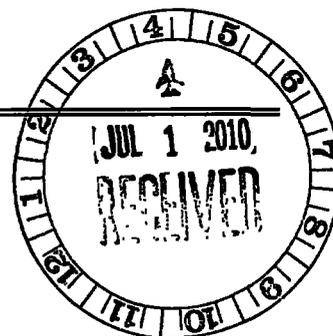


PUBLIC VERSION

**BEFORE THE
SURFACE TRANSPORTATION BOARD**



ARIZONA ELECTRIC POWER
COOPERATIVE, INC.

Complainant,

v.

BNSF RAILWAY COMPANY

and

UNION PACIFIC RAILROAD
COMPANY

Defendants.

Docket No. 42113

227579

**REBUTTAL EVIDENCE OF COMPLAINANT
ARIZONA ELECTRIC POWER COOPERATIVE, INC.**

NARRATIVE

**ENTERED
Office of Proceedings**

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ACRONYMS

The following acronyms are used:

AAR	Association of American Railroads
AEI	Automatic Equipment Identifier
AEO	2009 Annual Energy Outlook April Update Forecast
AEPCO	Arizona Electric Power Cooperative, Inc.
AILF	All-Inclusive Less Fuel Index, published by AAR
ANR	Arizona and Northern Railroad
APACHE	Apache Generating Station
APS	Arizona Public Service
ARRA	American Reinvestment and Recovery Act
ATC	Average Total Cost
ATF	Across-the-Fence
BNSF	BNSF Railway Company and Predecessors
CAPM	Capital Asset Pricing Model
CMP	Constrained Market Pricing
COC	Cost of Capital
COD	Cost of Debt
COE	Cost of Equity
CTC	Centralized Traffic Control
CWR	Continuous Welded Rail
DCF	Discounted Cash Flow
DP	Distributed Power
DTL	Direct To Locomotive
EIA	Energy Information Administration
FED	Failed Equipment Detector
FRA	Federal Railroad Administration
FXE	Ferrocarril Mexicano, S.A. de C.V.
GPD-IPD	Gross Domestic Product Implicit Price Deflator
GWR	Gross Weight on Rail
HDF	On-Highway Diesel Fuel Index
HPTT	Horsepower Per Trailing Ton
IDC	Interest During Construction
KCS	Kansas City Southern Railway
MACRS	Modified Accelerated Cost Recovery System
MGT	Million Gross Tons
MMM	Maximum Markup Methodology
MNA	Missouri & Northern Arkansas Railroad
MOW	Maintenance of Way
MRL	Montana Rail Link
MSDCF	Multi-Stage Discounted Cash Flow

NKCR	Nebraska Kansas Colorado Railway
NPRB	Northern Powder River Basin
PPI	Producer Price Index
PRB	Power River Basin
PTC	Positive Train Control
RCAFA	Rail Cost Adjustment Factor, adjusted for productivity
RCAFU	Rail Cost Adjustment Factor, unadjusted for productivity
ROW	Right of Way
RSIA	Rail Safety Improvement Act of 2008
R/VC	Revenue-to-Variable Cost
RTC	Rail Traffic Controller Model
SAC	Stand-Alone Cost
SARR	Stand-Alone Railroad
SPRB	Southern Powder River Basin
STEO	Short Term Energy Outlook
STIMULUS ACT	Economic Stimulus Act of 2008
SWRR	Southwestern Railroad Company, Inc.
T&E	Train & Engine
UP	Union Pacific Railroad Co.
URCS	Uniform Railroad Costing System
USDA	United States Department of Agriculture
WCTL	Western Coal Traffic League
WTI	West Texas Intermediate Crude Prices

CASE GLOSSARY

The following short form case citations are used:

<i>AEP Texas</i>	STB Docket No. 41191 (Sub-No. 1), <i>AEP Tex. N. Co. v. BNSF Ry.</i> (STB served Sept. 10, 2007)
<i>AEP Texas 2009</i>	STB Docket No. 41191 (Sub-No. 1), <i>AEP Tex. N. Co. v. BNSF Ry.</i> (STB served May 15, 2009)
<i>AEPCO May 2001</i>	<i>Ariz. Elec. Power Coop. v. Burlington N. & S.F. Ry.</i> , 5 S.T.B. 531 (2001)
<i>AEPCO November 2001</i>	STB Docket No. 42058, <i>Ariz. Elec. Power Coop. v. Burlington N. & S.F. Ry.</i> (STB served Nov. 27, 2001)
<i>AEPCO December 2001</i>	STB Docket No. 42058, <i>Ariz. Elec. Power Coop. v. Burlington N. & S.F. Ry.</i> (STB served Dec. 31, 2001)
<i>AEPCO August 2002</i>	<i>Ariz. Elec. Power Coop. v. Burlington N. & S.F. Ry.</i> , 6 S.T.B. 322 (2002)
<i>AEPCO November 2003</i>	<i>Ariz. Elec. Power Coop. v. Burlington N. & S.F. Ry.</i> , 7 S.T.B. 224 (2003)
<i>AEPCO March 2005</i>	STB Docket No. 42058, <i>Ariz. Elec. Power Coop. v. Burlington N. & S.F. Ry.</i> (STB served March 15, 2005)
<i>APS</i>	<i>Ariz. Pub. Serv. Co. and Pacificorp. v. The Atchison, Topeka and Santa Fe Ry.</i> , 2 S.T.B. 367 (1997)
<i>Coal Rate Guidelines or Guidelines</i>	<i>Coal Rate Guidelines, Nationwide</i> , 1 I.C.C.2d 520 (1985), <i>aff'd sub nom. Consolidated Rail Corp. v. United States</i> , 812 F.2d 1444 (3 rd Cir. 1987)
<i>Coal Trading Corp.</i>	<i>Coal Trading Corp. v. The Baltimore & Ohio R.R.</i> , 6 I.C.C.2d 361 (1990)
<i>CP&L</i>	<i>Carolina Power & Light Co. v. Norfolk S. Ry.</i> , 7 S.T.B. 235 (2003)
<i>Duke/CSXT</i>	<i>Duke Energy Corp. v. CSX Transp. Inc.</i> , 7 S.T.B. 402 (2004)
<i>Duke/NS</i>	<i>Duke Energy Corp. v. Norfolk S. Ry.</i> , 7 S.T.B. 89 (2003)

<i>FMC or FMC Wyoming</i>	<i>FMC Wyo. Corp. v. Union Pac. R.R.</i> , 4 S.T.B. 699 (2000)
<i>KCP&L</i>	<i>Kansas City Power & Light Co. v. Union Pac. R.R.</i> , STB Docket No. 42095 (STB served May 19, 2008)
<i>Major Issues</i>	<i>Major Issues in Rail Rate Cases</i> , STB Ex Parte No. 657 (Sub-No. 1) (STB served Oct. 30, 2006)
<i>McCarty Farms</i>	<i>McCarty Farms v. Burlington N. Inc.</i> , 2 S.T.B. 460 (1997)
<i>Otter Tail</i>	<i>Otter Tail Power Co. v. BNSF Ry.</i> , STB Docket No. 42071 (STB served Jan. 27, 2006)
<i>PPL Montana</i>	<i>PPL Montana, LLC v. BNSF Ry.</i> , 6 S.T.B. 752 (2003)
<i>PSCo/Xcel I</i>	<i>Public Service Co. of Colorado d/b/a Xcel Energy v. Burlington N. and Santa Fe Ry.</i> , 7 S.T.B. 589 (2004)
<i>PSCo/Xcel II</i>	STB Docket No. 42057, <i>Public Serv. Co. of Colorado d/b/a Xcel Energy v. Burlington N. and Santa Fe Ry.</i> (STB served Jan. 19, 2005).
<i>TMPA</i>	<i>Texas Mun. Power Agency v. Burlington N. and Santa Fe Ry.</i> , 6 S.T.B. 573 (2003)
<i>Seminole Electric</i>	STB Docket No. 42210, <i>Seminole Electric Coop., Inc. v. CSX Transp., Inc.</i> (pending)
<i>West Texas Utilities</i>	<i>West Tex. Utils. Co. v. Burlington N. R.R.</i> , 1 S.T.B. 638 (1996), <i>aff'd sub nom. Burlington N. R.R. v. STB</i> , 114 F.3d 206 (D.C. Cir. 1997)
<i>WFA/Basin I</i>	STB Docket No. 42088, <i>Western Fuels Ass'n, Inc. and Basin Electric Power Coop. v. BNSF Ry.</i> (STB served Sept. 10, 2007)
<i>WFA/Basin II</i>	STB Docket No. 42088, <i>Western Fuels Ass'n, Inc. and Basin Electric Power Coop. v. BNSF Ry.</i> (STB served Feb. 18, 2009)
<i>Wisconsin P&L</i>	<i>Wisconsin Power & Light Co. v. Union Pac. R.R.</i> , 5 S.T.B. 955 (2001)

AEPCO's Opening submission shows, and AEPCO's Rebuttal filing confirms, that BNSF/UP have market dominance over the transportation, that their rates to AEPCO exceed a lawful maximum, that the jurisdictional threshold for the New Mexico movements should be calculated without regard to BNSF's arrangement with the Southwestern Railroad Company, Inc. ("SWRR"), that the maximum markup methodology MMM analysis for allocating relief under the discounted cash flow ("DCF") model used for calculating stand-alone cost ("SAC") yields a revenue-variable cost ratio below the jurisdictional threshold -- in fact, below 100% of variable costs, that the maximum reasonable rates should be set at the jurisdictional threshold, and that AEPCO should be awarded reparations.

Confronted with such a showing that their rates are unlawful, BNSF/UP present what is essentially a two-prong approach in their Reply. The first prong is a relatively conventional attack on the various individual elements of AEPCO's SAC analysis, *e.g.*, BNSF/UP claims that volumes and revenues are overstated, construction and operating costs are understated, staffing assumptions are too optimistic, *etc.* However, BNSF/UP recognize that this approach, by itself, will not produce BNSF/UP's desired results, *i.e.*, the MMM ratio will remain far below 180% and rates will be set at the jurisdictional threshold.

Accordingly, BNSF/UP devote substantial effort to presenting a second prong in their Reply that challenges the basic structure of AEPCO's stand-alone railroad ("SARR"), the Arizona & Northern Railroad ("ANR"). In effect, they argue that the ANR must be split into two separate SARRs, one SARR to handle the issue New Mexico

traffic (the “ANR-NM”), and another SARR to handle the issue PRB traffic (the “ANR-PRB”). They further demand that the two SARRs should be required to replicate the two separate interchange or connection points (Deming, NM and Pueblo, CO, respectively) that BNSF/UP utilize for the issue New Mexico and PRB traffic in the real world. BNSF/UP’s objective is to deprive AEPCO of the least-cost, most-efficient flexibility that is the *sine qua non* of a SARR, and, not surprisingly, their machinations, including the physical plant changes described above and the traffic group changes discussed in detail below, cause both SARRs to fail: the ANR-NM because of a cross-subsidy problem on the low-density segment between Belen, NM and Rincon, NM, and the ANR-PRB because its revenues supposedly fail to cover its costs. *See, e.g.*, BNSF/UP Reply at I-38-42. BNSF/UP further claim that the use of two SARRs and the replication of the real-world interchanges are required by the Board’s decisions in AEPCO’s prior rate case. *Id.* at I-1-31.¹

In fact, BNSF/UP have it exactly backwards: AEPCO’s configuration of the ANR conforms exactly to what the Board ordered in AEPCO’s prior rate case. First, the ANR does not use the trackage rights of one defendant over the other anywhere on its system, including the segment between Vaughn, NM and El Paso, TX. The ANR utilizes trackage rights only between Laurel (Mossmain) and Jones Junction, MT, where BNSF

¹ STB Docket No. 34041, *Ariz. Elec. Power Coop. v. Burlington N. & S.F. Ry.*, 5 S.T.B. 531 (2001) (“*AEPCO May 2001*”); STB Docket No. 42058, *Ariz. Elec. Power Coop. v. Burlington N. & S.F. Ry.* (STB served Nov. 27, 2001) (“*AEPCO November 2001*”) (captioned with other cases), (STB decision served Dec. 31, 2001) (“*AEPCO December 2001*”), 6 S.T.B. 322 (2002) (“*AEPCO August 2002*”), 7 S.T.B. 224 (2003) (“*AEPCO November 2003*”), (STB served March 15, 2005) (“*AEPCO March 2005*”).

has trackage rights over Montana Rail Link (“MRL”). This use of trackage rights over a non-defendant is fully in accord with Board precedent, including decisions in AEPCO’s prior rate case.

Second, the cross-subsidy concern related to whether AEPCO could use the heavier-density PRB portion of the SARR to cross-subsidize the lower-density New Mexico portion when the PRB portion shared so little of its facilities with the New Mexico portion was resolved in AEPCO’s prior rate case. The specific solution proposed by AEPCO and adopted by the Board was that the PRB portion would be added to the New Mexico portion, *i.e.*, the reasonableness of the PRB rates would be assessed in conjunction with, and not in isolation from, the New Mexico portion. That is exactly what AEPCO has done here. BNSF/UP have reversed their position by claiming that the New Mexico portion will cross-subsidize the PRB portion, when they argued the exact opposite in AEPCO’s prior rate case. *AEPCO December 2001 at 2; AEPCO August 2002, 6 S.T.B. at 324-25.* AEPCO’s configuration of one SARR does not cause the New Mexico portion to cross-subsidize the PRB traffic, as nearly two-thirds of the route-miles used to handle the New Mexico traffic is also used to handle the PRB traffic. Indeed, BNSF/UP have not shown (or attempted to show) there is a *PPL Montana* or *Otter Tail*-type cross subsidy problem on any segment of AEPCO’s ANR.²

² *PPL Montana, LLC v. BNSF Ry.*, 6 S.T.B. 752, 757-78 (2003) (“*PPL Montana*”); STB Docket No. 42071, *Otter Tail Power Co. v. BNSF Ry.* (STB served Jan. 25, 2006) (“*Otter Tail*”). BNSF/UP do, however, identify a *PPL Montana* defect on the Belen-Rincon segment of their ANR-NM, and present a DCF analysis on their ANR-PRB for the line segment between Stratford and El Paso (BNSF/UP Reply at III.H-6). Their failure to identify any such problem on AEPCO’s ANR thus does not reflect a casual

BNSF/UP's contention that AEPCO cannot use Vaughn as the point of interconnection between the BNSF and UP portions of the ANR system for either the New Mexico traffic (because BNSF/UP interchange the traffic at Deming) or the PRB traffic (because BNSF/UP interchange the traffic at Pueblo, CO) is even more unfounded. In AEPCO's prior rate case, the Board made clear that AEPCO was free to replace whichever defendant it wanted on any particular segment (subject to restrictions on the use of trackage rights of one defendant over the other, which AEPCO has followed), and the Board expressly approved the Vaughn-El Paso routing for the issue New Mexico traffic, which necessarily involved a new connection at Vaughn.

In short, BNSF/UP's Reply contradicts the Board's major holdings in AEPCO's prior rate case as well as the positions that BNSF/UP themselves took in that rate case. BNSF/UP's contentions are also contrary to the principles that the Board established in STB Ex Parte No. 657 (Sub-No. 1), *Major Issues in Rail Rate Cases* (STB served Oct. 30, 2006) ("*Major Issues*"), and its prior decisions in numerous rate cases.

AEPCO has, therefore, properly configured its SARR. AEPCO's SARR produces a MMM ratio below 180%. Indeed, that result would apply even if a number of BNSF/UP's proposed adjustments were accepted, although the vast bulk of their proposed adjustments are unsound. Accordingly, the Board should set rates at the jurisdictional threshold.

oversight.

In the remainder of this Part I of its Rebuttal, AEPCO addresses the legal issues presented by BNSF/UP in Part I of their Reply, and AEPCO also provides a brief overview of some of the more significant issues addressed in other portions of its Rebuttal. In the interests of brevity, AEPCO has not attempted to summarize all the elements presented in Parts II and III of its Rebuttal.

B. MARKET DOMINANCE

BNSF/UP accept that they have qualitative market dominance over the issue traffic, so the only issues in Part II relate to quantitative market dominance, meaning the level of the jurisdictional threshold. Even there, the only real point of contention is whether to treat the SWRR, which serves as BNSF's sub-contractor between Rincon and Deming, as a full interline carrier on the New Mexico movements. The answer is clearly no, as doing so causes an arrangement that is intended to, and does, reduce BNSF's costs to yield instead a substantial increase in the variable costs and the jurisdictional threshold. A costing approach that transforms a cost-reduction arrangement into one that increases costs is nonsensical, as well as arbitrary and capricious.

BNSF/UP seek to divert attention from the plain logic in AEPCO's approach by claiming that AEPCO seeks the type of movement-specific adjustment prohibited by *Major Issues* and the Board's decision in STB Docket No. 42095, *Kansas City Power & Light Co. v. Union Pacific R.R.* (STB served May 19, 2008) ("KCP&L"). What AEPCO seeks is manifestly not a movement-specific adjustment. If AEPCO were to seek to cost the movement based on what BNSF actually pays SWRR to serve as

BNSF/UP's sub-contractor, the result would be a significant decrease in the variable cost and jurisdictional threshold. Accordingly, AEPCO's variable cost treatment is appropriate and should be adopted by the Board.

BNSF/UP also claim that if AEPCO is allowed to reroute the issue traffic for SAC purposes, then "logic and fairness require the Board to" calculate the jurisdictional threshold using the longer routing. There is no basis for BNSF/UP's position. The maximum reasonable rate is already determined as the higher of the jurisdictional threshold for the existing movement or the rate resulting under the SAC constraint. *Coal Rate Guidelines, Nationwide*, 1 I.C.C.2d 520, 543-44 (1985) ("*Coal Rate Guidelines*"), makes clear that the SARR may be configured with a longer routing, and such a routing is encouraged if it is more efficient in the stand-alone world (as it is here). The jurisdictional threshold calculation and the SAC calculation are completely independent from one another, and although the SARR routing need not reflect the actual route, the variable cost calculation that determines the jurisdictional threshold *must* reflect the actual route of movement. Inflating the jurisdictional threshold calculation to reflect SAC considerations (*i.e.*, route miles) contravenes the simplified variable cost calculation procedures mandated in *Major Issues*. There is also no reason to inflate the SAC result to reflect real-world considerations (*e.g.*, how BNSF/UP route and where they interchange the issue traffic, addressed *infra*). Indeed, BNSF/UP cite no authority to support their position, as there is none. Accordingly, their position must be rejected.

C. SARR CONFIGURATION AND TRAFFIC GROUP ISSUES

As noted *supra*, BNSF/UP devote most of their Reply argument and much of their Part III.A to arguing that AEPCO has configured its SARR improperly so that it relies heavily on impermissible cross-subsidies and/or other distortions. As these matters are discussed extensively in Part III-A of AEPCO's Rebuttal and to a lesser extent elsewhere, AEPCO will limit its discussion here to the major points.

1. Inclusion of Intermodal Traffic/Lack of Cross-Subsidies

BNSF/UP claim that the ANR's results should be rejected for being "anomalous" because a significant portion of the ANR's traffic group consists of intermodal traffic that is "competitive" and thus is supposedly not very profitable.³ BNSF/UP Reply at I-6-7. However, there is no substance to BNSF/UP's claim, which is contradicted by BNSF's and UP's own real-world actions (as well as by their claim that the PRB portion is cross-subsidized by this marginal traffic). Both carriers devote extensive resources to serving and trying to grow intermodal and other so-called competitive traffic, and such efforts provide a strong demonstration that such traffic is very profitable indeed. The incongruity is particularly acute for BNSF, as intermodal

³ As the name implies, intermodal traffic moves over more than one transportation mode between origin and destination. Freight moving in intermodal service is hauled in equipment that can be easily transported by rail, truck, vessel, or barge. BNSF/UP's description of intermodal traffic as competitive is accurate, but incomplete. In fact, BNSF/UP (and other Class I railroads) compete not only with each other, but also with the trucking industry for intermodal traffic. As such, intermodal rates reflect the total market cost structure, which is driven in large part by trucking costs that dwarf rail costs on a unit basis. Therefore, all rail intermodal traffic (particularly the long-haul intermodal traffic that the ANR handles) is profitable due to the cross-market competition between high-cost trucking and low-cost rail.

traffic (together with automotive traffic) accounts for the plurality of its revenues. If the traffic were so unprofitable, then it seems doubtful that Berkshire Hathaway Inc. (“Berkshire”) would have acquired BNSF, much less paid a premium stock price to do so. The only logical answer is that the traffic is actually quite profitable, especially along the corridors and under the operations reflected in the ANR.

Furthermore, AEPCO has calculated the divisions and allocated the SAC relief for the intermodal traffic in accordance with the procedures and methods (divisions based on average total costs (“ATC”), and rate relief allocated under MMM) that the Board specified in *Major Issues*.⁴ In that regard, the relatively low revenue-variable cost ratio produced by the MMM analysis is necessary for portions of the intermodal traffic to be able share in the SAC relief.

In any event, if BNSF/UP wished to show that AEPCO’s ANR embodies impermissible cross-subsidies, then their proper recourse is to make an appropriate showing under *PPL Montana/Otter Tail*. See, e.g., STB Docket No. 42088, *Western Fuels Ass’n & Basin Elec. Power Coop. v. BNSF Ry.* (STB served Sept. 10, 2007) (“*WFA/Basin I*”), at 10 (“BNSF has failed to explain why the Board should not use its established test for detecting an impermissible internal cross-subsidy.”). BNSF/UP have

⁴ In contrast, BNSF/UP propose a major deviation from *Major Issues* by applying MMM based on what they claim are the URCS variable costs of the ANR (“ANR URCS”). BNSF/UP Reply at III.H-8-17. The effect of their proposal is to shift SAC relief away from the coal traffic to non-coal traffic. The core of their approach is to increase the variable costs associated with coal and reduce the variable costs associated with non-coal, presumably including intermodal, traffic, thereby making the non-coal traffic appear more profitable. The flaws with BNSF/UP’s proposal are discussed *infra* and in Part III-H of AEPCO’s Rebuttal.

made little effort to do so with respect to any segment of AEPCO's ANR because none exists.⁵

Accordingly, there is no basis on which to conclude that the ANR's incorporation of intermodal traffic is any way improper or that it creates an impermissible cross-subsidy.

2. AEPCO's Use of a Single SARR for New Mexico and PRB Traffic

As noted *supra*, BNSF/UP's claim that AEPCO is required to use separate SARRs for the New Mexico and PRB issue traffic rests on a distortion of the Board's decision and the parties' positions in AEPCO's prior rate case. In the prior rate case, BNSF/UP maintained that the PRB traffic should not be allowed to cross-subsidize the New Mexico traffic because the New Mexico traffic shared so little of the facilities utilized to transport the PRB traffic. AEPCO's solution, which the Board approved, was that its SARR would consist of separate sub-SARR modules, with the New Mexico rates being tested only by the New Mexico module and the PRB rates being tested by the combined SARR, consisting of the New Mexico module, the Colorado module, and the PRB module. *AEPCO August 2002*, 6 S.T.B. at 325, 329.⁶

⁵ BNSF/UP's various DCF models contain "Construction Summaries" that purport to show "ANR Cross Subsidy" investment figures, but provide no explanation of their derivation or meaning, and are not used in any of the defendants' reply analyses. Additionally, BNSF/UP operating costs e-workpapers contain information on an "ANR Cross Subsidy," but do not use this information in any cross-subsidy analysis.

⁶ There is no Colorado module in AEPCO's current rate case because UP has claimed that the existence of a contract (one without a minimum volume obligation or duty to ship) extinguishes its obligation to establish rates from Colorado or UP-served origins in the Southern PRB. STB Docket No. 42113, *AEPCO v. BNSF* (STB served

BNSF/UP's current position is the exact opposite of their position in AEPCO's prior rate case. They now contend that the New Mexico portion will cross-subsidize the PRB portion. But what BNSF/UP ignore is that nearly two-thirds of the route miles used to handle the New Mexico traffic in AEPCO's ANR will also be utilized to handle the issue PRB traffic. The concerns in AEPCO's prior rate case are not applicable, especially inasmuch as the reasonableness of the PRB rates will be adjudged by a SARR that includes the New Mexico portion, which is the exact approach that the Board approved in AEPCO's prior rate case.

Furthermore, unlike in AEPCO's prior rate case, the Board now has a very specific methodology -- the *PPL Montana/Otter Tail* test -- for determining and addressing the existence of any cross-subsidies. See *WFA/Basin I* at 10, *supra*. If BNSF/UP wish to demonstrate -- as opposed to making empty and entirely unsubstantiated allegations -- that an impermissible cross-subsidy is present, then they are required to do so using the *PPL Montana/Otter Tail* test. Tellingly, they have made little effort to do so regarding the ANR as configured by AEPCO.

AEPCO's use of a single SARR to serve both the New Mexico and PRB issue traffic is entirely appropriate and must be accepted, especially in light of Board's decision in AEPCO's prior rate case.

April 23, 2009). In AEPCO's earlier rate case, all of the issue traffic (New Mexico, Colorado, and PRB) would have been routed through Vaughn.

3. Connection of ANR's BNSF and UP Segments at Vaughn

BNSF/UP devote substantial effort to their claim that AEPCO cannot connect the ANR's BNSF and UP segments at Vaughn because: (a) the rates at issue specify that BNSF/UP are to interchange traffic at Deming and Pueblo; (b) AEPCO's use of Vaughn as the connection point is not possible under the challenged rate authorities; (c) AEPCO's approach ignores the legal consequences of the defendants' right to choose their interchange location; (d) AEPCO's alteration of the interchange point distorts the SAC cross-subsidy test; and/or (e) if AEPCO is allowed to alter the connection points, the Board must base the jurisdictional threshold on the longer routing. BNSF/UP Reply at I-7-31.

BNSF/UP's arguments are fundamentally irrelevant and completely contrary to basic SAC theory and established Board precedent. AEPCO proposed and the Board approved the Vaughn-El Paso routing in AEPCO's prior rate case. The Board made clear that AEPCO was free to use whatever routing it wanted for SAC purposes, so long as AEPCO had not requested a specific routing from the carriers. The Board stated that since "BNSF and UP are themselves free to alter or vary their routing of AEPCO's movements in this manner at any time (by mutually changing the interchange point) without needing AEPCO's consent and without affecting the joint rate charged to (and challenged by AEPCO)," AEPCO's adoption of an alternate routing and associated interchange in its SARR "would seem to be permissible, so long as AEPCO had not specifically requested the routing that the defendants currently use." *AEPCO August 2002*, 6 S.T.B. at 327. AEPCO did not request any specific routing from BNSF/UP in its

prior rate case or in the present one. Therefore, AEPCO is free to use whatever routing and connection point that it wants.

The fact that BNSF/UP have chosen to interchange the issue traffic at other locations and/or they may be presently unable to interchange traffic at Vaughn is of no consequence at all. Inherent in the SAC concept is the principle that the SARR is not required to replicate the incumbents at their existing locations and in their existing practices, but the SARR can instead adopt other routings, use a longer routing that achieves more desirable densities and other efficiencies, and even choose not to be a railroad at all. *Coal Rate Guidelines*, 1 I.C.C.2d at 543-44 & n.60. BNSF/UP are thus seeking to deny the ANR the flexibility that lies at the core of the SAC test and the theory of contestable markets.

If AEPCO faced only one defendant, it would plainly have the ability to vary the configuration and utilize internal rerouting. *See, e.g., PSCo/Xcel I*, 7 S.T.B. at 589, 602. BNSF/UP cannot acquire any additional abilities to hamstring AEPCO's SARR because the two defendants have decided to provide a joint through rate. In particular, the Conference Report for the Staggers Rail Act of 1980 makes clear that the rate reasonableness standards for joint rates should not be more onerous or demanding than those in single line rate cases. "The Conference substitute maintains the requirement that joint rates must be reasonable. The conferees intend that the rate standard for the reasonableness of joint rates shall be the same as for all rates." H.R. Rep. No. 96-1430 at 90 (1980). The flexibility that applies where there is one defendant must also apply where there is more than one defendant.

AEPCO is not ignoring BNSF/UP's ability to specify their interchange locations in the real world. Rather, under SAC theory, the SARR "stands in the shoes" of the defendants and thus acquires that same ability and discretion to select its routings, including the connection points of its segments. *AEPCO August 2002*, 6 S.T.B. at 327. To do so, the complainant need not show that the existing interchange location functions inefficiently in the real-world.⁷ The SARR effectively starts with a "clean sheet of paper" and without the benefit of the incumbents' legacy investments. It is hardly surprising that routings and practices the incumbents have adopted in the real world are less than optimal for the SARR, which does not have the benefit of the incumbents' legacy assets and embedded costs. That is why the shipper is entitled to design a SARR that handles issue and non-issue traffic efficiently and is not required to duplicate any aspect of the incumbents' operations. Yet that is exactly what BNSF/UP would require here, and it constitutes an impermissible entry barrier that prevents the SARR from handling the issue traffic in a least-cost, most-efficient manner.

Nor does AEPCO's approach distort the cross-subsidy test, the purpose of which is to determine if the rate set by defendant(s) for the issue exceeds the rate that would be charged by a least-cost, most-efficient competitor that did not face barriers to entry or exit. To the contrary, BNSF/UP are seeking to distort the cross-subsidy test by

⁷ In this regard, BNSF/UP have (willfully) confused a maximum reasonable rate complaint with a proceeding under 49 U.S.C. § 10705. BNSF/UP Reply at I-16-17, 20-22. AEPCO need not challenge the routing selected by BNSF/UP in order to challenge the rates that they have established for the routing. Furthermore, as explained *infra*, the divisions established by BNSF/UP for the routing are irrelevant, as the Board agreed with BNSF/UP in AEPCO's prior rate case. *AEPCO December 2001* at 7, 8.

arguing that AEPCO's approach effectively alters the revenue divisions between the two defendants. In evaluating a joint through rate, the divisions between the defendants are irrelevant. All that is of concern is the reasonableness of the joint through rate itself, as the Supreme Court stated eighty-five years ago:

The division of the joint rate among the participating carriers is a matter which in no way concerns the shipper. The shipper's only interest is that the joint rate be reasonable as a whole. It may be unreasonable although each of the factors of which it is constructed was reasonable. It may be reasonable although some of the factors, or the divisions of the participants, were unreasonable.

Louisville & N. R.R. v. Sloss-Sheffield Steel & Iron Co., 269 U.S. 217, 234 (1925).

Indeed, BNSF/UP refused to produce their divisions on the issue traffic on precisely this basis in AEPCO's prior and present rate cases, and the Board denied AEPCO's motion to compel production of the divisions in AEPCO's prior rate case on the grounds of lack of relevance. *AEPCO December 2001* at 7, 8. BNSF/UP are thus precluded from relying on their internal allocations to limit AEPCO's flexibility in challenging the joint rate.

Otherwise, BNSF/UP's discussions of the restrictions on a SARR's use of external reroutes (BNSF/UP Reply at I-25) are irrelevant, as the ANR has only internal reroutes and fully accounts for all the costs associated with those reroutes. In particular, the ANR accounts for the costs of constructing and operating the connection at Vaughn, the costs resulting from routing the issue New Mexico traffic via Vaughn-El Paso rather than Belen-Deming, and the costs resulting from routing traffic via Stratford, TX-Amarillo, TX-Vaughn, NM over BNSF's lines, rather than directly from Stratford to Vaughn over UP's lines. The ANR's service with the reroutes is superior or at least

equivalent to that provided by BNSF/UP under their real-world routing. Nothing more is required for a SARR to reroute traffic internally. *See, e.g., Tex. Mun. Power Agency v. Burlington N. & S.F. Ry.*, 6 S.T.B. 573, 594-95 (2003); STB Docket No. 41191 (Sub-No. 1), *AEP Texas North Co. v. BNSF Ry.* (STB served Sept. 10, 2007), at 10-11 (“*AEP Texas*”); and *WFA/Basin II* at 11-12.

In short, AEPCO’s use of Vaughn as the point of connection for its BNSF and UP-replacement segments is entirely appropriate. BNSF/UP’s claim that AEPCO must replicate BNSF/UP’s existing interchanges is plainly contrary to SAC theory, *Coal Rate Guidelines*, and ample Board precedent, including particularly its decisions in AEPCO’s prior rate case.

4. AEPCO’s Need for a Prescription of Reasonable PRB Rates

BNSF/UP also contend that the Board should not prescribe maximum reasonable rates from the PRB origins. BNSF/UP’s position is that {
}, the Board has no authority to prescribe rates under such circumstances, and that even if the Board has the authority, it should exercise its discretion not to prescribe such rates. BNSF/UP Reply at I-31-38.

AEPCO strongly disagrees with BNSF/UP’s claims. AEPCO has already used the PRB rates, which alone establishes a need for the Board to determine a maximum reasonable level for the rates. As noted below and explained more fully in the portion of Part III-A sponsored by AEPCO Senior Vice President and Chief Operating

Officer Garfield (Gary) C. Grim,⁸ AEPCO has a continuing need to be able to obtain PRB coal {

} Thus, AEPCO has entirely legitimate reasons for needing the PRB rates, which it has already utilized, and the Board should require BNSF/UP to establish their rates at a reasonable level.

⁸ BNSF/UP seek to criticize AEPCO because its Opening narrative on its internal traffic projections was not directly sponsored by Mr. Grim. BNSF/UP Reply at I-33. The criticism is unfounded. AEPCO provided abundant information to BNSF/UP in discovery, including internal projections of coal volumes and sources and internal consideration of various coal options. AEPCO's projections on Opening reflected those internal projections, as stated in AEPCO's Opening narrative. BNSF/UP plainly received AEPCO's internal information, as they discuss selected elements of it in their Reply at I-32-33, 36. In any event, Mr. Grim is sponsoring the relevant portion of AEPCO's Rebuttal.

BNSF/UP also complain that they, as opposed to their outside attorneys and consultants, "still do not know AEPCO's plans" as AEPCO designated its information as "Highly Confidential." BNSF/UP have no basis to complain as the Board adopts protective orders precisely so that information produced in discovery will not be used for commercial advantage. AEPCO designated its internal plans and analyses as "Highly Confidential" so that they could not be exploited commercially by BNSF/UP. There is nothing improper with AEPCO's protecting internal, confidential and/or proprietary information, and there is no basis for BNSF/UP to suggest otherwise, especially considering that BNSF/UP designated almost all of the information that they produced as "Highly Confidential." Moreover, if BNSF/UP believe that AEPCO's designations are improper, the Protective Order provides a procedure by which BNSF/UP can challenge the designations. They have not done so and should not be heard to complain here.

The legal authorities cited by BNSF/UP provide no support for their contentions. *Burlington Northern Railroad v. STB*, 75 F.3d 685 (D.C. Cir. 1996) (“*BN v. STB*”), in no sense “addressed a similar set of issues.” BNSF/UP Reply at I-35. In that case, the transportation was governed by contracts that had not expired. There is no contract for the PRB origins at issue in AEPCO’s rate case, and there has not been a contract for many years.⁹ The Board explained this very point in AEPCO’s earlier rate case, *AEPCO May 2001*, 5 S.T.B. at 532, in requiring BNSF/UP to establish PRB rates in AEPCO’s earlier rate case. The Board stated directly that *BN v. STB* “does *not* support defendants’ position” as “the court ruled that we could not require a carrier to establish a common carrier rate when that rate *could not possibly be applied to the traffic*, as that traffic was governed by a rail transportation contract that would not expire for more than a year.” 5 S.T.B. at 531 (emphasis added). BNSF/UP’s claim that *BN v. STB* “addressed a similar set of issues” amounts, at best, to a willful misreading of the case. Nor does BNSF/UP’s reference (*id.* at I-31-32) to AEPCO’s prior rate case advance their cause, as AEPCO was allowed to proceed with its earlier PRB rate case when it had shipped a similar volume of PRB coal and the Board ordered BNSF/UP to establish PRB rates. *AEPCO May 2001*, 5 S.T.B. at 531, *supra*; *AEPCO December 2001* at 3 (requiring BNSF/UP to maintain rates from the PRB, including Decker and Spring Creek/Nerco

⁹ AEPCO’s contract with UP that expired at the end of 2008 did include rates for PRB origins, but not the NPRB origins served exclusively by BNSF that are at issue in AEPCO’s instant rate case.

Jct.). AEPCO has already utilized the PRB rates at issue in its instant case and needs to continue to be able to ship PRB coal.

The references in BNSF/UP Reply at I-37, 38, to STB Docket No. 41191 (Sub-No. 1), *AEP Texas North Co. v. BNSF Ry.* (STB served May 15, 2009), at 18-19 (“*AEP Texas 2009*”), are equally or more far-fetched. The shipper in that case was not entitled to relief for its past or current shipments under the SAC constraint (as the Board applied it at the time).¹⁰ The Board’s analysis showed that there was a possibility of MMM relief in the last year of a 21-year DCF model for a limited volume of the traffic, depending on the vagaries of the SAC forecasts and how they comported with reality, and the Board was concerned that setting a rate prescription in 2009 would leave it without the ability to reverse an underpayment in 2020, when the Board could instead award reparations after the fact for the limited volumes at stake. *Id.*

AEPCO’s situation is entirely different. Under AEPCO’s analysis, the SAC level is nearly half of the jurisdictional threshold, the jurisdictional threshold is substantially below the published rate, and AEPCO is entitled to reparations and a substantial prospective reduction of the rate throughout the DCF model, which is only 10 years, in accordance with *Major Issues*. See AEPCO Rebuttal Tables III-H-2-4 in Rebuttal at III-H-25-27, *infra*. There is an enormous margin before BNSF/UP’s PRB rates would, absent relief, begin to approximate a reasonable maximum, and AEPCO is

¹⁰ On June 18, 2010, the D.C. Circuit vacated and remanded the Board’s decision based on the Board’s failure to adequately explain its treatment of the railroad cost of capital for 2005. *AEP Texas N. Co. v. STB* (D.C. Cir. No. 09-1202, June 18, 2010).

thus entitled to relief, both now and for the foreseeable future. The specific factors that caused the Board to act with restraint in *AEP Texas 2009* are not at all present in AEPCO's situation. BNSF/UP are simply seeking to evade their duty to maintain reasonable rates under 49 U.S.C. §§ 10701 and 10704.

BNSF/UP's claim that AEPCO has no need for the PRB rates is also devoid of factual support. AEPCO's limited deliveries of PRB coal to date are a result of a number of factors that do not negate AEPCO's need for the rates. First, the Signal Peak mine is still phasing in its operations. {

}

BNSF/UP's rates for transportation of the PRB coals are overstated by over \$11/ton, which corresponds to 65 cents per mmBtu for Gillette area coals that typically have a heating or caloric value of 8,400 Btu/lb.¹¹ 65 cents/mmBtu is more than sufficient to render the PRB coal (or other coals) uneconomic. In effect, BNSF/UP are seeking to evade their obligation to establish and maintain reasonable rates by instead (1) establishing unreasonable rates, and (2) then claiming that because the rates will not be used, or will be used only to a limited extent, BNSF/UP should have no duty to maintain rates at all.

BNSF/UP should not be allowed to evade their obligations in this manner. AEPCO has utilized the PRB rates, AEPCO has a continuing need for the rates, and the Board has a statutory function to prescribe the maximum reasonable level for those rates. In addition, there are obvious efficiencies for the Board and the parties (including BNSF/UP) in prescribing maximum reasonable rates for the future at the same time that the reasonableness of rates for past shipments is assessed. As a relatively low-volume unit train coal shipper, AEPCO also has an interest in avoiding additional rate cases. There is no support for BNSF/UP's argument that the Board could or should evade its duty to prescribe maximum reasonable rates for AEPCO's shipments from the PRB, including Signal Peak.

¹¹ \$11 ton divided by (8,400 Btu/lb times 2,000 lbs/ton) equals \$11 divided by 16.8 million Btus/ton equals \$0.655/mmBtu.

5. Other Traffic Group Matters

BNSF/UP raise a number of other matters in their Reply Part III.A relating to the ANR's traffic group that AEPCO addresses in its Rebuttal Part III-A. The following treatment is intended to address briefly three of the more prominent issues, but it is not intended to be comprehensive in breadth or detailed in scope.

a. MRL Trackage Rights

First, BNSF/UP criticize AEPCO's utilization of BNSF's trackage rights over MRL between Laurel (Mossmain) and Jones Junction, MT, apparently because this segment is near the post-2011 northern terminus of the ANR and the ANR would not handle some of the affected traffic over other portions of its system that the ANR actually builds. BNSF/UP Reply at III.A-3, 9-10, 18-21. BNSF/UP's argument is devoid of substance. BNSF utilizes the trackage rights over the MRL (same as the ANR), and BNSF derives margins associated with utilizing those trackage rights to support other portions of its system (again, the same as the ANR). MRL is not a co-defendant, and AEPCO is entitled to "stand in the shoes" of BNSF with respect to the trackage rights.

Any other approach would impose a burden on the ANR that does not apply to BNSF, which constitutes an impermissible entry barrier. As the Board explained in AEPCO's earlier rate case:

Complainants in rail rate cases have long been permitted to hypothesize a SARR that would utilize trackage rights over another railroad's line for a portion of the route where those trackage rights have replicated how the defendant railroad was actually moving the issue traffic, and where the line has belonged to a third-party, i.e., a railroad that was not a defendant in that rate case. In those cases, use

of trackage rights was allowed in the SAC analysis because the third-party carrier was not responsible for providing the service and the revenue requirements of the third-party carrier were not at issue in the rate case. Moreover, as the Board and ICC have explained, in those circumstances, allowing the SARR to have the benefit of the same trackage rights arrangement as the defendant railroad uses to move the traffic involved, at the same trackage rights fee, is necessary for the SARR to “stand in the shoes” of the defendant. Otherwise, the SAC analysis would be based on categories of costs the defendant railroad does not incur. It is well-settled that costs not incurred by the defendant carrier are to be excluded from a SAC analysis.

AEPCO March 2005 at 10-11 (citations omitted).

The ANR is entitled to make the same use of the MRL trackage rights as BNSF. AEPCO’s configuration of the ANR is fully permissible in this respect.

b. Impact of Recession on BNSF/UP Volumes

Second, BNSF/UP devote substantial effort to claiming that AEPCO failed to account for the full impact of the recession on BNSF/UP’s coal and non-coal volumes in 2009. BNSF/UP Reply at III.A-4, 28-31, 34-38, 39-43. AEPCO’s basic approach was to identify its base year traffic group from the BNSF and UP revenue, car, and train data that BNSF and UP produced in discovery for the 2Q08-1Q09 period,¹² use the actual data for 1Q09, and scale the 2Q08-4Q08 data to the 2Q09-4Q09 period using a combination of BNSF/UP’s reported data and forecasts.¹³ In this manner, AEPCO sought to use the

¹² 2Q08-1Q09 was, and still is, the latest available full-year period for which both BNSF and UP have provided the waybill, train, and car movement data required to identify and evaluate movements for inclusion in the ANR traffic group.

¹³ Because BNSF and UP both failed to provide the level of forecasts they have provided in past rate cases, AEPCO utilized the forecast of coal shipments prepared by

last complete set of data that BNSF/UP provided and to make it track the actual circumstances as best as possible given the data provided. AEPCO Opening at III-A-18-27.

However, BNSF/UP accuse AEPCO of systematically overstating the ANR's projected (and their actual) volumes for the 2Q09-4Q09 period.¹⁴ Toward that end, they purport (a) to have relied on data for that now-historical period that they provided to AEPCO either in discovery or in their Reply e-workpapers, and (b) to have selected their version of the ANR's 2009 traffic group from that data by allegedly simulating the same procedures that they claim that AEPCO would have utilized in selecting its base-year traffic group from the 2Q08-4Q08 data. BNSF/UP claim that their analysis properly identifies the appropriate ANR traffic group in the 2Q09-4Q09 period, and it shows significantly less traffic than depicted by AEPCO.

What BNSF/UP say they did, and what they actually did in practice, are fundamentally different.¹⁵ What BNSF/UP have concocted does not approximate the traffic group that AEPCO selected from the 2Q08-1Q09 period, nor does it approximate what AEPCO would have selected from the 2Q09-4Q09 period, if BNSF/UP had provided AEPCO with the required data (which BNSF/UP still have not done). In fact, BNSF/UP's presentation shows a substantially greater decline for ANR traffic from

the Energy Information Administration of the Department of Energy.

¹⁴ Because AEPCO utilized actual railroad data for 1Q09 period, BNSF/UP do not challenge AEPCO's traffic group for that quarter.

¹⁵ AEPCO's discussion here is necessarily simplified. The subject is treated in full in Part III-A of AEPCO's Rebuttal.

2Q08-4Q08 to 2Q09-4Q09 than the decline they actually experienced. Such an overstatement of their volume reductions is not a mere coincidence, but is the result of systematic bias in BNSF/UP's procedures.

First, BNSF/UP did not -- and still have not -- provided AEPCO with the materials (revenue, car, and train data) required to select the appropriate traffic group directly for the 2Q09-4Q09 period. While BNSF did provide waybill/revenue data for 2Q09-3Q09 (but not 4Q09), BNSF has not provided either the car or the train movement data for that period. Accordingly, while AEPCO can discern volumes that moved, AEPCO cannot determine how that traffic was routed. Without that information, AEPCO cannot possibly determine if traffic should or should not be in its traffic group, or whether its inclusion would result in impermissible external reroutes. Moreover, UP also provided some waybill/revenue data, but none of the car and train movement data.

Without the missing data, it is not possible for AEPCO to select an appropriate traffic group from the time period. Selection of the traffic group is necessarily a train-based activity, as a SARR is generally required to handle the same trains as the incumbent, and a SARR is required to ensure that its traffic group results in no impermissible external reroutes, which requires knowledge of the actual route of movement. The last complete set of data that BNSF/UP have provided is for the 2Q08-1Q09 period, and that is the data AEPCO necessarily relied upon to select its traffic group. Moreover, even if BNSF/UP had provided a full set of data for later periods, there would not be sufficient time within the procedural schedule for AEPCO to perform the needed analysis. AEPCO would have needed to seek an extension of time, BNSF/UP

would have demanded surrebuttal to respond, *etc.*, and the case would not be completed within the three-year time period under 49 U.S.C. 11701(c), which may well be part of BNSF/UP's objective.

Second, in no sense did BNSF/UP attempt to determine the appropriate traffic group for the ANR utilizing the 2Q09-4Q09 data. Instead, BNSF/UP took isolated attributes of the traffic group that AEPCO selected from the 2Q08-4Q08 data and attempted to find "matching" movements in the 2Q09-4Q09 data. BNSF/UP's efforts were half-hearted at best. For example, BNSF/UP sought to match BNSF non-coal traffic on the basis of train symbols, but: (a) BNSF/UP did not consider a particular train symbol worthy of selection unless AEPCO had selected at least 90% (and not, say 89.6%) of the trains with that train symbol in the 2Q08-1Q09 period;¹⁶ (b) BNSF/UP made no effort to adjust for the fact that not all trains with a particular symbol may have been desirable for the ANR in the 2Q09-4Q09 period;¹⁷ and (c) BNSF/UP also made no effort to determine whether trains with other train symbols or new train symbols might have been desirable for inclusion. In other cases, particularly involving non-issue coal traffic, BNSF/UP did not attempt to adjust for the possibility that traffic might move from different origins or origin districts to new destinations (including off-SARR origins and destinations), or that traffic might migrate from BNSF to UP or *vice versa*.

¹⁶ If AEPCO had selected less than 90% of a particular train symbol, BNSF ignored the train symbol altogether. In one case, AEPCO had selected 89.6% of the trains with a particular train symbol, an average of over a train a day, and BNSF/UP did not include any such trains.

¹⁷ Where AEPCO included some, but not all, trains with a particular symbol, AEPCO had a reason for its decisions on individual trains.

BNSF/UP thus avoided the sort of bottom-up, train-by-train analysis that AEPCO utilized and was required to utilize. Instead, BNSF/UP used a series of short-cuts designed to understate the ANR's traffic group. And BNSF/UP succeeded since their version of the ANR traffic shows a greater reduction from 2008 to 2009 than BNSF and UP experienced on a system-wide basis.

In short, BNSF/UP sought to engage in a process that might look, to the casual observer, like an effort to approximate how the ANR might have selected its traffic group if the required BNSF/UP data had been provided, but BNSF/UP made no attempt to actually engage in that process. Moreover, because BNSF/UP did not produce the car and train movement data, AEPCO cannot discern what is in the traffic group that BNSF/UP selected or how (or whether) it moves over the ANR. Consequently, AEPCO cannot begin to perform the necessary ATC, RTC, MMM and other analyses for the specific movements and trains.

Moreover, while BNSF/UP address at length AEPCO's supposed understatement of the greater than forecasted declines in BNSF/UP's traffic in 2009, they make no mention of BNSF/UP's greater than forecasted increases in traffic in 2010. Their one-sided analysis is thus intended to lock-in the 2009 declines for the remainder of the DCF analysis, whereas the more recent data (and numerous third-party projections) indicate that railroad traffic is recovering very favorably. Their efforts to incorporate only downside developments, and to ignore countervailing developments, are designed to achieve a desired litigation result, not to achieve an accurate forecast of the ANR's revenues.

Under the circumstances, BNSF/UP's restatement of the ANR's traffic group cannot possibly be accepted, and AEPCO's presentation must be utilized.

c. Fuel Surcharges

Fuel surcharges account for a large portion of BNSF/UP's revenues, and they also figure prominently in the ANR's revenues, which are necessarily based on BNSF/UP's revenues.

BNSF/UP thus seek to reduce the ANR's fuel surcharge-related revenues in two ways. The first is to reduce the scope of traffic that will be subject to the fuel surcharges, *i.e.*, BNSF/UP claim that traffic that currently is not subject to their regular fuel surcharges (including traffic where the pricing authority is silent as to the fuel surcharge) will retain that status, even as the current contracts and related pricing authorities expire. *See, e.g.*, BNSF/UP Reply at III.A-59-61. The second is to reduce the level of projected fuel surcharges by claiming that the retail price of highway diesel fuel ("HDF"), which is used to calculate the fuel surcharges, will decline effective January 1, 2012, when the period governed by the current Short Term Energy Outlook ("STEO") prepared by the Energy Information Administration ("EIA") ends, and the EIA's most recent long-term forecast in the Annual Energy Outlook ("AEO") starts to apply. *See, e.g.*, BNSF/UP Reply at III.A-52-55. Neither claim is sound or justified.

For the better part of the last decade, the railroads have insisted that their traffic be covered by their fuel surcharge programs. The railroads, including BNSF and UP, simply refuse to enter into transportation arrangements on any other basis. Their established position is that a shipper will be responsible for fuel surcharges unless the

pricing authority clearly specifies otherwise, in which event the absence of a fuel surcharge will be a point for renegotiation at the earliest opportunity. BNSF/UP's claim in this case that a shipper that is not currently subject to the fuel surcharge will generally remain not subject to the fuel surcharge in the future simply cannot be reconciled with their established pricing position, the experience of the shipper community, or BNSF/UP's statements to the investment community, which have identified so-called "fuel cost recovery" as a vital area of revenue and margin growth. The only exceptions from application of the fuel surcharge discussed in the BNSF/UP Reply relate to STB-prescribed rates, and AEPCO has removed the fuel surcharges from that very limited set of traffic on Rebuttal.¹⁸ There is no plausible basis on which to project that a significant portion of BNSF/UP's non-prescribed traffic will remain not subject to their fuel surcharge program in the future.

BNSF/UP's statements concerning the EIA STEO/AEO forecasts are also deficient. Both the STEO and the AEO show a consistent, unbroken pattern of price increases. The AEO forecast value for 2012 is lower than the STEO forecast value for December 2011, but the AEO forecast still shows a price value for 2012 that is higher than its price value for 2011 (*i.e.*, the STEO HDF value for 2011, which both parties use, is significantly higher than the AEO HDF value for 2012). There is thus no sound reason

¹⁸ There may be other isolated examples, but they are not discussed in BNSF/UP's Reply. Instead, their discussion of a few contracts is limited to when those contracts expire or may be renewed or renegotiated. If there were other examples where BNSF or UP agreed that the regular surcharge program would not apply, the shipper would insist that aspect of the arrangement to be prominently noted. It is also reasonable to expect that the carrier would have received some significant consideration in return.

to conclude that the EIA expects the price in January or any portion of 2012 to be lower than the price as of December 2011, yet that is BNSF/UP's position. The far more plausible explanation is that AEO annual forecast has just not been updated to reflect the more current information reflected in the STEO forecast. Accordingly, the transition from the STEO to the AEO should be handled in the manner depicted by AEPCO, *i.e.*, calculate the change in the AEO values from 2011 to 2012, and apply that change to the average STEO 2011 value to obtain the value for January 2012.

**D. STAND-ALONE RAILROAD SYSTEM
CONFIGURATION, ROUTE MILES AND TRACK MILES**

With respect to AEPCO's version of the ANR, which BNSF/UP refer to as the "Reply ANR,"¹⁹ BNSF/UP accept the basic route proposed by AEPCO. They also accept the ANR's track configuration, yard and interchange locations, and track miles with minor modifications.

In response to BNSF/UP's evidence on the ANR's route miles, on Rebuttal AEPCO has increased the route miles by 3.5 miles from its Opening number, from 2,231.54 to 2,235.04. The reasons for the increase (and for rejecting other minor changes proposed by BNSF/UP²⁰) are set forth at pp. III-B-7-8, *infra*.

¹⁹ As discussed earlier, BNSF/UP wrongly challenge certain aspects of the ANR's route, in particular their routing of the issue New Mexico coal traffic via Vaughn and El Paso and their routing of the issue PRB coal traffic via BNSF's lines between Stratford-Amarillo-Vaughn. However, their "Reply ANR" essentially accepts the route proposed by AEPCO.

²⁰ One of the changes proposed by BNSF/UP was to reduce the non-constructed route miles, consisting of trackage rights over MRL in Montana, by 5.33 miles. For the reasons explained at pp. I-22-23, *supra*, the ANR is entitled to use the MRL trackage

Table III-B-1 on page III-B-28 summarizes the remaining differences in the parties' track miles for the ANR. The remaining 2.56-mile difference in track miles for first main track is due to the parties' difference in the ANR's route miles. AEPCO's Rebuttal calculation of track miles for other main tracks (1,124.27 miles) is 12.89 miles greater than BNSF/UP's calculation. The changes in other main track miles from Opening are explained at pp. III-B-8-10, *infra*.

AEPCO's Rebuttal count of track miles for helper pocket and setout tracks (41.26 miles) is also greater than BNSF/UP's count, by 11.88 miles. The reasons for the change from Opening are set forth at pp. III-B-10-12, *infra*.

The ANR has five principal yards where car inspections and locomotive fueling occur, as well as 21 interchange yards or facilities.²¹ The parties disagree on the configurations for several of these yards. The disagreements, and AEPCO's response to BNSF's criticisms of its yards, are set forth at pp. III-B-12-28, *infra*. On Rebuttal, AEPCO decreased the ANR's yard track miles by 5.18 miles from Opening, although its Rebuttal yard track miles (237.75) are still 3.36 miles greater than the yard track miles calculated by BNSF/UP.

BNSF/UP have essentially accepted the other aspects of the ANR's system, including its traffic control and communications systems. Overall, AEPCO's

rights in the same manner as the real-world BNSF does so this reduction is unwarranted.

²¹ The inspection/fueling yards are located at Guernsey, WY; North Amarillo, TX; Texico, NM; West Vaughn, NM; and West El Paso, NM. The interchange locations are shown in the table on p. III-B-5 of AEPCO's Opening; the interchange with UP at Pueblo, CO has been eliminated on Rebuttal.

development of the ANR system, as revised on Rebuttal, constitutes the best evidence of record and should be accepted by the Board.

E. OPERATING PLAN

AEPCO's operating plan for the ANR was initially developed by AEPCO Witness Paul Smith, assisted by Walter Schuchmann (who conducted a simulation of the ANR's peak-period operations using the Board-approved RTC Model) and, later, by Paul Reistrup.²² BNSF/UP criticize various elements of the operating plan developed by AEPCO's experts. Most of their criticisms involve either AEPCO's inputs to the RTC Model, or AEPCO's use of the output to generate various operating statistics including road locomotive, freight car and train crew counts. AEPCO responds in detail to each and every one of the defendants' criticisms in Part III-C of this Rebuttal.

After revising several of the RTC inputs in response to the defendants' criticisms,²³ AEPCO re-ran the RTC Model and used the output to develop revised operating statistics and associated annual operating expenses for the ANR. For the most part, the Rebuttal simulation produced slightly faster ANR train transit times than

²² Mr. Smith suffered a stroke in November of 2009, and was unable to continue working on the case (he is recuperating). Mr. Reistrup stepped in and completed Mr. Smith's work on the operating plan, as presented in AEPCO's Opening Evidence. Messrs. Reistrup and Schuchmann sponsor AEPCO's Rebuttal evidence on the ANR's operating plan.

²³ Although AEPCO reduced the ANR's peak-year traffic slightly in response to the defendants' criticisms of its traffic group for the ANR, in the interest of economy of time and expense it did not eliminate any trains from the Opening RTC peak-period train list – with the result that the RTC train list is overstated by approximately 38 trains. (*See* pp. III-C-18-19, *infra*). The result, if anything, is to overstate the transit times for the ANR's trains in AEPCO's Rebuttal RTC simulation.

AEPCO's Opening simulation. These transit times compare favorably with BNSF/UP's real-world transit times for the comparable trains in 2008, as shown in Rebuttal Exhibit III-C-2, meaning that AEPCO has carried its burden of proving that the ANR provides transportation that meets its customers' transportation service requirements. *WFA/Basin I* at 15; *PSCO/Xcel*, 7 S.T.B. at 598.

The principal remaining disagreement between the parties with respect to the ANR's operating plan involves three categories of operating inputs to the RTC Model. Three involve (1) dwell times for coal trains at the ANR's origin mines and destination power plants, (2) time allocated for track maintenance windows, and (3) time allocated for random track/signal and operating outages.

With respect to origin/destination dwell times for coal trains, AEPCO explains at pp. III-C-22-27, *infra*, why (with one exception) it is more appropriate to use the maximum train loading and unloading times under the applicable pricing authorities than to use the actual average dwell times during the fourth quarter of 2008, as proposed by BNSF/UP.²⁴ The exception involves origin dwell time at the Wyoming PRB mines.

²⁴ AEPCO recognizes that the Board has previously accepted average actual dwell time at a BNSF-served destination power plant. *WFA/Basin I* at 17. In this case, AEPCO has presented evidence demonstrating that the dwell-time information provided by BNSF in discovery at both origin and destination is riddled with errors and incongruities, and that use of maximum unloading (and mine loading) times is more likely to produce accurate results. Moreover, as noted at p. III-C-23, *infra*, 2008 was the highest overall volume year in the history of PRB coal transportation, and is not likely to be repeated in the foreseeable future (as the defendants contend elsewhere in attempting to reduce the ANR's PRB coal volumes for every year in the DCF period). Use of average dwell times during 2008 thus is likely to overstate the dwell times that will occur in 2009 and subsequent years.

AEPCO used the 4Q08 average dwell times for each of the two mine origin groups in Wyoming (mines on the Orin/Reno Subdivisions and mines on the Campbell Subdivision), as developed by BNSF/UP. This is consistent with the approach approved by the Board in *TMPA* and subsequent PRB coal rate cases. *See pp. III-C-25-27, infra.*

With respect to maintenance windows, this is the first SAC case in which the defendant has even suggested that delays for program maintenance should be accounted for in the RTC Model. Even BNSF – which was the defendant in the most recent rate cases decided by the Board – has previously agreed that it is inappropriate to include time for maintenance windows during the peak RTC simulation period, and the Board has routinely accepted RTC simulations of SARR operations that did not include time for maintenance windows. *See WFA/Basin I* at 15-17; *AEP Texas* at 17-21. In this case, BNSF/UP have not demonstrated that program maintenance actually occurred on any of the lines replicated by the ANR during the RTC simulation period, and their “supporting” workpapers for the Base Year actually indicate that the times they allocated for program maintenance windows did not involve program maintenance at all since trains continued to operate during the alleged windows. *See the discussion at pp. III-C-32-34, infra.* In short, there is no reason to deviate from Board precedent excluding time for maintenance windows from RTC simulations of SARR operations.

With respect to random outages, for purposes of AEPCO’s Opening RTC simulation AEPCO Witness Reistrup reviewed the outage data provided by BNSF in discovery for the 2008 period comparable to the peak RTC simulation period, and designated 52 outages as appropriate for inclusion in the RTC Model for the BNSF lines

replicated by the ANR. Mr. Reistrup did not include any outages for the replicated UP lines because UP did not provide useable outage data in discovery. On Reply, BNSF/UP propose to add 230 additional outages on the replicated BNSF lines, and to use the outages on those lines as the basis for imputing outages to the replicated UP lines. On Rebuttal, Mr. Reistrup accepted 56 of the additional outages on the BNSF lines proposed by the defendants, and rejected the remainder. His reasons for doing so are set forth at pp. III-C-34-38, *infra*, and Rebuttal e-workpaper “BNSF Outage Data.pdf.”²⁵ He also continues to assign no outages to the UP lines for the reasons stated at pp. III-C-38-39, *infra*.

Resolution of the parties’ continuing differences on the three categories of RTC Model inputs summarized above will affect the Model output and thus the operating statistics used to develop the ANR’s annual operating expenses. If the Board is unwilling to accept AEPCO’s position on these inputs, AEPCO suggests that the Board consider re-opening the record for purposes of directing the parties to conduct a final RTC Model simulation using a common set of dwell-time and random-outage inputs. This approach is consistent with Board precedent in the two most recent SAC cases involving PRB coal movements, *AEP Texas* and *WFA/Basin*,²⁶ and it would provide the Board with an

²⁵ Mr. Reistrup also changed the speed restriction for several of the additional outages he accepted from 0 mph to 10 mph. See pp. III-C-36-37, *infra*, and Rebuttal e-workpaper “Reply Form B - “0” Outages.xls.”

²⁶ See *AEP Texas* (STB served March 17, 2006), and *WFA/Basin* (STB served March 17, 2006).

apples-to-apples basis for comparing the parties' respective operating plans and RTC simulations.

F. OPERATING COSTS

In Part III-D of its Opening Evidence, AEPCO followed Board precedent in developing the ANR's annual operating expenses, including the annualization of operating statistics from the RTC Model simulation of the ANR's operations during the peak week of the 10-year DCF period, the development of a spare margin and peaking factor for locomotives and railcars, and the development of personnel requirements without excessive reliance on cross-training employees or outsourcing. BNSF/UP submitted 149 pages of narrative evidence (together with voluminous electronic workpapers) in an attempt to increase AEPCO's Opening operating expenses by nearly 50 percent (from \$752.1 million to \$1,113.3 million). BNSF/UP's attacks range from the grandiose (increasing the ANR's MOW costs by nearly \$79 million, or 132 percent, compared with AEPCO's MOW costs) to the ridiculous (increasing General & Administrative ("G&A") staffing to a level more than four times that initially proposed by AEPCO).²⁷

AEPCO responds to each of BNSF/UP's contentions regarding the ANR's operating costs in Part III-D of this Rebuttal. In many cases BNSF/UP's arguments take the form of unsupported assertions by its witnesses, and all too often the numbers in

²⁷ BNSF/UP's proposed G&A staffing for the ANR (315 employees) is nearly five times the highest G&A staffing level ever accepted by the Board in a coal rate case (66 employees). *AEP Texas* at 51-53.

BNSF/UP's workpapers conflict with those in its narrative evidence. AEPCO has had to respond to each allegation, or risk acceptance of the defendants' positions – no matter how far-fetched – by the Board. In response to the few meritorious arguments advanced by the defendants, on Rebuttal AEPCO has increased the ANR's 2009 operating expenses by more than \$100 million, from \$752.1 million to \$855.3 million.

The three largest areas of operating-cost difference between the parties involve maintenance-of-way ("MOW"), Locomotive Operations (including fuel costs), and G&A. With respect to MOW, AEPCO developed a detailed MOW plan for the ANR that relies on a substantial in-house staff of field employees to perform all maintenance except program maintenance (large-scale rail and tie replacements, *etc.*) and certain maintenance activities that, as the defendants acknowledge, are more appropriately performed by a contractor due to their relative infrequency, such as rail grinding. *See pp. III-D-124-151, infra.* In this regard, AEPCO's MOW plan, as revised on Rebuttal, avoids the extensive reliance on cross-training and outsourcing that the Board found troubling in *AEP Texas (id. at 67-68)*.

In a new twist, never before advanced by the defendant(s) in a SAC case, BNSF/UP contend that AEPCO's failure to provide for the construction of improved maintenance or access roads along the ANR's tracks²⁸ requires an incremental MOW cost additive due to maintenance crews' need to spend more time traveling to work areas on

²⁸ The Board has held on several occasions that a SARR is not required to build construction or maintenance roads where the incumbent did not build them as part of the original construction of the lines involved. *See, e.g., TMPA*, 6 S.T.B. at 701-02.

the tracks (using hi-rail equipment). The defendants' proposed additive represents fully 35 percent of their total proposed annual MOW operating expense. The additive depends on unproven assumptions about the impact of the lack of improved maintenance roads on MOW employee productivity and on train operations, including the false assumption that MOW crews cannot get adequate access to the tracks without such roads. At pp. III-D-131-134 and 152-56, *infra*, AEPCO demonstrates that the ANR's MOW personnel have adequate access to its tracks, just as the defendants themselves have adequate access to the vast majority of their lines being replicated by the ANR, without improved access roads. The defendants' proposed incremental cost additive should be rejected.

With respect to locomotive operations, the biggest difference between the parties relates to fuel costs, and in particular the delivered cost of diesel fuel at the ANR's West Vaughn and West El Paso inspection/fueling yards in New Mexico. BNSF/UP claim that AEPCO understated the delivered cost of fuel at these yards by using BNSF's average delivered cost of fuel at its Belen, NM yard, without allowance for the cost of transporting the fuel from Belen to West Vaughn, and without considering that fuel at West El Paso would be supplied from a nearby UP yard in El Paso rather than from Belen. On Rebuttal, AEPCO demonstrates that direct pipeline deliveries of diesel fuel could easily be obtained for West Vaughn, at a cost below the delivered cost at Belen, and that UP's cost of fuel at El Paso (delivered by pipeline) is such that even with the added cost of delivery by tank car to West El Paso, the cost used by AEPCO on Opening overstates the delivered cost that the ANR could obtain at West El Paso. *See* pp. III-D-6-17, *infra*.

With respect to G&A, BNSF/UP's staffing and other proposals inflate the ANR's G&A costs far beyond the realm of reason, as well as far beyond the levels accepted by the Board in prior SAC cases. Most of the defendants' G&A staffing evidence is unsupported opinion testimony. On Rebuttal, AEPCO's four G&A experts (including Dr. Patricia Buhler, a widely-recognized expert on best practices in corporate management) demonstrate in exhaustive detail why BNSF/UP's G&A evidence must be rejected, and why AEPCO's evidence (including the modest staffing increase provided on Rebuttal) should be accepted by the Board. *See* pp. III-D-47-118, *infra*.

G. ROAD PROPERTY INVESTMENT

AEPCO's Opening road property investment costs for the ANR, amounting to \$6.36 billion or roughly \$2.8 million per route mile, fall well within the range of investment in recent SAC cases decided by the Board. *See, e.g. AEP Texas* (\$2.4 million per route mile), and *WFA/Basin* (\$2.9 million per route mile). Not surprisingly, BNSF/UP's Reply proposes substantially higher road property costs, \$8.24 billion, or nearly triple AEPCO's level on Opening.²⁹ On Rebuttal, AEPCO has increased its road property investment to \$6.81 billion or roughly \$3.0 million per mile.

Details of the various issues and AEPCO's adjustments are presented in Part III-F of this Rebuttal. However, two areas, (a) earthwork unit costs and (b) ballast and subballast unit costs and related transportation costs, account for much of the difference between the parties and are summarized below.

²⁹ The increase relates entirely to construction costs, as BNSF/UP have accepted AEPCO's land acquisition cost for the ANR. *See* BNSF/UP Reply at III.F-2.

On Opening, AEPCO derived its common earthwork unit cost from excavation and embankment costs that BNSF actually experienced on projects that BNSF undertook on lines replicated by the ANR. BNSF/UP claim unit costs in the Means Handbook are more appropriate because (1) the ANR could not reasonably expect to achieve the lower unit cost in geographic areas outside of those where the projects occurred, which BNSF/UP mistakenly believe are located only in Wyoming, and (2) expansion projects such as the construction of a second main track supposedly cost less because preparation work that has already been performed when constructing the first track. BNSF/UP Reply at III.F-20-23. As AEPCO explains in Rebuttal Part III-F-2-b-ii-(a), *infra*, BNSF/UP's assault on BNSF's own actual unit costs cannot withstand scrutiny. For example, AEPCO's common earthwork unit costs incorporate a project that BNSF conducted in the Amarillo, TX area. BNSF/UP have also made no showing that unit costs would be higher in other regions traversed by the ANR or that BNSF actually achieved any savings on its lower common earthwork unit costs because of work that had already been done when building the first track in the areas of the expansion projects. Moreover, BNSF/UP make no effort to account for the added complications and expense of building expansion projects next to active lines over which traffic is moving.

BNSF/UP claim that AEPCO's Opening cost for ballast does not include sufficient transportation and that at least one other source of ballast would be necessary. BNSF/UP Reply at III.F-53-55. AEPCO accepts this limited criticism and makes an appropriate adjustment, as discussed in Rebuttal Part III-F-3-b-ii-(a), *infra*. However, BNSF/UP's Reply ballast unit cost is probative because BNSF/UP rely on a supposed

weighted average cost per ton (including transportation) without providing any supporting calculations for the cost, which exceed AEPCO's weighted average cost by more than \$6.00 per ton. AEPCO thus continues to use its Opening unit cost for ballast, which is the only feasible and verifiable cost in the record.

BNSF/UP also raise the same criticisms as to AEPCO's Opening subballast unit costs, but add a claim, never presented in any previous SAC case, that subballast cannot be delivered by rail. BNSF/UP Reply at III.F-55-60. AEPCO's Rebuttal adjusts for the transportation and subballast source-related issues, similar to the adjustment on ballast costs. However, AEPCO demonstrates that BNSF/UP's solution to delivering subballast to the ANR, relying solely on trucks with an average haul of 20 miles, is unsupported and infeasible. *See* Rebuttal Part III-F-3-b-ii-(b), *infra*. AEPCO also demonstrates that moving subballast by rail is plainly feasible and entirely consistent with Board precedent, including recent SAC cases in which BNSF was a defendant. *Id.*

H. DISCOUNTED CASH FLOW ANALYSIS

The parties' most significant dispute as to the DCF analysis involves BNSF/UP's opposition to AEPCO's use of cost of equity ("COE") for 2008 as calculated only under the Board's Capital Asset Pricing Model ("CAPM") and AEPCO's related exclusion of the higher 2008 COE as calculated under the Board's Multi-Stage Discounted Cash Flow ("MSDCF") model.

BNSF/UP do not dispute AEPCO's observation that the 2008 MSDCF figure reflects growth rates that the ANR will not realize. BNSF/UP instead claim that

the ANR's low growth rate will be offset by the ANR's supposedly large cash flows. However, BNSF/UP's claim assumes a false equivalence between cash flows under the SAC DCF model and the cash flows utilized in the MSDCF model. BNSF/UP also do not account for the absence of a stock price for the ANR. While BNSF/UP refer to the ANR's equity and the replacement value of its assets, neither provides a sound, stable, or predictable proxy for a stock price. BNSF/UP also do not address the statements made by Goldman Sachs and Evercore for the BNSF Board of Directors that utilized a lower COE for BNSF than AEPCO utilizes for the ANR in 2008. In short, the MSDCF COE figure for 2008 is inappropriate for the ANR, and AEPCO's use of only the CAPM figure is appropriate and even conservative compared to the Goldman Sachs and Evercore analyses.

BNSF/UP also seek to make some other modifications to the DCF model, but their proposals are unsound. For example, BNSF/UP seek an additive to the COE to cover the supposed costs for ANR to "float" its equity, but their adjustment is contrary to both Board precedent, including *AEP Texas* on which they purport to rely, and finance theory. BNSF/UP also challenge AEPCO's approach to indexing land values, but they primarily rely on a two-year average that is unsound and contrary to established Board precedent.

In addition, BNSF/UP also seek to modify the standard 10-year DCF model that the Board prescribed in *Major Issues* to correct what they claim are distortions resulting from calculating terminal values at the end of 10 years. However, their proposed modification is directly contrary to *Major Issues*. Their approach is also one-

sided in that it ignores the additional productivity gains in operating expenses that the ANR would experience after the initial 10 years as well as gains in capital asset productivity noted in *Major Issues*. BNSF/UP's proposed modification cannot be adopted in an individual rate case, and it should not be adopted in a rulemaking, at least not without other modifications that would be favorable to shippers.

Accordingly, BNSF/UP's proposed modifications to AEPCO's DCF analysis are defective and should not be adopted.

I. RESULTS OF SAC ANALYSIS

BNSF/UP appear to recognize that if AEPCO is allowed to proceed with a single-SARR approach, then the DCF model will show that the ANR's revenues substantially exceed its revenue requirement (operating expenses plus capital carrying charge) and that AEPCO will be entitled to substantial MMM relief. It is presumably for that reason that BNSF/UP devote so much effort to challenging AEPCO's single-SARR configuration.

BNSF/UP's primary contention in Part III-G of their Reply is that if AEPCO's single-SARR approach is not rejected, then any calculation of MMM relief should be based on the variable costs of the ANR (determined under an "ANR URCS"), rather than the variable costs of BNSF and UP. BNSF/UP claim that application of MMM based on the variable costs of BNSF and UP is inappropriate because of the diversity of the ANR's traffic group and the fact that the ANR serves as the replacement for portions of two defendant carriers and not just one.

BNSF/UP's proposal is unsound. The Board explained in *Major Issues* that it adopted MMM precisely because it could be applied to a diverse traffic group. The Board further explained in *Major Issues* and elsewhere, including AEPCO's prior rate case, that the purpose of the MMM and SAC analysis is to determine the extent to which defendants have abused their market power, as measured by modified Ramsey pricing mark-ups calculated on the basis of variable costs. That objective is nullified to the extent that different variable costs are utilized.

BNSF/UP's proposed approach is defective in other respects. In particular, it would cause ATC divisions to be based on one set of variable costs, and MMM to be based on a different set of variable costs, leading to inconsistency between the divisions calculated and the relief awarded. Furthermore, while BNSF/UP argue that use of an ANR URCS is required for MMM purposes to avoid improper cost-shifting between the two defendants, their complaint is makeweight since (a) BNSF and UP elected to establish a joint through rate for the issue traffic, and (b) their revenue divisions for the issue traffic are irrelevant for rate reasonableness purposes, as BNSF/UP have themselves maintained.

Moreover, the ultimate impact of their proposed ANR URCS is to shift some of the MMM relief from coal traffic (including the issue traffic) to non-coal traffic (including intermodal traffic).³⁰ The ANR URCS would achieve this result by increasing

³⁰ Even so, BNSF/UP do not show that MMM for the issue traffic would rise to anywhere near the jurisdictional threshold of 180%. Indeed, BNSF/UP purport to apply their ANR URCS only to the DCF model results as presented in AEPCO's Opening Evidence. BNSF/UP's objective is apparently to be able to present their "real" analysis

the variable costs for coal traffic and reducing the variable costs for non-coal traffic.

BNSF/UP would thus make the intermodal traffic appear more profitable, despite their statements to the contrary in BNSF/UP Reply at I-6-7.

In any event, AEPCO's submission shows that the correct MMM ratio is far below the jurisdictional threshold, and even below a revenue-variable cost ratio of 100%.

J. CONCLUSION

AEPCO's Opening submission shows, and AEPCO's Rebuttal submission confirms, that BNSF/UP have market dominance over the issue traffic, that the rates on the issue traffic should be set at the jurisdictional threshold, and that the jurisdictional threshold on the New Mexico traffic should be calculated without reference to the SWRR.

BNSF/UP's claims to the contrary are without merit, except as to minor or technical matters that have no significant impact on the outcome. In particular, AEPCO has properly configured its SARR, accurately depicted the traffic group, operating plan, operating costs, non-road and road property investment, and properly conducted the discounted cash flow analysis, which yields a MMM ratio far below the jurisdictional threshold of 180%.

at some later stage, thereby creating additional delay and expense for AEPCO, and possibly by causing the rate case to exceed the three-year limit. The Board should not tolerate such tactics.

Accordingly, the Board should prescribe apply rates based on the jurisdictional threshold as follows:

Rebuttal Table I-1					
Maximum Rate Summary 1/					
Origin	1Q09	2Q09	3Q09	4Q09	1Q10
Lee Ranch	\$10.12	\$10.13	\$10.48	\$10.66	\$10.94
El Segundo	\$9.97	\$9.99	\$10.31	\$10.51	\$10.78
Gillette Area Mines (Eagle Butte)	\$27.50 ^{2/}	\$27.54	\$28.39	\$28.87	\$29.63
Spring Creek	\$29.39	\$29.54	\$30.37	\$30.89	\$31.70
Decker	\$29.27	\$29.30	\$30.22	\$30.74	\$31.55
^{1/} The Maximum Rate Per Ton equals the greater of the Jurisdictional Threshold or MMM Rate per ton, which is the Jurisdictional Threshold in all instances. ^{2/} From Eagle Butte Mine. Source: Rebuttal Exhibit III-A-4 and Rebuttal e-workpaper "Cochise MMM Rates Rebuttal.xlsx." No figure is shown for Signal Peak because that origin does not enter the SAC analysis until January 1, 2012.					

In addition, the Board should award damages for amounts that AEPCO has paid in excess of the maximum reasonable rates since January 1, 2009, plus interest.

Respectfully submitted,

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Dated: July 1, 2010

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**BEFORE THE
SURFACE TRANSPORTATION BOARD**

)	
)	
ARIZONA ELECTRIC POWER COOPERATIVE, INC.)	
)	
Complainant,)	
)	
v.)	Docket No. 42113
)	
BNSF RAILWAY COMPANY)	
)	
and)	
)	
UNION PACIFIC RAILROAD COMPANY)	
)	
Defendants.)	

PART II

MARKET DOMINANCE

II. A. QUANTITATIVE EVIDENCE¹

BNSF/UP generally accept AEPCO's Opening presentation as to the calculation of variable costs for the issue movements for purposes of determining the jurisdictional threshold under 49 U.S.C. §§ 10701(d)(1) and 10707.

In their Reply, BNSF/UP take issue with only two matters, both relating only to the treatment of coal movements to AEPCO's Apache Generating Station from the El Segundo and Lee Ranch Mines in New Mexico. BNSF/UP

¹ The evidence in Part II-A is sponsored by AEPCO Witnesses Thomas D. Crowley and George H. Borts.

take no issue with AEPCO's calculation of variable costs for the Wyoming and Montana movements, nor do BNSF/UP contest AEPCO's showing as to BNSF/UP's qualitative market dominance.²

The two matters concerning the New Mexico issue traffic movements are addressed below. Before turning to those matters, it is appropriate to first review and update the nature of the variable cost and jurisdictional cost calculations that AEPCO presented on Opening.

At the time AEPCO made its Opening presentation, 2009 URCS cost data was not available, and AEPCO thus necessarily relied on 2008 URCS costs updated to the four quarters of 2009 using the Board's standard URCS indexing procedure. However, data is now available to develop a very good estimation of the 2009 URCS costs. Specifically, BNSF and UP have now filed 2009 R-1 Reports with the Board, and the Association of American Railroads ("AAR") has now submitted its estimate of the 2009 cost of capital in STB Ex Parte No. 558 (Sub-No. 13), *Railroad Cost of Capital -- 2009*. AEPCO has used those sources to construct URCS costs for both BNSF and UP for 2009. AEPCO's URCS

² BNSF/UP also do not address AEPCO's alternative variable cost calculations on the grounds that "even AEPCO acknowledges that under the Board's current procedures such calculations are not considered in a SAC case." BNSF/UP Reply Evidence at II.A-3 n.2. However, AEPCO explained on Opening that currently pending legislation would permit such adjustments in rate cases. AEPCO Opening Evidence at II-6 n.4. Beyond that, AEPCO would note that much of BNSF/UP's evidence (such as calculating the jurisdictional threshold for the New Mexico movements using the Vaughn-El Paso routing, addressed *infra*) is not permitted under the Board's current procedures.

derivation is shown in Rebuttal Section II-A e-workpaper folder “2009 BNSF UP URCS (AAR COC).”

AEPCO recognizes that its URCS calculations are not necessarily final, especially as the Board may adopt a lower cost of capital based on comments submitted by the Western Coal Traffic League (of which AEPCO is a member), and AEPCO thus reserves the right to update these calculations. Nonetheless, the calculations provide a better approximation of the URCS costs than was previously possible. Moreover, the 2009 URCS yield lower costs than the 2008 URCS costs previously utilized. Accordingly, AEPCO has utilized the 2009 URCS costs throughout its Rebuttal, *e.g.*, to calculate variable costs and the jurisdictional threshold, to calculate ATC, to apply MMM, etc.

The following tables depict the variable costs, jurisdictional thresholds, tariff rates, and resulting R/VCs for the issue traffic movements from 1Q09 through 1Q10 based on (a) the 2008 URCS costs, (b) the 2009 URCS costs, and (c) the difference between the two:

Rebuttal Table II-A-1 Variable Cost and R/V C Ratios – 2008 URCS												
Movement Parameters	New Mexico Mines			Gillette Area Mines, WY					Montana Mines			
	Lee Ranch	El Segundo	Eagle Butte	Buckskin	Rawhide	Clovis Point	Dry Fork	Spring Creek	Decker	Signal Peak		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		
2008 Base Year Cost	\$6.96	\$6.86	\$18.69	\$18.72	\$18.66	\$18.61	\$18.64	\$20.05	\$19.95	\$22.62		
1Q09												
Indexed VC	6.04	5.96	16.33	16.35	16.30	16.26	16.29	17.50	17.42			
Juris. Thresh. 1/	10.88	10.73	29.40	29.44	29.34	29.27	29.32	31.50	31.35			
Tariff Rate	14.88	14.87	40.32	40.32	40.32	40.30	40.31	42.17	42.16			
R/V C 2/	2.463	2.496	2.469	2.466	2.473	2.478	2.474	2.410	2.420			
2Q09												
Indexed VC	6.05	5.97	16.35	16.37	16.32	16.28	16.31	17.52	17.44			
Juris. Thresh. 1/	10.89	10.74	29.43	29.47	29.38	29.31	29.36	31.54	31.39			
Tariff Rate	14.63	14.62	39.55	39.55	39.55	39.54	39.54	41.35	41.34			
R/V C 2/	2.418	2.450	2.419	2.416	2.423	2.428	2.425	2.360	2.370			
3Q09												
Indexed VC	6.25	6.17	16.88	16.90	16.85	16.81	16.84	18.09	18.01	20.38		
Juris. Thresh. 1/	11.25	11.10	30.38	30.43	30.33	30.26	30.31	32.57	32.41	36.68		
Tariff Rate	14.80	14.79	40.06	40.07	40.06	40.05	40.06	41.90	41.88	47.33		
R/V C 2/	2.368	2.398	2.373	2.370	2.377	2.382	2.379	2.315	2.326	2.322		
4Q09												
Indexed VC	6.36	6.27	17.15	17.17	17.12	17.08	17.11	18.39	18.30	20.72		
Juris. Thresh. 1/	11.45	11.29	30.87	30.91	30.82	30.74	30.80	33.10	32.94	37.29		
Tariff Rate	14.97	14.96	40.58	40.58	40.57	40.56	40.57	42.45	42.43	47.95		
R/V C 2/	2.354	2.386	2.366	2.363	2.370	2.375	2.371	2.308	2.319	2.314		
1Q10												
Indexed VC	6.54	6.45	17.64	17.66	17.61	17.56	17.59	18.91	18.82	21.31		
Juris. Thresh. 1/	11.77	11.61	31.75	31.79	31.70	31.61	31.66	34.04	33.88	38.36		
Tariff Rate	15.06	15.04	40.83	40.84	40.83	40.81	40.82	42.72	42.70	48.26		
R/V C 2/	2.303	2.332	2.315	2.313	2.319	2.324	2.321	2.259	2.269	2.265		

Source: "2008 and 2009 URCS Variable Cost_AEPCO Position.xls."

1/ Indexed VC x 1.80.

2/ Tariff Rate divided by Indexed VC.

Rebuttal Table II-A-2 Variable Cost and RVC Ratios – 2009 URCS												
Movement Parameters	New Mexico Mines			Gillette Area Mines, WY					Montana Mines			
	Lee Ranch	El Segundo	Eagle Butte	Buckskin	Rawhide	Clovis Point	Dry Fork	Spring Creek	Decker	Signal Peak		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		
2009 Base Year Cost	\$5.75	\$5.67	\$15.60	\$15.62	\$15.57	\$15.53	\$15.56	\$16.68	\$16.60	\$18.72		
1Q09												
Indexed VC	5.62	5.54	15.28	15.30	15.25	15.22	15.24	16.33	16.26			
Juris. Thresh. 1/	10.12	9.97	27.50	27.54	27.45	27.40	27.43	29.39	29.27			
Tariff Rate	14.88	14.87	40.32	40.32	40.32	40.30	40.31	42.17	42.16			
RVC 2/	2.648	2.684	2.639	2.635	2.644	2.648	2.645	2.582	2.593			
2Q09												
Indexed VC	5.63	5.55	15.30	15.32	15.27	15.24	15.26	16.36	16.28			
Juris. Thresh. 1/	10.13	9.99	27.54	27.58	27.49	27.43	27.47	29.45	29.30			
Tariff Rate	14.63	14.62	39.55	39.55	39.55	39.54	39.54	41.35	41.34			
RVC 2/	2.599	2.634	2.585	2.582	2.590	2.594	2.591	2.528	2.539			
3Q09												
Indexed VC	5.82	5.73	15.77	15.79	15.74	15.71	15.73	16.87	16.79	18.94		
Juris. Thresh. 1/	10.48	10.31	28.39	28.42	28.33	28.28	28.31	30.37	30.22	34.09		
Tariff Rate	14.80	14.79	40.06	40.07	40.06	40.05	40.06	41.90	41.88	47.33		
RVC 2/	2.543	2.581	2.540	2.538	2.545	2.549	2.547	2.484	2.494	2.499		
4Q09												
Indexed VC	5.92	5.84	16.04	16.06	16.01	15.97	16.00	17.16	17.08	19.26		
Juris. Thresh. 1/	10.66	10.51	28.87	28.91	28.82	28.75	28.80	30.89	30.74	34.67		
Tariff Rate	14.97	14.96	40.58	40.58	40.57	40.56	40.57	42.45	42.43	47.95		
RVC 2/	2.529	2.562	2.530	2.527	2.534	2.540	2.536	2.474	2.484	2.490		
1Q10												
Indexed VC	6.08	5.99	16.46	16.48	16.43	16.39	16.42	17.61	17.53	19.77		
Juris. Thresh. 1/	10.94	10.78	29.63	29.66	29.57	29.50	29.56	31.70	31.55	35.59		
Tariff Rate	15.06	15.04	40.83	40.84	40.83	40.81	40.82	42.72	42.70	48.26		
RVC 2/	2.477	2.511	2.481	2.478	2.485	2.490	2.486	2.426	2.436	2.441		

Sources: "2009 URCS Variable Cost_AEPCO Rebuttal.xls" and Rebuttal Exhibits II-A-1 through II-A-5.

1/ Indexed VC x 1.80.

2/ Tariff Rate divided by Indexed VC.

Rebuttal Table II-A-3												
Variable Cost and RVC Ratios – Differences												
Movement Parameters	New Mexico Mines			Gillette Area Mines, WY					Montana Mines			
	Lee Ranch	El Segundo	Eagle Butte	Buckskin	Rawhide	Clovis Point	Dry Fork	Spring Creek	Decker	Signal Peak		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		
Base Year Cost	(\$1.21)	(\$1.19)	(\$3.09)	(\$3.10)	(\$3.09)	(\$3.08)	(\$3.08)	(\$3.37)	(\$3.35)	(\$3.90)		
1Q09												
Indexed VC	(0.42)	(0.42)	(1.05)	(1.05)	(1.05)	(1.04)	(1.05)	(1.17)	(1.16)			
Juris. Thresh.	(0.76)	(0.76)	(1.90)	(1.90)	(1.89)	(1.87)	(1.89)	(2.11)	(2.08)			
Tariff Rate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
RVC	0.185	0.188	0.170	0.169	0.171	0.170	0.171	0.172	0.173			
2Q09												
Indexed VC	(0.42)	(0.42)	(1.05)	(1.05)	(1.05)	(1.04)	(1.05)	(1.16)	(1.16)			
Juris. Thresh.	(0.76)	(0.75)	(1.89)	(1.89)	(1.89)	(1.88)	(1.89)	(2.09)	(2.09)			
Tariff Rate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
RVC	0.181	0.184	0.166	0.166	0.167	0.166	0.166	0.168	0.169			
3Q09												
Indexed VC	(0.43)	(0.44)	(1.11)	(1.11)	(1.11)	(1.10)	(1.11)	(1.22)	(1.22)	(1.44)		
Juris. Thresh.	(0.77)	(0.79)	(1.99)	(2.01)	(2.00)	(1.98)	(2.00)	(2.20)	(2.19)	(2.59)		
Tariff Rate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
RVC	0.175	0.183	0.167	0.168	0.168	0.167	0.168	0.169	0.168	0.177		
4Q09												
Indexed VC	(0.44)	(0.43)	(1.11)	(1.11)	(1.11)	(1.11)	(1.11)	(1.23)	(1.22)	(1.46)		
Juris. Thresh.	(0.79)	(0.78)	(2.00)	(2.00)	(2.00)	(1.99)	(2.00)	(2.21)	(2.20)	(2.62)		
Tariff Rate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
RVC	0.175	0.176	0.164	0.164	0.164	0.165	0.165	0.166	0.165	0.176		
1Q10												
Indexed VC	(0.46)	(0.46)	(1.18)	(1.18)	(1.18)	(1.17)	(1.17)	(1.30)	(1.29)	(1.54)		
Juris. Thresh.	(0.83)	(0.83)	(2.12)	(2.13)	(2.13)	(2.11)	(2.10)	(2.34)	(2.33)	(2.77)		
Tariff Rate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
RVC	0.174	0.179	0.166	0.165	0.166	0.166	0.165	0.167	0.167	0.176		

Source: Rebuttal Table II-A-2 minus Rebuttal Table II-A-1

1. Treatment of Rincon-Deming Segment

The first issue raised by BNSF/UP regarding the New Mexico issue traffic movements concerns the treatment of the Southwestern Railroad Company, Inc. (“SWRR”),³ which operates between Rincon, NM and Deming, NM.

AEPCO’s Opening at II-8-10 explains that several factors require that the Rincon-Deming segment be costed as if the traffic were handled by BNSF (with an interchange to UP occurring at Deming) rather than as an interchange with SWRR at Rincon and another interchange between SWRR and UP at Deming.

In particular, SWRR provides only a crew change and no additional activities at Rincon (or Deming). SWRR is also not a party to BNSF Common Carrier Pricing Authority 57966. Under BNSF’s agreement with SWRR,⁴ the SWRR operates not as a line-haul railroad when handling the AEPCO coal trains, but only as BNSF’s agent in a haulage agreement. Moreover, SWRR’s compensation for serving as BNSF’s agent does not function as a division because it is {

³ BNSF/UP refer to this railroad as the “Southwest Railroad” (BNSF/UP at II.A-1), which is not its correct name. *See* F.D. No. 34072, *Southwestern Railroad Company, Inc.–Acquisition, Lease, and Operation Exemption–The Burlington Northern and Santa Fe Railway Company* (STB served Sept. 21, 2001).

⁴ {

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}.⁵ BNSF entered into the agreement to reduce its costs.⁶

Accordingly, AEPCO treats SWRR for variable costing purposes as if it were BNSF's sub-contractor. AEPCO Opening Evidence at II-A-8-10.

In their Reply, BNSF/UP do not suggest that AEPCO has misstated the facts in any way. Nonetheless, BNSF/UP insist that the New Mexico movements must be costed as if a full interchange occurs with SWRR at Rincon because of precedent in STB Docket No. 42095, *Kansas City Power & Light Co. v. Union Pacific R.R. Co.* (STB served May 19, 2008) ("KCP&L"), and the Board's statement in STB Ex Parte No. 657 (Sub-No. 1), *Major Issues in Rail Rate Cases* (STB served Oct. 30, 2006) ("*Major Issues*"), at 50, that the Board would not permit "movement-specific adjustments." BNSF/UP thus derive a variable cost for the 1Q09 Lee Ranch movements that is \$0.38 (or 6%) per ton

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⁶ {

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greater than the variable cost calculated by AEPCO and a jurisdictional threshold that is \$0.68 (also 6%) per ton greater than that calculated by AEPCO.⁷

BNSF/UP's reliance on *KCP&L* and *Major Issues* is misplaced, as neither authority provides direct support for BNSF/UP's position, especially as AEPCO is not seeking to use movement-specific costing based on BNSF's actual payment to SWRR for the segment. Moreover, BNSF/UP's proposed costing method produces an economically perverse result.

KCP&L provides no meaningful support for BNSF/UP's position. In that case, the shipper, KCP&L, successfully sought to treat the movement as an interline movement. KCP&L did so in opposition to UP's contrived claim that UP's division payment to the short-line destination carrier, the Missouri & Northern Arkansas Railroad ("MNA"), should be treated as a variable cost of the UP and thus subjected to an 180% mark-up to calculate the jurisdictional threshold. In other words, UP was seeking a movement-specific adjustment based on what UP actually paid the MNA, and the Board rejected UP's proposed adjustment. As noted, AEPCO seeks no equivalent adjustment here.

⁷ See AEPCO Opening e-workpaper "Opening Variable Cost_AEPCO Position.xls," AEPCO Opening at II-A-7, and BNSF/UP Reply e-workpaper "Quarterly VC.xlsx." These figures vary slightly based on whether one uses Base Year 2008 URCS costs or Base Year 2009 URCS costs, indexed quarterly. The figures in the text above reflect the 2008 URCS costs. On Opening, AEPCO calculated figures only through 4Q09. The text of the BNSF/UP Reply addressed the figures only for 1Q10.

KCP&L did present an “alternative suggestion” under which the movement would be costed as a single-line movement by UP, similar to AEPCO’s proposed method. However, in *KCP&L*, the results of the interline and single-line approaches were virtually identical, *i.e.*, within pennies per ton. The situation and impact in AEPCO’s case are far different.

In particular, the MNA handled the movement for 154 miles and was responsible for the unloading operations at KCP&L’s plant. The MNA was thus responsible for providing a major portion of the transportation at issue in KCP&L’s rate case.⁸ In contrast, SWRR handles the AEPCO New Mexico movements for only 53.3 miles, is required to do so in no more than {

}, and is not responsible for loading or unloading. SWRR’s involvement in AEPCO’s movement is thus nominal or even minimal, especially compared to the MNA’s involvement in KCP&L’s movement. Yet, because the SWRR segment is so short, inclusion of the SWRR and the associated additional interchange cost results in a substantial increase in the variable cost, whereas the impact of including the MNA in KCP&L’s costs was *de minimis*. In light of these very substantial factual distinctions, the Board’s treatment of the MNA in *KCP&L*

⁸ By way of comparison, UP itself handles AEPCO’s New Mexico movements for only 149.7 miles, slightly less than the distance MNA handled KCP&L’s movements.

can hardly be said to be dispositive for AEPCO's situation, or even particularly helpful for BNSF/UP's position.⁹

Major Issues also provides no support for BNSF/UP's position. *Major Issues* excludes movement-specific adjustments in calculating variable costs. But AEPCO is not seeking a movement-specific adjustment, *i.e.*, AEPCO is not seeking an adjustment based on what BNSF actually pays SWRR, what it actually costs BNSF to exchange with SWRR at Rincon, what it actually costs SWRR to operate between Rincon and Deming, etc.¹⁰ Instead, AEPCO's position is that no interchange with, and no costs of, SWRR should be recognized because SWRR operates only as BNSF's sub-contractor, and SWRR is not a party to the relevant common carrier pricing authority. In addition, inclusion of SWRR as an interline carrier in this instance produces a higher variable cost, which is a perverse outcome for an arrangement entered into to reduce BNSF's costs. To reward BNSF/UP with a *higher* jurisdictional threshold because one of them

⁹ The Board in *KCP&L* noted that neither UP nor the shipper "objected to application of the proposed rules in this proceeding when given the opportunity to do so" in *Major Issues*, and the Board concluded that "any argument that *Major Issues* should not apply here is therefore waived." *KCP&L* at 7. When it initiated *Major Issues*, the Board also explicitly suspended the then-applicable procedural schedule for discovery and submission of evidence in *KCP&L*. *Major Issues*, Notice of Proposed Rulemaking (STB served Feb. 27, 2006), at 2. As AEPCO filed its rate case more than three years after the *Major Issues* rulemaking concluded, waiver cannot possibly apply as against AEPCO.

¹⁰ As discussed next, an adjustment based on {

}

entered into a cost-*reduction* arrangement makes no economic sense whatsoever and would constitute an arbitrary and capricious result.

That said, a movement-specific analysis based on the actual compensation that BNSF provides to SWRR demonstrates that AEPCO's costing treatment substantially overstates BNSF's costs.¹¹ The \$ { } for the 117 tons per car for Lee Ranch and El Segundo movements. In contrast, the variable cost associated with operation over the Rincon-Deming segment, assuming that the SWRR lease was not in effect and that BNSF conducted the operations itself, would be \$59.67 per car or \$0.51 per ton (for Lee Ranch and El Segundo). BNSF thus reduces its variable costs by { } by having SWRR operate over the segment instead of BNSF itself. The arrangement is "win-win" for BNSF and SWRR as BNSF reduces its costs and SWRR presumably earns enough to have induced its entry into the arrangement.

Costing the segment for URCS Phase III purposes as if BNSF still directly operated over the segment still leaves BNSF with { }. The savings

¹¹ Because of BNSF's belated disclosure of the SWRR's involvement in AEPCO's New Mexico movements, AEPCO did not have an opportunity to seek discovery from SWRR. Based on AEPCO's prior rate case and the experience of its counsel and consultants with other short line railroads in other rate cases, AEPCO expects that such discovery would have been a futile exercise as SWRR would not have data that would prove meaningful for costing purposes.

differential is also marked up by 80% to reflect the jurisdictional threshold level.

In other words, if BNSF still operated over the segment, its associated jurisdictional threshold for the segment would be {

}, as compared to treating the SWRR division as a variable cost, which translates into a jurisdictional threshold of { }.¹²

Such an excess recovery of { } is surely more than adequate. By comparison, SWRR's entire revenue fee is only { } per car.

In contrast, BNSF/UP's proposal to treat the SWRR as a third carrier in the movement and include the costs of an additional interchange only exacerbates the already excessive recovery. Under BNSF/UP's approach, the associated variable cost for the Rincon-Deming segment rises to \$0.91 per ton or \$106.47 per car. This figure is {

} fee that BNSF actually pays to SWRR for operating over the segment. In other words, BNSF/UP seek to recover from AEPCO { } of what BNSF actually pays SWRR for the segment -- at the variable cost level. At the jurisdictional threshold level, BNSF/UP would recover {

} of BNSF's actual payment to SWRR.

¹² If the SWRR division were treated as a revenue offset instead of a variable cost, it would not be marked up to the 180% level. The division constitutes the full compensation to SWRR, that is, SWRR deems the payment sufficient to cover its total costs, including overhead and/or fixed costs, and not its variable costs. Furthermore, marking the payment up by 180% at the jurisdictional threshold level will not increase SWRR's compensation. The revenue offset treatment is thus fully appropriate under the circumstances.

Under AEPCO's method, BNSF/UP still recover more than { } of what BNSF actually pays SWRR (row 2 divided by 4). However, under BNSF/UP's proposed method, AEPCO would be forced to pay { } what BNSF actually pays SWRR (row 1 divided by row 4). Such a massive over-recovery does not reflect a rational costing approach. A shipper should not be forced to pay substantially more (row 3) because a carrier enters into an arrangement that reduces its costs. The result under AEPCO's method (row 2) provides more than adequate compensation to BNSF/UP relative to their actual costs.

AEPCO's method is also consistent with and would further the policy goals that the Board articulated in eliminating movement-specific adjustments to Phase III URCS costs. As noted *supra*, SWRR is not a party to the joint rates established by BNSF and UP for AEPCO's New Mexico movements in Common Carrier Pricing Authority BNSF 57966. SWRR is also not a defendant in this proceeding. Incorporating additional data for a carrier that is not even formally part of the New Mexico issue traffic movement adds complexity and difficulty, as confirmed by BNSF's failure even to mention SWRR in its original discovery response. Including SWRR and the additional associated interchange is thus very much the functional equivalent of the sort of movement-specific adjustment that the Board sought to eliminate in *Major Issues*.

Additionally, formal inclusion of the SWRR in the costing as sought by BNSF/UP constitutes the sort of movement-specific adjustment that causes the

resulting variable cost calculation to become less, and not more, accurate.

Specifically, it enables the Defendants to exploit a limitation in URCS Phase III, namely the failure to distinguish between different types of interchanges, *i.e.*, those that involve a mere crew change and those that involve more substantive activities (such as switching or maintenance of cars and locomotives, refueling, etc.). Use of Phase III URCS also transforms an arrangement entered into for the purpose and the demonstrated effect of reducing costs into one that increases the costs. *Major Issues* was not intended to result in such alchemy.

The SWRR situation is also not one where “the URCS program already tailors the variable cost calculation to the movement at issue.” *Major Issues* at 52. Instead, the limitation is that the URCS Phase III program does not distinguish between run-through and more costly forms of interchange.

Accordingly, excluding SWRR and the associated interchange would be consistent with the Board’s stated view that “we do not believe that use of movement-specific adjustments leads to a more accurate result than using the URCS system-wide average.” *Major Issues* at 51. Nor does inclusion of SWRR as a separate carrier in the movement help verify that the Defendants are “still earning a reasonable return,” *id.* at 51 n.157, since formal inclusion of SWRR causes the analysis to yield an excessive return relative to both BNSF’s general and specific costs, as demonstrated above.

SWRR is ultimately nothing more than a sub-contractor for BNSF: BNSF merely pays SWRR a fee to perform a service that BNSF would have to

perform itself if SWRR did not exist. Separate costing of the SWRR's operation over the Rincon-Deming segment produces a jurisdictional threshold determination that less accurately reflects BNSF's costs in arranging for SWRR to provide service over the segment. Conversely, excluding the SWRR yields a jurisdictional threshold that more accurately reflects BNSF's costs.

Furthermore, SWRR is not a defendant in this rate case. Its compensation will not be reduced (or increased) as a result of any rate relief that AEPCO obtains. SWRR is a stranger to the rate case, and inclusion of SWRR as a separate entity in determining BNSF/UP's jurisdictional threshold is an analytical exercise with no useful consequence, that is, the equivalent of a bridge to nowhere. Including the SWRR in the calculation of the variable costs for AEPCO's movement would not merely elevate form over substance, but would cause form to supplant substance altogether.

Accordingly, the Board should calculate the jurisdictional threshold for AEPCO's New Mexico coal movements as if SWRR did not exist.

2. Use of Actual Belen-Deming Routing

BNSF/UP's second claim regarding the jurisdictional threshold of the New Mexico issue traffic is that if AEPCO's routing of the New Mexico issue traffic movements through Vaughn, NM and El Paso, TX is accepted for SAC purposes, then the variable costs should be calculated using that longer SARR routing and not the shorter real-world routing through Belen-Rincon-Deming, NM. BNSF/UP Reply at II.A-4.

BNSF/UP claim that “logic and fairness require the Board” to adopt their approach. *Id.* But there is no logic or fairness in BNSF/UP’s position. As explained in Part III-A, the Board authorized AEPCO to use the Vaughn-El Paso routing in AEPCO’s earlier rate case, and there was no suggestion that the variable costs and the jurisdictional threshold needed to be increased accordingly. Moreover, the use of a longer routing for SAC purposes is expressly approved in the *Coal Rate Guidelines*,¹³ again without any suggestion of increasing variable costs. AEPCO’s SAC analysis reflects the additional costs associated with the longer routing, and that is all that is required under the Board’s rerouting standards.

Furthermore, maximum reasonable rates are already determined as the higher of (a) the jurisdictional threshold or (b) constrained-marking pricing, which effectively means stand-alone cost. Railroad defendants thus already benefit from the real-world inefficiencies inherent in the actual operations measured by variable costs.¹⁴ In addition, railroad defendants already benefit from the excess return embodied in using the replacement/opportunity costs embodied

¹³ “In selecting the route of a SAC railroad, for instance, an overriding factor may be the effort to lower costs by taking advantage of economies of density.... Thus, the stand-alone railroad may not represent the shortest route for the captive shipper, but the one with the highest traffic densities.” *Coal Rate Guidelines, Nationwide*, 1 I.C.C.2d 520, 543-44 (1985).

¹⁴ In theory, there is a right to obtain a more efficient joint rate through routing under 49 U.S.C. § 10705, but that right is very difficult to exercise in practice. *See, e.g.,* Docket No. 42104, *Entergy Arkansas, Inc. and Entergy Services, Inc. v. Union Pacific R.R. and Missouri & Northern Arkansas R.R. Co., Inc.*

in SAC relative to the embedded/depreciated investment costs that railroads encounter in the real-world. Railroads get the benefit of whichever approach yields the highest rate.¹⁵ There is thus no basis in “logic” or “fairness” to allow BNSF/UP to inflate the jurisdictional threshold to reflect higher variable costs that they do not actually incur, just as there is no basis to require that the SAC result be inflated by requiring the SARR to violate its least-cost, most-efficient definition, a matter addressed in Part III.

BNSF/UP also have not provided any statutory support or precedent for their position, and there is none. Under the statute, 49 U.S.C. § 10707(d)(1)(B), “variable costs ... shall be determined only by using such carrier’s unadjusted costs.” AEPCO is hard-pressed to find an appropriate label for the costs that BNSF/UP are seeking to recover here, but the costs would, at a minimum, have to be considered “adjusted costs” because use of a hypothetical routing to increase the real-world costs certainly does not represent “unadjusted costs.” BNSF/UP also do not identify any instance where the jurisdictional threshold has been based on a longer routing than what the defendant(s) utilize in the real world.

The Board must reject this gross overreaching on the part of BNSF and UP and should do so in no uncertain terms.

¹⁵ If the SAC routing were shorter than the real-world routing, one doubts BNSF/UP would support use of the shorter routing for calculating the jurisdictional threshold. In that regard, the *Coal Rate Guidelines* contemplate that the SAC need not be based on a railroad at all, 1 I.C.C.2d at 543, which could result in a much more direct route.

II. B. QUALITATIVE MARKET DOMINANCE

As noted *supra*, BNSF/UP do not contest AEPCO's demonstration of their qualitative market dominance. BNSF/UP Reply Evidence at II.A-5.

Specifically, AEPCO presented the Arizona & Northern Railroad (“ANR”) as its hypothetical least-cost, most-efficient stand-alone railroad (“SARR”) for SAC purposes. AEPCO configured the ANR to serve all of the issue traffic, meaning coal moving (a) from the Lee Ranch and El Segundo Mines in New Mexico, (b) mines in the Northern Powder River Basin (“NPRB” or “PRB”) in Wyoming and Montana served exclusively by BNSF, and (c) the new Signal Peak Mine in Montana starting in 2012. For ease of discussion, Signal Peak is sometimes treated as being in the NPRB.

AEPCO’s configuration reflects and complies with the Board’s rulings in AEPCO’s prior rate case. In particular, the ANR does not utilize any trackage rights of one co-defendant over another. AEPCO’s routing of its New Mexico traffic does not use the Belen-Rincon-Deming routing that BNSF/UP use in the real world. Instead, AEPCO reroutes the New Mexico traffic via Vaughn-El Paso, the same route that UP utilizes for AEPCO’s real world PRB traffic. This rerouting is the same as in AEPCO’s earlier rate case. Unlike AEPCO’s prior rate case, the ANR constructs the Vaughn-El Paso segment and does not attempt to use BNSF’s trackage rights over UP for that (or any other) segment.

Accordingly, all the issue traffic, whether it originates in New Mexico, Wyoming, or Montana, traverses the same route on the ANR from Vaughn to Cochise via El Paso. AEPCO has not improperly combined two SARRs into one. AEPCO has instead presented one SARR, and the different issue traffic movements traverse some common facilities and some facilities that are not

in common. This approach was used in other SAC rate cases including *FMC Wyoming* and the currently pending Docket No. 42110, *Seminole Electric Cooperative, Inc. v. CSX Transportation, Inc.*, as discussed *infra*. The Board has further recognized that a SARR may include facilities that are not directly utilized to handle the issue traffic. *See, e.g., FMC Wyoming, Otter Tail, and WFA/Basin II*. Notably, all of the ANR's facilities are used to handle issue traffic, except for a 52-mile segment between Defiance and Baca, NM.²

In accordance with the decisions in AEPCO's earlier rate case,³ all of the ANR's lines reflect new, original construction, and it does not rely on any trackage rights, except for the segment between Laurel and Jones Jct., MT, where the ANR utilizes the same trackage rights over Montana Rail Link ("MRL"), a non-party carrier, that BNSF utilizes.⁴ Use of a defendant's trackage over a non-

² Defiance is a logical interchange point with the residual BNSF. Defiance is also the location of the Defiance Spur that extends to the McKinley Mine. While the McKinley Mine is in the process of closing, there are additional reserves in the area that could be mined in the future. BNSF/UP did not object to the Defiance terminus.

³STB Docket No. 42058, *Az. Elec. Power Coop. v. BNSF Ry.* (STB decision served Dec. 31, 2001) ("*AEPCO December 2001*"), 6 S.T.B. 322 (2002) ("*AEPCO August 2002*"), (STB served March 15, 2005) ("*AEPCO March 2005*").

⁴ While AEPCO has complied with the Board's prior orders, AEPCO's position remains that imposition of any additional burdens on a SARR in a rate case that involves more than one defendant violates the *Coal Rate Guidelines*, SAC and contestable market theory, sound public policy, and Congressional intent. The Conference Report for the Staggers Rail Act of 1980 specifies that: "The Conference substitute maintains the requirement that joint rates must be reasonable. The conferees intend that the rate standard for the reasonableness of joint rates shall be the same as for all rates." H.R. Rep. No. 96-1430 at 90 (1980). Accordingly, a complainant in a joint rate case should be able to present a SARR

defendant is entirely consistent with precedent and SAC theory. To prevent a SARR from stepping into a defendant's trackage rights under such circumstances would constitute an impermissible entry barrier.

As noted, AEPCO reroutes the issue New Mexico traffic through Vaughn-El Paso rather than through Belen-Rincon-Deming. The Vaughn-El Paso routing is longer, but AEPCO has accounted for all of the additional costs associated with the longer routing, consistent with Board precedent. *See, e.g., Duke/NS.*⁵ Furthermore, *Coal Rate Guidelines* expressly contemplated that a SARR might use a longer routing to achieve desirable economies of density. "In selecting the route of a SAC railroad, for instance, an overriding factor may be the effort to lower costs by taking advantage of economies of density.... Thus, the stand-alone railroad may not represent the shortest route for the captive shipper, but the one with the highest traffic densities." *Coal Rate Guidelines*, 1 I.C.C.2d 520, 543-44 (1985).

that combines the traffic and facilities of the defendants, is not limited to replacing only one defendant along any segment, and is able to utilize any and all of the trackage of the defendants, even if they are over another defendant. *A fortiori*, the SARR should not be restricted to the defendants' existing interchange points.

⁵ AEPCO's calculation for ATC and MMM purposes utilizes the actual routing of the issue traffic following the Board's decision in *WFA Basin II* at 15 that "ATC will allocate revenues using the ... predominant route actually used by the defendant carrier to move the traffic in question." Furthermore, BNSF, in the narrative of its Reply Third Supplemental filing in STB Docket No. 41191 (Sub-No. 1), *AEP Texas North v. BNSF* (dated March 19, 2007), at 16, stated that "BNSF agrees that the variable costs should be the same for both purposes, and thus BNSF used the same variable costs for MMM as it uses for ATC."

The Vaughn-El Paso reroute is especially needed here to avoid cross-subsidy problems with the Belen-Rincon-Deming routing under the standards that the Board adopted in *PPL Montana* and *Otter Tail*. In any event, the Vaughn-El Paso routing was specifically proposed and approved in AEPCO's earlier rate case (subject to the Board's determination that AEPCO could not use trackage rights of one defendant over another, and the ANR does not utilize such trackage rights). AEPCO's other reroutes (Stratford-Amarillo-Vaughn and Orin Jct.-Wendover-Guernsey) are modest, and all the associated costs are reflected in the DCF analysis.

AEPCO also replaces only one of the defendants over any given segment and generally avoids combining the traffic of the two defendants, consistent with the ruling in AEPCO's prior rate case, with limited exceptions where there were special considerations. One such exception is for the Pueblo-Stratford-Amarillo-Vaughn segment. The ANR replaces BNSF between Pueblo and Stratford, but includes UP coal traffic that actually traverses that line using trackage rights. As the RTC analysis requires that AEPCO actually model the UP traffic, the appropriate analysis from a contestable markets perspective is to incorporate all of the costs of handling the traffic and the associated revenues. The other exception is the Denver-Pueblo segment, where BNSF and UP generally have parallel tracks and reciprocal trackage rights. BNSF's and UP's operations over that segment are effectively merged, there is no capital payment for the

trackage rights, and the trackage rights payments thus do not reflect the true economic cost of the facilities.

Since AEPCO generally can replace only one defendant at a time along any segment, the ANR requires a connection or junction between its BNSF and UP segments in order to “switch” from replacing one defendant to the other. The ANR utilizes Vaughn as the single location for that connection, the same location that AEPCO utilized with Board approval in its prior rate case. The Board explained in the earlier rate case that since “BNSF and UP are themselves free to alter or vary their routing of AEPCO’s movements in this manner at any time (by mutually changing the interchange point) without needing AEPCO’s consent and without affecting the joint rate charged to (and challenged by AEPCO),” AEPCO’s adoption of an alternate routing and associated interchange “would seem to be permissible, so long as AEPCO had not specifically requested the routing that the defendants currently use,” which AEPCO had not and did not. *AEPCO August 2002*, 6 S.T.B. at 327. Vaughn is thus an appropriate junction point, even if BNSF and UP do not actually interchange the issue or other traffic at that location.

In short, the SARR that AEPCO presented in its Opening Evidence complies with applicable SAC principles and precedents, including those in AEPCO’s prior rate case.

In their Reply Evidence, BNSF/UP seek to attack the basic design of the ANR in several fundamental respects. BNSF/UP also attack a number of elements of AEPCO's calculation of the ANR's traffic, revenues, and divisions. In this Rebuttal Evidence, AEPCO responds first to BNSF/UP's fundamental attacks and then addresses the more specific criticisms of AEPCO's traffic and revenue calculations.

1. **Stand-Alone Traffic Group**

a. **Permissibility of a Single SARR**

BNSF/UP's most fundamental, and most voracious, claim is that AEPCO's use of a single SARR for both its New Mexico and its PRB (including Signal Peak) traffic is impermissible and that AEPCO is instead required to present two separate SARRs, one for the New Mexico traffic, and the other for the PRB traffic. BNSF/UP claim that AEPCO's approach directly violates the Board's orders in AEPCO's prior rate case and presents an impermissible cross-subsidy.

BNSF/UP's contentions are erroneous and rest on a misconstruction of relevant fact, law, and policy.

First, as a factual matter, AEPCO's New Mexico and PRB movements do not rely on entirely separate facilities. Instead, they share the approximately 470 route miles of ANR track between Vaughn and Cochise. The 470-mile distance exceeds the total length of the SARRs in at least three other rate cases, *APS*, *PSCo/Xcel*, and *WFA/Basin*. The direct investment associated with

the 470 miles is at least \$1.4 billion, based on the average investment per route mile contained in AEPCO's Rebuttal Evidence.⁶ The presence of such common facilities demonstrates that the ANR is not two separate SARRs, but is instead one SARR that has a common facility and then two main lines to serve the issue traffic that originates in New Mexico and the PRB.

Within the context of the shared facilities, the 259.6-mile segment from Defiance to Vaughn, which BNSF/UP claim is the source of cross-subsidy,⁷ is hardly inordinate. In fact, it amounts to little more than half (55%) the length of the Vaughn-Cochise segment, over which all of the issue traffic passes, and is thus a modest extension of the Vaughn-Cochise segment that handles all of the issue traffic.

Furthermore, there is nothing particularly novel in a SARR design that involves main lines that branch in different directions and handle different traffic flows with different traffic densities. For example, the SARR in *FMC Wyoming v. Union Pacific R.R.*, 4 S.T.B. 699 (2000), ran from Portland, OR to Gibbon, NE, where it split into two segments, one going to Chicago, IL (approximately 618 miles), and the other going to Kansas City, MO (approximately 288 miles). In addition, the SARR had a 375-mile extension into the PRB from O'Fallons, NE to Caballo Jct., WY, even though the issue traffic

⁶ See AEPCO Rebuttal e-workpaper "Exhibit III-H-1 Reb.xlsx."

⁷ Oddly enough, BNSF/UP's claim in AEPCO's prior rate case was that the PRB movements cross-subsidized the New Mexico movements, as addressed *infra*.

included no PRB coal movements. The Board did not find that the FMC SARR's configuration posed any cross-subsidy problems, and the PRB extension was over 100 miles longer than the ANR's Defiance-Cochise segment. In addition, the Board required that FMC's SARR be extended from Kansas City, KS to Kansas City, MO, where "some of the soda ash traffic covered by the complaint is currently delivered." 4 S.T.B. at 724. The Board explained that "a SARR must either be designed to provide complete service to all the traffic at issue or include the costs of providing any additional or substitute service that would be needed to complete the transportation covered by the challenged rate." *Id.* For the ANR to accomplish the task set by AEPCO's complaint, its lines must extend to coal origins in both New Mexico and the PRB. The ANR would be deficient if it did not do so.⁸

Similarly, Seminole, the shipper in Docket No. 42110, *Seminole Electric Cooperative, Inc. v. CSX Transportation, Inc.*, has proposed a SARR with main lines that have a "Y" configuration from Folkston, GA, with one line extending south approximately 87 miles to Seminole's plant, another line

⁸ If AEPCO so desired, AEPCO could proceed with two separate, albeit partially overlapping, SARRs, but AEPCO is not required to do so. For the Board (and, *a fortiori*, BNSF/UP) to require that AEPCO adopt a particular configuration in advance would conflict with the shipper's necessary freedom to construct a SARR to handle its traffic at the least possible cost. "The purpose of a SAC analysis is to determine the *least* cost at which an efficient competitor could provide the service... Thus, we will not limit parties in the matter suggested by the railroads.... The parties will have broad flexibility to develop the least costly, most efficient plant." *Coal Rate Guidelines*, 1 I.C.C.2d at 542-43 (original emphasis).

extending about 778 miles northwest, and another line extending 1,046 miles to the northeast. The termini of the Northwest and Northeast lines are more than 500 miles apart. In addition, the Northeast line, while it is by far the longest, also has considerably lower densities. This configuration would seem far more objectionable than the ANR in terms of cross-subsidy concerns, but no claim of improper configuration has been raised on that basis in the Seminole rate case.

McCarty Farms v. BNSF, 2 S.T.B. 460, 489 (1997), provides another example of a more complicated SARR with different densities, products, and flows of issue traffic.

AEPCO's desire to configure a single SARR that covers as much of its coal needs as possible is entirely logical in terms of efficiency and simplicity, particularly as compared to the burden of preparing two separate SARR presentations.⁹ Having to prepare separate SARRs would increase the cost and complexity of the undertaking, which would benefit BNSF/UP and not AEPCO. As noted, *Coal Rate Guidelines* makes clear that the shipper has the flexibility and discretion to tailor the SARR to meet its needs. As explained elsewhere, AEPCO

⁹ AEPCO is a relatively modest-sized shipper, as its maximum annual volume is 1.5 million tons. AEPCO thus has a very legitimate interest in avoiding the burdens inherent in making multiple SARR presentations, especially as the burdens in rate cases have increased in recent years (*e.g.*, ATC and MMM calculations, the need for RTC simulations and greater specificity in staffing arrangements, *etc.*). Moreover, the Board has recognized that the need for analytical rigor should vary depending on the size of the rate case, as reflected in the promulgation of simplified SAC and the three-benchmark methodologies for smaller rate cases. STB Ex Parte No. 646 (Sub-No. 1), *Simplified Standards for Rail Rate Cases* (STB served Sept. 4, 2007).

has a very real and pressing need to be able to ship coal from the NPRB and Signal Peak origins, and AEPCO's use of a single SARR to handle shipments from multiple origins is logical, reasonable, and efficient.

Requiring AEPCO to challenge the New Mexico and the PRB rates through separate SARRs would also deprive AEPCO of economies of scale. *Coal Rate Guidelines* recognized that a shipper was entitled to realize in full all available "economies of scale, scope, and density," regardless of whether they are presently being realized by the incumbents in the real world. Indeed, that is one of the prime purposes of the stand-alone constraint:

If the current carrier is fully efficient and realizes economies of scale, scope and density, its existing configuration will yield the lowest overall cost of service. If not, a captive shipper can have its rates based on the lower costs of an alternate, "stand-alone" system in which the plant size and traffic base are designed to maximize the efficiencies and production economies.

Coal Rate Guidelines, 1 I.C.C.2d at 542.

By including the Defiance-Vaughn segment within a single SARR, AEPCO is attempting to realize and reflect the economies and efficiencies that BNSF and UP regularly utilize in operating their systems and serving AEPCO and other shippers included within AEPCO's traffic group. To prevent AEPCO's SARR from benefitting from those economies of scale would be to impose an impermissible entry barrier. "[T]he entrant suffers no[] disadvantage in terms of production technique ... relative to the incumbent..." William J. Baumol,

Contestable Markets: An Uprising in the Theory of Industry Structure, 72 Amer. Econ. Rev. 1, 4-5 (March 1982), *quoted in Coal Rate Guidelines*, 1 I.C.C.2d at 528.

BNSF/UP further accuse AEPCO of “having ignored the Board’s prior warning against presenting a combined challenge to New Mexico and PRB rates without addressing ‘the potential distorting effect of including PRB traffic that shares few facilities with the New Mexico ... traffic in a combined SAC analysis.’” BNSF/UP Reply Evidence at III.A-6, quoting *AEPCO August 2002*, 6 S.T.B. at 329. But it is critical to place the Board’s ruling in context. Doing so reveals that AEPCO has complied with both the letter and spirit of the Board’s earlier rulings and that BNSF/UP have reversed their position substantially from the earlier case.

First, as a factual matter, it is simply not the case that the portion of the SARR utilized for handling the New Mexico issue traffic shares few commonalities with the facilities used to handle the PRB and Signal Peak traffic. To the contrary, over 64% of the route miles used to move the New Mexico traffic is also utilized to transport the NPRB and Signal Peak traffic.¹⁰ The vast majority of facilities used to handle the New Mexico issue traffic thus also serve to handle the PRB and Signal Peak traffic. As a consequence, these are not “essentially ...

¹⁰ The distance from Defiance to Vaughn is 259.6 route miles, and the distance from Vaughn to Cochise is 470 route miles. So, the total distance is 729.6 route miles, of which the Vaughn to Cochise segment used by all the issue traffic is 64.4%.

separate rate challenges” (BNSF/UP Opening Evidence at III.A-6 quoting earlier Board language), but instead they are logically part of the same SARR.

Indeed, BNSF/UP’s charge in the earlier rate case was that the more distant PRB traffic would be subsidizing the New Mexico traffic and for that reason the PRB traffic could not be considered in reviewing the reasonableness of the New Mexico rates. Now, however, BNSF/UP claim the opposite, *i.e.*, that the New Mexico traffic is subsidizing the PRB traffic. The two allegations are not interchangeable. As noted above, most of the facilities used to handle the New Mexico traffic are also utilized to handle the PRB movements to AEPCO.

Moreover, under the “modular” approach that AEPCO suggested, and that the Board endorsed in *AEPCO August 2002*, 6 S.T.B. at 325, 329, the PRB rates would have been adjudged under a combined SARR that included the New Mexico, Colorado, and PRB sub-SARRs.¹¹ The use of the combined SARR to challenge the PRB rates is thus very much what AEPCO proposed and the Board approved in AEPCO’s previous rate case in order to obviate the supposed cross-subsidy problems raised by BNSF/UP in the earlier rate case. AEPCO is

¹¹ In contrast, the New Mexico movements would have been adjudged only under the New Mexico sub-SARR, so that there would be no possible “cross-subsidy” from the facilities used to reach the Colorado and PRB origins. After the decision in *AEPCO August 2002*, AEPCO reached a settlement with UP that mooted the Colorado and PRB portion of the rate case, and AEPCO dismissed its challenge as to those rates and proceeded to challenge only the New Mexico rates. A complicating factor in the earlier rate case was that the Colorado movements involved UP single-line rates, whereas the New Mexico and PRB movements are both BNSF/UP joint rates.

thus complying fully with the Board's prior orders, whereas BNSF/UP have reversed their position and are seeking to confuse the Board into doing the same.

Second, to the extent that BNSF/UP believe that AEPCO's configuration of the ANR embodies a cross-subsidy, the only appropriate course for BNSF/UP to support their allegations is to demonstrate that the attributable revenues for a particular segment do not exceed its attributable costs. In this regard, it is appropriate and necessary to place the Board's statements regarding cross-subsidization and the like in AEPCO's earlier rate case within context.

On August 20, 2002, the Board issued its *AEPCO August 2002* decision cautioning that "cross-subsidization (the recovery of any shipper's attributable costs from other shippers) ... is not [permissible]" and adding that "revenues from non-issue traffic should not be relied upon to contribute to the costs of line segments or facilities to the costs of line segments or facilities that the non-issue traffic would not use." 6 S.T.B. at 324. The same day, the Board also issued its decision in *PPL Montana, LLC v. Burlington N. & S. F. Ry.*, 6 S.T.B. 286 (2002), adopting a specific test for determining if a segment is impermissibly cross-subsidized, namely, whether a particular SARR segment is not self-sustaining because its SARR revenues do not cover its attributable costs. Where a segment fails this test, the result is that issue traffic utilizing that segment of the SARR generally cannot obtain any SAC relief, as was the result in *PPL Montana* itself.

In STB Docket No. 42071, *Otter Tail Power Co. v. BNSF Ry.* (STB served Jan. 25, 2006), the Board expanded and elaborated upon the *PPL Montana* cross-subsidy test. The Board explained that even if a segment passed the *PPL Montana* test, “[a] refinement to the Board’s cross-subsidy is needed, however, to ensure that the agency itself does not create a cross-subsidy when we set a rate prescription.” *Otter Tail* at 10. Accordingly, “the internal cross-subsidy analysis described in *PPL* should be applied not only as a threshold inquiry, but also as a limitation on potential rate relief, to ensure that no impermissible internal cross-subsidy is created through any rate prescription.” *Id.* at 9.

The Board has made clear that the *PPL Montana/Otter Tail* approach constitutes its operative cross-subsidy test. For example, in *WFA/Basin*, BNSF argued for a more demanding test that would prevent revenues from higher-density SARR segments from paying for any portion of SARR facilities on lower-density segments, which appears to be the result that BNSF/UP seek to achieve here by isolating the New Mexico movements from the ANR. The Board squarely rejected BNSF’s contentions:

BNSF has failed to explain why the Board should not use its established test for detecting an impermissible internal cross-subsidy. Moreover, BNSF’s approach is flawed because it does not permit the disputed traffic to make any contribution to unattributable operating costs. Having failed to identify any section of the SARR that is not self-supporting, BNSF has not met its burden to demonstrate that the SAC presentation rests upon an improper internal cross-subsidy. We will therefore include this disputed traffic in our analysis.

WFA/Basin I at 10. BNSF/UP's claims should be given no more credence here.

BNSF/UP are hardly unaware of the Board's adoption of the *PPL Montana/Otter Tail* cross-subsidy test. At the very end of their narrative, they invoke the test and claim that their "ANR-URCS and MMM application work papers show how this calculation would have to be made." BNSF/UP Reply at III.H-17. BNSF/UP offer no further explanation of the mechanics and nature of this adjustment in their narrative and also do not provide any specific workpaper reference.

AEPCO's review of the BNSF/UP workpapers failed to reveal anything even remotely approaching the sort of analysis portended by the text. The only MMM-related workpaper in BNSF/UP's reply is "Reply ANR URCS MMM Model.xlsm." That analysis relies on AEPCO's opening evidence, addresses investment and operating expenses for 2009 only, and utilizes a 2009 URCS based on the ANR,¹² but calculates a 2009 MMM R/VC ratio of 105% (far below the jurisdictional threshold), which it then applies based on the BNSF and UP (not ANR) URCS Phase III costs. BNSF/UP have failed to submit an *Otter Tail*-type analysis, which is required for demonstrating that the SARR embodies an impermissible cross-subsidy.

¹² BNSF/UP's claim in Reply Part III-G that the MMM R/VC ratios should be calculated using the supposed URCS costs of the ANR, and not those of the real world BNSF and UP, constitutes an unwarranted deviation from *Major Issues*. Even if BNSF/UP had presented an *Otter Tail*-type analysis, it would be deficient for this reason alone.

In sum, BNSF/UP have failed to show that AEPCO has improperly configured the ANR as a single SARR, and they have also failed to show that the ANR embodies any improper cross-subsidies.

b. Permissibility of the Vaughn Connection

BNSF/UP's next threshold attack is to claim that AEPCO cannot utilize Vaughn as the point of internal connection between the BNSF and UP portions of its SARR because AEPCO must instead utilize the BNSF/UP real-world interchanges of Deming, for the New Mexico movements, and Pueblo, for the PRB movements. BNSF/UP Reply at I-11-31, III.A-7-9, 21-24.

The practical effect of BNSF/UP's argument is to require AEPCO to construct two separate SARRs because the New Mexico and PRB issue traffic movements have different BNSF/UP interchanges in the real world. The New Mexico SARR would have to utilize Deming as its BNSF/UP connection. Using Deming as the connection for the New Mexico movements would cause the SARR, as BNSF/UP intend, to fail the *PPL Montana* cross-subsidy test on the Belen-Rincon segment.¹³ Requiring the PRB movements to use Pueblo as the point of connection to the UP would prevent the SARR from benefiting from any of the BNSF traffic on the Vaughn-Amarillo-Stratford segment. BNSF/UP thus

¹³ BNSF/UP do acknowledge that the SARR would be able to use BNSF's trackage rights over SWRR, a non-defendant, between Rincon and Deming. BNSF/UP Reply at III.A-24.

seek to immunize their New Mexico rates altogether and greatly reduce, if not eliminate, the prospect of relief on the PRB rates.

BNSF/UP purport to base their position on a combination of legal, factual, and economic assertions. Their basic contention is that they have the right to decide on their point of interchange in order to establish a through route, that they made the decision based on specific considerations, that they cannot presently interchange traffic at Vaughn, that if they changed traffic at other locations they would need to charge a higher rate to reflect different divisions, and that the Vaughn routing for the New Mexico traffic is particularly inefficient. BNSF/UP Reply at I-7-31 and III.A-7-8, 22-24.

BNSF/UP's contentions fail on all grounds.

First, AEPCO successfully proposed the Vaughn connection in its prior rate case. The Board specifically stated in the earlier rate case that since "BNSF and UP are themselves free to alter or vary their routing of AEPCO's movements in this manner at any time (by mutually changing the interchange point) without needing AEPCO's consent and without affecting the joint rate charged to (and challenged by AEPCO)," AEPCO's adoption of an alternate routing and associated interchange "would seem to be permissible, so long as AEPCO had not specifically requested the routing that the defendants currently use," and AEPCO did not specify any routing in its requests resulting in the issue rates. *AEPCO August 2002*, 6 S.T.B. at 327. The Board has thus already decided the issue and rejected BNSF/UP's position.

BNSF/UP seek to dismiss the Board's earlier decision on AEPCO's SARR configuration on the grounds that "[i]f the Board had fully addressed the issue, it would have reached a different conclusion from that suggested by its dicta." BNSF/UP Reply at I-20. But the Board's statement was hardly a gratuitous observation, and the Board did fully address the issue. BNSF/UP had challenged AEPCO's ability to propose a SARR in the prior rate case and had raised issues about what configuration would be permissible. In response, AEPCO presented a very specific proposal for covering the New Mexico, Colorado, and PRB origins, which identified Vaughn as a common point for the different SARR presentations, including the New Mexico SARR. The Board specifically advised AEPCO that it could reroute the New Mexico traffic over the same Vaughn-El Paso segment as the other issue traffic. *AEPCO August 2002*, 6 S.T.B. at 327. In addition, AEPCO used the Vaughn-El Paso routing in its ultimate presentation on the New Mexico rates. While the Board ultimately dismissed AEPCO's rate case, the dismissal was based on AEPCO's use of trackage rights over the Vaughn-El Paso segment, and the Board expressed no dissatisfaction with the rerouting and different "interchange." *AEPCO March 2005*, at 15.

Second, *Coal Rate Guidelines* expressly states that a shipper has the discretion and flexibility to utilize a different, and longer, routing, as AEPCO has done here:

The parties will have broad flexibility to develop the least costly, most efficient plant. The plant should be designed to minimize construction (or acquisition) and operating costs and/or maximize the carriage of profitable traffic. In selecting the route of a SAC railroad, for instance, an overriding factor may be the effort to lower costs by taking advantage of economies of density... Thus, the stand-alone railroad may not represent the shortest route for the captive shipper, but the one with the highest traffic densities. The factors to be considered depend upon individual circumstances. Hence, the optimal size and placement of the physical plant must be determined on a case-by-case basis.

1 I.C.C.2d at 543-44. By forcing AEPCO to utilize a particular connection point, BNSF/UP would deprive AEPCO of the flexibility expressly conferred on complainants by *Guidelines*.¹⁴

Guidelines further stated that the SARR need not be a railroad at all and rejected railroad efforts to preclude use of a coal slurry pipeline for SAC purposes. 1 I.C.C.2d at 543 & n.60. A requirement to utilize an existing real-world interchange, or even any interchange at all, would likely make it very difficult to utilize a pipeline, *e.g.*, a pipeline is unlikely to follow the railroad routing and probably would not have an interchange in any traditional sense.

¹⁴ In *PSCo/Xcel*, the Board rejected BNSF's efforts to prevent a SARR from handling non-issue traffic over a reroute that was longer than BNSF's real-world route. The Board noted that the shipper "could have designed a SARR that would not follow either of the current BNSF routes out of the PRB. Yet, under BNSF's test, because none of its traffic currently moves over such a route, the shipper could include no other traffic beyond its own in the traffic group to share costs -- a result at odds with the *Guidelines*." *PSCo/Xcel I*, 7 S.T.B. at 609. Without the ability to alter the connection point, the SARR's ability to change the routing would be nullified in a joint rate case.

Nothing suggests that pipelines should be appropriate for single-line rate cases, but barred in cases involving joint through rates.

Third, and closely related, the flexibility to adopt a different routing is essential for implementing the least-cost, most-efficient principle upon which contestable markets and SAC theory are founded. BNSF/UP's claim that conferring that discretion on the complainant would distort the SAC cross-subsidy test, BNSF/UP Reply at I-23-29, is just another attempt to undermine the utility of the SAC constraint.

By routing both the New Mexico and PRB traffic over the Vaughn-El Paso segment, and by routing the PRB traffic over BNSF's Pueblo-Stratford-Amarillo-Vaughn lines, rather than utilizing UP's Pueblo-Stratford trackage rights (discussed *infra*) and Tucumcari line between Stratford and Vaughn, the ANR achieves desirable economies of density and scale. The ANR is a lower cost and more efficient SARR with that configuration than without (or else BNSF/UP would not be challenging the configuration). The purpose of the SAC test is to determine if the issue traffic is being forced to enrich the defendants excessively or to cross-subsidize other traffic. By preventing AEPCO from adopting a lower cost, more efficient configuration, BNSF/UP are seeking to impose an impermissible entry barrier and thus game the result to their advantage.

Fourth, BNSF/UP claim that the shipper's designation of the connection point interferes with their legal right to choose the point of interchange. BNSF/UP Reply at I-16-22. However, the SARR "stands in the

shoes” of the defendants. In doing so, it acquires the defendants’ prerogative to select a different point of connection for its segments. AEPCO has designated a connection point that enables it to handle the SARR’s traffic group, including the issue traffic, more efficiently than BNSF/UP. Otherwise, BNSF/UP would not be opposing this aspect of the ANR’s configuration. However, the SARR would fail its intended purpose if defendants could require it to utilize an inefficient configuration.

BNSF/UP’s observation that a shipper has some (limited) ability to challenge the routing for a through rate is beside the point. A shipper need not, and should not, be required to challenge a through rate routing in the real world in order to utilize a different routing in the stand-alone world. SAC is a theoretical construct, and it is entirely natural that a SARR starting from scratch, without any previously sunk costs, would choose a different routing than real-world railroads, which have the benefit of sunk investments. Beyond that, real-world costs, including those sunk investments, serve to define the jurisdictional threshold, and rates are to be set at the higher of the jurisdictional threshold or constrained market pricing (which means SAC for present purposes). BNSF/UP are assured of receiving at least the jurisdictional threshold, which Congress has determined represents an adequate recovery of their real-world costs. As such, imposing the real-world routing on the SAC constraint would undermine its basic purpose.

In addition, the Conference Report for the Staggers Rail Act of 1980 makes clear that the rate reasonableness standards for joint rates should not be

more onerous or demanding than those in single line rate cases. “The Conference substitute maintains the requirement that joint rates must be reasonable. The conferees intend that the rate standard for the reasonableness of joint rates shall be the same as for all rates.” H.R. Rep. No. 96-1430 at 90 (1980). BNSF/UP’s attempt to make the application of SAC more burdensome in a joint rate case thus contravenes the Congressional intent.

Accordingly, whether BNSF/UP currently interchange traffic at Vaughn or even have a functioning interchange at that location is irrelevant, especially as the complainant has the flexibility to adopt a different routing, such as one where rail lines do not currently exist, or to utilize a different technology altogether. Further, the Board has made clear that shippers have the right to reroute traffic, particularly on an internal basis.¹⁵ AEPCO’s use of the Vaughn interchange for both the New Mexico and PRB issue traffic constitutes nothing more than internal rerouting. The shipper is required to account for the costs associated with achieving efficiencies through rerouting, and AEPCO has done so here. For example, AEPCO accounts for the costs of the Vaughn interchange (including the costs of a connecting track), the additional fuel consumed for the longer routing, and the impact of the longer routing on transit time and operating statistics produced by the RTC simulation. Nothing more is or should be required.

¹⁵ BNSF/UP cite to *West Texas Utilities*, 1 S.T.B. at 658 n.41 for the proposition that artificial interchanges can distort the SAC analysis, BNSF/UP Reply at I-25, but that discussion involved an external reroute, and the ANR has none.

Fifth, BNSF/UP also claim that if they were forced to utilize a different interchange, they would have needed to develop different divisions and the rate would be different, meaning higher to reflect the loss of efficiencies and economies. That, too, is completely contrary to SAC theory and the nature of challenges to joint rates. It also totally contradicts the position that BNSF/UP successfully stated in AEPCO's earlier rate case.

In terms of SAC theory, the SARR is a theoretical and hypothetical construct to test the reasonableness of the real world rates. It starts with the equivalent of a clean sheet of paper, and it does not have the benefit of the legacy assets that the real-world incumbents enjoy. Instead, it must create and pay for those assets. It is hardly surprising that a SARR would not retain a segment (Belen-Rincon-Deming) that may have made sense over a hundred years ago and may have returned its investment many times over, but which currently has enough traffic to warrant only its retention, but not its recreation.¹⁶ It is entirely rational that the SARR would choose instead to replicate a higher density line and then reroute additional traffic over that line, even if it adds to the distance. To require the SARR to do something just because that is the way the defendants do it

¹⁶ From time to time, BNSF has indicated that it has plans to abandon the Belen-Rincon segment due to the low volumes. At such time as BNSF does so, BNSF/UP may be entitled to have the jurisdictional threshold based on a longer routing. But BNSF/UP are not entitled to raise the jurisdictional threshold based on a routing that they do not utilize, nor are they entitled to prevent the ANR from adopting a longer reroute that is more efficient in the stand-alone world. BNSF/UP may be entitled to the higher of the jurisdictional threshold or SAC, but they are not entitled to inflate either calculation.

in the real world is to impose an entry barrier and disrupt the least-cost, most-efficient principle that lies at the heart of the SAC analysis.

BNSF/UP's sudden fixation on divisions is also legally irrelevant in the context of a challenge to joint rates. Abundant precedent establishes that a shipper is required to challenge the joint rate as a whole and has no ability to challenge the separate divisions:

The division of the joint rate among the participating carriers is a matter which in no way concerns the shipper. The shipper's only interest is that the joint rate be reasonable as a whole. It may be unreasonable although each of the factors of which it is constructed was reasonable. It may be reasonable although some of the factors, or the divisions of the participants, were unreasonable.

Louisville & N. R.R. v. Sloss-Sheffield Steel & Iron Co., 269 U.S. 217, 234 (1925).

See also Great Northern Ry. v. Sullivan, 294 U.S. 458 (1935) (overturning award of reparations only against a proportional rate that was part of a combination through rate); *Metropolitan Edison Co. v. Conrail*, 5 I.C.C.2d 385 (1989) (dismissing complaint against joint rates where complaint had fully settled with one party to the joint rate). Real-world divisions simply do not enter into the determination of whether a joint rate, such as BNSF/UP have established here, is reasonable.

In addition, BNSF/UP's attempt to rely on their divisions of the AEPCO joint rates completely contradicts their established position that their divisions are irrelevant to AEPCO's rate case. AEPCO did request division

information in its first set of document production requests, but BNSF and UP refused to produce the information on the grounds that the division information was irrelevant. For example, BNSF's objections stated (at p. 18) that "BNSF further objects to subpart (t) of this Request on grounds that it seeks information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence to the extent it seeks BNSF's and/or UP's share or division of the total freight revenues associated with AEPCO trains." See AEPCO Rebuttal e-workpaper "AEPCO RFP 10 and BNSF Response.pdf." BNSF/UP cannot now seek to rely on information that they refused to produce on grounds of relevance.

Moreover, in the earlier AEPCO rate case, AEPCO actually filed a motion to compel the production of the division information after BNSF/UP refused to produce it, but the motion was denied as the Board agreed with BNSF/UP that the information lacked relevance. "UP objects to this discovery request on the ground that rate divisions are not relevant to the development of either variable costs or stand-alone costs.... Accordingly, the motion to compel defendants to produce this information is denied." *AEPCO December 2001* at 7, 8. Having successfully opposed production of division information on the grounds of relevance, BNSF/UP should now be precluded and estopped from claiming that their divisions are of any importance or relevance.¹⁷

¹⁷ See also *FMC Wyoming v. Union Pacific R.R.*, 4 S.T.B. 699, 729-30 (2000) ("It is inappropriate for UP to deny FMC access to actual division data and then to rely on division sheets to rebut the modified mileage block prorate method for only selected traffic."); *Texas Municipal Power Agency v. The Burlington N.*

Accordingly, AEPCO has the discretion to configure the ANR with Vaughn as the single point of connection between the BNSF and UP replacement segments of the SARR. In this respect as well, AEPCO's configuration of its SARR complies completely with the Board's order in the prior rate case, while BNSF/UP have reversed their earlier position in an attempt to confuse the Board into doing the same.

c. Utilization of MRL Trackage Rights

The ANR utilizes BNSF's trackage rights over Montana Rail Link ("MRL") between Laurel and Jones Jct., MT. These are the only trackage rights on the ANR system. The ANR uses the trackage rights as part of its extension in 2012 to reach the Signal Peak Mine. BNSF currently utilizes these trackage rights to serve the Signal Peak Mine and other traffic, and the ANR merely stands in BNSF's shoes, that is, the ANR pays the same compensation, operates over the same trackage, and handles a subset of the same traffic as BNSF.

BNSF/UP state that they have no objection to AEPCO's utilization of the trackage rights to serve the issue traffic itself, but BNSF/UP object to AEPCO's inclusion of non-issue traffic that uses the MRL "bridge" between Laurel and Jones Junction. BNSF/UP seek to exclude approximately 5.6 million

and Santa Fe Ry., 6 S.T.B. 573, 638 (2003) (BNSF estopped from presenting data on special crew costs when it had not produced the data in discovery); and *Potomac Electric Power Co. v. CSX Transp., Inc.*, STB Docket No. 41989 (STB served November 24, 1997) (CSXT precluded from introducing revenue data it did not make available during discovery).

tons of such traffic¹⁸ from the ANR's traffic group altogether. In addition, for 10.4 million tons of non-issue coal traffic and 3.4 million tons of non-coal traffic (based on the presentation in AEPCO's Rebuttal Evidence) that move over other portions of the ANR, BNSF/UP seek to reduce the ANR's division by changing the interchange point with the residual BNSF to Huntley (or Jones Jct.) instead of Laurel. BNSF/UP also seek to change the interchange for coal traffic originating at the Signal Peak mine to Mossmain (Laurel) instead of Jones Jct. for non-issue coal moving to eastern destinations starting in 2012. BNSF/UP Reply at III.A-9-10, 18-21. BNSF/UP assert that "[a]ny allocation of revenue that the SARR obtains from the trackage rights in excess of the trackage fees it pays would be a windfall to the SARR and thus would impermissibly cross-subsidize the issue traffic." *Id.* at III.A-20.

BNSF/UP's objection to the ANR's utilization of the MRL trackage rights and their characterization of the resulting contribution as a "windfall" are unfounded. All the conditions for use of the trackage rights are satisfied. BNSF enjoys and utilizes the trackage rights in the real world. AEPCO is not proposing to reroute any traffic over the trackage rights. Instead, AEPCO is simply incorporating traffic that BNSF already handles over this segment that the ANR utilizes to serve Signal Peak, which is an issue traffic origin. The ANR's

¹⁸ As shown on AEPCO Rebuttal Exhibit III-A-1, this figure is composed of { } tons of consumer traffic, { } tons of industrial traffic, and { } tons of agricultural traffic. These figures are for 2009 and reflect the presentation in AEPCO's Opening and Rebuttal Evidence.

incorporation of the trackage rights and the associated traffic is a natural and logical part of its system. As the Board explained in AEPCO's earlier rate case:

Complainants in rail rate cases have long been permitted to hypothesize a SARR that would utilize trackage rights over another railroad's line for a portion of the route where those trackage rights have replicated how the defendant railroad was actually moving the issue traffic, and where the line has belonged to a third-party, i.e., a railroad that was not a defendant in that rate case. In those cases, use of trackage rights was allowed in the SAC analysis because the third-party carrier was not responsible for providing the service and the revenue requirements of the third-party carrier were not at issue in the rate case. Moreover, as the Board and ICC have explained, in those circumstances, allowing the SARR to have the benefit of the same trackage rights arrangement as the defendant railroad uses to move the traffic involved, at the same trackage rights fee, is necessary for the SARR to "stand in the shoes" of the defendant. Otherwise, the SAC analysis would be based on categories of costs the defendant railroad does not incur. It is well-settled that costs not incurred by the defendant carrier are to be excluded from a SAC analysis.

AEPCO March 2005 at 10-11 (citations omitted); *see also* the discussion at III-B-3-5, *infra*.

If MRL were a co-defendant, some issue might exist as to the ANR's ability to use the trackage rights of one co-defendant over another, but MRL is not a co-defendant. The situation is thus functionally equivalent to the SWRR arrangement that BNSF/UP assert would be available to AEPCO under BNSF/UP's proposed New Mexico ANR routing via Rincon-Deming. BNSF/UP Reply at III.A-24.

BNSF/UP's position is that there is something different about the MRL trackage rights because they occur near a terminus of the ANR system and/or the BNSF uses the trackage rights to handle traffic that moves over other BNSF segments that the ANR does not incorporate. But such distinctions are meaningless. BNSF does handle the traffic over the trackage rights, and the segment is a legitimate part of the ANR system, as even BNSF/UP do not suggest that AEPCO is required to construct the segment. The revenues and associated margins from the traffic are therefore available to help sustain the ANR. In addition, the ANR accounts for all of its own operating expenses while operating on the segment, just as BNSF is accountable for its operating expenses while on the MRL's line. Preventing the ANR from utilizing BNSF's trackage rights over the MRL would constitute an entry barrier and deprive the ANR of revenue and margins that are useful for determining and eliminating the subsidy that the ANR traffic group, including the issue traffic, provides to BNSF/UP's other traffic and/or to BNSF/UP.

The ANR's use of the trackage rights does not constitute gaming or provide a cross-subsidy to the ANR's other traffic. The ATC method for determining divisions on cross-over traffic limits the revenues and margins that the ANR can receive on such traffic. Whatever contribution the traffic makes is then proportionate to the ANR's share of the haul. Moreover, the MMM method of allocating relief further limits the extent to which the issue traffic can benefit from the revenues, margins, and contribution of the segment's traffic.

If including the MRL trackage rights traffic actually resulted in an improper cross-subsidy elsewhere on the MRL system, then BNSF/UP would be entitled, and should be able, to demonstrate the existence of such a cross-subsidy under the standard adopted in *PPL Montana* and extended in *Otter Tail*, as explained *supra*. BNSF/UP have made no attempt to do so, beyond their attempts (a) to require the New Mexico issue traffic to be routed via Belen-Rincon-Deming, and (b) to base MMM on an ANR-specific URCS and thus limit relief over the Vaughn-El Paso segment for the PRB traffic. The flaws in those efforts are addressed elsewhere in this Rebuttal Evidence at III-A-17-27 and III-H-9-22.

Accordingly, the ANR is entitled to use the MRL trackage rights without restriction.

d. Non-Use of Pueblo-Stratford Trackage Rights

While BNSF/UP criticize AEPCO for using trackage rights between Laurel and Jones Jct., BNSF/UP elsewhere assert that the ANR is permitted to use UP's trackage rights over BNSF between Pueblo and Stratford, even though those are trackage rights of one co-defendant over another, because BNSF's revenues over that segment, including the trackage rights received from UP, are sufficient to cover the segment's stand-alone costs. BNSF/UP Reply at III.A-13-14 & n.18. Of course, BNSF/UP elsewhere (*e.g.*, BNSF/UP Reply at III.A-12) maintain that the ANR is required to replace UP, and not BNSF, over that segment because the ANR is supposedly required to make its internal connection between its BNSF and

UP segments at Pueblo, where BNSF and UP interchange the PRB issue traffic in the real world.

AEPCO appreciates BNSF/UP's statement that the ANR could use UP's trackage rights between Pueblo and Stratford if AEPCO so desired. However, AEPCO is not required to do so. In particular, the ANR has the flexibility to make its internal connection at some location other than Pueblo, and AEPCO has chosen Vaughn for that connection for reasons stated *supra*.

Moreover, the fact that the Pueblo-Stratford segment covers its stand-alone costs is hardly exceptional, as the same is true for all of the ANR's segments. However, the fact that the Pueblo-Stratford segments covers its stand-alone costs under the tests as applied by BNSF/UP suggests that the ANR is better off constructing the segment and using it to handle BNSF's traffic, as AEPCO has done, rather than utilizing trackage rights and confining itself to UP's traffic.¹⁹

In short, BNSF/UP's statement regarding the permissibility of use of trackage rights between Pueblo and Stratford is another attempt to increase the ANR's costs and/or decrease its revenues, thereby undermining the nature of the SAC test, in order to permit BNSF/UP to overcharge the ANR traffic group, including the issue traffic, to the benefit of BNSF/UP themselves or their other traffic.

¹⁹ As explained in the next section, there are sufficient reasons for allowing AEPCO to include the traffic that UP routes over this segment as part of the ANR traffic group.

e. **Inclusion of UP Pueblo-Stratford Coal Traffic**

As noted *supra*, the ANR is configured to replace BNSF, rather than UP, on the Pueblo-Stratford segment. However, the ANR traffic group includes some coal traffic that UP handles over the line using the trackage rights it obtained from BNSF.

BNSF/UP's primary challenge to the Pueblo-Stratford segment is that the ANR may replace only UP, and not BNSF, over this segment because BNSF and UP interchange the issue PRB traffic at Pueblo. That theory, and its deficiencies, are discussed at III-A-17-27, *supra*.

In addition, BNSF/UP presumably object to AEPCO's inclusion of UP traffic on a BNSF segment, as they object to inclusion of UP traffic on the Denver-Pueblo segment, where they claim the ANR can replace only BNSF and not include UP traffic. *See, e.g.*, BNSF/UP Reply at I-25 ("For each segment of a route used to test the respective joint rates, only the traffic and revenues of the carrier whose route is being replicated should be included in the SARR's traffic group") (quoting *AEPCO August 2002*, 6 S.T.B. at 329), and at III.A-15-16 (discussing BNSF/UP objections to combining BNSF and UP traffic on the Denver-Pueblo segment, addressed *infra*). While AEPCO addressed the matter in its Opening Evidence at III-A-12-13, AEPCO adds the following elaboration,

particularly to respond to BNSF/UP's similar criticism of the Denver-Pueblo segment addressed next.²⁰

In *AEPCO August 2002*, the Board explained that "our SAC constraint is meant to serve as a practical tool, not a mere exercise in contestable market theory divorced from its purpose of judging the reasonableness of the defendant carrier's pricing" and on that basis held that a complainant could not include in its SARR "another carrier's traffic and revenues that do not or could not reasonably be expected to pay for the defendant carrier's costs." 6 S.T.B. at 328. At the same time, the Board recognized that "where [BNSF] has cost-sharing arrangements in place with [UP] (for example, joint ownership of a line-segment or trackage rights arrangements), it is entirely appropriate to assume that the SARR would have the benefit of the same opportunities under the same terms as UP enjoys." *Id.*²¹ The Board concluded its analysis by stating:

Thus, for each segment of a route used to test the respective joint rates, only the traffic and revenues of the carrier whose portion of the route is being replicated should be included in the SARR's traffic group. But the SARR may be assumed to have the same cost-sharing arrangements as the defendant carriers have on each segment, so long as the terms of those arrangements (including operational provisions and terms of compensation) are the same as those applicable to the defendant carriers.

²⁰ To the extent BNSF/UP have failed to make the claim for the Pueblo-Stratford segment, it may also be deemed waived.

²¹ UP and BNSF are reversed in the original text, as the discussion was directed to UP single-line movements of Colorado coal.

Id. at 329.

UP has trackage rights over the Pueblo-Stratford segment and uses those trackage rights to transport coal. In replacing BNSF along the Pueblo-Stratford segment, the ANR is entitled, at the very least, to replicate the existing arrangement and include the trackage rights fees that UP actually pays BNSF to use that segment. AEPCO has gone further and included actual UP coal movements and moved them to Vaughn for switching to the UP portion of the ANR. The additional degree of inclusion is appropriate on several grounds.²²

First, in order to include the UP traffic even using trackage rights, it becomes appropriate to model the UP trains for purposes of the RTC simulation in order to ensure that the ANR has the necessary capacity. However, if the traffic is modeled as moving on the ANR, as it needs to be, then it is appropriate for the ANR to model the movement in a least-cost, most-efficient manner. As such, it is appropriate for AEPCO to treat the traffic as moving via the ANR, and not via UP, and for the ANR to move the traffic to Vaughn, especially as the ANR does not have (and does not need to have) an interchange with the residual UP at Stratford. For that matter, if the ANR can provide the transportation more efficiently than UP, then UP would logically choose to have the ANR provide the service rather than perform the transportation itself.

²² If the Board were to find that AEPCO is entitled to only the trackage rights fee for the UP traffic, then it would be appropriate to remove the operating expenses associated with the ANR's handling of the UP traffic from Pueblo to Vaughn.

Furthermore, for purposes of applying the SAC relief through the MMM procedure, it does not matter if the ANR's customer is viewed as being UP's customer, UP itself, or some combination of the two. In particular, if UP is viewed as being the customer, then UP would continue to charge its customer the same rate, and UP would receive the benefit of all the savings -- meaning the MMM relief -- resulting from transporting the traffic from Pueblo to Vaughn (and beyond) via the more efficient ANR. Such a result constitutes a Pareto-efficient "win-win" for the ANR and UP.

AEPCO acknowledges that the terms of this arrangement are not identical to those of the existing one where UP pays the trackage rights fee and continues to operate the trains itself between Pueblo and Stratford. However, the arrangement leaves UP no worse off and potentially better off.

In contrast, if ANR were to receive only the trackage rights fee from UP, then significant issues would arise as to whether the UP trackage rights fee should be subject to any of the MMM relief and, if so, how the MMM relief should be applied. If the ANR were merely required to provide the same access to UP as BNSF, then it is not clear, as a threshold matter, that UP should share in the ANR's savings and efficiencies since the UP traffic itself is not fully part of the ANR traffic group.²³ Beyond that, for MMM to apply, it would be necessary to

²³ Excluding the UP trackage rights traffic from the MMM relief would leave more relief to be allocated to the traffic group for which the ANR actually provides the transportation.

calculate a variable cost associated with the trackage rights, *e.g.*, the UP trackage rights traffic would receive relief limited to the below-the-wheel variable costs, whereas other traffic fully handled by the ANR would receive relief based on the full variable costs. Accordingly, an approach that treats the ANR as having performed the actual movement is conceptually and administratively simpler and treats the entire traffic group equitably.

Moreover, positing that UP would agree to have BNSF (or the ANR as its replacement) handle the traffic is not an exercise in pure speculation. In the past, AEPCO, BNSF, and UP (or their predecessors) moved coal through an arrangement where UP (SP/DRGW) served as the originating and terminating carrier and BNSF (ATSF) served as the intermediate carrier between Pueblo and Stratford.

Accordingly, AEPCO's proposed treatment is appropriate under the circumstances. AEPCO is not proposing a sharing arrangement where none exists. Instead, AEPCO is depicting an appropriate treatment consistent with SAC theory where the traffic is presently routed over the ANR's route using existing trackage rights.

f. Inclusion of UP Denver-Pueblo Coal Traffic

Similar issues arise with the segment between Denver and Pueblo. As addressed *supra*, the ANR replaces BNSF and not UP over this segment, as the ANR's internal switch between the BNSF and UP segments occurs at Vaughn. BNSF/UP do not object to AEPCO's decision to serve as the replacement for

BNSF, and not UP, over this segment because BNSF and UP do not interchange the real-world issue PRB traffic until the trains reach Pueblo.

However, BNSF/UP claim that AEPCO may not combine the traffic of the two carriers over this segment. BNSF/UP Reply at III.A-15. On that basis, BNSF/UP delete 284,000 tons of UP 2009 traffic from the ANR altogether and treat another 735,000 tons of UP 2009 traffic as entering the ANR at Pueblo instead of Denver. *Id.* at III.A-16.²⁴ As a related matter, BNSF/UP propose to downsize the ANR's Denver Yard and to downsize the Denver-Pueblo facilities to reflect the reduction in volume. *Id.* & n.20.

As explained in AEPCO's Opening Evidence at III-A-12-13 and 13-14, BNSF and UP each have mainline tracks between Denver and Pueblo that are largely duplicative, except that UP has the only mainline track between Palmer Lake and Kelker. BNSF and UP have trackage rights over each other's lines between Denver and Pueblo, and the co-defendants' compensation arrangement consists of proportionate sharing of maintenance costs and incremental capital costs. There is thus no direct return or reimbursement (return of or on capital) to one carrier for allowing the other carrier to use its trackage. In this sense, the compensation arrangement does not reflect the true economic cost of the facilities.

As a practical matter, the defendants' Denver-Pueblo operations are closely coordinated, and the parallel lines are generally used for directional

²⁴ If AEPCO is not allowed to include this traffic in the ANR, then the associated operating expenses should be removed as well.

running, without distinctions of ownership, to achieve greater efficiencies. While each carrier typically dispatches its own segments, the two carriers' ownership and operations over the segments are indistinguishable as a practical matter.

Under *AEPCO August 2002*, 6 S.T.B. at 328-29, AEPCO is precluded from having the ANR operate over UP trackage rights between Denver and Pueblo. Accordingly, the ANR has constructed the line, including the UP-only line between Palmer Lake and Kelker. The ANR generally follows the Main #2 line, which is the easternmost of the two parallel lines. In the real world, BNSF and UP own different segments of the Main #2 line.

Having constructed that line, the ANR is entitled to take advantage of other traffic, meaning UP traffic, as “where [BNSF] has cost-sharing arrangements in place with [UP] (for example, joint ownership of a line-segment or trackage rights arrangements), it is entirely appropriate to assume that the SARR would have the benefit of the same opportunities under the same terms as UP enjoys.” 6 S.T.B. at 328. However, UP, as noted, pays no capital costs for its use of the BNSF trackage rights. Furthermore, because the ANR (as the BNSF replacement) is required to construct its own track rather than utilize trackage rights over a co-defendant under *AEPCO August 2002*, the trackage rights that BNSF receives over UP in return cannot be utilized by the ANR and are thus of no practical value to the ANR. The combination of the Board's approach and the specifics of the agreement thus make it impossible for the ANR to recreate “the same cost-sharing arrangements as the defendant carriers have on [this] segment.”

Id. at 329. However, it would constitute an impermissible entry barrier to deprive the ANR of the benefits of those arrangements.²⁵

Accordingly, AEPCO has treated the specified UP traffic as if it were handled by the ANR for the same basic reasons stated for the Pueblo-Stratford-Vaughn traffic. (Indeed, a majority of the affected UP traffic handled on the ANR from Denver to Pueblo continues on the ANR to Stratford.) Specifically, AEPCO has modeled the UP traffic as if it were handled by the ANR in order to demonstrate that the Pueblo-Denver segment has adequate capacity to furnish the trackage rights to UP without disrupting the BNSF portion of the operations over that segment. Furthermore, once the traffic is modeled as moving over the ANR, it becomes appropriate for the ANR to actually handle the traffic for several related reasons. First, the ANR's operations are equivalent or superior to those of UP (as well as BNSF) over the segment.²⁶ Second, because the ANR segment has sufficient capacity to handle both the designated BNSF and UP traffic, there would be no logical reason for UP to incur the costs associated with building and maintaining the unneeded line. Third, for MMM purposes, UP itself, as opposed to its customers, can be viewed as receiving the monetary benefits of the ANR's

²⁵ In effect, the Board's prior ruling in *AEPCO August 2002* and the nature of the trackage rights agreement combine to create a Catch-22. AEPCO must construct the line, and once AEPCO does so, it is entitled to assume the benefits of the existing arrangement, but once it builds the line, the existing arrangement provides no benefits.

²⁶ Rebuttal Exhibit III-C-2 shows that for every movement that utilizes the Denver-Pueblo segment, the ANR handles the traffic faster than BNSF and UP.

superior efficiency. Finally, the treatment involves no rerouting of the traffic. AEPCO is simply reflecting a more efficient treatment of traffic along the existing route of movement.

Treating the UP traffic as being handled by the ANR between Denver and Pueblo is thus reasonable and appropriate. Moreover, there is no realistic option to treat UP as paying a fee to the ANR for use of the trackage rights because the existing arrangements call largely for payment-in-kind (use of trackage rights of UP) plus a payment for proportionate direct maintenance of costs (that is, under *AEPCO August 2002*, the ANR cannot use trackage rights over UP for this segment, but must construct it instead). The most reasonable treatment that is available under the circumstances is to treat the UP traffic as part of the ANR traffic group, which is what AEPCO has done. Because AEPCO is thus entitled to handle the UP traffic, there is no need or basis to downsize the Denver-Pueblo segment or the Denver Yard, as BNSF/UP claim in their Reply at III.A-15 &n.20.

g. AEPCO's Continuing Need for PRB Rates

In Part I, BNSF/UP argue that the Board need not and should not prescribe maximum rates for the PRB origins (including Signal Peak) because AEPCO supposedly will not use, and thus has no need for, the rates. BNSF/UP Reply at I-31-38. AEPCO strongly disagrees with BNSF/UP's assertions.

First, BNSF/UP have a duty to establish common carrier rates on request. 49 U.S.C. § 11101. AEPCO requested the rates, AEPCO has utilized the

rates, AEPCO has a continuing need for the rates as explained more fully below, and there is no particular burden on BNSF/UP in maintaining the rates. Moreover, AEPCO does not have any sort of contract with BNSF or UP that applies to transportation from the covered origins, nor does AEPCO have any contracts that preclude it from receiving PRB coal transported by common carrier service. That, by itself, should be enough to dispose of the matter.

Beyond that, both BNSF and UP in recent years made a major effort, which may still be continuing,²⁷ to establish regimes of “public pricing” by which they purport to establish ostensible common carrier rates and arrangements to govern their coal transportation sources. As part of their efforts, they stated that they would no longer offer their services by transportation contracts, and they established rates from origins to destination in the absence of any request from any customers, without regard to the expiration dates of then-existing contracts. A number of shippers (including the Western Coal Traffic League, of which AEPCO is a member) and the Board itself expressed concerns about the legality, effectiveness, and value of those efforts.²⁸ It is rather incongruous for BNSF/UP to complain about maintaining common carrier rates that AEPCO has already utilized when the carriers previously rushed to establish common carrier rates for which there was no customer request at all.

²⁷ BNSF and UP have made no formal announcement that they have abandoned their public pricing schemes.

²⁸ See, e.g., STB Ex Parte No. 669, *Interpretation of the Term “Contract” in 49 U.S.C. 10709* (STB served March 29, 2007), at 4-5.

Moreover, AEPCO has a very real need for access to coal from non-New Mexico origins in a number of important respects. {

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AEPCO's difficulties and delays in getting BNSF/UP to comply with their statutory obligation to establish common carrier rates reinforces AEPCO's need to have rates already in existence. By the same token, BNSF/UP's

demonstrated ability to delay the establishment of common carrier rates enhances their already extensive leverage over AEPCO.

In addition, there are substantial economies and efficiencies to AEPCO in being able to obtain relief through a single rate case, as opposed to having to file another rate case against BNSF/UP (or UP) at such time as AEPCO wants reasonable rates for the transportation of PRB coal.

BNSF/UP correctly note that AEPCO shipped only two trainloads of NPRB coal in 2009. {

} AEPCO thus

continues to have a strong need for and interest in being able to ship these coals.

AEPCO's use or potential use of Signal Peak coal has been constrained by the fact that the mine has not yet commenced full-scale operations and production has thus been limited. Under the circumstances, opportunities for the mine to make third-party sales to relatively modest customers like AEPCO are apt to be constrained. As noted, the Signal Peak coal has a number of desirable qualities, and AEPCO needs to be in a position to weigh that coal against its other options. {

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AEPCO's use of the PRB coals has also been constrained by the high rates that BNSF/UP established for transportation of the coals. AEPCO's analysis shows that the BNSF/UP rates for the PRB coal exceed the jurisdictional threshold by some \$10-\$16 per ton and that the SAC rate should be below the jurisdictional threshold. The excess mark-up above the jurisdictional threshold substantially impairs the economic desirability of the coal. For example, Gillette area coals have a typical heat value of 8,400 Btus/lb, which equates to 16.8 million Btus per ton. The BNSF/UP rates exceed the jurisdictional threshold by some \$11 per ton, which corresponds to over 65 cents per mmBtu on a delivered basis (\$11 per ton divided by 16.8 million Btus per ton). The 65 cents per mmBtu is a huge margin, especially considering that some utilities are able to obtain coal at a delivered cost of under \$2.00 per mmBtu, and many utilities make decisions designed to achieve savings of not more than a few cents per mmBtu. BNSF/UP should not be heard to complain about AEPCO's failure to ship particular coals when their pricing decisions make the coal uneconomic. Stated differently, the railroads should not be able to evade their obligation to establish and maintain reasonable rates by instead establishing rates that are unreasonable.

BNSF/UP's position thus devolves into one where they should not be required to maintain rates, or AEPCO should not be allowed to obtain a rate prescription, because BNSF/UP have established rates that are so high that it makes no economic sense to AEPCO to ship the coal. BNSF/UP should not be rewarded for engaging in such abuse of their market power.

In the legal portion of their Reply, BNSF/UP claim that *AEP Texas 2009* supports their claim that the Board should not prescribe a rate for the PRB origins. BNSF/UP Reply at I-37. As explained more fully in Part I of AEPCO's Rebuttal, *AEP Texas 2009* provides no support at all for BNSF/UP's position. In *AEP Texas 2009*, the Board decided not to prescribe a rate based upon a DCF analysis that showed that the shipper might be entitled to relief only in the last year of a 21-year DCF model, and even then only for a small portion of its shipments, assuming that the forecasts and projections proved accurate.

Otherwise, the shipper was found not be entitled to any relief. *AEP Texas 2009* at 18-19. AEPCO's situation is entirely different, as its DCF analysis shows that:

(a) the SAC level is far below the jurisdictional threshold throughout the 10-year DCF model mandated by *Major Issues*; (b) all the rates should be set at the jurisdictional threshold, which is substantially below the tariff rate level, throughout the period; (c) AEPCO is thus entitled to substantial rate relief for all of its shipments; and (d) the rate relief extends to the PRB volumes that AEPCO has already moved. Under the circumstances, BNSF/UP should not be allowed to evade their responsibility under 49 U.S.C. §§ 10701 and 10704 to maintain

reasonable rates. AEPCO certainly should not be required to seek reparations for each trainload of PRB coal it may move over the next eight years.

2. Volumes (Historical and Projected)

Besides objecting to the AEPCO SARR configuration and related matters addressed above, BNSF/UP take issue with various elements of the calculation of the volumes for the ANR at pages III.A-26-46 of their Reply. As explained below, the BNSF/UP criticisms are largely misplaced. In substantial part, the BNSF/UP Reply mischaracterizes the evidentiary record. In particular, BNSF/UP make improper use of available data and rely on data that they have not made available to AEPCO as well as data that AEPCO could not properly utilize even if it had been made available. In other instances, BNSF/UP claim to rely on more recent data, but that data has been supplanted by other data. Where BNSF/UP's criticisms are well-founded, AEPCO has made modifications in its Rebuttal presentation, but such modifications are limited.

For ease of discussion, AEPCO has generally adopted the organization utilized by BNSF/UP in their Reply.

a. Coal Traffic

i. Base Year and Projected Tonnages -- Issue Traffic

BNSF/UP accept AEPCO's Opening presentation of the issue traffic for the base year and projected tonnages, except for 81,010 tons of 2009 tonnage. BNSF/UP Reply at III.A-27.

In the interests of simplicity, AEPCO accepts BNSF/UP's position.

The following table depicts the issue traffic:

Rebuttal Table III-A-1 Expected AEPCO Coal Shipments (in thousands of tons)						
Year	Origin					Total
	Lee Ranch	El Segundo	Colorado	NPRB MT	Signal Peak MT	
2009	462	638	0	28	0	1,128
2010	{ }	{ }	{ }	{ }	{ }	{ }
2011	{ }	{ }	{ }	{ }	{ }	{ }
2012	{ }	{ }	{ }	{ }	{ }	{ }
2013	{ }	{ }	{ }	{ }	{ }	{ }
2014	{ }	{ }	{ }	{ }	{ }	{ }
2015	{ }	{ }	{ }	{ }	{ }	{ }
2016	{ }	{ }	{ }	{ }	{ }	{ }
2017	{ }	{ }	{ }	{ }	{ }	{ }
2018	{ }	{ }	{ }	{ }	{ }	{ }

Source: AEPCO Rebuttal e-workpaper "Coal Traffic Forecast Rebuttal.xls." Note that the Table does not reflect 197,000 tons that AEPCO received from the McKinley Mine in 2009 because AEPCO has elected not to include those shipments in its SAC analysis.

ii. Base Year Tonnages -- Non-Issue Coal Traffic

On Opening, AEPCO developed the tonnages for non-issue coal traffic by first utilizing actual BNSF and UP data for the 2Q08-1Q09 historical base period to identify movements for potential inclusion in the SARR traffic group, and then using the Annual Energy Outlook ("AEO") April 2009 Update coal production forecast, prepared by the Energy Information Administration ("EIA") of the Department of Energy, to develop volumes for the three remaining

quarters of 2009 (2Q09-4Q09).²⁹ AEPCO employed the AEO April 2009 Update in this manner because BNSF and UP failed to provide the plant-specific forecasts they had provided in prior rate cases. AEPCO Opening at III-A-18. In the absence of standard internal business forecasts that are specific for the traffic group, use of EIA forecast is appropriate. *See, e.g., PSCo/Xcel I*, 7 S.T.B. at 637.

BNSF/UP claim in their Reply that the AEO April 2009 Update understated the extent of the severe economic downturn, and they purport to develop lower volumes for 2Q09-4Q09 based on their actual 2009 volume data. BNSF/UP Reply at III.A-28-31. There are three elements to their criticism.

1. BNSF/UP claim to have allocated 2009 volumes to 2008 origin/destination pairs. They further claim to have accounted for origin switching between mines from (a) BNSF origins (for PRB movements) and (b) UP mines (for origins outside the PRB) on joint UP/BNSF movements, by developing regional growth factors for each destination. BNSF/UP claim to have categorized mines into six origin groups and then compared 2Q08-4Q08 volumes from each region to 2Q09-4Q09 volumes to each region for each individual destination in the coal traffic group to develop a destination-specific growth factor. The growth factor was applied to the 2Q08-4Q08 traffic levels to project 2Q09-4Q09 traffic levels. No growth factor was needed for 1Q09 as AEPCO used actual data for that quarter.

²⁹ For 1Q09, AEPCO was able to utilize actual data. Accordingly, BNSF/UP's criticisms are limited to the 2Q09-4Q09 volumes.

2. As origin switching was not an issue with the UP single-line coal movements in AEPCO's coal traffic group, BNSF/UP purported to identify actual movements in UP's 2Q09-4Q09 waybill data to add to AEPCO's 1Q09 UP coal traffic estimates.

3. BNSF/UP further claim that AEPCO has sufficient information to use the actual 2009 waybill data³⁰ in its Rebuttal. BNSF/UP state that they provided post-1Q09 waybill data as it became available, even after discovery closed and that their Reply contains whatever 2009 waybill data that was not provided before AEPCO filed its Opening Evidence.³¹ BNSF/UP claim that AEPCO has no excuse for not using actual 2009 traffic data.

BNSF/UP's analysis is defective in a number of critical respects.

First, BNSF/UP's approach is designed to systematically understate the traffic that is available to the SARR. BNSF/UP's approach makes some effort to reflect origin-switching, that is, traffic that moves to a particular destination from one origin in the 2Q08-4Q08 time period, but from a different origin (albeit one in the same origin group) in the 2Q09-4Q09 time period. However, BNSF/UP

³⁰ What BNSF/UP refer to as waybill data is actually a spreadsheet that contains a subset of what is often referred as the revenue data or revenue tapes. The spreadsheet data lacks data fields that are needed to link the revenue data with the train and car movement data, including specific train symbols. Moreover, UP did not produce its revenue data, but only a summary of that data, which is even less useful for developing a SARR traffic group.

³¹ BNSF/UP provided 2Q09-3Q09 waybill data in November/December 2009, well after discovery had closed. BNSF/UP used that data, as well as 4Q09 data that they never provided to AEPCO, in developing their Reply traffic volumes.

make no attempt to reflect traffic that moves from new origin groups to existing ANR customers (including off-ANR destinations where the ANR would handle part of the movement) or moves from the covered origins to a different ANR destination or different ANR customer or potential customer. In other words, BNSF/UP's approach at most reflects origin-switching within the same origin region, but they make no effort to reflect traffic that may be lost from one destination, but gained at another destination in the 2Q09-4Q09 period, or traffic moving to a destination that is switched from one origin region to another.³²

The omissions are very significant. BNSF/UP's Reply traffic data shows that approximately 1.5 million tons moved from new origin regions to existing ANR customers in the 2Q09-4Q09 time period, and that approximately 3.9 million tons of coal moved to destinations in the 2Q09-4Q09 time period that did not receive coal from BNSF in the 2Q08-4Q08 period.³³ Such coal may have

³² For example, during 2Q09-1Q09, {

Under their procedure, BNSF/UP excluded coal originating from the Campbell PRB region in 2Q09 even though this traffic was clearly available to and would logically be handled by the ANR. Similarly, BNSF/UP 2009 data show traffic moving from the {

} BNSF/UP excluded this traffic as well. Another example of exclusion is that AEP Texas, an off-ANR destination, received coal only from the Eagle Butte and Rawhide mines in the {

}

³³ See AEPCO Rebuttal e-workpaper "2009 New Movements.xls."

moved via BNSF to the new destinations for a range of factors including (a) new facilities that came on-line, (b) switch to the PRB from other origins, and (c) switch from UP to BNSF as contracts expire. There is every reason to think that this coal would have been part of the ANR's traffic group. Furthermore, it is entirely logical to expect that because the ANR's rates would be lower, the ANR would have captured additional volumes of traffic moving to new destinations or additional volumes moving to existing destinations. However, BNSF/UP's approach systematically excludes such additional traffic, while focusing instead on reducing the growth factor in traffic moving to already served destinations.

The Board has previously criticized railroad attempts to truncate the traffic group presented by a shipper by excluding consideration of additional volumes available to a SARR, for example, by limiting the traffic to specific origin/destination combinations that occur in the base year. *See, e.g., CP&L, 7 S.T.B. at 250* ("An O/D pair-specific approach to the traffic group is too restrictive in this situation. It would be unfair to require the complainant to anticipate specific changes in traffic where traffic patterns are constantly shifting."). While BNSF/UP have made some effort to reflect origin-shifting, their failure to take into account destination-shifting renders their analysis defective as an attempt to depict the volumes reasonably available to the ANR:

The better approach is to view the traffic group selected by [the complainant] here as meant to encompass all coal traffic served by [the defendant] that moves over the lines replicated by the [SARR] ... and to view the particular coal traffic that moved over

those lines in [the base year] as representative of the aggregate traffic that would be expected to move on the [SARR] in future years.

Id. BNSF/UP's approach is thus conceptually defective.

The same defect appears to attach to the BNSF/UP depiction of UP movements, *i.e.*, there is no indication of any attempt to take into account coal volumes moving to new destinations. Furthermore, UP did not present its actual waybill data, but only what purports to be a summary of that data, as discussed *infra*. Accordingly, AEPCO is unable to definitively quantify the volumes that moved to new destinations.

Moreover, BNSF/UP have not provided AEPCO with the data required to include in the ANR's traffic group the trains moving to the new destinations in 2Q09-4Q09. While BNSF/UP did provide waybill data (for BNSF),³⁴ they did not provide the full year 2009 car and train movement data to be utilized with the waybill data. Thus, while AEPCO can estimate that approximately 5.0 million tons of new origin/destination pairs moved on BNSF in 2Q09-4Q09, AEPCO cannot determine the routing of the traffic, which is required for, *inter alia*, identifying the on and off-SARR locations for calculating revenue

³⁴ While BNSF/UP did provide the BNSF waybill data, the UP data consisted of only a brief summary of the 2009 traffic data, and not the waybill revenue data itself. See BNSF/UP Reply e-workpaper "Coal Traffic Forecast Reply.xlsx," worksheet "UP Coal Single Line," rows 19 to 24. Without the waybill information, AEPCO has no ability to identify any new movements that occurred over UP.

divisions under ATC and for conducting the RTC simulation, which includes a comparison of the SARR transit times to those of the incumbents.

Furthermore, even if BNSF/UP had produced the additional data, the task of incorporating that data into AEPCO's Rebuttal presentation would be enormous and impossible to accomplish within the existing procedural schedule or anything close to it. In effect, AEPCO would be required to develop an entirely new traffic group and associated analyses (SARR configuration, operating plan, RTC analysis, ATC, MMM, etc.) based on 1Q09-4Q09 data, rather than the 2Q089-1Q09 analysis that AEPCO utilized. AEPCO would effectively be required to "start from scratch" in terms of matching the revenue, car, and train movement data (and developing variable cost and density data for all new selected movements), an exercise that could take months, cost in excess of a million dollars, and cause BNSF/UP to seek the opportunity to submit surrebuttal.³⁵

BNSF/UP are not entitled to pose that sort of burden on AEPCO.

Moreover, the approach that BNSF/UP propose -- relying directly on historical traffic to determine the base year traffic group -- is ultimately infeasible.

Under their approach, a shipper would file its rate case, but could not begin to

³⁵ AEPCO (or, more accurately, its consultants) lack the "front end" that BNSF and UP are believed to have for their data systems. In other words, even if BNSF and UP do produce to AEPCO the actual data that the railroads rely on internally, the railroads have data manipulation and integration tools that are unavailable to AEPCO that allow the railroads to manipulate that data on an automated basis using preexisting query and reporting applications, whereas AEPCO must develop specialized ad hoc programs and applications to work with the data.

develop its traffic group (or the rest of its SARR) until approximately fifteen months later, that is, after four quarters of historical data had accumulated and been produced from the railroad(s) to the shipper. The shipper would then need roughly another six months to select the traffic group and develop its RTC analysis. Twenty-one months would have likely passed before the shipper could submit its opening evidence, leaving only fifteen months for the remainder of the rate case before the three-year statutory limit was reached. Moreover, the railroad(s) would be in a position to use any changes in traffic after the first year to undermine the projected volumes, etc., for the SARR. BNSF/UP are thus seeking to establish the terms of an exercise that the shipper can never win. Such an approach is inherently unfair and biased and should not be tolerated.

In their Reply at III.A-53 n.52, BNSF/UP claim to have produced various traffic data in discovery and to have included additional data in their workpapers. However, the footnote is erroneous and misleading. First, the files are simply not included in their workpapers. BNSF/UP included only a small portion of the customary waybill data usually provided in discovery, and not the additional data included in standard revenue data or revenue tape production. For example, BNSF/UP Reply e-workpaper “Coal Traffic Forecast Reply.xlsx,” at worksheet “2009 Actuals,” contains only 27 data fields, as compared with the 167 fields included in the traffic data provided in discovery. Furthermore, UP produced only a summary or compilation of the data, and not the actual data itself, further limiting its usability. Beyond that, BNSF/UP’s production consisted at

most of waybill data, and did not include the additional car and train movement data that, as BNSF/UP are fully aware, is required to make the data usable for inclusion in the SARR traffic group.

BNSF/UP have thus failed to present a meaningful criticism of this aspect of AEPCO's development of the traffic group for the ANR. They have relied on a procedure that is systematically biased in their favor, and they have failed to produce the data that might allow AEPCO to respond appropriately to their claimed criticism (assuming that AEPCO had the time and resources to do so). Under the circumstances, their criticism cannot be given any weight.³⁶ Accordingly, AEPCO has appropriately relied on the analysis in its Opening Evidence.

Second, BNSF/UP claim that AEPCO should have known that the EIA's AEO April 2009 Update overstated the BNSF/UP traffic volumes, as AEPCO had access to the 2Q09-3Q09 traffic data that showed the AEO volumes were overstated, but AEPCO chose to ignore this information and to rely instead on an overstated EIA forecast. BNSF/UP Reply at III-A-31.

The BNSF/UP criticism is misdirected in several respects. First, the AEO forecast covers a full year and is not broken down into individual quarters or

³⁶ See, e.g., *FMC Wyoming v. Union Pacific R.R.*, 4 S.T.B. 699, 729-30 (2000), *Texas Municipal Power Agency v. The Burlington N. and Santa Fe Ry. Co.*, 6 S.T.B. 573 (2003), and STB Docket No. 41989, *Potomac Electric Power v. CSX Transp., Inc.*, (STB served November 24, 1997) (all holding that a railroad cannot rely on information that it has failed or refused to produce).

other periods of time. Comparing two or three quarters of data to an annual forecast is not a straightforward exercise. One cannot simply take the annual figure and divide it by four to determine values for each quarter as coal burns, coal volumes, electric load, etc., vary seasonally. For example, power plant operators typically schedule planned outages for coal-fired plants in the off-peak or shoulder seasons.

Moreover, EIA prepares its coal production forecasts on a regional basis, *e.g.*, the EIA PRB coal production forecasts are for the entire PRB and thus include volumes transported by both BNSF and UP. UP was very careful not to produce any waybill or other data concerning its PRB volumes to AEPCO in discovery so as to preserve its position that the existence of an alleged contract extinguishes any obligation it may have to establish Southern PRB and Colorado coal common carrier rates to AEPCO and to avoid facilitating any challenges to those rates. BNSF/UP are thus asserting that AEPCO should have drawn inferences for what the AEO forecast signified for the ANR's PRB volumes, when the EIA forecast covered the entire PRB and BNSF/UP had produced data for only BNSF and not for UP. The data for the region as a whole is not necessarily reflective of the data for one of the two carriers serving the region. In addition, the data for one carrier is not necessarily reflective of the traffic that would be captured by a least-cost, most-efficient competitor, operating at effectively a cost pass-through basis, without any exercise of market power beyond that needed to recoup its costs (if that can be considered an exercise of market power).

Furthermore, having failed to produce relevant information, BNSF/UP are not entitled to the benefit of inferences that rely on information that they did not produce, as explained previously.

AEPCO also notes that the AEO 2009 Update was the last complete forecast that the EIA had produced at the time that AEPCO needed to finalize its traffic group. AEPCO was certainly entitled to rely on that analysis, especially as BNSF and UP failed to produce the more specific types of forecast that they had routinely produced in prior rate cases. AEPCO's approach was reasonable and appropriate under the circumstances.

iii. Projected Tonnages -- Non-Issue Coal Traffic

In its Opening Evidence, AEPCO projected the ANR's non-issue coal traffic volumes for the 2010-2018 period by applying the AEO April 2009 Update to the 2009 traffic volumes. AEPCO Opening at III-A-18-19.³⁷ BNSF/UP agree with the use of an AEO forecast for this purpose, but they claim that it is more appropriate to use instead the 2010 AEO Early Release forecast released by the EIA in December 2009. BNSF/UP Reply at III.A-32.

AEPCO's position is that use of the 2010 AEO Early Release is not appropriate. The Early Release is not a complete forecast, as the forecast includes volumes, but not updated transportation rates and rate escalators. Accordingly,

³⁷ Again, AEPCO did not have the benefit of a more specific internal forecast from BNSF or UP comparable to what the carriers had produced in past rate cases.

use of only the Early Release volumes results in a situation where volumes are taken from one forecast and set of assumptions, but the related rates and rate escalators are taken from a different forecast that rests on a different set of assumptions. BNSF/UP thus seek to create a situation where different inputs are founded on different and likely inconsistent assumptions.

Accordingly, in its Rebuttal calculations, AEPCO has utilized the final 2010 AEO forecast, which the EIA released in early May 2010. This forecast represents the most recent data available, and it supplies a complete and coherent set of forecasts covering volumes, rates, and rate escalators, which are the needed inputs for the SAC DCF model.

The BNSF/UP Reply at III.A-32-33 also claims that AEPCO misapplied the EIA Southwest region production forecast, overstated the Signal Peak production, and misused the EIA Western Montana coal forecast.

AEPCO agrees that it applied the change in total U.S. coal production rather than the Southwest regional forecast for the limited amount of non-issue coal originating at New Mexico mines. AEPCO has made the correction in its Rebuttal calculations.

BNSF/UP claim that AEPCO's assumption that First Energy will transport 8 million tons per year from Signal Peak is unsupported and that AEPCO should rely instead on the lower forecast in the 2010 AEO. AEPCO believes that its figure, which is based on published trade press reports that First Energy will take between 8 and 10 million tons of coal per year from Signal Peak, is

reasonable and even conservative. See AEPCO Rebuttal e-workpaper “Signal Peak Information.pdf.” Furthermore, AEPCO’s witnesses have communicated with the EIA analyst who developed the EIA forecast and she indicates that her estimate relies on her own judgment and trade press reports, but not any inside information. Nonetheless, in the interests of limiting disagreement, AEPCO is accepting for its Rebuttal calculations the final AEO 2010 forecast volumes for Signal Peak. Because AEPCO is accepting the EIA forecast for Signal Peak, AEPCO has also adjusted the EIA’s Western Montana coal production forecast to remove the tons associated with the EIA’s Signal Peak forecast.

The table below summarizes the ANR Non-Issue Coal Tonnages that AEPCO utilizes on Rebuttal:

Rebuttal Table III-A-2 Expected ANR Non-AEPCO Coal Shipments (in thousands of tons)						
	Origin					Total
	New Mexico	SPRB	NPRB	Other MT	Rocky Mountain	
2009	5,334	102,781	22,329	0	1,566	132,010
2010	6,789	106,847	20,266	0	1,437	135,339
2011	6,669	112,719	21,722	0	1,481	142,592
2012	7,892	113,142	23,245	5,137	1,500	150,917
2013	7,811	113,341	21,828	6,849	1,425	151,255
2014	7,978	114,032	23,193	7,024	1,407	153,634
2015	8,190	107,339	23,444	7,406	1,480	147,859
2016	8,296	108,942	24,220	7,839	1,480	150,777
2017	8,332	107,976	24,649	8,041	1,465	150,464
2018	8,339	109,699	25,122	8,574	1,460	153,193
Source: AEPCO Rebuttal e-workpaper “Coal Traffic Forecast Rebuttal.xls.”						

The following table compares (a) the total coal volumes utilized by AEPCO on Opening, (b) the total coal volumes utilized by BNSF/UP on Reply, and (c) the total coal volumes utilized by AEPCO on Rebuttal:

Rebuttal Table III-A-3 ANR Total Coal Tonnages (in millions of tons)			
Year	AEPCO Opening	BNSF/UP Reply	AEPCO Rebuttal
2009	138.0	130.8	133.1
2010	144.3	132.1	136.6
2011	149.2	136.8	143.9
2012	159.3	144.8	152.3
2013	160.0	145.2	152.7
2014	160.3	147.4	155.0
2015	159.2	142.0	149.3
2016	160.0	144.9	152.2
2017	160.4	144.6	151.9
2018	160.6	147.0	154.6

Source: AEPCO Opening e-workpaper “Exhibit III-A-2.xlsx,” BNSF/UP Reply e-workpaper “Exhibit III-A-2 Reply.xlsx,” and AEPCO Rebuttal e-workpaper “Rebuttal Exhibit III-A-1.xlsx.”

b. Non-Coal Traffic

Most of the issues raised in the BNSF/UP Reply at III.A-34-44 concerning AEPCO’s calculation of the non-coal traffic in the ANR’s traffic group are similar to the issues raised by BNSF/UP regarding the coal traffic, although there are some differences in the application. In general, BNSF/UP’s criticisms are invalid and rely on improper data, improper analysis, or a combination of the two. In limited instances, BNSF/UP have identified computational errors on AEPCO’s part, and AEPCO has made appropriate corrections, although their impact is limited.

BNSF/UP first claim that all traffic that utilizes the MRL trackage rights should be excluded because it does not share any facilities with the ANR. BNSF/UP Reply at III.A-34. However, the ANR makes the same use of those MRL trackage rights as does BNSF, the ANR has the right to stand in BNSF's shoes with respect to the use of those trackage rights, and inclusion of the MRL trackage rights and associated traffic in the ANR is perfectly appropriate. As the approach urged by BNSF would constitute an impermissible entry barrier, as explained in AEPCO Rebuttal at III-A-27-31, *supra*, AEPCO has thus retained the MRL trackage rights and associated traffic on Rebuttal.

i. **2009 Base Year Tonnages -- BNSF Non-Coal Traffic**

On Opening, AEPCO calculated the 2009 base year tonnages for BNSF non-coal traffic much as AEPCO calculated other types of base year tonnages. AEPCO utilized the historical data that BNSF had provided for the 2Q08-4Q08 period, adjusted those volumes using BNSF forecasts to determine traffic for the 2Q09-4Q09 period, and utilized actual provided data for the 1Q09 period to determine the base tonnages for 1Q09-4Q09. AEPCO's projections utilized provided and public forecast data, depending on the specific type of traffic and the information available from BNSF. AEPCO Opening at III-A-22-24.

In their Reply at III.A-34-37, BNSF/UP seek to depict AEPCO's approach as "complicated and unnecessary," and instead propose a methodology that relies on data not provided to AEPCO in discovery and/or that was

unavailable before AEPCO filed its Opening presentation. BNSF/UP's approach is defective for that reason and for the other reasons stated below.

As a threshold matter, continually updating forecasts to reflect newly available data is ultimately an infeasible approach. New data always becomes available, and the new data regularly deviates from the forecasts in various respects. Of necessity, forecasted traffic volumes, rates, revenues, and costs form the foundation for SAC analysis. To continually update all forecasts would essentially turn SAC analysis into a never-ending process and defeat its role as a useful economic and policy tool.

However, there is a fundamental difference between (a) updating the forecasts for projected volumes and (b) altering the base year traffic group that underlies the SAC analysis. Determining the base year traffic group requires the identification of specific cars and trains going from one location to another along a specific route with a specific set of operating parameters in order to conduct the necessary ATC, RTC, MMM and other analyses.³⁸ Individual trains, and the

³⁸ The individual trains to be included in the traffic group must be identified in the base year. Then projections must be applied to determine the traffic for the peak year. Then, the peak period and associated trains must be identified so that the SARR system can be configured and the operating plan established. Then, the RTC analysis must be undertaken to determine the feasibility of the SARR and its operating statistics for inclusion in the DCF model. The identification of individual trains is thus a critical first step, and it is not something that can be easily modified or adjusted later in the analysis. This reality explains why the production of the revenue, car, and train movement data by the defendant railroad(s) is so vital for the shipper. Where production of that information is delayed or incomplete, as is often the case and was the case here, the shipper is placed at a further disadvantage.

traffic that moves on them, must be identified from the combination of revenue, car, and train movement data for inclusion in the SARR traffic group. It is an intensive exercise, and a data lag is necessarily involved. As explained *supra*, if a shipper had to wait until the base year analysis reflected a full year of historical data, the rate case likely could not be concluded in time.

Moreover, because the railroads have possession of the later developing information, the railroads are in a position to exploit the information. The asymmetry of information means that the railroads can utilize the information when it is helpful, and suppress the information when it is unfavorable to their interests.³⁹ In addition, the railroads can, as they have done here, present only selective items of information, and deny complainants access to additional information that is necessary for fully addressing the railroads' representations on rebuttal. Allowing the railroads to introduce more internal data, on a selective basis, on Reply thus does nothing to ensure a more fair, accurate, or reasonable result. It simply provides the railroads with a further opportunity to exploit their information advantage.

Moreover, there is an inherent asymmetry in the underlying information: the shipper complainants must obtain the information from the railroads, whereas the railroads have the information at their disposal and have superior capabilities to manipulate the information. The asymmetry persists after

³⁹ The asymmetry of information was noted in *Coal Rate Guidelines*, 1 I.C.C.2d at 548.

discovery is completed. Accordingly, if it turns out that information (be it historical data or forecasts) accumulated after information has been produced to the shipper in discovery is favorable, the railroads can elect to use it, but if the information is unfavorable, the railroads can elect not to introduce it. In addition, they can decide to introduce selective elements, while suppressing others.

Information that is unhelpful is thus unlikely to see the light of day, especially given the standards that apply to shipper efforts to improve their cases on rebuttal. In addition, the railroads can also improve their posture in a rate case by delaying production if they expect that later data will prove more favorable.⁴⁰

In that regard, it should be clear that the traffic data ostensibly relied on by BNSF/UP in their Reply is new data that BNSF/UP had not made available to AEPCO at the time AEPCO submitted its Opening Evidence, or at the earlier time during which AEPCO was developing the ANR's traffic group.⁴¹ Moreover,

⁴⁰ AEPCO notes that UP's initial production of revenue data did not include intermodal traffic, which delayed the development of AEPCO's rate case.

⁴¹ Complete BNSF and UP waybill, train, and car movement data through March 2009 were provided and available for use in the development of AEPCO's Opening evidence. Although UP initially provided the required data through May 2009, the base period was necessarily defined as the latest period for which waybill, train, and car movement data were available for both defendant railroads. BNSF supplemented its initial production with additional waybill data for April through September 2009 on November 18, 2009. BNSF provided no corresponding train and car movement data for that time period. BNSF still has not provided any train or car movement data for any period after March 2009. UP supplemented its initial production with additional waybill, train, and car movement data for June through September 2009 on December 18, 2009. In their Reply, the railroads rely on the provided waybill data through September 2009, as well as October through December 2009 waybill data that still have not been

BNSF/UP still have not produced to AEPCO the corresponding car and train movement data that AEPCO would require to work with the revenue data to develop a traffic group that properly reflected the data relied upon by BNSF/UP in their Reply.

Moreover, the alternate BNSF non-coal traffic that BNSF/UP present in their Reply is deficient and systematically understates the ANR volumes in not only 2009, but in all subsequent years of the analysis. BNSF/UP purport to present an analysis based on the 2009 data that reflects the actual traffic available to the ANR, but their methodology limits that traffic in several artificial ways.

First, for BNSF non-coal traffic, BNSF/UP purport to limit their selection of 2Q09-4Q09 traffic to traffic moving on trains with the same train symbols as those trains that the ANR moved (meaning trains that AEPCO selected on Opening) for 2Q08-4Q08. Review of BNSF/UP's workpapers reveals that BNSF/UP's description of their approach does not accurately represent what BNSF/UP really did. That is, BNSF/UP did not base their 2Q09-4Q09 traffic selection on the trains AEPCO selected for inclusion in its traffic group, but BNSF/UP instead developed a different group of trains that includes some of the

provided to AEPCO. (The BNSF/UP Reply work papers contain only summaries of the data, not the actual raw data itself.) As stated above, the base period is necessarily defined as the latest period for which waybill, train, and car movement data are available for both defendant railroads, which remains April 2008 through March 2009.

ANR trains, excludes some of the ANR trains, and includes some trains that were not selected by AEPCO at all.

BNSF/UP's flawed implementation of their described methodology is discussed in further detail below. However, even if BNSF/UP did what they claim to have done, they still would have automatically excluded from the analysis any potential SARR traffic moving on any train with a train symbol that did not match a train symbol selected by AEPCO for inclusion in the ANR traffic group that moved in 2Q08-4Q08. Therefore, if a new train symbol was introduced to the BNSF system, or BNSF provided a new route for an existing train, in 2Q09-4Q09 that traversed (or could have reasonably traversed) a portion of the ANR's system, no traffic on that train would be eligible for inclusion in the ANR traffic group under the BNSF/UP methodology. If AEPCO were attempting to develop the ANR traffic group directly from the 2009 data, it would not limit its review to only those train symbols selected from the 2008 data.⁴² BNSF/UP's stated approach thus artificially constricted the traffic available for inclusion in the ANR in 2009, even if it had been implemented as described.

Moreover, BNSF/UP have not, as noted, provided the car and train movement data that AEPCO would require to determine the existence and routing of such trains. BNSF/UP omitted this additional information notwithstanding their

⁴² For reasons stated previously, such an exercise would be very time-consuming for AEPCO, but the railroads have data systems intended, and created, to facilitate this type of analysis.

acknowledgement, BNSF/UP Reply at III.A-36, that AEPCO's traffic selection methodology is necessarily train-based, meaning AEPCO selected traffic by selecting trains and then AEPCO identified the corresponding traffic for inclusion in its traffic group. AEPCO utilized the 2Q08-1Q09 base traffic period because it represented the most recent twelve-month (full year) period for which all required data -- traffic, train, and car data for both BNSF and UP -- was provided in discovery. Moreover, it still represents the most recent twelve months of data for which complete data is available because BNSF/UP have not provided the train and car data for both carriers for a more recent period. Furthermore, although BNSF/UP used 4Q09 waybill data to derive their quantification of 2009 ANR traffic, they did not provide the raw 4Q09 waybill data in support of their Reply evidence. AEPCO thus cannot verify whether BNSF/UP even summarized the 4Q09 waybill data accurately.

As noted above, BNSF/UP claim that they "use[d] AEPCO's 2Q08 to 4Q08 selected BNSF train symbols ... and 2Q09 to 4Q09 BNSF waybill records to match-up train symbols selected by AEPCO with actual BNSF shipments on those trains in 2Q09 to 4Q09." BNSF/UP Reply at III.A-36. This statement is inaccurate and misleading. BNSF/UP did not include every train symbol selected by ANR in their restatement of 2009 traffic volume. In fact, BNSF/UP did not even include every train symbol selected by ANR in their quantification of 2Q08-4Q08 traffic to which they compared the 2Q09-4Q09 data. BNSF/UP instead included a particular train symbol in their restated traffic group comparison only if

AEPCO included at least 90% of the trains with that particular train symbol during the 2Q08-1Q09 base period in the ANR's traffic group. If AEPCO included less than 90% of the trains with that particular train symbol in its traffic group, then BNSF/UP eliminated all trains with that train symbol, and all traffic moving on those trains, from their traffic group comparison altogether.

An example is particularly instructive. According to BNSF/UP's Reply workpapers, AEPCO's traffic group includes traffic moving on { } trains with train symbol { } that moved from Clovis, NM to Alliance, TX during March 2008-March 2009. The { } trains over a thirteen-month period correspond to an average of { } trains per day, which the ANR would handle between Clovis (Texas) and Amarillo. BNSF/UP, however, count a total of { } trains during March 2008-March 2009, and because { } divided by { } equals 89.6%, and not 90%, BNSF/UP exclude all traffic moving on any of the { } trains altogether from their determination of the ANR traffic group. AEPCO Rebuttal Exhibit III-A-4 contains a list of trains, by train symbol, excluded by the railroads on this basis. Additionally, for train symbols that AEPCO selected more than 90% of the time but less than 100% of the time (almost always because some of the trains did not traverse the ANR or did so in an operationally inefficient manner), BNSF/UP included 100% of those trains and the traffic moving on them in their comparison.

The net result is that even the 2Q08-4Q08 traffic BNSF/UP use as their representation of the traffic ANR selected in 2Q08-4Q08 is, in fact, a

different traffic group from the actual traffic group selected by AEPCO.⁴³

Rebuttal Table III-A-4 below compares (a) the actual 2Q08-4Q08 trains that compose the ANR traffic group as selected by AEPCO and (b) the 2Q08-4Q08 trains that compose the traffic group BNSF/UP represent to be the ANR traffic group as selected by AEPCO:

Table III-A-4				
Comparison of AEPCO-Selected 2Q-4Q08 BNSF ANR Traffic Group and BNSF/UP's Altered 2Q-4Q 2008 BNSF ANR Traffic Group				
Train Type	AEPCO Opening Trains	BNSF/UP Reply Trains	Difference	Percent Error
G	{ }	{ }	{ }	(2%)
H	{ }	{ }	{ }	2%
J	{ }	{ }	{ }	(33%)
M	{ }	{ }	{ }	17%
Q	{ }	{ }	{ }	(8%)
S	{ }	{ }	{ }	(5%)
U	{ }	{ }	{ }	(43%)
V	{ }	{ }	{ }	(57%)
Z	{ }	{ }	{ }	(11%)
Total	{ }	{ }	{ }	0%
Source: AEPCO Rebuttal e-workpaper "Problems with BNSF-UP Train Symbol Volume Adjustment (BN Non-Coal).xlsx."				

As shown in the table above, BNSF/UP's approach of excluding or including trains on the basis of train symbols alone completely disregards the necessary and time-consuming process AEPCO undertook on Opening to evaluate

⁴³ Although BNSF/UP's 2Q09-4Q09 traffic group is theoretically comparable to its 2Q08-4Q08 traffic group, neither is comparable to the 2Q08-4Q08 traffic group actually selected by AEPCO.

every train individually to determine whether its individual operations and traffic warranted its inclusion in the traffic group. As a result, BNSF/UP have grossly misrepresented the ANR's actual traffic group in their development and application of the reduction in the ANR's non-coal traffic from 2008 to 2009. BNSF/UP's distortion is masked by the fact that their fatally flawed methodology coincidentally results in a traffic group comprising roughly the same number of trains in total as the actual ANR traffic group posited by AEPCO on Opening. BNSF/UP's analysis is thus improper and demonstrates that BNSF/UP's restated traffic group makes no reasonable attempt to depict the traffic available to the ANR.

Third, the cumulative effect of BNSF/UP's machinations is to produce a reduction in BNSF traffic from 2008 to 2009 that often exceeds, by a substantial amount, the reduction that BNSF experienced on a system-wide basis, as depicted in the 10-K report that BNSF filed with the Securities and Exchange Commission ("SEC") for 2009. The deviations are shown on the following table:

Rebuttal Table III-A-5 Reduction in BNSF Traffic Units from 2008 to 2009 Based on BNSF/UP Reply Evidence and BNSF 2009 10-K		
Traffic Group	Reduction in BNSF Traffic Units Depicted in BNSF/UP Reply Evidence 1/	Reduction in BNSF Traffic Units Depicted in BNSF 2009 10-K 2/
Industrial	-40.9%	-26.7%
Agricultural	-19.8%	-11.0%
Consumer	-16.2%	-18.8%
1/ Source: BNSF/UP Reply e-workpaper "BNSF Non-Coal Growth Rates 2009.xlsx," level "SUMMARY." 2/ Source: AEPCO Rebuttal e-workpaper "BNSF 10K_railway_2009.pdf."		

BNSF/UP make no attempt to explain why the ANR's volume reduction from 2008 to 2009 should exceed BNSF's system-wide reduction. Indeed, with its lower rates, the ANR would logically attract more business than BNSF. The disparity reflects a systematic bias in BNSF/UP's methods.

The self-serving and selective nature of BNSF/UP's efforts is further confirmed by their failure to make any mention of the abundant evidence, or to attempt any inclusion, of the larger than expected or forecasted increase in volumes in 1Q10 or 2010 year-to-date. Instead, BNSF/UP focus only on the larger than expected downturn in their volumes in 2009.⁴⁴ If BNSF/UP were attempting to be balanced and fair in their depiction, they might have noted that their volumes are now recovering far more rapidly than planned. For example, both AEPCO and BNSF/UP rely on the BNSF forecast provided in discovery which assumes { } growth in industrial traffic and { } growth in consumer traffic in 2010. However, BNSF carload data show { } actual growth in non-coal traffic through May 2009.⁴⁵

⁴⁴ The volume declines would have been diminished if the railroads had shown more willingness to decrease their rates. Indeed, the carriers appear to have taken pride in their ability to achieve real rate increases despite the severity of the recession. For example, an excerpt from UP's 2009 fact book reads: "The [2009] revenue decline masked core price improvement of 4.5 percent. Strong pricing gains are key to the Company's ability to earn an adequate return on investment. Renegotiating legacy contracts, which comprised 12 percent of UP's revenue as of April 1, 2010, remains a significant opportunity for yield improvement." See Rebuttal e-workpaper "UP 2009 factbook.pdf."

⁴⁵ See AEPCO Rebuttal e-workpaper "Summary of BNSF 2009 and 2010 Traffic changes.xlsx."

Yet, BNSF/UP make no effort whatsoever to reflect any of this greater than expected recovery growth in 2010 in their Reply forecasts. The result is a very substantial anomaly in their analysis. BNSF/UP assert that the forecast cannot be used for 2009 because the actual decline was so much worse than expected, and the decline that they quantify was actually worse than what they experienced. However, when it comes to 2010, they revert back to the use of the forecast they said could not be used for 2009 because it understated the decline, when there is abundant evidence that the forecast also understates the 2010 recovery.⁴⁶

BNSF/UP thus seek to cherry-pick the combination of actual data and forecast that best serves their interests. In effect, they seek to “lock-in” the low water mark of 2009 for the entire DCF period by reflecting only the greater than expected dip, and ignoring the subsequent offsetting recovery that puts the railroads back on the path to the original forecast. In contrast, AEPCO’s approach of using the most recent data and forecast that could be feasibly utilized is a much more reasoned, fair, and appropriate approach.

As BNSF/UP have failed to present any sort of reasonable volume calculation for non-coal BNSF traffic in their Reply, AEPCO continues to rely on the basic approach AEPCO presented on Opening.

⁴⁶ For example, UP’s presentation to financial analysts for 1Q10 indicates that UP’s volumes are up 13% from prior quarter volumes.

As a separate matter, BNSF/UP object to AEPCO's separate adjustment for { } traffic, based on publicly-available data from { }, on the grounds that the change in the { } traffic is already accounted for in BNSF's intermodal forecast, such that AEPCO is effectively seeking a "double count" of the impact of the { } volume increases on BNSF's total intermodal volumes. BNSF/UP Reply at III.A-37.

AEPCO rejects BNSF/UP's criticism on several grounds. First, AEPCO did not engage in any cherry-picking. AEPCO simply used the most specific data that was available to it. In one case, it was { } publicly-reported data, and in the other it was BNSF's general forecast. Second, BNSF/UP do not dispute the accuracy of the { } publicly-reported data. Applying the BNSF average forecast to the { } traffic would thus necessarily understate the growth in that traffic. Third, if BNSF/UP wanted to demonstrate that the greater than expected increase in { } traffic was offset by a smaller increase or decline in the intermodal traffic of other BNSF customers, BNSF/UP surely had it in their power to do so based on the actual 2Q09-4Q09 traffic data in their possession that they purport to have presented and utilized for other purposes.

However, BNSF/UP made no effort to engage in this direct analysis of the actual trend in non-{ } BNSF intermodal traffic. Indeed, they acknowledge as much in stating that "Rather than try to separate and subtract { } volumes from total BNSF intermodal traffic, defendants simply apply the

overall change they derive for 2009 for BNSF intermodal traffic in the traffic group to all BNSF intermodal volumes in the traffic group, including { }.” BNSF/UP Reply at III.A-37.⁴⁷ BNSF/UP could have engaged in that analysis if they so desired. For all AEPCO can know, BNSF/UP did engage in that analysis and did not like the results. In any event, it is rather incongruous for BNSF/UP to criticize AEPCO for relying on forecasts instead of actual data in some respects,⁴⁸ and then come back and criticize AEPCO for relying on data -- which BNSF/UP do not control -- in another respect. Under the circumstances, BNSF/UP have failed to support their contentions as to the { } traffic and as to the BNSF non-coal traffic generally.

ii. Projected Tonnages -- BNSF Non-Coal Traffic

BNSF/UP accept AEPCO’s projection of tonnages for BNSF consumer and industrial traffic, but disagree with AEPCO’s use of the USDA forecast for agricultural traffic because the USDA forecast is not prepared by region or individual carrier, unlike the regional EIA forecast that is used for coal. BNSF/UP Reply at III.A-38-39.

AEPCO disagrees with BNSF/UP’s criticism. The EIA forecast for coal is also not carrier-specific (where the coal can be transported by more than

⁴⁷ Stated differently, they simply ignore the more specific data utilized by AEPCO that { } publicly reported.

⁴⁸ See, e.g., BNSF/UP Reply at III.A-37 (“Defendants’ methodology for determining 2009 base year volumes is more reliable than AEPCO’s methodology because it relies on actual 2009 volumes....”).

one carrier), and so that aspect of the criticism is inapplicable. The implicit assumption in the use of a regional forecast is that the distribution of volumes among carriers will remain static into the future. The same assumption appears no less reasonable for a national forecast for agricultural products. If anything, the use of an average forecast, be it regional or national, is unduly conservative since a SARR should logically capture additional volumes through its lower rates.

Moreover, in the case of coal, a regional, rather than national, forecast is appropriate because coals from different regions are generally not fungible. If coals were fungible, prices would be much more uniform. In contrast, agricultural products, especially in bulk, tend to be much more fungible and/or they tend to be more limited to particular areas. There is thus substantially less need and less significance for a regional forecast for agricultural products than for coal.

Finally, the forecast that BNSF has prepared and seeks to rely on is itself aggregated. It reflects a system-wide figure and embodies no effort to identify traffic along the particular lanes utilized by the ANR. {

} Under these

circumstances, it is preferable to rely on a neutral, independent, government-prepared index. Insofar as BNSF/UP claim that AEPCO's treatment for the BNSF agricultural traffic differs from that for the BNSF consumer and industrial traffic, AEPCO notes that it is unaware of any government-prepared forecast for these other categories of traffic.

Accordingly, AEPCO continues to rely on the approach it utilized on Opening.

iii. Base Year Tonnages -- UP Non-Coal Traffic

In their Reply, BNSF/UP present criticisms of AEPCO's calculation of the base year tonnages of the ANR non-coal traffic taken from UP that are closely related to their criticisms of AEPCO's calculation of the BNSF non-coal traffic volumes. BNSF/UP Reply at III.A-39-43. BNSF/UP's arguments as to the UP non-coal traffic generally suffer from the same deficiencies as their arguments as to the BNSF non-coal traffic. In responding, AEPCO will attempt to limit its repetition of matters previously addressed with the BNSF non-coal traffic.

⁴⁹ {

}

For example, BNSF/UP criticize AEPCO's reliance "on a series of complicated, and inconsistent, assumptions" based on "demonstrably incorrect traffic forecasts" as the "centerpiece" of its methodology. BNSF/UP Reply at III.A-39, 43. However, as explained *supra*, the use of forecasts is unavoidable, except if the rate-setting exercise is to be entirely retrospective, which is inconsistent with the statute of limitations and the rule against retroactive ratemaking. The use of forecasts is inevitable when full data is not available. Moreover, all forecasts will prove to be "demonstrably incorrect" with the passage of time.

The appropriate question is whether AEPCO made reasonable and appropriate use of the data and forecasts that were available when AEPCO selected its SARR traffic group on Opening. The answer is affirmative, and confirmed by review of the actions taken by BNSF/UP in supposedly updating AEPCO's analysis to reflect "real" data from 2Q09-4Q09. BNSF/UP's analysis of the UP non-coal traffic suffers from the same type of deficiencies as their analysis of the BNSF non-coal traffic. Indeed, the analysis of the UP non-coal traffic is even more defective in several respects.

In contrast to their selection or restatement of the BNSF non-coal traffic, BNSF/UP based their selection of UP non-coal traffic for the 2Q09-4Q09 period on a comparison to the 2Q08-4Q08 origin-destination pairs that AEPCO included in the ANR traffic group. BNSF/UP Reply at III.A-40. BNSF/UP were compelled to use this constricted approach because the UP waybill data does not

contain information regarding the individual trains on which traffic moves.

Accordingly, BNSF/UP sought to identify 2Q09-4Q09 traffic that had the same origin-destination pairs as the ANR 2Q08-4Q08 traffic.

The fundamental problem with this approach is that by focusing on origin-destination pairs, BNSF/UP made no effort to take into account either origin-shifting or destination-shifting.⁵⁰ BNSF/UP thus captured declines in traffic involving existing origin-destination combinations, but made no effort to reflect movements involving a new origin to an existing destination, an existing origin to a new destination, or a new origin to a new destination.⁵¹ BNSF/UP's approach thus makes sense only as an exercise to reduce the ANR's traffic group, and not as a reasonable attempt to capture the traffic that would be available to the ANR in 2Q09-4Q09. As with the BNSF traffic analysis, BNSF/UP do not attempt

⁵⁰ BNSF/UP's assertion at III.A-40 n.73 that they accounted for potential shifts in traffic patterns by including in their comparison only origin-destination pairs between which traffic moved in both 2008 and 2009 is a nullity. In particular, their methodology makes no attempt to account for new movements coming on-line in 2Q09-4Q09. Their insistence on beginning their selection by matching origin-destination pairs serves only to narrow the traffic eligible for consideration in the ANR's traffic group.

⁵¹ Moreover, AEPCO cannot undertake that analysis for itself because UP provided only a summary of its 2Q09-4Q09 waybill data with its Reply, and the waybill data summary would include only the origin-destination and not information on the individual train on which the traffic moves, making it impossible to determine the route of movement. UP also did not include the car and train movement data that would also be required to include additional trains in the ANR traffic group. Moreover, BNSF did not provide any car and train movement data for any period after March 2009, and, as noted elsewhere, the ANR base-year traffic group selection process is necessarily based on the latest 12-month time period for which waybill, car, and train data are available for both UP and BNSF.

to select a 2Q09-4Q09 that is comparable to the traffic group ANR selected from 2Q08-4Q08 data. Rather, as with the BNSF traffic analysis, BNSF/UP use a two-step process. In the first step, BNSF/UP use the origin-destination pairs represented by the actual UP non-coal portion of the ANR traffic group to develop some other group of 2Q08-4Q08 traffic and use that as a proxy for the actual 2Q08-4Q08 traffic group. In the second step, BNSF/UP develop a 2Q09-4Q09 traffic group they claim to be comparable to the 2Q08-4Q08 traffic group they develop in the first step. However, as with the BNSF analysis, neither the 2Q08-4Q08 nor the 2Q09-4Q09 traffic group developed by BNSF/UP is comparable to, or representative of, the ANR traffic group selected by AEPCO. As with the BNSF non-coal traffic group, this sample of UP non-coal traffic selected by BNSF/UP contains some ANR movements, it excludes some ANR movements, and it includes many UP movements that AEPCO deliberately excluded from the ANR traffic group, largely because the movements did not traverse the ANR route or did so in an inefficient manner.

Rebuttal Table III-A-6 below compares the actual 2Q08-4Q08 ANR traffic group with the traffic group BNSF/UP claim represents the 2Q08-4Q08 ANR traffic group for UP non-coal traffic:

Rebuttal Table III-A-6				
Comparison of AEPCO-Selected 2Q-4Q08 UP ANR Traffic Group and BNSF/UP's Altered 2Q-4Q 2008 UP ANR Traffic Group				
Traffic Group	AEPCO Opening Units	BNSF/UP Reply Units	Difference	Percent Error
Agricultural	{ }	{ }	{ }	(60%)
Automotive	{ }	{ }	{ }	14%
Chemicals	{ }	{ }	{ }	(28%)
Industrial	{ }	{ }	{ }	9%
Intermodal	{ }	{ }	{ }	1%
Total	{ }	{ }	{ }	(1%)
Source: Rebuttal e-workpaper "UP 2009 Non-Coal Growth Rates PROBLEMS-REBUTTAL WP.xlsx," level "SUMMARY."				

As shown in the table above, the group that BNSF/UP included in their evaluation as 2Q08-4Q08 ANR traffic does not, even on an aggregated basis, fairly represent the traffic mix composing the ANR traffic group as selected by AEPCO, even though the absolute numbers of units included in both groups are coincidentally fairly close. Furthermore, although the 2Q08-4Q08 intermodal volumes in the two disparate traffic groups are similar, they are composed of a different traffic mix when compared on a movement-specific basis.

The cumulative effect of BNSF/UP's distortions to the UP intermodal traffic group, which constitutes, by far, the largest category of UP traffic transported by the ANR, become apparent when the 2Q09-4Q09 volumes

are evaluated. Specifically, BNSF/UP calculate a 20% reduction in their quantification of 2Q09-4Q09 UP intermodal volumes compared to their quantification of the 2Q08-4Q08 volumes “handled” by the ANR.⁵² However, comparing UP’s 2008 and 2009 Form 10-Ks shows that UP reported only a 8.8% reduction for intermodal traffic on a system-wide basis between 2Q08-4Q08 and 2Q09-4Q09. In the absence of further explanation, which BNSF/UP have made no attempt to provide, the disparity indicates that BNSF/UP have substantially overstated the reduction in the UP non-coal traffic that would be handled by the ANR in 2009.

As with the treatment of the BNSF non-coal traffic, BNSF/UP are quick to attempt to reflect (and overstate) the volume reductions in 2009, but they make no attempt to reflect the greater than expected volume increase experienced by UP in 1Q10 and 2010 year to date. Specifically, while both AEPCO and BNSF/UP assume growth rates for UP non-coal traffic in the range of{ } to { } for 2010 based on forecast data provided in discovery, UP’s 2010 carload reports show cumulative non-coal growth of 20.4% through May 2010.⁵³ In other words, BNSF/UP are willing to rely on actual data or forecasts, as the case may be, but only when the choice produces the desired result. The net effect is to lock-in artificially reduced levels for the remainder of the SAC DCF analysis. In

⁵² See BNSF/UP Table III.A.6 at Reply III.A-41 and BNSF/UP Reply e-workpaper “UP 2009 Non-Coal Growth Rates.xlsx,” at tab “Summary.”

⁵³ See AEPCO Rebuttal e-workpaper “Summary of UP 2009 and 2010 Traffic changes.xlsx,” at tab “UP 5-29-10.”

contrast, AEPCO relied on the most recent, complete data and forecast that was available to it when it developed the ANR traffic group.

AEPCO’s approach was entirely reasonable on Opening, and BNSF/UP have not provided the complete data that would be required to redo the analysis using more recent data. Accordingly, AEPCO has retained its approach on Rebuttal.

The following table compares (a) the total non-coal volumes utilized by AEPCO on Opening, (b) the total non-coal volumes utilized by BNSF/UP on Reply, and (c) the total non-coal volumes utilized by AEPCO on Rebuttal:

Rebuttal Table III-A-7 ANR Total Non-Coal Volumes (millions of tons)			
Year	AEPCO Opening	BNSF/UP Reply	AEPCO Rebuttal
2009	101.3	86.8	101.3
2010	103.1	88.2	103.1
2011	109.0	93.0	109.0
2012	114.3	97.2	114.3
2013	118.2	100.6	118.2
2014	121.5	103.4	121.5
2015	124.9	106.3	124.9
2016	128.3	109.3	128.3
2017	131.8	112.4	131.8
2018	135.5	115.5	135.5
Source: AEPCO Opening e-workpaper “Exhibit III-A-2.xlsx,” BNSF/UP Reply e-workpaper “Exhibit III-A-2 Reply.xlsx,” and AEPCO Rebuttal e-workpaper “Rebuttal Exhibit III-A-1.xlsx.”			

The following table provides a breakdown of the ANR Peak Year (2018) volumes by commodity:

Rebuttal Table III-A-8 ANR Peak Year (2018) Traffic (millions of tons)			
	AEPCO Opening	BNSF/UP Reply	AEPCO Rebuttal
Coal	160.6	147.0	154.6
Consumer	82.7	76.8	82.7
Industrial	36.7	27.7	36.7
Agriculture	16.1	11.0	16.1
Total	296.1	262.6	290.1
Source: AEPCO Opening e-workpaper "Exhibit III-A-2.xlsx," BNSF/UP Reply e-workpaper "Exhibit III-A-2 Reply.xlsx," and AEPCO Rebuttal e-workpaper "Rebuttal Exhibit III-A-1.xlsx."			

3. Revenues (Historical and Projected)

Much of BNSF/UP's discussion of revenues in their Reply reflects their treatment of the configuration, volume, and related issues addressed previously in this Rebuttal. For example, the BNSF/UP Reply at III.A-46-49 presents the revenue consequences associated with preventing the ANR from connecting its BNSF and UP segments at Vaughn and with requiring AEPCO to utilize separate NM and PRB SARRs instead of a single SARR. However, BNSF/UP's objections to AEPCO's configuration of the ANR are inconsistent with SAC theory and Board precedent and otherwise defective for the reasons explained *supra*, and their calculations of revenues associated with those configuration issues fail for the same reasons. BNSF/UP also seek to remove the portion of the cross-over divisions associated with the ANR's use of the MRL and to shorten the ANR's portion of cross-over movements involving the MRL by requiring that the ANR interchange traffic with the residual BNSF at Mossmain

(Laurel) rather than Jones Jct. (Huntley) for Signal Peak coal traffic moving east, or at Jones Jct. rather than Mossmain for coal and non-coal traffic moving in both directions between Donkey Creek and Mossmain. BNSF/UP Reply at III.A-49. However, AEPCO's incorporation of the MRL trackage rights and use of its original interchange and associated routing is entirely sound for reasons previously stated. Accordingly, AEPCO's Rebuttal focuses primarily on separate issues raised by BNSF/UP.

AEPCO's Rebuttal discussion of revenues generally follows the organization of BNSF/UP's Reply and addresses coal and non-coal revenues separately, although a substantial portion of BNSF/UP's attempted criticisms apply to both categories of traffic.

Before turning to those matters, it is appropriate to address briefly two technical matters raised by BNSF/UP regarding AEPCO's ATC workpapers. The first involves the use of residual miles rather than SARR miles on 2,500 records, and the second involves incorrect fixed cost calculations for some UP non-coal movements. BNSF/UP Reply at III.A-50-51. AEPCO agrees with the first criticism and has made an appropriate correction in its Rebuttal e-workpapers. AEPCO also agrees with the second criticism and has calculated fixed costs in its Rebuttal e-workpapers for the few UP non-coal movements that did not have fixed costs for one of the two off-SARR segments in AEPCO's Opening e-workpapers.

That said, AEPCO on Rebuttal is updating its ATC calculations, as well as some other calculations, including the jurisdictional threshold, to reflect

2009 URCS values based on 2009 URCS data.⁵⁴ Use of the 2009 URCS values generally results in lower variable costs on both BNSF and UP compared to the indexed 2008 URCS values that AEPCO utilized on Opening in the absence of more timely data. One effect is that there are some movements for which the ATC divisions previously failed to cover their variable costs (meaning that no fixed costs would need to be allocated or thus calculated under ATC) now more than cover their variable costs. Valuing these movements as having a contribution over variable costs causes the ATC divisions to be valued at a positive fixed cost.

a. Revenues for Coal Traffic

BNSF/UP accept AEPCO's calculations of base year traffic revenues for the issue traffic, although BNSF/UP slightly reduce AEPCO's base year volumes and associated revenues. BNSF/UP Reply at III.A-51. AEPCO accepts BNSF/UP's adjustment.

i. Issue Traffic Fuel Surcharge Revenues

BNSF/UP appear to accept AEPCO's approach of projecting revenues for the issue traffic based on changes in the RCAF-U and a mileage-based fuel surcharge, but BNSF/UP take issue with AEPCO's fuel surcharge

⁵⁴ AEPCO's 2009 URCS calculations utilize the R-1 Reports filed by BNSF and UP and the estimate of the railroad industry cost of capital for 2009 filed by the Association of American Railroads ("AAR"). The Western Coal Traffic League ("WCTL"), of which AEPCO is a member, has filed comments with the Board showing that the AAR has overstated the cost of capital. Accordingly, AEPCO reserves the right to update its URCS calculations to reflect the actual cost of capital as adopted by the Board. The issue of the appropriate cost of equity for use in the SAC DCF model itself is addressed in Part III-G.

calculation and also claim that AEPCO improperly blended the EIA's Short-Term Energy Outlook ("STEO") and long-term Annual Energy Outlook ("AEO") forecasts. BNSF/UP Reply at III.A-52-54. As fuel surcharges are a major component of BNSF's and UP's rates, the same criticism is repeated as to other traffic categories.⁵⁵

BNSF/UP's specific claim is that AEPCO improperly mixed the STEO and AEO forecasts of highway diesel fuel ("HDF") prices to overstate the revenues from fuel surcharges after 2011. Specifically, AEPCO used the STEO through 2011, the end of the period covered by the forecast, and AEPCO then applied the AEO annual change for years 2011-2018 to the 2011 STEO HDF figure. BNSF/UP agree with using the STEO through 2011, and the AEO from 2012 through 2018, but BNSF/UP propose to use the actual AEO HDF values (not relative changes) as published for 2012 through 2018. BNSF/UP Reply at III.A-53-54, 59, 67, 68, 71, 72.

What BNSF/UP carefully avoid mentioning is that their proposed switch from the STEO to the AEO in 2012 produces a 4.3% drop in HDF prices (from \$3.110 per gallon in 2011 to \$2.976 per gallon in 2012) after the STEO forecast ceases to apply. There is no principled reason to anticipate that such a

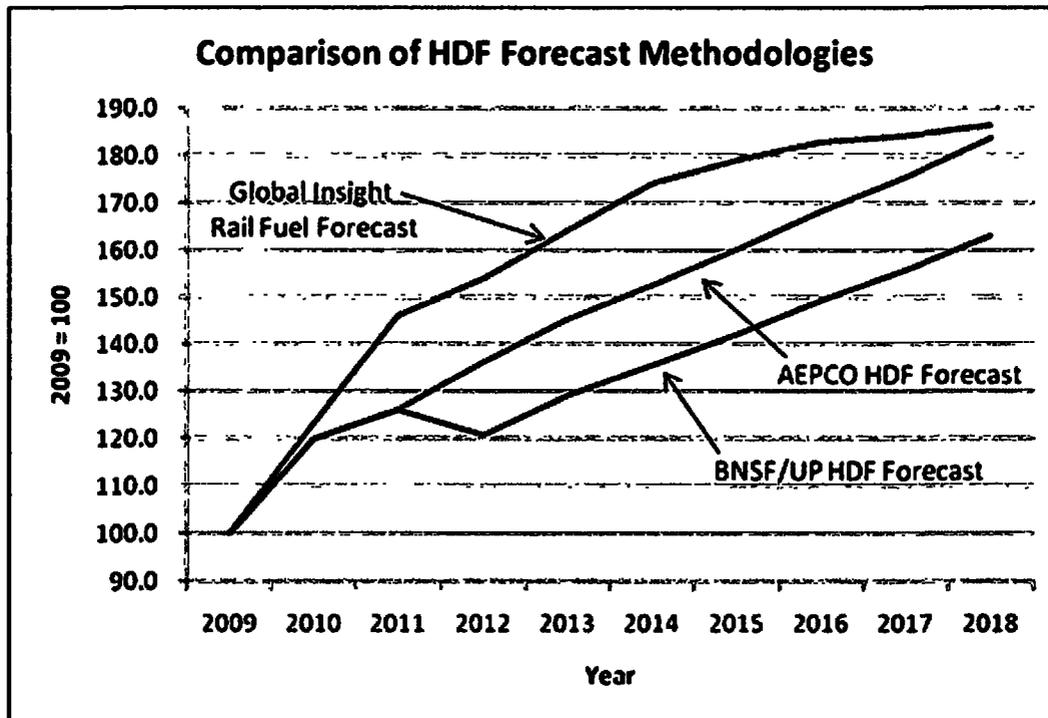
⁵⁵ BNSF/UP also raise a narrower issue as to AEPCO's use of the 2009 AEO Early Release instead of the April 2009 AEO forecast, despite a contrary statement in its narrative. BNSF/UP Reply at III.A-52 n.99. While AEPCO accepts that its Opening e-workpapers did not track the narrative, AEPCO's Rebuttal utilizes the 2010 AEO forecast released in May 2010 (the most recent available), which resolves the issue.

severe and sudden drop in HDF prices would occur at the start of 2012. In fact, implicit in the AEO forecast is a 7.8% increase (from \$2.762 per gallon in 2011 to \$2.976 per gallon in 2012). If the EIA intended to project such a severe drop-off, one would reasonably expect the EIA to have provided some discussion or explanation, but the EIA has not done so. Nor has EIA posited any underlying changes in supply or demand conditions that could account for such a decrease.

To the contrary, the EIA's more recent issuances point to continued price increases in that period. Furthermore, the rail fuel cost index incorporated in the RCAF Forecast prepared by IHS/Global Insight and used by both parties in this case to develop future contract rate escalators aligns much better with AEPCO's HDF forecast than with BNSF/UP's HDF forecast.⁵⁶ As shown on the following chart, AEPCO's methodology produces far more realistic results than does BNSF/UP's methodology:

⁵⁶ The railroads use HDF as a proxy for railroad fuel costs in their fuel surcharge programs, so it is illogical for forecasts of HDF and railroad fuel costs not to track well. As shown in detail in Rebuttal Exhibit III-A-3, even AEPCO's HDF forecast is shown to be conservative relative to forecasted railroad fuel cost increases through 2018, although it is clearly far superior to BNSF/UPs proposed HDF forecast.

Figure III-A-1



Source: AEPCO Rebuttal Exhibit III-A-3.

Nothing supports the substantial price decline posited by BNSF/UP. Accordingly, AEPCO on Rebuttal retains the same methodology that it utilized on Opening, although AEPCO has updated its forecast to use more current EIA HDF price forecasts. Specifically, AEPCO has used HDF forecasts from the EIA's June 2010 STEO and the EIA's 2010 AEO.

ii. Non-Issue Coal Traffic Revenues

BNSF/UP raise several issues with respect to the treatment of non-issue coal traffic revenues.

First, BNSF/UP generally accept AEPCO's approach for adjusting transportation rates on non-issue coal traffic, including the use of the EIA's

transportation rate escalators. However, BNSF/UP criticize AEPCO's use of the 2009 AEO Update rate escalators and instead use the 2010 AEO rate escalators. BNSF/UP Reply at III.A-56. While the 2010 AEO Update escalators were not available at the time AEPCO prepared its Opening Evidence, AEPCO accepts their use on Rebuttal.

However, some errors in BNSF/UP's Reply approach should be noted. While BNSF/UP used the more recent 2010 AEO rate escalators, they continue to use the 2009 AEO Update Gross Domestic Product – Implicit Price Deflator (“GDP-IPD”) forecast to convert the rate escalators from a real basis to a nominal basis. In addition, BNSF/UP misapplied the GDP-IPD forecast to make the conversion. Specifically, the 2010 EIA rate escalator uses 2008 as its base year, but BNSF/UP applied the GDP-IPD forecast as if the 2010 EIA rate escalator used a 2007 base year.⁵⁷

Second, BNSF/UP use the actual contracts and contract rates for the Signal Peak movements. BNSF/UP Reply at III.A-56-57. BNSF/UP had not given AEPCO the actual contracts at the time that AEPCO filed its Opening. AEPCO utilizes the actual contract rates, which BNSF/UP have now provided, on Rebuttal. However, BNSF/UP miscalculated the ATC divisions on the new rates by improperly removing the MRL portion of the movement, effectively leaving AEPCO with the operating costs for the segment, including trackage right fees, but

⁵⁷ See BNSF/UP Reply e-workpaper “Coal Revenue Forecast Reply.xlsx,” worksheet “EIA Rate Escalators,” cells G7 to G18.

none of the revenues. AEPCO's ATC divisions properly reflect service by the ANR to Signal Peak itself.

Third, BNSF/UP claim that AEPCO improperly applied the BNSF 2008 tariff rates for the movement to the Laramie River Generating Station plant rather than the rates prescribed by the STB. BNSF/UP Reply at III.A-57. AEPCO disagrees, as AEPCO Opening e-workpaper "Coal Revenue Forecast.xlsx," worksheet "Contract Rate Adjustments," rows 841-853, show that AEPCO applied the rates that the Board prescribed as published in BNSF Common Carrier Pricing Authority 90077, Version 10. However, because BNSF published the prescribed Laramie River rates for 2010 in Version 11 of the referenced pricing authority on May 2, 2010, AEPCO includes the updated rates on Rebuttal.

Fourth, BNSF/UP explain that they used the actual contract rate adjustors from the contracts for {
} that they "inadvertently failed" to produce in discovery, despite their agreement to do so. BNSF/UP Reply at III.A-57 & n.111. AEPCO's Rebuttal uses the belatedly produced documents.

Fifth, BNSF/UP utilize the correct revenues for the {
} contract movements based on the actual contract. BNSF/UP note that the BNSF traffic data misidentified this contract. BNSF/UP Reply at III.A-58 & n.112. AEPCO's Rebuttal uses the now-identified contract.

Sixth, BNSF/UP identify a few instances where AEPCO used a multiple-year index to adjust rates following contract expiration instead of

indexing from a prior rate and other instances where AEPCO indexed 2009 rates using a 2008 rate index. BNSF/UP Reply at III.A-58. AEPCO agrees that these technical errors were made on Opening and corrects them on Rebuttal.

Seventh, BNSF/UP calculate liquidated damages for movements to {

} when forecasted volumes fell below contractual minimum levels.

BNSF/UP Reply at III.A-58-59. AEPCO disagrees that these volumes fell below the contractual minimums, as the plants meet their contract minimum when proper traffic forecasting is utilized.⁵⁸

Eighth, BNSF/UP raise four issues relating to fuel surcharge revenues on non-issue coal traffic. The first issue is that BNSF/UP claim that AEPCO did not properly blend the STEO and AEO forecasts. BNSF/UP Reply at III.A-59. The issue of the transition from the STEO to the AEO is addressed *supra*.

The second issue is that BNSF/UP claim that AEPCO improperly applied fuel surcharges to certain contract movements where BNSF/UP failed to provide the contracts in discovery or misidentified the contract { }. BNSF/UP claim that AEPCO should have known that fuel surcharges should not apply because there was no fuel surcharge revenue for these movements in the BNSF waybill data. BNSF/UP Reply at III.A-59-60. The criticism is rather

⁵⁸ See AEPCO Rebuttal e-workpaper “Coal Traffic Forecast Rebuttal.xlsx,” tab “Contract Minimums.”

disingenuous as (a) BNSF/UP failed to properly produce the contracts, and (b) in other instances involving UP non-coal traffic, discussed *infra*, UP failed to provide the waybill fuel surcharge information, but BNSF/UP claim AEPCO should have reviewed the contracts. Notwithstanding the inconsistency in BNSF/UP's positions, AEPCO's Rebuttal forecast reflects the belatedly-provided fuel surcharge mechanisms.

Third, BNSF/UP note that the { } contract does not expire until later and claim that no fuel surcharge should apply until the contract ends. BSNF/UP Reply at III.A-59-60. AEPCO agrees that the contact does not expire until later and has its Rebuttal forecast reflects the later expiration.

Fourth, BNSF/UP note that the common carrier pricing authorities for TMPA, AEP Texas, and PSCo/Xcel do not contain fuel surcharges. BNSF/UP Reply at III.A-60. AEPCO's Rebuttal forecast reflects the absence of a fuel surcharge in the pricing authorities.

Finally, BNSF/UP claim that AEPCO made an unsupported assumption that all non-issue BNSF coal traffic will become subject to BNSF's standard fuel surcharge as existing contracts expire. BNSF/UP claim that where a BNSF customer does not have a surcharge, it reflects a special negotiation and the result of that negotiation should be expected to continue into the future. BNSF/UP thus continue to supply the contract (non-standard) fuel surcharge mechanism after contract expiration. BNSF/UP Reply at III.A-60-61.

AEPCO strongly disagrees with BNSF/UP's self-serving claims. Their litigating position is contrary to their well-established positions that all movements will become subject to the standard fuel surcharge mechanism as current contracts expire. Furthermore, the assumption that standard fuel surcharge mechanisms will be applied upon contract expiration has been used and accepted by railroads in prior SAC cases, including the presently pending *Seminole* case.

In addition, use of any fuel surcharge mechanism other than the standard creates an inconsistency with the use of the EIA forecasts to forecast changes in the base rates. The EIA coal transportation rate forecast involves a multi-step process. The first step is the development of the transportation rate escalator. The transportation rate escalator, which BNSF/UP use in their Reply forecast to adjust rates after contract expiration, develops the expected change in coal transportation rates, exclusive of the impact of changes in fuel prices. Once the transportation rate escalator is applied, an additive is applied to the rates to account for fuel surcharges. The EIA bases its fuel surcharge additive on BNSF's standard fuel surcharge mechanism. See EIA, *Coal Market Module of the National Energy Modeling System: Model Documentation 2009*, [http://tonto.eia.doe.gov/FTP/ROOT/modeldoc/m060\(2009\).pdf](http://tonto.eia.doe.gov/FTP/ROOT/modeldoc/m060(2009).pdf), at 140. These fuel-surcharge adjusted coal transportation rates are used to develop the coal production forecasts relied upon in transportation cases. Applying the transportation rate index to post-contract rates as BNSF/UP propose without applying the standard fuel surcharge would produce results inconsistent with the

underlying EIA coal production forecast used by both parties. If BNSF/UP use the EIA's coal production forecast and transportation rate escalators, they must also use the standard fuel surcharge mechanism to adjust post-contract rates.

Otherwise, there is a basic mismatch.

b. Revenues for Non-Coal Traffic

BNSF/UP address various issues relating to AEPCO's development of revenues for non-coal traffic at III.A-61-73 of their Reply.

i. Base Rates/Fuel Surcharges Allocation

BNSF/UP first criticize AEPCO's estimate of the allocation of revenues between the base rates and fuel surcharges for UP non-coal traffic based on system-wide UP data. BNSF/UP argue that AEPCO should be required instead to use the BNSF/UP contract-specific methodology that reflects their evaluation of selected traffic moving under UP-provided contracts. BNSF/UP Rely at III.A-63-65, 70.

AEPCO disagrees with BNSF/UP's criticism on several related grounds. First, AEPCO's discovery specifically requested waybill data containing separate fuel surcharge revenues, or the information required to separate fuel surcharge revenues from total movement revenues. UP chose not to provide the requested data, although BNSF had no difficulty providing the data as requested by AEPCO.⁵⁹

⁵⁹ See AEPCO Request for Production No. 10, parts s. and u., and UP's response, included as AEPCO Rebuttal e-workpaper "AEPCO RFP 10 and UP

BNSF/UP claim that “as AEPCO observed, UP waybill data do not separately report the revenue that is attributable to UP fuel surcharges that apply to intermodal and automotive traffic.” BNSF/UP Reply at III.A-64. BNSF/UP further assert that AEPCO could have used information it developed in its contract analysis instead of the system-wide ratio AEPCO did use to separate UP waybill revenues into base revenues and fuel surcharge revenues. *Id.*

BNSF/UP’s comments are an evasion. The notion that UP does not track or record fuel surcharge revenues separately from base revenues for waybill movements has no credibility. Fuel surcharges are a major portion of UP’s revenue stream, and UP surely pays ample attention to which customers do and do not pay fuel surcharges and how much they pay. Fuel surcharges have been the subject of Board investigation as well as a pending federal class action antitrust complaint. Since 2007, the Board has required Class I railroads, including UP, to submit quarterly reports specifying their fuel surcharge revenue collections, both in total and relating to regulated traffic. STB Ex Parte No. 661 (Sub-No. 1), *Rail Fuel Surcharges* (STB served Aug. 14, 2007). UP is thus required to maintain this data on a movement-specific basis in the normal course of business. Moreover, UP has dutifully filed its reports to the STB, duly certified, typically by its Controller and Chief Accounting Officer. Any suggestion that UP does not have the information requested by AEPCO readily available is absurd. Moreover,

Response.pdf.”

BNSF/UP's Reply does not claim that UP does not, or did not, have the information readily available. Instead, BNSF/UP's position is that AEPCO should not be allowed to rely on a UP system-wide figure, but AEPCO could have developed, and should now effectively be required to rely on, a contract-specific analysis such as BNSF/UP included in their Reply Evidence.

However, neither AEPCO nor UP ever had any reason to conduct the time-consuming and burdensome contract-by-contract review to develop the information. Instead, the information was (and is) available in UP's traffic and operating data, as UP is required to maintain the information, as noted above. In addition, UP plainly views fuel surcharges as a key revenue source and has ample business motivation to track them with precision. To retrieve the information for its internal use, or for production as AEPCO requested in this case, UP needed at most to punch a few buttons on a keyboard.

Of course, AEPCO had no such access to UP's data. Accordingly, to develop the information that BNSF/UP claim AEPCO should have utilized as a reasonable proxy, AEPCO would have been required to conduct a detailed, laborious, essentially manual review of the pricing authority documents produced by UP.⁶⁰ Faced with a deficiency that UP deliberately created by withholding the

⁶⁰ BNSF/UP claim that because AEPCO conducted a similar analysis for other reasons in this proceeding, AEPCO should be required to add this new function to that existing analysis. This argument misses the point that AEPCO need only develop a reasonable proxy using the data available to it. Regardless of the existence of a related analysis that could be used as the foundation of this separate and distinct analysis, AEPCO need not use the methodology posited by

requested information, AEPCO sought to fill in the missing information in the most efficient and least labor-intensive means at its disposal. AEPCO's use of publicly available UP data to make the required calculation is thus reasonable and justified. UP gave up the right to determine the fuel surcharge revenue amounts when it decided to withhold the data from AEPCO in discovery.

Moreover, use of system-wide data should not bias the results of AEPCO's revenue forecast. Simply stated, the system-average data that AEPCO utilized will produce results that on average reflect the actual split of revenues between base rates and fuel surcharges. Application of system-average divisions to all traffic may overstate fuel surcharges for some traffic and understate fuel surcharge for other traffic, but the total net effect should be offsetting.

AEPCO's approach is thus fully appropriate under the circumstances, and AEPCO continues to use it on Rebuttal.

ii. Growth Rate for Consumer Traffic

BNSF/UP note a discrepancy in AEPCO's presentation as to the growth rates for revenues for consumer traffic for both BNSF and UP for the 2015-2018 period, 2014 being the last year covered by BNSF's Long Range Plan [LRP]. AEPCO's Opening Narrative indicates that the growth rate for the last year (2013-2014) was utilized (AEPCO Opening at III-A-42), whereas AEPCO's workpapers utilized the 2009-2014 compound annual growth rate. BNSF/UP

the railroads so long as its own methodology is sound, which it is.

Reply at III.A-65, 70-71. AEPCO had intended to carry the last year (2013-2014) forward, as that year is more probative of what can reasonably be expected in future years, especially as the earlier years of 2009-2014 figures reflect the expected impact of the current recession. AEPCO's Opening e-workpapers reflect an erroneous calculation, and AEPCO utilizes the 2013-2014 figure on Rebuttal.

BNSF/UP also claim a technical error in AEPCO's calculation of the weighted average contract rate increase for BNSF consumer traffic in 2013. The claimed error relates to {

}.⁶¹ Accordingly, the appropriate treatment is to not include the rate at all in the calculation of the 2013 weighted average. AEPCO corrects the matter on Rebuttal by excluding the contract escalator from the 2013 weighted average calculation altogether.

BNSF/UP also claim that AEPCO incorrectly assumed that the {
} contract would terminate in { }, which they correct by extending the contract through 2018. BNSF/UP Reply at III.A-66-67. In fact, the contract {

}. BNSF/UP assume that the contract will be extended with the existing provisions. While AEPCO assumed that the contract would terminate in { } on Opening, AEPCO now agrees that the contract should be extended through the

⁶¹ See AEPCO Rebuttal e-workpaper "Pricing Authority Master Summary File BNSF NC v4 x Rebuttal.xlsx" and BNSF_AEPCO 81916-81928.

DCF period, consistent with AEPCO's treatment of other contracts with auto-extension clauses. AEPCO treats the contract as extending through 2018 on Rebuttal. This change has one significant impact on the overall application of AEPCO's revenue forecast methodology. Specifically, this change pushes the weighted average contract term for BNSF consumer traffic through { } (it was { } in Opening.) As a result, AEPCO now applies its weighted average contract rate escalators and fuel surcharge provisions for BNSF consumer traffic moving under non-provided contracts through { }, and applies system average rate escalators and base fuel surcharge rates to that traffic beginning in { }.

iii. Fuel Surcharge Calculations

As discussed *supra*, BNSF/UP also claim that AEPCO improperly mixed the forecasts from the EIA's STEO and AEO forecasts of HDF prices to overstate the revenues from fuel surcharges after 2011. BNSF/UP Reply at III.A-53-54, 59, 67, 68, 71, 72. BNSF/UP make the same basic criticism of AEPCO's coal traffic revenues. However, as explained *supra*, nothing supports the substantial price decline posited by BNSF/UP. Accordingly, AEPCO on Rebuttal retains the same methodology that it utilized on Opening.

Another BNSF/UP criticism is that AEPCO incorrectly applied the base fuel surcharge to movements under produced contracts which "did not provide details about the method of calculating the fuel surcharge." BNSF/UP claim that AEPCO further erred by including those movements in its calculation of weighted average contract fuel surcharges for non-coal traffic. BNSF/UP argue

that the appropriate methodology is to calculate the weighted average contract “based only on movements for which detailed fuel surcharge information was available” and to apply that result to the calculation of the affected movements. BNSF/UP Reply at III.A-67-68, 71.

BNSF/UP’s arguments are misplaced and cannot be reconciled with their stated positions elsewhere, as explained in the discussion of non-issue coal traffic. Both BNSF and UP have made clear that they expect their customers to pay fuel surcharges in the future as a matter of course. For example, in its published 2009 fact book, UP stated that “[a]pproximately 85 percent of the Company’s business is covered by some type of fuel surcharge program. The goal is to achieve 100 percent coverage.”⁶² Undoubtedly, shippers would prefer not to pay fuel surcharges, and some shippers (typically, high-volume shippers with relatively high bargaining leverage) are able to negotiate exceptions from the carriers’ policy, such as discounts to the standard fuel surcharge formulae. However, where a shipper does succeed in obtaining an individually-negotiated term, it is a significant occurrence (not something that happens by mere accident or coincidence), and those terms can reasonably be expected to have a position of prominence in the final negotiated pricing authority.

⁶² Union Pacific Corporation 2009 Analyst Fact Book, at 4, <http://www.up.com/investors/attachments/factbooks/2008/factbook.pdf>. *See also* AEPCO Rebuttal e-workpaper “UP fuel surcharge future.docx.”

BNSF's and UP's position that a contract's silence as to the method of calculating fuel surcharges should be taken as final, definitive proof that the shipper will receive a discounted fuel surcharge or no fuel surcharge at all thus simply lacks plausibility. For the better part of the last decade, the railroads' established position is that a shipper will be responsible for fuel surcharges unless the pricing authority clearly specifies otherwise (and in which event the absence of a fuel surcharge will be a point for renegotiation at the earliest opportunity). Where no specific fuel surcharge discounts or exemptions are specified in a pricing authority, the only reasonable conclusion is that the base fuel surcharge program rates will apply, as that is the position that the railroads espouse in their day-to-day dealings with customers. Accordingly, AEPCO retains the approach as to fuel surcharges that it utilized on Opening.

As a related matter, BNSF/UP claim that AEPCO erred in applying the base or standard fuel surcharge to movements under provided contracts with non-standard fuel surcharge provisions upon the expiration of the current term of the contracts. The BNSF/UP position is that such non-standard fuel surcharge provisions should be assumed to continue beyond the expiration of the contract. BNSF/UP Reply at III.A-68, 71.

Again, BNSF/UP's self-serving argument cannot be reconciled with their stated and demonstrated determination to require the application of their base surcharge programs wherever possible and especially upon the expiration of existing contracts that contain non-standard fuel surcharge provisions. For

example, consider the following excerpts from the transcript of UP's 1Q10

Earnings Call:

“Rob Knight

Importantly, with the economy turning around, our continued strong service offerings as well as the re-pricing of some major legacy deals, we believe pricing will improve over the balance of the year.

In other words, we believe the first quarter of 2010 price numbers should mark the low price point for the year. *Our legacy renewals also provide us with better fuel cost recovery.* And although this does not contribute to our core price numbers, it definitely improves our Intermodal and overall company margins.”⁶³

and

“Justin Yagerman - Deutsche Bank

Okay that's helpful and I guess just vis-à-vis that and may be giving a little context around it, you talked about *better fuel surcharge recovery* and I am assuming that comes with some of this intermodal change. Can you speak to where you've been, where you are now and where you expect to be on a full run rate basis in terms of *offsetting incremental fuel costs as we kind of move through 2010 and exit into 2011?*

Rob Knight

We continue to make progress *and you are right as we continue to click off legacy contracts and as Jack talked about the intermodal that improved our position, we've done a great job of moving forward on the recovery and minimizing the negative impact that*

⁶³ Transcript of UP 1Q10 Earnings Call on April 22, 2010, at 3, available <http://seekingalpha.com/article/200316-union-pacific-corp-q1-2010-earnings-call-transcript?page=3> (emphasis added).

comes with rising fuel prices. We still of course have the risk of the challenge from quarter-to-quarter should there be swings in fuel prices with the lag effect but we've made great progress on a recovery. We are going to continue to make progress as we move forward."⁶⁴

Contracts contain term limits specifically so that all contracting parties may renegotiate all terms upon contract expiration to reflect market forces at the time of expiration, rather than those at the time of the execution of the expiring contract. The railroads' position that fuel surcharge terms will continue indefinitely assumes that market forces relative to fuel prices and fuel-related costs are static. That assumption is patently unfounded. BNSF and UP have now made clear for over five years that recovery of fuel costs is one of their prime requirements in serving customers, and there is no reason to think that their position will change given the recent volatility in fuel prices and their statements that fuel prices are the most volatile component of their costs. Furthermore, recent STB focus (*e.g.*, STB Docket No. 42105, *Dairyland Power Coop. v. Union Pacific R.R.* (STB served July 25, 2008)), on fuel surcharge programs and practices places an unprecedented level of scrutiny on the formulae railroads use to derive fuel surcharges. As such, there is no plausible reason to conclude that railroads will relent on fuel surcharge terms in the future.

Additionally, the railroads' treatment of fuel surcharge terms is entirely inconsistent with their treatment of other contract terms upon contract

⁶⁴ *Id.* at 7 (emphasis added).

expiration. While BNSF/UP claim that non-standard fuel surcharge provisions will continue beyond the expiration, they recognize that non-standard base-rate escalation provisions will not continue beyond the contract term, but will instead be replaced by standard escalation provisions. The railroads thus assert that the parties will come to different terms on base rate escalation terms, but will continue to use the same fuel surcharge terms. The discrepancy is especially telling because their now standard base rate escalation mechanism (the All-Inclusive Index Less Fuel or AII-LF) was ostensibly devised to work in tandem with fuel surcharge programs in order to appear to avoid a “double dip” of the recovery of fuel surcharges through both the base escalator and the fuel surcharge mechanism. Given the importance of fuel cost recovery to the railroads, there is little reason to think that they would propose or agree to use of the AII-LF without the presence of a fuel surcharge mechanism. The resulting inconsistency highlights the railroads’ motive and ability to pick and choose specific items that help its case while ignoring theoretical congruity. Accordingly, AEPCO’s Rebuttal uses the methodology and calculations utilized on Opening.

As another related matter, BNSF/UP argue that AEPCO incorrectly applied the base fuel surcharge to movements for which no contracts were provided after the weighted average contract term expired for non-coal traffic and to coal movements where BNSF/UP failed to provide the contracts in discovery as requested by AEPCO. BNSF/UP contend that the proper approach is to continue applying weighted average fuel surcharge rates beyond the weighted average

contract term for non-coal traffic and apply the contract terms that govern the coal movements. BNSF/UP Reply at III.A-68.

As above, there is substantial reason to conclude that BNSF/UP will insist on and succeed in implementing their standard fuel surcharge terms to all movements in the future. Fuel surcharges are a standard provision in new pricing authorities (including contracts), and have been so for a number of years. Fuel volatility has been of prime importance to the railroad, and the recent, and tragic, events in the Gulf of Mexico indicate that the volatility is not about to end. There is no reason to conclude that the railroads will fail to insist upon and/or fail to obtain their standard fuel surcharge provisions as contracts expire.

iv. Application of AII-LF and RCAF Indexes

BNSF/UP also criticize AEPCO's application of the AII-LF and RCAF indexes. On Opening, AEPCO utilized figures for the first quarter(s) to calculate growth rates for the 2008-2011 period, but BNSF/UP maintain that use of annual figures is inappropriate. BNSF/UP Reply at III.A-72-73.

AEPCO disagrees with this criticism. Use of 1Qxx values for the 2008-2011 period is appropriate on several grounds. First, 1Q09 is the last time period for which BNSF and UP provided actual, useable railroad traffic data, and AEPCO necessarily and appropriately developed its base year traffic group from that data, as explained supra. Since 1Q09 was the end of the relevant data period, adjusting the rates based on the 1Qxx to 1Qxx change in the AII-LF and RCAF indexes, where that quarterly data is available, is appropriate as doing so provides

the best or tightest match. Second, the SAC DCF model and the shipments of the issue traffic begin on January 1, 2009. Use of 1Qxx indexes in developing the costs and rates for the ANR is also appropriate in terms of providing a better match to the purpose and function of the DCF model. Third, it is appropriate to use more detailed data where such data is available. While only annual forecast rates are available after 2011 and must thus be used for future periods, that is no reason to avoid using the better-timed data for the earlier period where such data is available. Accordingly, AEPCO retains its approach on Rebuttal.

BNSF/UP also make some additional adjustments in their Reply that are not explicitly addressed in their narrative, presumably because they flow from their proposed configuration changes (although other adjustments that flow from their configuration changes are discussed in their narrative). For example, BNSF/UP revised the on-/off-SARR location for BNSF traffic moving south of Pueblo as in their ANR-PRB model (*e.g.*, Denver to Amarillo traffic changed to Denver to Pueblo) and for UP traffic moving north of Vaughn as in their ANR-PRB model (*e.g.*, El Paso to Vaughn traffic changed to El Paso to Stratford) for purposes of calculating ATC revenue divisions. As AEPCO disagrees with BNSF/UP's configuration changes for the reasons previously stated, AEPCO retains the on-/off-SRR locations for the covered traffic as presented on Opening.

c. Revenue Summaries

The following table compares (a) the total coal revenues utilized by AEPCO on Opening, (b) the total coal revenues utilized by BNSF/UP on Reply, and (c) the total coal revenues utilized by AEPCO on Rebuttal:

Rebuttal Table III-A-9 ANR Total Coal Revenues (millions)			
Year	AEPCO Opening	BNSF/UP Reply	AEPCO Rebuttal
2009	\$922.2	\$863.2	\$859.9
2010	1,049.5	936.1	952.9
2011	1,141.8	1,000.2	1,043.8
2012	1,227.6	1,042.8	1,122.1
2013	1,316.8	1,108.4	1,193.2
2014	1,369.9	1,149.5	1,250.7
2015	1,397.5	1,137.2	1,233.9
2016	1,485.0	1,198.2	1,303.5
2017	1,554.6	1,240.5	1,343.8
2018	1,621.4	1,296.1	1,398.8
Source: AEPCO Opening e-workpaper "Exhibit III-A-3.xlsx," BNSF/UP Reply e-workpaper "Exhibit III-A-3 Reply.xlsx," and AEPCO Rebuttal e-workpaper "Rebuttal Exhibit III-A-2.xlsx."			

The following table compares (a) the total consumer revenues utilized by AEPCO on Opening, (b) the total consumer revenues utilized by BNSF/UP on Reply, and (c) the total consumer revenues utilized by AEPCO on Rebuttal:

Rebuttal Table III-A-10			
ANR Total Consumer Revenues			
(millions)			
Year	AEPCO Opening	BNSF/UP Reply	AEPCO Rebuttal
2009	\$926.9	\$841.6	\$906.4
2010	1,028.5	943.0	1,001.8
2011	1,111.1	1,025.7	1,083.1
2012	1,205.2	1,070.0	1,174.5
2013	1,321.6	1,170.2	1,273.9
2014	1,410.7	1,253.2	1,371.5
2015	1,516.8	1,339.1	1,462.3
2016	1,628.4	1,455.0	1,561.3
2017	1,769.8	1,552.0	1,687.4
2018	1,902.8	1,666.3	1,804.4
Source: AEPCO Opening e-workpaper "Exhibit III-A-3.xlsx," BNSF/UP Reply e-workpaper "Exhibit III-A-3 Reply.xlsx," and AEPCO Rebuttal e-workpaper "Rebuttal Exhibit III-A-2.xlsx."			

The following table compares (a) the total industrial revenues utilized by AEPCO on Opening, (b) the total industrial revenues utilized by BNSF/UP on Reply, and (c) the total industrial revenues utilized by AEPCO on Rebuttal:

Rebuttal Table III-A-11			
ANR Total Industrial Revenues			
(millions)			
Year	AEPCO Opening	BNSF/UP Reply	AEPCO Rebuttal
2009	\$240.1	\$195.8	\$218.7
2010	263.8	210.8	240.7
2011	321.8	241.0	295.5
2012	385.2	263.4	352.8
2013	417.5	285.9	382.9
2014	441.2	301.6	405.3
2015	468.1	324.5	429.8
2016	496.7	342.0	456.1
2017	528.6	362.0	485.3
2018	561.6	383.0	515.6
Source: AEPCO Opening e-workpaper "Exhibit III-A-3.xlsx," BNSF/UP Reply e-workpaper "Exhibit III-A-3 Reply.xlsx," and AEPCO Rebuttal e-workpaper "Rebuttal Exhibit III-A-2.xlsx."			

The following table compares (a) the total agricultural revenues utilized by AEPCO on Opening, (b) the total agricultural revenues utilized by BNSF/UP on Reply, and (c) the total agricultural revenues utilized by AEPCO on Rebuttal:

Rebuttal Table III-A-12			
ANR Total Agricultural Revenues			
(millions)			
Year	AEPCO Opening	BNSF/UP Reply	AEPCO Rebuttal
2009	\$98.2	\$85.1	\$90.8
2010	108.0	92.3	100.0
2011	125.9	98.7	116.7
2012	135.0	102.5	125.4
2013	143.0	107.8	132.6
2014	150.4	113.0	139.9
2015	158.4	122.0	147.5
2016	166.7	128.0	155.7
2017	175.2	134.2	164.2
2018	184.0	141.0	172.9

Source: AEPCO Opening e-workpaper "Exhibit III-A-3.xlsx," BNSF/UP Reply e-workpaper "Exhibit III-A-3 Reply.xlsx," and AEPCO Rebuttal e-workpaper "Rebuttal Exhibit III-A-2.xlsx."

The following table compares (a) the total revenues utilized by AEPCO on Opening, (b) the total revenues utilized by BNSF/UP on Reply, and (c) the total revenues utilized by AEPCO on Rebuttal:

Rebuttal Table III-A-13			
ANR Total Revenues			
(millions)			
Year	AEPCO Opening	BNSF/UP Reply	AEPCO Rebuttal
2009	\$2,187.4	\$1,985.6	\$2,075.8
2010	2,449.8	2,182.2	2,295.3
2011	2,700.6	2,365.6	2,539.0
2012	2,953.0	2,478.8	2,774.8
2013	3,198.8	2,672.2	2,982.5
2014	3,372.2	2,817.3	3,167.4
2015	3,540.8	2,922.9	3,273.5
2016	3,776.9	3,123.1	3,476.6
2017	4,028.2	3,288.7	3,680.7
2018	4,269.8	3,486.4	3,891.7
Source: AEPCO Opening e-workpaper "Exhibit III-A-3.xlsx," BNSF/UP Reply e-workpaper "Exhibit III-A-3 Reply.xlsx," and AEPCO Rebuttal e-workpaper "Rebuttal Exhibit III-A-2.xlsx."			

III. B. STAND-ALONE RAILROAD SYSTEM

AEPCO has propounded a single SARR, the ANR, which would transport all of the coal that is subject to the Amended Complaint in this proceeding, including coal originated by BNSF at mines in Montana, Wyoming and New Mexico and terminated by UP at AEPCO's Apache Generating Station near Cochise, AZ. In their Reply Evidence, BNSF/UP attack AEPCO's proposal for a single SARR and aver that AEPCO should have provided two SARRs, with one serving each of the two origin coal-producing regions from which BNSF/UP established joint rates for the issue coal traffic (Montana/Wyoming¹ and New Mexico). BNSF/UP also aver that the routes of each SARR should follow the actual real-world routes of movement for the issue traffic, without internal reroutes involving BNSF's route from Stratford, TX to Vaughn, NM via Amarillo, TX (in the case of movements from the PRB origins) and BNSF/UP's route from Belen, NM to Deming, NM via Vaughn, NM and El Paso, TX (in the case of movements from the New Mexico origins).²

¹ Although the Montana/Wyoming origins include one mine, Signal Peak, that technically is not located in the Powder River Basin ("PRB"), AEPCO herein refers to these origins for convenience as the "PRB origins."

² The changes from the actual routes of movement are shown schematically on pages 2 and 4 of BNSF/UP Exhibit No. ("Reply Exhibit") III.A-1. Although these schematics are for the defendants' separate "ANR-PRB" and "ANR-NM" SARR routes, the different internal routes also apply for the single SARR proposed by AEPCO.

In Parts I and III-A-1 of this Rebuttal, AEPCO has demonstrated that its proposal for a single SARR to move all of the issue traffic is supported by SAC theory, precedent in other SAC rate cases, and the facts. That demonstration will not be repeated here; suffice it to say that AEPCO does not believe that two separate SARRs are needed and is not changing either the single-SARR concept or the routes used on Opening. Accordingly, AEPCO herein responds only to BNSF/UP's evidence on the SARR system for the "Reply ANR" which is the defendants' version of the single SARR posited by AEPCO.

1. **Route and Mileage**

BNSF/UP do not dispute the geographic limits of the ANR as proposed by AEPCO, which extends from Walter Jct., MT on the north to Cochise, AZ on the south/west with a main line extending from Vaughn to Defiance, NM to handle the issue New Mexico coal traffic as well as non-issue traffic that uses that line. While BNSF/UP dispute the internal reroutes described on the preceding page, for purposes of presenting evidence on the "Reply ANR" they accept all of the routes specified by AEPCO.

a. **Main Line**

The defendants dispute only one segment of the ANR's main line: the segment that involves trackage rights over Montana Rail Link ("MRL")

between Laurel and Jones Jct., MT.³ As described in Opening Part III-B-1, the ANR operates over all of this 29.57-mile MRL line segment for purposes of handling (1) coal and other traffic that originates or terminates at other points on the ANR system and that the ANR interchanges to the residual BNSF at Laurel or Jones Jct.; (2) traffic that BNSF moves overhead between Jones Jct. and Laurel using its MRL operating rights; (3) coal traffic originating at the Signal Peak Mine (beginning in 2012), and which the ANR moves both to its other lines which connect with MRL at Huntley, MT and to its interchange with BNSF at Jones Jct.; and (4) coal traffic destined to PPL Montana's Corette generating station at Billings, MT.

BNSF/UP assert that the ANR may use BNSF's trackage rights over MRL only for traffic that moves between ANR points north and south of the trackage rights line (*i.e.*, Signal Peak coal traffic that moves between ANR points north of Mossmain, MT and ANR points south of Huntley/Moran Jct., MT).⁴ Their only basis for this position is that the ANR is not constructing any portion of the MRL lines and therefore cannot use them for BNSF trackage rights traffic that does not share other, constructed ANR lines (in other words, for what are essentially BNSF overhead movements between Laurel and Jones Jct.). BNSF/UP

³ BNSF/UP quarrel with AEPCO's route-mile calculations for the constructed portions of the ANR in three minor respects, which are discussed in Subparts III-B-1-d and e below.

⁴ BNSF/UP Reply at III.B-1. The MRL line and associated BNSF lines are shown schematically on page 5 of Reply Exhibit III.A-1.

Reply at III.A-9-10, III.C-6. Defendants cite *Duke/CSXT* as supporting their position, but as noted in Part III-A-1, that decision is inapposite because the issue Signal Peak traffic moves over almost all of the MRL trackage rights segment in issue and thus does share facilities with the BNSF overhead traffic, which warrants its inclusion. *Id.*, 7 S.T.B. at 424-426. Moreover, other precedents establish the principle that a SARR may share in the incumbent's traffic (and revenues therefrom) that uses cost-sharing arrangements such as trackage rights over lines of a third-party, non-defendant carrier, which MRL's position for purposes of this case. See *Wisconsin P&L*, 5 S.T.B. at 1006, 1014; *PSCo/Xcel I*, 7 S.T.B. at 628, 665; *AEPCO November 2003*, 7 S.T.B. at 228.⁵

Finally, the inclusion of the overhead BNSF traffic that uses the MRL trackage rights is a fundamental component of AEPCO's traffic grouping, in that this traffic shares facilities and costs with other traffic using the SFRR system. By arbitrarily removing this traffic, BNSF/UP are changing the SFRR traffic group and reducing available revenue, something which is not the defendants' prerogative under the *Coal Rate Guidelines*.⁶ The *Guidelines* encourage shippers to group traffic in a manner that maximizes densities, thus lowering the average

⁵ In a subsequent decision in the prior *AEPCO* rate case served March 15, 2005 ("*AEPCO March 2005*"), the Board refused to allow a SARR, when replacing one of two defendant carriers involved in a joint movement, to utilize that carrier's operating rights over a line of the other defendant (the Vaughn-El Paso line segment) rather than constructing that line. However, the Board explicitly acknowledged the propriety of a SARR's using operating rights over a non-defendant third party. *Id.* at 7.

⁶ *Id.*, 1 I.C.C.2d at 544.

investment cost per ton (as well as certain operating costs, such as General & Administrative costs, costs for Operating managers, and ad valorem taxes, which remain constant as revenue increases, thus effectively making them fixed costs.) The inclusion of the MRL overhead trackage rights traffic contributes toward these investment costs and fixed operating costs, thus lowering the average costs per ton. Removing the MRL overhead traffic would infringe upon AEPCO's right to group traffic to develop a least-cost/most profitable SARR system.

For the foregoing reasons, it would be improper to limit the ANR's trackage rights to the 24.24-mile segment between Mossmain and Huntley, which is the segment used by the issue Signal Peak coal traffic moving to the Apache power plant, or to exclude any BNSF traffic that uses these trackage rights.⁷

b. Branch Lines

BNSF/UP have accepted the four ANR branch lines proposed by AEPCO to serve origin coal mines, although there is a minor dispute as to the route miles of the Reno Branch which serves the Black Thunder and Jacobs Ranch (now Thunder East) coal mines in Wyoming. The ANR also owns and/or operates over spurs (or parts of spurs) that serve various coal mines and five destination

⁷ BNSF/UP also propose, inexplicably, that coal traffic moving between ANR-served origins south of Huntley/Moran Jct. and points east of Jones Jct. should be interchanged with BNSF at Moran Jct. rather than Jones Jct. The ANR is constructing the 1.5-mile BNSF-owned line segment between Moran Jct. and Jones Jct., so there is no reason why the interchange cannot be at Jones Jct. In addition, coal traffic originating at Signal Peak mine and interchanged to BNSF for movement east from Jones Jct. can be interchanged with BNSF at Jones Jct. rather than Mossmain for the same reason the BNSF MRL overhead traffic can be interchanged at Jones Jct.

power plants, and these spurs have also been accepted by the defendants. *See* BNSF/UP Reply at III.B-3 and the defendants' route miles table (BNSF/UP Reply at III.B-8) (showing identical mileage for the ANR portion of PRB mine spurs and destination spurs as between "AEPCO ANR" and "Reply ANR").

c. Interchange Points

As propounded by AEPCO on Opening, the ANR interchanges coal and other traffic at 24 locations. *See AEPCO* Opening at III-B-4-5. The interchanges are with BNSF, UP, and two other railroads with which BNSF or UP interchanges coal traffic in the real world (NKCR and Mexican carrier FXE). In addition to re-arranging the interchanges with BNSF in the MRL trackage rights area, as discussed above, BNSF/UP propose to reduce the number of interchange locations by three for the Reply ANR. The reductions result from elimination of one of the two BNSF interchanges at Denver, CO, elimination of the interchange with BNSF and UP at Pueblo, CO, and the elimination of the interchange with FXE at El Paso, TX. *See BNSF/UP* Reply at III.B-4-5.

AEPCO concurs that the ANR does not interchange any traffic at Pueblo, and thus that this interchange should be eliminated. One of the two interchanges at Denver and the FXE interchange at El Paso are used to interchange coal traffic {

} As

described in Part III-A-1 above, this traffic remains in the SFRR's traffic group so both interchanges continue to be needed.

d. Route Mileage

BNSF/UP accept AEPCO's calculation of the ANR's route miles, with three exceptions. First, they propose to reduce the non-constructed route miles involving the MRL trackage rights from 29.57 miles to 24.24 miles, a reduction of 5.33 miles. As previously explained, this reduction is inappropriate because the ANR is entitled to use cost-sharing arrangements such as trackage rights with third-party, non-defendant carriers.

Second, BNSF/UP propose to increase the route miles for the Reno Branch by 2.56 miles, on the basis that the track charts for that branch indicate a long mile between MP 0.0 and MP 1. BNSF/UP Reply at III.B-2. AEPCO rejects this addition, because the ANR does not construct all of the existing trackage between MP 0.0 and MP 1.0. It only builds the 0.92 miles required for the wye connection between Reno Junction and the Reno South Turnout. *See* Rebuttal e-workpaper "ANR Stick Diagram.pdf" which shows the trackage to be constructed.

Third, BNSF/UP propose to increase the route miles at two locations on the Gallup Subdivision in New Mexico by a total of 3.50 miles (1.51 miles between W. Baca and E. Defiance and 1.99 miles between Dalies and E. Baca). The reason, again, is that there is additional distance between two sets of mileposts on that subdivision. BNSF/UP Reply at III.B-2-3. Based on further review of the subject BNSF track charts, AEPCO accepts both of these additions.

The net result is that the ANR's total route miles should be increased by 3.5 miles from Opening, from 2,231.54 to 2,235.04 miles. This increase also

applies to the ANR's constructed route miles (which exclude the MRL trackage rights line). Thus, the constructed route miles increase from 2,201.97 to 2,205.47. The increased mileage is reflected in AEPCO's revised track or "stick" diagrams for the ANR, included as Rebuttal Exhibit III-B-1.⁸ It is also reflected in the revised ANR road property investment costs shown in Part III-F below.

e. Track Miles and Weight of Track

i. Main Lines and Branch Lines

The revisions to the ANR's route miles described above also require revisions to the ANR's constructed main track miles, as shown in Table III-B-3 on page III-B-9 of AEPCO's Opening narrative. The track miles for single first main track as shown in this table should be increased by 3.50 miles, from 2,201.97 to 2,205.47 miles. The two route-mile additions on the Gallup Subdivision described in the preceding section are in areas with two parallel main tracks. Thus, the ANR's total main track miles increase by 3.50 miles for first main track and 3.50 miles for second main track, or a total of 7.00 track miles, as a result of these route-mile additions.⁹

⁸ Changes from AEPCO's Opening track diagrams are shown in red color.

⁹ BNSF/UP propose an increase of 6.06 miles for single first main track and 3.31 miles for other main line track, for a total increase of 9.17 miles. BNSF/UP Reply at III.B-9. The 6.06-mile increase for single first main track appears to include BNSF/UP's proposed addition of 2.56 route miles for the Reno Branch, which AEPCO has rejected as explained earlier, as well as 3.50 miles for the two route-mile additions on the Gallup Subdivision which AEPCO has accepted.

AEPCO has also added or extended several passing sidings, and removed one siding, as a result of its Rebuttal RTC Model simulation of the ANR's peak-period operations. The changes, from north to south, are as follows:

- Add a 1.85-mile passing siding between MP 9.35 and MP 11.20 on the Dutch Branch.
- Convert the 1.74-mile interchange track between MP 116.39 and MP 118.13 on the Pikes Peak Subdivision to a passing siding.¹⁰
- Add a 1.70-mile passing siding between MP 583.30 and MP 585.00 on the Pueblo Subdivision
- Extend the 1.2-mile passing siding between MP 573.30 and MP 574.50 on the Pueblo Subdivision 0.4 miles from MP 573.30 to MP 572.90, thus increasing the length of this siding to 1.60 miles.
- Remove the 0.8-mile passing siding between MP 570.70 and MP 571.50 on the Pueblo Subdivision.
- Extend the 1.1-mile passing siding between MP 566.20 and MP 567.30 on the Pueblo Sub 0.5 miles from MP 567.30 to MP 567.80, thus increasing the length of this siding to 1.60 miles.
- Add a 1.65-mile passing siding between MP 217.0 and MP 218.65 on the Boise City Subdivision.

These changes result in a net increase in the ANR's constructed track miles of 7.04 miles.

In addition, AEPCO's experts have discovered two errors in their Opening calculation of track miles for second main track. First, AEPCO

¹⁰ This track was originally intended as a UP interchange at Pueblo; however, the ANR does not interchange any traffic with UP at Pueblo. A corresponding 1.74 track miles have been removed from the ANR's (interchange) yard track miles.

inadvertently excluded 1.03 track miles of second main track between MP 792.70 and MP 791.67 on the Clovis Subdivision from its Opening main-track miles and construction costs.¹¹ The second main extends to MP 791.67 in the RTC Model and should have been reflected that way in AEPCO's Opening track diagrams. Second, 1.13 miles of what should have been classified as second main track were improperly classified as interchange track. This error has been corrected in Rebuttal e-workpaper "Track ANR working.REBUTTAL.xls."

The net result of the changes described above is to increase the ANR's constructed main track miles by a total of 16.20 miles – 7.00 miles for the increase in route miles (3.50 miles first main and 3.50 miles second main), 7.04 miles for the siding changes resulting from the Rebuttal RTC simulation, and 2.16 miles to correct the two errors described in the preceding paragraph. All of these changes are shown in red color on Rebuttal Exhibit III-B-1.

ii. Helper Pocket, Setout and MOW Tracks

BNSF/UP disagree with AEPCO's Opening track miles for helper pocket tracks and FED setout tracks, but accept the Opening track miles for maintenance-of-way ("MOW") equipment storage tracks. BNSF/UP Reply at III.B-9-11. The net result is to increase the ANR track miles for this category from 29.02 to 29.38, an increase of 0.36 miles.

¹¹ AEPCO's Opening track diagrams incorrectly show the end of double track at MP 797.80 rather than MP 792.70. *See* Opening Exhibit III-B-1, page 18. This same error appears on BNSF/UP's track diagrams (*see* Reply Exhibit III-B-1, page 29).

AEPCO disagrees with BNSF/UP's proposed changes to the track miles for helper pocket and setout tracks. With respect to helper pocket tracks, BNSF/UP propose to eliminate the two helper districts provided by AEPCO on Opening (one at the north end of the Orin Subdivision in Wyoming, the other near Palmer Lake, CO), and add a helper district between Sheridan and Parkman, WY. BNSF/UP Reply at III.B-9-10 and III.C-17-18. However, as explained in Part III-C-1-c below, AEPCO's operating experts have chosen to retain the Orin and Palmer Lake helper districts rather than operate all PRB coal trains (including those moving to points south of Denver) with four locomotives over their entire route, which would cause a substantial increase in locomotive unit miles. With respect to loaded coal trains operating over the grade between Sheridan and Parkman, AEPCO has equipped all coal trains over 16,500 gross trailing tons with four locomotives for the relatively short distance between the mine(s) and the BNSF interchange at Jones Jct. or Laurel, MT. *See* Rebuttal e-workpaper "Power Up Sheridan-Parkman Grade northbounds.xls." AEPCO's Opening and Rebuttal RTC simulations indicate that lighter trains do not need helper assistance in this territory; accordingly, a helper district between Sheridan and Boardman is not needed. Thus, no changes should be made to AEPCO's Opening track miles for helper pocket tracks.

With respect to setout tracks, AEPCO provided one 860-foot setout track per main track on either side of each failed-equipment detector, or FED.

BNSF/UP accept this, but claim that the ANR requires additional FED's on the Orin Subdivision, which in turn requires additional setout tracks. Specifically, BNSF/UP assert that AEPCO provided only three FED's on the Orin Subdivision whereas seven are needed, or a net increase of four. BNSF/UP Reply at III.B-11. In fact, AEPCO provided a total of nine FEDs for the Orin Subdivision on Opening, at five locations (four of the five locations have two tracks). BNSF/UP also show five FED locations in their Reply track diagrams. *Compare* Opening Exhibit III-B-1, pp. 6 and 7 with Reply Exhibit III-B-1, pp. 7 and 9. Thus, no change in the number of FED setout tracks (which accompany each FED) on the Orin Subdivision is warranted.

Review of the Opening helper pocket and setout track miles, undertaken to respond to BNSF/UP's comments, indicates that AEPCO understated the miles for these tracks on Opening. There are 223 setout tracks and five helper tracks, totaling 41.26 track miles. *See* Rebuttal e-workpaper "ANR Auxiliary tracks REBUTTAL.xls."

Yard track miles are addressed in the next section.

2. Yards

The ANR has five inspection/fueling yards (located at Guernsey, WY; North Amarillo, TX; Texico, NM; West Vaughn, NM; and West El Paso, NM), and 21 additional yards used to interchange traffic with other railroads. On Opening, AEPCO calculated a total of 242.93 track miles for all of these yards. AEPCO Opening at III-B-9, 18. BNSF/UP's Reply evidence on yard track miles

is confusing and inconsistent. Table III.B-3 on page III.B-9 of the Reply Narrative shows 234.39 track miles for yard tracks, or 8.54 miles less than what AEPCO posited on Opening.¹² However, BNSF/UP's Part III.F grading spreadsheet shows a total of 263.79 miles for yard tracks, which represents an increase of 20.86 track miles compared with the 242.93 yard track miles calculated by AEPCO in its Opening Evidence. See BNSF/UP Reply e-workpaper "Revised ANR Grading.xls," tab "IIIF 10 Yards (2)".

In any event, AEPCO has reviewed BNSF/UP's descriptions of the additional yard tracks they claim are needed at various locations, and has made several changes to its yard track miles on Rebuttal. These changes are described below.

a. Inspection/Fueling Yards

Guernsey. BNSF/UP have accepted AEPCO's proposed configuration for Guernsey Yard. BNSF/UP Reply at III.B-12.

North Amarillo. BNSF/UP have generally accepted AEPCO's proposed configuration for North Amarillo Yard except that they propose to add a lead track at each end of the yard to prevent bad-order switching activity from blocking access from the main line by trains that need to be refueled and

¹² Based on BNSF/UP's ANR construction cost spreadsheets for Part III.F, it appears this number was derived by simply subtracting the track miles for yard turnouts developed by AEPCO from AEPCO's total yard track miles (the yard turnout miles are accounted for elsewhere).

inspected. BNSF/UP Reply at III.B-13.¹³ AEPCO's operating experts concur that one lead track, 2.0 miles in length, should be added at each end of this yard.

Texico. BNSF/UP assert that AEPCO's design for the Texico Yard, which is used for swapping blocks of cars between certain intermodal trains, inspection/fueling of the new trains prior to departure, and interchanging trains with BNSF, is inadequate in two respects. First, defendants claim that because "DTL" (direct-to-locomotive by tanker truck) fueling will be performed at Texico Yard, three tracks need to be added for fuel unloading and storage. Second, defendants assert that, as with the North Amarillo Yard, lead tracks should be added at each end of the yard. BNSF/UP Reply at III.B-13-14. AEPCO accepts the two lead tracks (with the easterly lead extending to the BNSF interchange connection at Milepost 646.05), but disagrees that fuel unloading and storage tracks are needed.

BNSF/UP evidently assume that the tanker trucks that perform DTL fueling of locomotives at Texico will get their fuel from storage tanks at Texico, and that trackage is needed to deliver fuel to these storage tanks by tank car. This is incorrect. Texico Yard is located only six miles east of Clovis, NM, where large quantities of diesel fuel and other refined petroleum products are consumed by BNSF (which has a substantial yard at Clovis) and other users including the

¹³ BNSF/UP do not show a revised configuration for North Amarillo Yard in their ANR track diagrams (Reply Exhibit III-B-1). All of AEPCO's revised yard configurations are shown in Rebuttal Exhibit III-B-1 which shows all revisions made on Rebuttal to AEPCO's Opening Exhibit III-B-1.

nearby Cannon U.S. Air Force Base. There is no reason why the contractor's tanker trucks cannot obtain diesel fuel from a supplier at Clovis and transport it the six miles to Texico Yard for dispensing into locomotives.

West Vaughn. AEPCO again accepts the defendants' proposal (BNSF/UP Reply at III.B-17) to add lead tracks at both ends of the yard (a total of four lead tracks are needed because the yard tracks are located on both sides of the double-track main line). AEPCO has also added two relay tracks to this yard as a result of its Rebuttal RTC Model simulation.

BNSF/UP also propose to add additional trackage and facilities (including storage tanks) to receive diesel fuel by tank car from Belen, NM, where BNSF has a large yard that is the real-world equivalent of the ANR's West Vaughn Yard and where an existing pipeline supplies fuel to BNSF. *Id.* at III.B-14-16. AEPCO disagrees that fuel must be delivered to West Vaughn in tank cars from Belen, or that trackage related facilities to load and unload tank cars must be added at either Belen or West Vaughn. As explained in Part III-D-1-c, *infra*, given the volume of diesel fuel being consumed annually at West Vaughn (which replaces an equivalent amount of fuel consumed by BNSF annually at Belen), it is reasonable to assume that the owner of the nearby pipeline that carries diesel fuel used by BNSF at Belen would construct a lateral extension to supply fuel directly to the ANR at West Vaughn. AEPCO has accounted for the cost of fuel resulting from construction of this pipeline lateral, and there is no need for the ANR to

construct additional trackage or other facilities to receive fuel at West Vaughn via tank car.

BNSF/UP also propose that the ANR's fuel storage facilities be expanded from 2.4 million gallons of capacity (roughly a five-day supply) to 5.4 million gallons (a ten-day supply) to "ensure an adequate supply of fuel to meet the requirements at Vaughn in the case of a short-term interruption of deliveries due to weather or other causes." BNSF/UP Reply at III.B-16. AEPCO Witness Reistrup concurs that ten days of fuel storage capacity would be appropriate if fuel is being delivered by tank car, but deliveries by an underground pipeline (which is unaffected by weather) are virtually uninterrupted so five days of storage capacity are sufficient.

Finally, defendants assert that an overpass should be constructed for New Mexico Highway 3 which crosses the existing BNSF line at the west end of West Vaughn Yard, to avoid vehicular traffic interfering with rail traffic. BNSF/UP Reply at III.B-14. AEPCO intended to avoid this crossing when it sited the West Vaughn Yard, but tracks were added to the yard during the RTC simulation that resulted in lengthening the yard over the crossing. On Rebuttal, AEPCO has moved the West Vaughn Yard 0.4 miles to the east to avoid the Highway 3 crossing. The revised location puts the yard between Mileposts 801.60 and 804.35, as shown on page 18 of Rebuttal Exhibit III-B-1.

West El Paso. BNSF/UP propose a number of changes to the configuration of the ANR's West El Paso Yard, which is located in southeastern

New Mexico approximately 17 miles west of El Paso, TX. First, BNSF/UP point out that AEPCO's evidence is internally inconsistent with respect to the location of the West El Paso Yard. BNSF/UP Reply at III.B-18. AEPCO acknowledges that the location of this yard is shown incorrectly in its Opening track diagrams Exhibit III-B-1). The correct location is the location shown in its RTC track schematics, *i.e.* between Mileposts 1277.9 and 1280.0 on UP's Lordsburg Subdivision. The location of the yard is shown correctly in AEPCO's Rebuttal track diagrams (Rebuttal Exhibit III-B-1).

Second, BNSF/UP propose that the entire yard be located south of the main line, rather than having tracks on both sides of the main. BNSF/UP Reply at III.B-18-19. AEPCO's operating experts disagree with this change (and they note that most of the ANR's other inspection/fueling yards are designed with relay tracks on both sides of the main line, without objection from BNSF/UP). Most of the westbound trains that require inspection and fueling arrive from Vaughn via the Carrizozo subdivision, which connects with the ANR's Lordsburg Subdivision main line from the north. AEPCO's Opening RTC simulation indicates that these trains naturally flow onto the relay tracks on the north side of the yard, as otherwise they would have to cross the main tracks to reach the relay tracks on the south side (where BNSF/UP propose to locate them).¹⁴

¹⁴ AEPCO notes that its design for this yard includes two sets of dual or universal crossovers between the two main tracks, with one set located near each end of the mainline crossovers. *See* Opening Exhibit III-B-1, page 22A. This facilitates the movement of trains onto an open yard relay track.

Third, BNSF/UP state that lead tracks need to be added at both ends of the West El Paso Yard. *Id.* at III.B-19. AEPCO concurs with this addition and has added the lead tracks on Rebuttal.

Fourth, BNSF/UP hypothesize that due to the uneven flow of trains through the yard, the yard should have eight fuel racks (platforms) rather than four, as posited by AEPCO. *Id.* at III.B-20-21.¹⁵ However, the railroads' speculation as to delays is belied by AEPCO's Opening RTC simulation. The simulation showed that, notwithstanding that trains do not arrive evenly spaced out during the day, the four fueling platforms provided by AEPCO (which can fuel eight trains simultaneously) could accommodate all trains whose locomotives required fueling without causing delay to other trains. AEPCO's Rebuttal RTC simulation shows the same thing. Accordingly, it is not necessary to add more fuel racks to this yard.

Fifth, BNSF/UP assert that additional track, unloading and storage facilities are needed at West El Paso Yard to receive diesel fuel by tank car from UP's Dallas Street Yard, and the loading facilities at Dallas Street Yard would also have to be expanded at the ANR's expense. AEPCO agrees that fuel would be received at West El Paso by tank car from UP's Dallas Street Yard and that West El Paso Yard needs facilities to receive/unload tank cars. However, UP does not

¹⁵ The defendants also note that although AEPCO's Opening narrative states that the four fueling platforms will be located at the west end of the yard, its track diagrams (Opening Exhibit III-B-1) show two platforms at the west end and two at the east end. The track diagrams are correct.

appear to have added any specific infrastructure costs related to receiving/unloading diesel fuel, other than additional fuel storage tanks.¹⁶ AEPCO agrees that an additional fuel storage tank is needed, and has added costs for this tank on Rebuttal. *See* Rebuttal e-workpaper “ANR Buildings and Facilities Final. REBUTTAL.xls.”¹⁷

Sixth, BNSF/UP asserts that the West El Paso yard needs a separate track on which to perform repairs to bad-order cars that cannot be fixed during the inspection process. *Id.* at III.B-22-23. AEPCO concurs that repair tracks are needed, and it provided two such tracks on Opening. *See* Opening Exhibit III-B-1, page 22A and Opening e-workpaper “Yards.xls,” tabs “EPChart” and “West El Paso” (the tracks designated “RIP” tracks are the bad order car repair tracks).

Seventh, BNSF/UP assert that the yard needs a locomotive inspection track with a pit because of the 470-mile distance from West El Paso to the ANR’s principal locomotive inspection/repair point (North Amarillo Yard). *Id.* at III.B-22. AEPCO agrees that a locomotive inspection track should be added, and has provided it on Rebuttal.

¹⁶ BNSF/UP’s diagram of West El Paso Yard (Reply Exhibit III.B-2, page 37) does not show any specific tracks dedicated to unloading tank cars. AEPCO’s design for the yard (Rebuttal Exhibit III-B-1, page 22A) incorporates several short tracks on the south side of the yard that can be used to receive/unload tank cars of fuel.

¹⁷ BNSF/UP propose to add 16 storage tanks for their proposed four additional fueling platforms at West El Paso; these tanks are not needed because there is no need for additional fueling platforms.

Eighth, BNSF/UP propose to add a second track for ramping/deramping containers and trailers from intermodal trains that originate and terminate at West El Paso, as well as a run-around track and two intermodal gates at either end of the yard. *Id.* at III.B-23-24.¹⁸ AEPCO’s Opening and Rebuttal RTC simulations show that only one yard track is needed for ramping and deramping intermodal trains, only 12 of which originate or terminate at West El Paso during the 15-day RTC simulation period with a maximum of two on any single day. Thus, neither second intermodal track nor a runaround track is necessary. BNSF/UP’s proposal for two intermodal (truck) access gates is also unwarranted, given the relatively low volume of containers and trailers handled daily at this yard. A single access gate is provided at most real-world, low-volume rail intermodal facilities and only one is needed here.

Finally, BNSF/UP assert that because West El Paso is a crew-change point and home base for ANR train crews, it should have a crew facility and office space for crew management. *Id.* at III.B-24. However, AEPCO already provided a crew change facility on Opening. As for office space, the Assistant Manager of

¹⁸ BNSF/UP also assert that AEPCO did not show the track and facilities used for ramping/deramping containers and trailers in its Opening track diagrams. In fact, the dedicated intermodal track is shown in Opening Exhibit III-B-1; although not labeled as such, it is the top track shown in the track schematic for West El Paso Yard (page 22A of the exhibit). The cost of constructing this track and related facilities, including a truck parking and chassis storage area, yard lighting, and drainage, was included in AEPCO’s Opening road property investment costs. *See* Opening e-workpaper “ANR Buildings and Facilities Final.xls.”

Train Operations stationed at West El Paso can use space in either the West El Paso crew change building or the MOW building.

b. Interchange Yards

Interchange yards are located at each of the ANR's 20 points of interchange that are not located at inspection/fueling yards. The locations are described in AEPCO Opening at III-B-5 and III.B-16-17, and shown in AEPCO's Opening ANR track diagrams (Opening Exhibit III-B-1), except that the interchange at Pueblo is being deleted on Rebuttal.

BNSF/UP accept the interchange yard locations and configurations propounded by AEPCO at Las Animas Jct., West Amarillo, Belen and Dalies. BNSF/UP Reply at III.B-25.¹⁹ The railroads propose different configurations at other interchange locations, as well as modification of the locations themselves in some instances. These differences are discussed below.²⁰

Revised interchange locations. BNSF/UP propose to rearrange the ANR/BNSF interchange locations in the vicinity of the MRL trackage in Montana over which the ANR (like BNSF) has operating rights. In lieu of the interchanges

¹⁹ Defendants state that they also accept the location of the interchange at Pueblo (*id.*), but as noted earlier, the Pueblo interchange has been removed.

²⁰ BNSF/UP also propose new interchanges at Stratford, TX and Rincon and Deming, NM, in connection with their proposal for two separate SARRs (the ANR-PRB and ANR-NM). For reasons explained previously, AEPCO's proposal for a single ANR, as well as a single internal "interchange" with BNSF and UP at Vaughn, NM regardless of where the issue coal traffic originates, must be accepted by the Board. Accordingly, AEPCO does not respond to BNSF/UP's proposals for different interchanges for the ANR-PRB and ANR-NM.

proposed by AEPCO at Laurel and Jones Jct., BNSF/UP provide new interchanges at Mossmain, Huntley and Moran Jct. These changes are driven by BNSF/UP's position that the ANR cannot move any traffic over the MRL trackage rights segment except traffic that has a prior and subsequent movement over trackage constructed by the ANR. *Id.* at III.B-25-26. AEPCO has previously explained that the ANR is, in fact, entitled to use the MRL trackage rights to originate and terminate any BNSF traffic that uses the trackage rights. *See pp. III-B-2-4, supra.* Thus, there is no need to re-arrange the interchanges in this area.

Donkey Creek. Defendants "accept AEPCO's location and configuration of Donkey Creek as an interchange yard" but assert that the yard needs to be expanded to perform inspection and fueling functions as well because some ANR trains do not travel through any of the five ANR inspection and fueling yards. BNSF/UP Reply at III.B-26. These include coal trains that move between the PRB mines and Donkey Creek for further movement eastward via BNSF, and non-coal trains that move overhead between Laurel and Donkey Creek. However, the ANR does not need to inspect or fuel these trains at Donkey Creek. BNSF has a large inspection/fueling yard at Alliance, NE, which is located 222 miles east of Donkey Creek and which is also on the route of movement of these trains.²¹ The maximum distance any of these trains moves between a point on the ANR and

²¹ It is Mr. Reistrup's understanding that BNSF's Donkey Creek yard was constructed within the past few years as an additional coal-train staging point, and that BNSF moved the inspection and fueling process from Alliance to Donkey Creek for trains that move to the mines via Donkey Creek. Thus there should be plenty of capacity at Alliance to inspect coal trains originated by the ANR.

Alliance is 491 miles (the distance between Laurel, MT and Alliance). The distance a coal train travels between Alliance and the furthest-distant PRB Mine (Decker/Spring Creek) is 342 miles, so an empty coal train can easily be operated from Alliance to the mine, and return to Alliance as a loaded train, within the maximum 1500-mile interval between FRA-required inspections. Thus, no changes are needed to the configuration of Donkey Creek Yard.

Wendover. BNSF/UP accept the Wendover, WY interchange yard, except they argue that a connection track (wye) is needed to allow locomotives to decouple from coal trains that move to/from destinations south of Wendover to travel to Guernsey for periodic servicing. *Id.* at III.B-27. There is no need for an additional connecting or wye track at Wendover. As shown on page 9 of Opening Exhibit III-B-1, AEPCO provided three tracks at the Wendover interchange yard, one of which can be used by locomotives awaiting movement to or from Guernsey on another ANR train that passes through Wendover en route to or from Guernsey.

Northport. BNSF/UP accept AEPCO's configuration for the interchanges at Northport, NE, except they add (1) a short setout track for BNSF helper locomotives (helper assistance is required on the BNSF Angora Subdivision between Northport and Alliance), and (2) a second interchange track for the movement of coal trains to and from UP. *Id.* at III.B-27. AEPCO accepts the addition of the helper setout track at the BNSF interchange, but does not accept the additional UP interchange track. AEPCO has configured the UP interchange

exactly as it exists in the real world, with a single connecting track to UP.²² If BNSF and UP can get by with one connecting track at Northport, so can the ANR.

Sterling. The ANR interchanges coal trains with the NKCR at Sterling, CO. As BNSF/UP note (*id.* at III.B-27), this interchange is shown in AEPCO's Opening track diagrams but it is not an active interchange in the RTC Model. This is because no coal trains are interchanged with NKCR at Sterling during the RTC simulation period. There is no need to connect the lead track (identified as "To NKCR" on page 12 of Opening Exhibit III-B-1) back to the ANR main line, as defendants suggest, because coal trains operate in only one direction on the ANR – from and to the PRB.

Brush. BNSF/UP accept the Brush interchange, but propose to remove one yard track "because some of the coal trains AEPCO indicated would be interchanged at Brush would actually be interchanged at Northport." *Id.* at III.B-28. BNSF's traffic and train movement data show that coal destined primarily to Chicago, for interchange to and delivery by eastern railroads to destinations in Ohio and Michigan, moves via Brush (although such traffic also moves east from Northport). Thus, the ANR does interchange coal traffic with BNSF at Brush. This traffic is shown in Opening Exhibit III-A-2. This means that no changes to AEPCO's Brush interchange track configuration are needed.

²² The interchange itself occurs on two UP tracks just east of the connection, as shown in the relevant BNSF track chart for the Angora Subdivision (reproduced in Rebuttal e-workpaper "Northport track chart.pdf"). Thus two coal trains can occupy the interchange tracks themselves simultaneously.

Denver. There are two ANR interchange locations in Denver. The interchange between Mileposts 1.95 and 3.95 is not shown as being “in service in the RTC simulation, as defendants note (*id.* at III.B-28), because it is not used by any trains during the RTC simulation period. With respect to the second interchange, between Mileposts 539.67 and 541.20, defendants propose to add an additional track because of possible interference by parts of the train(s) serving the Arapahoe power plant (*id.*). However, the spur to the Arapahoe plant is seven miles long, and a total of only six trains (three inbound, three outbound) move to/from the Arapahoe plant during the entire 15-day RTC simulation period. Thus such interference is unlikely – as confirmed by the Opening RTC simulation, in which trains moved to and from Arapahoe and the interchange tracks without interfering with each other. Thus an additional track is not needed at this location.

Pueblo. This interchange has been deleted because the ANR does not interchange any traffic with UP at Pueblo. As described earlier, one of the two interchange tracks at Pueblo has been converted to a passing siding.

Texico. AEPSCO has revised the second (easterly) BNSF interchange at Texico to reflect the addition of the easterly lead track to the Texico inspection/fueling yard. The turnouts used by trains moving to/from BNSF’s Slayton Subdivision connect with the lead track, as these trains enter or depart from Texico Yard. Rather than having a two-track interchange yard as shown on page 17 of Opening Exhibit II-B-1, the Rebuttal RTC simulation shows that a single interchange siding is needed; it is located between MP 646.70 and MP

645.00 on the Hereford Subdivision. These changes are shown on page 17 of Rebuttal Exhibit III-B-1.

East Vaughn. The ANR interchanges non-coal traffic with the residual BNSF at East Vaughn, NM. BNSF/UP profess confusion as to where the interchange yard is located (*id.* at III.B-30), but the location is clear. The interchange yard is located on the Carrizozo Subdivision just southwest of the point where the BNSF Clovis Subdivision and the UP Carrizozo Subdivision connect (the connection is in the current small UP yard at Vaughn). This location is clearly shown on page 21 of Opening Exhibit III-B-1. The yard has four interchange tracks, which is the same number proposed by UP (BNSF/UP Reply at III.B-30). There is no need to move the East Vaughn interchange yard further northeast to the location of the current UP yard, as defendants suggest.

Defiance. The ANR interchanges large numbers of trains (primarily non-coal trains) with the residual BNSF at Defiance, NM. BNSF/UP assert that the Defiance interchange yard, shown on page 20 of Opening Exhibit III-B-1, is too small (and too short) to accommodate the volume of traffic interchanged at Defiance. BNSF/UP Reply at III.B-30-31. The size of the Defiance Yard is incorrectly portrayed on page 20 of Opening Exhibit III.B-1. It was actually designed with six relay tracks, in a configuration roughly equivalent to the configuration shown on page 34 of BNSF/UP Reply Exhibit III-B-1. Although two of the six tracks were not actually used in AEPCO's Opening RTC simulation.

AEPCO has retained all six tracks. The location and configuration of the Defiance interchange yard have been corrected in Rebuttal Exhibit III-B-1.

Cochise. The ANR interchanges traffic with the residual UP at Cochise, AZ. BNSF/UP note that AEPCO's track diagrams (Opening Exhibit III-B-1) show only one main track and two interchange tracks at Cochise, whereas AEPCO's RTC Model shows two main tracks and four interchange tracks. BNSF/UP Reply at III.B-33-34. The configuration of the yard and associated main tracks are correctly shown in the RTC Model; *see* Rebuttal e-workpaper "Cochise Screen Shot.pdf." As the workpaper shows, AEPCO has also included two universal crossovers between the main tracks near both ends of the yard, as suggested by BNSF/UP, even though one is not used during the RTC simulation period and thus has been disabled in the Rebuttal RTC Model. In short, no configuration changes need to be made to this yard.²³

c. Revised Yard Track Miles

The changes to the ANR's five inspection/fueling yards yards which AEPCO has accepted, as described above, result in an additional 24.42 yard track miles compared with the Opening number. *See* Rebuttal e-workpaper "Yards. REBUTTAL.xls," tab "Yard Summary." The interchange yard track miles have

²³ A crew change facility is needed at Cochise, as suggested by BNSF/UP. However, AEPCO provided for such a facility in its Opening evidence. BNSF/UP assert that locating the west end of the ANR at Cochise will saddle UP with additional crew costs (BNSF/UP Reply at III.B-35), but this is incorrect as the insertion of the ANR into UP's El Paso-Tucson crew district means UP can convert its straightaway crew district into a turnaround crew district based at Tucson. This issue is addressed in more detail in Part III-C-3, *infra*.

been reduced by 29.60 miles from Opening because of double-counts (some interchange track miles should not have been included on Opening because they were already included in the total as main track miles). See Rebuttal e-workpaper Yards.REBUTTAL.xls,” tab “Interchange Tracks.”

Overall, the ANR’s yard track miles have decreased from 242.93 (Opening) to 237.75 (Rebuttal). Construction costs for these yard track miles have been included in Rebuttal Part III-F.

* * * *

A summary of the parties’ positions regarding the ANR’s track miles is set forth in Rebuttal Table III-B-1 below. The Board should accept the track miles shown in the “AEPCO Rebuttal” column of this table.

REBUTTAL TABLE III-B-1 ANR CONSTRUCTED TRACK MILES			
	AEPCO Opening	BNSF/UP Reply	AEPCO Rebuttal
Main line track – Single first main track ^{1/}	2,201.97	2,208.03	2,205.47
– Other main track ^{2/}	1,108.07	1,111.38	1,124.27
Total main line track	3,310.04	3,319.41	3,329.74
Helper pocket, setout and MOW equip. tracks	29.02	29.38	41.26
Yard tracks ^{3/}	242.93	234.39	237.75
Total track miles	3,581.99	3,583.18	3,608.75
^{1/} Single first main track miles equal total constructed route miles including branch lines, and exclude the 29.57 route miles of MRL trackage in Montana which are operating miles that the ANR is not constructing. ^{2/} Equals total miles for constructed second main tracks and passing sidings. ^{3/} Includes all tracks in inspection/fueling and interchange yards.			

3. Other

BNSF/UP accept AEPCO's single joint facility for the ANR (the MRL line between Laurel and Jones Jct., MT, which the ANR uses via trackage rights²⁴), as well as AEPCO's proposed signal and communications system and specifications for turnouts, FEDs and AEI scanners. BNSF/UP Reply at III.B-35-36. BNSF/UP take issue with AEPCO's signaling of its lines in the RTC Model – an issue addressed in Part III-C-2 below – and with the number of FEDs AEPCO proposes for the Orin Subdivision. The number of FEDs required for the Orin Subdivision is described on page III-B-11, *supra*.

²⁴ As indicated earlier, BNSF/UP improperly propose to truncate the ANR's use of BNSF's trackage rights over MRL by eliminating their use between Laurel and Mossmain and between Huntley and Jones Jct., which reduces the trackage rights miles from 29.57 miles to 24.24 miles (*i.e.*, the MRL line between Mossmain and Huntley). AEPCO has demonstrated that it is entitled to use the entire 29.57 miles for purposes of interchanging trains with the residual BNSF.

III. C. STAND-ALONE RAILROAD OPERATING PLAN

1. General Parameters

AEPCO designed an operating plan for one SARR, the ANR, which transports all of the issue traffic regardless of origin as well as other coal and non-coal traffic that uses the BNSF and UP lines replicated by the ANR. In this Part, AEPCO responds to BNSF/UP's Reply Evidence on the operating plan for AEPCO's single SARR, which the railroads designate as the "Reply ANR."¹

As described in Part III-A of this Rebuttal, AEPCO has revised the ANR's traffic volume downward in each year of the 10-year DCF period to reflect revisions in the traffic forecasts for the various segments of the ANR's traffic group. As indicated in Part III-B, AEPCO has made minor upward adjustments in the ANR's route miles and mainline and yard track miles. These changes do not affect the operating plan, which BNSF/UP have accepted for the most part.

Although the traffic changes warrant removal of a few trains from the peak-period train list used for AEPCO's simulation of the ANR's operations using the RTC Model, AEPCO has not removed any trains from the Opening train list for purposes of its Rebuttal RTC simulation. The Rebuttal simulation reflects changes in the inputs to the RTC Model made in response to BNSF/UP's reply evidence.

¹ The evidence in this Part III-C is sponsored by AEPCO Witnesses Paul Reistrup and Walter Schuchmann. Mr. Reistrup replaced Paul Smith, the initial architect of the ANR's operating plan, as AEPCO's principal rail operations expert following Mr. Smith's unfortunate stroke in November of 2009. Mr. Smith is recovering but is not able to participate in the rebuttal phase of this case.

a. Traffic Flow and Interchange Points

The ANR’s peak-year (2018) traffic volume, as revised on Rebuttal, consists of 154.6 million tons of coal traffic, 80.2 million tons of intermodal traffic, and 55.3 million tons of other freight traffic. These volumes are slightly less than those reflected in AEPCO’s Opening Evidence. In terms of carload/container volume, Rebuttal Table III-C-1 below compares the positions of the parties.

REBUTTAL TABLE III-C-1 ANR 2018 TRAFFIC VOLUME (Cars/Containers)			
	AEPCO Opening	BNSF/UP Reply ANR	AEPCO Rebuttal
Coal			
Local	106,787	163,299	102,808
Interline Forwarded	1,239,453	1,072,113	1,194,052
Interline Received	2,374	431	2,187
Overhead	13,277	9,353	11,980
Subtotal ¹	1,361,890	1,245,196	1,311,027
Intermodal			
Interline Forwarded	50,046	42,006 ^{2/}	50,046
Interline Received	49,617	40,859 ^{2/}	49,617
Overhead	5,763,207	5,456,262 ^{2/}	5,763,207
Subtotal	5,862,870	5,539,127	5,862,870
General Freight - Overhead			
	737,507	453,019 ^{2/}	737,507
Total¹	7,962,268	7,237,342	7,911,404
^{1/} Total may differ slightly from the sum of the individual items due to rounding. ^{2/} See AEPCO Rebuttal e-workpaper “UP-BNSF Carloads.xlsx.”			

The ANR handles some local coal traffic (including the issue traffic), but most of its traffic is interlined with other carriers including BNSF, UP, FXE and NKCR. The ANR moves trains to and from 24 interchanges with other railroads. The interchange locations are described in Part III-B-1. BNSF/UP generally accept the traffic flows posited by AEPCO, with two exceptions. First, they assert that the ANR does not handle any coal traffic in conjunction with FXE during the DCF period. BNSF/UP Reply at III.C-8. AEPCO disagrees for the reasons explained in Part III-A-1 above, and the ANR thus continues to interchange coal traffic with FXE at El Paso.

Second, BNSF/UP point out that some of the non-coal trains the ANR moves in overhead service between Defiance, NM and Amarillo, TX set out and/or pick up cars at Belen, NM. BNSF/UP Reply at III.C-1-2 and 6. As described in Part III-C-2-c, *infra*, AEPCO acknowledges this, and treats the subject trains in the same manner that BNSF/UP treated them in their Reply RTC simulation of the ANR's peak-period operations.

The parties' positions with respect to the traffic densities on the various ANR line segments are shown in Rebuttal Table III-C-2 below.

REBUTTAL TABLE III-C-2
ANR 2018 TRAFFIC DENSITY BY LINE SEGMENT
(Millions of Gross Tons Per Mile)

Line Segment^{1/}	AEPCO Opening	BNSF/UP Reply ANR	AEPCO Rebuttal
Walter Jct. to Mossmain	12.0	12.3	12.9
Laurel to Jones Jct. ^{2/}	55.5	1.1	55.5
Jones Jct. to Dutch	83.5	68.7	79.9
Dutch to Campbell	56.9	46.2	54.6
Campbell to Donkey Creek	94.2	78.5	90.4
Donkey Creek to Orin Jct.	131.3	140.3	126.0
Orin Jct. to Northport	125.2	109.0	120.1
Northport to Denver	77.4	68.3	74.3
Denver to Pueblo	73.9	64.0	71.0
Pueblo to Amarillo	69.2	61.5	66.5
Amarillo to Texico	165.7	132.7	165.0
Texico to Vaughn	177.7	143.8	177.2
Vaughn to Baca	178.9	143.2	178.6
Baca to Defiance	189.0	155.3	188.7
Vaughn to El Paso	40.3	32.0	40.2
El Paso to Cochise	112.6	87.3	112.5

^{1/} Tonnages shown are the maximum tonnages moving over any part of each line segment and may not be uniform for the entire segment.

^{2/} This segment involves use of trackage rights over MRL. BNSF/UP's position is that the ANR can move only traffic that has both a prior and subsequent move over ANR-constructed lines over the MRL line, hence their dramatic reduction in volume for this segment. AEPCO demonstrates in Part III-B-1-a above that the ANR can use the MRL trackage rights to move any traffic that BNSF moves over this segment in the real world.

b. Track and Yard Facilities

The ANR's track, yard² and other facilities are generally described in Part III-B-1-b of AEPCO's Opening Evidence. BNSF/UP have accepted most of these facilities, and AEPCO has made a few revisions to them on Rebuttal in

² The ANR has five inspection/fueling yards, the locations for which have been accepted by BNSF/UP, and 21 additional interchange yards.

response to BNSF/UP's criticisms and as a result of its Rebuttal RTC Model simulation. The revisions are described in Part III-B-2, *supra*, and shown schematically in Rebuttal Exhibit III-B-1.

c. Trains and Equipment

i. Train Sizes

BNSF/UP have accepted the train sizes posited by AEPCO, as described in Part III-C-1-c of AEPCO's Opening Evidence. BNSF/UP Reply at III.C-11. However, the defendants contend that AEPCO has assigned insufficient locomotives to certain trains operating on the replicated BNSF Transcon line between Amarillo and Defiance. *Id.* AEPCO addresses this issue below in its discussion of road locomotives.

ii. Locomotives

BNSF/UP have accepted the locomotive types designated by AEPCO (GE ES44-AC locomotives for road and helper service and EMD SW1500 locomotives for yard switching and work-train service). *Id.* at III.C-11. However, the defendants assert that AEPCO has underestimated the number of road and switch/work-train locomotives needed by the ANR in several respects. AEPCO responds to the defendants' arguments below.

(a) Road Locomotives

First, based on numerous alleged errors identified by their Witness Wheeler, BNSF/UP claim that AEPCO developed locomotive hours through an improper analysis of peak-period operations using the RTC Model. BNSF/UP

Reply at III.C-11. The alleged errors are described beginning at page III.C-22 of the Reply and involve primarily inputs to the RTC Model including peak week train counts, locomotive consists, helper service, maximum train speeds, train dwell times, and random outages. AEPCO responds to the defendants' arguments concerning each of these RTC Model inputs in Part III-C-2-c, *infra*.

Second, BNSF/UP claim that AEPCO improperly sized locomotive consists for the ANR's trains based on the point where the train enters the ANR system, whereas in the real world locomotives are added en-route (*i.e.*, at some point during the time the train moved over the ANR route). BNSF/UP Reply at III.C-12. The defendants claim this is done to minimize delay and otherwise achieve desired transit times, and that the ANR should do the same. However, regardless of what the defendants do in the real world, AEPCO's RTC simulation indicates that all of its trains are adequately powered to move them over the relevant parts of the ANR system without delay.³

Third, BNSF/UP do not accept AEPCO's locomotive configuration for certain PRB coal trains. AEPCO configured all such trains with a 2x1 distributed power ("DP") configuration, meaning two locomotives are placed on the front of the train and one remotely-controlled locomotive is placed at the rear

³ The real-world, Base Year trains replicated by the ANR had a variety of different locomotive types. In the absence of data other than total horsepower per train, AEPCO had to use the simplifying assumption, for RTC modeling purposes, that its heavier interline trains had a number of ES44-AC locomotives (one of the most powerful, high-adhesion locomotive types used by the railroads) sufficient to at least equal (and in many cases exceed, due to rounding) the horsepower on the equivalent real-world trains. See AEPCO Opening at III-C-22 n. 11.

of the train. This is the standard locomotive configuration used by both BNSF and UP for most PRB coal trains. The defendants assert, however, that the ANR should follow BNSF's current practice (adopted in 2008) of equipping PRB coal trains moving to points south of Denver with four locomotives, in a 2x2 DP configuration, over their entire route of movement. BNSF/UP Reply at III.C-12-13. This has enabled BNSF to avoid having to use helper assistance for these trains on the north end of the Orin Subdivision and between Big Lift and Palmer Lake, CO. However, this practice results in overpowering these trains over most of their route of movement, and it also increases locomotive hours and locomotive unit miles substantially. AEPCO's operating experts have concluded that, from the standpoint of overall efficiency, it is preferable to continue to operate these trains with three locomotives and retain the Orin and Palmer Lake helper districts. Both the Opening and Rebuttal RTC simulations confirm that the subject coal trains operate efficiently and without undue delay using the locomotive configurations and helper districts posited by AEPCO on Opening.

BNSF/UP further assert that the ANR should follow BNSF's current practice of using six locomotives for its coal and heavy grain trains on the replicated portion of the BNSF Transcon in order to maintain train speed and avoid impeding time-sensitive intermodal traffic. *Id.* at III.C-13. However, under AEPCO's operating plan the ANR's trains have the equivalent (or higher) horsepower as the corresponding real-world BNSF trains, and AEPCO's RTC simulation confirm that all ANR trains operate over the Transcon route efficiently

and without any greater delay than BNSF encounters in the real world. AEPCO also notes that there is a disconnect between the defendants' argument that some trains should have more power and their argument elsewhere that the maximum train speeds should be reduced on the replicated BNSF lines.

Fourth, BNSF/UP make a minor mathematical correction to AEPCO's 5.0 percent spare margin, revising it to 5.39 percent. BNSF/UP Reply at III.C-15. AEPCO accepts this correction. In addition, BNSF/UP disagree with AEPCO's calculation of a 5.7 percent peaking factor for two reasons. *Id.* at 13-15. First, the defendants imply that, notwithstanding AEPCO's statement that it followed the same procedure adopted by the Board to calculate the peaking factor in *PSCo/Xcel*, it must not have done so because its 5.7 percent peaking factor here is much smaller than the 20.1 percent peaking factor adopted by the Board in *PSCo/Xcel*. The fact that the evidence in the two proceedings produces markedly different results does not indicate that AEPCO's procedure is incorrect; rather, the different results simply demonstrate that the facts concerning train and locomotive operations are not the same for each proceeding. As demonstrated below, BNSF/UP's modifications to the calculation of the peaking factor appear to be result-driven, rather than fact-based, in order to produce a result similar to that in *PSCo/Xcel*.

BNSF/UP begin by alleging that AEPCO improperly removed certain trains from the peak week without making similar adjustments to the number of annual trains from which it determined the average. BNSF/UP are

correct that AEPCO made this error, *i.e.*, AEPCO removed 113 duplicate trains from the peak week, and did not remove these trains from peak year trains prior to calculating the annual average trains per week. On Rebuttal, AEPCO has corrected this error, which increased the peaking factor from 5.7 percent to 5.9 percent. *See* Rebuttal e-workpaper “ANR Peaking Factor_Rebuttal.xls.”

BNSF/UP also allege AEPCO removed other trains from the peak week on the basis that they are outside the peak period. BNSF/UP Reply at III.C-14. The defendants indicate that the dates in AEPCO’s workpapers for these trains are “RTC generated” and therefore they cannot determine if these trains should properly be included in the peak period. In AEPCO’s Opening Evidence, 88 coal trains (44 empty coal trains and 44 subsequent linked loaded coal trains⁴) were excluded from the peak week. The prior empty trains did not operate over the ANR during the peak period, and the subsequent linked loaded coal trains only operated during the warm-up portion of the peak period (that is, they did not operate in the peak week). All of these trains were excluded from the peak period train list by AEPCO. Because the 44 loaded trains actually moved during the warm-up period preceding the peak week, the removal of these trains has no impact on the ANR’s operations during the peak week upon which the ANR statistics are calculated. AEPCO continues to exclude these trains from its

⁴ The subsequent linked loaded coal trains were labeled as “RTC generated” in the time field because the time the loaded train ultimately leaves the mine is a function of the transit and loading time in the RTC Model.

Rebuttal RTC Model calculation of peak-week transit times and from the corresponding calculation of the peaking factor.

Rather than making the simple adjustment to AEPCO's calculation of the peaking factor described above, BNSF/UP calculated an entirely new peaking factor. The defendants' peaking factor is fatally flawed for two reasons. First, defendants' peaking factor is based on a different peak week and a different traffic year from those used in their Reply RTC analysis. In this regard, the defendants state: "Defendants accept AEPCO's choice of a peak seven-day period (October 15-21, 2018) for ANR." BNSF/UP Reply at III.C-22. BNSF/UP use this peak seven-day period in their RTC model simulation, and they use the output from the simulation to determine transit times – yet they use an entirely different peak seven-day period (October 30 through November 5, 2008) and an entirely different twelve-month period (the twelve months ending March 31, 2009) to calculate their peaking factor. Thus, BNSF/UP's peaking factor does not match their RTC simulation or the transit times and operating statistics produced by that simulation.

Second, BNSF/UP's peaking factor is fatally flawed because the annual train count used in their calculation of the peaking factor is different (and substantially less) than the annual trains they used to calculate annual operating statistics for the ANR. Defendants' use of an understated annual train count results in a significant overstatement of the peaking factor. Specifically, in calculating the peaking factor, BNSF/UP determined that 1,230 trains moved in

their new October 30 to November 5, 2008 seven-day peak week, and that 54,472 trains moved during the twelve month period from April 1, 2008 to March 31, 2009. This yields 1,045 trains per average seven-day period and a peaking factor of 17.7 percent. However, examination of the defendants' calculations shows that they included operating statistics for 59,242 trains, or an average of 1,136 trains per seven-day period. Using these trains yields a peaking factor of 8.3 percent, which is far closer to AEPCO's peaking factor than that claimed by BNSF/UP. Because the defendants include these trains in the calculation of operating statistics, they must also include them in the calculation of the peaking factor.

On Rebuttal, AEPCO uses a 5.9 percent peaking factor which is the peaking factor used in its Opening evidence, revised to reflect the removal of duplicate trains from the annual train count discussed above. AEPCO's peak seven-day period is consistent with that used in both parties' RTC simulations and with the methodology adopted by the Board in *PSCo/Xcel*.

Finally, BNSF/UP assert that AEPCO failed to take into account the imbalance between locomotives (horsepower) for eastbound and westbound non-coal traffic which moves over the replicated portion of the BNSF Transcon and over the UP Sunset Route between El Paso and Cochise, which imbalance requires that locomotives occasionally be repositioned as part of the ANR's run-through arrangements with BNSF and UP. BNSF/UP Reply at III.C-15-16. However, the imbalance is not particularly pronounced, and AEPCO does not believe additional road locomotives are required because of any repositioning. As shown in Rebuttal

e-workpaper “ANR Non-Coal Train Flows.xls,” the imbalance of eastbound and westbound non-coal trains moving in each of these corridors is not significant in either the RTC simulation period or the Base Year. To the extent locomotives must be repositioned between one end of a corridor and another, they can be ferried on existing trains (which is generally what BNSF and UP do in the real world).

(b) Helper Locomotives

AEPCO’s operating plan provides two helper districts, the Campbell-Orin district in Wyoming (over which trains are helped in both directions) and the Big Lift-Palmer Lake helper district located between Denver and Pueblo, CO. BNSF/UP accept the Campbell-Orin helper district (and the use of two-unit helper consists), but eliminate the Big Lift-Palmer Lake helper district due to their reconfiguration of coal trains operating between Denver and Pueblo with an additional (fourth) locomotive unit. BNSF/UP also propose to add a helper district between Sheridan and Parkman, WY, on the ANR line extending from Campbell, WY to Huntley/Jones Jct., MT. BNSF/UP Reply at III.C-17-18.

As explained above, AEPCO’s operating experts have retained the Big Lift-Palmer Lake helper district in order to operate coal trains that use this district with three locomotives over most of their route, thus saving considerable locomotive hours and locomotive unit miles. Based on AEPCO’s Rebuttal RTC simulation, a total of two 2-unit helper consists continue to be needed for this helper district, and two 2-unit helper consists also continue to be needed for the

Campbell-Orin helper district to cover the trains needing helper assistance on the busiest days during the simulation period. *See also* AEPCO Opening at III-C-13.

The ANR does not need a helper district between Sheridan and Parkman because AEPCO has equipped the loaded PRB coal trains that otherwise would require helper assistance in this territory with four locomotives, in a 2x2 DP configuration. The RTC simulation shows that loaded coal trains over 16,500 tons gross trailing weight require four locomotives to negotiate the Sheridan-Parkman grade. Due to the relatively short total distance involved,⁵ AEPCO's operating experts chose to equip only these trains with four locomotives rather than add a helper district that is not needed for any other coal trains.

(c) Switch/Work Train Locomotives

On Opening, AEPCO provided a total of 15 switch locomotives to handle the switching requirements at the ANR's five inspection/fueling yards, plus spares. BNSF/UP's evidence on the number of switch locomotives needed for the Reply ANR is contradictory,⁶ but it appears from their narrative discussion that

⁵ For example, the distance from Decker Mine to Jones Jct. is only 150 miles. This compares with 544 miles for a coal train operating between Black Thunder Mine and Pueblo (*i.e.*, a train for which the defendants posit four locomotives over the entire route.) Most PRB coal trains that BNSF operates between Denver and Pueblo move to destinations well south of Pueblo.

⁶ Table III.C.3 on page III.C-17 of the Reply shows 18 switch/work-train locomotives, but the narrative text states that 20 such locomotives are required. BNSF/UP Reply at III.C-19. Moreover, Reply e-workpaper "ANR Operating Expense RR Reply.xls," tab "Summary-ANR" shows that 18 switch locomotives are included in BNSF/UP's operating expense calculations.

they propose a total of either 18 or 19 locomotives – an increase of either three or four from the number proposed by AEPCO.

Specifically, BNSF/UP propose an increase of one switch locomotive to cover a second 24/7 switching assignment at Texico Yard, one switch locomotive to serve as a spare at Texico, one switch locomotive to cover a second 24/7 switching assignment at North Amarillo Yard, and one switch locomotive to cover a third, daytime switching assignment at Guernsey five days a week. BNSF/UP Reply at III.C-18. Given that the daily switching activity at North Amarillo during the peak RTC simulation period is comparable to that at Guernsey, AEPCO agrees that a second switching assignment, and thus an additional switch locomotive, is needed at North Amarillo. The other additions proposed by the defendants are not needed.

With respect to Texico Yard, AEPCO's Rebuttal RTC simulation shows the maximum number of arriving trains per day that require block-swapping (and inspection) at Texico is six. Some of the block-swapping activity can be handled by road locomotives during the period between their detachment from arriving trains and their departure on outbound trains. Unlike switching of bad-order and repaired cars following inspections, which is usually performed one car at a time, multiple cars are involved in the block-swapping procedure which thus requires less switching time. The switch locomotive at Texico is used primarily for switching bad order/repaired cars, although it is also used for switching blocks between trains. There is no need for a spare switch locomotive

at Texico as a spare road locomotive can be used temporarily for switching when the switch locomotive stationed at Texico is unavailable due to inspection or when it is undergoing maintenance.

AEPCO disagrees that a third part-time switching assignment is needed at Guernsey. Guernsey Yard is a 24/7/365 operation, and trains requiring inspection arrive at all hours of the day, seven days a week. There is no “peak” activity period during the day Monday to Friday, as the defendants appear to suggest. Adding a switch locomotive that would be used only 30 percent of the time⁷ is inefficient and a waste of resources. Moreover, the spare switch locomotive stationed at Guernsey can be pressed into service temporarily during periods of unusually heavy activity.

Although not directly affecting the number of switch locomotives required, UP/BNSF point out that AEPCO’s proposal for one-person switch crews is impractical unless power switches and remote control technology are installed at each of the ANR’s five inspection/fueling yards. BNSF/UP Reply at III.C-19. AEPCO Witness Reistrup agrees that remote control technology should be used, and on Rebuttal has equipped each switch crew assignment with a remote control “belt pack” so that the movement of the switch locomotive can be controlled from the ground. (This technology is in increasingly common use on real-world railroads, and UP uses it for switching operations in its Bailey Yard at North

⁷ Assumes the additional switch locomotive would be used 10 hours a day five days per week (50 hours of use per week ÷ 168 hours in a week = 29.8%).

Platte, NE.) The ground “engineer” on each assignment thus will be able to throw internal yard hand switches without having to demount from the locomotive. This means there is no need for additional power switches in these yards.

* * * *

A summary comparison of the parties’ calculations of the ANR’s total locomotive requirements in 2009 (the ANR’s first year of operations) is provided Rebuttal Table III-C-3 below.

REBUTTAL TABLE III-C-3 ANR 2009 LOCOMOTIVE REQUIREMENTS			
Type of Service	AEPCO Opening	BNSF/UP Reply ANR	AEPCO Rebuttal
Road/Helper – ES44-AC	336	440	365
Switch/Work Train – SW1500	15	18	16
Total	351	458	381

iii. Railcars

BNSF/UP accept most aspects of the methodology used by AEPCO to determine the ANR’s freight car requirements, including the use of a 5.0 percent spare margin. However, the defendants calculate a higher peaking factor than AEPCO’s (as they did for locomotives) and calculate higher car requirements based on this and the increased transit times resulting from their RTC simulation of the ANR’s peak-period operations. BNSF/UP Reply at III.C-20.

As discussed in the preceding section on locomotives, BNSF/UP’s calculation of the peaking factor is fatally flawed and cannot be used by the Board.

On Rebuttal, AEPCO has modified its peaking factor to correct a simple mathematical error. As discussed in the next section, AEPCO has made minor revisions to the RTC Model inputs which result in modified ANR train transit times. Rebuttal Table III-C-4 below summarizes the ownership of railcars and intermodal units for each ANR traffic type based on these revisions.

RFEBUTTAL TABLE III-C-4			
PERCENTAGE OF CAR OWNERSHIP BY TRAFFIC TYPE			
Traffic Type	System	Foreign	Private
Coal	23.3%	0.5%	76.2%
General Freight	39.6%	14.7%	45.7%
Containers & Trailers	1.9%	--	98.1%
Intermodal Flats	32.7%	8.1%	59.2%
Multi-level Flats (auto)	19.7%	14.1%	66.2%

2. Cycle Times and Capacity

a. Procedure Used to Determine the ANR’s Configuration, Cycle Times and Capacity

AEPCO developed the ANR’s train cycle and transit times by using the Board-approved RTC Model to simulate the ANR’s operations during the peak week of its peak traffic year (2018). The RTC model was also used to help develop the system (track and yard) configuration, and confirm its capacity to handle the ANR’s peak-period traffic efficiently and in accordance with customer transportation requirements.⁸ The procedure used by AEPCO, including its use of

⁸ If the ANR has adequate capacity to handle its peak-week traffic, it clearly has capacity to move lower traffic volumes at other times and in other years during the ten-year DCF modeling period.

a 15-day RTC simulation period that encompasses the peak traffic week (October 15-21, 2018), is described in detail in AEPCO Opening at Part III-C-2-a.

In their Reply Evidence, BNSF/UP criticize several of AEPCO's inputs into the RTC Model, and they perform their own RTC simulation of the "Reply ANR"⁹ using revised train counts, revised track inputs (including yard/interchange tracks), and several "corrected" operating inputs. BNSF/UP Reply at III.C-22. AEPCO responds below to BNSF/UP's criticisms of, and changes to, the inputs AEPCO used in its Opening RTC simulation.

b. Development of Peak-Period Trains

BNSF/UP accept the RTC modeling period selected by AEPCO, including the peak week (October 15-21, 2018). BNSF/UP Reply at III.C-22. BNSF/UP also accept AEPCO's RTC train list as a starting point, but state that they adjusted it downward based in the difference between their 2018 volume levels and AEPCO's. *Id.*

As indicated in Part III-A-1, *supra*, AEPCO has accepted that the ANR's annual traffic volumes, including volume in the peak year, will be somewhat lower than the volumes developed on Opening. However, the reductions are not nearly as large as those posited by BNSF/UP. The impact on

⁹ As previously explained, BNSF/UP's proposal for two separate SARRs must be rejected as AEPCO has properly presented a single SARR to transport all of the issue traffic. AEPCO does not specifically address the defendants' separate RTC simulations for the "ANR-PRB" and "ANR-NM," but much of its response to the defendants' RTC evidence on the "Reply ANR" also applies to the two sub-SARRs.

the RTC train list is *de minimus*; the volume reductions that AEPCO has accepted would affect, at most, 38 trains out of the 3,192 trains dispatched during the RTC modeling period.¹⁰ Rather than expend the time and effort to identify and remove the specific trains that would be affected, AEPCO has chosen to use the same train list it used on Opening for purposes of its Rebuttal RTC simulation. See Opening Exhibit III-C-1. This approach is conservative, as the removal of trains would have resulted in less congestion and faster cycle and transit times for the remaining trains.

c. Operating Inputs to the RTC Model

BNSF/UP dispute several of AEPCO's operating inputs into the RTC Model, and present revised inputs for the Reply ANR. The operating inputs developed by AEPCO are described at pages III-C-20-41 of AEPCO's Opening narrative. Each of BNSF/UP's criticisms is discussed below, and AEPCO describes the revisions to the operating inputs that are warranted in view of the railroads' critique.¹¹

i. Road Locomotive Consists

BNSF/UP accept AEPCO's proposed road locomotive consists, except that they propose four locomotives in a 2x2 DP configuration for PRB coal

¹⁰ For reasons noted earlier in this Rebuttal evidence, AEPCO has not eliminated any origin/destination pairs or trains that move over the MRL trackage rights line as it is entitled to move any traffic that BNSF moves over this line under its trackage rights agreement with MRL.

¹¹ AEPCO also adjusted the ANR's main and yard track configuration, as input into the RTC Model, to reflect the changes described in Part III-B, *supra*.

trains moving to destinations at or south of Pueblo, rather than the 2x1 DP configuration proposed by AEPCO, and they add locomotives to some trains as they move over the ANR route where BNSF or UP added locomotives in the real world. BNSF/UP Reply at III.C-24. AEPCO previously demonstrated that neither of these proposed changes is warranted. *See* pp. III-C-5-8, *supra*. Accordingly, AEPCO continues to use the same locomotive consists for its Rebuttal simulation that it used for the Opening simulation.

ii. Train Size and Weight

BNSF/UP accept AEPCO's assumptions regarding train size and weight. BNSF/UP Reply at III.C-24.

iii Helpers

BNSF/UP have accepted the Campbell-Orin helper district, eliminated the Big Lift-Palmer Lake helper district, and added a helper district between Sheridan and Parkman, WY. *Id.* at III.C-25. For the reasons set forth at pp. III-C-12-13, *supra*, AEPCO continues to include the Big-Lift-Palmer Lake helper district because of the way the ANR trains are powered under its operating plan. AEPCO has not included a new Sheridan-Parkman helper district because its operating plan calls for the addition of a fourth unit to certain heavy coal trains operating over this line segment to enable these trains to negotiate the grade involved.

BNSF/UP accept AEPCO's proposed helper consists and time to add and detach helpers from trains, as well as the light movement of helpers back to their point of origin as described by AEPCO. BNSF/UP Reply at III.C-25.

iv. Maximum Train Speeds

BNSF/UP generally accept AEPCO's maximum permissible train speeds as input into the RTC Model, with two exceptions. First, BNSF/UP reduce the maximum speed for trains other than intermodal trains from 60 to 55 mph on the replicated BNSF lines. Second, they reduce the maximum speed for loaded coal trains over 100 tons per operative brake from 50 to 40 mph on the replicated BNSF lines. Both restrictions were imposed to be consistent with BNSF timetable speed restrictions. BNSF/UP Reply at III.C-26.

There is no reason why the ANR, as a most-efficient, least-cost new entrant, has to follow these BNSF maximum-speed restrictions. UP apparently does not impose such restrictions, so the maximum train speeds proposed by AEPCO clearly are feasible. The same maximum train speeds reflected in AEPCO's operating plan were also proposed by the shipper and accepted by the Board in other BNSF coal rate cases where the SARR's operations were modeled using the RTC Model, including *AEP Texas* (whose SARR also carried intermodal and non-coal traffic) and *WFA/Basin*.

BNSF/UP also assert that AEPCO's RTC Model failed to incorporate "appropriate" speed limitations for the ANR's yards that are located where there are no yards in the real world, such as West Vaughn and West El

Paso. BNSF/UP Reply at III.C-26. BNSF/UP do not provide a source for their speed restrictions where trains enter/leave these yards, and AEPCO's experts are unaware of any specific timetable speed restrictions for either BNSF or UP yards whose location is replicated by ANR yards. In any event, the RTC Model slows trains to the appropriate speed to enter a turnout approaching a yard. Given power switches and the use of CTC to govern train movements (which are reflected in the Rebuttal RTC simulation), there is no need to impose other speed restrictions on trains entering or leaving any of the ANR's yards.

v. Dwell Times at Power Plants and Other Destinations

AEPCO's Opening RTC inputs included train dwell times for the five destination power plants served by the ANR equal to the maximum unloading free time allowed under the transportation contracts or other pricing authorities governing coal movements to these plants. BNSF/UP accept the dwell time allotted at AEPCO's Apache Station at Cochise, AZ (doubtless because the free time exceeded the actual average dwell time at the plant according to AEPCO's records¹²), but reject the dwell times allotted at the other four plants. For these plants, the defendants insist that actual real-world average dwell times should be used based on the underlying train event data showing arrival-to-spot and spot-to-release times. BNSF/UP Reply at III.C.27 and 29.

¹² See AEPCO Opening at III-C-26.

AEPCO acknowledges that in several prior coal rate cases the Board has accepted use of actual average dwell time based on BNSF data. *Id.*, n. 29. However, for several reasons AEPCO does not believe use of such data is appropriate in this case. First, the data produced in discovery for the Base Year (4Q08 through 1Q09) is riddled with inconsistencies and obvious errors. For example, BNSF's train event data shows dwell times at the Comanche plant at Minnequa, CO ranging from a low of 0.0 hours to a high of 222.3 hours (or more than nine days).¹³ Unloading dwell time of zero hours obviously is impossible, which means the data entry must have been erroneous. The nine-day dwell time also is an obvious anomaly – most likely, the utility decided to store the trainset on site, and the locomotives probably were removed during this lengthy dwell period.

Second, the average destination dwell times used by BNSF/UP were based on experience in the fourth quarter of 2008. Overall PRB coal traffic volumes reached an all-time high in 2008, and (as BNSF/UP are quick to point out when it suits their purposes, such as in developing coal traffic projections), overall coal traffic volumes declined in 2009 which is the ANR's first year of operations. It is unreasonable to base future dwell times on those experienced in the year of highest PRB coal traffic volume in history, which is unlikely to be repeated anytime soon.

¹³ The maximum train dwell time was even higher 313.1 hours (or about 13 days), at another ANR-served power plant, the Pawnee Plant at Pawnee Jct., CO.

Third, the maximum unloading free time under the applicable contract or pricing authority governing the movement of unit coal trains is always set slightly higher than what both the shipper and the railroad expect the actual unloading dwell time to be under normal circumstances. It is therefore a reasonable surrogate for use in a simulation of a hypothetical railroad's future operations.

Finally, BNSF almost certainly collected detention (demurrage) charges for at least part of the dwell time over and above unloading free time. Although force majeure-type events (such as an unloading disability caused by a breakdown in the equipment used to unload coal trains) may extend the unloading free time, the unloading dwell times used by the railroads are so much higher than the applicable unloading free times (5.0 to 6.5 hours for all of the plants except Apache Station) that it is highly likely detention charges were collected. It is impossible to determine from the revenue data provided by BNSF whether the revenues for the subject coal movements in the Base Year included detention charges, much less the amount of such charges. Nonetheless, it is unfair to subject the ANR to high destination dwell times without assuring it the benefit of any additional revenues associated with those high dwell times.

For all of these reasons, in this particular case it is appropriate to use maximum unloading free times rather than actual average dwell times at power plant destinations. Accordingly, AEPCO continues to use the same destination dwell times it used on Opening for its Rebuttal RTC simulation.

BNSF/UP further propose a dwell time of { } hours for coal trains destined to the Corette power plant at Billings, MT, which is served by MRL. BNSF/UP state that this is “the actual BNSF time for unloading at Corrette [*sic*]” (BNSF/UP Reply at III.C-27 n.28), but in fact this appears to be the time between delivery of a loaded train in interchange to MRL at Billings and receipt of the empty train in interchange back from MRL. AEPCO treated these trains as terminating and originating at the MRL interchange point, and thus did not allot a specific dwell time for these trains at the Corette plant but only the usual 30 minutes for the interchange itself. In these circumstances it is improper to assign a specific dwell time for coal trains at Corette.

vi. **Dwell Time at Mines and Other Origins**

The ANR directly serves and originates coal trains at 20 coal mines, of which all but two are located in Wyoming or Montana (the other two are located in New Mexico). AEPCO Opening at III-C-27-28. For purposes of its Opening RTC simulation, AEPCO allotted four hours of train dwell time at each of these mines, except for the Wyoming mines served by the Orin Subdivision, Reno Branch and Campbell Branch. The four hours of origin dwell time allotted at the non-Wyoming mines represents the maximum free time allotted under the applicable BNSF transportation contracts and pricing authorities. Consistent with Board precedent in several recent BNSF coal rate cases, 5.5 hours of dwell time were allotted at the mines located on the Orin Subdivision and Reno Branch, and 6.0 hours of dwell time were allotted at the mines located on the Campbell Branch

(collectively the “Wyoming mines”). *Id.* at III-C-28. The 5.5 hours of average dwell time for the Orin Subdivision/Reno Branch, which exceeds the loading free time allotted under the applicable BNSF contracts and pricing authorities to allow for the presence of non-ANR trains at these mines, was based on average actual dwell times accepted by the Board in *TMPA*¹⁴ and subsequently used by both parties in *PSCo/Xcel I*, *AEP Texas* and *WFA/Basin I*.

BNSF/UP propose to use separate dwell times at each of the origin mines served by the ANR – including the Wyoming mines – based on actual real-world average train dwell times dwell times. BNSF/UP Reply at III.C-28-29.¹⁵ AEPCO believes it is more appropriate to use maximum loading free time for the non-Wyoming mines for the reasons stated in the preceding section on unloading dwell times.¹⁶ Thus AEPCO continues to use loading free time for these mines in its Rebuttal RTC simulation.

¹⁴ *Id.*, 6 S.T.B. at 654-55. BNSF subsequently developed an average dwell time of six hours at the Campbell Branch mines in *AEP Texas*, which was accepted by the complainant. *See* BNSF Reply Evidence (Public Version) in Docket No. 41191 (Sub-No.1), Narrative Vol. I at III.B-45, and *AEP Texas North Rebuttal Evidence (Public Version)* in same docket, Narrative Vol. 1 at III-C-34. The same dwell times were subsequently used by both parties in *WFA/Basin*.

¹⁵ The dwell times are based on actual data for 4Q2008.

¹⁶ For example, actual train dwell time at the mines as reported in BNSF’s train movement data for the Base Year ranged from a low of 0.2 hours (which is impossible, as it normally takes at least two hours for the actual loading process itself) to a high of 797 hours, or 33 days. There is no way any coal train stayed at a mine for more than a month; the data simply is erroneous and unreliable.

With respect to the Wyoming mines, average actual dwell train times were accepted by the Board in prior SAC cases to account for possible interference from UP trains at the Orin/Reno Subdivision mines (*i.e.*, mines served by the PRB Joint Line) and from other BNSF trains at the Campbell Subdivision mines. AEPCO accepts the concept that the average train dwell times reflected in prior cases are somewhat dated and should occasionally be updated, as BNSF/UP have done in this proceeding. However, AEPCO does not believe it necessary to use the actual loading times for each of the individual Wyoming mines, as this requires time-consuming separate coding of each of the numerous coal trains that originate or terminate at one of these 16 mines. Rather, using the same BNSF unit coal train performance reports that are the source for BNSF's 4Q08 average dwell time for each mine, AEPCO developed 4Q08 weighted average dwell times (with the weighting based on the number of trains that used each mine) separately for the eleven mines or loadouts on the Orin Subdivision/Reno Branch and for the five mines on the Campbell Branch. The weighted average dwell times are 6.0 hours for the Orin/Reno mines and 5.9 hours for the Campbell mines. *See* Rebuttal e-workpaper "Dwell Analysis Summary_052810.xls." These weighted average mine dwell times were input into the RTC Model for purposes of AEPCO's Rebuttal simulation.¹⁷

¹⁷ The use of average train dwell times for the mines in these two groups is consistent with the approach accepted by the Board for the same mines in *TMPA* and subsequent SAC cases involving PRB coal movements.

vii. Dwell Time at Yards

With one exception, BNSF/UP accept the train dwell times allotted at each of the ANR's inspection/fueling yards, the 30 minutes of dwell time allotted at interchange yards, and the 15 minutes of dwell time for trains where only a change of crews takes place. BNSF/UP Reply at III.C-29-33. The exception is Texico Yard; BNSF/UP assert that AEPCO should have allotted 2.5 hours of dwell time at Texico Yard for the intermodal trains that stop at Texico for block-swapping and inspection. *Id.* at III.C-31.32.

AEPCO did not allot any specific dwell time at Texico Yard for the intermodal trains that stop there for block-swapping and inspection. Rather, these trains were treated as originating or terminating at Texico Yard.¹⁸ The reason for this is that the comparable inbound and outbound real-world intermodal trains (which undergo block-swapping at BNSF's Clovis Yard) are not linked in the BNSF train event data – that is, there are no common train ID numbers for any inbound and outbound trains. BNSF/UP do not contest that the Texico Yard, as configured by AEPCO, has sufficient capacity to accommodate the block-

¹⁸ The arrival times for trains terminating at Texico were generated as part of the RTC modeling exercise. The departure times for trains originating at Texico were based on the actual departure times from Clovis (where BNSF performs the same block-swapping operations that the ANR performs at Texico) for the corresponding trains in the Base Year.

swapping and inspection operations that occur there.¹⁹ For these reasons it is inappropriate to assign artificial dwell times at Texico for any specific trains.

BNSF/UP note that while train speeds do not directly affect yard dwell time, southbound trains accelerate at slow speeds when departing from North Amarillo Yard due to an adverse grade, and that their RTC expert has “adjusted defendants’ RTC Model” to reflect this. BNSF/UP Reply at III.C-31. This statement is puzzling, as AEPCO’s RTC expert input the grades in the vicinity of North Amarillo Yard input into the RTC Model for the Opening simulation and the Model automatically “adjusts” train speeds to account for grades, curves, *etc.* Thus, no further adjustment is needed.

With respect to dwell times at the ANR’s West El Paso Yard, BNSF/UP state that AEPCO failed to provide 30 minutes of dwell time for eastbound trains that are interchanged to UP at El Paso. *Id.* at III.C-33. However, eastbound non-coal trains that are interchanged to UP at El Paso for movement toward Dallas/Fort Worth or Houston via UP’s Valentine Subdivision are not interchanged at West El Paso Yard; rather, such trains are interchanged at UP’s Dallas Street Yard in El Paso. *See* AEPCO Opening at III-C-33. The comparable westbound trains are interchanged at West El Paso Yard. This is exactly the reciprocal procedure that UP/BNSF suggest at pp. III.C-33-34 of the Reply

¹⁹ The configuration of Texico Yard is shown on page 17A of Rebuttal Exhibit III-B-1. The configuration is unchanged from Opening Exhibit III-B-1 except for the addition of two lead tracks, as described at page III-B-14, *supra*.

narrative – thus the defendants’ experts appear to have overlooked the discussion of this issue in AEPCO’s Opening narrative.²⁰

Finally, BNSF/UP note that some of the real-world non-coal trains replicated by ANR trains that move through Belen, NM (*i.e.*, trains that move overhead on the replicated portion of the BNSF Transcon between Amarillo/Texico and Defiance or vice versa) stop at Belen to set out or pick up cars destined for other points such as Albuquerque. BNSF/UP contend that the comparable ANR trains should also stop at Belen to permit the same cars to be set out or picked up by the residual BNSF. BNSF/UP Reply at III.C-1-2 and 5-6. BNSF/UP state that they have modified the ANR operating plan to include the resources and additional transit time needed to pick up or set out these cars (*id.* at III.C-2), but in fact, their RTC simulation does not provide for stopping any trains at Belen to pick up or set out cars.²¹ Since BNSF/UP have not identified the trains involved or allotted any time in their RTC simulation for this activity, AEPCO has no basis

²⁰ BNSF/UP also claim that AEPCO failed to explain how the ANR would handle local intermodal traffic that originates or terminates at El Paso, suggesting that this traffic would be handled at West El Paso Yard. BNSF/UP Reply at III.C-34. This is exactly where this traffic is handled under AEPCO’s operating plan. *See* AEPCO Opening at III-B-16 and the discussion at pp. III-B-19-20, *supra*.

²¹ Both parties’ RTC simulations include trains that are interchanged with BNSF at Belen, and thus originate or terminate there, but these do not appear to be the trains BNSF/UP contend should be stopped en route at Belen for pick-ups or set-outs.

to do so either, and thus has not allotted any time for this activity in its Rebuttal simulation.²²

viii. Crew-Change Locations/Times

BNSF/UP accept AEPCO's road, helper and switch crew districts and crew assignments, except that they propose to rearrange road Crew District 1 to accommodate the change they have made elsewhere to the ANR's use of the MRL trackage rights in Montana. BNSF/UP Reply at III.C-35-36. Because AEPCO does not accept BNSF/UP's limitation on the ANR's ability to use the MRL trackage rights (*see pp. III-B-3-5, supra*), AEPCO does not agree that any change to Crew District 1 is necessary.

BNSF/UP note that under AEPCO's operating plan, certain ANR crews will cover routes in multiple directions from their home terminals, and that this requires that the ANR have managers who are qualified on multiple crew districts as well as additional managers to perform the (unspecified) tasks necessary to maintain the crew members' FRA qualifications. BNSF/UP Reply at III.C-37. AEPCO addresses these issues in Part III-D-3-a, *infra*; suffice it to say here that AEPCO has provided field transportation managers who are, in fact, qualified on multiple crew districts and in sufficient numbers to perform safety tests and otherwise handle all required FRA qualification matters. Deadheading

²² BNSF/UP acknowledge that the ANR's Belen interchange yard, as designed by AEPCO, has sufficient capacity to allow a full train to clear the main line so that such "local" traffic can be switched out. BNSF/UP Reply at III.B-6.

and taxi costs due to crew expirations (discussed briefly at BNSF/UP Reply III.C-38) are also discussed in Part III-D-3-a below.

ix. Time for Trains to Reverse Direction

On Opening, AEPCO provided for certain trains to reverse direction at El Paso, TX, in connection with their interchange to/from another carrier. These include trains moving between Vaughn, NM and UP points east of El Paso reached via UP's Valentine Subdivision, which reverse direction during the interchange process at West El Paso Yard, and coal trains moving to/from the FXE interchange at El Paso which reverse direction while on the ANR Lordsburg Subdivision main line. *See* AEPCO Opening at III-C-36-37.

BNSF/UP assert that no reversals of direction are needed because of the location of West El Paso Yard and because no FXE interchange trains should be included in the ANR's traffic group. BNSF/UP Reply at III.C-38. However, since both kinds of trains described above are, in fact, included in the ANR traffic group, reversals of direction will occasionally be required (although none of the FXE interchange movements occur during the RTC simulation period).

x. Track Inspections and Maintenance Windows

Consistent with practice in other SAC rate cases, AEPCO did not allot any time for scheduled track inspections or maintenance windows in its Opening RTC Model simulation. BNSF/UP accept that no time needs to be allotted for track inspections, but contend that time should be allotted for maintenance windows because "it is unrealistic to assume that there will be no

program maintenance on a 2,200-mile network during any two-week period.”

Accordingly, BNSF/UP provided for “program maintenance windows” in their RTC simulation. BNSF/UP Reply at III.C-38-39.

AEPCO disagrees with the defendants’ allotment of time for maintenance windows for several reasons. First, the Board has previously accepted SARR operating plans and RTC Model simulations involving PRB coal traffic (as well as other, non-coal traffic) that did not include time for maintenance windows during the peak traffic period. *AEP Texas* at 17-21; *WFA/Basin I* at 15-17.

Second, the defendants have not provided any evidence that program maintenance activity actually occurred – much less the type of activity or its duration – on any of the lines replicated by the ANR during the Base Year equivalent of the 15-day RTC simulation period.

Third, the maintenance delays provided in BNSF/UP’s RTC simulation for the Reply ANR do not appear to involve maintenance windows at all. The delays, and the time allotted by BNSF/UP for each, are summarized in Rebuttal e-workpaper “Reply Form B Spreadsheet by RLBA.xls,” tab “MOW Windows,” which is an extraction of the “track maintenance” slow orders input into the RTC Model by BNSF/UP for their Reply ANR simulation. {

}

These factors indicate that what probably occurred was not a maintenance window at all, but perhaps {

} In any event, BNSF UP have not provided adequate supporting documentation to support the inclusion of any of the listed times as program maintenance windows. Accordingly, AEPCO has not included these times in its Rebuttal RTC simulation.

xi. Time for Random Outages

Based on information provided by the defendants in response to AEPCO discovery requests for the 2008 period comparable to the RTC simulation period, AEPCO Witness Paul Reistrup included 52 random outages on the BNSF lines replicated by the ANR as inputs to the RTC Model for the Opening simulation. Mr. Reistrup did not input any random outages on the replicated UP lines because the information provided by UP in discovery did not identify any outages likely to affect train operations on those lines during the 2008 equivalent to the RTC simulation period. AEPCO Opening at III-C-38-41.

²³ For example, {

}.}

BNSF/UP assert that AEPCO should have input an additional { } outages on the replicated BNSF lines that purportedly were of “exactly the same type” as the outages selected by Mr. Reistrup, and another { } outages that were described differently but that nonetheless “resulted in train delays.” BNSF/UP Reply at III.C-39-41. BNSF/UP also propose adding outages on the UP lines replicated by the ANR by imputing outages to those lines at the same rate as the outages that affected the BNSF-replicated lines. *Id.* at III.C-42.

With respect to the outages on the replicated BNSF lines, Mr. Reistrup has reviewed the list of additional outages proposed by the defendants, as well as the underlying data produced by BNSF in discovery, and has concluded that a total of 56 outages²⁴ should be added to the 52 outages that were input to the RTC Model on Opening because they are similar enough to the Opening outages that they could reasonably cause delays to trains. The additional outages accepted by Mr. Reistrup are identified in Rebuttal e-workpaper “BNSF Outage Data.pdf.” Mr. Reistrup has rejected the remaining { } BNSF outages proposed by the defendants because they are dissimilar to the Opening outages and there is no evidence that they caused any train delays. Mr. Reistrup has also rejected the imputation of BNSF outages to the replicated UP lines.

Additional BNSF outages. With respect to the 56 additional outages that AEPCO is accepting on the BNSF lines replicated by the ANR, BNSF/UP

²⁴ Outages that affected more than one track at a particular location are treated as a single outage for purposes of Mr. Reistrup’s analysis.

treated 20 as bringing train operations to a complete standstill – that is, the train speed on the main track(s) at the location of each outage is shown as zero miles per hour. *See* Rebuttal e-workpaper “RTC Reply Form B “0” Outages.xls.”

These outages generally involved a switch problem that either affected only one of two main tracks, or that occurred in an area with one main track but was not of a nature that should have required train operations to be stopped altogether while the problem was fixed.

Mr. Reistrup reviewed these 20 outages with AEPCO Witnesses Schuchmann and Davis²⁵ to determine whether it is appropriate to treat them in the Rebuttal RTC simulation as “zero mph” outages for all main tracks at the location involved, or whether trains could be allowed to operate by the location at restricted speed (10 mph) either on the adjacent main (if the location has two main tracks) or on the affected main (in single-track locations). They concluded that for eight of the 19 outages, train operations do not need to be halted altogether and that trains could continue to move past the affected location at restricted speed.

For example, {

²⁵ Mr. Schuchmann, who conducted the RTC Model simulation, is a former NS operating officer. Mr. Davis, who designed the ANR’s MOW plan, is a former NS Track Supervisor and also held other positions related to MOW in the NS Engineering department.

}

The other seven added outages that were improperly treated as zero mph outages by BNSF/UP, together with the reasons why AEPCO's experts permitted train operations to continue at restricted speed, are described in Rebuttal e-workpaper "RTC Reply Form B "0" Outages.xls."

Additional BNSF outages that were rejected. Mr. Reistrup has rejected the remaining 174 additional BNSF outages proposed by the defendants because they are not, in fact, similar to the Opening outages and there is no evidence that they caused any train delays.²⁶ In discussing the additional outages they included, BNSF/UP simply summarized them by broad category, and did not

²⁶ A summary of the additional outages proposed by BNSF, with Mr. Reistrup's handwritten notes, is contained in Rebuttal e-workpaper "BNSF outage data.pdf." Mr. Reistrup's reasons for rejecting the remaining 174 outages proposed by BNSF/UP are set forth on the last four pages of this workpaper.

identify which specific outages fell within each category. BNSF/UP Reply at III.C-40-42. Mr. Reistrup analyzed the description provided by BNSF for each individual outage and determined, on the basis of that description, whether it would be likely to cause a train delay if it occurred on the ANR. The results of his location-specific analysis are provided as part of Rebuttal e-workpaper “BNSF outage data.pdf.”

Outages on UP lines. It is inappropriate to “impute” outages that occurred on the replicated BNSF lines during the 2008 equivalent of the RTC simulation period to the replicated UP lines. The UP lines in issue were owned and operated by the Southern Pacific Railroad (“SP”) prior to the UP/SP merger in 1996, and they have undergone substantial upgrading (including the replacement of rail, ties and ballast and the addition of second main track or passing sidings) since that time. Thus they were likely to have been in better condition in 2008 than many of the BNSF lines replicated by the ANR, and they also have lower traffic density (in terms of both gross tons and numbers of trains per day) than BNSF’s Transcon and Orin Subdivision, in particular. Thus, these UP lines were unlikely to have experienced the same (proportionate) number of random outages as the BNSF lines.

Equally important, AEPCO requested information from UP on the random outages that actually occurred in 2008 for the lines being replicated by the ANR, and after UP failed to produce any specific outage information AEPCO’s counsel followed up with UP’s counsel to determine whether additional

information was available (it was not). *See* AEPCO Opening at III-C-40-41. On Reply, the defendants euphemistically acknowledge that the information provided by UP in discovery “may have lacked the detail needed to draw definitive conclusions about the relationship of train delay to particular incidents.” BNSF/UP Reply at III.C-42. The defendants should not be permitted to concoct outages that bear no relationship to what actually occurred given UP’s failure to provide meaningful outage data in discovery.

Finally, BNSF/UP did not actually input any random outages on the UP lines being replicated into the RTC Model for purposes of their Reply ANR simulation. Since the defendants did not input any specific outages, neither AEPCO nor the Board has a basis for accepting (or rejecting) any of them.

xii. Signals

BNSF/UP point out that AEPCO did not incorporate any intermediate signaling from the ANR’s CTC system into their Opening RTC simulation. BNSF/UP Reply III.B-50-51. Although intermediate signals are not a required input for an RTC simulation,²⁷ and complainants have conducted RTC

²⁷ BNSF/UP incorrectly state (*id.* at III.C-51) that “without the correct signaling, the RTC Model cannot accurately determine whether (or where) passing sidings ought to be sited to maintain safe and fluid train operations.” Signaling is not necessary for determining where passing sidings should be situated, as the flow of trains in the Model (with or without signals) determines that. AEPCO’s approach was to input the existing main-track configuration from BNSF and UP’s track charts and make judgments as to which sidings (or double-track segments) could be removed given the ANR’s traffic group and peak train counts. The flow of trains through the Model verified whether these judgments were accurate or had to be modified.

simulations without signals in other SAC rate cases, AEPCO's operating experts concur that the lack of signals can slightly affect train transit times and that, on balance, it is better to include them. Accordingly, intermediate signals have been included in AEPCO's Rebuttal simulation.

d. Results of the RTC Simulation

AEPCO Witness Schuchmann re-ran the RTC Model after making the input changes described in the preceding section. The Model ran successfully to a conclusion with the addition or extension of several passing sidings and yard tracks, as described in Part III-B-1-e, *supra*, thus confirming that the ANR's system configuration and operating plan, as revised in response to BNSF/UP's criticisms, are feasible. Although BNSF/UP's RTC Model simulation for the Reply ANR also ran successfully (BNSF/UP Reply at III.C-42-43), the Board should use AEPCO's Rebuttal RTC simulation in determining the ANR's feasibility, as the inputs used by AEPCO in the Rebuttal simulation constitute the best evidence of record.

The outputs generated by the Rebuttal RTC simulation (including in particular elapsed train running times over each of the ANR's line segments, and train cycle and transit times) were used to develop various operating statistics used to calculate the ANR's annual operating expenses, in particular locomotive and car hours and train-crew counts. A schematic diagram of the ANR's tracks as they appear in the Model for the Rebuttal simulation is attached as Rebuttal Exhibit III-C-1. The electronic files containing the Rebuttal RTC Model runs, output and

case files are included in AEPCO's Part III-C Rebuttal e-workpaper folder "RTC Revised." The latest version of the RTC Model (Version RTC 2.79L55P) was used for the Rebuttal simulation.

The Rebuttal simulation produced slightly different average train transit times, locomotive and car hours, and train crew counts (as well as crew deadheads and taxi trips due to crew expirations under the federal Hours of Service law), compared with the Opening simulation. These outputs were provided to AEPCO Witness Thomas Crowley for use in developing revised annual operating costs for the ANR.

Similar to the approach used on Opening, AEPCO has compared the average train transit times produced by the Rebuttal RTC simulation with the BNSF and/or UP average train transit times for the same peak period in the Base Year (2Q08 through 1Q09), based on train movement data produced in discovery. The revised BNSF/UP and ANR transit-time comparisons for the ANR's principal coal and non-coal traffic flows are shown in Rebuttal Exhibit III-C-2. Further details on a train-by-train basis are shown in Opening e-workpapers "AEPCO Elapsed Travel Time Peak Period.xls" and "Base Year BN-UP Non-Coal Transit Times.xls," and Rebuttal e-workpaper "Elapsed Time & Crosswalk AEPCO 616 Final_Transit Times.xlsx"

Rebuttal Exhibit III-C-1 continues to show that the ANR's 2018 peak-period train transit times for each category of movement (coal, intermodal and other freight) generally are comparable to or faster than the real-world BNSF

and/or UP cycle times for the comparable trains during the same peak period in the Base Year (October 8 through 22, 2008). In fact, for the most part, the ANR's average transit times are lower in the Rebuttal RTC simulation than they were in the Opening simulation.²⁸ The revised transit-time comparisons confirm that the ANR can provide service commensurate with its customers' requirements.

AEPCO notes that in one instance the ANR's transit time is significantly higher than the real-world BNSF/UP transit time. This instance involves the movement of loaded coal trains from Lee Ranch Mine, NM to AEPCO's Apache generating station at Cochise, AZ shown in line 8 of Rebuttal Exhibit III-C-2 – in other words, trains transporting issue New Mexico coal traffic.²⁹ AEPCO would gladly exchange a hypothetical { }-hour increase in transit time for these trains for the rate reduction mandated by AEPCO's evidence in this case.

²⁸ Compare the numbers in Column (6) of Rebuttal Exhibit III-C-2 with the comparable numbers in Column (6) of Opening Exhibit III-C-2.

²⁹ The ANR transit time shown in line 8 is for the single train that moved in the RTC simulation period, whereas (due to a lack of peak-period data) the BNSF/UP transit time was an average for the entire Base Year. Thus, this comparison of transit times is somewhat suspect. In any event, the ANR's traffic group does not include any other coal traffic moving between mines in New Mexico and points west of Cochise. Accordingly, the increase in transit time using the ANR does not affect any shipper other than AEPCO itself.

3. **Other**

a. **Rerouted Traffic**

The ANR has four internal reroutes, in which the ANR transports some coal traffic in part over a route that is different from the route used by the real-world BNSF and/or UP in 2008. These reroutes are described in AEPCO Opening at III-C-43-50. While BNSF/UP do not dispute that these reroutes are all “internal” reroutes (that is, reroutes that are internal to the ANR and that involve delivery or receipt of cross-over traffic at a point on the traffic’s real-world route of movement), they assert that the reroutes are longer, less efficient, and result in longer cycle times and increased operating costs than using the real-world routes. BNSF/UP Reply at III.C-43-44.

BNSF/UP devote most of their attention to the New Mexico coal reroute, in which the ANR moves coal trains originating at the Lee Ranch and El Segundo mines and terminating at Cochise via Vaughn, NM and El Paso, TX, rather than using the shorter real-world route via Belen-Rincon-Deming, NM. As discussed in Part III-A-1, *supra*, this reroute is clearly permissible under the Board’s decisions in the prior AEPCO rate case (so long as the SARR constructs the Vaughn-El Paso segment rather than attempting to use BNSF’s trackage rights over this UP segment), not to mention the *Coal Rate Guidelines*.³⁰ BNSF/UP aver

³⁰ The *Guidelines* expressly authorize a shipper to utilize a longer route than the route used in the real world as “an overriding factor may be the effort to lower costs by taking advantage of economies of density.... Thus, the stand-alone

that it would make little sense to implement this reroute rather than using the shorter, more direct real-world route, and that its use adds to potential congestion on busy lines such as BNSF's Transcon. BNSF/UP Reply at III.C-44-47.

The additional density and revenues from using this reroute more than offset the increase in operating costs due to the additional distance (which in any event are accounted for in AEPCO's RTC Model simulation and the ANR's annual operating expenses). The choice of routing is AEPCO's to make, as long as all costs resulting from the reroute are accounted for (as they are here), including the cost of constructing the necessary track connection facilities at Vaughn. It should also be noted that the only New Mexico coal traffic being rerouted is the issue traffic moving to AEPCO's Cochise generating station. Therefore, no other ANR traffic moves a longer distance or incurs longer transit times as a result of this reroute.

With respect to the three PRB coal reroutes, BNSF/UP register no objection to the internal reroute between certain PRB mines and Northport, NE (BNSF/UP Reply at III.C-49), and their only stated objection to the BNSF/FXE coal reroute is that the traffic should not be included in the ANR's traffic group because the FXE coal movement did not take place in 2009 (*id.*; this point is refuted in Part III-A-1 above). BNSF/UP do take issue with the reroute between Stratford, TX and Vaughn, NM via Amarillo, TX, rather than using UP's direct

railroad may not represent the shortest route for the captive shipper, but the one with the highest traffic densities." *Id.*, 1 I.C.C.2d at 543-44.

line between Stratford and Vaughn which is 91 miles shorter than the route via Amarillo. *Id.* at III.C-48. However, the defendants' primary objection to this reroute is that their RTC simulation of the ANR shows the route proposed by AEPCO produces longer transit times (and more fuel consumption) than those produced by an RTC simulation of the ANR using the current route. This is not the relevant comparison. The relevant comparison is to the real-world UP transit times for trains operating between Stratford and Vaughn, not to ANR transit times using the UP route. AEPCO's Rebuttal RTC simulation shows that ANR coal trains operate between Denver and El Paso via Stratford, Amarillo and Vaughn { } than the comparable real-world trains, which operate over UP's line between Stratford and Vaughn. *See* Rebuttal Exhibit III-C-2, line 9. And, of course, all of the costs of operating over the longer route via Amarillo are included in AEPCO's calculation of the ANR's annual operating expenses.

b. Fueling of Locomotives

BNSF/UP do not object to AEPCO's proposed locomotive fueling procedures, as described in AEPCO Opening at III-C-50. Defendants do note that given the use of a DP locomotive configuration for ANR trains, direct-to-locomotive or DTL fueling of the rear units would have to be performed at each of the ANR's five inspection/fueling yards, where fueling facilities are provided. BNSF/UP Reply at III.C-49. AEPCO agrees, and has provided for DTL fueling of the rear (DP) locomotives by contractors. However, the contractors would provide

their own tanker trucks, so BNSF/UP's statement that "each locomotive fueling facility should have sufficient tanker trucks to accommodate [DTL] fueling in addition to permanent fueling platforms" (*id.*) is erroneous if it is intended to mean that the ANR would have to provide the trucks.

BNSF UP also repeat their argument that additional infrastructure (track and other facilities needed to deliver, offload and store fuel received via tank car) need to be provided at West Vaughn and West El Paso Yards. *Id.* at III.C-49-50. As explained in detail in Part III-D-1-c, *infra*, the ANR does not need to receive fuel at West Vaughn via tank car, and thus does not need the additional infrastructure proposed by BNSF/UP. AEPCO addresses the infrastructure needed to receive fuel by tank car at West El Paso at pp. III-B-18-19, *supra*.

c. Car Inspection Locations and Procedures

AEPCO's proposed ANR car inspection locations and procedures are described in AEPCO Opening at III-C-50-54. BNSF/UP accept these inspection locations and procedures. BNSF/UP Reply at III.C-50. BNSF/UP's contentions concerning the configurations of the ANR's five inspection/fueling yards are addressed at pp. III-B-13-20, *supra*.

d. Train Control and Communications

i. CTC/Communications System

BNSF/UP accept the ANR's CTC traffic control system and fiber optic/microwave communications system, as described in AEPCO Opening at III-C-54-55. BNSF/UP Reply at III.C-50-51. However, BNSF/UP object to

AEPCO's failure to incorporate intermediate signaling into its Opening RTC simulation of the ANR's operations. As noted earlier, AEPCO has added intermediate signals in its Rebuttal RTC simulation.

BNSF/UP further assert that the use of one-person switch crews means that each inspection/fueling yard should be equipped with power switches and remote control technology. *Id.* at III.C-51-52. AEPCO agrees that the switch crews should be equipped with remote control devices so the operation of the switch locomotives can be controlled from the ground, but disagrees that internal yard switches need to be powered. *See pp. III-C-15-16, supra.*

ii. Dispatching Districts

On Opening AEPCO provided for nine dispatching districts or desks, with all dispatchers stationed at the ANR's headquarters at North Amarillo, TX. AEPCO Opening at III-C-52-54. BNSF/UP propose to add a tenth dispatching desk and to rearrange Desks 1 and 8 by making Desk 1 responsible for the line between Mossmain and Walter Jct., MT,³¹ rather than Desk 8. BNSF/UP Reply at III.C-52-53. AEPCO has no objection to moving the Mossmain-Walter Jct. line to Desk 1, but disagrees that a tenth desk should be added.

The tenth dispatching desk that BNSF/UP propose to add is a new Desk 3, which is essentially a second desk for the line from Campbell to East Guernsey, WY, in addition to AEPCO's Desk 2. This line includes the Orin and

³¹ Walter Jct. is the northerly terminus of the ANR system and the point where the ANR connects with the private spur serving the Signal Peak mine.

Canyon Subdivisions and serves all of the “Joint Line” mines south of Campbell/Donkey Creek. BNSF/UP state that their addition of a second desk for this territory “is based on BNSF’s historical experience when it was the only railroad operating in this territory. As in the AEPCO proposal, the territory involved both single- and double-track lines. At that time, BNSF required two dispatchers to manage this territory efficiently.” BNSF/UP Reply at III.C-52.

BNSF’s “historical experience” operating this line without the presence of another carrier is not a sufficient reason for adding a second dispatching desk. UP’s predecessor, CNW, began operations on the Joint Line in August of 1984, or more than 25 years ago. The dispatching technology at the time was not remotely comparable to the computerized and centralized dispatching technology available today. A dispatcher today can handle a far greater volume of traffic on a particular line segment than a dispatcher could in the early 1980’s.

Moreover, the traffic density on the Campbell-East Guernsey line is lower than the traffic density on longer ANR line segments covered by other dispatching districts, where the defendants have not attempted to double up the dispatching desks. The maximum peak-year density on the 172-mile Campbell-East Guernsey line segment is 126.0 gross tons per mile between Donkey Creek and Orin Jct., whereas the peak-year density on the 242-mile Amarillo-Vaughn line segment (AEPCO’s Desk 6) is at least 165 million gross tons per mile over the entire segment, and the peak-year density on the 250-mile Vaughn-Defiance line segment (AEPCO’s Desk 7) is at least 178 million gross tons per mile over

the entire segment.³² BNSF/UP's acceptance of one desk to cover each of the Amarillo-Vaughn and Vaughn-Defiance lines demonstrates that there is no need for two dispatching desks to cover the less busy Campbell-East Guernsey line.

iii. PTC Implementation Under RSIA

On Opening, AEPCO described the positive train control ("PTC") requirements of the Rail Safety and Improvement Act of 2008 ("RISA") to the ANR, and acknowledged that, absent an amendment to the statute, PTC will have to be installed on various ANR lines that carry certain toxic-by-inhalation materials by December 31, 2015. AEPCO Opening at III-C-57-60. BNSF/UP criticize AEPCO for not including any capital or operating costs for PTC implementation, and they include capital costs of \$52.6 million for PTC compliance in their Reply evidence concerning the ANR's construction costs. BNSF/UP Reply at III.C-54-58 and Section III.F-6.

With respect to operating costs, AEPCO has, in fact, included staffing costs for an inter-departmental PTC Compliance Group that includes a Director of PTC Compliance and four other members, plus a full-time administrative assistant. AEPCO Opening at III-C-60 and III-D-19-20. AEPCO did not include any other direct operating costs related to PTC, but neither did the defendants. BNSF/UP Reply at III.C-56 and 57-58.

With respect to capital costs, the PTC implementation process is still in its early stages and many technical issues remain to be resolved. (Several such

³² See Rebuttal Table III-C-2 on page III-C-4, *supra*.

issues are described in AEPCO Opening at III-C-58-59 and acknowledged in BNSF/UP Reply at III.C-57.) For this reason, AEPCO believes it premature to attempt to develop an estimate of the ANR's capital (and direct operating) costs for PTC compliance. The Board concurs that estimating PTC compliance costs is premature, as it recently rejected UP's attempt to include projected PTC compliance costs in a "simplified" rate case involving the Three-Benchmark standard. STB Docket No. 42114, *US Magnesium, L.L.C. v. Union Pacific Railroad Co.* (STB served January 28, 2010). The Board noted in this decision that "there is a great deal of uncertainty surrounding PTC investment, and UP has not demonstrated the precise amounts that could be reasonably ascribed to USM's traffic" (*id.* at 17). The Board further held:

While we understand that the costs of PTC might be significant and that carriers might need to recover the additional costs from their customers in the future, the adjustment advocated by UP cannot be justified here UP has not demonstrated here that PTC investments are sufficiently defined such that UP can quantify its costs or fairly attribute those costs to USM's traffic.

Id. at 2. Although the Class I railroads subsequently (in mid-April of 2010) submitted PTC Compliance plans to the FRA, these plans acknowledge the continuing uncertainties as to the technologies that will ultimately be used and as to ultimate PTC compliance costs.

Given the continuing issues and uncertainties with respect to PTC implementation, the Board should reject BNSF/UP's attempt to assign specific

PTC compliance costs to the ANR that will not be incurred for another four years. However, out of an abundance of caution, AEPCO responds to BNSF/UP's evidence on PTC capital costs in Part III-F-6 of this Rebuttal evidence.

e. Miscellaneous Aspects of the Operating Plan

Other elements of the ANR operating plan, including locomotive maintenance facilities and procedures, equipment maintenance facilities and procedures, operating personnel requirements, and maintenance-of-way, are described in Part III-D of AEPCO's Opening Evidence. BNSF/UP similarly discuss these elements in Part III.D of their Reply Evidence, and AEPCO responds in Part III-D of this Rebuttal.

f. Differences in Operating Plan Prior to Start-Up of Operations North of Mossmain, MT

The ANR will not initially construct the line between Mossmain and Walter Jct., MT, which it will use to serve the new Signal Peak Mine, and will not start operating over that line until January 1, 2012. In AEPCO Opening at III-C-61-63, AEPCO described how the ANR's operating plan would be adjusted during the first three years of operations (2009-2011), prior to the start-up of service to Signal Peak Mine.

BNSF/UP acknowledge that AEPCO's proposed operating-plan modifications for the first three years appear reasonable, although they "question" whether the elimination of operating expenses for Signal Peak coal trains "is entirely valid" as AEPCO has not re-run the RTC Model to reflect the absence of

these operations and thus “may be overstating the impacts on congestion and operating times.” BNSF/UP Reply at III.C-59. BNSF/UP also state that AEPCO’s evidence is “insufficient to support its proposed . . . reduction of locomotive requirements by six units” (*id.*). However, BNSF/UP have not presented any specific evidence to back up these suppositions, nor have they explained why AEPCO’s evidence on the reduction in locomotive requirements is “insufficient.” Accordingly, the Board should accept AEPCO’s evidence on the operational impacts of deferring service to Signal Peak Mine until 2012.

III. D. OPERATING EXPENSES

The ANR's annual operating expenses are in large measure a product of its operating plan and the operating statistics from the RTC Model simulation of the ANR's peak-period operations. To the extent that BNSF/UP have inappropriately changed the operating plan proposed by AEPCO and conducted their own RTC simulation using inappropriate inputs, as described in Part III-C of this Rebuttal, their development of the ANR's operating expenses is invalid. In addition, BNSF/UP's proposed Operating, General & Administrative ("G&A") and Maintenance-of-Way ("MOW") staffing for the "Reply ANR"¹ is inflated far beyond reason.

In this section of AEPCO's Rebuttal, AEPCO responds in detail to the defendants' Reply evidence on operating expenses, and explains the changes from its Opening development of the ANR's annual operating expenses that are warranted given the revisions to the operating plan and RTC simulation, and its consideration of the defendants' contentions with respect to the ANR's personnel and equipment requirements. The expert witnesses responsible for this evidence include Paul Reistrup (locomotive requirements and Operating and G&A

¹ As with other aspects of BNSF/UP's Reply evidence, in addition to responding directly to AEPCO's evidence on its single SARR, which the defendants designate as the "Reply ANR," BNSF/UP also develop annual operating expenses for their two proposed sub-SARRs, the "ANR-PRB" and "ANR-NM." Since AEPCO's designation of a single SARR is entirely appropriate, AEPCO responds herein only to the defendants' evidence on the operating expenses for the Reply ANR.

personnel/equipment), assisted by Walter Schuchmann; Dr. Patricia Buhler (G&A personnel); Joseph Kruzich (information technology requirements/costs); George Donkin (fuel sources and costs at the ANR's yards in New Mexico); Philip Burris (operating statistics, crew requirements, locomotive and freight car requirements, fuel costs, personnel compensation, equipment lease/maintenance costs and operating unit costs, loss and damage, insurance and ad valorem tax costs); and Gene Davis (maintenance-of-way costs).

Before turning to the specific differences between the parties' calculations of annual operating expenses, AEPCO notes BNSF/UP's argument that the ANR's 2009 operating expenses are considerably less, on a mills per net ton-mile basis, than those adopted by the Board in past SAC cases. BNSF/UP Reply at III.D-1. This should come as no surprise given the economies of density, scale and scope resulting from AEPCO's design of a SARR that concentrates heavy traffic volumes on an efficient rail system that is over 2,200 route miles in length. In this case AEPCO has done exactly what a complaining shipper in a SAC case is encouraged to do by the Board's *Coal Rate Guidelines*: select a SARR traffic group and physical plant that maximizes the carriage of profitable traffic and lowers costs by taking advantage of available economies of density. *Id.*, 1 I.C.C.2d at 543-44.

A comparison of the parties' calculations of the ANR's annual operating expenses for its first year of operations (2009) is shown in Rebuttal Table III-D-1 below.

REBUTTAL TABLE III-D-1 ANR 2009 OPERATING EXPENSES (\$ Millions)			
	AEPCO Opening	BNSF/UP Reply ANR	AEPCO Rebuttal
Locomotive Lease	\$ 33.2	\$ 43.5	\$ 36.1
Locomotive Maintenance	\$ 38.2	\$ 77.8	\$ 70.4
Locomotive Operations	\$ 266.2	\$ 336.6	\$ 299.3
Railcar Lease	\$ 81.5	\$ 84.0	\$ 77.1
Materials & Supply Operating	\$ 1.5	\$ 3.8	\$ 2.2
Train & Engine Personnel	\$ 120.2	\$ 139.4	\$ 126.7
Operating Managers	\$ 49.3	\$ 68.6	\$ 51.5
General & Administrative	\$ 28.3	\$ 62.2	\$ 32.7
Loss & Damage	\$ 2.7	\$ 2.7	\$ 2.7
Ad Valorem Tax	\$ 18.7	\$ 36.5	\$ 18.8
Maintenance-of-Way	\$ 60.2	\$ 142.0	\$ 63.2
Trackage Rights	\$ 0.1	\$ 0.0	\$ 0.1
Third Party Coal Loading Fees	\$ 2.0	\$ 2.1	\$ 2.0
Intermodal Lift Cost	\$ 2.4	\$ 2.0	\$ 2.8
Texico Train Expense Additive	\$ 0.1	\$ 0	\$ 0.04
Insurance	\$ 12.8	\$ 51.7	\$ 30.2
Startup and Training	\$ 35.4	\$ 60.4	\$ 39.6
Total¹	\$ 752.8	\$1,113.3	\$ 855.3
¹ Total may differ slightly from the sum of the individual items due to rounding.			

Of the \$258.0 million total remaining difference between the parties' calculations of annual operating expenses, 72.8 percent is accounted for by five categories: MOW (\$78.8 million); Locomotive Operations, including fuel costs (\$37.3 million); G&A (29.5 million); Insurance (\$21.5 million); and Start-up and Training (\$20.8 million).

1. Locomotives

The ANR's first-year (2009) locomotive requirements are summarized in Rebuttal Table III-C-3 on page III-C-16, *supra*. Although BNSF/UP accept the road/helper and switch locomotive models reflected in AEPCO's operating plan, they develop different locomotive counts than AEPCO did. AEPCO responds to the defendants' evidence on locomotive counts, and develops revised counts, at pp. III-C-5-16, *supra*. AEPCO responds below to BNSF/UP's development of ANR locomotive lease, maintenance and operating costs.

a. Leasing

BNSF/UP accept AEPCO's development of annual lease costs per unit for the ANR's road and switching locomotives. BNSF/UP Reply at III.D-3. Remaining differences in the parties' locomotive acquisition costs thus relate solely to their calculations of the number of locomotives that are required. *Id.* AEPCO's revised calculation of total 2009 locomotive lease costs for the ANR, based on the total locomotive requirements developed on Rebuttal, is shown in Rebuttal e-workpaper "ANR Operating Expense_Rebuttal.xls."

b. Maintenance

BNSF/UP accept AEPCO's approach of contracting out the maintenance of its locomotives, and using a BNSF agreement with GE Rail Services as the basis for calculating road locomotive maintenance costs. BNSF/UP Reply at III.D-3-4. However, they contend that AEPCO significantly understated

the amounts the ANR would pay GE for maintaining its locomotives, in that

{

}. *Id.* at III.D-4.

On Opening, AEPCO used an average locomotive maintenance cost per unit per day for ES44-AC locomotives of \${ } based on {

{

} AEPCO has corrected this omission on Rebuttal by
}. In doing so, the effective average locomotive maintenance cost per ES44-AC unit per day used on Rebuttal equals \${ }. *See* Rebuttal e-workpaper “ANR Operating Expense_Rebuttal.xls.”

BNSF/UP accept AEPCO’s annual maintenance cost per unit for the ANR’s locomotives used for switch and work-train service. BNSF/UP Reply at III.D-5. They also accept AEPCO’s cost for performing locomotive overhauls, but dispute AEPCO’s overhaul frequency of once every eight years because of the high locomotive utilization rate posited by AEPCO. *Id.* As with road locomotive mileage maintenance expense, on Opening AEPCO failed to account for the higher utilization of ES44-AC road locomotives in calculating locomotive overhaul

expenses. On Rebuttal, AEPCO accepts the defendants' overhaul frequency of every four years for its locomotive overhaul annuity calculations for the ANR, and in doing so increased the annual overhaul expense per road unit from \$ { } to \$ { }. See Rebuttal e-workpapers "ANR Operating Expense_Rebuttal.xls" and "ANR Loco Overhaul_Rebuttal.xls."

The revised total locomotive maintenance cost for the ANR equals \$70.4 million in 2009. See Rebuttal e-workpaper "ANR Operating Expense_Rebuttal.xls."

c. Fuel

i. Fuel Costs

On Opening, AEPCO calculated a weighted average locomotive fuel cost from data provided by BNSF in discovery for locations on or near the ANR's route. BNSF/UP use essentially the same approach, but dispute AEPCO's calculation of fuel costs at two specific locations: West Vaughn Yard and West El Paso Yard (both located in New Mexico). The defendants argue that because no petroleum pipelines serve either of these locations, the ANR would have to receive fuel at these locations (and at its Texico Yard, also located in New Mexico) by tank car, and AEPCO did not include infrastructure and operating costs related to the receipt and unloading of fuel at these locations by tank car. The defendants also assert that AEPCO improperly used BNSF's fuel cost per gallon at Belen as a surrogate for the ANR's fuel cost at West El Paso, rather than data concerning UP's fuel cost at El Paso produced in discovery. BNSF/UP Reply at III.D-6-11.

AEPCO Witnesses George Donkin and Philip Burris respond to these contentions below. Mr. Donkin is a pipeline expert with many years of experience in evaluating the construction and operating costs and delivery capabilities of pipelines carrying refined petroleum products, including diesel fuel. Mr. Donkin's qualifications are described in Part IV, *infra*.

(a) **West Vaughn**

BNSF/UP accept the use of BNSF's average cost per gallon of diesel fuel at Belen, NM, as a surrogate for the cost of diesel fuel at the ANR's West Vaughn Yard, which is located approximately 100 miles east of Belen. However, because a pipeline delivers diesel fuel directly to BNSF's Belen Yard, whereas no pipeline serves West Vaughn, BNSF/UP assert that the ANR must first take delivery of fuel at Belen, and then transport it from Belen to West Vaughn by tank car. According to the defendants, this increases the ANR's fuel cost at West Vaughn by \$0.057 cents per gallon. BNSF Reply at III.D-8-9 and III.B-14-16.

AEPCO Witness Donkin disagrees that the ANR would have to take delivery at and then transport fuel from Belen to West Vaughn by tank car, or invest in additional track, unloading facilities or other infrastructure needed to receive fuel by tank car at West Vaughn, for several reasons. He concludes that the delivered cost of fuel at West Vaughn used by AEPCO (using BNSF's cost of fuel at Belen as a surrogate) actually overstates the delivered cost that would be achieved at that location.

In calculating the delivered cost of diesel fuel at the ANR's West Vaughn Yard, AEPCO used \$ { } per gallon, based on BNSF's average delivered cost per gallon of diesel fuel in the 1st Quarter of 2009 ("1Q09") at its Belen Yard. This \$ { } per gallon average delivered cost represents the sum of {

{ }. BNSF/UP assert that the \$ { } per gallon used by AEPCO for fuel cost at West Vaughn Yard is too low. BNSF/UP Reply at III.D-9-10. Instead, they argue that ANR's total delivered fuel cost in 1Q09 at West Vaughn is \$ { } per gallon, based on the following:

- The ANR takes initial delivery of its West Vaughn fuel requirements at the existing BNSF Belen Yard, at a cost of \$ { } per gallon;
- The ANR must then ship that fuel by tank cars from Belen to West Vaughn, at an average cost of \$0.056 per gallon; and
- In addition, to reflect the cost of the tank cars used to ship fuel from Belen to West Vaughn of \$0.001 per gallon must be included, resulting in a total delivered cost of fuel at the West Vaughn Yard of \$ { } per gallon.

The average daily diesel fuel requirement at ANR's West Vaughn yard is { } gallons, which represents a total annual diesel fuel requirement of { } million gallons. BNSF/UP Reply at III.B-15. Both AEPCO and the defendants agree that the ANR's total annual fuel requirement at West Vaughn displaces most of BNSF's existing annual fuel requirement at Belen. *Id.* This means that the ANR's total annual fuel requirement at West Vaughn is by far the

largest of all fueling locations on the existing BNSF system for which BNSF produced cost data in discovery. The next largest after West Vaughn's { } million gallons is {

}.

See Rebuttal e-workpaper "BNSF Fuel Cost Data.xls," which reproduces a spreadsheet produced by BNSF in discovery. The ANR's annual fuel requirement at West Vaughn { } is not only { }.

BNSF's largest fixed fueling locations tend to be served by {

}.

See Rebuttal e-workpaper "BNSF Fuel Cost Data.xls." The ANR's very large diesel fuel requirements at West Vaughn represent a very attractive new market for actual or potential new products pipeline service providers. There is in fact an existing petroleum products pipeline owned by NuStar Logistics L.P. ("NuStar") connecting Amarillo, TX with Albuquerque, NM, which passes only about thirty miles north of the ANR's West Vaughn Yard.

The ANR fuel requirement at West Vaughn Yard is also an especially attractive new market for NuStar because the costs to attach this new load are low, in comparison with most pipeline projects. This is because:

- The area where the supply lateral from the existing NuStar products pipeline to West Vaughn would be constructed is rural, with much lower construction costs per mile than exist in urban, more densely populated areas.
- The size of the pipeline needed to meet the ANR's fuel requirements at West Vaughn is not likely to exceed 8 inches in diameter, which is less than the size of most new petroleum pipelines constructed in recent years. This also results in lower pipeline construction costs.
- The new supply lateral is a land pipeline, resulting in lower construction costs than for new offshore pipelines.

Few onshore pipeline supply laterals have been constructed in the U.S. in recent years. However, cost per mile information on the following 2008/2009 pipeline projects was reported in the September 14, 2009 issue of the *Oil & Gas Journal*:

- An 8-inch, 1.21-mile pipeline in North Dakota, at a cost of \$710,095 per mile.
- A 12-inch, 41.4-mile lateral pipeline in Colorado, at a cost of \$963,594 per mile.
- A 12-inch, 4.99-mile lateral pipeline in West Virginia, at a cost of \$1,121,543 per mile.
- A 6-inch, 8.0-mile pipeline in Pennsylvania, at an estimated cost of \$880,530 per mile.

The average cost per mile of these four recent new pipeline projects is \$918,940. At \$918,940 per mile over a distance of about 30 miles, it would cost nearly \$27.6 million for NuStar to build a new supply lateral from its existing Amarillo/Albuquerque products pipeline to the ANR's West Vaughn Yard.

Assuming that NuStar constructed a new, 30-mile supply lateral in 2008 from its existing Amarillo/Albuquerque pipeline to the ANR's West Vaughn Yard, that pipeline service would be available to meet the ANR's fuel requirements at West Vaughn beginning in 1Q09. Rebuttal Exhibit III-D-1 presents a comparison of NuStar's actual 2008 costs of service with the costs of service NuStar would have experienced in 2008 with a new pipeline lateral from its existing Amarillo/Albuquerque line to supply ANR's diesel fuel requirements at West Vaughn. As the exhibit shows, the resulting pipeline transportation cost is \$0.03 per gallon.

If the ANR pays a pipeline transportation tariff rate that is based on NuStar's fully-distributed incremental cost to connect its existing products pipeline to West Vaughn, Exhibit III-D-1 shows that rate is \$0.034 per gallon. At \$0.034 per gallon for pipeline transportation, plus \$0.009 per gallon for taxes, and a \$1.391 per gallon purchase price, the ANR incurs a total delivered cost of fuel at West Vaughn of \$1.434 per gallon which is {
} fuel cost used by AEPCO in its Opening fuel cost calculations.

The tariff rate the ANR would pay NuStar for pipeline service at West Vaughn in 1Q09 would be less than \$0.034 per gallon if NuStar rolls in the cost of the new pipeline supply lateral and charges the ANR a rate that is based on its average total cost of service. As is also shown in Rebuttal Exhibit III-D-1, after adjusting 2008 costs to reflect the cost of the new pipeline supply lateral to West Vaughn, NuStar's average system-wide total cost of service increases from \$0.010

per gallon to \$1.011 per gallon. At a pipeline tariff rate of about \$0.011 per gallon, the ANR's total delivered cost of fuel at West Vaughn is only \$1.411 per gallon, which is { } delivered cost used by AEPCO in its Opening fuel cost calculations.

The pipeline cost of service analysis presented in Rebuttal Exhibit III-D-1 demonstrates the following:

- NuStar's rate base increases by nearly \$27.6 million, and its after tax return on rate base increases by nearly \$2.9 million, by adding the ANR and its fuel requirement at West Vaughn as a customer. This represents a significant incentive, in the form of increased rate base and increased earnings, for NuStar to provide pipeline delivery service for the ANR's diesel fuel requirements at West Vaughn.
- The delivered cost of diesel fuel at the ANR's West Vaughn Yard is either \$1.434 per gallon or about \$1.411 per gallon, and both are { } delivered cost at West Vaughn assumed in AEPCO's Opening Evidence.

It follows, therefore, that the West Vaughn fuel cost used by AEPCO on Opening is conservatively high, and should be accepted by the Board.

(b) West El Paso

BNSF/UP contend that AEPCO improperly used BNSF's Belen fuel cost as a surrogate for the ANR's fuel cost at its West El Paso Yard, which is located in southeastern New Mexico approximately 15 miles west of El Paso, TX. BNSF/UP note that UP produced data concerning its fuel costs at El Paso, and contend that AEPCO should have used this data as the basis for developing fuel costs at West El Paso rather than BNSF's fuel cost data at Belen, NM (which is located more than 200 miles from West El Paso). The defendants also assert that

the ANR would have to have diesel fuel delivered to West El Paso by tank car, this time from UP's Dallas Street Yard in El Paso where UP receives diesel fuel delivered by pipeline. BNSF/UP Reply at III.B-21-22 and III.D-9-11.

AEPCO Witness Donkin agrees that the diesel fuel used by the ANR at West El Paso Yard should be sourced from UP's Dallas Street Yard in El Paso, and accepts that the fuel would be transported from Dallas Street Yard to West El Paso Yard (a distance of about 15 miles) by tank car. However, he disagrees with BNSF/UP's calculation of the delivered fuel cost at West El Paso.

In calculating the delivered cost of diesel fuel at West El Paso Yard, AEPCO used \$ { } per gallon, which was BNSF's average delivered cost per gallon of diesel fuel in the first quarter of 2009 at BNSF's Belen Yard. The first prong of the defendants' argument is that AEPCO erred in using the delivered cost of diesel fuel at Belen for the ANR's fuel requirements at West El Paso Yard. Instead, the defendants propose using, as an initial point of departure, the delivered cost of diesel fuel at UP's Dallas Street Yard in El Paso. But because the 1Q09 delivered cost at Dallas Street Yard is not available (or at least was not produced by UP in discovery), the defendants use an estimate of the cost that the ANR would incur in 1Q09 for diesel fuel delivered at Dallas Street Yard. The defendants estimate the 1Q09 cost of diesel fuel at Dallas Street yard as follows:

- {

}

• {

}

The second prong of the defendants' argument is that because there are no petroleum products pipelines in the immediate vicinity of the ANR's West El Paso Yard, the cost of transporting fuel by tank car from UP's Dallas Street Yard to West El Paso Yard should also be reflected in arriving at the total delivered cost of diesel fuel at West El Paso Yard. According to the defendants, that additional cost amounts to \$ { } per gallon. BNSF/UP Reply at III.D-11. When that amount is added to their estimate of UP's 1Q09 delivered cost of diesel fuel at Dallas Street Yard of \$ { } per gallon, the defendants claim that the total delivered cost of diesel fuel in 1Q09 at West El Paso Yard is \$ {

} the delivered cost of fuel used by AEPCO for West El Paso.

Mr. Donkin accepts as reasonable the defendants' argument that the ANR's fuel requirements at West El Paso would first be obtained at UP's Dallas Street Yard. However, the index the defendants use to estimate the delivered cost in 1Q09 for diesel fuel deliveries at Dallas Street Yard is based on faulty reasoning and therefore should be modified.

In 2008, UP's average cost of diesel fuel at Dallas Street Yard was {

} Accordingly,

the delivered cost of fuel at the BNSF locations shown varies over a wide range, reflecting differences in (1) geographic market conditions, (2) transportation costs, (3) local taxes in some states, and (4) delivery conditions. It is therefore to be expected that UP's average delivered cost of fuel by pipeline in 2008 at its fixed fueling facility in El Paso {

}

If the cost of fuel at another location or at other locations is used to estimate the 1Q09 delivered cost of fuel at UP's Dallas Street Yard, the other location or locations should reflect geographic market conditions and conditions of delivery that are relatively similar to UP's at Dallas Street Yard. This means that {

} Similarly, geographic locations distant from El Paso also should be excluded from the calculation.

The BNSF fixed fueling station that is closest to El Paso is {

}

The relationship between 2008 and 1Q09 average delivered fuel costs at BNSF's Belen Yard represents a good index for estimating 1Q09 average fuel costs at UP's Dallas Street Yard in El Paso. A reasonable (and more conservative) alternative to a single-fueling-station index is to use the delivered fuel costs at BNSF's four closest (to El Paso) fixed fueling stations to estimate 1Q09 fuel costs at Dallas Street Yard. That would increase the distance from El Paso of the markets being used in the development of the index {

} BNSF's other fixed fueling stations in Texas and in other states are too far away to produce comparable market conditions and costs to those at Dallas Street Yard in El Paso.

Mr. Donkin has prepared an alternative index for estimating 1Q09 delivered fuel costs at Dallas Street Yard. The alternative index is based on BNSF's average delivered fuel costs in 2008 and in 1Q09 at fixed fueling facilities at { }. Mr. Donkin's alternative index is presented in Rebuttal Exhibit III-D-2. As shown in this exhibit, the quantity-weighted average delivered cost of diesel fuel at {

} is a more appropriate index for estimating 1Q09 delivered fuel costs at the Dallas Street Yard in El Paso than the index used by the defendants.

Applying a { } index to UP's 2008 average cost of diesel fuel at Dallas Street Yard of \${ } per gallon produces an estimated average delivered cost of fuel in 1Q09 of \${ } per gallon. Adding \${ } per gallon to that figure to reflect the defendants' estimated cost of transporting fuel by tank car from Dallas Street Yard to the ANR's West El Paso Yard produces a total delivered cost of fuel in 1Q09 at West El Paso of \${ } per gallon. This amount is {

} Accordingly, the cost used on Opening is conservative and should be accepted by the Board.

(c) DTL Fueling

BNSF/UP also note that the ANR would have to use DTL fueling for certain trains at several locations, in particular Donkey Creek, WY and Defiance, NM. BNSF/UP Reply at III.D-11. For the reasons stated at pp. III-B-20-21, *supra*, AEPCO disagrees that any DTL fueling is necessary at Donkey Creek given the existence of fueling facilities on the residual BNSF at Alliance, NE. With respect to Defiance, AEPCO agrees that westbound coal trains that originate at Lee Ranch or El Segundo Mines require DTL fueling at some point along their route, as they do not move through the ANR's West Vaughn fueling facility. However, BNSF

apparently fuels these trains at the final destination (or some other point west of Defiance), as the defendants do not include any costs for DTL fueling at Defiance for the Reply ANR.

The locomotives on the intermodal train that stop at Texico Yard for block-swapping also require DTL fueling. BNSF/UP aver elsewhere in their Reply that this fuel would have to be moved to Texico via tank car and that fuel storage facilities would be needed at Texico. However, the fueling contractor for Texico can obtain diesel fuel directly from vendors at Clovis, NM, which is only six miles from Texico Yard, and the tanker trucks can replenish their fuel loads at Clovis rather than from unneeded storage tanks at Texico. *See pp. III-B-13-14, supra.*

ii. Fuel Consumption

AEPCO calculated fuel consumption rates for the ANR's trains based on system-average BNSF and UP URCS fuel consumption factors. AEPCO Opening at III-D-8. BNSF/UP assert that this methodology understates the ANR's fuel consumption because data produced in discovery indicates that the ANR's trains (which are predominantly heavy coal trains and high-speed intermodal trains) consume more fuel per locomotive unit mile than the BNSF or UP system average. BNSF/UP Reply at III.D-12-13. BNSF/UP also argue that AEPCO did not explain why its use of system average factors applied to specific characteristics of ANR trains is relevant and preferable to the fuel consumption information that the defendants provided in discovery, which includes information specific to the trains AEPCO selected for movement on the ANR.

AEPCO used the defendants' system average factors applied to the specific characteristics of trains moving on the ANR because the data provided in discovery is unclear, in that the defendants failed to provide a data dictionary which is required to interpret the data text file that was produced. Because AEPCO had no way to reliably interpret the data provided by the defendants, it had to pursue alternative information.

The alternative information AEPCO chose to use was BNSF and UP URCS fuel consumption factors applied to specific characteristics of the trains moving on the ANR system. This methodology is the same as that used by the complainant and accepted by the Board in *WFA/Basin I* and resulted in a fuel consumption factor of 2.39 gallons per locomotive unit mile. *Id.* at 37-38.

On Reply, BNSF/UP identified fuel consumption data for all 4400 horsepower locomotives on trains moving over routes included in the ANR system, when two to five locomotives are powering a train. The defendants' analysis yields an average consumption rate of 2.76 gallons per locomotive unit mile. However, the defendants' analysis fails to recognize the fuel efficiencies of the ES44-AC road locomotives selected for the ANR by AEPCO and accepted by the defendants. General Electric's ES44-AC locomotive is the latest iteration of 4400 horsepower locomotives and is specifically designed to improve fuel efficiency and minimize pollution. As reported by GE, the comparative fuel efficiency of the ES44-AC has been independently verified and it produces a six percent fuel savings over other

similarly sized locomotives. See Rebuttal e-workpaper “GE Reports, GE’s Evo locomotive wins fuel efficiency competition.pdf.”

On Rebuttal, AEPCO has used the workpapers supporting defendants’ fuel consumption analysis provided on Reply, and selected only those trains moving on ANR routes with two to five ES44-AC locomotives. The average fuel consumption rate for these trains equals 2.605 gallons per locomotive unit mile (see Rebuttal e-workpaper “Fuel Data Base.xlsx” tab “Pivot ES44AC”), i.e. a 5.6 percent reduction from the 2.76 gallons per locomotive unit mile average of all 4400 horsepower locomotives used in the defendants’ analysis. AEPCO uses the ES44-AC locomotive fuel consumption rate of 2.605 gallons per locomotive unit mile on Rebuttal as this consumption rate is more specific to the type of locomotives actually used by the ANR.

d. Servicing (Sand and Lubrication)

AEPCO developed non-fuel locomotive servicing costs for sand and lubrication based on the servicing expenses reported in BNSF’s 2008 R-1. AEPCO Op. at III-D-7. BNSF/UP claim that AEPCO’s servicing costs are understated because UP’s servicing expenses as reported in its 2008 R-1 were higher than BNSF’s, and because the BNSF expenses used by AEPCO do not include the cost of lube oil. BNSF/UP Reply at III.D-13-15.

With respect to the defendants’ first argument, as a least-cost, most-efficient replacement for both BNSF and UP, the ANR is entitled to use the lowest feasible cost for each category of expense. See *FMC*, 4 S.T.B. at 800 (when two

feasible alternatives are presented by the parties, the shipper is “entitled” to use the alternative “that results in the lowest overall cost”). The locomotive servicing cost proposed by AEPCO is clearly feasible because it is based on real-world expenses incurred by BNSF. The fact that UP’s cost is higher is not determinative.

The defendants’ second argument is that lube oil costs are reported in Schedule 410, line 202 of BNSF’s R-1 Annual Report, rather than in Schedule 410, line 411 which was relied upon by AEPCO, and, therefore, that AEPCO failed to include the cost of lube oil in its locomotive servicing expenses. The defendants also claim that the BNSF/GE locomotive maintenance agreement, which both parties use to calculate locomotive maintenance costs, indicates that {

} The defendants

therefore conclude that BNSF bears the cost of oil changes, and adjust AEPCO’s cost by adding \${ } million in annual lube oil cost to the calculation of the locomotive servicing cost per locomotive unit mile. This increases the cost from the \$0.0631 used by AEPCO on Opening to \${ }.

AEPCO’s experts have concluded that inclusion of the \${ } million in added fuel oil cost is unwarranted for two reasons. First, BNSF/UP have not provided any support for their \${ } million calculation, or shown how that amount is derived from the total amounts shown in Schedule 410, line 202 of BNSF’s R-1 Annual Report. Rather, they simply assert that it is included in line 202. The only workpaper BNSF/UP provided to support the \$49.0 million is an email from a BNSF employee to its experts providing a number; however, there is no workpaper

or documentation showing the development of this amount or that would allow AEPCO's experts to verify the amount.²

Second, BNSF/UP claim that { }
under the BNSF/GE locomotive maintenance agreement. However, that agreement {

}³ As BNSF provided no documentation of its claimed \$49.0 million lube oil expense, AEPCO cannot verify { }.

In addition to the above, BNSF/UP argue that AEPCO intentionally understated the calculation of BNSF's locomotive servicing expense by including a credit of \$14.3 million for Purchased Services in its calculation. BNSF/UP Reply at III.D-14. On Opening, AEPCO included all expenses appearing in BNSF's R-1 Annual Report, Schedule 410, line 411 to calculate road locomotive servicing expense. As BNSF/UP correctly point out, this credit applies to the total of all

² Review of BNSF's 2008 R-1 Schedule 410 shows the amount on line 202, column C equals \$130.0 million. There is nothing in Schedule 410 that provides support or verification for the \$49.0 amount included by the defendants.

³ See { }
}

expenses shown on this line. The total expense including the credit equals \$36.4 million, which AEPCO used to calculate the locomotive servicing cost. The total from Schedule 410, line 411 has historically been used to calculate locomotive servicing costs by both complainants and defendants in previous SAC cases and this calculation has historically be accepted by the Board. AEPCO did not “incorporate this credit to produce a lower ANR servicing expense” as defendants claim, but included the total amount for the expense BNSF actually incurred to properly reflect what BNSF has reported to the Board and to follow the precedent used by all parties and accepted by the STB in previous SAC proceedings.⁴

2. Railcars

BNSF/UP accept the full service lease rates that AEPCO used for various types of ANR-owned freight cars, the mileage rates AEPCO developed for foreign and private cars, and the spare factor used by AEPCO.⁵ BNSF/UP Reply at III.D-15. They disagree, however, with the peaking factor used by AEPCO, and recalculate the ANR’s car costs based on their proposed peaking factor and the transit times from their RTC simulation for the Reply ANR. *Id.*

⁴ It should be noted that on Opening, AEPCO relied on BNSF and UP 2008 R-1 Annual Report data for locomotive servicing expenses as 2008 data was then the most current available. On Rebuttal, AEPCO has updated all R-1 Annual Report data used in calculating operating expenses to reflect BNSF’s and UP’s 2009 R-1 Annual Report information, which became available on March 31, 2009. See Rebuttal e-workpaper “Servicing Cost_Rebuttal.pdf.”

⁵ See AEPCO Opening at III-D-8-10.

AEPCO has responded to the defendants' contentions concerning the peaking factor at pp. III-C-8-11 and 16-7, *supra*. As noted, AEPCO has revised the peaking factor from 5.7 percent to 5.9 percent on Rebuttal. AEPCO has recalculated the ANR's car costs based on its revised peaking factor and the transit times resulting from its Rebuttal RTC Model simulation. The revised costs are shown in Rebuttal e-workpaper "ANR Car Costs_Rebuttal.xls."⁶

3. Personnel

AEPCO's development of the ANR's personnel requirements is set forth beginning at page III-D-15 of its Opening narrative. The approach used by AEPCO's experts is consistent with the ANR's status as a new, non-unionized, start-up operation that provides only unit-train and trainload service, and that is free from the baggage of collective bargaining agreements (many of which were inherited from predecessor railroads) and merger employee-protective conditions that real-world Class I railroads such as BNSF and UP carry.

BNSF/UP's approach on Reply is typical of the approach used by the defendants in prior SAC cases, in that they propound far higher employee levels than are necessary in an effort to jack up the SARR's annual operating expenses as much as they think they can get away with. This is demonstrated by BNSF/UP's

⁶ AEPCO's Rebuttal railcar costs rely on BNSF and UP 2009 Annual Report data.

proposal to nearly double the total number of ANR employees (excluding T&E personnel) compared with AEPCO's staffing.⁷

AEPCO now turns to a discussion of the differences between the parties with respect to the various categories of ANR personnel.

a. **Operating**

i. **Staffing Requirements**

(a) **Train/Switch Crew Personnel**

Road crews. BNSF/UP accept AEPCO's road crew districts for the ANR, as well as AEPCO's general approach to developing the personnel necessary to meet the ANR's road crew requirements. BNSF/UP Reply at III.D-15.

However, the defendants contend that AEPCO failed to account for the "directional imbalance" of trains on two ANR lines, and that AEPCO understated the proportion of crews that will exceed the maximum time on duty under the Hours of Service law and thus require a relief crew. *Id.* at III.D-15-17. However, due to their reductions in the ANR's traffic volume (and thus train counts), the defendants actually posit a reduction in the number of train crew personnel required, from 874 (as developed by AEPCO on Opening) to 834. *Id.* at III.D-19.

⁷ The total non-T&E employees proposed by BNSF/UP equals 1,576, consisting of 586 non-train Operating employees, 315 G&A employees, and 675 MOW employees. On Opening, AEPCO proposed a total of 871 non-T&E employees, consisting of 465 non-train Operating employees, 69 G&A employees, and 337 MOW employees. AEPCO has increased the total non-T&E staffing to 1,001 employees on Rebuttal (486 non-train Operating, 92 G&A and 423 MOW).

As AEPCO notes at page III-C-11-12, *supra*, the imbalance of trains and thus crews in the two areas noted by BNSF/UP (the replicated portion of the BNSF Transcon between Amarillo and Vaughn and the replicated portion of the UP Sunset route between El Paso and Cochise) is less than 10 percent. Moreover, examination of BNSF/UP's workpapers supporting their development of T&E personnel shows that the imbalance of trains results an increase in crews by a factor of only 1.8 percent. On Rebuttal, AEPCO accepts this factor and increases crews by 1.8 percent to reflect the deadheading of crews as a result of train imbalances. See Rebuttal e-workpaper "ANR Crews and Overnights_Rebuttal.xls."

As AEPCO explained on Opening, the number of T&E crews required was developed using the total number of crew starts as determined by the actual train counts over the peak year – a procedure that is consistent with Board precedent.⁸ The total crew starts from each crew base then were adjusted upward to reflect the 1.03% re-crewing requirements determined from a review of the number of crews whose on-duty time expired under the Hours of Service law, based on the results of AEPCO's RTC Model simulation. AEPCO Opening at III-D-13. Thus, AEPCO did not apply an arbitrary 1% recrew rate, as the defendants contend; rather, the number of recreds (and related taxi trips) needed due to crews expiring under the Hours of Service law was determined primarily by the transit times for trains in each crew district produced by the RTC Model. AEPCO has revised the

⁸ AEPCO notes that BNSF/UP do not contest its use of 270 crew starts per year. AEPCO Opening at III-D-13.

number of re crews and taxi trips required based on the output from its Rebuttal RTC simulation of the ANR's peak-period operations. This is the correct approach, rather than assigning arbitrary re-crew percentages based in part on the defendants' real-world operations (BNSF/UP Reply at III.D-17-18). Based on the Rebuttal RTC simulation, the ANR recrew requirement equals 0.07 percent, which AEPCO uses in calculating its Rebuttal crew costs. See Rebuttal e-workpaper "ANR Crews and Overnights_Rebuttal.xls."

The result of continuing to use this approach, using the output from the Rebuttal RTC simulation, is that the ANR's road train T&E personnel requirements have increased from 874 to 875. See Rebuttal e-workpaper "ANR Crews and Overnights_Rebuttal.xls."

Helper Crews. Since AEPCO has not changed either the RTC train list or the helper districts provided in its operating plan for the ANR, the number of crew members required for helper service remains at 12. AEPCO does not concur with the reduction in the helper crew shifts from 12 hours to eight hours (BNSF/UP Reply at III.D-19). Twelve-hour helper shifts are common in the railroad industry, including on CSXT when Mr. Reistrup worked for that carrier. Helper crews are not continuously active, as they often sit for hours waiting for a train that requires assistance.

Switch and work train crews. BNSF/UP propose to increase the number of switch crew employees from 32, as provided by AEPCO on Opening, to 57, and also propose to add 10 work train crew employees. BNSF/UP Reply at

III.D-18-19. The principal reason for the increase in switch crew members is that BNSF/UP propose to change the switch crew shifts from 12 hours to eight hours. However, Mr. Reistrup notes that 12-hour switch-crew shifts continue to be in common use on both Class I railroads (including CSXT) and regional railroads, and neither BNSF nor UP have provided any information as to their own practice in this regard. Moreover, the “safety concerns” cited by the defendants are minimized by the use of on-the-ground switch crews who remotely control locomotive movements in each yard. BNSF/UP have provided no explanation for their inclusion of 10 work train crew personnel, and separate personnel are not needed to staff the occasional ANR work train (most work trains are provided by contractors performing program maintenance).

As noted at pp. III-C-14, *supra*, on Rebuttal AEPCO has added a second switch crew assignment at the ANR’s North Amarillo Yard. This crew requires three additional employees to provide 24/7 coverage of the switching operations by the two switch assignments stationed at North Amarillo. Thus, AEPCO has increased its employee count for switch crew members from 32 to 35. The ANR’s total T&E personnel count thus has increased from 918 (Opening) to 922 (Rebuttal).

(b) Non-Train Operating Personnel

BNSF/UP propose to increase the ANR’s staffing for operating personnel other than train and switch crews and maintenance-of-way (“MOW”) personnel from 462 employees to 586 employees – an increase of 124 employees,

or 27 percent. *See* BNSF/UP Reply at III.D-28-29 (Table III.D-5).⁹ AEPCO’s Witness Reistrup believes the magnitude of the increase proposed by the defendants is absurd, and ignores the characteristics that differentiate the ANR from real-world Class I railroads as well as modern “span of control” concepts in a non-unionized work environment. Mr. Reistrup does agree, however, that a modest amount of additional field personnel (21 employees) are warranted in light of the defendants’ evidence. These include three Assistant Managers of Train Operations to provide 24/7 coverage at Guernsey, West Vaughn and West El Paso, one Manager of Locomotive Maintenance, one Manager of Car Maintenance, and 16 Equipment Inspectors to man eight two-person “remote” or roving inspection crews to handle car repairs on the set-out tracks near each failed-equipment detector (“FED”).

A summary of the parties’ positions with respect to the ANR’s non-train Operating personnel (other than MOW personnel) is set forth in Rebuttal Table III-D-2 below. The discussion following the table supports the Board’s acceptance of AEPCO’s Rebuttal personnel counts rather than the defendants’ counts.

⁹ The 462 (AEPCO) number shown in the table excludes, for reasons unknown, the three Operating employees AEPCO included, on Opening, with duties related to PTC implementation.

REBUTTAL TABLE III-D-2 ANR NON-TRAIN OPERATING PERSONNEL			
Position	AEPCO Opening	BNSF/UP Reply ANR	AEPCO Rebuttal
Vice President – Transportation	1	1	1
Administrative Assistants	2	2	2
Directors of Operations Control	2	2	2
Managers of Train Operations	6	11	6
Assistant Managers of Train Operations	8	14	11
Managers of Locomotive Operations	6	15	6
Terminal Manager	0	5	0
Managers of Yard Operations	25	25	25
Director of Crew Management	1	1	1
Assistant Director of Crew Management	0	2	0
Crew Managers	9	9	9
Manager of Crew Planning	0	5	0
Director of Dispatch	0	9	0
Manager of Dispatch	0	9	0
Manager of Dispatch Practices	0	1	0
Dispatchers	40	50	40
Director of Operating Rules, Safety & Training	1	1	1
Managers of Safety & Training	2	2	2
Director of Locomotive Distribution	0	1	0
Manager of Locomotive Distribution	0	5	0
Director of PTC Implementation	1	0	1
Administrative Assistant	1	0	1
Vice President – Engineering	1	1	1
Administrative Assistant	1	1	1
Vice President – Mechanical	1	1	1
Administrative Assistant	1	1	1
Director of Mechanical Services	1	2	1
Manager PTC Implementation – Mechanical	1	0	1
Manager of Testing & Environmental	2	2	2
Manager of Locomotive Maintenance	0	1	1
Manager of Car Maintenance	0	5	1
Car Foreman	0	22	0
Parts Inventory	0	5	0
Billing	0	2	0
Equipment Inspectors	352	373	368
Total	465	586	486

Before turning to a discussion of the specific differences between the parties' non-train Operating personnel, AEPCO notes that whereas its proposed Operating staffing was developed and is supported by an experienced former railroad executive with many years of operating experience, BNSF/UP's evidence on staffing is sponsored only by Richard Brown of FTI Consulting. *See* BNSF/UP Reply at IV-18-19. Mr. Brown has no direct railroad operating experience, having previously served only in the Strategic Planning and Marketing departments of BNSF and one of its predecessors.¹⁰ Thus AEPCO's evidence is better supported than BNSF/UP's evidence on Operating staffing.

Transportation Department. BNSF/UP propose a total of 170 employees for the Transportation Department (headed by the Vice President-Transportation), or 65 more employees than the 105 proposed by AEPCO on Opening (not counting the three employees assigned to PTC implementation, which BNSF/UP omits but AEPCO retains). On Rebuttal, AEPCO increases the Transportation staffing by three (all Assistant Manager of Train Operations employees).

There is no need for the enormous increase in Transportation staffing proposed by the defendants. Several of their new staffing proposals result in a ridiculously low span of control – *e.g.*, two Managers of Dispatch reporting to two

¹⁰ BNSF/UP state at page III.D-26 of their Reply that their operating witnesses, Messrs. Murphy and Kotter, reviewed AEPCO's staffing level and determined that it is insufficient, but a review of these witnesses' statements of qualifications in Section IV of the Reply indicates that neither of them has sponsored any part of BNSF/UP's Section III.D evidence on staffing.

Directors of Dispatch,¹¹ and two Assistant Directors of Crew Management reporting to a single Director, with each Assistant Director effectively supervising a single Manager-level employee (the nine Crew Manager employees cover two 24/7 positions). This is not the way any well-run enterprise would staff itself.¹²

BNSF/UP accept AEPCO's proposal for senior Transportation staffing consisting of a Vice President-Transportation (assisted by two Administrative Assistants) and two Directors of Operations Control. BNSF/UP Reply at III.D-20. However, BNSF/UP propose to increase the Manager of Train Operations ("MTO") positions from six to 11, and the Assistant Manager of Trains Operations ("AMTO") staffing from 8 to 14 employees. The principal reason for this is to provide better 24/7 coverage of train operations management. *Id.* at III.D-20-21. However, Trainmasters (the equivalent of a MTO on most Class I railroads) are rarely 24/7 positions, but rather are on call at any time of the day or night. The defendants have not indicated that they staff these positions any differently on their own systems. To the extent this type of supervisory employee needs to be physically on duty 24 hours a day, coverage is provided by Assistant Trainmasters

¹¹ The nine employees listed for each of these positions actually cover two positions, which BNSF/UP propose as 24/7 positions.

¹² In fact, Mr. Reistrup notes that even the U.S. Army, which is rigidly hierarchical, has a typical span of control of at least nine subordinates per officer, extending down to the Squad level.

(on the ANR, AMTO's).¹³ There is no need for 24/7 coverage at ANR points where there is not a lot of activity, such as Denver. However, Mr. Reistrup does concur that the volume of activity in the vicinity of the ANR's three largest yards, Guernsey, West Vaughn and West El Paso, warrants 24/7 coverage by AMTO's. Accordingly, he has provided three additional AMTO's to work 12-hour shifts (as the other AMTO's do) at these points.¹⁴

BNSF/UP assert that AEPCO has provided for no management at terminals, and thus added five Terminal Managers (one for each of the ANR's five inspection/fueling yards). *Id.* at III.D-21. AEPCO has, in fact, provided for management at these yards, in the form of a Manager of Yard Operations for each yard which is a 24/7 position.¹⁵ There is absolutely no reason why the Managers of Yard Operations cannot perform the functions described by BNSF/UP, and as noted earlier, the defendants' proposal to have a single Manager position report to another Manager position makes a mockery of modern span-of-control concepts.

¹³ BNSF/UP claim that the AMTO's "will be relatively inexperienced employees with minimal transportation experience." BNSF/UP Reply at III.D-20-21. These employees are indeed the first-line field supervisory officers, but they are largely former T&E employees and thus familiar with the railroad's operating rules and practices. If a problem arises they cannot handle, they can seek assistance from the appropriate MTO any time of the day or night.

¹⁴ As AEPCO noted on Opening, both a MTO and an AMTO are stationed at Amarillo, effectively providing 24/67 coverage for the two ANR yards near Amarillo as well as the main lines in the general vicinity.

¹⁵ BNSF/UP accept AEPCO's proposed staffing for this position, which provides a total of 26 employees to enable 24/7 coverage of each yard. BNSF/UP Reply at III.D-22.

On Opening, AEPCO provided for six Managers of Locomotive Operations (“MLO”), covering the same territories as the six MTO’s. BNSF/UP propose to increase this number to 15, largely under the theory that engineers are qualified for more than one district and because “so many trains employ Remote Control Locomotives which have additional qualification requirements.” BNSF/UP Reply at III.D-21-22.

While it is correct that the ANR’s engineers can operate in any direction out of their home terminals, this does not require additional MLO’s because each of these supervisory employees covers several crew districts. The reference to “Remote Control Locomotives” presumably is to the ANR’s extensive use of distributed power or DP, meaning that almost all trains have at least one unit on the rear that is remotely controlled from the lead locomotive. However, all of the ANR’s engineers and conductors undergo initial training in the operation of locomotives in a DP configuration, and the defendants have not explained what additional qualification requirements or ongoing training is needed that cannot be handled by the six MLO’s provided by AEPCO. Finally, BNSF/UP have not explained why the ANR must adhere to their internal staffing ratios of one MLO for every 60 engineers, which is probably driven by the defendants’ collective bargaining agreements and merger-protective conditions.

AEPCO staffed the crew management function with one Director of Crew Management and two 24/7 Crew Manager positions (requiring a total of nine Crew Manager employees). BNSF/UP accept these positions, but propose to add

two additional layers of management – two Assistant Directors of Crew Management and a Manager of Crew Planning. BNSF/UP Reply at III.D-22-23. Again, each of the two Assistant Directors effectively has a single individual (one Crew Manager) reporting to him. There is no reason why the Director cannot perform the functions BNSF/UP ascribe to the Assistant Director and to the Manager of Crew Planning. The latter position is also rendered unnecessary by the computerized crew management/calling system employed by the ANR, which is discussed in the section below on IT Systems.

BNSF/UP propose two additional layers of management for the train dispatching function, with each staffed by two 24/7 positions: two Director of Dispatch positions and two Manager of Dispatch positions. BNSF/UP Reply at III.D-23-24. This means that, once again, the defendants are effectively proposing one Director-level position for each Manager-level position. BNSF/UP also suggest the addition of a Manager of Dispatch Practices position to perform efficiency tests, *etc. Id.* at III.D-24.

None of these additional positions are needed. Supervision of the ANR's Dispatchers is provided by the two Directors of Operations Control who have responsibility for different geographic areas under the ANR's Operating Plan. *See* AEPCO Op. at III-D-15. They are located at the ANR's headquarters in North Amarillo, in close proximity to the Dispatchers. Although they are not 24/7 positions, they are on call if problems arise that cannot be handled by the Dispatchers or the 24/7 IT Technician assigned to the dispatching center. Given the

highly repetitive nature of the ANR's trainload operations and the use of computer-aided dispatching technology, there is no reason why 24/7 sub-managerial coverage is needed for the dispatching function.

BNSF/UP accept the nine ANR dispatching districts provided under AEPCO's operating plan, although they propose a second dispatching desk for the territory between Donkey Creek and Guernsey, WY. BNSF/UP Reply at III.D-23. AEPCO explained why there is no need to double up on the dispatchers for this territory at pp. III-C-47-49, *supra*. BNSF/UP also assert that five employees would be needed to cover every desk 24/7, for a total of 50 Dispatcher employees assuming 10 desks are needed (rather than the nine proposed by AEPCO) due primarily to the need for "individualized knowledge of the specific territory" covered by each desk.¹⁶ However, the dispatching desks are located together in the same room, and all of the Dispatcher employees are cross-trained to handle any portion of the ANR system and routinely help each other as the need arises.¹⁷ In other words, the Dispatchers are not isolated from each other to the extent that five employees are needed to cover each position 24/7 (or a total of 45 employees rather

¹⁶ Five employees are needed to cover one 24/7 position, assuming no overlap. The math is straightforward and is also used by BNSF/UP: 1 position x 3 shifts/day x 365 days/year ÷ 250 shifts per year = 4.38 employees, rounded up to 5. Where several positions covering the same function are located together, fewer than five employees are needed to provide 24/7 coverage (including vacation time) per position. Thus AEPCO's nine dispatching desks require a total of 40 employees (9 x 3 x 365 ÷ 250 = 39.42 employees, rounded up to 40).

¹⁷ See AEPCO Opening at III-C-56.

than 40 assuming nine desks). BNSF/UP's proposed 24/7 staffing is inefficient and they have not shown that AEPCO's proposed staffing is infeasible.

AEPCO also staffed the ANR's Transportation function with a Director of Operating Rules, Safety & Training and two Managers of Safety & Training. BNSF/UP accept this staffing level. BNSF/UP Reply at III.D-24. However, they propose to add six additional Transportation positions: a Director of Locomotive Distribution and five Managers of Locomotive Distribution. *Id.* at III.D-24-25. The five Manager employees would cover one 24/7 position, so the defendants yet again are improperly proposing a Director/Manager employee ratio of 1:1. AEPCO agrees that there is need for additional attention to the locomotive management and maintenance functions, which are related. Thus it adds a separate position to cover these functions in the Mechanical Department, as discussed below. There is no need for separate Transportation and Mechanical management of these related functions.

Engineering Department. Both parties staff this department with two employees, a Vice President-Engineering and an Administrative Assistant. BNSF/UP Reply at III.D-25. The general office staff responsible for MOW also reports to this Vice President. Differences in the parties' staffing for the MOW function are discussed in Part III-D-4, *infra*.

Mechanical Department. BNSF/UP propose a total of 414 employees for this department (headed by the Vice President–Mechanical), or 56

more employees than the 358 proposed by AEPCO on Opening.¹⁸ On Rebuttal, AEPCO increases the Mechanical staffing by 18 employees, including a Manager of Locomotive Maintenance, a Manager of Car Maintenance, and 16 additional Equipment Inspectors.

BNSF/UP propose to add a second Director of Mechanical Services, so that one Director would handle primarily locomotive matters and one would handle primarily car matters. There is no need for a separate Director for each function, given the additional oversight provided by the Vice President–Mechanical. AEPCO has accepted BNSF/UP’s proposal to add a Manager of Locomotive Maintenance, and has also added a Manager of Car Maintenance. These officers provide the separate car and locomotive coverage advocated by BNSF/UP, without the need for an additional Director.

BNSF/UP also propose five Car Managers and 22 Car Foremen. Evidently the Car Managers (one of which would be stationed at each of the ANR’s inspection/fueling locations) would oversee the Car Foremen, who have been added to supervise each crew of Car Inspectors. BNSF/UP also posit that the Car Managers would “interact[] with other management personnel for planning purposes, strategic issues, and supporting the operating plan for service.”

BNSF/UP Reply at III.D-26. AEPCO Witness Reistrup is uncertain exactly what

¹⁸ Most of the Mechanical Department employees are Equipment Inspectors, who are located at each of the ANR’s yards where car inspections are performed. AEPCO notes that BNSF/UP removed the Manager of PTC Implementation-Mechanical from AEPCO’s Opening list of Mechanical Department employees, without explanation. AEPCO retains this position on Rebuttal.

the defendants mean by this corporate double-talk, or exactly what the Car Managers would do that cannot be done by the Director of Mechanical Services, the Manager of Car Maintenance, and the Managers of Yard Operations.

With respect to the proposed Car Foremen, one member of each four-person inspection crew serves as crew foreman, and there is absolutely no need to add a fifth person to each inspection crew whose sole function would be to serve as a foreman. To the extent the inspection crews need direct supervision, it is provided by the Managers of Yard Operations, which are 24/7 positions assigned to each of the ANR's five inspection/fueling yards. Car inspections and associated bad-order switching are the only functions performed at these yards other than locomotive fueling, so the Managers of Yard Operations will have time to devote the necessary attention to making sure the Car Inspectors carry out their daily assignments.

BNSF/UP "accept AEPCO's staffing of 352 car inspectors at the ANR Yards" but propose 20 additional "remote carmen" to staff 10 two-person inspection crews in an unspecified "ten districts" that would respond to cars bad-ordered on line. BNSF/UP Reply at III.D-27.¹⁹ AEPCO Witness Reistrup agrees that several two-person crews of remote or "roving" equipment inspectors should be added given the ANR's geographic scope, but does not agree that 10 such

¹⁹ AEPCO notes that BNSF/UP's total number of Equipment Inspectors, as shown in Table III.D.5 on pp. III.D-28-29 of the Reply and accompanying workpaper, is actually 21 more than the 352 Equipment Inspectors originally proposed by AEPCO.

inspection crews are needed and notes that BNSF/UP have not explained how or why they arrived at 10 crews. Mr. Reistrup adds eight such crews (or a total of 16 Car Inspector employees). This means that each crew covers an average of just over 275 route miles, which should be adequate as bad-order cars routinely remain on the set-out tracks near FED's for 24 hours or more on real-world Class I railroads and can also do so on the ANR without interfering with train operations.

Finally, BNSF/UP propose to add five "Parts Inventory" employees and two "Billing" employees to the mechanical Department, evidently to assist in distributing spare car parts and in billing car owners for repairs. However, the parts function is superintended by the Manager of Car Maintenance which AEPCO has added on Rebuttal, and the billing function is managed by the ANR's accounts receivable personnel in the Finance & Accounting Department. BNSF/UP have provided no explanation of why these unnecessary positions have been added, either in their Reply narrative or their workpapers.

ii. Compensation

Salaries and total compensation for the ANR's operating personnel (other than MOW employees), including fringe benefits, are shown in AEPCO Opening at III-D-24, Table III-D-3. The sources for the salaries are explained in the accompanying text. BNSF/UP dispute the salary levels developed by AEPCO in two respects. First, they disagree with use of the average compensation for T&E crew members that BNSF reported in its 2008 Wage Forms A and B, because of the ANR's higher level of crew utilization (number of annual crew starts). Second,

they assert that AEPCO understated the annual compensation for the Vice Presidents of Transportation, Engineering and Mechanical by limiting their compensation to salary only, excluding incentive compensation. BNSF/UP Reply at III.D-29-30. AEPCO disagrees with the salary changes proposed by BNSF/UP.

With respect to T&E compensation, the defendants claim that they performed a study of the BNSF and UP T&E payroll records and determined that only { } of BNSF and UP crew people achieved 270 shifts in a year (the number provided in AEPCO's operating plan), and that their average compensation is { } compared with the average compensation developed by AEPCO of \$93,442. *Id.*

Defendants' calculation of the average salary for T&E employees of \$96,617 must be rejected because the underlying analysis is flawed for numerous reasons. First, the defendants state that the analysis is based on T&E personnel working *270 shifts* per year. *Id.* (emphasis added). This is a gross mischaracterization of the analysis BNSF/UP rely on. Review of their underlying workpaper shows that their analysis of BNSF T&E employees {

²⁰ {

}

}

Second, had the BNSF analysis been limited to {

}

Third, BNSF/UP's analysis develops a simple average of the results of the individual carrier analyses, and in doing, so significantly overstates the result. The average wage for BNSF T&E employees {

}

²¹ It is clear from BNSF's payroll records that {
} The ANR is designed for crews to
work no more than one shift per day.

Finally, the parties in stand-alone cost proceedings have historically calculated the defendant's average wage for engineers and the average wage for conductors and then taken an average of these two results to yield the average wage for T&E personnel.²² The workpapers supporting BNSF/UP's calculations in this proceeding do not identify the positions for any of the T&E employees included in their special study. As a result, the average wage for engineers and the average wage for conductors cannot be developed from the information supporting the defendants' evidence.

For each of the above reasons, the defendants' T&E wage analysis must be rejected. AEPCO continues to use an average wage per T&E employee of \$93,442 in its Rebuttal calculations.

The defendants accept AEPCO's compensation levels for all other ANR Operating personnel, except for compensation for the Vice President-Transportation. As fully discussed under General and Administrative compensation, *infra*, the difference between the parties' compensation for the ANR's vice presidents is related to defendants' inappropriate inclusion of stock options, option awards and other forms of compensation which the Board has historically rejected. See *WFA/Basin I* at 49 and *Otter Tail* at C-12. On Rebuttal,

²² For example, on Opening the average wage for BNSF engineers and conductors is calculated to equal \$99,505 and \$87,380, respectively. The average of these two wages equals \$93,442, the T&E wage AEPCO used in its Opening Evidence.

AEPCO continues to calculate compensation for vice presidents in the manner previously accepted by the Board.

* * * *

With respect to the determination of crew overnight and taxi expense, BNSF/UP make no mention of their approach to determining this category of expense or the fact that the parties have a significant difference in the amounts included for these T&E personnel-related operating expenses. On Opening, AEPCO included \$232,242 for T&E personnel overnight and taxi expense. In contrast, defendants include \$17.2 million on Reply. There are three reasons for the almost \$17 million difference.

First, AEPCO's Opening workpaper had an error which resulted in the omission of the majority of the expense it had intended to include. The proper calculation should have been \$6.3 million.

Second, the defendants overstate overnight hotel expense by including an overnight stay for all straightaway crews regardless of the termination point of the crew, *i.e.*, an overnight stay is assigned both at their away terminal *and* at their home terminal. Thus the defendants double-count overnight hotel expenses.

Third, the defendants make the same double-count error when calculating taxi expense for straightaway crews they make in assigning hotel expense, *i.e.* they assign taxi expense for these crews when their termination point is their home terminal, in addition to their away terminal. Defendants then exacerbate their error by assigning two taxis to each crew in each direction. In

essence, each individual crew member is provided its own taxi from terminal to hotel or hotel to terminal rather than the two crew persons sharing a taxi.

Eliminating the overstatements in the defendants' hotel and taxi expense reduces this expense to \$7.3 million, or nearly the same as the amount AEPCO intended to include in its Opening Evidence. On Rebuttal, AEPCO continues to assign overnight and taxi expense to straightaway crews at their away from home terminal only, and to deadhead crews and crews that exceed their allowed hours of service and must be relieved by another crew. The revised amount for overnight hotel and taxi expense equals \$6.2 million. *See* Rebuttal e-workpaper "ANR Crews and Overnights_Rebuttal.xls."

iii. Materials, Supplies and Equipment

BNSF/UP accept the kinds of items of materials, supplies and equipment for operating personnel proposed by AEPCO, as well as the unit costs developed by AEPCO. BNSF/UP Reply at III.D-31.²³ BNSF/UP also posit greater numbers of these items due to their much larger proposed operating staff, and include costs for hi-rail trucks for the remote Carmen (Car Inspectors) described above. *Id.* AEPCO concurs that each of the eight remote or roving inspection crews it has added on Rebuttal should be equipped with a hi-rail truck equipped as described by the defendants. Costs for these trucks, and for materials/supplies used

²³ In several instances, however, the unit costs used by BNSF/UP are different than the unit costs used by AEPCO on Opening. As BNSF/UP provide no explanation for their different unit costs and expressly state that they accept AEPCO's unit costs, AEPCO continues to use the same materials and supplies unit costs it used on Opening.

by the other Operating employees added on Rebuttal, have been added. *See* Rebuttal e-workpaper “ANR Materials and Supplies_Rebuttal.xls.”

In addition to the above-described differences in Materials and Supplies – Operating expense, there is a substantial difference in the parties’ calculations of travel expense for operating personnel (in addition to the hotel and taxi cost differences previously discussed for T&E personnel). On Opening, AEPCO included \$48,000 for travel for non-train operating personnel. On Reply, BNSF/UP include \$1.2 million for this expense.

AEPCO’s travel expense was based on an \$8,000 annual travel expense budget for six selected non-train Operating personnel. The defendants include different amounts for annual travel expenses depending on the employee’s position and department, and apply these expenses to all non-train Operating personnel except for car inspectors and dispatchers (a total of 142 employees).

Review of the defendants’ underlying workpapers reveals an apparent error in the assignment of travel expense to individual employees. Reply e-workpaper “ANR Personnel.xlsx”, tab “Operations Management” has a column for designating which employees are assigned travel expenses. This workpaper shows that 94 non-train Operating personnel should incur travel expense, but the defendants’ calculation of travel costs for non-train Operating personnel in the same workpaper instead includes travel expense for 142 non-train Operating personnel. This inconsistency cannot be reconciled and the defendants’ calculation of travel expense must therefore be rejected.

On Rebuttal, AEPCO accepts Defendants' annual travel expense amount per position and department and applies these amounts to the same Operating personnel they were applied to on Opening, as expanded to include the additional Operating personnel added on Rebuttal. A total of \$84,273 has been included for travel expense for Operating managers on Rebuttal.

Differences in the parties' equipment, materials and supply costs for G&A employees, IT systems, and MOW employees are described in Parts III-D-3-c and III-D-4 below.

b. Non Operating

The ANR's only non-operating personnel are its G&A personnel. Differences in the parties' positions concerning the ANR's G&A staffing requirements are set forth in the next section. The ANR's MOW employees, while considered operating personnel, are discussed separately in Part III-D-4 below.

c. General and Administrative

On Opening, AEPCO included \$28 million for G&A costs, including costs related to personnel, materials and supplies, and the outsourcing of various activities. AEPCO's Opening Evidence organized the ANR's 69 G&A personnel into four separate departments responsible for the railroad's principal staff functions. *See* AEPCO Opening at III-D-28-42.²⁴ Those included an Executive Department, a Marketing and Customer Service Department, a Finance/Accounting

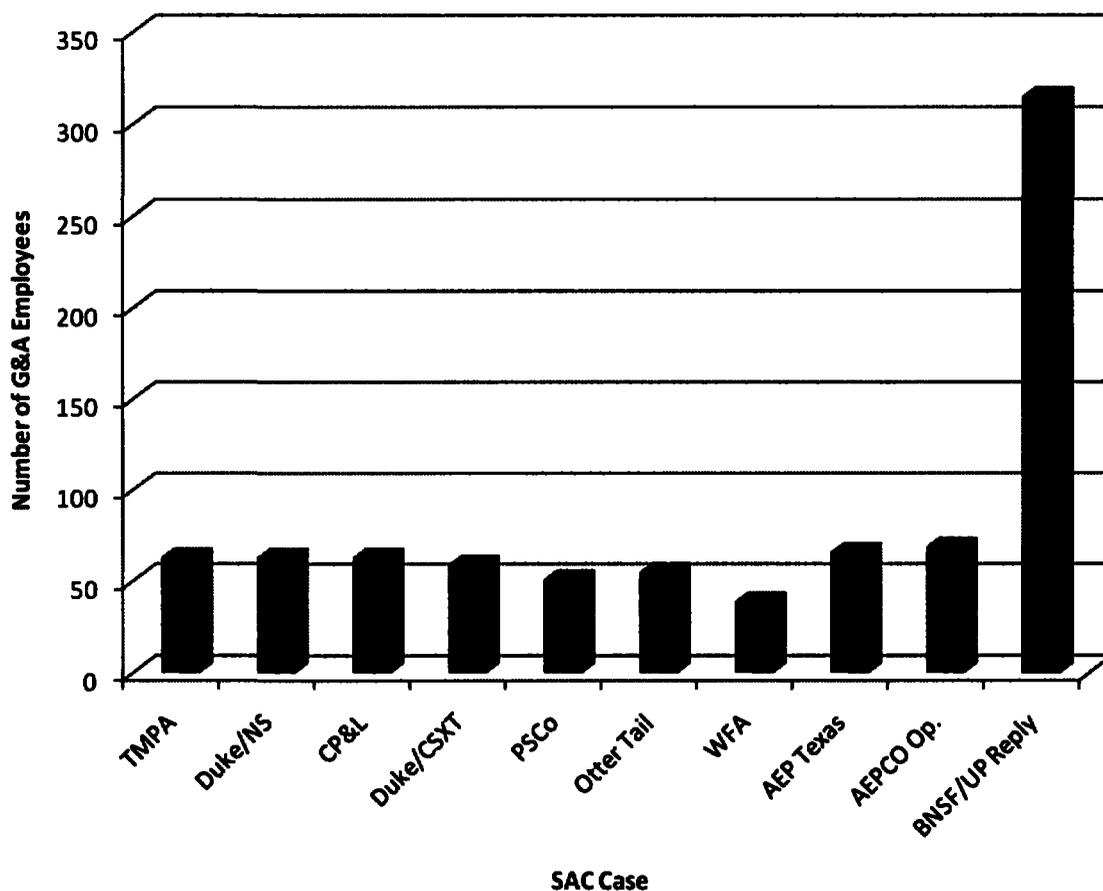
²⁴ AEPCO has determined that it will add a net of 23 additional employees to its G&A staffing on Rebuttal.

Department, and a Law & Administration Department (which also is responsible for the Human Resource and Information Technology functions).

Notably, the G&A staffing set forth in AEPCO's Opening Evidence actually exceeded the largest G&A staffing level ever accepted by the Board in a SAC coal transportation case (66 employees; *see AEP Texas* at 51-53). *See also TMPA*, 6 S.T.B. at 675 (accepting G&A staffing level of 63); *Duke/NS*, 7 S.T.B. at 156 (accepting G&A staffing level of 63); *CP&L*, 7 S.T.B. at 294 (accepting G&A staffing level of 63); *Duke/CSXT*, 7 S.T.B. at 460 (accepting G&A staffing level of 59); *PSCo/Excel Energy*, 7 S.T.B. at 648 (accepting G&A staffing level of 51); *Otter Tail* at C-8 (accepting G&A staffing level of 55); *WFA/Basin I* at 43 (accepting G&A staffing level of 39).

In their Reply Evidence, however, BNSF/UP propose to more than quadruple the G&A staffing level that AEPCO proposed on Opening to a staggering level of 315 personnel. The following Table III-D-3 demonstrates that BNSF/UP's proposed staffing level is thoroughly inconsistent with the results of prior maximum rate cases filed by coal shippers:

**REBUTTAL TABLE III-D-3
G&A STAFFING LEVELS**



A number of the rate case results depicted in the foregoing chart involved SARR systems that provided both coal and at least some non-coal service (*i.e.*, *Duke/NS*, *CP&L*, *Duke/CSXT*, *Otter Tail*, *AEP Texas*).

On the basis of their enormous staffing proposal,²⁵ BNSF/UP argue that 2009 G&A expenses for the ANR should be increased to a level (*i.e.*, { })

²⁵ To the best of AEPCO's knowledge, the defendants' proposed 315-person G&A staffing is the largest staffing level ever proposed by a carrier in a SAC case filed by a coal shipper, and reflects repeated instances in which BNSF/UP have argued for the inclusion of personnel that the Board has rejected in prior cases.

million) that is { } of AEPCO's estimate. Cf. BNSF/UP Reply at III.D-33 ("Defendants propose a total G&A expense for ANR of \$63 million"); BNSF/UP Reply e-workpaper "ANR Personnel.xlsx," Tab "G&A," cell C132 (calculating a Total G&A Expense of { } million). The \$34 million disparity between the parties' estimates amounts to about 9 percent of the total 2009 operating cost difference between the parties' Opening and Reply evidence.²⁶

With respect to G&A staffing levels, the difference in the parties' evidence is caused by BNSF/UP's inclusion of an excessive number of employees in each department, including an additional 100 employees in the Marketing and Customer Service Department (77 of which are added to the Customer Service function), an additional 90 employees in the Finance and Accounting Department, an additional 28 employees in the Law & Administration Department, and an additional 28 employees in a new and overstaffed IT department, for a total increase in staffing from 69 to 315 employees (a proposed increase of 246 employees or a 357% increase from AEPCO's proposed level).

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The overall annual G&A expense estimates provided by the parties, including G&A compensation, outsourcing, and materials and supplies, are as follows:

AEPCO Opening	\$28.3 million
BNSF/UP Reply (as stated)	\$62.2 million
BNSF/UP Reply (with additional benefits)	\$75.9 million
AEPCO Rebuttal	\$32.7 million

See AEPCO Rebuttal e-workpaper “ANR Operating Expense_Rebuttal.xls.”

AEPCO’s Rebuttal costs reflect the addition of 23 G&A positions on Rebuttal.

In each of its decisions in *Duke/NS*, *Duke/CSXT*, and *CP&L*, the Board accepted the complainant’s G&A expenses on the basis of its observation that the complainant’s G&A staffing levels “are based on the experience of former senior-level railroad employees, [and] are reasonable and supported” See *Duke/NS*, 7 S.T.B. at 156; *Duke/CSXT*, 7 S.T.B. at 459; *CP&L*, 7 S.T.B. at 264. Similarly, in its *PSCo/Xcel* decision, the Board characterized the complainant’s evidence on G&A staffing levels as “feasible,” as it was “supported by testimony from senior-level railroad employees.” *PSCo/Xcel*, 7 S.T.B. at 648.

AEPCO’s Opening and Rebuttal G&A evidence likewise is sponsored by witnesses who have considerable expertise in matters relating to both operating and G&A expenses, and collectively have spent many years working for Class I and other railroads in positions of significant responsibility. AEPCO’s principal

witness, Paul Reistrup, has 50 years of experience in railroad operations, engineering, and management, largely with CSXT and its predecessors as well as the Illinois Central. Mr. Reistrup also has served as President of both the Monongahela Railway and Amtrak.

AEPCO's other G&A witnesses include Joseph Kruzich, who has 38 years of experience in railroad accounting, executive administration, and information technology, including service as Vice President Telecommunications and Chief Information Officer of the Kansas City Southern Railway, and Philip Burris, a Senior Vice President of L.E. Peabody & Associates, Inc. with more than 30 years of consulting experience with regard to railroad economics. Mr. Burris, developed AEPCO's Opening and Rebuttal evidence regarding compensation levels for G&A personnel, material and supplies expenses, and non-Operating personnel training and recruiting costs.

Finally, AEPCO's Rebuttal G&A evidence is co-sponsored by Dr. Patricia Buhler, who is a Professor of Management at Goldey-Beacom College in Wilmington, Delaware, and has substantial expertise in the subjects of business administration and corporate organization. Dr. Buhler has over twenty years' experience in the analysis of business management structures, and has lectured extensively on topics ranging from Management Theory to Organizational Behavior, and from Strategic Human Resource Management to Creative Problem Solving in Business.

In light of this wealth of expertise, AEPCO's G&A evidence is well-supported. It is also consistent with recent Board decisions in SAC rate cases.

i. Staffing

BNSF/UP attempt to justify their proposal to more than quadruple the ANR's G&A staffing by "scaling" the staffing levels of one or both Defendant carriers. The fact, however, is that there is no existing railroad that is remotely comparable to the ANR. Unlike BNSF and UP, the ANR is a brand-new, start-up operation that does not have collective bargaining agreements, is not a product of mergers, and is able to take full advantage of current, state-of-the-art technology rather than gradually installing technology to replace human staff.²⁷ Accordingly, the ANR is not constrained by past inefficiencies, but begins with a clean slate that allows it to capitalize on current approaches to the strategic management of organizations and to leverage human capital with technological advances in order to create competitive advantages. Also unlike BNSF and UP, a majority of the ANR's traffic is overhead traffic which means the originating/terminating railroads perform a greater share of the marketing effort.

²⁷ Just since 1980, UP has acquired and merged with the Missouri Pacific, Western Pacific, Missouri-Kansas-Texas, Chicago and North Western, and Southern Pacific/Denver & Rio Grande Western railroads. Over the same time period BNSF's predecessors included Burlington Northern Inc. (itself a product of the merger of the Great Northern, Northern Pacific, Chicago, Burlington & Quincy, Colorado & Southern, Fort Worth & Denver, and Spokane, Portland & Seattle railroads in the late 1960's), the St. Louis-San Francisco Railroad, and the Atchison, Topeka & Santa Fe Railway.

AEPCO rejects the management reconfiguration and most of the additional staffing (and additional compensation) proposed by BNSF/UP for the ANR and continues to rely upon the G&A staffing that it submitted on Opening, with the exception of the following items:

Marketing & Customer Service:

- AEPCO has promoted the Director of Marketing and Customer Service to the position of Assistant Vice President of Marketing and Customer Service.
- AEPCO has added an administrative assistant to support the Assistant Vice President of Marketing and Customer Service.
- AEPCO has added a Director of Customer Service to supervise the ANR's fourteen Customer Service Managers.

Finance & Accounting:

- AEPCO has increased the number of Revenue Analysts/Clerks from two to four.
- AEPCO has added three Analyst/Clerks to the Accounts Payable and Payroll functions.
- AEPCO has added a Manager of Property Accounting.
- AEPCO has added two Tax Accountants, a Car Accounting Analyst, and two Financial Reporting Accountants.

Law & Administration:

- AEPCO has added five Security Agents and one Chief of Security.
- AEPCO has added an Employee Relations Liaison.

- IT changes – AEPCO has eliminated the Exchange 2007 Engineer but added four positions: a Database Manager, an Interface Support Manager, and two Help Desk positions.²⁸

Rebuttal Table III-D-4 below compares the parties' G&A staffing proposals for the ANR, and shows the increase in staffing accepted by AEPCO on Rebuttal.

REBUTTAL TABLE III-D-4 COMPARISON OF G&A STAFFING BY AEPCO AND BNSF/UP				
Position	AEPCO Opening	BNSF/UP Reply	AEPCO Rebuttal	Difference (BNSF/UP vs. AEPCO Reb.)
Executive				
President/CEO	1	1	1	0
Directors of Corporate Relations	2	2	2	0
Administrative Assistant	1	1	1	0
Executive Dept. Total	4	4	4	0
Marketing & Customer Service				
VP Sales and Customer Service	0	1	0	1
AVP of Mktg. & Customer Service	0	0	1	(1)
Administrative Assistant	0	1	1	0
Dir. of Mktg. and Customer Service	1	0	0	0
Mgrs. of Mktg. & Sales	4	0	4	(4)
Directors Intermodal Marketing	0	2	0	2
Managers Intermodal Marketing	0	11	0	11
Managers Coal Marketing	0	3	0	3
Director Marketing Administration	0	1	0	1
Marketing Administration Managers	0	8	0	8
Customer Communications	0	1	0	1
<i>Subtotal</i>	5	28	6	22
AVP Customer Service	0	1	0	1
Director of Customer Service	0	0	1	(1)
Customer Service Managers	14	0	14	(14)
Shift Directors	0	4	0	4
Intermodal Customer Support	0	10	0	10
Billing Services	0	14	0	14
Call Center	0	18	0	18
Operations Support	0	27	0	27

²⁸ AEPCO also has agreed to increase its outsourcing budget for human resources and outside legal counsel, and to upgrade the integrated accounting software that the ANR will utilize.

E Commerce	0	8	0	8
Fleet Management Staff	0	4	0	4
Customer Service Support Staff	0	5	0	5
<i>Subtotal</i>	<i>14</i>	<i>91</i>	<i>15</i>	<i>76</i>
Marketing Dept. Total	19	119	21	98
Finance & Accounting				
<i>1. Executive/Treasury Function</i>				
VP Finance & Accounting/CFO	1	1	1	0
Administrative Assistant	1	1	1	0
Treasurer	1	1	1	0
Assistant Treasurer	1	1	1	0
Cash Manager	1	1	1	0
<i>Exec./Treas. Subtotal</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>0</i>
<i>2. Controller Function</i>				
Controller	1	1	1	0
Asst. Controller – Revenue	1	1	1	0
Revenue Accounting Managers	0	5	0	5
Revenue Analysts/Clerks	2	0	4	(4)
Revenue Accounting Analysts	0	41	0	41
<i>Revenue Accounting Subtotal</i>	<i>3</i>	<i>47</i>	<i>5</i>	<i>42</i>
Asst. Controller – Disbursements	1	1	1	0
Analyst/Clerk	1	0	1	(1)
Manager – Contract Billing/Joint Facilities	0	1	0	1
Manager – Accounts Payable	0	1	0	1
Accounts Payable Clerk	0	7	1	6
Payroll Manager	0	1	0	1
Timekeeping/Payroll Clerks	0	10	2	8
<i>Disbursements Subtotal</i>	<i>2</i>	<i>21</i>	<i>5</i>	<i>16</i>
Asst. Controller – Taxes	1	1	1	0
Analyst/Clerk	1	0	1	(1)
Tax Accountants	0	11	2	9
Mgr. Property Accounting	0	1	1	0
Mgr. Car Accounting	0	1	0	1
Car Accounting Analysts	0	5	1	4
<i>Tax Function Subtotal</i>	<i>2</i>	<i>19</i>	<i>6</i>	<i>13</i>
Asst. Controller – Financial Reporting	1	1	1	0
Analyst/Clerk	1	0	1	(1)
Fin. Reporting Accountants	0	9	2	7
<i>Financial Reporting Subtotal</i>	<i>2</i>	<i>10</i>	<i>4</i>	<i>6</i>
<i>3. Budget/Purchasing Function</i>				
Dir. Budgets and Purchasing	1	0	1	(1)
Mgr. Budgets and Purchasing	2	0	2	(2)
Mgr. of Equipment Accounting	2	0	2	(2)

Director Purchasing	0	1	0	1
Buyers	0	6	0	6
<i>Budget/Purchasing Subtotal</i>	5	7	5	2
4. Internal Auditing Function				
Director of Internal Auditing	1	1	1	0
Finance & Accounting Dept. Total				
	21	111	32	79
Legal & Administration				
1. Legal Function				
Vice President Law	1	1	1	0
Administrative Assistant	0	1	0	1
General Attorneys	3	6	3	3
Counsel	0	0	0	0
Paralegals/Admin. Assistants	2	6	2	4
2. Claims Function				
Director – Claims	1	1	1	0
Manager – Claims	2	2	2	0
3. Environmental Function				
Environmental Managers	0	2	0	2
4. Security Function				
Chief of Security	0	1	1	0
Special Agents	0	7	5	2
5. Human Resources Function				
Director of Human Resources	1	1	1	0
Managers of Training	2	2	2	0
Compensation & Benefits Mgr.	0	2	0	2
Manager of Compliance	0	2	0	2
Staffing & Recruiting Mgrs.	0	2	0	2
Systems	0	1	0	1
Medical Doctor	0	1	0	1
Other (Employee Relations)	0	2	1	1
Legal & Administration Total				
	12	40	19	21
Information Technology²⁹				
VP of Information Technology	0	1	0	1
Director of Information Technology	1	0	1	(1)
Applications Director	0	1	0	1
Technology Support Director	0	1	0	1
Director Operations	0	1	0	1

²⁹ In its Opening Evidence, AEPCO included the IT function within the Law & Administration department. BNSF/UP create a separate IT department on Reply. There is no need for a separate IT department; AEPCO has set forth the IT figures separately in this table solely for ease of review.

Lead RMI Technician	1	0	1	(1)
Programmer/PC technicians	5	0	5	(5)
Help Desk PC Technician	1	0	3	(3)
Systems Analysts	0	3	0	3
Programmers/Development	2	4	2	2
Data Base Manager	0	2	1	1
Interface Support Manager	0	3	1	2
Support Technician	0	17	0	17
Computer Operations	0	6	0	6
Network Engineers	2	2	2	0
Exchange 2007 Engineer	1	0	0	0
IT Total	13	41	16	25
Total	69	315	92	223

**(a) BNSF/UP's Scaling Comparisons
Are Largely Irrelevant**

As briefly noted above, BNSF/UP's G&A Reply evidence relies heavily upon scaling in order to calculate staffing levels for the ANR. BNSF/UP's scaling calculations are not relevant, however, because the defendant carriers' operations are fundamentally different from the operations of the ANR. Notably, a substantial percentage of the ANR's traffic (approximately 67.3%) is overhead traffic. As compared with local traffic and with traffic that either originates or terminates on the lines of a carrier, overhead traffic is substantially less "G&A-intensive."

AEPCO's G&A experts have developed the G&A staffing of the ANR based on their analysis of the essential functions needed to operate this new railroad in a lean and streamlined manner. Class I railroads, on the other hand, tend to over-staff their marketing, sales, accounting, and overall management in a bureaucratic and overly stratified manner. Where budgets are developed for multi-

billion dollar railroads, the money is spent on staffing without the necessary attention to whether specific staffing is strictly required.

Moreover, many real-world railroads are organized in a suboptimal manner because they reflect long and complicated histories reflecting various mergers and acquisitions. Those histories can create layers of unnecessary management and redundant functions that are not strictly required for a least-cost, most-efficient railroad. The ANR will not be encumbered with any of that history and unnecessary complication.

BNSF/UP's evidence is based, in part, upon notions of levels of prestige, rather than any strict functional need. For example, BNSF/UP insist that the head of the Marketing department must be a Vice President because that is common in real-world railroads, because the chief commercial officer must be able to "interact as a peer" with the Vice President–Transportation, and because an "organizational relationship of equals in the commercial and operating functions is a key characteristic of all railroads with annual revenue in excess of \$100 million." BNSF/UP Reply at III.D-37. However, BNSF/UP never provide any explanation as to why a railroad cannot operate effectively unless the head of its Marketing department is viewed as a peer to the Vice President of Transportation.³⁰ AEPCO has developed its G&A staffing in order to ensure the least-cost, most-efficient

³⁰ In prior SAC cases, the Board has accepted SARR staffing where the marketing function is headed by a Director who reports to the Vice President-Transportation (the same staffing arrangement proposed by AEPCO), although the Director and his staff were included in the SARR's Operating personnel rather than its G&A personnel. See *WFA/Basin I* at 46.

operation of its SARR, not to match real-world tendencies of large railroads with huge percentages of local traffic and potential conflicts between department leaders.³¹

With the foregoing as background, AEPCO addresses below the differences between the parties' staffing for each department.

(b) **Executive Department/Board of Directors**

BNSF/UP have accepted AEPCO's proposed staffing for the Executive Department and Board of Directors for the ANR. *See* BNSF/UP Reply at III.D-36.

(c) **Marketing & Customer Service Department**

The single largest disparity between the parties' G&A staffing levels pertains to the ANR's Marketing & Customer Service Department.

On Opening, AEPCO proposed a staffing level for the ANR's Marketing and Customer Service Department that included sufficient in-house staffing to interact with an outside vendor (which performed the bulk of the ANR's marketing function) and to meet the balance of the railroad's marketing/customer service needs. *See* AEPCO Opening at III-D-31-34. Under that proposal, the ANR would incur an annual cost of \$260,000 for outsourcing, and would include an in-

³¹ BNSF/UP conclude their discussion of G&A staffing with a benchmarking comparison between the ANR and a variety of real-world railroads, including KCS, GTW, and SOO. *See* BNSF/UP Reply at III.D-73-77. This brief evidentiary afterthought, which Defendants place after their treatment of bad debt, is inapposite. BNSF/UP's benchmarking comparisons do not begin to consider the actual nature of the ANR or the many differences in the traffic base between the ANR and the various railroads that BNSF/UP identify in their benchmarking comparisons.

house department staffed by a Director and four Managers (with two of those Managers responsible for coal movements, one responsible for intermodal movements, and one responsible for general freight movements), plus 14 customer service managers to staff three positions around the clock seven days a week with one additional position on duty during normal business hours on weekdays. *Id.* at III-D-34; AEPCO Opening e-workpaper “ANR GA Outsourcing.xls.”

On Reply, BNSF/UP reject AEPCO’s outsourcing proposal and propose substantial increases in the staffing of the ANR’s Marketing and Customer Service Department. *See* BNSF/UP Reply at III.D-36-43. AEPCO addresses each of BNSF/UP’s proposals and/or criticisms in turn.

Outsourcing. BNSF/UP begin their criticism of AEPCO’s Marketing and Customer Service staffing levels with the argument that outsourcing is improper. *Id.* at III.D-36-37. There is no fundamental reason, however, why a railroad the size and nature of the ANR could not outsource a portion of its marketing function. BNSF/UP argue that outsourcing is improper because no real-world carrier with revenues of \$100 million or greater outsources marketing. But that observation does not mean that a least-cost, most-efficient railroad such as the ANR could not engage in outsourcing where it would be cost effective. AEPCO is not aware of any real-world carrier with revenues in excess of \$100 million that – like the ANR – moves nearly 70% percent of its traffic as an overhead carrier. This high share of overhead traffic greatly reduces the burden on the ANR’s Marketing & Customer Service department relative to that borne by real-world railroads.

In addition, even if a given outsource provider (such as Highroad Consulting) may not currently be capable of handling a project of the size of the ANR marketing function, that does not mean that such an entity would not be prepared to increase its staffing as necessary in order to handle a lucrative business opportunity with a long-term commitment from the client (*i.e.*, the ANR).

Moreover, in accordance with the Board's *PSCo/Xcel* precedent, AEPCO does not propose to outsource anything close to the entire marketing function, but instead, has proposed an in-house staff that will work in conjunction with the outside vendor. The Board has accepted partial outsourcing of the marketing function where the alternative proposed by a carrier would "gold-plate" the SARR's marketing system. *Id.* (citing *AEP Texas*). BNSF/UP's proposed 119-member marketing and customer service department is over six times the size of the 18-member "gold-plated" marketing and customer service department that BNSF had proposed in the *AEP Texas* case. *Id.* at 54 ("Because BNSF's proposal here would 'gold-plate' the marketing department of the much smaller TNR, we use *AEP Texas*' proposal [for outsourcing] – which recognizes that some in-house marketing positions would be needed – as the best evidence of record.").

Department Head. BNSF/UP next argue that it is essential for the ANR's Marketing & Customer Service Department to be headed by a Vice President. BNSF/UP Reply at III.D-37-38. There is no reason why the marketing function for a railroad with such a unique traffic group (most of the ANR's traffic is overhead and other cross-over traffic, such that the connecting railroads have a

more substantial role in connection with its marketing) must be headed by a separate vice president. BNSF/UP's proposal for an additional vice president to oversee Marketing and Customer Service reflects the larger bureaucratic structure of a railroad that has a significantly larger and more diverse customer base than that of the ANR.

Nevertheless, in order to remove any doubt about the adequacy of the ANR's staffing, on Rebuttal AEPCO promotes the ANR's Director of Marketing & Customer Service to the level of an Assistant Vice President of Marketing & Customer Service, who reports to the Vice President of Transportation. The AVP of Marketing & Customer Service will be more than sufficient to oversee the outsourced marketing function with the in-house marketing support, as well as to oversee the customer service function.³² BNSF/UP's proposed staffing of the Marketing & Customer Service Department is much larger than necessary (*i.e.*, 119 individuals). In the absence of that bloated staffing, there is no need for a separate vice president for this department.

In light of AEPCO's decision to upgrade the Director position to an Assistant Vice President position, however, AEPCO accepts BNSF/UP's related proposal to add an administrative assistant to support the head of the Marketing & Customer Service Department.

³² AEPCO also is expanding the staffing of the ANR's customer service function by adding a Director of Customer Service to supervise the ANR's fourteen Customer Service Managers.

Marketing Managers/Directors. BNSF/UP's effort to expand the ANR's marketing staff is unjustified and improper. BNSF/UP make only the briefest statement regarding the supposed need for enlarging the staff of marketing managers. Specifically, BNSF/UP limit their argument to the vague "corporate-speak" comment that the ANR will require a staff of marketing managers "to handle strategic and tactical relations with customers" but provided no real description of what that staff's responsibilities would include. BNSF/UP Reply at III.D-38. From that slender premise, BNSF/UP calculate ANR staffing levels using scaling based on revenue collected by the defendants in their coal and intermodal business units. *Id.* Stated differently, the entire BNSF/UP argument regarding market managers is that: (i) marketing managers are involved in marketing (*i.e.*, "strategic and tactical relations"); and (ii) we [the defendants] have more of those individuals than ANR (as configured by AEPCO) per dollar of revenue. On the basis of these simple observations, BNSF/UP propose to staff the ANR with three coal marketing managers, eleven intermodal marketing managers, and two intermodal marketing directors. *Id.* at III.D-38-39.

As an initial matter, BNSF/UP's coal marketing manager staffing is not appreciably greater than AEPCO's. To the contrary, AEPCO provides for outsourcing of the marketing function plus a director and four marketing managers (two of which are principally dedicated to coal transportation marketing). *See* AEPCO Opening at III-D-31-33. BNSF/UP, on the other hand, reject outsourcing and instead provide for three managers of coal marketing for the ANR. Rather than

constituting a basis for rejecting the AEPCO staffing level, if anything, the BNSF/UP reply staffing proposal confirms that AEPCO's proposed staffing of the coal marketing function is reasonable. In performing their scaling analysis, BNSF/UP do not address (much less account for) any of the differences between their traffic mixes and the traffic group for the ANR, and as such, BNSF/UP have failed to provide any basis for rejecting AEPCO's decision to rely upon outside contractors and two internal coal marketing managers to meet the ANR's coal marketing needs.

Conversely, BNSF/UP's proposed staffing of the intermodal marketing function is improper and unsubstantiated. BNSF/UP calculate a staffing level for intermodal managers based on the ratio of {

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to yield a staffing level of 11 Intermodal Marketing Managers. BNSF/UP's simplistic calculation is entirely inappropriate.

BNSF/UP's approach takes absolutely no account of the difference in the nature of the intermodal traffic handled by UP in the real world and the intermodal traffic handled by the ANR. The ANR's intermodal and general freight traffic is almost entirely overhead traffic (98.2%). BNSF/UP's approach, however, assumes that the marketing effort is only a function of revenue levels.

BNSF/UP have not identified any specific tasks that the eleven intermodal marketing managers and two intermodal marketing directors would perform in the context of ANR's unusual traffic base. With the exception of overhead traffic, the ANR would only participate in the movement of approximately two intermodal trains per day during its peak year. For the overwhelming majority of the ANR intermodal traffic (and all of the ANR general freight traffic), ANR staff would have little if any marketing contact with the customers. Instead, the ANR would serve as the overhead carrier necessary to permit BNSF and UP to complete movements of the traffic that they originate and deliver. Given this traffic base, BNSF/UP reliance on a revenue scaling calculation to determine the number of intermodal marketing managers needed by the ANR is improper.

Marketing Administration Managers. BNSF/UP also overstaff a G&A function that they refer to as "marketing administration." BNSF/UP Reply at III.D-39. BNSF/UP assign nine individuals to this function, and claim that these individuals would be needed to "administer contracts and tariffs, activate prices in internal systems, interface with RAILINC, administer refunds and suspended bills, and maintain reference files." *Id.*³³ In its Opening Evidence, AEPCO proposed

³³ In their narrative, BNSF/UP state that they are adding "nine Marketing Administration Managers." *See* BNSF/UP Reply at III.D-40. In their electronic workpapers, however, BNSF/UP actually have included a Director of Marketing Administration and eight Marketing Administration Managers. *See* BNSF/UP Reply e-workpaper "ANR Personnel.xlsx," Tab "G&A," cells C12 and C13. This provides an additional example of the inconsistency between BNSF/UP's narrative

that an outside vendor perform functions of this nature (and AEPCO included \$260,000 in annual costs for such a vendor), working in conjunction with the ANR's internal marketing staff. AEPCO Opening at III-D-32 and Opening e-workpaper "ANR GA Outsourcing.xls."

BNSF/UP raise four arguments in support of their marketing administration staffing. None of these arguments justifies BNSF/UP's proposal.

First, BNSF/UP explain that AEPCO's proposal to outsource contract administration is improper because marketing personnel have access to commercially sensitive materials and need to provide rates to customers in a timely manner. BNSF/UP Reply at III.D-39 ("Marketing Administration Managers will have access to highly commercial data and will need to work closely with BNSF and UP marketing managers to ensure that rates are available to customers in a timely manner."). AEPCO's G&A experts have reviewed this argument and find that it has no support in the current business environment. It is commonplace for companies to outsource confidential information, and adequate security measures can be implemented to ensure that an outside vendor treats sensitive commercial information with appropriate care.³⁴ Moreover, given the nature of electronic

and their workpapers. In addition, with regard to the substance of BNSF/UP's staffing, the inclusion of a Director-level position reflects a pattern in the BNSF/UP evidence of creating unnecessary bureaucratic hierarchy for every function identified.

³⁴ See, e.g., <http://hbr.org/2005/03/outsourcing-marketing/ar/1> ("Companies have long outsourced creative, right-brain marketing activities, such as advertising and promotion campaigns. But a fundamental change is under way: Increasingly,

communications, the use of an outside vendor to support the marketing function will not constitute any impediment to the ANR's ability to provide rates to customers in a timely manner. While railroads face some formal time constraints in their obligations to provide common carrier rates in response to customers' requests, those time constraints are on the order of weeks, not hours or minutes. Likewise, with respect to contract rate offers and/or intermodal rate quotes, BNSF/UP have not demonstrated that the use of an outside marketing vendor would in any way delay the rate quotation process in a manner that would be detrimental to the ANR's interests.

Second, BNSF/UP add that an in-house marketing administration staff which is "co-located with other commercial employees" will have "better access to essential commercial information." BNSF/UP Reply at III.D-39. Again, the existence of modern electronic communications minimizes the significance of any need to "co-locate" personnel in the same physical location. BNSF/UP's argument reflects an outdated view of corporate communications.

Third, BNSF/UP complain that AEPCO has not identified any rail carrier or other transportation company with revenues in excess of \$100 million that outsources "this critical function." *Id.* As AEPCO explained above, the ANR is

firms are farming out marketing operations and analytics as well"); *id.* ("Ericsson has outsourced the management of its extranet, which provides the sales force with up-to-date customer information and allows direct communication with selected customers. . . . American Express now outsources its data mining to specialist third-party firms that can process millions of transactions a day to reveal purchasing patterns and other aspects of consumer behavior.").

very different from any real-world rail carrier with revenues in excess of \$100 million. A substantial share of the ANR's revenue is associated with overhead traffic, which imposes far less onerous burdens on the ANR's marketing function than local or even interline forwarded or received traffic. Consequently, arguments regarding the absence of real-world examples of large carriers engaged in the outsourcing of marketing are inapposite.

Fourth, BNSF/UP argue that since the ANR participates in the movement of a significant volume of interline traffic, it is important that "all rates be maintained in an electronic format that can be used in the settlement process." *Id.* at III.D-39-40. BNSF/UP do not provide any explanation whatsoever of their implicit premise that a large internal staff is capable of maintaining rates in an electronic format but an outside vendor – working with an appropriately sized in-house marketing department – cannot maintain rates in an electronic format. BNSF/UP do not even purport to offer an explanation as to why the need to maintain rates in an electronic format would support their staffing proposal, as opposed to AEPCO's staffing proposal. No such explanation could be given in light of the fact that virtually all business information currently is maintained in electronic form.

BNSF/UP's proposal regarding marketing administration suffers from an additional defect. In particular, BNSF/UP explain that they have performed a scaling analysis based upon railcar volume in order to calculate the required number of marketing administration managers. BNSF/UP Reply at III.D-40

(“Analysis based on railcar volume results in a staff of nine Marketing Administration Managers”). In their workpapers, however, BNSF/UP provide a description stating that {

}
See BNSF/UP Reply e-workpaper “Staffing Levels.xlsx,” tab “Marketing,” line 23, column T.

BNSF/UP’s Reply Evidence therefore includes two different, conflicting versions of the proper manner for calculating at least a portion of the ANR’s number of Marketing Administration Managers (*i.e.*, the narrative description and the workpaper description). Moreover, BNSF/UP do not provide any explanation as to why {

} Again, the description of this actual calculation procedure is inconsistent with BNSF/UP’s narrative. BNSF/UP Reply at III.D-40.

For all of the foregoing reasons, the Board should reject BNSF/UP’s proposal to add Marketing Administration Managers and a Director of Marketing Administration to the ANR.

Customer Communications Manager. BNSF/UP next argue that the ANR staff must include one customer communications employee. BNSF/UP Reply at III.D-40. BNSF/UP's justification for this staffing is that the ANR's intermodal customers require "up-to-date information." BNSF/UP add, however, that they (*i.e.*, the defendants themselves) already have developed "very sophisticated methods of direct pro-active customer communication, including email and internet-based applications, systems that can communicate new or changed service offerings, service problems and embargoes, and other important information these and other customers require." *Id.*

Since the ANR operates almost exclusively as an overhead carrier for intermodal service, the fact that BNSF and UP already have developed such "sophisticated methods" of pro-active communication eliminates any need for the ANR take on additional staffing to perform the same work. The lack of any such need is particularly evident since BNSF/UP regard the Customer Communications staff as part of the marketing function. Since BNSF and UP will be the entities engaged in direct marketing with their intermodal service customers, and since the ANR would only serve as a bridge carrier for the vast majority of that traffic, there is no need for the ANR to take on additional staffing in this regard.

BNSF/UP's description of their scaling calculation for this function is also suspect. BNSF/UP claim that they have "adjusted the staffing requirements for this function by railcar volume," and state vaguely that they have "reduced the figures further to reflect a lesser degree of sophistication." *Id.* at III.D-40. In their

spreadsheets, however, BNSF/UP perform two separate scaling calculations; one based on carloads and one based on revenue. *See* BNSF/UP Reply e-workpaper “Staffing Levels.xlsx,” tab “Marketing,” line 36, columns H and P. BNSF/UP’s carload calculation yields {

} *Id.* BNSF/UP’s spreadsheet

next states that {

} *Id.* at line 36, Column T. Accordingly,

BNSF/UP’s narrative description of their scaling calculation does not match the actual calculation set forth in their workpapers.

In any event, for the reasons provided above, there is no need for a customer communication staff member within the ANR marketing staff.

Customer Service Managers. In the single most excessive aspect of their G&A reply evidence, BNSF/UP propose to replace the 14 customer service managers that AEPCO proposed for the ANR with an enormous staff of 91 customer service personnel, an increase of 77 individuals for this single function. BNSF/UP Reply at III.D-41-43.

BNSF/UP’s proposal is flawed for many reasons. Among the most egregious flaws is the fact that BNSF/UP developed this staffing in a logically backwards manner. Rather than first identifying specific customer service tasks that must be performed by the ANR and then determining the number of employees necessary to perform those tasks, BNSF/UP instead began their analysis by loosely calculating the “required” number of employees for the entire customer service

department based on a “modified” scaling analysis of their own staffing levels, and then attempted to find jobs for those individuals to perform. In effect, BNSF/UP’s staffing of the customer service function resembles a bloated public works project, where the primary goal is to maximize hiring and then only secondarily to identify some substantive role for those individuals to play. While it might be a helpful luxury for a rail carrier to have virtually unlimited customer service staffing, there is no genuine need for the “gold plated” customer service staffing levels that BNSF/UP propose for a least-cost, most efficient SARR.

BNSF/UP base their customer service staffing proposal on a vague and arbitrary maze of scaling calculations and margin notes in electronic spreadsheets that affords no legitimate consideration to the fundamental nature of the ANR as an overhead carrier for the vast majority of its traffic. Essentially, BNSF/UP have adopted a scaling metric that initially produced astronomically high staffing levels for the ANR, but then BNSF/UP – apparently cognizant of the vastly overstated nature of their results – adopted a series of minimally explained (or unexplained) “conservative” adjustments to cut the staffing proposal down to a level that BNSF/UP presumably think the Board would not reject out of hand. Notably, however, the Board will search BNSF/UP’s electronic spreadsheet in vain for the actual figures that appear in BNSF/UP’s Reply narrative.³⁵

³⁵ Careful scrutiny of BNSF/UP’s proposal demonstrates the glaring inadequacy of BNSF/UP’s evidence. Specifically, the numbers set forth in BNSF/UP’s narrative description of customer service are inconsistent with the staffing levels set forth in BNSF/UP’s electronic workpapers regarding the

The following is a summary of BNSF/UP's narrative explanation of their customer service staffing calculations. As a detailed review of BNSF/UP's actual approach demonstrates, BNSF/UP's determination of the customer service staffing level is entirely arbitrary, and BNSF/UP's effort to cloak this proposal in some semblance of formal analysis is unconvincing.

First, BNSF/UP observe that "BNSF and UP have over 350 workers assigned to these [customer service] functions." BNSF/UP Reply at III.D-41.

Second, BNSF/UP state that they analyze {
}. *Id.*

Third, BNSF/UP next state vaguely that in calculating the ANR customer service staffing level, they have "adjusted for several factors." No explanation of those adjustments is provided. *Id.*

Fourth, BNSF/UP state that they believe that the use of railcar volume as a metric is most appropriate because the work performed by the customer service group is "driven by this volume." *Id.* Railcar volume, of course, does not distinguish between local and overhead traffic, between unit-train or multiple-car billing and single-car billing, or between different lengths of haul.

Fifth, BNSF/UP state that their preferred railcar volume metric would yield a "high staffing level, because ANR will handle more intermodal units than either BNSF or UP." *Id.*

customer service function. *See* BNSF/UP Reply e-workpaper "Staffing Levels.xlsx," tab "Customer Service UP." The Board should reject BNSF/UP's approach to customer service staffing for this reason as well.

Sixth, BNSF/UP state that they have “conservatively modified the analysis” to reflect the fact that cars are on the ANR for “less time and fewer miles than is generally { }.” *Id.* AEPCO respectfully submits that, even if one were to accept the dubious concept of scaling, a more appropriate scaling approach would have been to use a metric that properly reflected the nature of the ANR as an overhead carrier, rather than starting with an improper metric and then “modifying” that analysis after it produced absurd results.

Seventh, BNSF/UP state that prior to performing their analysis, they “removed from { } those positions that are not primarily involved with coal and intermodal customer service” because BNSF/UP assume that any customer service needs of agricultural or industrial customers can be “accommodated by the customer service staff dedicated to the coal and intermodal sectors.” *Id.*

Eighth, BNSF/UP state that on the basis of their scaling analysis, the ANR will require a total customer service staff of 91. *Id.* at III.D-41-42. As noted above, however, BNSF/UP’s scaling calculations do not actually match the figures set forth in their narrative. At the risk of further complicating the description of the flaws in BNSF/UP’s approach, the contorted and arbitrary calculation sequence set forth in BNSF/UP’s spreadsheet (*i.e.*, BNSF/UP Reply e-workpaper “Staffing Levels.xlsx,” tab “Marketing”) includes the following steps:

- (i) { }

- (a) an Assistant Vice President for Customer Service;
- (b) { } Intermodal Customer Support Sub-Group Managers;
- (c) { } Billing Services Sub-Group Managers;
- (d) { } Call Center Sub-Group Managers;
- (e) { } Operations Support Sub-Group Managers;
- (f) four Shift Directors (one for each of the proposed Customer Service Sub-Groups);
- (g) eight E-Commerce Managers;
- (h) four Railcar Management Support Managers/Fleet Management Staff; and
- (i) five Managers for the Administrative Support Team.

Id.

Each of BNSF/UP's four principal customer service sub-groups receives one single sentence of explanation in the Reply narrative regarding its purpose. These after-the-fact efforts to justify the defendants' scaling calculation are inadequate to support the proposed staffing levels. For example, BNSF/UP explain their "intermodal" sub-group with the simple declaration that "[t]he intermodal sub-group handles issues that involve the very important intermodal customer base." BNSF/UP Reply at III.D-42. Stated differently, BNSF/UP's sole justification for the need for this sub-group { } (plus an additional shift Director) is that the intermodal group "handles issues" for intermodal customers.

While AEPCO recognizes that the ANR has a need to engage in some customer service activities, AEPCO provided a staff of 14 for this purpose (and as noted above, AEPCO has added a Director of Customer Service on rebuttal to supervise those 14 Managers). BNSF/UP's statement that an intermodal sub-group is needed to "handle issues" does not constitute a legitimate demonstration that AEPCO's proposed staffing is insufficient. Again, the ANR is a carrier that is largely restricted to moving intermodal traffic on an overhead basis. Overhead traffic does not place as high a burden on customer service staff as local traffic.

Each of the various other functions that BNSF/UP assign to their army of customer service employees can be handled – to the extent necessary by the overhead-intensive ANR – by the ANR staffing levels that AEPCO proposed on Opening. In some instances, those functions will be handled by the ANR's customer service personnel, but in other instances, BNSF/UP have proposed that customer service personnel will perform functions that already are being handled by other ANR departments (*e.g.*, billings, operations support, e-commerce, *etc.*). This proposed duplication of effort by different ANR departments is entirely unnecessary. The days of allowing each functional department within an organization to house its own support services (thereby duplicating the railroad's efforts across departments) are long gone.

Finally, BNSF/UP state in their electronic workpapers that {

} BNSF/UP

nevertheless included { } Billing Services Managers within their version of the ANR's Marketing & Customer Service Department. See BNSF/UP Reply at III.D-42 and BNSF/UP Reply e-workpaper "ANR Personnel.xlsx," tab "G&A," line 20, Column C.

(d) Finance and Accounting Department

In its Opening Evidence, AEPCO proposed a Finance and Accounting Department consisting of 21 employees headed by the Vice President of Finance & Accounting (supported by an Administrative Assistant). AEPCO Opening at III.D-34-38. The department includes a Treasurer, an Assistant Treasurer, a Cash Manager, a Controller (supported by four Assistant Controllers and five Analyst/Clerks), a Director of Budgets and Purchasing (supported by two Managers of Budgets/Purchasing and two Managers of Equipment Accounting), and a Director of Internal Auditing. *Id.* AEPCO also proposed that the ANR would rely upon the Peachtree MAS 200 package for its general accounting system (*id.* at III.D-49) and would expend \$200,000 on outsourcing for federal, state, and local tax return preparation and \$100,000 on outsourcing for property tax preparation. See AEPCO Opening e-workpaper "ANR GA Outsourcing.xls."

On Reply, BNSF/UP create an enormous Finance and Accounting Department consisting of 111 individuals. BNSF/UP Reply at III.D-43-55. BNSF/UP's proposed Finance and Accounting Department is disproportionate to

the tasks required, and like BNSF/UP's proposed Marketing & Customer Service Department, is itself larger than the entire G&A staff accepted by the Board in any prior coal rate case before the agency. *Cf. Duke/NS*, 7 S.T.B. at 156 (63 total G&A with 24 in Finance & Accounting); *Duke/CSXT*, 7 S.T.B. at 460 (59 total G&A with 21 in Finance & Accounting); *CP&L*, 7 S.T.B. at 294 (63 total G&A with 24 in Finance & Accounting); *PSCo/Xcel*, 7 S.T.B. at 648 (51 total G&A with 16 in Finance & Accounting); *AEP Texas* at 52-53 (66 total G&A with 21 in Finance & Accounting – not including IT); *Otter Tail* at C-8 (55 total G&A with 25 in Finance & Accounting); *TMPA*, 6 S.T.B. at 675 (63 total G&A with 23 in Finance & Accounting); *WFA/Basin I* at 43 (39 total G&A with 15 in Finance & Accounting).

BNSF/UP also propose on Reply that the ANR upgrade its general accounting software package from the Peachtree product to an Oracle integrated accounting software package. *See* BNSF/UP Reply at III.D-69 and BNSF/UP Reply e-workpaper “ANR IT.xls,” Tab “Oracle.” BNSF/UP note that their integrated software package “would include functionality for Accounts Payables, Accounts Receivables, General Ledger, Purchasing & Materials, Treasury, Fixed Assets, Project Management, Tax, Financial Reporting, and HR functions” *Id.* at III.D-69.³⁷

³⁷ AEPCO notes that in this Rebuttal, it has accepted BNSF/UP's proposal to utilize the Oracle integrated software package. *See* AEPCO's discussion of IT, *infra*. AEPCO agrees that the Oracle package offers greater functionality than the Peachtree system. It is, of course, a far more expensive system than Peachtree, and AEPCO is including substantially increased software costs in this Rebuttal evidence in order to obtain the benefits of that improved functionality. Significantly, the

In past cases, the Board has rejected carrier efforts to introduce huge numbers of employees into SARR Finance & Accounting Departments, but BNSF/UP have ignored that precedent in gold-plating their version of the ANR. *See, e.g., AEP Texas* at 55-57 (rejecting additional employees for the financial reporting function, the revenue analysis/budgeting function, and the real estate function); *TMPA*, 6 S.T.B. at 681-83 (rejecting effort to add 37 members to the finance/accounting staff); *WFA/Basin I* at 44-45 (rejecting effort to add employees for the financial reporting function, the budgeting and purchasing function, the real estate function, and 10 miscellaneous clerks, analysts, managers, and directors); and *Otter Tail* at C-9 (rejecting effort to add revenue accounting and financial reporting employees, and revenue analysts to handle “such matters as overcharging, undercharging, miscoded bills, etc.”). BNSF/UP’s evidence should be rejected on these grounds as well.

Much of the difference between the parties’ staffing estimates relates to the Controller function. BNSF/UP agree with AEPCO’s proposal to employ a Controller and four Assistant Controllers, but BNSF/UP characterize AEPCO’s reliance on a group of five supporting Analysts/Clerks for the Assistant Controllers as “plainly insufficient.” BNSF/UP Reply at III.D-45. BNSF/UP claim that AEPCO’s staffing proposal for the Controller’s office is improper because AEPCO does not provide any benchmarks or comparable railroad data to support this

greater functionality of the integrated Oracle system permits the ANR to perform its required functions without the vast majority of the additional staffing that BNSF/UP have proposed on reply.

staffing, and BNSF/UP contend that AEPCO's staff "would be unable to comply with basic SEC regulations, including the Securities Act filing and registration requirements and SOX procedures." *Id.* BNSF/UP concede that the ANR would not be a publicly traded company, but argue that the SEC/SOX regulations would apply to the ANR if it chose to issue public debt. *Id.* at III.D-45-46.

As with the scaling calculations BNSF/UP used to determine the staffing level for the Marketing & Customer Service Department, BNSF/UP's scaling calculations for the Finance & Accounting Department improperly reverse the logical sequence of proper SARR staffing (*i.e.*, BNSF/UP first develop aggregate staffing numbers and then try to identify tasks for those individuals to perform), are poorly documented, and fail to acknowledge the true nature of the ANR.

BNSF/UP address the four areas of responsibility for the four Assistant Controllers separately. AEPCO will respond to each BNSF/UP argument in turn.

Revenue Accounting. BNSF/UP propose that the Assistant Controller – Revenue will be supported by five revenue accounting managers and 41 revenue accounting analysts (*i.e.*, a total of 46 employees working under the Assistant Controller – Revenue). BNSF/UP claim that this staffing is necessary "to ensure the accurate and timely reporting of all operating revenue; to resolve issues and exceptions regarding interline settlements, waybills, and supplemental bills; to interact with auditors assessing SOX-mandated internal controls; and to monitor

and estimate all revenue-related and receivable reserves pursuant to Financial Accounting Standards guidelines.” BNSF/UP Reply at III.D-46. BNSF/UP claim that they have developed this staffing proposal based on “a variety of metrics, including railcar volume, revenue, assets, miles of track, and number of employees” and BNSF/UP add that “[e]xperts in the functional area confirmed that each of the metrics Defendants used was appropriate to the analysis.” *Id.* at III-D-46-47.³⁸

Notably, BNSF/UP offer two separate calculations of the staffing of the revenue accounting function which are completely independent of each other, rely upon different scaling parameters, and produce different results. First, BNSF/UP perform a carload-based scaling calculation reflecting the fact that the ANR has fewer overall carloadings than {

} to determine that the

Assistant Controller – Revenue should be assisted by 46 employees.

³⁸ BNSF/UP’s claim that “experts” have confirmed the appropriateness of these metrics is obviously mistaken because only a single expert witness sponsors BNSF/UP’s G&A evidence. *Id.* at III.D-35 (“Defendants’ analysis of G&A expense requirements was developed by Richard W. Brown.”). To the extent that the defendants’ claim refers to their own internal personnel, defendants cannot hold such personnel out as “experts” validating the defendants’ own legal position. *See also id.* at III.D-34 (“At the staff level, Defendants have identified metrics that, in the judgment of their experts, would drive the need for staff positions.”) (emphasis added); *accord id.* at III.D-48 (“Defendants’ expert team has reviewed comparable work volumes for these functions”) (emphasis added).

Next, however, BNSF/UP abruptly switch gears and argue that the staffing of the ANR's revenue accounting function is primarily driven by ANR's choice to be an interline carrier, and BNSF/UP perform a separate scaling evaluation based on UP's Interline Settlement System ("ISS") dispute staff. BNSF/UP claim that the ANR has 359% more carloads in the ISS than UP, and argue that the ANR therefore should have 359% more employees than UP does (BNSF/UP report that UP employs eight individuals for this function). From this premise, BNSF/UP calculate an ANR staffing level of { } employees in their electronic workpapers. However, in their Reply narrative, BNSF/UP incorrectly report that their scaling calculation yields a required staffing level of 37 employees to handle the ANR's ISS-related workload (*i.e.*, nearly five times as high as the UP staff of eight assigned to this function). To repeat, BNSF/UP's workpaper calculations once again do not match the figures that BNSF/UP have included in their narrative.

Moreover, BNSF/UP do not offer any explanation of this disconnect between their calculation of 46 revenue accounting employees (using overall carload scaling) and their calculation of the { }/37 revenue accounting employees (using ISS-based carload scaling). In any event, BNSF/UP's proposed staffing of the revenue accounting function is demonstrably excessive. The ANR's traffic group is comprised in large part of overhead intermodal and other non-coal traffic, and unit train coal traffic. Neither of these traffic types requires extensive work from a revenue accounting staff. Coal moves in unit trains and is billed by the

trainload, not by the car, and approximately 98.2 percent of the ANR's non-coal traffic is overhead traffic that is controlled by other railroads. This means there are relatively few customers for the ANR to invoice, notwithstanding the large amount of revenue generated by the traffic. Thus the ANR needs only a small revenue accounting staff.³⁹

BNSF/UP's argument regarding the need for additional revenue accounting staff to prevent revenue losses due to non-matching bills also is inapposite. In particular, BNSF/UP insist that a substantial staff is needed to monitor the automated ISS database, because errors in this system sometimes occur and because UP captured { } in disputed 2009 bills through revenue auditing. The implications of BNSF/UP's argument are remarkable. The ANR's interline partners, in virtually all instances, will be UP and BNSF. There are only two possible explanations for non-matching bills. BNSF/UP are suggesting that improper billing will occur either: (i) as the result of random errors; or (ii) because one of the ANR's interline partners intentionally misstates the appropriate settlement amount in its own favor.

If BNSF/UP are arguing that the source of the concern is the possibility of random errors, then there is just as much chance that an unaudited bill would favor the ANR, rather than favoring the other carrier involved in the movement. In this regard, BNSF/UP are conspicuously silent about the 2009

³⁹ In addition, the use of the Oracle integrated software package will allow the ANR's revenue accounting staff to perform their functions adequately even in the absence of the bloated staffing that BNSF/UP recommend.

results of BNSF's revenue auditing. It may very well be the case that revenue auditing of the ISS transactions caused BNSF to "lose" the very same {

} that UP "captured" through its revenue auditing. In other words, BNSF and UP may have been the two carriers involved in the non-matching bills for UP in 2009. Accordingly, the need to prevent random billing errors can hardly be relied upon as a basis for ensuring that the ANR is not harmed by other carriers. Over the course of the ANR's lifetime, it is reasonable to assume that any such random billing errors would tend to offset each other.

Conversely, if BNSF/UP are arguing that auditing staff is necessary because the ANR's interline partners may be over-billing intentionally (*i.e.*, cheating the ANR), that argument likewise is insufficient to justify a need for more ANR employees. Again, since BNSF and UP are, for all intents and purposes, the only two carriers with whom the ANR interchanges traffic, there is no basis for an argument that those carriers cannot be trusted to bill correctly. AEPCO is comfortable relying on BNSF/UP to honestly and accurately bill the ANR for each of their interline transactions.

Notwithstanding the defects in BNSF/UP's Reply evidence, AEPCO has concluded that a total of two Analyst/Clerks should be added to the Assistant Comptroller-Revenue's staff to provide adequate personnel to staff the Revenue Accounting and Rail Billing & Collections group (even though most of the actual billing is performed by connecting railroads, AEPCO still needs to monitor and audit the billing). One of these Analyst/Clerks would be assigned to each function.

Disbursements. BNSF/UP argue that AEPCO's proposed staffing of the Disbursement function (*i.e.*, one Assistant Controller and one Analyst/Clerk) would be insufficient. BNSF/UP Reply at III-D-48-49. BNSF/UP propose in their narrative to support the Assistant Controller – Disbursements with a total of nineteen individuals.⁴⁰ BNSF/UP's proposed staffing is excessive and, with the exceptions noted below, should be rejected.

First, BNSF/UP propose that the Assistant Controller - Disbursements should be supported by one Accounts Payable Manager and seven clerical staff. *Id.* BNSF/UP calculate this staffing level on the basis of a scaling analysis of {

} performing functions

reflected in other functional areas of the ANR staff.

In particular, BNSF/UP calculate a supposed need for {

} *See*

⁴⁰ BNSF/UP's spreadsheets actually reflect that BNSF/UP have included costs for 20 individuals supporting the Assistant Controller – Disbursements, with the disparity arising because of the inclusion of costs for a Contract Billing/Joint Facilities Manager. BNSF/UP do not attempt to justify the addition of this extra manager in their Reply narrative. There is no need for such an employee in the ANR staff. The ANR has only one joint facility – the 29-mile Montana Rail Link line in Montana, over which the ANR has operating rights.

BNSF/UP Reply e-workpaper “Staffing Levels.xlsx,” tab “Accounting,” columns N through P, lines 34 through 40.

AEPCO does not agree that this high level of staffing is necessary for the disbursement function. Again, BNSF/UP’s scaling analysis simply perpetuates the staffing of a real-world Class I carrier, and does not reflect any of the efficiencies associated with a new stand-alone railroad system (operating largely as an overhead carrier) working with the benefit of a sophisticated, integrated software system. Moreover, BNSF/UP have not adequately supported their morass of different scaling metrics for the different sub-functions within the disbursements function. There is no reason why a carrier with the traffic structure of the ANR would require eight individuals working in support of the Assistant Controller – Disbursements solely on accounts payable matters.

AEPCO’s proposed staffing of the disbursements function included the Assistant Controller – Disbursements plus one Analyst/Clerk. AEPCO believes that the integrated Oracle software that it has accepted on Rebuttal will permit the Controller’s Office of the ANR to perform its function adequately. Nevertheless, to remove any potential question about this staffing, AEPCO has added an additional Clerk on Rebuttal to further support the accounts payable function.

BNSF/UP also argue that the ANR would require a Payroll Manager and ten Timekeeping/Payroll staff members reporting to the Assistant Controller – Disbursements. *Id.* at III-D-49. In particular, BNSF/UP state that although AEPCO proposes that the use of software packages would reduce the ANR’s

staffing needs, the Paychex processing system “is a check-writing system that requires specific inputs from the user.” *Id.* BNSF/UP further state that the Peachtree system that AEPCO specified in its Opening evidence “could handle simple time and attendance, but ANR will require a system for determining various employee entitlements (such as basic pay, overtime) based on a variety of factors (such as number of trains worked).” *Id.* BNSF/UP add that this timekeeping and payroll staffing will be necessary because “[r]ailroad retirement requires reporting on all aspects of employee work status, while withholding, garnishment, and other issues all require some level of manual intervention regardless of system sophistication.” *Id.* BNSF/UP calculate their staffing level for this function based { }

As indicated above, on Rebuttal AEPCO has upgraded the ANR’s integrated accounting software package to the Oracle system. In addition, AEPCO is adding two timekeeping/payroll clerks to its staffing. AEPCO’s G&A experts have confirmed that this software and staffing upgrade will permit the ANR to perform its required functions. The additional staffing level that BNSF/UP proposed (based on the assumption that the ANR would continue to use the Peachtree system) simply is not required with the Oracle system.

With respect to the equipment accounting function, BNSF/UP state on page III.D-54 of their Reply that, as they “noted above,” they have placed equipment accounting responsibility within the purview of the Assistant Controller – Disbursements. BNSF/UP’s statement appears to be incorrect, however, because

their discussion of equipment accounting falls within the context of their discussion of the tax function. *Id.* at III.D-49-52. AEPCO disagrees with either of these two structures. AEPCO will address equipment accounting in its discussion of the ANR's Budget/Purchasing function.

Tax Function. AEPCO staffed the ANR's tax function with an Assistant Controller – Taxes and an Analyst/Clerk working in conjunction with outside tax preparation services. *See* AEPCO Opening at III-D-36-37 and Opening e-workpaper “ANR GA Outsourcing.xls” (providing a budget of \$200,000 in outsourcing costs for Federal, State, and Local tax return preparation and \$100,000 in outsourcing costs for Property tax preparation). Although BNSF/UP accepted AEPCO's outsourcing costs for this function,⁴¹ they nevertheless contend on Reply that AEPCO's proposed staffing level is insufficient because of the large number of tax returns that the ANR will prepare each year, and because the ANR “will need staff to provide information to outside vendors, respond to information requests, review draft tax returns, and generally oversee the work of outside vendors.” BNSF/UP Reply at III.D-50. BNSF/UP also argue that AEPCO's staffing is inadequate because the ANR would need staff to respond to state and federal audits and because “[c]ompanies as large as ANR might expect IRS to be on site full time.” *Id.* On the basis of these arguments and their claim that staffing for this

⁴¹ *See* BNSF/UP Reply e-workpaper “ANR Personnel.xlsx,” tab “Outsourced Services.”

function is driven by the number of states in which a railroad has rights-of-way, BNSF/UP “propose to staff this function at eleven people for ANR” *Id.*

BNSF/UP’s proposal is excessive in terms of the staff needed for preparation of state and federal tax forms and related follow-up. Most such forms are standardized and repetitive, which commends them to computer processing. Also, sufficient time is available between most monthly filings to plan and prepare for the next filing. If additional help is needed to respond to audits, etc., outside firms can be used for assistance – although this is unlikely given the limited number of repetitive forms due each month.

On Rebuttal, AEPCO agrees that the staff support for the Assistant Controller-Taxes needs to be increased slightly, given the relatively large number of state tax returns the ANR must file. Accordingly, AEPCO has added two Tax Accountants to this staff.

In addition, AEPCO agrees that it should add a Manager of Property Accounting to the ANR Staff. *See* BNSF/UP Reply at III.D-50-51. Moreover, as noted below (in its discussion of the Budgets and Purchasing function), AEPCO is adding one Car Accounting Analyst to the ANR staff on Rebuttal. *See* BNSF/UP Reply at III.D-51-52.

Financial Reporting. AEPCO proposed on Opening that the ANR’s financial reporting would be performed by an Assistant Controller supported by one Analyst/Clerk. AEPCO Opening at III-D-37. BNSF/UP argue that this staffing is insufficient and that it would be necessary for the ANR’s Assistant Controller –

Financial Reporting to be supported by nine Staff Accountants (*i.e.*, an increase in head count of eight relative to AEPCO's Opening Evidence, as BNSF/UP do not see a need for the Analyst/Clerk). BNSF/UP Reply at III.D-52-54. On Rebuttal, AEPCO is increasing its staffing for this function by adding two Financial Reporting Accountants, and AEPCO's version of the ANR is benefitting from the software upgrade to the integrated Oracle system. With the benefit of this software package, AEPCO's increased ANR staffing level is sufficient for this function, and the additional six Staff Accountants proposed by BNSF/UP are unnecessary.

BNSF/UP base their narrative argument regarding financial reporting on the status of the ANR as a Class I railroad with over \$6 billion in debt.

According to BNSF/UP, the financial reporting function would be responsible for the monthly closing of books, STB reporting, an annual financial statement audit, benefit plan reporting, SEC reporting, SOX compliance, bondholder reporting, and accounting research. *Id.* BNSF/UP's proposal to add eight additional accountants to handle these functions is unnecessary because, despite the ANR's substantial debt, it is still small compared with most Class I's and the level of financial reporting required does not vary significantly with the amount of debt (all of which would be incurred for one purpose: financing the initial construction of, and acquisition of equipment for, a brand-new railroad). A new railroad does not need the complicated accounts and financial reporting of railroads like BNSF and UP, which have many debt instruments incurred over a period of time for various purposes.

In addition, an independent reason exists for rejecting BNSF/UP's proposed addition of eight financial reporting staff members; namely, that BNSF/UP's scaling calculations in their electronic spreadsheets conflict with the results described in BNSF/UP's narrative. In particular, BNSF/UP's spreadsheets show that {

} to reach

the total figure of nine that appears in BNSF/UP's Reply narrative at III.D-54. See BNSF/UP Reply e-workpaper "Staffing Levels.xlsx," tab "Accounting," column P, line 62.

* * *

Budgets & Purchasing. In addition to the oversized support staffing for the four Assistant Controllers already identified by AEPCO, BNSF/UP also propose to add other staffing to the Finance & Accounting Department to

supplement the staffing proposed by AEPCO for the budgets and purchasing function.⁴²

In its Opening Evidence, AEPCO proposed to staff the budgets and purchasing function with a Director of Budgets and Purchasing, two Managers of Budgets and Purchasing, and two Managers of Equipment Accounting. AEPCO Opening at III-D-37-38. BNSF/UP propose to completely rearrange this staffing. In particular, BNSF/UP argue that budgeting responsibility should be placed within the purview of the Assistant Controller – Financial Reporting (BNSF/UP Reply at III.D-54), and responsibility for railcar accounting should fall within the purview of the Assistant Controller – Disbursements. *Id.* As for the purchasing function, BNSF/UP propose a staffing arrangement of one Director and six specialist Buyers. *Id.* at III.D-55.

AEPCO disagrees with BNSF/UP's re-arrangement of the staffing for the budgets and purchasing function. The Director and two Managers AEPCO proposed on Opening to oversee the budgeting and purchasing function are perfectly adequate.

AEPCO proposed two Managers of Equipment Accounting in its Opening Evidence, one of whom would interface with equipment repair contractors and would oversee outsourced equipment repairs, and one of whom would manage car hire and receivables issues for the ANR. AEPCO Opening at III-D-38. On

⁴² BNSF/UP did accept AEPCO's proposed staff of one for the internal auditing function. BNSF/UP Reply at III.D-55.

Reply, BNSF/UP argue that more staffing is needed for the second function because the RMI car hire system “does not run on autopilot” and because a “single individual cannot handle the activities involved in the car accounting function. . . .” BNSF/UP Reply at III.D-51. On the basis of this argument, BNSF/UP insist that the ANR would need not only two Managers of Equipment Accounting, as AEPCO had proposed, but instead, one Manager of Car Accounting and five Car Accounting Analyst positions. *Id.* at III.D-52.

BNSF/UP’s proposed car accounting staff is oversized. AEPCO’s initial staffing proposal, supplemented by a single additional Car Accounting Analyst, is adequate to perform all of the car accounting functions for the ANR, particularly because the integrated Oracle accounting system will streamline this process. In addition, BNSF/UP’s staffing proposal is excessive because the ANR’s cars are leased and the lessors will help with certain reporting and other car accounting functions.

Purchasing. BNSF/UP’s proposed staffing of seven for the purchasing function (a Director and six Buyers) is also oversized. Under BNSF/UP’s proposal, each Buyer would be responsible for an individual area: fuel, railcar and locomotive parts, rail, ties and ballast, signals and other track material, and miscellaneous. BNSF/UP Reply at III.D-55. The ANR is a new railroad, with new track and new locomotives, cars and other equipment, so equipment and track-material purchases should be limited during the first five years of its existence. Purchases are limited on a daily basis, and the ANR does not have anything

remotely approaching the purchasing demand of a major railroad like BNSF or UP. The purchasing staff that AEPCO has specified should be able to handle the railroad's ongoing fuel, material and small-equipment purchases.

(e) **Law and Administration Department**

On Opening, AEPCO proposed a Law & Administration Department for the ANR comprised of: (i) a Vice President Law & Administration; (ii) three staff attorneys; (iii) two paralegals; (iv) a Director of Claims (supported by two Managers of Claims); and (v) a Director of Human Resources (supported by two Managers of Training and relying largely upon outsourcing). AEPCO Opening at III-D-38-40. The total headcount proposed for this department (not including the 13 individuals staffing the IT function, discussed below) was 12. On Reply, BNSF/UP propose a much larger Legal & Administration Department consisting of 40 individuals, plus a separate, additional 41-member IT Department headed by its own Vice President. *See* BNSF/UP Reply at III.D-55-66.

There are four principal differences between AEPCO's Opening and BNSF/UP's Reply staffing of the Law & Administration Department (excluding for the moment the IT function): (i) BNSF/UP's addition of three attorneys and four paralegals to the AEPCO staffing proposal (and its addition of { } in outside legal fees); (ii) BNSF/UP's addition of a Chief of Security and seven Special Agents; (iii) BNSF/UP's addition of an two Environmental Managers; and (iv) BNSF/UP's inclusion of a 13-member Human Resources group. BNSF/UP's staffing is excessive and in large part unnecessary.

Attorneys/Paralegals. AEPCO proposed that the ANR’s Vice President–Law would be assisted by three General Attorneys and two Paralegals, and would incur an annual cost for outside law firms of \$475,000. AEPCO Opening at III-D-38-39 and AEPCO Opening e-workpaper “ANR GA Outsourcing.xls.”

On Reply, BNSF/UP claim that AEPCO has significantly understated the ANR’s legal expenses and staffing needs. BNSF/UP Reply at III.D-56-58.⁴³ In particular, BNSF/UP propose to staff the legal function with six attorneys and six paralegals, and to require the expenditure of { } in outside counsel fees. *Id.*; see also BNSF/UP Reply e-workpaper “ANR Personnel.xlsx,” tab “Outsourced Services.” The net in-house staffing increase proposed by BNSF/UP is four attorneys and four paralegals.

Once again, BNSF/UP’s approach to calculating staffing levels for the ANR’s legal department is conceptually backwards. Rather than determining the work that will be required and the staffing necessary to accomplish those tasks, BNSF/UP instead recount a supposedly typical percentage of revenue that \$1 to \$5 billion companies spend on legal matters, scale that amount to the ANR’s revenues, and then add enough lawyers and paralegals to the ANR staff to be sure to consume that entire assumed budget. BNSF/UP Reply at III.D-57. In particular, BNSF/UP cite a 2007 Altman Weil benchmarking survey of corporations in the \$1 to \$5

⁴³ BNSF/UP have, however, accepted AEPCO’s proposed staffing for the claims function. *Id.* at III.D-58.

fashion is less likely to drive up the overall corporate legal expenditure than revenue generated through either local railroad traffic, or through the various different lines of business encompassed in the Altman Weil survey.

In addition, BNSF/UP wrongly assume that the ANR would have a greater need for in-house counsel and paralegals because it is a regulated industry.⁴⁴ The ANR would not face the prospect of rate litigation,⁴⁵ and other Class I railroads (along with the AAR) would take the lead on industry-wide regulatory issues involving the STB or FRA. As a new railroad, the ANR does not have any past spills or ongoing environmental issues to deal with from a legal standpoint. AEPCO has already provided a larger staff of in-house attorneys and paralegals than the Board deemed necessary in *AEP Texas* at 57 (VP/General Counsel, two attorneys, one paralegal) and *WFA/Basin I* at 45 (same), in recognition that the ANR operates in more states than the SARRs in those cases.

Outside Counsel. As noted above, BNSF/UP propose to increase the annual budget for outside counsel from the \$475,000 that AEPCO provided on Opening to { }, on the basis of their assumptions that: (i) total legal

⁴⁴ BNSF/UP claim that the ANR would need additional resources to ensure compliance with FRA, TSA, environmental, and STB regulations and that the ANR would require legal expenditures in Federal Employers Liability Act (“FELA”) cases. *Id.* at III.D-56-57.

⁴⁵ Rate litigation might occur if the ANR and its interline partners raise rates substantially, but the ANR’s projected rates and revenues are based on indexing current rates based on existing contract price-adjustment mechanisms or standard cost indices. There is no reason to assume rate litigation would occur in these circumstances.

spend should be 0.275% of annual revenue; and (ii) that total legal spend should be split on a 60% (internal) / 40% (outside) basis. Part of BNSF/UP's proposed increase also relates to their increase in the annual outside counsel retainer fee of \$100,000. (BNSF/UP incorrectly claim at page III.D-56 of their Reply that AEPCO included this additional \$100,000 in its Opening evidence as well).

Again, BNSF/UP attempt to justify their far higher budget for outside counsel partly on the basis that the ANR is subject to FELA which requires the expenditure of significant litigation resources. BNSF/UP Reply at III.D-57. However, BNSF/UP have accepted AEPCO's proposed three-person in-house claims staff (which is much smaller than the claims staff of any Class I railroad) as well as AEPCO's proposed annual cost for outsourcing claims investigations. *Id.* at III.D-58. There appears to be a disconnect between BNSF/UP's proposed annual budget for outside counsel and their proposed annual budget for claims handling (the claims staff spends most of its time on FELA claims). If AEPCO's proposed claims staff and outsourcing budget is sufficient for the ANR's needs, there is no reason why its outside counsel budget (which was calculated using the same methodology accepted in *WFA/Basin*) would be insufficient.

Nevertheless, in order to remove any doubt regarding the sufficiency of AEPCO's estimate of the ANR's outside counsel budget, AEPCO is increasing its outside counsel estimate on rebuttal from \$475,000 to \$750,000, an increase of

\$275,000.⁴⁶ AEPCO's G&A experts have determined that this level will be more than adequate to meet the ANR's limited annual legal needs, given its unique business model as an overhead carrier with minimal local traffic.

Police Force. BNSF/UP argue on reply that the ANR would require a police force because "ANR will handle large volumes of intermodal traffic that will be yarded for some period of time on ANR, including a yard close to the U.S.-Mexico border." BNSF/UP Reply at III.D-58. BNSF/UP add that "[i]t is essential that ANR be in a position to protect this valuable freight." *Id.* BNSF/UP propose that the ANR add a Chief of Security and seven Special Agents, which BNSF/UP calculate on the basis of the number of states in which the ANR operates. *Id.*; see also BNSF/UP Reply e-workpaper "ANR Personnel.xlsx," tab "G&A."

Notably, BNSF/UP do not claim that security is required for any reasons related to hazardous materials, but instead, base their argument on the need to "protect valuable freight." That concern, while not without significance, does not rise to the level of concern that would be associated with the transportation of hazardous materials in or near a densely populated urban area.

In order to ensure a conservative approach to its G&A staffing, however, AEPCO accepts BNSF/UP's proposal to add a police force to the ANR

⁴⁶ In addition to its federal work, the ANR needs, at most, five outside law firms, each covering the states indicated: Montana/Wyoming; Nebraska/ Colorado; Texas/Oklahoma; New Mexico; and Arizona. The ANR will pay a retainer of \$150,000 per year per firm except \$75,000 for Arizona (in which the ANR has only 66 route miles). That produces a total expenditure of \$675,000. Adding the \$75,000 for federal outside counsel that AEPCO specified on Opening yields a total outside counsel budget of \$750,000.

staff, but rather than including a Chief and seven Special Agents, AEPCO submits that the necessary functions of a police force in this context can be performed by a Chief and five Special Agents. BNSF/UP's principal argument is that valuable intermodal freight located in yards near the U.S.-Mexico border would need to be secured. That argument does not apply to intermodal, coal or any other traffic moving over most of the ANR system, which is located far north of the Mexican border. Consequently, BNSF/UP's approach to staffing the ANR police force with one Special Agent per state is excessive.⁴⁷

A staff of five Special Agents is more than adequate to oversee the southerly intermodal traffic yards on the ANR (which are located in New Mexico), and to handle any necessary police functions on the balance of the system. One Special Agent is specifically assigned to the portion of the ANR system between Cochise, AZ and El Paso, TX, which is the only area close to the Mexican border. The other four cover the remainder of New Mexico, Texas/Oklahoma, Colorado/Nebraska, and Wyoming/Montana.

Environmental Staff. Notwithstanding the fact that AEPCO already proposed that the ANR's Mechanical Department would employ two Managers of Testing and Environment (which BNSF/UP include in their Operating staffing proposal), BNSF/UP contend that it is also necessary for the ANR's Law & Administration Department to include two Managers of Environmental

⁴⁷ The absurd nature of BNSF/UP's "one-Agent-per-state approach is evidenced by the fact that the ANR has less than 30 route miles in Oklahoma – yet BNSF/UP propose a separate Agent for Oklahoma.

Compliance. BNSF/UP Reply at III.D-59. BNSF/UP argue that these individuals would be “responsible for coordinating environmental issues at the federal and state levels.” *Id.*

As BNSF/UP acknowledge, however, the ANR does not handle large volumes of hazardous materials. *Id.* BNSF/UP have not demonstrated that the two existing Managers of Testing and Environment would not be capable of performing all of the required environmental functions for a railroad with such a low level of hazardous material transportation.

Human Resources Staff. On Opening, AEPCO provided a Director of Human Resources and two Managers of Training to staff the Human Resources (“HR”) function, in addition to the outsourcing of payroll processing. *See* AEPCO Opening at III-D-39-40 and AEPCO Opening e-workpaper “ANR GA Outsourcing.xls.”

On Reply, BNSF/UP argue that AEPCO has not budgeted a sufficient amount for HR outsourcing, and BNSF/UP instead insist that a larger in-house HR staff would be a more effective way to handle HR responsibilities. In particular, BNSF/UP argue that the ANR’s HR staff should include the Director and two Managers of Training that AEPCO specified, plus two Compensation & Benefits Managers, two Managers of Compliance, two Staffing & Recruiting Managers, a Human Resources Information System Manager, a medical doctor, and two

Employee Liaison staff members. BNSF/UP's total HR staffing level is 13 employees.⁴⁸

Curiously, BNSF/UP state in their Reply that “[i]n developing the appropriate staffing levels for the Human Resources Department, Defendants did not attempt to scale against an existing railroad because most of these functions are required regardless of organizational size.” BNSF/UP Reply at III.D-62.

BNSF/UP's workpapers, however, indicate that {

}⁴⁹

Notwithstanding this additional error in BNSF/UP's Reply Evidence (*i.e.*, disagreement between BNSF/UP's narrative and its actual calculations), AEPCO agrees that the HR staffing level that it specified on Opening may have been too thin. Significantly, however, AEPCO disagrees with BNSF/UP about the

⁴⁸ Notably, in their electronic spreadsheet regarding outsourcing costs, BNSF/UP neglect to include the payroll processing costs that AEPCO had included on Opening, instead wrongly reporting that AEPCO had not included any costs for this outsourcing. *Cf.* AEPCO Opening e-workpaper “ANR GA Outsourcing.xls” and BNSF/UP Reply e-workpaper “ANR Personnel.xlsx,” tab “Outsourced Services.” {

}

⁴⁹ Because of rounding issues, the sum of the individual employee totals in Column H of BNSF/UP's spreadsheet yields a total of {

}

extent and nature of the staffing changes that would be required to meet the ANR's HR staffing needs. As an initial matter, AEPCO disagrees with BNSF/UP's suggestion that a bloated in-house IT department would be a "more effective way to handle both recruiting and most other HR responsibilities in an organization of ANR's size." BNSF/UP Reply at III.D-61. The modern trend among organizations of the ANR's size is to outsource the HR function to the fullest extent possible.⁵⁰ Outsourcing of this function allows companies to take maximum advantage of efficiencies provided by specialist firms dedicated to HR work without the need to increase company payroll, benefits, *etc.*

AEPCO has determined that the ANR's payroll processing, plus the principal additional HR functions that BNSF/UP identify in their Reply filing (*e.g.*, compensation, compliance, recruiting strategy), could be performed in an adequate manner by an outside vendor on the basis of a \$275,000 annual budget. AEPCO does not concur in BNSF/UP's assessment that the HR department must include its own Information System Manager. BNSF/UP Reply at III.D-62. This BNSF/UP proposal once again reflects an outdated mindset of duplicating functions in each department. The ANR's IT department will administer the ANR's information

⁵⁰ *See, e.g., HR Magazine*, "The buying services game ever wonder about the net effect of outsourcing human resource services? Get the facts before you make a move," Nov. 2008 (reporting the results of an August 2008 survey regarding HR outsourcing indicating that a substantial majority of respondents either fully or at least partially outsource many HR activities including employee assistance and counseling, pension benefits administration, and health care benefits administration, *etc.*).

systems. There is no need to add redundant staffing for this function within the HR department itself.

In addition, there is no need for the ANR to employ a company doctor, as BNSF/UP propose (*id.* at III.D-62). Today's railroads do not employ in-house medical personnel, finding it to be more efficient (less expensive) to establish an outsourcing relationship with outside clinics to handle incidents beyond first aid for their employees. These clinics handle workers compensation and other medical insurance claims, as well as required physicals, as a part of the \$275,000 annual budget.

Finally, AEPCO agrees with BNSF/UP that it would be appropriate to include an internal staffing position dedicated to employee relations. *Id.*

{

} AEPCO {

} has added a single Employee Relations Liaison to its

Rebuttal staffing.

(f) Information Technology

AEPCO's IT expert, Joseph Kruzich, initially designed a 13-person IT sub-department, reporting to the Vice President-Law & Administration, consisting of a Director of Information Technology and 12 IT technician/specialists. AEPCO Opening at III-D-40-42. BNSF/UP propose to create an entirely separate

IT department headed by a Vice President, and to more than triple its size, from 13 to 41 employees. On Rebuttal, Mr. Kruzich has retained the Director to head the sub-department, removed one of the 12 technicians (the Exchange 2007 Engineer), and added four positions (a Database Manager, an Interface Support Manager, and two Help Desk positions), thus resulting in a revised total of 16 employees for this sub-department. Mr. Kruzich disagrees that any of the other changes proposed by the defendants are necessary.

The size of the ANR's IT department is a function of the railroad's unique characteristics (only unit train or trainload movements; 99 percent of non-coal movements are overhead to the ANR which means it does not perform the customer billing function; no intermediate classification switching other than the limited block-swapping of intermodal cars at Texico Yard; limited number of local/terminated coal and intermodal movements requiring customer billing). This combination of factors greatly reduces the complexity of the computer systems and staffing required to support operations compared with the systems and staffing employed by a large Class I railroad such as BNSF or UP.

BNSF/UP claim that AEPCO's IT staffing does not cover a number of functions that an IT department serving a "large" railroad would need to perform; that AEPCO "provides minimal resources for development of systems that could link its non-integrated systems"; and that the IT group would need to serve a substantially larger management team than AEPCO proposed. BNSF/UP Reply at III.D-63. These claims are misguided. AEPCO Witness Kruzich served as Vice

President and Chief Information officer of KCS from 1995 to 2000, and is well-aware of functions that the ANR's IT staff would have to cover. The fact that the ANR is relatively "large" for a SARR, with over 2,200 route miles and \$2 billion in annual revenues, is not determinative of its IT staffing needs – what is determinative is the IT functions that need to be performed, and these functions are much less complex than on a typical Class I railroad. The number of managerial employees to be served is much smaller than BNSF/UP propose,⁵¹ and Mr. Kruzich has designed computer systems (including software, with the minor changes noted in the section on IT Systems, *infra*) that provide perfectly adequate links between the ANR's integrated and non-integrated systems.

In designing more complex computer systems and a much larger IT staff, BNSF/UP fail to recognize the simplicity of the ANR's operations and instead propose an IT department that is similar to that of a typical large Class 1 railroad. The computer system requirements for a typical Class 1 railroad are very complex due to the very large number of customers served, the large number of commodities handled, the need to accommodate thousands of different origin and destination pairs, the need for extensive yard operations to sort and block cars and support local switching activities, and the need to keep track of service commitments to

⁵¹ BNSF/UP base their proposed ANR staffing requirements on the service needs of a 1,576-person organization (excluding T&E employees), which, as AEPCO explains on Rebuttal, is half again as large as the organization actually needed.

customers on an individual car basis. These conditions simply do not exist on the ANR.

Department Head. BNSF/UP propose that the ANR's IT function be headed by a separate Vice President because (i) it is "unreasonable" for the Vice President-Law & Administration to "effectively supervise" the legal, HR and IT functions, and (ii) "because of the importance of IT to the overall success of ANR." BNSF/UP Reply at III.D-64. Neither reason is valid. The total employees reporting to the Vice President-Law & Administration as revised on Rebuttal, including IT employees, is 35. This is a manageable number – in fact, it is five fewer employees than BNSF/UP propose for the Law & Administration Department with the IT function removed (40).

Information Technology is certainly important to the overall success of the ANR, but this does not warrant a separate Vice President to supervise a total of only 15 employees (the revised number proposed by AEPCO on Rebuttal). A Director-level employee is perfectly capable of handling responsibility for the overall IT strategy and tactical direction of a department this size. Moreover, the Board has accepted a Director as the head of a SARR's IT department, with the Director reporting to one of the Vice Presidents. *AEP Texas* at 57; *WFA/Basin I* at 46.⁵²

⁵² The SARR in *AEP Texas* was relatively large, with nearly 1,200 route miles, and it also handled non-coal traffic. The SARR IT staff approved by the Board consisted of a Director and 10 IT Specialists, or three fewer than the 13 Specialists AEPCO provides on Rebuttal.

Other Directors. BNSF/UP propose three Directors to oversee three primary IT functions: systems analysis, technology support, and network monitoring. BNSF/UP Reply at III.D-64. This is the same number of Directors KCS had when Mr. Kruzich was head of that railroad's IT department in the mid/late 1990's. At KCS, one Director oversaw computer operations which included an IBM mainframe; a second oversaw all revenue, car hire and financial management report applications; and a third oversaw all transportation applications including dispatching, crew calling, disbursements, *etc.* In total, KCS had 50-plus IT positions, including IT management that was responsible for all in-house computer applications (very little IT work was outsourced, and this continues to be the case on typical Class I railroads).

Consistent with today's practice for a company its size in terms of total managerial staff, the ANR does not have a mainframe and outsources 95 percent of its IT services to RMI. Most of the kinds of functions performed in-house at KCS 15 years ago will be performed for the ANR at RMI locations by RMI personnel. The ANR has very little need for applications development or systems analysis. When it (or technology support or network monitoring) is required, it is provided by the two Programmer/Development positions, and the required technology support will be provided by the five Programmer/Technicians. All of these functions can easily be supervised by the Director of IT.

Systems Analysts. BNSF/UP recommend three Systems Analyst positions, one to monitor RMI and two to support crew calling, dispatching and the

Enterprise Resource Planning (ERP) accounting package. As indicated in AEPCO Opening at III-D-42, AEPCO has also provided three positions to cover these functions: two Programmers/ Development and one Lead RMI Technician. It is unclear whether BNSF/UP propose to add three more positions to cover these functions (which is unnecessary), or have simply changed the names of the positions.

Programmers/Development. BNSF/UP suggest that the ANR would need staffing (two of the four Programmers/Development they propose) to manage and maintain a test/development system, in order to develop and implement new systems and enhancements to existing systems. They also assert that AEPCO has not provided for any computer hardware, software, or staffing for such a development and test system. BNSF/UP Reply at III.D-64-65. Mr. Kruzich would agree if the ANR's computer systems were configured to operate in-house, but they are not. Approximately 99 percent of the IT operating cost of the ANR's computer system is outsourced to RMI. Thus, RMI will test and make enhancements to its systems to support the ANR's needs and the ANR does not need employees for this purpose. AEPCO has provided two Programmers/Development to maintain and upgrade the crew calling, dispatching and accounting systems, which are adequate. (However, AEPCO has added one additional server for testing of the systems that the ANR's IT staff is responsible for enhancing and developing).

Database Management. BNSF/UP recommend two Database Management positions for designing, maintaining, and optimizing database

management systems. BNSF/UP Reply at III.D-65. AEPCO Witness Kruzich agrees that database management is a vital function in any IT organization, and that a database management function should be added. However, he disagrees that more than one Database Manager is needed since the majority of the ANR's computer needs are outsourced to RMI. The ANR will have only unit train and trainload operations, and far fewer customers, commodities and employees than any real-world Class I railroad. Therefore, database management will be far less complex than at BNSF or UP, each of which has thousands of customers, thousands of different commodities, thousands of employees, thousands of its own freight cars and locomotives, over 30,000 route miles, thousands of origin/destination pairs, thousands of rate combinations, *etc.* Based on the relatively simple ANR operations, only one position needs to be added to the IT staffing to handle database management.

Interface Support. BNSF/UP contend that there is a need for three Interface Support personnel to write interfaces between systems such as RMI, Crew Management and Payroll. BNSF/UP Reply at III.D-65. Mr. Kruzich concurs that some interfaces will have to be written, but not to the extent that the defendants suggest. Once an interface is written, it is operational for a long period of time and usually requires very little maintenance. Accordingly, he has added one Interface Support Manager (application programmer) to the ANR's IT staff to ensure that systems can be interfaced and function in an integrated manner.

Help Desk. BNSF/UP suggest a total of 40 technicians for the help desk function on the ANR. *Id.* at III.D-65-66. This is astonishing. When Mr. Kruzich was VP Information Systems at KCS, that railroad had one Help Desk Technician on duty 24/7 (or a total of five employees), which was more than adequate to handle all incoming calls for technical support. The defendants' gross overstaffing for the Help Desk function should be rejected. However, to be conservative Mr. Kruzich has added two additional Help Desk Technicians to the one such technician he provided on Opening. The two additional positions would cover the first and second shifts Monday through Friday.

Network Monitoring. BNSF/UP suggest that six Network Monitoring positions would be needed to monitor the health of the ANR's systems. *Id.* at III.D-66. Mr. Kruzich strongly disagrees with this suggestion because, as previously noted, 99 percent of the ANR's IT operating cost is outsourced to RMI. RMI has sufficient staff to monitor the ANR's systems, which is why the ANR pays a large sum of money for outsourcing. That is what outsourcing is all about; the outsourcer provides a reliable service so that the customer (ANR) can operate efficiently and effectively. Moreover, Mr. Kruzich has provided a 24/7 Programmer/PC Technician position (requiring five employees for 24/7 coverage). The Programmer/PC Technician provides user support in the day-to-day operation of the ANR's operating system and applications, software, and computers. Since the ANR outsources a large portion of its computer needs, this position provides

adequate network monitoring and the six Network Monitor positions BNSF/UP propose to add would have little work to occupy their time.

Network Engineers. BNSF/UP accept AEPCO's proposed staffing of two Network Engineers to oversee network security matters and local area network (LAN) functionality. BNSF/UP Reply at III.D-66.

Exchange 2007 Engineer. BNSF/UP suggest that the ANR not staff its IT department with an Exchange 2007 Engineer, but rather use Microsoft to host e-mail. *Id.* at III.D-66. Mr. Kruzich concurs with this suggestion, although he disagrees that all ANR employees need this service. For example, the T&E employees and most of the field Mechanical and Maintenance of Way employees do not need e-mail service and many such employees do not have the skills to use it. The Microsoft e-mail service should be provided to the same employees who have been provided desk-top computers per AEPCO's Opening Evidence, and others who can share a computer terminal (*e.g.*, at crew buildings) since a computer or cell phone is needed to use e-mail. Mr. Kruzich estimates that the total number of ANR e-mail users (computer terminals) would be approximately 600 users. Thus the annual cost would be \$57,600.00 annually, accepting the defendants' \$8 per employee per month ($600 \times \$8.00 \times 12 = \$57,600.00$). Accordingly, Mr. Kruzich has adjusted the ANR's IT staffing by eliminating the Exchange 2007 Engineer and adding \$57,600.00 to the operating budget for e-mail service.

* * * *

In summary, on Rebuttal AEPCO has increased the ANR's G&A staff by 23 employees, raising the total from 69 to 92. This represents a 39 percent increase over the highest number of G&A employees ever accepted by the Board in a coal rate case (66 employees; *see AEP/Texas* at 51-53, a case in which the SARR also carried non-coal traffic). AEPCO's Rebuttal G&A staffing is more than sufficient and should be accepted by the Board over BNSF/UP's bloated staffing.

ii. **Compensation**

BNSF/UP accept AEPCO's proposed salaries and benefits for the ANR's G&A personnel, although they add compensation for the many new positions they proposed to add. BNSF/UP disagree, however, with AEPCO's exclusion of bonuses and stock grants in calculating annual compensation for the ANR's senior executives (the President and Vice Presidents). BNSF/UP Reply at III.D-67. For the reasons set forth below AEPCO disagrees that additional elements of incentive compensation should be added to the salaries for the President and Vice Presidents.

AEPCO based compensation for the ANR's President and Vice Presidents on the salaries, including bonuses, paid for similar positions by KCS. AEPCO Opening at III-D-42. Bonuses are not specifically identified in the KCS proxy statements (the source for KCS executive compensation), so BNSF/UP have no basis to assume that bonuses were omitted from these executives' compensation. AEPCO excluded stock awards, stock options, non-equity incentive plan

compensation and “all other compensation” to the extent they were identified,⁵³ which is consistent with the treatment of these compensation elements in *WFA/Basin I*.

BNSF/UP’s proposal to include stock awards, option awards and other compensation for the ANR’s senior executives must be rejected for the same reason the Board rejected a similar proposal by BNSF in *WFA/Basin I*, in which the complainant also based SARR executive compensation on the salaries (including bonuses) paid to KCS executives. The Board held that because stock options were not counted as expense by KCS, they should not be included in the SARR’s executive compensation. See *WFA/Basin I* at 48-49. Review of KCS’ recent financial statements confirms that KCS still does not count stock awards and options as an expense.

It should be noted that despite BNSF/UP’s claim that they accepted AEPCO’s proposed salaries for G&A employees, review of the defendants’ underlying workpapers reveal that they did not, in fact, do so for five positions: (1) Assistant Treasurer; (2) Cash Manager; (3) Assistant Controller – Revenue; (4) Assistant Controller – Disbursements; and (5) Assistant Controller – Taxes. BNSF/UP provide no explanation or reasoning for the discrepancy between their narrative text and underlying workpapers or their reason for changing the salaries used by AEPCO on Opening for these positions. After review of BNSF/UP’s salaries and associated assignment of classification of job titles from 49 CFR Part

⁵³ See Opening e-workpaper “III-D-3 Salaries.pdf.”

1245.5, on Rebuttal AEPCO accepts defendants' assignment of job classification and salary for the Assistant Treasurer position and retains the job classification and salary it used on Opening for the remaining four positions.

AEPCO has re-calculated the total salaries and benefits for the ANR's G&A staff based on the positions it has added on Rebuttal. Details are provided in Rebuttal e-workpapers "ANR Salaries_Rebuttal.xls" and "ANR Operating Expense_Rebuttal.xls."

iii. Materials, Supplies and Equipment

At page III.D-68 of their Reply BNSF/UP state that they accept AEPCO's proposed unit costs for the various categories of materials, supplies and equipment necessary to support the ANR's G&A employees. However, without explanation or discussion, BNSF/UP have added 15 autos to the G&A materials and supplies expense.⁵⁴ This arbitrary and unexplained additive should be rejected.

AEPCO adds equipment and other materials/supplies costs for the G&A positions it has added on Rebuttal; in particular, each of the added Security personnel is equipped with a company vehicle. Details are provided in Rebuttal e-workpapers "ANR Operating Expense_Rebuttal.xls" and "ANR Material and Supplies_Rebuttal.xls." IT and MOW equipment and supplies are discussed separately below.

As was the case with non-train Operating personnel, there is also a substantial difference in the parties' calculations of travel expense for G&A

⁵⁴ See Reply e-workpaper "ANR Personnel.xlsx."

personnel. On Opening, AEPCO included an \$8,000 annual travel expense budget for 26 selected G&A personnel who are likely to travel on business. On Reply, BNSF/UP include differing amounts for annual travel expenses depending on the employee's position and department within the G&A function, and apply these expenses to 219 G&A employees – or essentially all G&A personnel except for customer service personnel.

Review of BNSF/UP's underlying workpapers reveals an apparent error in the assignment of travel expense to individual employees. Reply e-workpaper "Copy of ANR Personnel.xlsx", tab "G&A" has a column for designating which employees are assigned travel expenses. This workpaper shows that 93 G&A personnel should incur travel expense, yet the defendant's calculation of travel for G&A personnel ignores this number and instead includes travel expense for 219 G&A personnel. *See* Reply e-workpaper "ANR Personnel.xlsx." The inconsistency in Defendants' calculations again cannot be reconciled and their travel expenses must therefore be rejected.

On Rebuttal, AEPCO accepts the defendants' annual travel expense amount per position and department and applies these amounts to the same G&A personnel they were applied to on Opening, expanded to include the G&A personnel added on Rebuttal.

iv. Other

(a) IT Systems

The ANR's IT systems, as developed by AEPCO Witness Kruzich, are described in detail in AEPCO Opening at III-D-45-53. Although BNSF/UP assert that the IT systems "solution" provided by AEPCO "does not represent an integrated approach to data processing" and would require a significantly larger IT staff, in fact they accept the backbone of the system which is the RMI operating system. BNSF/UP Reply at III.D-68-69. However, BNSF/UP reject the Peachtree and Optimal Solutions packages provided by Mr. Kruzich for general accounting and human resources management. They also contend that AEPCO has not provided adequate hardware (servers) to allow the IT system to function properly and service the ANR staff, and that email applications for all employees would have to be added. *Id.* at III.-D-69 and 70.⁵⁵

Mr. Kruzich agrees that the Peachtree MAS 200 and the Optimal Solutions packages are sub-optimal for the ANR's accounting and human resources applications, and agrees that the Oracle solution proposed by the defendants is preferable.

On Rebuttal, Mr. Kruzich has adjusted the IT Capital and Operating Budgets to reflect the additional cost associated with the Oracle Accounting

⁵⁵ BNSF/UP accept AEPCO's proposed communications plan and AEPCO's plan and unit cost for providing laptops, desktops and printers to various employees (while revising the number total number of items to be consistent with their enlarged staffing). *Id.* at III.D-70.

Software. The Capital Budget has been increased by \$2,736,077 (\$2,854,042 - \$51,965 Accounting and - \$666,000 Human Resources), and the Operating Budget has been increased by \$613,458.89 (\$627,853.64 - \$5,994.75 Accounting and - \$8,400.00 Human Resources).

The defendants also contend that the ANR needs additional servers. BNSF/UP Reply at III.D-69. Mr. Kruzich concurs, and has added one server for test and development, one for Oracle software, one for Microsoft SQL, and one for SharePoint Portal for a total of four additional servers (the same number proposed by BNSF/UP). The total cost of \$56,892 ($\$14,223.00 \times 4 = \$56,892.00$) has been added to the Capital Budget. Two additional switches have also been added to the Capital Budget for a total of \$2,947.98 ($\$1,473.99 \times 2 = \$2,947.98$).

(b) Other Out-Sourced Functions

BNSF/UP largely accept AEPCO's assumptions concerning the outsourcing of some functions. See AEPCO Opening at III-D-53-54 and BNSF/UP Reply at III.D-70-71. However, BNSF/UP disagree that the transportation contract administration function should be outsourced, and they also propose to add \$40 per employee for an Employee Assistance program. *Id.* AEPCO responds to the defendants' position on these items in the discussion of the ANR's Marketing and Human Resources departments, *supra*.

(c) Start-Up and Training Costs

BNSF/UP disagree with several aspects of the startup and ongoing training costs developed by AEPCO. BNSF/UP Reply at III.D-71-72. The

differences between the parties' start-up and training costs are discussed below by position.

T&E Personnel. BNSF/UP indicate that they accept AEPCO's training cost for T&E personnel, except they substitute BNSF's attrition rate experience of 10 percent annually for AEPCO's 3 percent annual attrition rate. For reasons discussed below in the section on Ongoing Staffing Costs, AEPCO does not accept defendants' attrition rate and continues to use a 3 percent attrition rate for T&E personnel on Rebuttal.

Dispatchers. On Opening, AEPCO included a cost for reimbursing dispatcher candidates who take a training course to learn the dispatcher's craft. On Reply, BNSF/UP include training expense equal to 80 percent of a dispatcher's salary (including overtime pay) for 23 weeks of training, and do not include any reimbursement of the cost of a training course. AEPCO accepts the defendants' training cost for dispatchers with one exception: it does not include dispatcher overtime pay during the training period as it is unlikely that student dispatchers while taking course work to learn their trade will earn overtime pay.

Yardmasters. On Opening, AEPCO treated yardmasters as supervisory personnel who do not require training.⁵⁶ On Reply, BNSF/UP include training expense equal to 90 percent of yardmaster's salary for 18 weeks of training

⁵⁶ As with all other supervisory personnel, on Opening AEPCO included a recruitment cost of 25 percent of salary for yardmasters.

and do not include any expense for recruitment of yardmasters as supervisory personnel. AEPCO accepts the defendants' training costs for yardmasters.

Car Inspectors. On Opening, AEPCO included \$5,000 for a training course plus one week's salary for car inspectors for training expense. On Reply, Defendants include training expense equal to 80 percent of eight weeks of salary, plus overtime, and do not include any expense for a training course. AEPCO accepts the defendants' training expense for car inspectors, except that it does not include overtime pay during training for the same reason it excludes overtime pay for student dispatchers.

Maintenance of Way personnel. BNSF/UP indicate they accept AEPCO's training cost for MOW personnel. BNSF/UP Reply at III.D-71. However, review of Reply e-workpaper "ANR Training and Restaffing.xlsx" shows that, without explanation or discussion, the defendants have included 25 percent of each MOW employee's salary as a training cost. Given the inconsistency between the Reply narrative and Reply workpapers, and the lack of any explanation for the difference, AEPCO rejects this additive as unsupported.

AEPCO's Rebuttal training expense is shown in Rebuttal e-workpaper "ANR Operating Expense_Rebuttal.xls," tab "training."

(d) Ongoing Staffing Cost

BNSF/UP accept AEPCO's methodology for calculating ongoing staffing cost, with the exception that they substitute what they claim is their actual attrition rates by type of employee for the 3 percent attrition rate used by AEPCO.

BNSF/UP Reply at III.D-72. AEPCO disagrees that use of BNSF's historical attrition rates is appropriate. An article published in *Pacific Shipper*, titled "Lagging Rails Lay Off Workers," dated October 15, 2007,⁵⁷ discusses layoffs in the rail industry in late 2007 and quotes from both UP and BNSF sources which indicate their attrition rates are far less than those posited by these carriers in this proceeding. The article quotes UP spokesperson James Barnes as saying that UP expects "attrition to shrink [UP's workforce] about 2,200 positions" and also states that at that time UP's workforce averaged 50,755 employees, yielding an attrition rate of only 4.3 percent. The article also states that "BNSF Railway reported 41,595 employees at the end of June, down 1.8 percent or 762 positions from the same point in 2006. BNSF has put few on outright layoffs; but more on reserve status." As BNSF is not laying off employees, the reduction in employees is therefore due to attrition, thus the 1.8 percent reduction in employees represents BNSF's overall attrition rate for this period. The 4.3 and 1.8 percent attrition rates quoted for UP and BNSF, respectively in this independent article are far less than the 10 percent attrition rates used by defendants.

AEPCO's 3 percent attrition rate is consistent with those reported for BNSF and UP from this independent (as opposed to made-for-litigation) source. The economic downturn continued through 2009, so the conditions producing relatively low attrition rates have not materially changed. Accordingly, AEPCO continues to use the 3 percent attrition rate on Rebuttal.

⁵⁷ See Rebuttal e-workpaper "UP and BNSF Attrition Rates.pdf."

(e) **Bad Debt**

BNSF/UP assert that AEPCO failed to provide for bad debts, representing a percentage of the freight charges billed to customers that the ANR will be unable to collect. They assume an uncollectible rate of 0.065 percent of revenue based on a “review[] of uncollectible rates with BNSF and UP.” BNSF/UP Reply at III.D-72-73.

AEPCO does not accept the defendants’ uncollectible rate for two reasons. First, the defendants (unlike AEPCO) have access to the actual write-downs for uncollectible accounts associated with each of the ANR’s customers and could have used this information to determine their actual uncollectible experience (if any) with these customers. Instead, they chose to use system-wide uncollectible rates – perhaps because the average rates are higher than those for the utility and high-volume intermodal customers who generate the bulk of the ANR’s revenue.

Second, customers who are late in paying freight invoices are charged interest. Neither the defendants’ write-down for uncollectables nor their ANR revenues includes any allowance for the interest earned for late-paying customers. These interest charges may well offset any actual uncollectible amounts from ANR customers.

4. **Maintenance-of-Way**

BNSF/UP contend, through their Witness David Hughes, that AEPCO’s MOW plan for the ANR is inadequate and that AEPCO has understaffed

the MOW function. AEPCO's MOW witness, Gene Davis, strongly disagrees.⁵⁸

Mr. Davis believes that Mr. Hughes has approached the ANR's MOW needs with a traditional layered, unionized railroad mentality. Mr. Hughes's most recent railroad engineering experience was at Amtrak, where he served as Chief Engineer from 1999 to 2006. BNSF/UP Reply at III.D-78. As AEPCO Witness Paul Reistrup – who served as Amtrak's second President – attests, Amtrak is hardly a model of railroad efficiency, as it has relied for many years on government subsidies to stay afloat. Mr. Hughes' Amtrak experience doubtless influenced his decision to drive up the ANR's MOW staffing to levels far beyond what is required for an efficient non-unionized start-up operation with brand new physical plant.

a. **BNSF/UP's Benchmark Comparisons are Inappropriate**

BNSF/UP begin their critique of AEPCO's MOW plan by comparing that plan to various benchmarks involving BNSF's and UP's MOW expenditures. BNSF/UP Reply at III.D-81-86. However, it is hardly surprising that the ANR's MOW operating costs per track mile (for example) are significantly below those of BNSF and UP. BNSF and UP are heavily unionized railroads that are the product of numerous mergers and consolidations.⁵⁹ All of these mergers were accompanied

⁵⁸ Mr. Davis's extensive qualifications in railroad engineering and MOW, including many years of field and supervisory experience at NS, are summarized in AEPCO Opening at III-D-58.

⁵⁹ As noted previously, since 1980 UP has acquired and merged with the Missouri Pacific, Western Pacific, Missouri-Kansas-Texas, Chicago and North Western, and Southern Pacific/Denver & Rio Grande Western railroads. During the same period BNSF's predecessors included Burlington Northern Inc. (itself a

by ICC- or STB-mandated employee protective conditions which extended into both the management and unionized ranks, particularly at the field level, and which resulted in more employees than were actually needed as well as protection of individuals whose work tasks are combined with other duties on smaller or non-unionized railroads.

The ANR, on the contrary, is a brand-new, start-up, non-unionized operation that staffs itself efficiently according to the functions to be performed, taking advantage of modern equipment and technology. Its philosophy in developing a MOW plan is different from a Class I railroad's. AEPCO Witness Davis has substantial experience both in a large Class I's (NS's) MOW department, where he was a field manager responsible for maintaining high-density, heavy-haul lines on a daily basis, and in developing MOW plans for new regional railroads such as the Coos Bay Rail Link (which recently acquired the former Central Oregon & Pacific Railroad line serving the port of Coos Bay, OR). The same bottom-up approach used by regional railroads can be used for the ANR, taking into account its higher traffic densities.

In the latter regard, BNSF/UP note that their systems as a whole have lower traffic density than the ANR due to their inclusion of thousands of miles of branch lines with low maintenance expense which reduces the average cost per

product of the merger of the Great Northern, Northern Pacific, Chicago, Burlington & Quincy, Colorado & Southern, Fort Worth & Denver, and Spokane, Portland & Seattle railroads), the St. Louis-San Francisco Railroad, and the Atchison, Topeka & Santa Fe Railway.

track mile, and that the ANR's average cost per track mile therefore should be higher than BNSF's or UP's. BNSF/UP Reply at III.D-81. This is not a valid comparison, and certainly does not mean the ANR's average MOW cost per track mile should be higher than BNSF's or UP's. The need to maintain low-density branch lines actually decreases efficiency, as manpower and equipment spend more time per gross ton-mile maintaining these lines than they can achieve on high-density lines. This is compounded by the fact that lower-density lines are usually maintained by in-house daily field maintenance forces (with the cost expensed), as opposed to the use of mechanized production gangs on higher-density lines with many activities capitalized.

BNSF/UP cite the number of track miles per field employee approved by the Board in *WFA/Basin I* as a further indication that the ANR's MOW staffing is inadequate. BNSF/UP Reply at III.D-83. The *WFA/Basin I* SARR's Board-approved MOW staffing was 4.0 track miles (excluding yards, set-out and helper tracks) per field employee. The ANR's track miles per field employee (again excluding yards, set-out and helper tracks) under AEPCO's MOW plan, as revised on Rebuttal, equal 8.2. However, the ANR has a much larger system than the SARR involved in *WFA/Basin I*, with 2,205 route miles to be maintained compared with only 218 route miles for the *WFA/Basin I* SARR. This means the ANR can be staffed more efficiently due to its greater economies of scale.

Finally, BNSF/UP assert that there should be no material difference between the MOW staffing requirements for a non-union SARR and the staff

required for a modern Class I railroad because the Class I railroads have been aggressively improving labor productivity – with the result that the number of track miles per MOW employee for BNSF (for example) has increased 37% from 1989 to 2008, notwithstanding a 73% increase in traffic density (gross tons per track mile) during the same period. BNSF/UP Reply at III.D-85. While the Class I railroads certainly have improved labor productivity over the past 20 years, they remain unionized operations and they remain subject to various merger-related labor protective conditions. Mr. Davis is confident that if they were able to approach MOW with the philosophy and mindset of a brand-new, unencumbered start-up operation, they would be able to achieve much greater productivity improvements due to the ability of MOW employees to perform additional tasks that are within their skill set without the carrier having to be concerned about time claims by unionized employees.⁶⁰

Mr. Davis's approach was to develop the ANR's MOW plan from the ground up, based on its geography, track system and the gross tonnages moving annually over its various line segments. That this approach resulted in a substantially leaner MOW staff and a lower annual MOW cost per track mile or gross ton-mile should not be surprising.

⁶⁰ An example of this is the opportunity to contract out paving operations (including rail and/or tie replacement) in conjunction with highway grade crossing replacements, instead of utilizing in-house forces to accomplish pavement surface restoration.

b. Personnel

A summary of the parties' positions with respect to the ANR's MOW employee requirements is set forth in Rebuttal Table III-D-5 below.

REBUTTAL TABLE III-D-5 ANR MOW PERSONNEL			
Position	AEPCO Opening	BNSF/UP Reply ANR	AEPCO Rebuttal
HQ Office/Supervisory (based at Amarillo)			
Track Engineer	1	1	1
Communications & Signals Engineer	1	1	1
Assistant Engineer-Signals	1	1	1
Assistant Engineer-Communications	1	1	1
Assistant Engineer C&S – PTC Compliance	1	1	1
Bridge Engineer	1	1	1
Building Engineer	0	1	1
Engineer of Programs and Contracts	1	1	1
Public Projects Engineers	2	2	2
Manager of Administration and Budgets	1	1	1
Manager of Environmental/Safety/Training	1	1	1
Manager of Welding & Grinding	1	1	1
Manager of Mechanical Operations	1	1	1
Supervisor of Work Equipment	1	1	1
Administrative Assistants/Clerks	4	4	4
Subtotal	18	19	19
Field			
Assistant Track Engineers (Field Production)	5	5	5
Roadmasters	15	20	16
Assistant Roadmasters	24	40	26
Track Crew Foreman	29	60	37
Track Crew Members	87	180	111
Roadway Machine Operators	18	52	22
Distribution Truck Drivers (Material Yard)	0	4	0
Clerks (Material Yard)	0	2	0
Welders/Helpers/Grinders	30	80	32
Rail Lubricator Repairmen	5	0	5
Roadway Equipment Mechanic	8	10	8
Ditching Crew Foremen	5	0	4
Ditching Crew Members	5	0	4
Smoothing Crew Foremen	5	20	6
Smoothing Crew Members/Machine Operators	10	40	12
C&S Supervisors	5	5	5

CTC Dispatch Center Technicians	0	5	5
Signal Technicians	0	5	0
Signal Inspectors	0	9	6
Signal Maintainers	40	51	47
Communications Technicians	0	5 ^{1/}	5
Communications Maintainers	0	5 ^{1/}	5
Communications Technicians - Radio & EOTD	6	6	6
B&B Supervisors	2	2	2
Building Maintenance Foremen	0	5	5
Multi-skilled Building Tradesmen	0	15	10
B&B Inspectors	2	2	2
B&B Machine Operators	2	2	2
B&B Foremen	4	4	4
B&B Carpenters/Welders/Helpers	12	12	12
Subtotal	319	646 ^{1/}	404
Total	337	665^{1/}	423
<p>^{1/} As noted in the discussion of the Communications & Signals Department in the text, <i>infra</i>, BNSF/UP's MOW personnel tables and workpapers incorrectly overstate their proposed field MOW staffing by ten employees (five Communications Technicians and five Communications Maintainers).</p>			

As can be seen from this table, AEPCO and BNSF/UP now agree on the office/supervisory staffing for the MOW function. The remaining differences in the parties' field staffing for the three sub-departments (Track, Communications & Signals, and Bridges & Buildings) are discussed below.

i. Track Department

The parties concur that the general office staff for the Track Department numbers five employees, including the Track Engineer, Manager of Welding & Grinding, Supervisor of Work Equipment, and an Administrative Assistant. Differences in the parties' field staffing for the Track Department are shown in Rebuttal Table III-D-6 below.

REBUTTAL TABLE III-D-6 ANR FIELD TRACK EMPLOYEES			
Position	AEPCO Opening	BNSF/UP Reply ANR	AEPCO Rebuttal
Asst. Track Engineers (Field Production)	5	5	5
Roadmasters	15	20	16
Asst. Roadmasters	24	40	26
Track Crew Foreman	29	60	37
Track Crew Members	87	180	111
Roadway Machine Operators (Roadmaster)	15	40	16
Roadway Machine Operators (Track Engineer)	3	10	6
Roadway Machine Operators (Material Yard)	0	2	0
Distribution Truck Driver (Material Yard)	0	4	0
Welder/Helper/Grinders	30	80	32
Rail Lubricator Repairmen	5	0	5
Roadway Equipment Mechanics	8	10	8
Ditching Crew Foremen	5	0	4
Ditching Crew Members	5	0	4
Smoothing Crew Foremen	5	20	6
Smoothing Crew Member/Machine Operators	10	40	12
Total	250	513	288

Roadmasters and Assistant Roadmasters. As BNSF/UP note, in heavy-haul territory the size of a Roadmaster's district varies depending on workload (gross tonnage miles of main track, track curvature and gradient, *etc.*) and track accessibility. BNSF/UP Reply at III.D-93. BNSF/UP assert that the size of the ANR's Roadmaster districts as proposed by AEPCO is too large, averaging about 140 route miles, and that the ANR's Roadmaster districts should average 110 route miles and 165 track miles which requires 20 districts rather than 15 as proposed by AEPCO. *Id.*

AEPCO Witness Davis disagrees that the ANR's Roadmaster districts should be increased by five for several reasons. First, BNSF/UP's claim that

AEPCO has not accounted for the “omission” of maintenance access roads along the right-of-way, which prevents “normal” access to the track for maintenance activities, is erroneous.⁶¹ The “normal” situation on the vast majority of the mainline rail routes in the United States is that there are no constructed access or service roads. Maintenance roads are likely to be provided only as part of new BNSF and UP track construction within the past fifteen years or so, such as the addition of a second or third main track.

The vast majority of the existing maintenance roads on the current national rail system (including the BNSF and UP systems) developed informally over the years, as BNSF/UP acknowledge in footnote 134 on page III.D-113 of their Reply. Parallel track access was gained by driving MOW trucks and other vehicles over unimproved property along the right of way (or sometimes construction roads), similar to what is available to the ANR after construction of its lines is completed. The ANR’s maintenance forces would make productive use of the right-of-way and nearby parallel roads to perform any duties that can be accomplished without formal track time authority, such as staging materials and

⁶¹ BNSF/UP Reply at III.D-93. BNSF/UP claim that maintenance roads exists on more than 75% of the ANR route on the incumbent railroads, but they do not provide any support for this number nor do they indicate exactly where the maintenance roads exist. Based on field observations of the ANR route by AEPCO’s engineering and operating experts), actual maintenance roads exist primarily on the Orin Subdivision and in other areas where BNSF or UP has recently added a second main track or additional passing siding. Most of the existing replicated right of way does not have constructed access roads – as opposed to the existence of unimproved roads made by the passage of construction and maintenance vehicles along the right of way over time.

equipment. Once formal authority is received, they either set the crew truck on the track at a nearby crossing to use the hydraulic boom to change out heavier components, or use the excavator and/or a backhoe to change out the track structure component.

BNSF/UP give the erroneous impression that the vast majority of maintenance work is accomplished while occupying maintenance roads. While some preliminary work is performed from such roads (such as getting tools and materials in place), the major portion of MOW work is performed with the maintenance crews' hi-rail boom trucks on the track.⁶² Moreover, the access road may be on the opposite side of the tracks (in double-track territory) where the maintenance work is to be performed (such as changing out a rail). All a maintenance road would do in that scenario is allow the MOW forces to unload tools near the work area; then they would have to move the truck to a crossing and, when formal track time is received, set the vehicle onto the track on which the work is to be performed to return to the work area. With the railroads' (including BNSF's and UP's) heavy emphasis on safety, they are very likely to encourage their MOW employees to make all possible use of the boom trucks' hi-rail capabilities.

⁶² It should be noted that a hi-rail vehicle cannot transfer from a parallel maintenance-access road directly to the track anywhere along the route except where there is an at-grade road crossing of the tracks, either public or private. The ANR would develop the same understandings with private landowners to use their private roads to access the tracks that any railroad does in the normal course of its business.

In short, there are an almost-infinite number of possibilities of how maintenance work can be performed without constructed or improved maintenance access roads, many of which occur every day on heavy-haul railroads such as the ANR. Vehicles can move along the right-of-way without formal access roads in most areas, and there are parallel highways or other roads near most of the ANR's route, as well as numerous road grade crossings.⁶³ The access-road issue as framed by BNSF/UP is a red herring and, like real-world railroads, the ANR's maintenance forces do not need improved maintenance roads to quickly and safely perform their work.

In addition, BNSF/UP's proposal for 20 Roadmaster districts is inefficient. The defendants propose an average of only 165 track miles per Roadmaster district. Mr. Davis spent many years as a Track Supervisor (equivalent to a Roadmaster) at NS and through his contacts at NS continues to be familiar with the size of NS's Track Supervisor territories. For example, NS's Pocahontas Division serves the West Virginia/Virginia/Kentucky/Ohio coal fields, and is situated in heavy-haul, mountainous territory with numerous grades and curves. When Mr. Davis was a track Supervisor on the Pocahontas Division, it had (and still has) about 2,330 track miles including areas with two main tracks and several

⁶³ The ANR has a total of 683 public at-grade crossings along its 2,205.7 route miles, and at least 475 private crossings. Thus, on average, there is a road crossing of the tracks every 1.9 miles.

yards, with a total of 11 Track Supervisor (Roadmaster) districts.⁶⁴ Thus each district covers an average of approximately 212 miles.

Mr. Davis agrees that the 15 Roadmaster districts he provided on Opening are a little thin, and has increased the number by one, to 16, on Rebuttal. This reduces the average track miles per Roadmaster district to 225 (3,608.75 track miles [including all main, side and yard trackage] ÷ 16). While this is slightly more track miles per Roadmaster than on the real-world NS Pocahontas Division, the difference is negligible considering that the maintenance conditions faced by NS on the Pocahontas Division (including the need to maintain an older track structure) are more severe than those faced by the ANR. The revised ANR Roadmaster (and Assistant Roadmaster) territories are described in Rebuttal e-workpaper “MOW Roadmaster Territories-Revised.xls.”

With respect to Assistant Roadmasters, BNSF/UP propose to increase the number of these ANR employees from 24 to 40, evidently to provide a uniform two Assistant Roadmasters for each Roadmaster district. BNSF/UP Reply at III.D-92. The Assistant Roadmasters are primarily responsible for conducting twice-weekly FRA track inspections of the ANR’s lines. On most heavy-haul or heavily-congested railroads, approximately 50-60 miles of track can be patrolled (inspected) per day given that the maximum allowable speed for a hi-rail inspection vehicle

⁶⁴ Mr. Davis notes that there are almost no improved maintenance access roads along the Pocahontas Division, built specifically as such. However, there are numerous locations where MOW forces gain access by driving over construction roads, similar to what would be available to the ANR.

going forward is 25 mph, with slower speeds when traversing highway grade crossings and switches. This allows for the inspector to set off to clear trains and perform minor repairs as defects are discovered. Under these conditions, a Roadmaster territory covering up to 120 route miles would need only one Assistant Roadmaster.⁶⁵

Some of the ANR's Roadmaster districts cover more than 120 route miles; for each of these districts Mr. Davis has provided two Assistant Roadmasters. See Rebuttal e-workpaper "MOW Roadmaster Districts-Revised.xls." The result is a total of 26 Assistant Roadmasters for the ANR. This is "right-sizing," or matching the necessary staff levels to the individual Roadmaster territories, rather than simply providing the same manpower for all territories regardless of their individual characteristics.

Track Crews. On Opening, AEPCO provided a total of 29 four-person track crews, with each crew consisting of a foreman and three crew members. BNSF/UP accept the use of four-person track crews, but propose to increase the number of crews to 60 so that each of their proposed 20 Roadmaster districts has three track crews. BNSF/UP Reply at III.D-97. This is overkill, and

⁶⁵ The Assistant Roadmaster would cover the first half of the territory on Mondays and Thursdays, and the second half on Tuesdays and Fridays. (This leaves Wednesdays to do walking inspections of less-used tracks and yard tracks, and performance of other minor track work.) According to FRA regulations (49 CFR § 213.233(b)(1), "One inspector in a vehicle may inspect up to two tracks at one time provided that the inspector's visibility remains unobstructed by any cause and the second track is not centered more than 30 feet from the track upon which the inspector is riding." Thus, up to 120 route miles can be covered per week even in double-track territory.

BNSF/UP have not explained why a uniform three track crews are needed for each Roadmaster district (or provided evidence of their own, real-world track crew territories). Based on his revised Roadmaster districts, Mr. Davis has again matched the number of track crews to the appropriate size and conditions (tonnage) for each individual territory, considering track miles and gross tonnage. As a result, he has increased the number of track crews from 29 to 37, and the total number of employees for the track crews from 116 to 148 (37 foremen and 111 crew members). The revised track crew districts are shown in Rebuttal e-workpaper “Roadmaster Districts-Revised.xls.”

In the *WFA/Basin* case, both parties (with the Board’s acquiescence) accepted approximately 89.4 track miles per SARR track crew (446.5 miles ÷ 5).⁶⁶ In this case, AEPCO’s 37 track crews cover an average of 97.5 track miles per crew (3,608.75 miles ÷ 37). BNSF/UP’s proposed 60 track crews would cover an average of only 60.1 track miles per crew (3,608.75 miles ÷ 60). AEPCO’s staffing for the ANR thus more closely matches the staffing accepted by the Board in *WFA/Basin I*.

Roadway Machine Operators. On Opening, AEPCO provided a total of 18 Roadway Machine Operators, with 15 assigned to the Roadmasters (one for each backhoe assigned to each Roadmaster District), and three assigned system-wide to operate track excavators and Prentice Loaders. BNSF/UP propose to increase the total number of Roadway Machine Operators from 18 to 52, with 40

⁶⁶ See *WFA/Basin I* at 26 and 58.

assigned to the 20 Roadmaster Districts (one operator for backhoe and speedswing for each Roadmaster), 10 assigned to the Track Engineer (*i.e.*, system-wide), and two assigned to two MOW material yards which BNSF/UP also propose to add. AEPCO Witness Davis agrees that each Roadmaster District should be assigned a Machine Operator to operate a rubber-tired backhoe, and thus has increased the number of these Machine Operators from 15 to 16. He has also added three additional “system” Machine Operators (for a total of six) to operate the additional small excavator, large excavator and Prentice Loader that he agrees should be added. Mr. Davis disagrees that any additional local Machine Operators are needed for rubber-tired speedswings, or that the ANR needs any Machine Operators for material yards.

Having both a rubber-tired backhoe and a speedswing is unnecessary, as both pieces of equipment are able to perform similar tasks (installing rail and frogs as well as helping to distribute materials). The backhoe has an advantage over the speedswing in that it has a bucket along with a “thumb” which grips crossties, allowing the backhoe to install ties which the speedswing is ill-equipped to do or help with.

The ANR has no need for any centralized materials yards. The ANR system is comparable in size to an operating division on a Class I railroad such as BNSF, UP or NS. Best practice today is that, at the division level, MOW materials are ordered from the vendor by the Division Engineer’s office and shipped directly to the Roadmasters’ headquarters via truck (for smaller items), or via rail (for

larger items such as frogs, switch points, stock rails, *etc.*). The materials are then off-loaded and distributed to the field via the individual Roadmaster's truck and lowboy, or distributed via railcar as needed. No separate material management group or materials yards are needed. The same process is used on the ANR; materials are ordered by the Engineering general office and shipped by vendors directly to the Roadmasters' headquarters, as needed. This cuts down on inventory and personnel needed to man separate materials yards, as well as limiting the exposure of material to theft at remote locations..

The elimination of designated material yards eliminates the need for two Machine Operators for these yards, as well as the four Distribution Truck Drivers and the two Clerks proposed by BNSF/UP for these unnecessary yards.

Welder/Helper/Grinders. AEPCO's original MOW plan called for 15 welding crews (one for each Roadmaster District), with each crew consisting of a Welder and a Welder/Helper/Grinder – meaning that a total of 30 employees were needed to man these crews. AEPCO Opening at III-D-67-68. On Rebuttal, Mr. Davis has increased the number of welding crews to 16 due to the increase in Roadmaster Districts from 15 to 16 (for a revised total of 32 Welder/Helper/Grinder employees). BNSF/UP propose a total of 80 of these employees, with two, two-person welding crews assigned to each of their proposed 20 Roadmaster districts. BNSF/UP Reply at III.D-92, 93.

Based on Mr. Davis' experience at NS, having one welding crew per Roadmaster district is well within the norm of a heavy-haul railroad. BNSF/UP

claim that additional welding crews are required because the ANR has more than 5,200 insulated joints with an estimated useful life of 100 million gross tons (MGT) each. *Id.* at III.D-93 n. 111. However, insulated joint manufacturers suggest that insulated joints have a useful life of at least 300 MGT, and Mr. Davis has seen advertisements in industry trade publications stating that modern insulated joints can last up to 800 MGT if properly maintained. *See* Rebuttal e-workpaper “Bonded Insulated Joint.pdf.”

When Mr. Davis was a Track Supervisor on two NS divisions, he changed insulated joints when required, but nowhere near the rate proposed by BNSF/UP of the insulated joints per week per Roadmaster district. Insulated joint replacement on the ANR could be expected to occur about six to twelve times per year per Roadmaster district, based on many factors including tonnage, curvature, track profile, *etc.* With the advent of greater joint bar and insulation material strengths due to improved technology in recent years, the rate should decline even further. In short, there is no need to double the number of welding crews by providing two per Roadmaster district, rather than one.

Rail Lubricator Repairmen. The ANR MOW plan developed by Mr. Davis calls for five Rail Lubricator Repairmen to inspect and repair the railroad’s 220 rail lubricators on a regular basis. AEPCO Opening at III-D-68-69. BNSF/UP propose to eliminate these positions under the theory that lubricator maintenance

could be performed by the track crews. BNSF/UP Reply at III.D-99.⁶⁷ Mr. Davis retains these employees because it is more efficient to have one person perform this function than four, and to keep the track crews free to perform other, more labor-intensive work.

Ditching Crews. On Opening, Mr. Davis staffed the ANR with five two-person ditching crews, each consisting of a Foreman and a Ditching Crew Member, assigned a hi-rail Gradall and rotary dump truck, on a geographic basis. AEPCO Opening at III-D-69-70. BNSF/UP propose to eliminate the ditching crews because light ditching could be handled by a track crew or a Machine Operator and backhoe and heavier ditching could be handled by one of the “system” Machine Operators. BNSF/UP Reply at III.D-99.

Mr. Davis believes it prudent to retain the ditching crews, who are assigned their standard equipment (Gradalls and rotary dump trucks) and who concentrate on ditching work, thus freeing up the track crews for other work. However, given the addition of three system Machine Operators and related equipment (an additional small excavator, large excavator and Prentice Loader), the ditching crews’ system-wide workload has been reduced so Mr. Davis has reduced the number of ditching crews from five to four (or one for every four Roadmaster Districts). With the addition of an additional small and large excavator, if drainage work that is needed is beyond the Gradall’s capabilities, one of the four excavators

⁶⁷ This may in part account for the increase in the number of track crews proposed by BNSF/UP.

(with its operator) can be brought in for assistance. Thus the total staffing for the ditching crews is reduced from 10 to eight.

Roadway Equipment Mechanics. BNSF/UP propose to increase the ANR's Roadway Equipment Mechanics from eight to ten, thus providing one Mechanic for every two Roadmaster districts. BNSF/UP Reply at III.D-101. The eight Mechanics AEPCO provided (AEPCO Op. at III-D-69) also equal one for every two Roadmaster Districts (which have been increased to 16 on Rebuttal). Since this is consistent with the ratio proposed by BNSF/UP, and since it is well within the capabilities of a mechanic to cover two Roadmaster territories, there is no need for additional Roadway Equipment Mechanics.

Smoothing Crews. On Opening AEPCO provided five smoothing crews, each consisting of a Foreman and two Crew Members/Machine Operators, for a total of 15 employees. AEPCO Opening at III-D-70-71. BNSF/UP propose to increase the number of three-person smoothing crews to 20 (one for each Roadmaster District), for a total of 60 employees. BNSF/UP Reply at III.D-92, 97. In support of this level of staffing, BNSF/UP claim that a smoothing crew would have only two hours of productive on-track time per day due to traffic volume and lack of maintenance roads. *Id.* at III.D-98. However, this is the absolute worst-case scenario, involving a scheduled railroad whose trains are always evenly spaced out and on which no fleeting occurs, and it also assumes the dispatching center would be unwilling to bunch up trains to allow a work window. On the ANR, there will be days when the level of traffic is such that only a total of about two hours of track

time will be available. However, there will be plenty of other days, for example in double-track territory, where a smoothing crew can work on one of the main tracks for a couple of hours, during which time the dispatcher would bunch up the trains, and once the smoothing crew clears the track, these trains would run and the crew could then get back out to work some additional time. BNSF/UP Witness Hughes ignores these considerations, doubtless because of his days with Amtrak where trains ran on a specified schedule. The ANR's trains often can be run on an as-needed basis thus providing work windows for smoothing (and other) crews to perform MOW work.

It simply is not the norm in the rail industry for each Roadmaster to have his own smoothing crew. Mr. Davis's experience on NS is that smoothing gangs are shared between two or three Track Supervisors (Roadmasters). Since Mr. Davis has added one Roadmaster district on Rebuttal, for a total of 16, he also adds one smoothing crew (for a total of 6) to keep the ratio of Roadmaster districts to smoothing crews under 3 to 1. This adds one Foreman and two Crew Members, or a total of three additional employees, to the Opening count – resulting in a total of 18 employees working on the smoothing crews.

ii. Communications & Signals Department

As with the ANR's Track Department, the parties concur that the general office staff for the Communications & Signals ("C&S") Department consists of five employees, including the C&S Engineer, Assistant Engineer-Signals, Assistant Engineer-Communications, Assistant Engineer-PTC Compliance,

and an Administrative Assistant. Differences in the parties' field staffing for the C&S Department are shown in Rebuttal Table III-D-7 below.

REBUTTAL TABLE III-D-7 ANR FIELD C&S EMPLOYEES			
Position	AEPCO Opening	BNSF/UP Reply ANR	AEPCO Rebuttal
C&S Supervisors	5	5	5
Signal Technicians	0	5	0
Signal Inspectors	0	9	6
Signal Maintainers	40	51	47
CTC Dispatch Center Technicians	0	5	5
Communications Technicians	0	5 ^{1/}	5
Communications Maintainers	0	5 ^{1/}	5
Communications Technicians - Radio/EOTD	6	6	6
Total	51	91	79
<p>^{1/} The Reply narrative describes five employees for each of these positions, but Reply Table III.D.22 and the Reply MOW workpapers show 10 employees for each position.</p>			

Signals System Maintenance. AEPCO provided for a field signals system maintenance staff consisting of 40 Signal Maintainers (one for every 1,600 AAR signal units). AEPCO Opening at III-D-74-75. BNSF/UP propose to increase the number of Signal Maintainers to 51, and to add five Signal Technicians and nine Signal Inspectors. BNSF/UP Reply at III.D-102-104.

AEPCO Witness Davis agrees that Signal Inspectors should be added to conduct tests, but concludes that six such employees are sufficient rather than the nine proposed by BNSF/UP. Based on discussions with an industry

consultant who has worked as both a Signal Technician and a Signal Maintainer,⁶⁸ current best practice is that one inspector covers the territory of seven to eight maintainers. Based on the revised count of Signal Maintainers, this means the ANR needs six Signal Inspectors.

The same consultant advised Mr. Davis that for a freight railroad with CTC, a good rule of thumb for Signal Maintainer requirements is in the mid-range between 1,250 AAR signal units per Maintainer (the number proposed by BNSF/UP) and 1,500 AAR signal units per Maintainer. The average of these two numbers is 1,375 AAR signal units per Maintainer, and Mr. Davis has revised the number of ANR Signal Maintainers upward to reflect this ratio rather than the 1:1,600 ratio he used on Opening. The result is that the ANR requires 47 Signal Maintainers (64,804 total AAR signal units on Rebuttal ÷ 1,375), an increase of seven employees from AEPCO's Opening number.

BNSF/UP propose to add five Signal Technicians to maintain electronic signal equipment such as code units, electronic track circuits, *etc.*, which the defendants claim is beyond the skills of a Signal Maintainer. BNSF/UP Reply at III.D-104. However, the defendants provide no support for this broad statement. The industry consultant referenced above, who has worked under both job classifications, confirms that the work BNSF/UP want to assign to Signal Technicians is not beyond the capabilities of Signal Maintainers – rather, the

⁶⁸ See Rebuttal e-workpaper “AEPCO Revised Signal and Communications Staffing.doc.”

“Signal Technician” designation is simply a job classification that has been passed down by some railroads as a result of mergers, and has been eliminated by many railroads. *See* Rebuttal e-workpaper “AEPCO Revised Signal and Communications Staffing.doc.” This is a classic example of the kind of overlapping skills that the ANR is well-positioned to take advantage of – unlike Class I railroads due to their contracts with unionized MOW employees.

Finally, BNSF/UP propose to add five CTC Dispatch Center Technicians to maintain the “mission critical” equipment in the ANR’s Dispatch Center. These five employees would cover one 24/7 position. BNSF/UP Reply at III.D-104. Mr. Davis agrees that a 24/7 CTC Dispatch Center Technician should be added, and has provided the same a total of five employees to staff this position 24/7.

Communications System Maintenance. On Opening, AEPCO proposed a staff of six Communications Technicians, who are primarily responsible for maintaining train crew radios and other communications devices. BNSF/UP accept AEPCO’s staffing for this position, but propose to add five two-person field communications maintenance crews, each consisting of a Communications Technician and a Communications Maintainer. BNSF/UP Reply at III.D-105-106. AEPCO notes that BNSF/UP list 10 employees for each position in the table on pp. III.D-102-103 of the Reply narrative and in their MOW workpapers.⁶⁹ However, the narrative text specifically describes five two-person communications

⁶⁹ *See* Reply e-workpaper “ANR III-D MOW Tables.xls,” tab “C&S.”

maintenance crews, and in the absence of any explanation for the higher staffing levels shown in the table and workpapers, AEPCO assumes BNSF/UP intended five crews and a total of ten employees for both positions.

AEPCO accepts BNSF/UP's position that communications system maintenance should be performed in-house rather than being contracted out. Accordingly, AEPCO accepts the additional staffing proposed by BNSF in its Reply Narrative (five Communications Technicians and five Communications Maintainers). This results in elimination of the contract maintenance expense for communications equipment that AEPCO submitted on Opening.

iii. Bridge & Building Department

The parties agree on the general office staffing for the ANR's Bridge & Building ("B&B") Department, except that BNSF/UP propose to add a separate Engineer of Buildings position. The parties also agree on the field staffing for the B&B Department, except that BNSF/UP propose to maintain the ANR's buildings with in-house employees rather than contracting out this maintenance, and accordingly propose to add five Building Maintenance Foremen and 15 Multi-Skilled Building tradesmen. BNSF/UP Reply at III.D-106-108.

AEPCO has concluded that it is both more prudent and more economical to provide an in-house building maintenance staff than to have the ANR's buildings maintained by contractors. Accordingly, AEPCO accepts BNSF/UP's proposed B&B staffing for both general office and field employees, except that it disagrees that four-person building crews are required. BNSF/UP

have not explained why each of the five crews needs to consist of three crew members plus a foreman, rather than two crewmen plus a foreman. Since each building crew is assigned a double cab pickup truck, any of the employees would be able to drive. As a result of Mr. Davis's time as Assistant Division Engineer-Bridges on the NS Pocahontas Division, and as a B&B Supervisor in Millen, GA, he is well-familiar with the size of a crew necessary to maintain repairs to buildings. There is no doubt that needed repairs can be accomplished with a three-person crew. Accordingly, on Rebuttal AEPCO reduces the number of Multi-Skilled Tradesmen from 15 to 10 (two for each of the five building maintenance crews).

The parties' remaining differences with respect to the field staffing for the B&B Department are shown in Rebuttal Table III-D-8 below.

REBUTTAL TABLE III-D-8 ANR FIELD B&B EMPLOYEES			
Position	AEPCO Opening	BNSF/UP Reply	AEPCO Rebuttal
B&B Supervisor	2	2	2
B&B Inspector	2	2	2
Building Maintenance Foremen	0	5	5
Multi-Skilled Building Tradesmen	0	15	10
B&B Machine Operator	2	2	2
B&B Foreman	4	4	4
B&B Carpenter/Welder/Helper.	12	12	12
Total	22	42	37

d. Compensation for MOW Employees

BNSF/UP have accepted the salaries proposed by AEPCO for the ANR's MOW personnel, except for the new positions that AEPCO has accepted on Rebuttal. AEPCO accepts BNSF/UP's proposed salaries for these new positions, with the exception of the Communications Maintainer, Communications Technician and CTC Dispatch Center Technician positions; it appears that BNSF erroneously used the Signal Maintainer salary for these positions. The revised salaries for MOW personnel are shown in Rebuttal e-workpaper "ANR Salaries-Revised.xls."

e. Non-Program MOW Work Performed by Contractors

BNSF/UP largely accept AEPCO's plan to contract out certain non-program MOW work, including both planned and unplanned contract maintenance. As noted earlier, AEPCO accepts BNSF/UP's proposal to use in-house MOW forces to maintain the ANR's communications systems and buildings, rather than contracting this work out as originally planned.

BNSF/UP agree with AEPCO's development of annual costs for the following items of contract maintenance: track geometry testing, ultrasonic rail testing, ballast cleaning, yard cleaning, vegetation control, crossing repaving, bridge inspections, and derailments. BNSF/UP Reply at III.D-109. They disagree with AEPCO's annual maintenance costs for snow removal, storm debris removal and washouts, and environmental cleanup. *Id.*

Snow removal. It is very difficult to estimate annual costs for snow removal accurately, as nobody can predict the weather a long time in advance and

snowstorms vary widely from state to state as well as year to year. On further reflection, Mr. Davis has concluded that a better way to estimate the appropriate amount to set aside for annual snow removal on the ANR is, first, to consider that a local snow plow can usually be contracted for about \$50 per hour. Mr. Davis determined that 500 hours of plowing (his original line item) could be accomplished for that amount. Using an eight-hour work day, this equates to 62.5 days of snow plowing annually.⁷⁰ Considering the ANR's five major yard locations and that snow is very unlikely at El Paso and Cochise, Mr. Davis conservatively doubles his annual snow removal estimate, from \$25,000 to \$50,000. This revised number, which is reflected in Rebuttal e-workpaper "MOW Costs-Revised.xls," equals 125 eight-hour days spread out over the winter months.

Storm debris removal and washouts. On Opening Mr. Davis estimated annual storm debris removal costs at \$25,000 and annual washout cleanup costs at \$25,000, or a total of \$50,000. AEPCO Opening at III-D-91-92 and Opening e-workpaper "MOW Costs.xls." BNSF/UP estimate the cost of these two items at \$1 million annually, based on input from UP officials to the effect that UP retains a contractor on a year-around basis for \$1 million to perform this kind of work in across Arizona and new Mexico. BNSF/UP Reply at III.D-110. Mr. Davis

⁷⁰ In contrast, BNSF/UP assumed that 3,000 hours of snow plowing would be required annually. This produces 375 days of snow plowing per year at eight hours per day, which is absurd considering that approximately half of the ANR system is located in Texas, New Mexico and Arizona where snowfall is minimal.

believes \$1 million is far too high for maintenance work that may/may not occur and that is every bit as unpredictable as the aforementioned snow storms.

On Rebuttal, Mr. Davis has increase his annual cost estimate for storm debris removal to \$50,000 and for washouts to \$290,000, for a total of \$340,000. The \$50,000 allocated by Mr. Davis for storm debris removal allows for 400 hours (*i.e.*, 50 eight-hour days) at \$125 per hour for a contract machine such as a rubber-tired backhoe or small excavator and its operator. Alternatively, if a crane is required to remove debris, a \$50,000 allotment allows for 12.5 eight-hour days at \$500 per hour for the machine and its operator. The \$290,000 allocated for washouts allows for two contract machines such as mid-sized excavators plus operators for 60 days, eight hours per day, at \$200 per hour each, working with a foreman or supervisor for the same time periods at \$100 per hour, plus an allowance of \$50,000 for materials and rock/ballasting.

Environmental cleanup. After consideration of BNSF/UP's evidence with respect to environmental cleanups, AEPCO accepts their annual cost for this item. After making a minor mathematical correction, the annual amount is \$114,097. *See* Rebuttal e-workpaper "MOW Costs-Revised.xls."

f. **Contract Maintenance (Capitalized)**

BNSF/UP concur with AEPCO's capitalization of programmed maintenance work, including surfacing, rail grinding and bridge superstructure/substructure repairs.

g. Equipment

BNSF/UP accept most of the items of MOW equipment (including hi-rail vehicles, Gradalls, excavators, backhoes, *etc.*) proposed by AEPCO, with some additions to reflect their proposed increases in field staffing as well as several large pieces of equipment such as speedswings that would be available for use system-wide. As explained previously, AEPCO rejects BNSF/UP's proposed addition of speedswings because they are redundant and, overall, less useful than each Roadmaster's backhoe and lowboy.

In addition, AEPCO has not allocated any work-train equipment. Traditionally, MOW work trains are used to support capitalized gang activities such as rail, tie and ballast replacement. No specific work trains are necessary to support daily, ordinary MOW activities.

h. Incremental Cost Additive Associated With the Absence of Maintenance Roads

BNSF/UP propose a cost additive of \$37.6 million annually to cover the alleged "incremental" increase in maintenance costs associated with the absence of maintenance roads. BNSF/UP Reply at III.D-111-121. This is the first time a defendant in a SAC case has contended that if constructed maintenance roads are not included in the SARR's road property investment costs, their absence causes an incremental increase in SARR MOW costs. BNSF/UP's novel argument should be rejected by the Board for several reasons.

First, the ANR has access roads along its tracks to the extent they were included in the original construction of the liens being replicated. The cost of these roads is included in the ANR's grading costs. BNSF/UP have not provided any evidence that they have constructed access roads along any portion of the ANR route since the original construction of these lines, where no new track construction has occurred. If improved access roads were so much more efficient and productive compared with original construction roads combined with unimproved roads made by driving over the open right-of-way, the Class I railroads would be building improved roads all over their systems as fast as possible.

Second, geography traversed by the ANR is fairly flat. The ANR has a 100-foot right-of-way width, and four-wheel drive ("4WD") MOW vehicles can travel alongside the track over a vast majority of the route. As indicated at pp. III-D-132-134, *supra*, access along the tracks does not have to be over improved roads.

Third, there is substantial access to the ANR's tracks at public and private road at-grade crossings. The ANR has a total of 683 public road crossings and at least 475 private crossings, or a total of 1,158 grade crossings. This equates to a crossing every 1.9 route miles on average (2,205.47 route miles ÷ 1,158).

Fourth, construction costs for access roads have been rejected by the Board in several prior SAC proceedings where such roads were not included with the original construction. *See TMPA*, 6 S.T.B. at 701-702; *AEP Texas* at 80; *WFA/Basin I* at 83-84. In *TMPA*, the Board accepted the complainant's argument that "access roads are not generally necessary, because maintenance equipment can

access the ROW over the line, and because the numerous road crossings along the [SARR] route would permit crews to access the ROW by four-wheel drive vehicles”, and held that “BNSF has not demonstrated that any access roads would be needed where it does not already have such roads itself. . . .” *Id.* at 702.

AEPCO has submitted similar evidence in this proceeding. As discussed in connection with the ANR’s Track department at pp. III-D-132-134, *supra*, the absence of formal, improved maintenance roads does not have a measurable or quantifiable impact on the ability of the field MOW forces to perform their work without unduly interfering with train operations. Vehicles and equipment are able to travel along the right of way on unimproved “roads” that were built during the ANR’s construction phase or that develop over time as maintenance vehicles move along the tracks.⁷¹ Hi-rail maintenance vehicles can only get on the track at grade crossings, which are accessible from the many public highways that parallel the ANR’s lines and from private (farm or ranch) crossings, to which the ANR will acquire access just as other railroads do.⁷² Non hi-rail

⁷¹ BNSF/UP acknowledge the gradual building of unimproved (but useful) maintenance roads in a brief footnote on page III.D-113 of the Reply. In addition, the construction of access roads is reflected in the ANR’s grading quantities to the extent that access roads were included in the original construction of the lines replicated by the ANR by the defendants or their predecessors. BNSF/UP have not demonstrated that maintenance vehicles are unable to travel along the right-of-way at other locations.

⁷² As noted earlier, the ANR averages a road grade crossing every 1.9 route miles. This means MOW vehicles will not have to travel long distances to find a location where they can access the right of way, or use their hi-rail equipment to get on the track.

equipment also often has to be moved to the other side of the tracks (in double-track territory) at grade crossing if the access road (whether improved or informal) is located on the opposite side of the right of way as the track on which the work is to be performed.

Notwithstanding these facts, BNSF/UP have posited an increase in the ANR's annual maintenance costs due to the absence of maintenance roads in the form of a largely-indirect "cost premium" of \$36.7 million – which represents an incredible 35 percent of their proposed total MOW operating expense. BNSF/UP Reply at III.D-119-121. This novel cost additive is dependent on hypothetical and completely-unsupported assumptions as to the impact on train operations (and MOW employee time) resulting from MOW employees using hi-rail vehicles to travel on the track to and from the places where work is to be performed. The defendants have not presented any evidence documenting the alleged need for MOW employees to travel almost exclusively on the track, such as a demonstration of the portions of the ANR's right-of-way that might be impassible to four-wheel-drive maintenance vehicles, or evidence that travel via adjacent roads to grade crossings in the vicinity of the work sites is infeasible or unduly time-consuming.⁷³

⁷³ Again, the ANR has an average of only 1.9 route miles between road grade crossings. In this regard, the defendants assert that while hi-rail vehicles can get on/off the track at grade crossings, smoothing crews cannot. But this begs the question, as the implication of the defendants' statement is that smoothing crews must occupy the track regardless of whether there are improved maintenance roads along the track. The only substantive advantage access roads provide to smoothing crews is access to broken-down machinery on the main tracks by the roadway equipment repairmen.

In short, BNSF/UP have not carried their burden of proof with respect to their self-serving contention that the absence of improved maintenance-access roads results in an incremental increase in MOW costs – much less their claimed annual amount of \$37.6 million. The Board should reject any such addition to the ANR’s annual MOW costs.

5. Leased Facilities

Although the ANR has no leased facilities, it does have trackage rights over 29.57 miles of MRL line in Montana. BNSF/UP disputes the ANR’s ability to use these trackage rights for any traffic other than “overhead bridge movements” between segments that the ANR constructs or local coal traffic moving to PPL Montana’s Corette power plant near Billings, MT. BNSF/UP Reply at III.D-142. AEPCO has previously demonstrated that the ANR is entitled to use the MRL trackage rights to move any traffic that BNSF moves over the same line, including overhead traffic that does not have a prior or subsequent move on an ANR-constructed line. *See pp. III-B-2-5, supra.*

BNSF/UP also assert that AEPCO failed to account for all of the costs (payments to MRL) associated with the ANR’s use of the trackage rights.

BNSF/UP Reply at III.D-142. For example, the defendants state that “AEPCO selected trains that would originate or terminate in Laurel, Montana. BNSF pays MRL { }” (*id.*). However, the defendants are incorrect in stating that any ANR’s trains originate or terminate in MRL’s Laurel Yard. The interchange between the ANR and BNSF occurs at East

Mossmain Jct., and AEPCO included sufficient trackage (non-constructed route miles) east of that point in its RTC simulation to allow the trains to exit and enter the ANR system.⁷⁴ Thus, to the extent these trains use the MRL's Laurel Yard, they do so while on the equivalent of the residual BNSF, not while on the ANR. Thus the ANR { }

6. Loss and Damage

BNSF/UP state that AEPCO calculated the ANR's loss and damage costs using a three-year average of the defendants' loss and damage experience, not using a single year (2008). *Id.* at III.D-143. BNSF/UP accept the multi-year approach actually used by AEPCO, and also accept AEPCO's pro-rata allocation to the ANR based on relative mileages. *Id.*

7. Insurance

AEPCO calculated the ANR's annual insurance expense based on the average of BNSF's 2007 and 2008 insurance ratios, or 1.74 percent of operating expenses. AEPCO Opening at III-D-108. BNSF/UP contend that BNSF is able to achieve insurance economies of scale (and thus lower rates) that the ANR could not achieve due to its smaller size. BNSF/UP therefore propose to use the average insurance ratio of four smaller rail systems, KCS, CP (SOO), Genesee and

⁷⁴ This is confirmed by AEPCO Opening e-workpaper "BNSF General freight ATC Summary.xlsx," which shows that the only "On SARR" or "Off SARR" point in this area is Mossmain, not Laurel. This workpaper is the source for the ANR's revenue in this proceeding, and indicates that revenues for the ANR's traffic is calculated using Mossmain, not Laurel, as the point of interchange for divisions calculations.

Wyoming (“GW”), and RailAmerica (“RA”), or 4.9 percent. BNSF/UP Reply at III.D-144. The defendants thus propose to increase the ANR’s annual insurance expense from \$12.8 million to \$51.7 million

The Board has held, conceptually, that the use of BNSF’s insurance expense as a percentage of other operating expenses is inappropriate for a SARR. *WFA/Basin I* at 76; *AEP Texas* at 73. However, in both of those proceedings, the Board accepted the use of an average insurance percent for *Class I* carriers with revenues of less than \$1.0 billion as appropriate for a SARR.⁷⁵ Rather than using only Class I carriers with revenues similar to the SARR, BNSF/UP include two companies, GW and RA, which both are holding companies that operate numerous shortline and regional carriers in the United States.

GW’s and RA’s insurance experience is not comparable to the ANR’s for two reasons. First, G&W and RA are comprised of 62 and 40 regional and shortline carriers, respectively. Because these carriers are a conglomerate of small carriers spread across the country, each with its own unique issues that could affect insurance rates, they are not representative of a Class I carrier such as the ANR with approximately \$2 billion in revenues and whose lines form a single, contiguous system. Second, the numerous carriers that make up the GW and RA in aggregate have far lower revenues than the ANR. In 2008, the aggregate revenues of GW and RA equaled \$601,984 and \$388,640, respectively, while the SFRR

⁷⁵ Unlike the SARRs in both *WFA/Basin* and *AEP Texas*, the ANR has revenues of \$2.0 billion annually. Therefore, if the same approach is followed, Class I railroads with revenues in excess of \$1.0 billion must be considered.

revenues in 2009 equaled \$2.0 billion, *i.e.*, several times the combined revenues earned by the dozens of railroads comprising either GW or RA.

As stated above, the defendants include in their insurance analysis both KCS and the U.S. operations of CP, but curiously exclude the U.S. operations of Canadian National Railway (“CN”), which are reported to the Board in the Grand Trunk Western (“GTW”) R-1 Annual Report. The CN (GTW) annual revenues range for \$1.9 to \$2.4 billion from 2006 through 2009, or nearly the same as the ANR’s \$2.0 billion in annual revenues. This level of revenue is far closer to the ANR’s than either those of KCS or CP (SOO), which have annual revenues of approximately \$900 million and \$700 million, respectively, *i.e.*, less than half of those of the ANR.

On Rebuttal, SECI relies on the Class I carriers earning similar revenues to those of the ANR, *i.e.* KCS and the operations of the CP (SOO) and CN (GTW) in the United States.⁷⁶ The average insurance rates paid by these three carriers in 2007, 2008 and 2009 combined equals 3.66 percent of operating expenses, which is comparable to the insurance ratios accepted by the Board in *WFA/Basin I* and *AEP Texas* of 3.2 percent and 4.69 percent, respectively.

⁷⁶ In calculating the percent-insurance expense for CN (GTW) for the years 2007 and 2009, the R-1 Annual Report expenses for G&A insurance and casualties have been adjusted to remove CN’s writing off insurance accruals in those two years as noted at page 13 of its 2009 R-1 Annual report. This adjustment to CN’s reported expense is extremely conservative, as CN wrote down its accruals because it had excessive funds in reserve for insurance claims. Stated differently, CN’s historic accruals have overstated its insurance expense and thereby the percentage of other operating expenses represented by insurance.

8. Ad Valorem Tax

AEPCO calculated ad valorem taxes based on the amount that BNSF and UP paid per route mile in each of the eight states in which the ANR operates, with these amounts then applied to the ANR's route miles in each state. AEPCO Opening at III-D-108. BNSF/UP argue that this methodology understates the tax obligations the ANR would actually incur because the western states calculate taxes for a railroad on a unitary assessment of the value of the railroad's entire system, which includes a factor based on capitalized net railway operating income ("NROI"). The states then allocate this assessment and associated tax revenues to local jurisdictions on a proration basis. BNSF/UP Reply at III.D-144-145. BNSF/UP then "created" a model based on the NROI per mile of the ANR compared to that of BNSF and UP to account for the income aspect of the ANR's ad valorem tax liability. *Id.* at III.D-145.

BNSF/UP's assertions regarding ad valorem tax assessments by western states are incomplete and misleading. Generally, western states do determine a railroad's ad valorem tax liability using a "unitary assessment" of the entire system's value and assign a portion of that value to the property within the state to determine the value of the property to be taxed. Defendants would lead the Board to understand that the value assigned to the entire system by the states is based on a net return on income, which their model fairly represents.

Review of the taxation methods employed by the various western states in which the ANR route is situated reveals that each state relies on a

combination of various methods to assess the value of a carrier's system, and that no one valuation method is relied upon exclusively. The goal of a state tax assessor's department is to estimate the value of the carrier's system, and to do so the following methods are most often considered: (1) historic/book cost less depreciation; (2) sales comparison approach; (3) market value of outstanding securities or capitalized earnings approach; (4) net salvage value; and (5) income approach. The individual western states use a combination of these five commonly used approaches, whereas the defendants would have the Board believe that only the income approach is used.

BNSF/UP's evidence is also misleading in that they use their NROI model to allocate the tax already assessed by the various states against the defendants to the lines which comprise the ANR. However, without exception, the western states allocate the assessed value and the carriers' tax liability to various rail lines located in local jurisdictions within a state based on route miles or track miles. Stated differently, these states do not attempt to determine which rail line, or locality, within a state produces the greatest amount of tax revenue and allocate tax liability or tax revenue on that basis. Instead they use the same "simplistic" (BNSF/UP Reply at III.D-144) allocation methodology used by AEPCO.

To place the calculation of ad valorem tax liability for the ANR in context based on the above information, AEPCO has essentially accepted each of the individual states' assessed value and tax assignments by simply adopting the amounts BNSF and UP actually paid to the individual states as reported in their

respective R-1 Annual Reports. AEPCO has then allocated these amounts to the BNSF and UP rail lines comprising the ANR on a route mile basis, which is exactly the same method used by virtually all of the western states to allocate the amounts they have assessed to the localities within in the state.

In contrast, the defendants erroneously argue that a new assessment must be made for the ANR, and imply that the western states would make such an assessment based on a NROI method rather than a combination of various methods. Rather than making such an assessment and applying the actual tax rates to an assessed value of the ANR, the defendants calculate a “NROI” factor which they apply to the actual assessments made by the individual western states to BNSF and UP in order to allocate BNSF and UP’s actual assessment to the ANR lines. In essence, the defendants have done nothing more than substitute their NROI model to allocate the actual BNSF and UP tax liability within a state for the allocation methods actually used by the various states.

On Rebuttal, AEPCO continues to rely on the same method it used on Opening for allocating BNSF and UP’s actual ad valorem tax liability by state, as reported in their respective R-1 Annual Reports, to the ANR’s lines. This allocation method is based on miles of mainline track and is the same allocation method used by each of the western states to allocate ad valorem tax revenues to various localities within the states.

AEPCO Rebuttal e-workpaper “Ad Valorem Tax method by western states.pdf” provides a summary of the valuation methods used by each state in the

ANR system and the method for allocating the revenues among localities within the states.

9. Other

a. Costs Related to Rerouted Traffic

AEPCO discussed the cost impact of its internal reroutes of some ANR traffic in AEPCO Opening at III-D-108-110. BNSF/UP do not directly respond to this evidence, simply asserting that the impacts of AEPCO's rerouting of traffic (including the issue traffic) "are addressed elsewhere throughout Defendants' reply evidence." BNSF/UP Reply at III.D-145.

b. Third Party Coal Loading Fees

BNSF/UP accept AEPCO's approach to determining the costs for third party contract loading that is performed for BNSF at the PRB mines in Wyoming, modifying the costs only to reflect their revised 2009 tonnages. *Id.* at III.D-145-146. AEPCO uses the same approach on Rebuttal and applies the unit costs to its revised PRB tonnages. The calculations are shown in Rebuttal e-workpaper "ANR Loading Fees_Rebuttal.xlsx."

c. Intermodal Lift Cost

BNSF/UP accept AEPCO's use of intermodal lift costs, developed from UP's 2008 R-1 Annual Report, as a proxy for developing the cost of services performed to ramp and deramp intermodal containers and/or trailers that the ANR originates or terminates in the El Paso area, as well as the expense per lift used by AEPCO. BNSF/UP Reply at III.D-146. On Rebuttal, AEPCO updates the

intermodal lift costs based on information included in UP's 2009 R-1 Annual Report. See Rebuttal e-workpapers "Intermodal Lift Cost_Rebuttal.xlsx" and "Lift Cost_Rebuttal.pdf."

BNSF/UP's statement concerning the space needed for the intermodal ramp facilities (BNSF/UP Reply at III.D 146) are addressed at p. III-B-20, *supra*.

d. Texico Train Expense Additive

On Opening, AEPCO developed a cost additive to account for the additional costs associated with swapping blocks of intermodal cars among certain trains at the ANR's Texico Yard. AEPCO Opening at III-D-111. BNSF/UP accept the concept of the cost additive, asserting somewhat grudgingly that "in this instance the limited dollar amounts do not warrant rigorous scrutiny." BNSF/UP Reply at III.D-146-147. BNSF/UP also assert that their Reply evidence "more appropriately models the operations that would be required at Texico Yard" and "also accounts for the necessary infrastructure" at that yard. *Id.* at III.D-147. The modeling issue relates to whether specific dwell time should be allocated at Texico Yard for the intermodal trains that undergo block-swapping there; this issue is addressed at pp. III-C-28-29, *supra*. With respect to the configuration of Texico Yard, AEPCO designed the yard to accommodate the block-swapping and related operations and BNSF/UP have accepted AEPCO's configuration except for the addition of lead tracks and a fueling track. BNSF/UP Reply at III.B-13-14. As indicated at pp. III-B-13-14, *supra*, AEPCO has accepted the addition of the lead tracks but rejected additional facilities for locomotive fueling. These facilities do

not affect the yard configuration in terms of its ability to accommodate the block-switching and car inspection functions for which it is designed.

On Rebuttal, AEPCO has updated the calculation of the Texico train cost additive to reflect BNSF's 2009 URCS data. *See* Rebuttal e-workpapers "Texico block switching_Rebuttal.xlsx" and "Block Switch_Rebuttal.pdf."

e. Calculation of Annual Operating Expenses

BNSF/UP assert that the process by which AEPCO developed its operating expenses, as summarized at pp. III-D-112-113 of the Opening Narrative, "unnecessarily distorts the 2009 operating expenses that are input into the DCF model" because of the manner in which AEPCO used the 2018 peak-year trains to develop operating statistics used to calculate 2009 costs, and because AEPCO failed to use the same metric (tons) to adjust the 2018 statistics back to 2009 levels and then inflate operating expenses (using ton-miles) in the DCF model. BNSF/UP Reply at III.D-147-149.

BNSF/UP's first alleged error involves AEPCO's determination of 2009 operating statistics for the ANR. AEPCO forecasted all trains moving on the ANR from the base year to the 2018 peak year, then calculated operating statistics and crew requirements for all trains moving in the peak year, and finally indexed these statistics and crew requirements to the first year in the DCF model (2009) using a tonnage index. AEPCO then increased statistics for each subsequent year, using the indexing procedure within the DCF model. BNSF/UP claim that AEPCO's process unnecessarily introduces forecast error into the first year

operating expense and therefore should not be used. Instead, BNSF/UP forecast Base Year trains (*i.e.*, April 1, 2008 through March 31, 2009) to the first year in the DCF model (2009), and determine operating statistics and crew requirements for this period. Using the DCF model, the defendants then increase the statistics from 2009 to each subsequent year in the analysis.

AEPCO's procedure is identical to that accepted by the Board in virtually every previous SAC proceeding using a DCF model, and is also the procedure that was advocated by the defendants in those proceedings including BNSF. Most recently, in *WFA/Basin I*, in addressing proper annualization of peak week operating statistics, the Board described the procedure for calculating operating statistics for the SARR in that proceeding as follows:

In this fashion, BNSF developed transit times for *all trains moving in the peak year*, even if there were no comparable trains moving during the peak week.... BNSF's approach is more precise, as it relies on the actual traffic forecast for that year. It is also the approach used by the Board in recent SAC cases.

WFA/Basin I at 33 (emphasis added). Similarly, in *AEP Texas*, the Board described the procedure used by BNSF, which it accepted, as follows:

According to BNSF, it determined the TNR locomotive-hours for each train moving between a specific origin-to-destination (O-D) pair in 2020....BNSF then converted its 2020 count to a 2002 requirement using a ratio of base-year tons to peak-year tons.

Id. at 41. Thus, in the two most recent SAC rate cases decided by the Board, BNSF advocated, and the Board accepted, development of

operating statistics for *all trains in the peak year* and then indexing the results to the first year in the analysis. This is exactly the procedure used by AEPCO in this proceeding.

Moreover, the defendants' claim that forecast error is introduced in this process is not accurate. All traffic is forecast from the Base Year to the peak year in order to determine traffic and revenue levels in that year and to determine the peak period for RTC Model simulation purposes. To the extent there exists any forecast error, it is inherent in this modeling process and no new forecast error is introduced by indexing the operating statistics from the peak period to the first year in the model as long as the same index is used to then increase the operating statistics from the first year in the model back to the peak year in the DCF model.

On Rebuttal, AEPCO continues to follow STB precedent and develops operating statistics for all trains in the peak year, then indexes these statistics to the first year in the model using the ratio of base-year tons to peak-year tons.

The second item addressed by BNSF/UP is AEPCO's adjustment of peak year operating statistics to 2009 using a "ton" ratio, then inflating operating expenses in the DCF model using a "ton-mile" ratio. On Rebuttal, AEPCO corrects this inconsistency and uses a ton ratio for both procedures.

Finally, BNSF/UP identify two errors in AEPCO's operating statistics summary spreadsheet. These formula errors inadvertently omit from the total operating statistics locomotive unit miles, locomotive hours, car miles and car hours

associated with agricultural traffic and locomotive units associated with industrial traffic. BNSF/UP Reply at III.D-149. However, the numbers of locomotives and railcars required by the ANR are determined elsewhere in this same spreadsheet and do not rely on the totals calculated where the error occurs. Of the errors cited by defendants, the only one that effects AEPCO's calculation of operating cost is locomotive unit miles. On Rebuttal AEPCO corrects this error and incorporates the locomotive unit miles associated with agricultural traffic. AEPCO also revises the formula to include the number of locomotive units for industrial traffic.

III. E. NON-ROAD PROPERTY INVESTMENT

AEPCO briefly addressed non-road property investment in Part III-E of its Opening Evidence, indicating that the ANR's non-road property investment costs were addressed elsewhere in that evidence. BNSF/UP take a similar approach.

III. F. ROAD PROPERTY INVESTMENT

On Opening, AEPCO's road property investment costs for the ANR were presented in a manner consistent with Board precedents, and the investment costs were consistent with those accepted by the Board in past SAC cases. Indeed, some of AEPCO's unit costs and design decisions were based directly on the Board's holdings in *WFA/Basin I* and *AEP Texas*. Other costs, such as the ANR's common earthwork unit cost, were based on real-world projects undertaken by BNSF on the lines being replicated.

BNSF/UP have taken exception to many of AEPCO's road property investment unit costs and methodologies. In doing so, BNSF/UP continue to build on the unending "revisions" to costs and equipment that the railroads have been advocating in case after case. For example, BNSF/UP again attempt to discredit the use of a larger off-road hauler to transport excavated materials even though it has been accepted many times. To be sure, BNSF/UP have a new twist on why the large hauler will not work, but the effort largely misses the point that AEPCO and other shippers have repeatedly made which is that arguments over equipment belie the reality that large projects can achieve much lower unit costs than Means Handbook unit costs.

BNSF/UP have also taken aim at their own documents produced in discovery. They suggest, for example, that their unit costs for "subballast" did not really involve subballast. Likewise, they suggest that unit costs from actual grading projects on the lines being replicated are not really reflective of what the

ANR could achieve. As explained below, AEPCO continues to rely on the railroads' actual experience as shown in the documents produced in discovery.

BNSF/UP's Reply Evidence has also made a terrible mess of transportation costs. In particular, BNSF/UP raised concerns about the routes and costs for transportation utilized by AEPCO on Opening. However, in trying to "fix" these problems, BNSF/UP have completely muddled the necessary transportation needs by mixing illogical routes and costs without sufficient explanation. AEPCO attempts to untangle the web below.

AEPCO also notes that this Rebuttal is directed to BNSF/UP's "Reply ANR" and not the "ANR-PRB" or "ANR-NM." As explained, in Parts I and III-A, AEPCO's presentation of a single SARR that covers all origins for the issue coal traffic is permissible. Therefore, AEPCO is not presenting separate rebuttal evidence directed to the ANR-PRB or ANR-NM.

For all of the reasons set forth in this Part, the Board should reject BNSF/UP's road property investment costs and accept those presented by AEPCO on Rebuttal, as shown in Rebuttal Table III-F-1.

REBUTTAL TABLE III-F-1
ANR ROAD PROPERTY INVESTMENT COSTS
(millions)

Item	AEPCO Opening	BNSF/UP Reply	AEPCO Rebuttal
1. Land	\$ 217.1	\$ 217.1	\$ 217.1
2. Roadbed Preparation	1,147.8	2,088.2	1,274.2
3. Track Construction	2,518.7	2,982.9	2,771.9
4. Tunnels	54.5	74.2	54.5
5. Bridges	795.6	736.2	736.2
6. Signals & Communications	294.5	331.3	305.8
7. Buildings & Facilities	131.0	225.4	175.7
8. Public Improvements	62.7	59.9	59.8
10. Subtotal	\$5,222.1	\$6,708.8	\$5,576.5
11. Mobilization	56.5	123.0	63.5
12. Engineering	500.5	649.2	535.9
13. Contingencies	577.9	748.1	617.6
14. Total Road Property Investment Costs	\$6,357.0	\$8,236.8	\$6,793.5

1. Land

BNSF/UP have accepted AEPCO's land valuation costs. BNSF/UP Reply at III.F-2. However, BNSF/UP disagreed with AEPCO's treatment of land values in the DCF model. *Id.* This issue is addressed in Part III-G of this Rebuttal.

2. Roadbed Preparation

AEPCO's Opening roadbed preparation costs and quantities were developed using the same basic techniques that have been repeatedly employed in other SAC proceedings before the Board. AEPCO utilized the ICC Engineering Reports, in large part, to develop various earthwork quantities, and then applied real-world project costs or Means Handbook unit costs as necessary. BNSF/UP's various critiques of AEPCO's Opening costs and quantities are addressed below.

BNSF/UP note that AEPCO's Means Handbook location factor is understated due to AEPCO's omission of Montana route miles in the calculation. BNSF/UP Reply at III.F-3. AEPCO did inadvertently excluded the Montana route miles from its location factor calculation on Opening. It has corrected this error on Rebuttal, which caused all Means Handbook-based costs to rise on Rebuttal. AEPCO also notes that, there is still a minor difference in the parties' location factors due to the slight difference in the route miles between the parties, which is discussed in Part III-B of this Rebuttal.

BNSF/UP then generally attack AEPCO various unit costs for items such as subballast (which is addressed below). BNSF/UP Reply at III.F-4-6. Ultimately, BNSF/UP's diatribe against Board precedent supporting the lowest feasible unit costs leads to their main point, which is that Means Handbook unit costs should be used for most roadbed preparation items rather than unit costs from real-world projects. This is an argument the same engineering witnesses recently raised on behalf of the defendant in *Seminole*, but the argument is no more persuasive here.

The Means Handbook is one of many ways to project costs for a planned rail project. LTK Engineering, AEPCO engineering Witness Willard Whitbred's firm, often uses its own historical costs from various projects and bid tabulated prices from various state Departments of Transportation. Indeed, a review of published costs from various state Departments of Transportation shows

that unit prices significantly lower than those found in the Means Handbook are readily available.

State	Quantity (CY)	Unit Cost	Year
Texas	19,653,272	\$3.71	2009-2010
Montana	4,364,725	\$2.91	2009
Wyoming	3,239,585	\$3.51	2009

In other words, Means Handbook unit costs are certainly useful if costs from actual construction projects, such as the BNSF expansion projects that AEPCO relied upon to develop its Opening common earthwork unit costs, are not available. However, such costs are hardly superior to the direct experience of one of the defendants.

Means Handbook unit costs suffer from another fault that makes costs derived from direct experience (when available) more useful: Means costs do not recognize the economies of scale of large railroad projects such as the ANR. In particular, the Means Handbook states that “[t]he size, scope of work, and type of construction project will have a significant impact on cost. Economies of scale can reduce costs for large projects.” See Rebuttal e-workpaper “Means Handbook project size.pdf.” Clearly, the ANR’s construction would be classified as a large project resulting in reduced unit costs (*i.e.*, lower than those shown in the Means Handbook). Thus, AEPCO’s reliance on unit costs derived from

discovery documents, other projects, or other vendor quotes is equally valid as – if not preferable to – reliance on Means Handbook costs. Moreover, shippers have noted in past SAC cases that their engineering witnesses’ direct experience with railroad projects usually resulted in unit costs lower than those found in the Means Handbook. This was borne out in *WFA/Basin*; see *WFA/Basin I* at 86. The circumstances here are the same as those in *WFA/Basin*. Thus, AEPCO continues to use a variety of unit costs derived from actual projects, and Means Handbook unit costs where direct project costs are not available.

Before turning to the individual roadbed preparation items, AEPCO notes several problems that permeate BNSF/UP’s roadbed preparation spreadsheets. First, BNSF/UP’s grading spreadsheet has incorrect route miles and incorrect additional “side track” miles (*i.e.*, miles for second main tracks/passing sidings) for all line segments from Vaughn to Cochise and from Defiance to Vaughn (a total of seven segments) – *i.e.*, the constructed miles for these segments are assigned to the incorrect line segments and valuation sections. See Reply e-workpaper “Revised ANR GRADING.xls,” tab “IIIF Miles,” rows 26-32 and compare to the same location in AEPCO’s Opening e-workpaper “ANR GRADING.xls.” This error impacts all of BNSF/UP’s roadbed preparation calculations based on miles and valuation sections. This one error alone causes numerous calculation, quantity and cost errors throughout BNSF/UP’s Reply e-workpaper “Revised ANR GRADING.xls,” thereby rendering the spreadsheet virtually useless.

BNSF/UP's Reply grading spreadsheet did not include any of the additional side track miles that BNSF added on Reply. Instead it used AEPCO's Opening miles for these tracks. BNSF/UP also made several change to AEPCO's Opening yard track miles but failed to reflect these changes in their roadbed preparation calculations.

Rebuttal Table III-F-3 below summarizes the differences in the parties' roadbed preparation costs.

**REBUTTAL TABLE III-F-3
COMPARISON OF ROADBED PREPARATION COSTS**

Item (1)	AEPCO Opening ^{1/} (2)	BNSF/UP Reply ^{2/} (3)	AEPCO Rebuttal ^{3/} (4)	BNSF/UP over/(under) AEPCO ^{4/} (5)
1. Earthwork				
a) Common	\$280,800,249	\$685,063,890	\$282,114,116	\$402,949,774
b) Loose Rock	\$65,845,167	\$90,752,110	\$76,231,201	\$14,520,909
c) Solid Rock	\$137,610,545	\$163,298,450	\$159,424,381	\$3,874,069
d) Borrow	<u>\$528,748,613</u>	<u>\$766,055,668</u>	<u>\$600,988,046</u>	<u>\$165,067,622</u>
e) Total	\$1,013,004,574	\$1,705,170,118	\$1,118,757,744	\$586,412,374
2. Clearing & Grubbing	\$6,731,185	\$18,300,920	\$7,893,853	\$10,407,067
3. Lateral Drainage	\$365,895	\$360,074	\$753,298	(\$393,224)
4. Culverts	\$36,825,312	\$61,282,405	\$53,107,557	\$8,174,848
5. Retaining Walls	\$9,314,510	\$11,156,430	\$10,770,297	\$386,133
6. Rip Rap	\$11,632,095	\$13,424,453	\$13,508,868	(\$84,415)
7. Detour Road Surfacing	\$6,817,225	\$7,872,492	\$7,873,320	(\$828)
8. Relocation of Utilities	\$5,540,004	\$5,540,004	\$5,540,004	\$0
9. Topsoil Placement / Seeding	\$5,742,079	\$5,742,079	\$5,742,079	\$0
10. Land for waste quantities	\$1,561,628	\$1,713,514	\$1,568,424	\$145,090
11. Environmental Compliance	\$2,876,225	\$2,876,225	\$2,876,225	\$0
12. Tunnel Daylighting	\$17,453,056	\$0	\$17,847,372	(\$17,847,372)
13. Sand and Drainage Berms	\$23,046,716	\$45,593,558	\$23,046,716	\$22,546,842
14. El Paso Trainway	\$4,917,650	\$14,593,759	\$4,917,650	\$9,676,109
15. Undercutting	\$0	\$52,803,761	\$0	\$52,803,761
16. Finish Grading	\$0	\$67,438,389	\$0	\$67,438,389
17. Over Excavate Rock	<u>\$0</u>	<u>\$74,353,317</u>	<u>\$0</u>	<u>\$74,353,317</u>
18. Total	\$1,145,828,154	\$2,088,221,498	\$1,274,203,407	\$814,018,091

1/ AEPCO Opening e-workpapers "ANR GRADING.xls" and "ANR Culverts working.xls"

2/ BNSF/UP Reply Table III.F.3 and Reply e-workpaper "Revised ANR Grading.xls" (segments 1 through 11 comprising AEPCO ANR system)

3/ AEPCO Rebuttal e-workpapers "ANR GRADING REBUTTAL.xlsx" and "ANR Culverts working.REBUTTAL.xls"

4/ Column (3) - Column (4)

a. **Clearing and Grubbing**

i. **Quantities of Clearing and Grubbing**

BNSF/UP accepted AEPCO's Opening methodology for developing clearing and grubbing quantities based on the ICC Engineering Reports. *See* BNSF/UP Reply at III.F-8. The parties' slight difference in quantities is attributable to the minor difference in total route miles, as well as differences in second main, siding and yard track miles. *See* Rebuttal e-workpaper "ANR Grading Rebuttal.xls," tab "IIIF_3 Othr EW."

ii. **Clearing and Grubbing Unit Costs**

With the correction to the location factors, the parties agree on all the relevant unit costs except brush clearing. BNSF/UP argue that AEPCO misstated the production rate of the brush clearing dozer as 8 acres per hour, and that this production rate is unrealistic. BNSF/UP Reply at III.F-8-9. BNSF/UP's assertion is incorrect. AEPCO's Means Handbook unit cost is based on 8 acres per day. *See* Opening e-workpaper "Means Unit Costs.pdf."

BNSF/UP apparently recognize the actual production rate from Means because they use it as the basis for their brush clearing unit cost. *See* BNSF/UP Reply at III.F-9. Inexplicably, BNSF/UP then argue that the Means unit cost is incorrect because the dozer could really only clear brush at a rate of four acres per day due to the need to stockpile and haul away organic material. *Id.* BNSF/UP's argument and additional costs are meritless.

First, BNSF/UP provided no explanation for why a Means Handbook cost should be modified (*i.e.*, if the dozer would really be hindered by the need to remove such materials, presumably the Means Handbook would not include a production rate of 8 acres per day). Second, the production rate is largely irrelevant. If needed, additional crews could be used to clear the land more quickly, but the cost per acre would remain the same. More importantly, BNSF/UP have not explained why the organic materials need to be hauled away.¹ The ANR is built on an average 100-foot right-of-way. There is ample room to simply move the materials to the edge of the right-of-way where they can decompose naturally. Finally, AEPCO notes that, unlike BNSF/UP's unit costs, its unit costs are consistent with recent Board precedent, such as *AEP Texas* at 78-79. As such, AEPCO continues to use its Opening brush clearing unit cost from the Means Handbook.

iii. Other

(a) Stripping

BNSF/UP add an additional cost for stripping, which is included in their undercutting costs (discussed below), on the basis that such activity is required when building an embankment, and that grubbing must be done at least 3 inches below the ground and the ground must be filled and compacted where vegetation is removed. BNSF/UP Reply at III.F-9-10. BNSF/UP also argue that

¹ BNSF/UP have also ignored that any timber worthy of being hauled away could probably be sold, thereby offsetting any removal cost.

the removed materials must be moved to waste pits. *Id.* at 10. BNSF/UP's additional costs are without merit.

First, BNSF/UP have ignored Board precedent with regard to stripping. As AEPCO explained on Opening, in *PSCo/Xcel* the Board rejected additional stripping costs because "the top 6 inches of soil would be removed during excavation and because topsoil removal is included in waste costs, there would appear to be no need for a separate charge for stripping. To the contrary, including such an additional cost would result in a double count." *Id.*, 7 S.T.B at 671; *see also AEP Texas* at 79. Second, BNSF/UP ignore that the ICC Engineering Report clearing and grubbing quantities include all clearing and grubbing necessary to construct the roadbed. This would presumably include the clearing and grubbing necessary prior to building embankments. Likewise, the ICC Engineering Report earthwork quantities include all material moved to construct the roadbed. This would include the top 3 inches if necessary to build an embankment. Indeed, BNSF/UP have not suggested otherwise. Thus, the costs of stripping, if necessary, are reflected in the earthwork and the clearing and grubbing costs, and AEPCO's assumption of 30% waste should easily cover any waste removed prior to building an embankment. AEPCO and BNSF/UP have both included land to place waste quantities.

(b) Undercutting

On Opening, AEPCO's engineers did not include a separate cost for undercutting, noting that the Board has repeatedly rejected additional costs for this

item. *See WFA/Basin* at 83; *AEP Texas* at 79; *Duke/NS*, 7 S.T.B. at 176; *CP&L*, 7 S.T.B. at 313; *Duke/CSXT*, 7 S.T.B. at 480. Notwithstanding this precedent, on Reply BNSF/UP have included a significant cost for undercutting. BNSF/UP's primary argument in favor of adding undercutting costs is that undercutting and/or stripping is required when constructing an embankment and that the BNSF construction projects utilized by AEPCO on Opening to determine common earthwork costs include costs for removing unsuitable materials. BNSF/UP Reply at III.F-11-13.

BNSF/UP then attempt to determine the volume of required undercutting. BNSF/UP first suggest that the ICC Engineering Reports are not helpful in determining undercutting quantities. *Id.* at III.F-11. BNSF/UP then suggest that even if historical documents were helpful, the degree of required undercutting would still need to be adjusted to account for heavier axle loads used today. *Id.* Thus, BNSF/UP rely on the BNSF construction projects as the basis for their calculations – arguing that 150,000 of the 3.7 million cubic yards in the various projects were unsuitable materials (*i.e.*, 4% of the total), which BNSF/UP then apply to the ANR's entire route. *Id.* at III.F-12. To account for the unit costs, BNSF/UP applied Means-based common earthwork costs and then applied the Means-based unit cost for borrow to replace the materials. *Id.* at III.F-13.

BNSF/UP's arguments in favor of adding undercutting are unfounded. First, BNSF/UP have provided no evidence that ICC Engineering Report earthwork quantities do not include undercutting quantities. Instead, they

provide mere speculation designed to support their inclusion of additional costs. Second, BNSF/UP have provided no evidence of instances where the original roadbed construction for any of the lines replicated by the ANR had to be replaced, or the subgrade adjusted, because undercutting was not performed during the original construction.

BNSF/UP also note that the ICC Engineering Reports are based in part on “observations of physical characteristics of topography or structures that were an observable part of the roadbed construction effort.” *Id.* at III.F-11. This indicates that if the area surrounding an embankment showed signs of unsuitable material and/or warranted grubbing, then the quantities would have been included in the quantities reported on the ICC Engineering Reports. AEPCO also notes that the ICC Engineering Reports do not specify the quantity of cubic yards of excavation used as embankment, and, therefore, the number of undercutting cubic yards cannot be distinguished from this material – but since those cubic yards are rolled into the quantities, adding undercutting costs would result in a double count. In addition, both parties assumed that 30% of the excavation quantities would be wasted (*i.e.*, unsuitable materials). Thus, the 4% undercutting quantities estimate by BNSF/UP is already accounted for in the waste quantities. Finally, adding borrow is absurd. Undercutting a small amount of material should not require the trucking in of borrow from several miles away. Suitable replacement materials can be derived from the excavation occurring on-site.

v

As explained below, BNSF/UP's unit costs for common earthwork and borrow are overstated. Moreover, undercutting is simply additional excavation, and it should be costed as such. Thus, consistent with the Board precedents noted above, AEPCO has not added any additional costs for undercutting as such quantities are already included in AEPCO's excavation quantities.

(c) Over-Excavation

BNSF/UP have added more costs for "over-excavation," which they claim is necessary in solid rock cuts. In particular, BNSF/UP argue that 12 inches of over-excavation must occur and then be replaced with compacted select material. BNSF/UP Reply at III.F-13-14. BNSF/UP apparently assume that such excavation, if necessary, was not done when the lines were originally constructed. BNSF/UP's additive is unnecessary.

AEPCO and BNSF/UP have included quantities for "backfill in rock cuts" in their earthwork calculations, which represents over-excavation. *See, e.g.,* the ICC Engineering Reports for valuation sections CBQ-6AB, CBQ-2ABC-WY, CBQ-5AB and CBQ-1-CO from AEPCO's Opening e-workpaper "ICC Engineering Reports.pdf" and compare that to the earthwork quantities included for those valuation sections in AEPCO Opening e-workpaper "ANR GRADING.xls," tab "IIIF_2 ER INPUT." These same figures are included in the same tab in BNSF/UP's reply "Revised ANR GRADING.xls." Thus, to the extent such work was necessary, the parties have already included it.

AEPCO also notes that BNSF/UP have provided no evidence of instances where the original roadbed construction for any of the ANR's rail lines had to be replaced because over-excavation was not performed during the original construction. Finally, BNSF/UP provide no support for using borrow quantities as replacement for excavated rock. Most embankments on the ANR are constructed using excavated material, as evidenced by the fact that both parties have assumed that 70% of excavation is reused as embankment (and 30% is wasted). Thus, BNSF/UP's application of their overstated solid rock excavation cost plus borrow cost to their unsupported over-excavation quantities is completely unnecessary and results in a double-count of quantities and costs.

b. Earthwork

i. Earthwork Quantities

**(a) Earthwork Quantities from
ICC Engineering Reports**

BNSF/UP accept AEPCO's methodology for the development of earthwork quantities. BNSF/UP Reply at III.F-14. BNSF/UP made a few minor modifications to account for areas with non-parallel tracks or unusually wide track centers. *Id.* at III.F-14-15. The parties differ slightly on the total route miles, as already addressed above. BNSF/UP also used AEPCO's Opening additional side track (second main track/passing siding) miles in their earthwork quantities, even though BNSF/UP increased the ANR's side track miles.

First, as discussed above, BNSF/UP's grading spreadsheet has the wrong route miles and additional side track miles for all line segments from Vaughn to Cochise and from Defiance to Vaughn (*i.e.*, the constructed miles for these segments are assigned to the incorrect line segments and valuation sections).

On Opening, AEPCO accounted for 37.1 miles of non-parallel main track, which was identical to that identified in the prior *AEPCO* proceeding.

However, on Reply, BNSF/UP has argued that three additional locations have non-parallel main tracks: Clovis Subdivision – MP 750.93 to MP 755.87 (4.94 miles); Clovis Subdivision – MP 778.79 to MP 780.47 (1.68 miles); and Lordsburg Subdivision – MP 1293.80 to MP 1290.00 (3.8 miles). BNSF/UP Reply at III.F-15. AEPCO's engineers note that of the three sections identified above, the first two sections are single-track on the ANR, and, thus, no adjustment is required. AEPCO agrees that the 3.8 miles on the Lordsburg subdivision are non-parallel second main track, and has added it on Rebuttal.

AEPCO's engineers have also reviewed BNSF/UP's claims regarding segments with wide track centers. Simply put, BNSF/UP have not provided any evidence as to why the ANR track could not be placed on 15-foot track centers, which BNSF/UP accept for all other locations. In other words, these tracks may be further apart in the real world, but BNSF/UP have not shown that there any impediments to constructing the track with closer track centers as the ANR did on Opening. As such; AEPCO has continued to use it Opening quantities in the impacted areas.

(b) Earthwork Quantities for Segments Not Covered by the ICC Engineering Reports

The parties agree on the earthwork quantities for these line segments. BNSF/UP Reply at III.F-16.

(c) ANR Yards

BNSF/UP accepted AEPCO's methodology for the calculation of earthwork quantities for yards, including the use of the 1-foot depth of fill methodology. BNSF/UP Reply at III.F-16. BNSF/UP also accepted AEPCO's quantities for the Guernsey East Yard, which were based on the quantities for the same SARR yard developed in the *WFA/Basin* case. As explained in Part III-B, *supra*, on Rebuttal AEPCO has made some minor modifications to its yards, which increased the yard track miles. AEPCO has incorporated these changes into its Rebuttal grading spreadsheet. See Rebuttal e-workpaper "ANR GRADING REBUTTAL.xlsx," tab "IIIF_10 Yards."

(d) Daylighting of Tunnel No. 2 Near Guernsey

BNSF/UP accept AEPCO's cost for the daylighting of Tunnel No. 2 located near Guernsey, WY. BNSF/UP Reply at III.F-17. However, BNSF/UP argue that AEPCO should have included costs for the original excavation of the materials that comprised the tunnel itself. *Id.* AEPCO agrees, and it has added the additional quantities as calculated by BNSF/UP. AEPCO has included the costs for these quantities with the tunnel daylighting costs and not with the solid rock earthwork costs as BNSF/UP have done. AEPCO also notes that despite their

acceptance of AEPCO's Opening daylighting cost, BNSF/UP failed to include this cost in their Reply grading costs. AEPCO continues to include this cost on Rebuttal.

(e) El Paso Trainway

On Opening, AEPCO based its costs for the El Paso Trainway on public filings made in the previous *AEPCO* rate case (Docket No. 42058), which showed that the Trainway was built through a public-private partnership wherein one third of the cost was borne by UP's predecessor. AEPCO utilized the cost presented by the defendants' engineers in that case (\$3.222 million – UP's share) and then indexed it forward, resulting in \$4.918 million in investment for this item. As noted on Opening, AEPCO requested that UP provide the details from those calculations as well as the cost sharing agreement. *See* Opening e-workpaper "Trainway and Sand Berm letter.pdf." However, UP did not respond to this request.

On Reply, BNSF/UP claim to have "exhaustively" detailed the costs for this project and determined that it should be \$14.5 million. *See* BNSF/UP Reply at III.F-17. However, all that BNSF/UP have done is produce the very calculations that AEPCO asked for in discovery. AEPCO and BNSF/UP are using the same base figure for the total project, \$14.593 million, but BNSF/UP neglected to carve out the 33.7% portion (\$4.918 million) that UP is responsible for under the agreement. As such, AEPCO continues to use its Opening investment cost of \$4.918 million for the El Paso Trainway.

(f) Sand and Drainage Berms

On Opening, AEPCO utilized the sand and drainage berm costs from the prior *AEPCO* proceeding (\$15.1 million) and then indexed that cost forward (\$23.0 million). AEPCO also requested that UP provide the details behind the sand and drainage berms costs from the prior proceeding. See Opening e-workpaper “Trainway and Sand Berm letter.pdf.” Again, UP did not respond to this request. On Reply, the railroads have argued that AEPCO, in the prior proceeding, accepted BNSF/UP’s estimate of 2,566,080 cubic yards and that AEPCO should not have indexed the costs, but, instead, it should have used 2009 borrow costs. BNSF/UP Reply at III.F-18. BNSF/UP’s Reply arguments should be rejected.

AEPCO notes that BNSF/UP have introduced evidence from documents that they were requested to produce in discovery, but did not. This requires rejection of the defendants’ evidence on this cost item. See *PSCo/Xcel*, 7 S.T.B. at 673 (BNSF cannot “impeach” the shippers evidence with “information it failed to produce in discovery”). In any event, AEPCO’s engineers have determined that BNSF/UP’s Reply evidence is incorrect for several reasons.

First, AEPCO did not have access to the quantities now described by the railroads on Reply. Thus, it had to rely on an indexed total cost figure because it had no way to apply updated unit costs.

Second, BNSF/UP’s Reply calculations are incorrect and so incomplete that AEPCO cannot not even restate the costs as presented. In

particular, the quantity information provided by BNSF/UP is incomplete. For example, in BNSF/UP's Reply e-workpaper "Sand Berm on UP 032003 RCP.pdf," the quantities shown only represent sand berms. No drainage berms are shown. Thus, BNSF/UP's recalculation is necessarily incomplete.

Third, BNSF/UP's claim that the quantities involved require the application of a borrow unit cost is incorrect. As AEPCO explained in Opening at III-F-29, both AEPCO and BNSF/UP treated the berm quantities as common excavation in the prior proceeding. Indeed, in the public version of AEPCO's Supplemental Rebuttal in the prior *AEPCO* case, AEPCO explained the development of the unit cost applied to the quantities for the sand and drainage berms. *See* Complainant's Supplemental Rebuttal Narrative (Public Version) in Docket No. 42058, filed April 2, 2004, at III-F-15-16.

Specifically, in their Supplemental Reply in the prior case, BNSF/UP treated the quantities as common excavation and applied costs for an elevated scraper, a bulldozer and compaction. In its Supplemental Rebuttal in the prior case, AEPCO used the costs for a different scraper and different compaction equipment, and eliminated the dozer. Neither party treated the costs as borrow. *See* AEPCO Opening e-workpaper "El Paso Trainway and Berms.pdf" which contains the text excerpts described above. Moreover, as 30 percent of the excavation is waste, there is no need to bring in borrow for sand and drainage berms. As such, AEPCO continues to use its Opening costs for sand and drainage berms.

(g) **Total Earthwork Quantities**

AEPCO's Rebuttal total earthwork quantities reflect the changes in the track configuration discussed in Part III-B of this Rebuttal. This results in a slight increase over Opening in the ANR's earthwork quantities. Rebuttal Table III-F-4 below compares the parties' earthwork quantities. As noted previously, BNSF/UP's quantities are erroneous due to the incorrect route and side track miles for seven ANR line segments.

**REBUTTAL TABLE III-F-4
ANR EARTHWORK QUANTITIES
BY TYPE OF MATERIAL MOVED**
(Cubic yards in thousands)

<u>Type of Earth Moved</u> (1)	<u>AEPCO Opening</u> ^{1/} (2)	<u>BNSF/UP Reply</u> ^{2/} (3)	<u>AEPCO Rebuttal</u> ^{3/} (4)	<u>BNSF/UP Reply Over / (Under) AEPCO Rebuttal</u> ^{4/} (5)
1. Common	82,346	79,388	82,732	(3,344)
2. Loose Rock	6,826	6,796	6,843	(47)
3. Solid Rock	10,805	9,235	10,838	(1,603)
4. Borrow	<u>41,416</u>	<u>43,115</u>	<u>41,434</u>	<u>1,681</u>
5. Total	141,393	138,534	141,847	(3,313)

^{1/} Opening Exhibit III-F-11.
^{2/} Reply e-workpaper "Revised ANR GRADING.xls," tab "IIIF_11 EW Cost."
^{3/} Rebuttal e-workpaper "ANR GRADING REBUTTAL.xlsx," tab "IIIF_11 EW Cost."

ii. **Earthwork Unit Costs**

BNSF/UP's Reply discussion of earthwork unit costs begins with a modification that its engineers made to all Means Handbook-based earthwork units costs. BNSF/UP modified the Means Handbook earthwork unit costs to

account for the different volumes of material that must be handled depending on whether the material is still in place (bank-measure volume), loose or compacted. BNSF/UP refer to this as their shrink/swell adjustment. BNSF/UP Reply at III.F-19-20. AEPCO disagrees that this adjustment is necessary, and it also notes that, even if such an adjustment was warranted, BNSF/UP overstated the adjustment.

First, AEPCO notes that BNSF/UP provided no workpapers in support of their shrink/swell argument. However, from the information in BNSF/UP's Reply, BNSF/UP's position is predicated on the assumption that the ICC Engineering Reports show bank cubic yards ("BCY") while the Means Handbook uses loose cubic yards ("LCY") for hauling. In fact, the cubic yard quantities shown on the ICC Engineering Reports are not labeled in any way. Since loose quantities may swell when compared to bank quantities, BNSF/UP conclude that an additive must be used to account for the additional trips that the haul trucks must make to move the greater volume of loose quantities. BNSF/UP suggest the mark-up would be 15 percent for common excavation, 40 percent for loose rock, and 50 percent for solid rock.

Contractors are paid on bank quantities. To be sure, there may be variations in the bank volume versus the loose volume, but BNSF/UP's additional costs are unwarranted. AEPCO shows below that actual project costs for a large scale project such as the ANR would be lower than the Means Handbook costs. Indeed, AEPCO's common earthwork costs (derived from actual BNSF projects) support substantially lower earthwork costs for common excavation, as well as

loose rock excavation, than costs based on Means Handbook unit costs. To take already-higher Means Handbook costs, and increase them to account for the estimated difference in bank and loose quantities, simply adds more costs where none would be warranted if the ANR project were actually bid out. As such, AEPCO urges the Board to reject this additive.

While AEPCO disagrees with BNSF/UP's adjustment, it also determined that BNSF/UP's swell/shrink adjustment is overstated. In particular, in today's construction world there is no loose rock category of costs; earthwork is either common (which encompasses loose rock) or solid rock. Nevertheless, BNSF/UP add 40 percent for this category versus 15 percent for common earthwork, which is completely unsupported.

(a) Common Earthwork

On Opening, AEPCO developed its common earthwork unit cost by using a composite of actual BNSF projects that were undertaken on the Hereford and Orin Subdivisions. BNSF/UP object to the use actual projects, opting instead for a Means Handbook-based common earthwork cost for all locations except the PRB (Orin Subdivision), where BNSF/UP used AEPCO's unit cost (with some additions) despite suggesting that such unit costs are unavailable for a newly constructed line. BNSF/UP Reply at III.F-20-23. BNSF/UP's litany of arguments against AEPCO's unit cost are without merit.

First, BNSF/UP suggest that new line construction cannot be based on "expansion" projects because expansion projects benefit from certain cost

savings that are not available to the construction of a new line, including certain types of excavation and costs of building infrastructure to support the work and obtaining necessary information to perform the work. BNSF/UP Reply at III.F-20-21. This argument does not stand up to scrutiny.

BNSF/UP suggest that the common earthwork unit costs from an expansion project are lower because stripping/undercutting and wasting materials have already been done or, in the case of some undercutting, the new line can use pre-existing embankments. *Id.* This argument is absurd. When a single-track line is constructed the stripping and undercutting, to the extent these are even necessary, are done for the subgrade that will be used for that *one* track. It is highly unusual, in the experience of AEPCO's engineers, for subgrade preparation to be done for an entire right-of-way on the assumption that a second line would be constructed at some point in the future. Indeed, one would expect that if so much work was normally done beforehand, the need for excavation costs would be very limited on these projects, which is not the case. Moreover, a second track would need to be built quickly in such an instances because as time passes vegetation and other changes to the ground could vitiate any previous subgrade preparation.

As for using an existing embankment, BNSF/UP are making yet another spurious claim. Building an embankment sufficient to support two tracks 15 feet apart would be highly unusual unless the railroad knew in advance that a second line would be laid shortly. BNSF/UP do not suggest that any such

economies were realized on the BNSF expansion projects utilized by AEPCO for its common earthwork costs.

AEPCO's engineers also note that BNSF/UP ignore the obvious downsides that tend to increase costs when building near existing lines. First, operating under traffic conditions limits access to the area and creates scheduling conflicts. Second, the grading contractor needs to be very careful not to disturb the existing roadbed, which limits the contractor's operating conditions and thereby increases the likelihood that the grading costs will increase.

BNSF/UP also suggest that common earthwork would be higher on a new line because some existing infrastructure might already be in place that would make moving equipment easier, such as construction access roads and bridges. BNSF/UP Reply at III.F-21. While use of a bridge or a pre-existing road might make moving equipment easier from time to time, BNSF/UP ignore that construction under traffic on the existing track limits access to bridges. Moreover, much of the heavy equipment being used should not be moved over bridges. For example, a heavy dozer with track "feet" should not be moved across track. Likewise, heavy rubber tired vehicles are unlikely to be equipped with hi-rail capability. Thus, the usefulness of such infrastructure is debatable, and, in any event, BNSF/UP have not shown how this infrastructure aided the common excavation costs on the BNSF expansion projects. AEPCO also notes that to the extent access roads were built during the original construction of the ANR line

segments, they are built by the ANR as AEPCO has captured those historical quantities.

Finally, BNSF/UP claim that the common excavation costs on expansion projects should be lower because the railroad will already have certain information that it might need, including where to establish staging areas and dispose of unsuitable materials. *Id.* These are BNSF/UP's only examples, and they are both meritless. For starters, BNSF/UP do not explain why the common earthwork cost would be impacted by these supposed savings. If anything, it might impact mobilization costs or possibly engineering costs, but both AEPCO and BNSF/UP have already included substantial sums for these activities. BNSF/UP also have not demonstrated that such knowledge existed when the BNSF expansion projects were undertaken, nor have they shown how BNSF might have saved on common earthwork costs. In other words, none of BNSF/UP's arguments regarding the so-called savings that inure to the incumbent when expanding its railroad have any basis in the evidence. In addition, BNSF/UP completely ignore the problems of building a new main track while operating under traffic conditions. As such, AEPCO submits that using expansion projects as the basis for its common earthwork unit cost remains valid.

BNSF/UP further complain that AEPCO's common earthwork unit costs cannot be used because the projects involved were only located in Wyoming, and that there are regional differences in unit costs – something both parties

account for through a location factor adjustment when using Means Handbook unit costs. *Id.* at III-F-21-22. BNSF/UP again are incorrect.

First, AEPCO's unit costs include a project from BNSF's Hereford Subdivision in Amarillo, TX. Second, if BNSF/UP were so concerned about the geographic cost difference, they could have easily applied the Means location factor that the parties have used elsewhere. Of course, applying the Means location factor actually results in a lower unit cost \$ { } per CY versus AEPCO's unit cost of \$ { } per CY. *See* Rebuttal e-workpaper "ANR GRADING REBUTTAL.xlsx," tab "BNSF Exp Proj Cost Loc Factor."

AEPCO further notes that its common earthwork unit cost is consistent with unclassified excavation (meaning any materials other than solid rock) unit costs from state DOT projects undertaken in some of the states traversed by the ANR. *See* Rebuttal e-workpapers "State DOT unclassified excavation costs.xlsx" and "State DOT costs.pdf." For these reasons, AEPCO continues to use its Opening common earthwork unit cost on Rebuttal.

While AEPCO continues to use its Opening common earthwork unit cost on Rebuttal, AEPCO's engineers have reviewed BNSF/UP's common earthwork costs and determined that BNSF/UP made a number of errors, or included unnecessary items.

BNSF/UP added certain AFE pay items from the BNSF expansion projects to the unit costs they accepted for Wyoming, and they adjusted certain elements of the costs, all of which are unnecessary or incorrect. *See* BNSF/UP

Reply at III.F-22. First, BNSF/UP eliminated the Walker to Shawnee embankment costs without any explanation other than deeming it an “anomaly” in the BNSF AFE earthwork cost spreadsheet. See Reply e-workpaper “Roadbed prep costs from AFEs – RCP Revisions 5-1-10.xls,” tab “Common exc and emb AFE,” cell L19. Such an adjustment without explanation is unwarranted and should be rejected.

Second, BNSF/UP made adjustments to the water for compaction. As explained below in the water for compaction subsection, BNSF/UP have misunderstood AEPCO’s position with respect to this cost item.

Third, BNSF/UP have added costs for over-excavation and disposal. Since BNSF/UP already included separate costs for over-excavation and both parties included separate land costs for disposal, these additions to its unit cost are unnecessary. Regardless, even after these adjustments, the total unit cost per CY rose only \$0.01.

Another puzzling modification, which is not explained in BNSF/UP’s Reply narrative, is that they have rejected AEPCO’s 70% adjustment to embankment quantities. The 70% adjustment is necessary because the cost is applied to total excavation quantities, while only 70% of excavation quantities are reused in embankment and 30% are wasted. BNSF/UP state in their workpapers that this adjustment is a quantity issue, but they made no adjustments in the quantities. See Reply e-workpaper “Roadbed prep costs from AFEs – RCP Revisions 5-1-10,” tab “Common exc and emb AFE,” footnote 2. Since the

common excavation cost is applied to total quantities, the adjustment for 70% embankment has to be made to the unit cost. BNSF/UP's application of the unadjusted embankment cost to total excavation quantities applies embankment costs to waste quantities which is clearly erroneous.

AEPCO has also identified errors in BNSF/UP's Means Handbook-based common earthwork unit costs. In particular, BNSF/UP suggest that the unit cost for an elevating scraper, which AEPCO showed in its Opening workpapers but did not apply, is acceptable, but that it requires a dozer to assist in spreading the material. *See* BNSF/UP Reply at III.F-22. However, the unit cost for Crew B-33F already includes the cost for dozers. *See* Reply e-workpaper "RS Means Cost Data 2009.pdf" at 26. Adding a separate cost for a dozer results in a double-count.

With very little explanation, BNSF/UP also changed the ratio of sheepsfoot roller time to steel wheel roller time from 50/50 to 80/20. Their sole argument is that embankments can be uneven and steel wheel rollers are not useful in such conditions. BNSF/UP Reply at III.F-22-23. BNSF/UP have provided no support at all for their 80/20 ratio versus the 50/50 ratio, which has been used, with little or no debate, by shippers and railroads in many SAC cases. As such, AEPCO submits that this modification is unsupported and should be rejected.

BNSF/UP also added costs for shrinking and swelling. As AEPCO has explained, BNSF/UP provided no support for their additive. Moreover, AEPCO's common earthwork unit costs are based on bank measurements. Therefore, no mark-up is necessary, even if shrink/swell were otherwise valid.

(b) Loose Rock Excavation

As AEPCO has already noted, loose rock excavation is no longer a category of excavation in current projects, but to be conservative, AEPCO included a standard package of Means Handbook-based unit costs on Opening to cover this category of earthwork as it is shown on the ICC Engineering Reports. On Reply, the railroads again take issue with various unit costs.

BNSF/UP first raise their shrink/swell arguments, which have been addressed above. BNSF/UP Reply at III.F-23. As BNSF/UP have failed to provide any support for these adjustments, especially with respect to loose rock, AEPCO has not included the adjustments. Moreover, it would be absurd to increase the already high unit costs for a category of excavation that would normally be common excavation, on the basis of shrink/swell.

BNSF/UP also launch a new assault on the use of a 42 CY hauler to move excavated materials and substitute the higher cost for a 22 CY hauler. This time, the railroads propose that the 42 CY hauler cannot be used because it will crush the culverts. *Id.* BNSF/UP's argument and its related workpaper are incorrect.

AEPCO's engineers have reviewed BNSF/UP's Reply e-workpaper "42 CY Axle Loading.pdf" and determined that there are problematic inconsistencies in the analysis. First, BNSF/UP mix and match the height of the cover. For the hauler, the railroads assume a depth of cover over the culvert of two feet, but for the train, they assume a depth of cover of 10 feet. This apples-to-

oranges comparison skews the result by suggesting that the more extreme loading case is the hauler. More importantly, BNSF/UP's calculation of the load created by the hauler is incorrect. AEPCO's engineers have properly calculated the load of the hauler and determined that it does not exceed 2,218 pounds per square foot (BNSF/UP argued that the load is 5,000 pounds per square foot). *See* Rebuttal e-workpapers "42 CY Hauler Load on Culverts.xls," "HD465-7_.pdf," "OTR tire 24.00R35.pdf," and "Caterpillar 773F.pdf."

By way of a valid comparison, the AREMA Manual for Railway Engineering, Volume 1, Part 4, governs the design of culverts under railroad loading. Using a Cooper E-80 loading, the design live load for a culvert is 3,800 pounds per square foot with two feet of overburden. *See* Rebuttal e-workpaper "AREMA.Culverts.pages.pdf." In other words, the load from a heavy-axle train exceeds the load from the hauler. As such, it is highly unlikely that the hauler would crush a culvert where a train, exerting a load more than 50 percent greater, would not crush the culvert.

AEPCO's engineers have also included an e-workpaper that reproduces a drawing produced by UP in discovery.² As is shown in the drawing,
{

² *See* Rebuttal e-workpaper "UP-AEPCO-56704.pdf"

} Thus, AEPCO's use of the 42 CY hauler would not crush the culverts.

AEPCO's engineers also take exception to BNSF/UP's curious assumption as to the stress the culverts are designed to bear. In particular, BNSF/UP simply assume in their Reply narrative that the culverts are designed to support only the exact loading of a train, as they calculated it with the different cover height (2,063 pounds per square foot), and that the approximately 5,000 pounds per square foot loading that the hauler might exert would therefore exceed the capability of the culvert by 2.4 times. *See* BNSF/UP Reply at III.F-23. However, BNSF/UP have provided no evidence as to the actual pressure that a 24-inch culvert (BNSF/UP's example size) could withstand. Again, AEPCO's engineers note UP's culvert drawings where the {

} . In other words, culverts can withstand more pressure than BNSF/UP suggest. AEPCO also notes that it specified 12 gage culverts, which are more crush resistant than those shown in UP's drawing. As BNSF/UP have not shown that the 42 CY hauler would actually crush a culvert, and AEPCO has shown that the load from a train exceeds the load from the hauler when the

same depth of fill is used, AEPCO has continued to use a 42 CY hauler on Rebuttal.

AEPCO's Opening narrative and workpapers conflicted slightly with respect to the dozers that AEPCO's engineers specified to rip and pile rock. AEPCO's intended to use the equipment specified in its workpapers, which included a 300-HP dozer for ripping and a 410-HP dozer for piling rock. BNSF/UP changed AEPCO's equipment consist to two 300-HP dozers, which AEPCO had mentioned in its narrative. As the 410-HP dozer is plainly capable of performing the work, and its unit cost is lower than the 300-HP dozer, AEPCO has continued to use the unit cost from its Opening workpapers.

Although not mentioned in their narrative, BNSF/UP also changed the sheepsfoot/steel wheel roller compaction ratio from 50/50 to 80/20 for loose rock. For the reasons explained above, AEPCO has continued to use the 50/50 compaction ratio.

(c) Solid Rock Excavation

The parties largely agree on the unit costs for solid rock excavation, with a few exceptions. BNSF/UP introduced their shrink/swell additive, they substituted a 22 CY hauler for the 42 CY hauler, and they changed the compaction ratio for sheepsfoot and steel wheel rollers from 50/50 to 80/20. BNSF/UP Reply at III.F-24-25. AEPCO has already explained why each of these changes should be rejected. Therefore, AEPCO continues to use its Opening approach for these items on Rebuttal.

BNSF/UP also propose to add a cost for moving boulders that might be left after blasting. *Id.* This is another tired argument recycled from the prior *AEPCO* proceeding and other SAC cases, and it is one the Board has consistently rejected. *See, e.g., AEP Texas* at 82. BNSF/UP have provided no new evidence here. Indeed, BNSF/UP's Reply relies on the same photos and scant data that its engineers collected for the prior *AEPCO* proceeding. Nevertheless, out of an abundance of caution *AEPCO* responds to the defendants' assertions below.

First, BNSF/UP provide no details of their estimate that 10% of the materials left after blasting are boulders that would require special handling beyond the normal production rates achievable with *AEPCO*'s 3 CY shovel. All that the defendants have shown is that some large boulders remained on one highway project unrelated to the ANR. BNSF/UP have provided no details on the blasting procedures used or the desired results. In any event, blasting is not a random exercise. Blasting is planned with a number of end results in mind, including the size of rocks that are desired and the landing zone for the materials, and can be quite precise. Indeed, variations in the desired end result are achieved, *inter alia*, by placing the charges in different locations, varying the spacing of the charges, and varying the depth of the charges. *See* Rebuttal e-workpaper "blasting.pdf" (desired fragmentation is obtained by checking the drill pattern, spacing and burden to be blasted). In addition, as explained in *AEP Texas*, the Means Handbook costs for handling blasted materials assumes that blasting would produce materials small enough to be handled by the 3 CY shovel that *AEP Texas*

used to “excavate and load blasted rock,” which is the same unit cost that AEPCO is using. *See* AEP Texas Rebuttal Narrative (Public Version) filed July 27, 2004, at III-F-56. Thus, AEPCO continues to rely on its Opening unit cost without an additive for moving boulders.

AEPCO also notes that BNSF/UP’s unit cost for moving boulders repeats the same flaw that afflicted the railroads’ evidence in *AEP Texas* and the prior *AEPCO* proceeding – using the unit cost to “Excavate and Load Boulders.” The obvious problem with BNSF/UP’s approach is that it represents a cost to move boulders that *have not been blasted*. Not surprisingly, it is more expensive to excavate boulders that are in place rather than move rocks that have been blasted. Thus, BNSF/UP’s additive must be rejected.

(d) Embankment/Borrow

On Opening, AEPCO used Means Handbook unit costs for acquiring the borrow and transporting it to the work site combined with the embankment cost from the BNSF construction projects (representing compaction costs including water). *See* Opening e-workpaper “ANR GRADING.xls,” tab “IIIF Unit Costs.”

On Reply, BNSF/UP claim that they largely accepted AEPCO’s costs for borrow, except that they added shrink/swell costs, changed the compaction ratio and adjusted the location factor. BNSF/UP Reply at III.F-25. In fact, BNSF/UP made other major modifications to AEPCO’s embankment/borrow unit costs without explanation, and BNSF/UP’s spreadsheet is also inconsistent

with their Narrative. Regardless, none of BNSF/UP's modifications are warranted.

BNSF/UP's grading spreadsheet shows that they included two borrow unit costs. BNSF/UP accepted AEPCO's borrow cost, including the embankment costs from the BNSF expansion projects for the Orin Line (even though there was no borrow on the Orin Line projects). For all other ANR line segments, BNSF/UP rejected the embankment cost from the BNSF expansion projects and instead added separate unit costs for their 80/20 compaction ration and for water for compaction to the Means Handbook costs to acquire and transport borrow. See Reply e-workpaper "Revised ANR GRADING.xls," tab "IIIF Unit Costs." AEPCO has already demonstrated that the embankment unit costs from the BNSF expansion projects are feasible and applicable to the entire ANR construction project. AEPCO has shown that BNSF/UP's 80/20 compaction ratio is unsupported and improper and for the reasons explained in the water for compaction section, *infra*, that additive is also unnecessary. AEPCO also notes that BNSF/UP did not include any shrink/swell adjustment in either borrow unit cost. As this cost adjustment is unwarranted for the reasons discussed above, AEPCO continues to exclude any such additive.

As BNSF/UP accepted the Means Handbook unit costs for acquiring the borrow and transporting it to the work site and did not offer any evidence as to why the embankment unit cost from the BNSF expansion projects is not applicable

to the entire ANR, AEPCO continues to use its Opening embankment/borrow unit cost with the correction to the location factor.

(e) Fine Grading

As explained on Opening, AEPCO's common earthwork unit cost, based on five BNSF construction projects, already incorporates any necessary fine grading. Thus, AEPCO did not include additional fine grading costs. Moreover, fine grading has been rejected numerous times by the Board. *See, e.g., AEP Texas at 82-83; Duke/NS, 7 S.T.B. at 176, Duke/CSXT, 7 S.T.B. at 480, CP&L, 7 S.T.B. at 313-314.* BNSF/UP acknowledge that fine grading is included in the common earthwork cost for the BNSF expansion projects. *See BNSF/UP Reply at III.F-26.* However, as BNSF/UP suggest that the Means Handbook unit cost for common earthwork should be used everywhere but the Orin Line, they have, despite various Board precedents, included fine grading costs. Obviously these costs are not necessary since AEPCO's common earthwork costs are fully supported, are applicable to the entire ANR and both parties agree that they include fine grading. Thus, AEPCO continues to exclude fine grading costs on Rebuttal.

(f) Land for Waste Excavation

On Opening, AEPCO included land to place wasted excavation, and it assumed a 30 percent waste ratio. BNSF/UP accept AEPCO's approach with one modification – BNSF/UP increased the total waste amount by 15 percent to account for their shrink/swell additive. *See Reply e-workpaper "Revised ANR GRADING.xls," tab "IIIF_12 Othr Cst."* As AEPCO has previously explained,

BNSF/UP have not provided any support for their shrink/swell additive. Thus, AEPCO continues to use its Opening methodology for calculating the land needed for waste quantities.

c. Drainage

i. Lateral Drainage

BNSF/UP claim that AEPCO made serious errors in its lateral drainage quantities and its calculations of the costs, but the net result is that BNSF/UP's total cost, is actually \$6,000 less than AEPCO's Opening cost. *See* BNSF/UP Reply at III.F-28-29. However, as AEPCO explains below, BNSF/UP's spreadsheets were not updated properly and certain quantities were not included. On Rebuttal, AEPCO has added additional costs to account for the discrepancies described below.

BNSF/UP argue that AEPCO understated the lateral drainage required on the Campbell Branch, and that AEPCO omitted lateral drainage from the Orin Line where they argue 63,360 linear feet of drainage should have been included. *Id.* at III.F-29.

First, AEPCO's engineers note that despite BNSF/UP's complaint that AEPCO's quantity of lateral drainage is understated, BNSF/UP failed to actually add any of the omitted quantities in its Reply. Second, AEPCO's engineers were unable to review BNSF/UP's calculation of lateral drainage on the Orin Line (the Orin and Reno Subdivisions) because BNSF/UP did not include the referenced workpaper "Lateral Drainage" in their Reply workpapers. AEPCO's

engineers have reviewed the track charts for the Orin and Reno Subdivisions, identified the correct amount of lateral drainage for the Orin Line, and determined that BNSF/UP's quantity is grossly overstated. The correct quantity is shown in Rebuttal e-workpapers "ANR GRADING REBUTTAL.xlsx," tab "Lateral Drain" and "Orin Line Lateral Drainage.xlsx." Finally, AEPCO accepted BNSF/UP's revised quantities for lateral drainage on the Campbell Branch.

As for the unit costs, BNSF/UP raise a variety of arguments that raise the total costs for lateral drainage. In particular, BNSF/UP added excavation costs for the pipe trench, they increased the length of haul for crushed stone to backfill the pipe trench from 2 miles to 10 miles, and they added a cost for disposing of trench excavation spoils. BNSF/UP Reply at III.F-29-31. None of BNSF/UP's modifications are warranted.

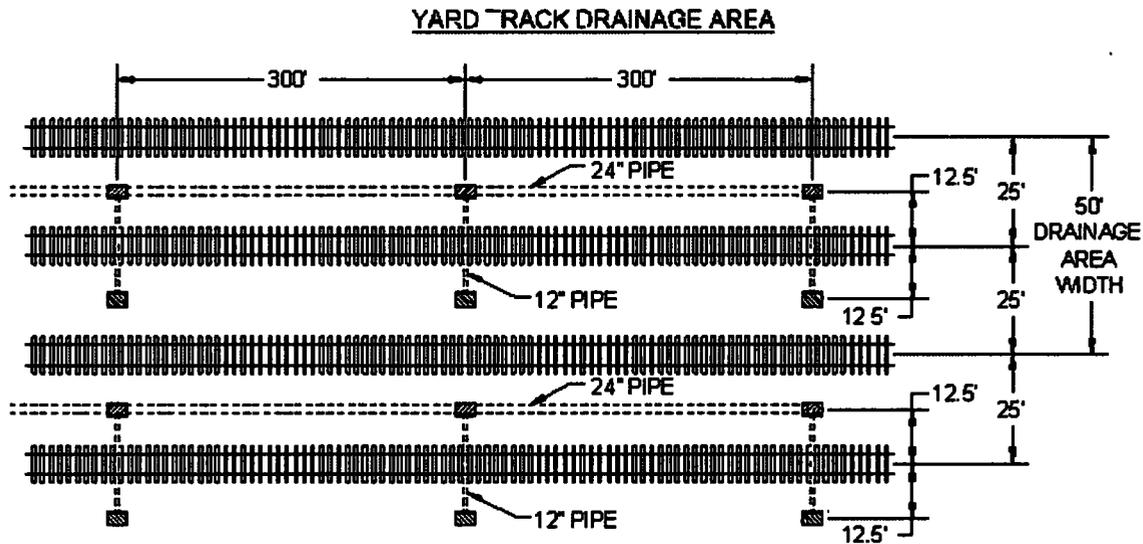
BNSF/UP extended the length of haul for crushed stone from two miles to ten miles without any explanation other than suggesting that two miles is unreasonable, since sources may not be located near the ANR. *Id.* at 30. BNSF/UP's additional miles are unsupported and should be rejected by the Board. A two-mile length of haul is reasonable in that materials are generally stockpiled at various locations around where crews are working. A two-mile length of haul for lateral drainage has been used repeatedly in prior SAC cases, and is far more reasonable than BNSF/UP's completely-unexplained 10 miles. *See Duke/NS*, 7 S.T.B. at 176; *Duke/CSXT*, 7 S.T.B. at 480-481; *CP&L*, 7 S.T.B. at 314; *WFA/Basin I* at 88; *AEP Texas* at 83 (BNSF accepted the same unit cost).

BNSF/UP also added a cost to cut a trench to place the drainage pipe. BNSF/UP Reply at III.F-29-30. This cost addition is without merit. As the Board has explained in previous SAC cases, any necessary trenching can be done at the same time that the line is being excavated, and, therefore, there is no need for additional costs for this activity. *See Duke/NS*, 7 S.T.B. at 176; *Duke/CSXT*, 7 S.T.B. at 480-481; *CP&L*, 7 S.T.B. at 314. *See also AEP Texas* and *WFA/Basin I*, where there was no dispute over installation costs using the same methodology that AEPCO is using here.

Finally, there is no need for additional costs for excavation spoils as any such material is included in the 30% excavation waste used by both AEPCO and BNSF/UP. AEPCO therefore continues to use the same unit costs as on Opening, except that they have been updated to reflect the proper location factor.

ii. Yard Drainage

On Opening, AEPCO's narrative explanation of the ANR's yard drainage was incomplete in several respects. In particular, AEPCO failed to note that its engineers had included more than just catch basins on sloped ends and sides of tracks. AEPCO's engineers also included a complete pipe drainage system between the tracks, which utilized the following scheme:



The costs were included in Opening e-workpaper “ANR Buildings and Facilities Final.xls,” tabs “ANR Yard Summary Cost” and “ANR Locomotive Shops with Yards.” Briefly summarized, AEPCO’s engineers used the above approach to develop a composite cost per linear foot of yard track, which was derived using the ENR 2009 Cost Book and Means Handbook values. The composite cost, calculated and used in all yards, was \$78.73 per linear foot. As the installed cost of straight drainage pipe ranges from \$21.54 per linear to \$42.28 per linear foot, depending upon diameter, the balance of the \$78.73 per linear foot is catch basins, manholes, and other necessary appurtenances.

Rebuttal Table III-F-5 below provides the linear feet and total costs that AEPCO used on Opening.

REBUTTAL TABLE III-F-5		
<u>Yard Drainage</u>		
Yard	Total Linear Feet of Drainage Pipe	Drainage Cost
West El Paso	66,000 LF	\$5,196,180
West Vaughn	60,000 LF	\$4,723,800
Texaco	36,000 LF	\$2,881,518
Guernsey	40,000 LF	\$3,149,200
North Amarillo	40,000 LF	\$3,149,200

The drainage provided is consistent with that used in other SAC cases, such as *WFA/Basin*, and is more than adequate to accommodate the moderate rainfall in the ANR territory. In addition, AEPCO notes that visual inspections by its engineers revealed that many of the real-world railroad yards in these areas have little or no drainage.

BNSF/UP apparently missed the additional facilities that AEPCO included on Opening. Consequently, BNSF/UP claims to have developed their own, costly yard drainage system, which includes completely unnecessary items like 48-inch pipes in various locations. BNSF/UP Reply at III.F-31-32. However, a review of BNSF/UP's workpapers shows that BNSF/UP included AEPCO's Opening drainage costs in their yard site costs. As such, AEPCO has continued to use its Opening yard drainage costs.

d. Culverts

On Opening, AEPCO utilized data provided by BNSF/UP in discovery to develop culvert quantities. From there, AEPCO's engineers used a combination of Means Handbook prices and various vendor quotes and costs from

public projects to determine the costs per culvert. BNSF/UP take issue with AEPCO's unit costs and its culvert installation plans in general.

i. Culvert Unit Costs

BNSF/UP raise three complaints with respect to AEPCO's culvert unit costs. First, they complain that AEPCO's unit cost for culvert band fasteners is based on a quote from one supplier while its pipe costs were based on a quote from another supplier. BNSF/UP Reply at III.F-34-35. Mixing and matching such quotes is hardly unreasonable. Such practices are common in real-world projects, and shippers have mixed and matched in other SAC cases without objection from the Board. However, as the impact is small, AEPCO has replaced the band costs developed from linear feet equivalency with actual band bid prices.

Second, BNSF/UP complain that AEPCO used regionally disparate prices to establish unit costs. BNSF/UP Reply at III.F-36. This argument is spurious. Material prices might originate from any number of sources in different locations. For example, in *AEP Texas*, bridge materials were sourced from locations in the Midwest. And despite their complaints, the railroads have not demonstrated that any of the prices are infeasible or inapplicable to the ANR's territory. Thus, AEPCO has continued to rely on its Opening unit costs for corrugated metal pipe, larger band fasteners, and box culverts, although it has extended the range of culvert pipe size unit costs that are required, as did the defendants in their Reply, as the range was incorrectly truncated on Opening.

Finally, BNSF/UP complain that AEPCO has not included the costs for transportation of bedding and rip rap for the culverts. AEPCO agrees, and has added the necessary costs in Rebuttal.

ii. Culvert Installation Plans

On Opening, AEPCO included a straightforward culvert installation plan that was consistent with industry practice and past SAC cases. BNSF/UP's Reply notes one problem with AEPCO's approach, and one area where AEPCO's approach is inefficient. In particular, BNSF/UP note that AEPCO culvert excavation formula understates the required excavation. BNSF/UP Reply at III.F-36. AEPCO agrees, and it has corrected this error on Rebuttal. BNSF/UP also suggest that it would be more efficient to place the backfill material with mechanical equipment rather than by hand. *Id.* AEPCO agrees, and it has made this modification on Rebuttal.

iii. Culvert Quantities

On Opening, AEPCO used culverts lists provided in discovery and other data to develop its culvert count. In addition, AEPCO developed culvert lengths using a variety of standard pipe lengths based on track width. BNSF/UP take issue with three of AEPCO's Opening methodologies and/or costs.

First, BNSF/UP note that AEPCO's standard culvert lengths are not long enough to extend across the entire roadbed as specified by AEPCO on Opening (BNSF/UP agree on AEPCO's roadbed widths). *Id.* at III.F-37-38.

AEPCO agrees that its Opening culvert length formula was incorrect. It has corrected this error on Rebuttal.³

BNSF/UP also complain that AEPCO converted certain larger culverts into bridges, but the resulting bridges are problematic because they are, for the most part, unusually tall but very short bridges. *Id.* at III.F-38-39.

Notwithstanding the merits of BNSF/UP's argument, the differences are minor. Thus, to reduce conflicts, AEPCO has changed the bridges back to culverts on Rebuttal.

Finally, BNSF/UP argue that the ANR included culverts that are not standard industry sizes such as 12-inch, 24-inch or 48-inch, and that AEPCO failed to include the extra costs associated with custom sizes such as 27-inch pipes. First, AEPCO notes that it inadvertently neglected to adjust its spreadsheet so that the culvert cost would reflect the next larger standard size. It has fixed this on Rebuttal. However, AEPCO also notes that the "non-standard" culvert sizes that were being replicated on opening were existing (real-world) "non-standard" sizes. BNSF/UP have offered no evidence that they paid more for construction of culverts with these non-standard sizes.

³ AEPCO's engineers note that in certain locations, the culverts length indicated in the discovery documents provided by the defendants were actually shorter than the standard length that AEPCO has adopted on Rebuttal. However, it was unclear why those culverts were shorter – possibly they represent culvert extensions. Regardless, AEPCO has assumed that any culvert would need to be at least the standard lengths used in Rebuttal.

With the modifications described above, AEPCO's revised rebuttal culvert costs are \$53.1 million. *See* Rebuttal e-workpaper "ANR Culverts working.REBUTTAL.xls."

e. Other

i. Sideslopes

The parties agree on an average 1.5:1 sideslope. *See* BNSF/UP Reply at III.F-40.

ii. Ditches

The parties agree on the specifications for ditches. *Id.*

iii. Retaining Walls

The parties have a variety of disagreements with respect to retaining walls, including differences in quantities and unit costs. While the net difference between the parties is small, AEPCO addresses the various disputes below.

(a) Quantities

BNSF/UP argue that AEPCO did not properly calculate the quantity of gabion needed to replace the quantity of retain walls derived from the ICC Engineering Reports. *Id.* at III-F.40-42. In particular, BNSF/UP argue that the retaining power of a wall is based on its weight, not its volume. BNSF/UP then suggest that since a CY of gabion wall weighs less than a CY of masonry wall (at least by their calculations), a gabion wall is inadequate as a replacement, unless the weight of the gabion wall equals that of the masonry wall. Thus, using their weight calculation, BNSF/UP develop a ratio of 1.54:1 to establish the amount of

gabion wall needed when replacing a masonry wall. *Id.* at III.F-42. BNSF/UP's modification is erroneous.

BNSF/UP's example assumes that the ANR would be replacing solid rock/concrete walls. However, while many of the masonry retaining walls identified in the ICC Engineering Reports involve some form of solid rock/concrete material, there are several culvert forms that either involve some sort of broken rock or do not include concrete. Such examples include:

1. Masonry, dry wall
2. Rubble in natural cement
3. Dry stone
4. Masonry – stone dry
5. Masonry – cut stone in mortar
6. Dry rubble wall

BNSF/UP's 1.54 weight ratio is certainly not applicable to the types of retaining walls identified above as they are not solid walls consisting of one type of material which is the basis for BNSF/UP's ratio.

Furthermore, BNSF/UP's weight ratio assumes that all retaining walls are made of solid limestone or sandstone. BNSF/UP has not provided any support for this assumption. The ICC Engineering Reports do not identify the type of material with any specificity but rather in general terms (*e.g.*, stone, rubble, cement, concrete).

AEPCO's quantities are most likely overstated to begin with as AEPCO assigned all retaining walls in each valuation section to the route miles of the valuation section and applied the amount per route mile to ANR's route miles.

Stated differently, as the ICC Engineering Reports do not show the location of retaining walls, AEPCO assumed all retaining walls were put in place for the initial main track. The seven valuation sections where the masonry retaining walls are located include miles of second main and yard track that the ANR does not construct, yet AEPCO included the total amount of retaining walls for the valuation section in determining the average amount per route mile. For these seven valuation sections, the route (first main track) miles range from only 17% to 84% of the total miles. See Rebuttal e-workpaper “ANR GRADING REBUTTAL.xlsx,” tab “ICC ER Masonry Ret Walls.” By assigning all the masonry retaining walls to the route miles, AEPCO has most likely overstated the quantities. Thus, BNSF/UP’s increase of retaining wall quantities by a factor of 1.54 times is unwarranted.

AEPCO also notes that its methodology for calculating the quantity of retaining walls on the ANR has been accepted by the Board in numerous prior stand-alone cost proceedings, including *WFA/Basin* at 89 (where the parties agreed) and *AEP Texas* at 84.

On Rebuttal, AEPCO continues to rely on its Opening methodology for calculating the masonry retaining wall quantities. However, AEPCO’s Rebuttal quantities increased slightly over Opening due to the minor increase in the ANR route mile described in Part III-B above.

(b) Timber, Tie and Log Walls

BNSF/UP do not address timber, tie and log walls in their Reply narrative. BNSF/UP appear to have accepted AEPCO's methodology for extracting quantities from the ICC Engineering Reports, but they did not develop the quantities for the ANR in the same manner as AEPCO. BNSF/UP's quantity development (See Reply e-workpaper "Revised ANR GRADING.xls," tab "IIIF_4 Othr EW)" is incorrect.

The ICC Engineering Reports contain the quantity of timber in thousand board feet ("MBM"), and the reports include a count of ties and LF of logs. Using these quantities, AEPCO's engineers calculated the SY facing area of the timber, tie and log walls. AEPCO then replaced the same SY area with CY of gabions. See Opening e-workpaper "ANR GRADING.xls," tab "IIIF_4 Othr EW." This is the same procedure that has been used and accepted in prior SAC cases.

BNSF/UP, on the other hand, failed to convert the quantities to SY facing area. Instead, BNSF/UP erroneously treat the MBM of timber, count of ties, and LF of logs as *cubic yards*, which is then multiplied by BNSF/UP's cost per CY for gabions, resulting in an overstatement of the costs. *Id.*

BNSF/UP's quantity calculations are also incorrect due to the errors in route miles by valuation section for the seven line segments discussed above. In combination, BNSF/UP have significantly overstated the total costs associated with replacing timber, tie and log walls with gabions.

(c) Piles

BNSF/UP accepted AEPCO's methodology for the calculation of quantities, as well as the unit costs for piles. *See* Reply e-workpaper "Revised ANR GRADING.xls," tab "IIIF_4 Othr EW." However, BNSF/UP's quantities are incorrect due to the errors in route miles by valuation section discussed above.

(d) Unit Costs

BNSF/UP made several unwarranted modifications to AEPCO's Opening gabion unit costs. BNSF/UP increased the unit cost for gabion stone by extending the haul from two miles to 10 miles. BNSF/UP added excavation costs for gabion installation. Finally, BNSF/UP added costs for temporary shoring structures. *See* BNSF/UP Reply at III.F-42-46.

BNSF/UP's increased haul for gabion material is unsupported. A two-mile haul is certainly reasonable since materials are generally stockpiled as work proceeds. The two-mile haul does not, as BNSF/UP suggest, mean that a quarry has to be within that distance. Moreover, BNSF/UP provide no evidence that a 10 mile haul is any more "realistic." In addition, BNSF/UP assume that all rock used in gabions would be coming from a quarry. In fact, wasted materials will be the primary fill for gabions, but to be conservative, AEPCO's engineers included a cost for stone with a two-mile haul. Finally, AEPCO notes that the two-mile haul has been accepted as recently as the *WFA/Basin* case. *See WFA/Basin I* at 89. Thus, AEPCO continues to use its Opening unit costs for gabions.

As for footings, the additional excavation costs advocated by BNSF/UP are unnecessary. As with lateral drainage, gabions are installed at the same time that other excavation work is performed. *See, e.g., AEP Texas* at 84. Thus, additional excavation is not required. In addition, AEPCO notes that it has included all excavation quantities included under “Protection of Roadway” (from the ICC Engineering Reports) in its earthwork calculations, which would include excavation required for retaining walls. *See, e.g.,* the ICC Engineering Report for valuation section CS-2-WY in AEPCO Opening e-workpaper “ICC Engineering Reports.pdf” and compare that to the earthwork quantities included for that valuation section in AEPCO Opening e-workpaper “ANR GRADING.xls,” tab “IIF_2 ER INPUT.”

BNSF/UP’s temporary shoring structure costs are unsupported and unnecessary. First, AEPCO notes that temporary shoring would only be needed in the most extreme cases (*i.e.*, where the retaining walls are particularly high). As the ICC Engineering Reports contain only CY quantities and no height information, and BNSF/UP have not provided any specific height information, it is not possible to determine if temporary shoring would be needed during the ANR’s construction.

Second, BNSF/UP have not suggested that the quantities in the ICC Engineering Reports do not include temporary shoring and the associated excavation. AEPCO included all types of retaining walls structures shown in the ICC Engineering Report as well as all excavation quantities shown under

“Protection of Roadway,” both of which BNSF/UP also included. Thus, both parties included timber walls and pilings which could have been used for temporary shoring structures. Indeed, it is very likely that BNSF/UP’s inclusion of costs for temporary shoring and compacted backfill results in a double count of costs.

Finally, BNSF/UP’s assumption that 25% of retaining wall structures are in cut-slopes is unsupported. BNSF/UP provide no evidence at all to support their figure. Consequently, AEPCO has not included additional costs for temporary shoring on Rebuttal.

iv. **Rip Rap**

BNSF/UP accepted AEPCO’s methodology for developing rip rap quantities, but the total quantities differ due to the parties’ slight difference in route miles. BNSF/UP Reply at III.F-46-47. However, BNSF/UP again increased the length of haul for the rock materials from two miles to ten miles without any support. AEPCO is very conservative by including the cost for rip rap material in the first place because wasted excavated rock would be re-used as rip rap wherever practical. In addition, the unit cost methodology, including the two-mile hauling distance, has been accepted by the Board and defendant railroads in the two most recent SAC proceedings. See *WFA/Basin I* at 90 and *AEP Texas* at 84, where the disputes were over quantities and not unit costs. In addition, BNSF/UP provided no support for their hauling distance. As such, AEPCO continues to use its Opening unit cost for rip rap adjusted by the correct location factor.

v. **Relocating and Protecting Utilities**

BNSF/UP have accepted AEPCO's Opening costs for this activity.

BNSF/UP Reply at III-F-52.

vi. **Seeding/Topsoil Placement**

BNSF/UP have accepted AEPCO's Opening quantities and costs for this item. *Id.*

vii. **Water for Compaction**

BNSF/UP have raised several criticisms of AEPCO's Opening approach to water for compaction. As described below, BNSF/UP have erred in their interpretation of AEPCO's Opening methodology and costs, and BNSF/UP's proposed revisions are incorrect.

BNSF/UP suggest that AEPCO misapplied the Means Handbook unit costs for water. *Id.* at III.F-47-48. This argument is irrelevant. AEPCO did not apply the Means Handbook costs for water at all since the cost for water is included in the excavation/embankment, as well as the borrow costs, which AEPCO explained on Opening at III-F-47-48.

BNSF/UP argue that AEPCO omitted water for compaction from most of the ANR embankment. BNSF/UP Reply at III.F-48. Again, this is incorrect. AEPCO included the cost of water in the common excavation/embankment cost developed from the BNSF expansion projects, which it also used for borrow. See Opening e-workpapers "Roadbed prep costs from AFEs.xls" and "ANR GRADING.xls," tab "IIIF Unit Costs." {

} Thus, AEPCO has fully accounted for water for compaction as needed.

AEPCO's engineers have also reviewed BNSF/UP's so-called fix to the water for compaction issue, and determined that BNSF/UP have made significant errors that cause their solution to be unworkable as well as improper.

BNSF/UP have misinterpreted the cost of water from the Means Handbook by ignoring the clarification in AEPCO's Opening workpapers based on a conversation with RS Means personnel. The Means Handbook cost is the cost per CY of water, not CY of embankment. See Opening e-workpaper "ANR GRADING.xls", tab "IIIF Unit Costs."

BNSF/UP also modify the cost of water by adding a labor and distribution cost from Means to the Walker to Shawnee unit cost for water. *See* BNSF/UP Reply at III.F-47-48. This modification is erroneous. The cost for water included in AEPCO's earthwork costs is not just a material cost, as claimed by BNSF/UP. As water for compaction is considered incidental to the earthwork costs, this would include the application of the water as well. Thus, BNSF/UP's modification of the Means Handbook cost of water by adding \$1.65 for such work is improper since the cost of water from the Walker to Shawnee project is a total cost including distribution, not just a material cost. Therefore, BNSF/UP's substitution of the entire cost for only the Means Handbook material cost results in a gross overstatement of the cost of water for compaction.

Even more puzzling, BNSF/UP's Reply includes four different costs for water for compaction. The common earthwork cost from the BNSF expansion projects used by BNSF/UP for the Orin Line includes \$ { } per CY for water. *See* Reply e-workpaper "Roadbed prep costs from AFEs – RCP Revisions 5-1-10.xls," tab "Common exc and emb AFE." In the Water for Compaction section, BNSF/UP's Reply states that the cost for water is \$3.80 per CY. *See* BNSF/UP Reply at III.F-47-48. Meanwhile, BNSF/UP's Reply workpapers show calculations equaling \$3.75 per CY. *See* Reply e-workpaper "Revised ANR GRADING.xls," tab "IIF Unit Costs," rows 122-126. Finally, BNSF/UP's common earthwork and borrow unit costs include a hardcoded \$3.51 per CY with

no source. See Reply e-workpaper “Revised ANR GRADING.xls,” tab “IIIF Unit Costs,” rows 15 and 61.

In any event, BNSF/UP’s calculations and their use of the \$ { } cost per CY from the Walker to Shawnee project as an additive to every CY on the Orin Line is improper and results in overstated earthwork costs for the Orin Line because water costs are already included in the embankment costs for the other four BNSF expansion projects. The Walker to Shawnee project’s separate water costs should be weighted in with all the embankment costs, as AEPCO did on Opening. See AEPCO Opening e-workpaper “Roadbed prep costs from AFEs.xls,” tab “Common exc and emb AFE.” However, this overstatement of Orin Line costs pales in comparison to BNSF/UP’s water for compaction costs for the non-Orin Line portions of the ANR, which are *more than* { } *times higher* than the cost of water for the Orin Line (\$3.80 to \$3.51 per CY divided by \$ { } per CY). This overstatement is inexplicable and ridiculous, and serves to further demonstrate that BNSF/UP have misapplied the Means Handbook water costs.

viii. Surfacing for Detour Roads

With the correction to the Means Handbook location factors, the parties agree on the unit costs and methodology for this item. BNSF/UP Reply at III.F-49. AEPCO’s Rebuttal costs differ slightly from BNSF/UP’s due to the minor difference in the location factor that results from the parties’ slightly different route mileage.

ix. Construction Site Access Roads

BNSF/UP did not address this issue in their Reply.

x. Environmental Compliance

BNSF/UP have accepted AEPCO Opening environmental compliance costs. BNSF/UP Reply at III.F-49.

3. Track Construction

AEPCO's Opening track construction costs were driven by the basic configuration of the ANR, as described in Part III-B of AEPCO's Opening and Opening Exhibit III-B-1. AEPCO's unit costs were derived primarily from documents provided by BNSF/UP in discovery, as well as costs derived from other cases and various quotes from vendors. On Reply, BNSF/UP have increased the total track construction costs by \$461 million. As explained below, this cost difference is attributable almost entirely to modifications to AEPCO's Opening unit and costs and quantities for ballast and subballast. While AEPCO acknowledges that its Opening transportation costs failed to include a multiplier to account for the actual transportation miles, BNSF/UP's "solutions" to the ballast and subballast issues are poorly explained and largely undocumented. AEPCO has corrected its initial errors and, consequently, the ANR's track construction costs have increased by \$247.7 million on Rebuttal. As explained below, AEPCO's Rebuttal restatement represents the best evidence of record.

a. Geotextiles

BNSF/UP argue that AEPCO understated the amount of geotextile fabric that is required under the ANR's turnouts, but take no exception to the AEPCO quantities for at-grade crossings. BNSF/UP Reply at III.F-50. The differences in quantities per turnout proposed by BNSF/UP and those specified by AEPCO's engineers are very minor. On Rebuttal, AEPCO's has accepted BNSF/UP's geotextile quantities for the various turnout sizes.

b. Ballast and Subballast

As noted above, ballast and subballast represent the bulk of the difference in track construction costs between the parties. Each of the disputes between the parties is addressed below.

i. Ballast and Subballast Quantities

For mainline track, AEPCO used an 8-inch layer of ballast and a 12-inch layer of subballast. BNSF/UP have accepted this specification. BNSF/UP Reply at III.F-51. However, BNSF/UP take issue with the details of AEPCO's ballast/subballast calculations. First, BNSF/UP note that AEPCO specification for shoulder ballast does not include 12 inches on each side of the track, and they argue that the additional shoulder ballast is needed for proper alignment of the rail during hot weather. *Id.* Putting aside the merits of BNSF/UP's argument, AEPCO's engineers have accepted this modification and have corrected for the shoulder widths in the ballast width calculation.

BNSF/UP further argue that the AEPCO did not correctly calculate the total amount of subballast because there is not enough ballast to protect the entire top of the subgrade. AEPCO's engineers agree that there was a problem with the subballast coverage that AEPCO used on Opening. However, AEPCO's engineers have determined that BNSF/UP's engineers made a calculation error when modifying the subballast quantities for certain track cross-sections. Details of the error are shown in AEPCO's Rebuttal e-workpaper "ANR Track Construction working.REBUTTAL.xls." AEPCO engineers have used a CAD tool to measure the correct subballast quantity for each track cross-section, as shown in rebuttal e-workpapers "ANR Track Section Single.revA.pdf," "ANR Track Section Double.revA.pdf," "ANR Track Section Triple.pdf," and "ANR Track Section Quad.pdf," and recalculated the total amount of subballast accordingly.

ii. Ballast and Subballast Unit Costs

As noted briefly above, AEPCO's Opening ballast and subballast unit costs suffered from a problem with respect to the proper transportation additive. However, as explained in detail below, BNSF/UP's fix is unworkable and inconsistent with stand-alone cost principles. AEPCO has modified its transportation costs in a realistic manner, and has made a few other modifications described below, thereby presenting the only feasible option for total ballast/subballast costs.

(a) Ballast Unit Costs

On Opening, AEPCO sourced the ANR's ballast from the Granite Canyon facility, which is located west of Cheyenne, WY. This quarry has been the source of SARR ballast in several SAC cases, including *WFA/Basin*. The unit cost was derived from documents produced in discovery by the railroads.

BNSF/UP accept the unit cost from this quarry, but they argue that it cannot realistically be the sole source of ballast due to the distance from this quarry to the southern portions of the ANR system. BNSF/UP Reply at III.F-52. Therefore, BNSF/UP added a second quarry in New Mexico to supply ballast. AEPCO agrees that a second quarry should be added, and AEPCO also agrees with the defendants' unit cost for ballast from this second facility. Thus, on Rebuttal, AEPCO has used the Torrance quarry, located on the ANR near Encino, NM, as the supplier for the ANR track south of the Colorado/Oklahoma border. The Granite Canyon quarry continues to supply ballast for all ANR tracks north of the Colorado/Oklahoma border, with the exception of several sections that will be supplied from either the Guernsey or Pipe quarries, as shown in Rebuttal e-workpaper "Ballast Haul Miles.REBUTTAL.xls."

As for transportation costs, BNSF/UP correctly note that AEPCO inadvertently included only one mile of transportation costs in calculating ballast costs. AEPCO has, on Rebuttal, added the proper mileage to the transportation cost formulas from all quarries.

AEPCO notes that BNSF/UP's Reply Evidence uses a weighted average delivered cost of ballast of \$ { } per ton. However, BNSF/UP did not provide any details of its calculation. It is simply a hardcoded number in Reply e-workpaper "Track Constructions Schedule.xls," tab "Track Construction Cost." While BNSF/UP did include some proposed mileages from the ballast sources, there are no specifics on the intended distribution. As such, AEPCO's engineers could not evaluate BNSF/UP's unit cost directly. However, AEPCO's engineers have provided detailed calculations of AEPCO's Rebuttal weighted average cost, which is considerably lower at { } per ton. AEPCO has provided the superior evidence of record with respect to ballast unit costs.

(b) Subballast Unit Costs

On Opening, AEPCO used a unit cost of \$ { } per ton for subballast out of the Granite Canyon quarry, which was derived from documents provided by BNSF/UP in discovery. BNSF/UP attempt to discredit their own documents by suggesting that the cost must represent fines and not suitable subballast. BNSF/UP cannot impeach their own documents. As the Board noted in *Xcel I*, 7 S.T.B. at 673, "parties must be able to rely on information supplied in discovery." Indeed, in *PSCo/Xcel*, the shipper relied on a subballast unit cost provided by BNSF in discovery. In that case, just prior to submitting its reply evidence, BNSF filed a letter from an employee that attempted to show that the delivered cost was incomplete. BNSF's Reply evidence then proposed a higher cost. The Board rejected BNSF's cost, noting that Xcel reasonably relied on the

unit cost provided by BNSF and that “BNSF may not impeach that information.” *Id.*, 7 S.T.B. at 683. The Board also noted that BNSF cannot “impeach” the shipper’s evidence with “information it failed to produce in discovery.” *Id.* at 673. Here, BNSF/UP only speculate that the subballast cost from discovery would not account for suitable subballast. The railroads present no specific evidence that the unit cost is not valid. As such, AEPCO has continued to use the subballast unit cost from Granite Canyon.

AEPCO does, however, agree with BNSF/UP that Granite Canyon is a relatively long distance from the southerly portions of the ANR system. Thus, as it did for ballast, AEPCO has included additional subballast sources south of Pueblo and one in Montana. Details of the sources are shown in Rebuttal e-workpaper “Ballast Haul Miles.REBUTTAL.xls.” Briefly summarized, they include the quarry near Encino; NN and sources near El Paso and Amarillo. For the furthest northern reaches of the ANR, AEPCO also added a subballast source in Montana. AEPCO also corrected its transportation costs, as it did with ballast.

Not satisfied with trying to discredit their own unit costs, BNSF/UP go on to propose a “first” in SAC cases by suggesting that subballast cannot be delivered by rail. First, BNSF/UP argue that the routings the ANR would have to use would be circuitous, especially coming from Granite Canyon. However, that problem is easily solved by adding several additional sources. Moreover, the chart that BNSF/UP included on page III.F-59 of their Reply contains a variety of assumptions about railheads where subballast could be delivered that are simply

absurd. For example, there is no need to move subballast from Granite canyon, WY through California just to get it to Cochise, AZ. The subballast could easily be moved more or less straight south to Deming, NM and then moved west to Cochise.

BNSF/UP then suggest that rail transportation would increase the quantity of subballast that would have to be rejected, as a result of over-handling. BNSF/UP then argue that railroads generally buy subballast that can be readily trucked to a particular location because the subgrade needs to be covered shortly after it is prepared, and they further argue that shipping by rail, stockpiling and redistributing by truck would further degrade the subballast. BNSF/UP Reply at II.F-57-59. Thus, BNSF/UP completely ignore AEPCO's subballast costs in favor of an average cost of \$12.26 per ton to deliver subballast 20 miles by truck to any point on the ANR, which they calculate on a small sample shown in a chart on page III.F-59 of their Reply. BNSF/UP's arguments are absurd.

First, shippers and railroads have often used rail transportation for subballast. *See, e.g.,* Rebuttal e-workpaper "UP-AEPCO-21462," which has a unit cost item, { }
AEPCO's engineers note, as well, that subballast is just another form of rock, which is regularly carried by the railroads. Indeed, AEPCO's engineers have worked on many projects where subballast was delivered to a railhead and distributed as necessary.

Second, BNSF/UP have not provided one concrete example from any project where transportation by rail made subballast any less suitable than transportation by truck. Finally, BNSF/UP have not provided any evidence from any source that suggests subballast cannot be shipped by rail, and indeed their own discovery documents contradict such arguments. *Id.*

In light of the above, AEPCO submits that its Rebuttal subballast costs are the best evidence of record.

c. Ties

The parties agree on the spacing of ties. The parties also agree on the unit costs for ties. BNSF/UP Reply at III.F-60.

d. Track (Rail)

i. Main Line

The parties agree on the weight of rail to be used on the ANR's main tracks, but BNSF/UP take issue with AEPCO's unit costs for rail. In particular, BNSF/UP argue that AEPCO's rail transportation costs would include transporting over the ANR, which result in delays as some portion of the ANR would need to be constructed first. Instead, BNSF/UP have calculated additional costs to move rail via other carriers to reach various railheads. *Id.* at III.F-60-61.

In fact, AEPCO did not specify on Opening exactly which railheads and routes it was using to reach the locations involved. AEPCO agrees that further details on this point are necessary. Thus, on Rebuttal, AEPCO provides a detailed description of where and how it intends the rail to be delivered on the

ANR (which does not actually use ANR facilities for the most part except several key sections that would be built first as necessary). See Rebuttal e-workpaper “Ballast Haul Miles.REBUTTAL.xls,” tab “ANR Material Routings.” In preparing this description, AEPCO discovered that it had understated these costs. Moreover, AEPCO’s engineers determined that while most of the rail should be supplied from Pueblo, CO, the Laurel, MT source is more efficient for the more northerly portions of the ANR system. In any event, AEPCO’s Rebuttal costs are approximately \$2.3 million higher than BNSF/UP’s (\$659.9 million versus \$657.6 million).⁴ Thus, regardless of the approach taken, the costs are approximately the same.

ii. Yard and Other Tracks

The parties agree on the weight of rail used in the ANR’s yard, interchange, and other tracks, and on the costs, except for the transportation costs as discussed with main-track rail. BNSF/UP Reply at III.F-61.

iii. Field Welds

BNSF/UP disagree with AEPCO’s Opening field weld unit costs as well as the quantity of field welds required. *Id.* at III.F-61-62. AEPCO agrees that it omitted certain costs from its field weld unit costs on Opening. It has added these costs on Rebuttal. AEPCO disagrees, however, that it omitted field welds required for turnouts and similar locations. Panelized turnouts, and even panelized

⁴ AEPCO notes that these costs also differ a small amount due to the difference in total track miles between the parties.

crossovers, come in one piece with all internal insulated joints and corresponding welds factory-installed. *See* Rebuttal e-workpaper “Turnouts.pdf.”

iv. Insulated Joints

Insulated joints are addressed in Part III-F-6 below.

v. Switches

The parties generally agree on the unit costs and sizes for the ANR’s switches. The parties do not agree on the cost for transporting the turnouts. BNSF/UP used entirely illogical routings, such as delivering the turnouts to Defiance by shipping from Texas and Kansas west via Utah to California, and then back east to New Mexico. AEPCO has adjusted the routings to use railheads at more readily accessible locations. *See* Rebuttal e-workpaper “Ballast Haul Miles.REBUTTAL.xls,” tab “ANR Turnout Routings.”

Switch machines are addressed in Part III-F-6 below.

e. Other

i. Rail Lubricators

The parties agree on the spacing and unit costs for rail lubricators. BNSF/UP Reply at III.F-63.

ii. Plates, Spikes and Anchors

The parties agree on the specifications and unit costs for plates, spikes and anchors. *Id.* at III.F-64.

iii. Derails and Wheel Stops

BNSF/UP argue that AEPCO omitted derails at a number of locations where they may be needed, such as servicing locations and intermodal yards. *Id.* AEPCO's engineers have reviewed the locations and counts and disagree that any changes are required. In particular, BNSF/UP increase the number of powered derails by including certain tracks within yards, such as MOW equipment tracks. However, such tracks generally are not protected by powered derails, but by portable blue flag devices that meet applicable FRA regulations, especially since internal yard switches are not powered, but hand-thrown. AEPCO has increased the ANR's derail count by two on Rebuttal, but only because the number of setout tracks has increased by one as a result of a section of double track mainline that was inadvertently shown as single track on Opening.

iv. Materials Transportation

BNSF/UP have added costs for work trains for the track construction contractor to use for the distribution of materials. BNSF/UP Reply at III.F-64-65. As AEPCO explained on Opening, the track construction unit costs that it utilized from the *WFA/Basin* case include the cost to move materials from railhead locations to the various actual construction points. Indeed, the parties agreed in *WFA/Basin* that additional work train costs were not required. Thus, AEPCO has not added work train costs on Rebuttal.

v. **Track Labor and Equipment**

BNSF/UP have accepted the labor costs proposed by AEPCO on Opening. BNSF/UP Reply at III.F-65. The parties, of course, differ slightly in total costs due to the difference in track configuration.

4. **Tunnels**

On Opening, AEPCO derived its tunnel inventory and tunnel lengths from materials provided by BNSF/UP in discovery. *See* Opening e-workpaper “Tunnel Construction Costs.xls.” Consistent with Board precedent, ANR’s engineers utilized the base unit cost of \$2,561 per linear foot (“LF”) developed in *Coal Trading Corp.*, 6 I.C.C.2d at 422, and then indexed this cost from 1980 to 1Q09. This procedure yielded a unit cost of \$7,431 per LF. The unit cost was multiplied by the total feet of tunnels (35,170 LF) to yield a total tunnel cost of \$261,348,270. *See* Opening e-workpaper “Tunnel Construction Costs.xls.”

BNSF/UP argue, erroneously, that the *WFA/Basin I* decision established that the *Coal Trading* unit cost only covered the construction of outdated timber-lined tunnels. BNSF/UP then go on to ignore the balance of AEPCO’s evidence, opting instead to develop all new unit costs that, not surprisingly, are higher than the already-high *Coal Trading* unit cost. BNSF/UP Reply at III.F-65-69. BNSF/UP’s approach is flawed.

On Opening, AEPCO explained in detail why the unit cost from *Coal Trading* had to have included costs to build steel and concrete lined tunnels. First, AEPCO’s engineers noted that any tunnel built in recent periods would not

have been timber-lined, as such techniques were abandoned in the early 1900s. See Charles Prelini, *Tunneling: A Practical Treatise* 280 (1902). Second, AEPCO's engineers explained that they were directly involved with a railroad tunneling project in 1993 where the unit cost for a concrete-lined tunnel was \$2,490 per linear foot – as indexed to 1Q09. AEPCO also pointed out that another tunnel project undertaken that same year was also concrete-lined and also cost less per linear foot (\$4,853) than AEPCO's unit cost in 1Q09 dollars, and that this project also involved particularly challenging fractured rock formations. *Id.* In other words, similar or more difficult tunneling projects were undertaken at lower costs than those derived from *Coal Trading*, and those projects included concrete and steel-lined tunnels.

BNSF/UP largely ignore the relevant unit costs from other projects, arguing that they are not detailed enough or that the conditions may not be similar to those encountered on the ANR route. BNSF/UP's argument is meritless. First, AEPCO presented unit costs from an actual project that its engineers were involved with, and AEPCO's engineers know with certainty that the unit costs from the project included all relevant costs. With respect to the second tunnel project, the *Engineering News Record* reported that the cost appeared to cover the budget for the project being built, not just the tunnels (*i.e.*, the article indicates that a bid of \$103.7 million was submitted for a section of light rail that includes “twin 3-mile-long tunnels.”) See AEPCO Opening e-workpaper “Tunnels.pdf.”

In further support of its Opening unit cost, AEPCO notes that in the mid-1980s, Canadian Pacific built two single track tunnels as part of a \$420 million expansion that was located in difficult terrain deep in the Canadian Rockies and in the middle of a national park. *See* AEPCO Rebuttal e-workpaper “CP Project Article.pdf.” The tunnels were horseshoe-shaped and excavated to almost 19 feet wide and 29 feet high, which is larger than the dimensions utilized by BNSF/UP on Reply. The tunnels included concrete wall and crown linings as well as 13-inch thick floor slabs. According to an *Engineering News-Record* article, the tunnel boring accounted for approximately one-third of the cost of the project, and the two tunnels, when combined, totaled approximately 10.1 miles. *Id.* When the total tunnel feet are divided into 1/3 of the project cost (the cost for the tunnels), the cost per linear foot comes to \$2,358 in 1986 dollars (\$5,111 when indexed to 1Q09), which is also less than the indexed 1980 *Coal Trading* unit cost.

As AEPCO has demonstrated that the indexed *Coal Trading* unit cost almost certainly overstates the current cost for constructing a modern, concrete-lined tunnel, AEPCO has continued to use the *Coal Trading* cost on Rebuttal.

The parties agree on the cost for the super span structure located near the Comanche Power Plant in Colorado. BNSF/UP Reply at III.F-70.

5. Bridges

BNSF/UP present a variety of criticisms and complaints regarding AEPCO’s Opening bridge evidence. BNSF/UP Reply at III.F-71-90.

Notwithstanding the specific arguments, AEPCO notes that BNSF/UP's final bridge costs are less than those proposed by AEPCO. Thus, without agreeing to the merits of any particular argument that BNSF/UP leveled against AEPCO's bridge costs and designs, to minimize disputes, AEPCO has accepted BNSF/UP's Reply bridge costs for the ANR.

6. Signals and Communications

On Opening, AEPCO's engineers designed and costed the ANR's signals and communications systems in accordance with the requirements of the railroad's operating plan. CTC was included as the primary traffic control/signaling system, and a combination of fiber optics and microwave systems were used as the communications backbone. BNSF/UP have generally accepted the approach adopted by AEPCO. BNSF/UP Reply at III.F-91. However, BNSF/UP do take issue with several unit costs and equipment counts. In addition, BNSF/UP included a cost for PTC components. Each criticism is addressed below.

a. Centralized Traffic Control

i. Highway Grade Crossing Warning Systems

BNSF/UP note that AEPCO omitted the cost for a number of highway grade crossing warning systems. *Id.* at III.F-92. AEPCO agrees, and has included the additional costs on Rebuttal. The parties agree that, consistent with *Duke/CSXT*, the SARR is responsible for 10% of the costs of installing such equipment. *Id.*

ii. Insulated Joints

On Opening, AEPCO's costs for insulated joints were incorporated into its signal unit costs. On Reply, BNSF/UP argue that the costs include only some of the required insulated joints, and that insulated joints for the closure rails and stock rails are missing, thereby undercounting insulated joints by 1,612 and field welds by 3,224. BNSF/UP Reply at III.F-92. BNSF/UP's assertion is incorrect. The powered, panelized turnouts specified by AEPCO's engineers include all necessary insulated joints. *See* AEPCO Rebuttal e-workpaper "Turnouts.pdf" for sample pictures of the turnouts. Indeed, it would be pointless and inefficient to buy a panelized power turnout that does not include the necessary insulated joints as a preinstalled item because installing such items in the field is cumbersome and time consuming.

iii. Switch Machines

On Opening, AEPCO indicated that all necessary switch machines were included in its unit costs for turnouts. However, AEPCO's description was incorrect. Switch machine costs were included in its signals costs, not its costs for turnouts. On Reply, BNSF/UP suggest that the costs for switch machines are not included in AEPCO's costs. BNSF/UP Reply at III.F-93. BNSF/UP are incorrect. AEPCO's switch machine costs are included in each individual cost item tab in AEPCO's Opening e-workpaper "ANR Signal Est working.xls." For example, under the tab "UniXover," switch machines are shown in cells A113 and A114.

BNSF/UP also propose that “helper” switch machines be added to No. 20 and No. 24 turnouts because certain circumstances, such as weather, might retard the standard switch in such a way that a “helper” is needed. These helper switch machines are not needed. First, the defendants have presented no evidence indicating that they have installed such “helper” switch machines on any of the lines being replicated by the ANR. Second, helper switch machines apparently are used when moveable point frogs are used in turnouts. *See, e.g.*, Rebuttal e-workpaper “UP No. 24 turnout.pdf” ({
}). The ANR does not use any moveable point frog turnouts. Therefore, it does not need helper machines, as indeed neither UP nor BNSF appear to use them in such circumstances.

iv. CTC Office Equipment

On Opening, AEPCO assumed that the ANR’s CTC office equipment would cost \$1 million based on the *WFA/Basin* case. This cost was based on a rough estimate from Alstom provided to AEPCO’s IT witness some years ago. On Reply, BNSF/UP obtained an estimate from Alstom that totaled \$2.5 million, including a \$500,000 backup location. BNSF/UP Reply at III.F-93-94. AEPCO accepts this revised cost and has included it on Rebuttal.

b. Communications

i. Fiber Optic Interface Equipment

On Opening, AEPCO utilized a total cost of \$500,000 for fiber optic interface equipment at major nodes. AEPCO inadvertently excluded its detailed costs for this item. As shown in Rebuttal e-workpaper “comms summary.REBUTTAL.xls,” tab “fiber nodes,” AEPCO’s engineers assumed a cost of \$17,241.38 per node based on the equipment listed therein and they specified a total of 29 nodes thereby equaling \$500,000. However, AEPCO’s engineers have determined that the Opening unit cost per node failed to include necessary labor charges of \$2,937.60 per installation. *Id.* The fiber nodes require only a few pieces of equipment, and AEPCO’s engineers assumed that the equipment would be installed in an equipment rack located inside a signal hut (of which there are many) rather than in a separate, unnecessary and very costly enclosure. *See* Rebuttal e-workpaper “Fiber Node Equipment.doc.” In addition, AEPCO’s engineers have determined that they understated the number of nodes by 10.⁵

On Reply, BNSF/UP claim that each site location would cost \$250,000. BNSF/UP Reply at III.F-94. BNSF/UP’s revised costs miss the mark, and AEPCO continues to use its Opening cost figure. BNSF/UP’s costs assume that each fiber node would be set-up inside its own enclosure, which is unnecessary and greatly increases the cost. Moreover, BNSF/UP’s costs provide

⁵ BNSF/UP proposed that 30 nodes would be required, but AEPCO’s engineers have determined that 30 nodes are not sufficient.

no details of their fiber node unit costs, what equipment is included, or any other details of the building costs and installation. Instead, BNSF/UP have relied on what appears to be a ballpark, turnkey estimate from a source at the Canadian National Railway. As such, AEPCO has presented the best evidence of record, and its approach is plainly feasible.

c. Other

i. PTC

BNSF/UP have included costs to implement PTC on the ANR by 2015 totaling \$52.6 million. *See* Reply e-workpaper “Summary of construction costs by alternative.xlsx,” amounts shown in Account 26B, Communications Systems (PTC Only). As explained in Part III-C-3-d of this Rebuttal, the inclusion of PTC costs is premature as the real costs to implement such a program are not yet known due to ongoing technical issues that have not yet been resolved. As a result, AEPCO continues to exclude road property investment costs for this technology.

7. Buildings and Facilities

AEPCO’s Opening building and facilities, included facilities typically specified in SAC cases, including shops, administrative offices, crew change buildings and fueling facilities. AEPCO also included some additional facilities to accommodate intermodal activity. BNSF/UP’s Reply buildings and facilities costs are much higher than those developed by AEPCO on Opening. There are two factors driving BNSF/UP’s overstated costs. First, BNSF/UP’s

engineers changed the design of several of the ANR's buildings. Second, BNSF/UP have "gold plated" a number of these revised facilities.

Before turning to the individual items at issues, AEPCO notes that certain building costs have increased in AEPCO's Rebuttal as a result of the correction to the location factor discussed above.

a. Headquarters Building

On Opening, AEPCO specified a 21,500 square foot building to house the headquarters personnel and facilities. BNSF/UP accept the square footage specified by AEPCO, and they agree with the cost developed by AEPCO, except for the Means location factor that AEPCO applied. BNSF/UP Reply at III.F-97. As explained above, AEPCO agrees that the location factor requires correction. Therefore, AEPCO has updated its building cost accordingly.

BNSF/UP also argue that AEPCO excluded window treatments, an emergency generator, utility connections and a paging system for the building. BNSF/UP at III.F-98. BNSF/UP are incorrect. AEPCO's costs included an emergency generator. This item was included under "D5090 Other Electrical equipment," and it includes the following description: "Generator sets, w/battery, charger, muffler and transfer switch, gas/gasoline operated, 3 phase, 4 wire, 277/480 V, 7.5 kW Uninterruptible power supply with standard battery pack, 15 kVA/12.75 kW." See Opening e-workpaper "ANR Buildings and Facilities Final.xls." Item D5030 includes the cost for communication systems, fire detection and related alarm (with 50 detectors). *Id.* AEPCO also included utility

connections. In particular, line item D6010 covers electrical service and distribution facilities, including facilities to wire up 1,000 amp service to the building. In addition, the Means costs includes water and sewer piping. As for window treatments, such furnishings are not typically used in railroad buildings.

b. Fueling Facilities

i. Fixed Fueling Facilities

On Opening, AEPCO included fixed fueling facilities at all of its inspection/fueling yards except Texico. BNSF/UP have accepted AEPCO's unit costs for these facilities, but as explained in Part III-B, they have argued for additional fixed fueling platforms, additional storage facilities, and tank car unloading facilities. AEPCO addresses each of the railroads proposed additions in Parts III-B-3-a and III-D-1-c of this Rebuttal. Simply put, AEPCO agrees that additional fuel storage facilities are needed at the West El Paso Yard, and it has added the necessary facilities on Rebuttal.

BNSF/UP's Reply also includes a puzzling footnote on page III.F-98 regarding the fueling facilities in the ANR's Guernsey Yard. The footnote states that Part III-B of BNSF/UP's Reply evidence suggested the need for two fueling platforms, which it did not. BNSF/UP also suggest that AEPCO excluded the cost of the inside fueling facilities at Guernsey. Again, this is incorrect. AEPCO included the inside fueling and sanding costs in its Opening e-workpaper "ANR Buildings and Facilities Final.xls," tab "ANR Locomotive Shops with Yards," Cells O33 and O34.

c. Locomotive Shop

On Opening, AEPCO included two locomotive maintenance shops. The primary locomotive facility was located at North Amarillo Yard, and the second facility was located at Guernsey Yard. BNSF/UP argue, in Part III-B of their Reply evidence, that an additional one-track inspection pit is necessary at the West El Paso Yard because a few locomotives would not normally pass through either Amarillo or Guernsey. AEPCO agrees that an inspection pit is necessary, and, on Rebuttal, it has added an extra track and small covered building with an inspection pit for this purpose. However, BNSF/UP's engineers apparently thought that BNSF/UP was proposing a facility similar to the Guernsey shop, as they added an additional \$14 million for this facility. This addition is plainly unnecessary as locomotives requiring more complete work can be deadheaded to North Amarillo and the volume of locomotives involved is only a fraction of the ANR's total fleet. More importantly, the West El Paso shop is not called for by BNSF/UP's own operating plan for the Reply ANR.

BNSF/UP take issue with several elements of the two locomotive shops that AEPCO proposed on Opening. First, the defendants suggest that each shop would have only a five-ton crane, and that such a configuration is inefficient. BNSF/UP Reply at III.F-99. BNSF/UP have misconstrued AEPCO's shop plans. The North Amarillo shop includes a 20-ton crane that can free span tracks 2-5, thereby eliminating the need for individual 5-ton cranes – hence, AEPCO's inclusion of an independent crane runway and foundation. In addition, the shop

has an allowance for four free standing jib cranes. The Guernsey shop includes the same runway, but instead of 20-ton crane, that shop has a 5-ton crane since the shop is not intended to be used for heavier work. The Guernsey shop also includes the allowance for four free standing jib cranes. *See* Opening e-workpaper “ANR Buildings and Facilities Final.xls,” tab “ANR Locomotive Shops with Yards.”

BNSF/UP also argue that both shops require covered locomotive wash facilities, and that only the Guernsey facility was covered. *See* BNSF/UP Reply at III.F-99. Again, BNSF/UP are incorrect. On Opening, AEPCO provided covered wash facilities for both shops. *See* Opening e-workpaper “ANR Buildings and Facilities Final.xls,” tab “ANR Locomotive Shops with Yards,” cells O14, C42, C88.

BNSF/UP also argue that AEPCO did not include a pump house, pipe racks, or a storage tank containment structure. Once again, BNSF/UP are incorrect. AEPCO’s locomotive shop equipment list includes line items for “Oil & Commodities Tanks,” “Fluids Dispensing System,” and “Waste Oil Tank.” *See* Opening e-workpaper “ANR Buildings and Facilities Final.xls,” tab “ANR Locomotive Shops with Yards.” As for a structure for the facility, AEPCO applied a cost of \$86,000 based on the Means cost included in the locomotive building estimate (cost items A2010 and 2020). Although those items are described by the Means system as basement excavation and basement walls, a locomotive shop does not need a basement. AEPCO’s engineers, therefore, used the additional costs for the fluids containment structure.

BNSF/UP further suggest that AEPCO did not include wastewater pretreatment facilities and sewer lines. BNSF/UP Reply at III.F-100. In fact, AEPCO's engineers did include such facilities. For both shops, AEPCO's costs include line items for packaged sewage treatment facilities. In addition, each facility includes a sewage lift station, sewage piping, gravity drain line, a pressure line for the sewage treatment unit, a 1,000 foot allowance for a pressure line to the sewer intercept, manholes and related clean-outs. *See* Opening e-workpaper "ANR Buildings and Facilities Final.xls," tab "ANR Locomotive Shops with Yards."

BNSF/UP also added outside tracks and concrete walkways for the locomotive facilities. BNSF/UP has not explained why these additional walkways and tracks are necessary other than to suggest that they can be used as a staging area and a place to perform locomotive load tests. First, there is ample room for staging in the locomotive shops because there is room for four locomotives per track, and AEPCO's design allows for waiting aprons on the repair tracks. Thus, outside concrete walkways are not necessary.

The above items respond to specific criticisms that BNSF/UP make of AEPCO's locomotives shops. What BNSF/UP do not explain is why their actual locomotive shop costs are completely restated at much higher overall cost. Before turning to the individual problems with BNSF/UP's revised costs, AEPCO notes that BNSF/UP did not provide any support for a wholesale revision to AEPCO's, costs nor did they suggest that AEPCO's costs were not feasible. In

addition, BNSF/UP did not include any shop drawings. Thus, AEPCO's engineers were unable to examine all the potential issues in BNSF/UP's revised "design," which BNSF/UP never suggested was necessary. However, as explained below, BNSF/UP has "gold plated" these shop facilities with no explanation of why the gold-plating is necessary (particular for the two smaller shops proposed at Guernsey and West El Paso).

- BNSF/UP's shell building cost is more than double AEPCO's, but BNSF/UP provide no explanation for why this cost is so high.
- BNSF/UP include a 20,000 gallon lube oil tank at each of its three proposed shops.
- BNSF/UP include a 10,000 gallon journal oil tank at each shop.
- BNSF/UP include a 10,000 gallon chemical storage tank at each shop.
- BNSF/UP include a 10,000 gallon locomotive air compressor lubricating oil storage tank at each shop.
- BNSF/UP include a 10,000 gallon soap storage tank at each shop.
- BNSF/UP include a 10,000 gallon journal oil tank at each shop.
- BNSF/UP include over \$170,000 for pumps and facilities to feed the soap from the storage tank (*i.e.*, a \$170,000 soap dispenser) at each shop.
- BNSF/UP's office and warehouse facilities, besides being oversized, are all built with 34' foot eaves. At that height, three stories of offices would fit inside. Plainly these facilities are overdesigned.

- BNSF/UP includes poured concrete inspection facilities, when metal structures are suitable and far cheaper.
- BNSF/UP's locomotive wash is much bigger than necessary, and it has basement walls as well.
- The office area for the main shop includes 11 toilets and four showers, which are unnecessary.
- All of the shops include wheel truing machines.
- All of the shops include a 3-ton bridge crane and a 10-ton bridge crane.

The above, represent just some of the excesses of BNSF/UP's locomotive shops. AEPCO has, therefore, continued to use its Opening locomotive shop costs, but its costs have been adjusted to reflect the corrected location factor.

d. Car Repair Shop

The parties agree that the ANR does not need to build a car repair shop. BNSF/UP Reply at III.F-100.

e. Crew Change Facilities and Yard Offices

AEPCO's Opening crew change/yard office facilities were simple buildings designed to meet the basic functions they perform. In each case, AEPCO provided 2,700 feet of space that included restrooms, work areas and office space. BNSF/UP indicate that they accept AEPCO's design, but then reject the unit costs with no explanation. BNSF/UP Reply at III.F-100. BNSF/UP also indicate that they made certain of the buildings larger where crew change and yard office functions might be combined.

BNSF/UP's revised unit costs must be rejected. First, BNSF/UP have provide no evidence that AEPCO's costs are not feasible, nor have they provided any evidence that a 2,700 square foot building is inadequate for combined yard office/crew change space. As such, AEPCO's Opening evidence should be accepted.

As for the all new unit costs for these buildings, BNSF/UP have gold plated these facilities. For example, they include basements, which are unnecessary. Thus, AEPCO has continued to use its Opening crew change and yard office costs and designs.

f. Maintenance of Way Buildings (Roadway Buildings)

On Opening, AEPCO included MOW buildings with basic facilities for the work crew and a small garage to store materials and occasionally vehicles as needed. The total building space is 2,700 square feet. AEPCO's Opening count of MOW buildings was understated because they were only included at locations where Roadmasters were headquartered, rather than at all MOW crew locations. AEPCO has corrected this on Rebuttal and its total count of MOW buildings is 37.

As with crew change buildings, BNSF/UP accept AEPCO's design, but then restate all the costs, which are of course more expensive. BNSF/UP Reply at III.F-100-101. However, as with crew change buildings, BNSF/UP provide no explanation for their restatement of costs, nor do they suggest why AEPCO's costs are not feasible. Thus, AEPCO continues to use its Opening costs.

BNSF/UP also include an 8,000 square foot fenced storage yard at each facility. *Id.* Again, such facilities are not necessary in general. However, Mr. Davis agrees that some fenced storage is useful at the Roadmaster headquarters, where materials are stockpiled for distribution to the various MOW crews. Therefore, AEPCO has added fenced storage at the 16 locations where a Roadmaster is situated.

g. Wastewater Treatment

The parties agree that wastewater treatment would be handled through local sewer connections. BNSF/UP Reply at III.F-101.

h. Yard Air and Yard Lighting

The parties agree on the costs for yard air and yard lighting. *Id.*

i. Intermodal Terminals

On Opening, AEPCO included one intermodal facility located in the West El Paso Yard. To serve this facility, AEPCO included 4 acres of parking lots to accommodate the trucks serving the intermodal track in the yard. AEPCO also included high mast lighting in the yard and security fences. As such, AEPCO provided the necessary facilities at this location.

BNSF/UP assert that AEPCO did not provide any facilities at this location, and then built a duplicative facility (*i.e.*, BNSF/UP accepted AEPCO's yard site costs for this facility, including the parking lots, fencing and lights, but then built the same basic package again). BNSF/UP Reply at III.F-101. As AEPCO already built sufficient facilities, and BNSF/UP's costs are largely

duplicative, AEPCO has continued to use its Opening West El Paso yard costs, which include costs for the associated intermodal facilities.

8. Public Improvements

While public improvements are discussed in detail below, most of the costs for such items are included in other investment categories, such as track construction, bridges and signals. In general, the parties agree on the costs and quantities for various public improvement items. There are some minor differences, which are addressed below.

a. Fences

The parties agree on the quantities and costs for right-of-way fencing. BNSF/UP Reply at III.F-101. BNSF/UP take issue with the fencing used at the headquarters facility and ANR yards. In particular, BNSF/UP argue that these fences should cost \$1.25 per linear foot more because different security fencing is required. *Id.* BNSF/UP have not explained why AEPCO's security fencing is inadequate, nor have they explained why their fencing would provide superior security. As such, AEPCO continues to use its Opening costs for these items, which is based on the ENR Cost Book Figure of \$15.25 per LF (for 9 gage wire, 6 feet high, and posts on 10 foot centers) with \$4.00 per LF added for 3 row barbwire, and a \$2/LF allowance for gates. *See* Rebuttal e-workpaper "Yard Fence Costs.pdf."

BNSF/UP have also added fencing for microwave sites. AEPCO agrees with this addition, and it has added such fencing on Rebuttal. BNSF/UP

have also added fenced storage for all MOW buildings. As explained above, AEPCO has added fenced storage to 16 of the 37 MOW buildings.

b. Signs and Road Crossing Devices

The parties generally agree on the package of railroad signs needed by the ANR. BNSF/UP Reply at III.F-102. However, BNSF/UP added one more category of signs: emergency notification signs at railroad crossings, which include an “800” number to call in case of emergency. AEPCO agree that these signs are required, and AEPCO’s engineers have added them on rebuttal.

c. Grade-Separated and At-Grade Crossings

The parties agree on the quantities and costs of at-grade crossings and related crossing materials. *Id.* at III.F-103. Grade-separated crossings are addressed in Part III-F-5, *supra*, and signalized crossing protection is addressed in Part III-F-6, *supra*.

9. Mobilization

On Opening, AEPCO’s engineers added a 2.4 percent mobilization factor for all items where mobilization is not already included in the contractor’s bid. This mobilization additive was the same as the additive the Board accepted in *AEP Texas* at 103. On Reply, BNSF/UP suggest that the *AEP Texas* additive was based on a special study that was not performed in this case, and it then adopts a 3.5 percent mobilization additive citing *Simplified Standards for Rail Rate Cases* (which used the mobilization costs from *PSCo/Xcel*). BNSF/UP Reply at III.F-

103. BNSF/UP's arguments are incorrect, and its use of a 3.5 percent additive is not warranted here.

BNSF/UP claim that the 2.4% mobilization factor "was built up based on a detailed analysis of the mobilization costs for each major asset category." *Id.* In fact, all that happened in the *AEP Texas* case was that the parties sparred over whether to include demobilization costs and whether certain categories of construction should have a higher or lower mobilization additive – no special study was conducted. In the end, the Board accepted BNSF's higher mobilization costs additive of 2.4 percent, which BNSF/UP now complains about. In addition, this is the same additive that the same defendants proposed in the prior AEPCO case. Finally, the Board also found that BNSF's mobilization factor was in line with previous decisions in *TMPA* (2.0 percent mobilization factor); *PPL Montana* (2.2 percent); *Wisconsin P&L* (2.6 percent); and *FMC* (2.4 percent).

AEPCO submits that the 2.4 percent mobilization additive is feasible because it is consistent with the recent *AEP Texas* percentage (2.4 percent), as well as the percentages accepted in other western SAC cases involving large SARR's. Furthermore, BNSF/UP's suggestion that *Simplified Standards* set all future mobilization additives in full SAC proceedings is not supported by any precedent in SAC cases. Indeed, the Board decided *AEP Texas* (2.4 percent) five days after its *Simplified Standards* decision was issued. Thus, AEPCO continues to use the 2.4 percent additive on Rebuttal.

10. Engineering

The parties agree on the application of a 10 percent engineering additive to the total construction cost, excluding land acquisition costs. BNSF/UP Reply at III.F-104.

11. Contingencies

The parties agree on the application of a 10 percent contingency factor to the total construction cost, excluding land acquisition costs. *Id.*

12. Other

a. Construction Time Period

The parties agree on the construction time period. However, BNSF/UP have revised certain elements of the construction schedule due to timing of track construction materials. *Id.* at III.F-104-106 However, in Part III-H of BNSF/UP's Reply, they indicate that they accepted AEPCO's proposed construction schedule for the ANR. *Id.* at III.H-1. Indeed, BNSF/UP's DCF model employs the same schedule as AEPCO's Opening model.

III. G. DISCOUNTED CASH FLOW ANALYSIS¹

In Part III-G of their Reply, BNSF/UP raise various issues with respect to AEPCO's SAC DCF analysis. In particular, they challenge AEPCO's exclusion of the Multi-Stage Discounted Cash Flow ("MSDCF") portion of the Board's calculation of the railroad industry's cost of equity ("COE") for 2008 as representing a deviation from the Board's standard practice. BNSF/UP Reply at III.G-1-5. At the same time, BNSF/UP themselves seek major alterations to the Board's established approach on such matters as equity flotation costs, inflation index for land, treatment of tax liability, capital cost recovery, and positive train control. *Id.* at III.G-5-20.

AEPCO responds to BNSF/UP's contentions below, utilizing the same organizational headings as in BNSF/UP's Reply.

1. Cost of Capital

AEPCO's Opening explains that AEPCO excluded the Board's 2008 MSDCF figure from AEPCO's calculation of the COE portion of the ANR's cost of capital ("COC") on two grounds. First, there is a fundamental mismatch between the MSDCF figure and the ANR in that the Board's MSDCF calculation is founded upon projected growth rates that the ANR is not projected to achieve. Second, the MSDCF COE figure vastly exceeds reasonable estimates of the

¹ The evidence in Rebuttal Part III-G is sponsored by AEPCO Witnesses Thomas D. Crowley and Daniel L. Fapp generally and also by Professor George H. Borts of the Brown University Department of Economics in responding to BNSF/UP's claims regarding the calculation of the ANR's cost of equity for 2008.

railroad industry's COE, including most notably the estimates that the BNSF Board of Directors obtained from Goldman Sachs and Evercore as part of the fairness opinions that those firms provided to the BNSF directors in conjunction with the acquisition of BNSF by Berkshire Hathaway Inc. As the Board's MSDCF figure for 2008 was overstated and founded upon a key assumption that is manifestly inapplicable to the ANR, AEPCO did not incorporate the figure into its calculation of the COC for the ANR.

In their Reply, BNSF/UP allege that there are a number of errors and deficiencies in AEPCO's exclusion of the 2008 MSDCF figure. BNSF/UP Reply at III.G-1-5. As discussed *infra*, their criticisms are unconvincing and contradicted by other arguments advanced by BNSF/UP. However, the far more telling point is that BNSF/UP do not challenge the two predicates for AEPCO's 2008 COE approach. They do not claim that the ANR's growth rate will approximate that of the industry average (or that of any of the four individual Class I carriers that comprise the average) used in the MSDCF calculation, and they do not discuss at all the Goldman Sachs and Evercore analyses. Accordingly, on Rebuttal, AEPCO continues to use only the Capital Asset Pricing Model ("CAPM") figure for 2008.

For 2009, however, AEPCO has incorporated the average of the 2009 CAPM and MSDCF figures as submitted by the AAR. AEPCO has done so for several reasons. First, the MSDCF figure for 2009 is substantially (approximately 2.5 percentage points) lower than the figure for 2008, reflecting

more moderate growth rates. Second, the CAPM figure for 2009 is significantly (1 percentage point) higher than the 2008 figure. As a result, the disparity between the MSDCF and CAPM figures for 2009 (roughly 2 percentage points) is substantially less than the disparity for 2008 (over 5 percentage points). Third, AEPCO anticipates that the actual MSDCF and MSDCF/CAPM average figures will prove to be lower after the Board reviews the comments on the 2009 cost of capital filed by the Western Coal Traffic League, of which AEPCO is a member. Fourth, the 2009 COE plays a less prominent role in the Board's DCF model (2008 is a major "construction" year, whereas 2009 enters as only one year of a multiple-year average). Accordingly, while AEPCO believes that the 2009 COC figures that the Board is likely to adopt eventually will be overstated, the degree of overstatement is not nearly as excessive or as consequential as the 2008 MSDCF figures.

BNSF/UP's various criticisms of AEPCO's approach to the 2008 MSDCF figure have little substance. For example, BNSF/UP claim that "[t]he Board has already decided that use of a combined MSDCF-CAPM yields the best estimate of the railroad industry's cost of capital." BNSF/UP Reply at III.G-2. But even if that were true (AEPCO disagrees with this claim for reasons stated on Opening), it does not necessarily yield an accurate estimate for the ANR,

particularly as the ANR's growth rates do not approach those used in the MSDCF calculation.²

BNSF/UP next claim that "AEPCO cannot have it both ways" in using only part of the Board's hybrid methodology. *Id.* But BNSF/UP themselves seek modification of the Board's figure to include equity flotation costs (*id.* at III.G-5-8), disproving their own position. Beyond that, the Board has always recognized that a shipper may develop its own cost of capital for its SARR, if it provides a justification for the departure from the use of the industry average.³ AEPCO has made a showing to exactly that effect by demonstrating that the growth rates, which are the key input in the Board's 2008 MSDCF COE calculation for the railroad industry, are substantially above those projected by the ANR.⁴ Because the ANR does not achieve the growth rates of the real-world railroads, a COE determination founded upon those growth rates does not, and cannot, accurately depict the ANR's COE.

² The growth rates utilized in the Board's MSDCF model estimate growth in earnings per share ("EPS") and not strictly growth in revenue and/or volume. A significant component of EPS growth is improvements in productivity. The Board has repeatedly found that SARRs will not realize productivity growth at the same rate as real-world railroads, at least not during the DCF period. *See, e.g., Major Issues* at 39-47.

³ *See, e.g.,* the Board's Brief in *AEP Texas North v. S.T.B.* (D.C. Cir. No. 09-1202, Dec. 22, 2009), at 28 (noting possibility of "a sufficient showing that the SARR could obtain capital at a lower cost than the railroad industry generally"), and 39 ("To be sure, the Board has the discretion to use a cost-of-capital figure different from the one previously published...").

⁴ The gap between the growth rates of the ANR and the Class I railroads would be increased to the extent that any of BNSF/UP's contentions as to the ANR's revenues and costs are accepted.

BNSF/UP then allege that the ANR “presents one of the strongest cases that the Board has seen recently” for use of the industry average because the ANR’s wide range of products means it looks more like real world railroads. BNSF/UP Reply at III.G-2-3. But in Part III-H of their Reply, BNSF/UP contend that the ANR’s diversity of traffic, the fact that it replaces both BNSF and UP, and the fact that it serves largely as a bridge carrier (at least on its non-coal traffic) means that MMM relief must be allocated on the basis of an ANR URCS and not the BNSF and UP URCS variable costs. BNSF/UP cannot have it both ways. Moreover, the fact that the ANR has a diversity of traffic and is not dependent on coal strongly supports an inference that the ANR should face less risk than other SARRs because the ANR handles a diverse mix of traffic.

BNSF/UP’s next claim is that AEPCO “could have tried to develop a SARR-specific cost of capital,” and they contend that “[i]t might have produced an even higher estimated cost of equity.” *Id.* at 3. BNSF/UP’s claim is makeweight. If AEPCO wanted an alternative cost of capital, it could have instead used the lower values developed by Goldman Sachs and Evercore for BNSF’s Directors. AEPCO used the Board’s 2008 CAPM figure because it already reflected the Board’s approved methodology, the same methodology that the Board had previously utilized for 2006 and 2007, which are the first two years of the ANR’s existence (during its construction phase). AEPCO should not be faulted for using a conservative approach in this respect.

BNSF/UP next turn to the MSDCF model, but, as noted *supra*, they do not argue with AEPCO's assertion as to the growth rates. BNSF/UP instead focus their efforts on the other elements of the MSDCF calculation, the supposedly greater level of cash flow and the stock price. However, their claims are defective.

In particular, BNSF/UP assert that “[a]s compared to real-world railroads, ANR would have extremely high cashflows.” BNSF/UP Reply at III.G-3. However, BNSF/UP fail to establish that the ANR's cash flows are high at all. Free cash flow depends upon revenues, operating costs, working capital, actual taxes paid, and capital expenditures. During the three years of construction, the SARR will have no revenues at all, but will incur very large capital costs associated with its construction. It will thus have negative cash flows during that period. A negative cash flow implies an enormous, or even infinite, MSDCF COE/discount rate, or, alternatively, that the MSDCF model could or should not be used at all. Even after it commences operations, the ANR still faces annual capital expenditures (including an ongoing requirement to cover the replacement cost of assets installed during initial construction without consideration for asset productivity), operating costs, and taxes. There is simply no proof that the SARR will have high free cash flow.

Moreover, high revenues and high growth rates do not automatically equate to high free cash flow. “Free cash flow can be negative for rapidly growing firms, even if the firms are profitable, because investment exceeds cash flow from

operations.” Brealey, R. A., Myers, S. C., and Allen, F., *Principles of Corporate Finance* 509 (McGraw Hill 8th ed. 2006). Beyond that, free cash flows are not determinative of the COE in the MSDCF value. The COE is calculated as the implied discount rate to cause expected cash flows available to equity holders to equal the current stock price. The Board’s 2008 MSDCF calculation uses an average growth rate of 13.61%, which implies that cashflow will be over 3.5 times as large at the end of ten years.⁵ There is thus no basis for BNSF/UP’s claim that the “ANR’s higher cash flows would offset, and likely even overwhelm, any difference in earnings growth.” BNSF/UP Reply at III.G-3.

While BNSF/UP further claim that AEPCO “conveniently ignores the initial free flow part of the MSDCF calculation,” BNSF/UP Reply at III.G-3, it is BNSF/UP that have erred by improperly equating overpayments in the SAC model with cash flows in the MSDCF COE model. The overpayment calculation in the SAC model (that is, Revenues minus Total SAC) does not take into account base elements of free cash flow for MSDCF purposes. First, the SAC DCF model does not consider total taxes paid on earnings, which would substantially reduce free cash flow. Second, the return on investment calculation in the SAC DCF model is not comparable to the annual capital expenditures included in a true free cash flow calculation. Return on investment estimates the cost of carrying the

⁵ $1.1361^{10} = 3.5823$. The STB’s MSDCF approach uses a long-term earnings per share growth forecast for each individual railroad in the first stage of the model before switching to an average of all the growth forecasts in the second stage. As utilized by the Board, the 13.61% average annual growth rate means that cash flows will be 3.5 times as large after ten years.

investment over time, while capital expenditures measure actual cash outflows. Third, free cash flow is calculated when cash is first expended, which is during the construction phase of a SARR (when cash flow is negative because the SARR has no revenues). Any SARR-specific MSDCF model would have to take these initial (negative) cash flows into consideration, as noted above, but BNSF/UP have made no effort to do so.

Nor can SAC overpayment as a percentage of replacement costs be meaningfully compared to the ratio of initial free cash flows to equity market cap, as attempted in BNSF/UP Reply at III.G-3 n.7. First, as described above, the SAC overpayment is not equal to free cash flow. Second, the replacement cost for the SARR is not comparable to the equity market capitalization of the firm. The lack of comparability is illustrated by the recent Berkshire acquisition of BNSF, where Berkshire booked significant amounts in its goodwill account due to its acquisition of BNSF. If the equity market cap (stock price multiplied by shares outstanding) equaled the fair market value (*e.g.*, replacement cost of existing assets), there would have been no goodwill. There is no basis to claim that the replacement costs of a railroad's assets are equal to the market equity cap of the railroad.

Nor can the initial equity raised by the SARR be equated with market capitalization over time. When the SARR is deemed to issue its equity during its construction period, it faces several years of negative cash flows as it makes investments without receiving any revenues. Under those circumstances, the market would be likely to discount the value of the equity. However, once the

SARR begins its operational phase, the SAC DCF model includes the cost of paying for the ongoing replacement of the assets, a cost that the SARR effectively covers without issuing any new equity. As the SARR is handling a growing volume of traffic and continuously replacing its assets that grow more expensive with time due to inflation, the market would likely attribute some premium to the equity, at least relative to the earlier valuation. In short, the market capitalization appears unlikely to remain stable, and the relationship of SAC overpayment (as a posited surrogate for free cash flow) to replacement costs (as a posited surrogate for market capitalization) will be neither stable nor predictable, thus precluding a COE calculation under the MSDCF method.

In the same footnote, BNSF/UP seek to bury their answer to AEPCO's observation on Opening that a MSDCF analysis cannot be run on a SARR because there is no stock price (AEPCO Opening at III-G-7 n.8) by claiming that "the MSDCF model can be adapted to run with relative percentages instead of absolute dollar amounts." BNSF/UP Reply at III.G-3 n.7. Their claim is absurd. The MSDCF model defines COE as the implicit return necessary to discount future cashflows back to the current stock price. Whether this relationship is presented in aggregate dollars, dollars per share, or percentage of share price, there needs to be some present value target based on the current market price. It is the implied return inherent in the stock price relative to the free cash flow that dictates the cost of equity. Without this target, there can be no meaningful estimate of the COE. Since the STB's DCF approach does not

develop an annual equity market value for the ANR and, as explained *supra*, the asset replacement costs of the SARR over time are not comparable to equity market capitalization, a MSDCF estimate of the COE for the ANR cannot be developed on a ratio basis.

BNSF/UP also claim that an ANR-specific CAPM analysis would result in a higher COE because of the ANR's higher risk. BNSF/UP Reply at III.G-4. But this attack fails on several basic levels. First, AEPCO did not present an ANR-specific CAPM analysis, and BNSF/UP's speculation as to what it would, or might, show is irrelevant. Furthermore, BNSF/UP's claim here contradicts their earlier statement that one must use the Board's approach as the Board applies it.

Second, BNSF/UP's notion of risk does not correspond to that in the CAPM model. A central premise of CAPM is that an efficient portfolio eliminates risk that is unique to a firm (unsystematic risk) through diversification. Since unique risk can be eliminated by diversification, only the un-diversifiable, or systematic, market risk, *i.e.*, how the stock responds to the broad risks that all firms face, is of concern to investors in valuing individual stocks. The ANR's risk factors noted by BNSF/UP, *e.g.*, lack of track redundancy, overhead vs. local traffic types, and low contingency construction estimates, all relate to firm-specific, non-systematic, or diversifiable risk and are not relevant under the CAPM methodology. BNSF/UP's concerns are thus irrelevant.

Third, even if the COE under CAPM reflected a firm's unique risk, which it does not, BNSF/UP's discussion (BNSF/UP Reply at III.G-4) ignores

factors that reduce its risks. Unlike most other SARRs, the ANR is not a coal-only railroad, but instead handles a range of products. Since the ANR is not solely dependent on coal, it should logically have a lower risk than a coal-only railroad.⁶ Also, BNSF/UP ignore the redundancy inherent in the ANR's configuration. The ANR has two east-west legs in its southern portion. If one of its "feeder" systems (BNSF or UP) encountered a problem, then traffic on the other unaffected leg would lessen the impact to the SARR and sustain revenue flows. As a result, the ANR has more adaptability than either BNSF or UP have individually. Therefore, contrary to BNSF/UP's contentions, the SARR would have lower risk relative to the existing railroads.

BNSF/UP's final argument is that the Board's use of a MSDCF/CAPM average "is expressly intended to smooth out ... short-term variations in cost of equity that would result from using only one or the other cost of capital approach." *Id.* at 5. BNSF/UP's observation fails in several respects. First, the Board's MSDCF model utilizes a multiple-year average, which itself limits the impact that any year can have on the average. The "problem," to the extent there is one, is already addressed. Second, use of multiple methods to develop the costs of equity makes sense only if the costs produced are reasonable and reflect the circumstances of the companies being evaluated. Blindly using a model because it "smoothes the averages" does nothing to reflect the actual costs

⁶ Just as a diverse stock portfolio will face less unique risk than a single stock, a railroad with a diverse traffic group will face less risk than a railroad transporting a single commodity.

of capital. In other words, if the assumptions used in the model have no relationship whatsoever to the underlying company, the results of the multiple methods are meaningless and skew the results.⁷ Third, and related, the MSDCF figure and the MSDCF/CAPM average for 2008 are both substantially overstated, particularly in comparison to the Goldman Sachs and Evercore analyses. Again, BNSF/UP have failed to show that the 2008 MSDCF figure is in any sense an accurate surrogate for the ANR's cost of equity or that the inclusion of that figure with the 2008 CAPM figure yields a more accurate estimate of the ANR's cost of equity in 2008.

Accordingly, AEPCO retains the approach to the ANR's cost of equity for 2008 that AEPCO presented on Opening.

2. Equity Flotation Costs

Notwithstanding their statements that AEPCO is precluded from deviating from the Board's published COC figures addressed *supra*, BNSF/UP seek their own deviation from the Board's published figures in the form of an additive to represent equity flotation costs. BNSF/UP Reply at III.G-5-8.

BNSF/UP purport to base their inclusion of such costs on the Board's decision in STB Docket No. 41191 (Sub-No. 1), *AEP Texas North Co. v. BNSF* (STB served Sept. 20, 2007), at 108 ("*AEP Texas*"). However, the 3.9% additive they seek is thirty times as large as the 0.13% additive actually included in *AEP Texas*.

⁷ For example, one could achieve smoothness by including any fixed number, no matter how arbitrary, in the average. One could also achieve stability by using a longer measurement period in calculating the CAPM beta.

Until *AEP Texas*, the Board had uniformly rejected the efforts of defendant railroads to add equity flotation costs to the SARR's COE. *PSCo/Xcel*, 7 S.T.B. at 659; *TMPA*, 6 S.T.B. at 751; *Wisconsin P&L*, 5 S.T.B. at 1010; and *Duke/CSXT*, 7 S.T.B. at 433. The Board did so on two grounds. The first is that equity flotation costs are already reflected in the Board's COE determination, and including the cost again would constitute a double-count. *See, e.g., Duke/NS*, 7 S.T.B. at 123 ("Duke argues that the annual cost of capital computation already includes flotation costs.... Duke's points are well taken."). The second is that the Board has correctly observed that the railroads do not incur these fees, and imposing them on a SARR would inflict a cost burden not incurred by the incumbent carrier.

BNSF/UP claim that *AEP Texas* represents a permanent departure from established Board precedent, but they omit any reference to the case's distinguishing facts. Specifically, the shipper in *AEP Texas* had proposed to include the flotation costs for purposes of engaging in a projected refinancing effort to take advantage of the lower prevailing capital costs. The shipper's proposed flotation cost was designed to track the Board's treatment of flotation in the cost of debt and spread the costs over the entire industry in the given year. While the Board rejected the proposed refinancing approach, it nonetheless included the flotation costs, but in doing so rejected the same 3.9% figure (rounded to 4.0% in the *AEP Texas* decision) that BNSF/UP seek here.

AEP Texas, on its facts, does not constitute a binding determination to incorporate a flotation cost into the COE. The issue presented in *AEP Texas* was not whether an equity flotation cost should be included, but whether a very modest additive proposed by the shipper as the cost of gaining some other benefit should be included. As AEPCO is not proposing any equity refinancing, the treatment in *AEP Texas* is inapposite. As in *Duke/CSXT*, BNSF/UP have made no showing that either carrier actually incurred an equity flotation cost in any recent time period or that the ANR would incur any fees beyond those already included in the Board's COC determinations. *Duke/CSXT*, 7 S.T.B. at 433; *PSCo/Xcel I*, 7 S.T.B. at 659. Moreover, the Board previously rejected a railroad attempt to include additives to the Board's cost of capital figure for both flotation costs and asymmetric risk in *Wisconsin P&L*, 5 S.T.B. at 983.

Three additional factors warrant rejection of any equity flotation cost. The first factor is that the Goldman Sachs and Evercore analyses included in the S-4 for Berkshire's acquisition of BNSF constitute a solid demonstration that the Board COC and COE calculations are already overstated. Including a flotation cost additive would only increase the overstatement. Insofar as BNSF/UP seek to include a "real world" additive, then it becomes even more appropriate that the COC and COE not overstate the actual expectations of the investment community.

The second factor is that one of the defendants, BNSF, is no longer publicly-traded, as it has been acquired by Berkshire. Since BNSF no longer faces equity flotation costs, it is inappropriate to impose such costs on a SARR that

serves in substantial part as a replacement for BNSF. Imposing a flotation cost under such circumstances would constitute an impermissible entry barrier.

The third factor, noted briefly *supra*, is that the Board's COE calculation already takes into account any flotation costs that may have been incurred. The Association of American Railroads ("AAR") explains this very point in its Opening Comments in Ex Parte No. 558 (Sub-No. 13), *Railroad Cost of Capital --2009* (dated May 17, 2010). Specifically, the Verified Statement of John T. Gray, the AAR's Senior Vice President for Policy and Economics, explains at 19-20 that any costs originally incurred to float a security would have been taken into consideration in the pricing of the security (*e.g.*, flotation costs would reduce net income and earnings, thus affecting the stock price).⁸ Because flotation costs are thus already implicitly reflected in the stock price of the railroads including in the COC and COE determinations, adjusting the cost of capital, either directly as an additive to the COE or indirectly through capital carrying charges, would constitute an impermissible double-count of flotation costs.

⁸ Mr. Gray frames his discussion of flotation in terms of debt, but his analysis is equally applicable to equity securities. Efficient market theory indicates that current stock prices reflect all past prices (weak form efficiency) and all publicly known information (semistrong form efficiency). *See, e.g.*, Brealey, R. A., Myers, S. C., and Allen, F., *Principles of Corporate Finance* 337 (McGraw Hill 8th ed. 2006), and Brigham, E.F. and Ehrhardt, M.C., *Financial Management: Theory & Practice* 302-03 (South-Western College Pub. 12th ed. 2008). To the extent that railroads incurred any flotation costs for their equity in the past, this information would be known by the market and reflected in their current stock prices, which are a key component of the MSDCF and CAPM COE.

3. Inflation Indices

BNSF/UP accept AEPCO's methodology for indexing road property assets and operating expenses for inflation and adjust them to reflect more recent forecasts. BNSF/UP Reply at III.G-8. On Rebuttal, AEPCO uses the same approach, but utilizes a still more recent forecast.

BNSF/UP disagree with four aspects of AEPCO's methodology for indexing land in the DCF model: (a) AEPCO's use of 2005 as the base for constructing a multiple-year average; (b) use of 2006 values from the United States Department of Agriculture ("USDA") for what are depicted as 2009 USDA values; (c) weighting index values by number of acres instead of land values; and (d) use of the Bureau of Labor Statistics ("BLS") Consumer Price Index for non-agricultural land instead of other indexes. *Id.* at III.G-8-12. Each claim is addressed below.

BNSF/UP's first claim is that AEPCO improperly measured land inflation over a four-year period (2005-2009) and instead should have used a two-year period (2007-2009). BNSF/UP claim that AEPCO's approach was an outcome-oriented attempt to circumvent the drop in land prices and that AEPCO's approach contradicts the statements by its own expert witness. *Id.* at III.G-9-10.

AEPCO rejects BNSF/UP's assertions. First, AEPCO did not ignore the drop in real estate prices in 2008 and 2009. Instead, those years are reflected in the last two years of AEPCO's multiple-year average. AEPCO also did not contradict the statements of its expert witness concerning the drop. Mr. Smith's

statements addressed the 2008-2009 drop in real estate prices -- a drop that is, again, reflected in AEPCO's average – and his statements are not in any way inconsistent with a projection that real estate prices will recover over the remaining term of the DCF model.

In contrast, BNSF/UP's approach is outcome-oriented as it, in conjunction with their other proposed changes (which have relatively little impact), "produce[s] an average 3.92 percent annual decline." *Id.* at III.G-12.⁹ The short-term trend thus does not provide a sound or realistic long-term forecast. For that reason, the Board has consistently held that in the absence of a third-party, neutral forecast of future inflation in a given sector, historic averages over a 4 to 15-year averaging period is the preferred approach. *See, e.g., APS*, 2 S.T.B. at 440, and *McCarty Farms*, 2 S.T.B. at 523. Accordingly, AEPCO has utilized the approach long favored by the Board.

BNSF/UP's use of a two-year average, which covers only an atypical decline in the market, is a completely unrealistic assessment of future land prices, and contrary to the Board's approach of using a historic average of 4 years or more. BNSF/UP simply chose the worst two years in a market that has shown

⁹ What BNSF/UP do not say is that an annual 3.92% decline amounts to a 33% decline over ten years. $(1.0 - 0.0392)^{10} = 0.670$, and $1.0 - 0.670 = 0.33$. Moreover, under the Board's residual value adjustment, the decline in land values would not end at the last year of the DCF analysis, but would effectively continue into perpetuity. It is presumably for these reasons that BNSF/UP propose to "freeze" the decrease in land values as of the end of 2009. BNSF/UP Reply at III.G-12.

consistent growth when viewed over a longer period of time. Simply stated, two years is just an observation and not a trend.

BNSF/UP's second claim is that what AEPCO depicted as 2009 (ending point) USDA agricultural land index values for specific states in the ANR are actually 2006 values. BNSF/UP Reply at III.G-11. AEPCO agrees that a technical error led to the use of 2006 instead of 2009 values and has corrected this error on Rebuttal.

BNSF/UP's third claim is that the index values should be weighted by relative land values instead of acres. *Id.* However, established Board precedent specifies that the index values should be weighted by ownership or acres, rather than land values. As indicated by the shipper in *AEP Texas*:

The annual inflation forecast that is used to calculate the value of the TNR land assets is based on a weighted combination of indices that reflect rural and urban land prices in relative proportion to the mix of land types traversed by the TNR. See Exhibit III-H-1. This approach likewise was endorsed in *Duke/CSX and Carolina*.¹⁰

The Board accepted the complainant's approach in *AEP Texas* at 109. An additional problem with weighting by land value (and presumably the reason that BNSF/UP seek that approach) is that the weighting would change the land values, which would change the weighting, resulting in further distortion.

¹⁰ Opening Evidence of AEP Texas North Co. in STB Docket No. 41191 (Sub-No. 1), *AEP Texas North Co. v. BNSF Ry.* (Public version dated March 1, 2004), at III-G-6.

BNSF/UP's fourth claim is that AEPCO improperly used the CPI to index the ANR's non-agricultural land values. BNSF/UP claim that the index reflects price changes for things other than land, especially fuel, and BNSF/UP instead propose to use indexes developed by the Massachusetts Institute of Technology ("MIT") to track price changes for commercial property. BNSF/UP Reply at III.G-12. The Board has previously accepted use of the CPI to adjust land values. *See, e.g., West Texas Utilities*, 1 S.T.B. at 713. Notwithstanding prior Board acceptance of the CPI, AEPCO on Rebuttal adopts use of the MIT indexes, but applies them in a proper manner, correcting two technical errors made by BNSF/UP in their Reply e-workpapers.

First, BNSF/UP used the change in quarterly values for the Western MIT index, but used annual values for the Southern MIT index. MIT provides as part of its data set a model to convert its annual Southern index to a quarterly index. In the interests of consistency, AEPCO has converted the Southern MIT index from an annual basis to a quarterly basis using the MIT conversion model so that both the Western and Southern indexes are presented on a consistent quarterly basis.¹¹

Second, BNSF/UP used the MIT index values only from the 2007-2009 period. On Rebuttal, AEPCO uses the 1Q05 to 1Q09 index values that cover

¹¹ *See* AEPCO Rebuttal e-workpaper "ANN_TO_QTRLY_CONECTER_SOUTH.XLS."

a longer historic period, consistent with established Board practice, as explained *supra*.¹²

4. Tax Liability

BNSF/UP raise three claims regarding the DCF treatment of the ANR's tax liability. BNSF/UP Reply at III.G-12-13. The first claim is that AEPCO improperly reflected "bonus" depreciation for assets acquired prior to January 1, 2008. As discussed in Rebuttal Part III-H-5, AEPCO accepts this technical correction in its Rebuttal analysis. The second claim is that AEPCO used an incorrect tax life for certain assets. As explained in Rebuttal III-H-5, BNSF/UP's criticism is unfounded. The third claim is that AEPCO improperly calculated the terminal value with respect to the present value of remaining interest and accelerated depreciation tax benefits, a matter that is discussed in the next section.

5. Capital Cost Recovery

In their Reply at III.G-13-19, BNSF/UP present an argument to the effect that the Board, in switching from a 20-year DCF model to a 10-year DCF model in *Major Issues*, exacerbated an already existing problem in the recognition of remaining interest and accelerated depreciation tax benefits in the terminal value calculation. BNSF/UP's position is that the terminal value reflects the recognition of interest and depreciation tax benefits that would otherwise be

¹² See AEPCO Rebuttal e-workpaper "ANR LAND APPRECIATION REB.XLSX."

recognized only in later years, that the problem already lurked in the 20-year model and is made worse by the 10-year model, and that an appropriate adjustment is required.

To the extent BNSF/UP have any claim, they should have presented it in the *Major Issues* proceeding. All AEPCO has done in its DCF model is to comply with the directive in *Major Issues* to use a 10-year DCF model instead of a 20-year model:

We believe that a 10-year SAC analysis period strikes the most reasonable balance. It covers an average business cycle but removes unreliable distant forecasts from our core analysis. This is not to suggest that the revenue requirements of a SARR over the 10-year period would need to recover the full capital investment, often billions of dollars, within that 10-year window. Just as has been done in a 20-year analysis, we would continue to calculate a “terminal value” at the end of the shorter SAC analysis period.

Major Issues at 64 (emphasis added) (footnotes omitted).

If BNSF/UP believed that some additional modification to the model was appropriate, *Major Issues* was the appropriate proceeding for them to seek that modification. Or, they could seek to have that proceeding reopened on the basis of new evidence. However, their own submission shows that the problem is not new at all, as BNSF or its predecessor noted the issue over ten years ago in *APS*. As their own presentation makes clear, BNSF/UP were on notice of the supposed flaw at the time of *Major Issues*, and they should have raised the matter in that proceeding at that time.

In addition, if issues associated with the truncation of the DCF period were to be reconsidered, then it would be appropriate to address other aspects of the 10-year model that disadvantage shippers. In particular, the productivity adjustment to SARR operating expenses adopted in *Major Issues* reflects a phase-in of 5% per year (5% in year 1, 10% in year 2, etc.), meaning that there would be a full phase-in over 20 years. However, the model is truncated at year 10, meaning that there is what might appear to be only a 50% phase-in.¹³ If the acceleration of interest and deferred tax benefits associated with the truncation of the model are to be considered, then it would be no less appropriate to

¹³ In fact, after 10 years, the SARR receives far less than a 50% pass-through of accumulated productivity gains. Consider the following example where productivity accumulates at 1% per year:

Rebuttal Table III-G-1			
Demonstration of Phase-in of RCAF Productivity Over Ten Years			
DCF Year	RCAFU	RCAFA	Hybrid Index 1/
(1)	(2)	(3)	(4)
1	1.03	1.02	1.0295
2	1.03	1.02	1.0290
3	1.03	1.02	1.0285
4	1.03	1.02	1.0280
5	1.03	1.02	1.0275
6	1.03	1.02	1.0270
7	1.03	1.02	1.0265
8	1.03	1.02	1.0260
9	1.03	1.02	1.0255
<u>10</u>	<u>1.03</u>	<u>1.02</u>	<u>1.0259</u>
Total	1.3439	1.2190	1.3085
1/ Changes annually in 5% increments, e.g., Year 1 = (95% RCAFU + 5% RCAFA), Year 2 = (90% RCAFU + 10% RCAFA), Year 3 = (85% RCAFU + 15% RCAFA), etc.			

At the end of 10 years, railroad industry productivity gains will amount to 10.2% (1.3439/1.2190), but the SARR will have realized only 2.7% in productivity gains (1.3439/1.3085), or only 26% (2.7%/10.2%) of the industry gains.

reconsider the impact of the elimination of the future productivity gains on operating expenses after year 10. In addition to reflecting post-year 10 reductions in operating expenses due to productivity gains, the DCF model should also be adjusted to reflect capital asset productivity, meaning productivity resulting from ongoing replacement assets. The Board noted this source of additional productivity gains in *Major Issues* at 46, and further observed that such productivity gains would not offset or displace gains in operating expensive productivity as the two would complement each other.

Moreover, even if the adjustment sought by BNSF/UP were sound, which it is not, BNSF/UP have calculated it improperly by using an incorrect discount rate to discount tax benefits. BNSF/UP discounted the unused depreciation expenses at the ANR's composite weighted-average cost of capital. However, a depreciation tax-shield is effectively a risk-free cash flow in that its benefits are set by known tax rates and historic costs. Because the benefit is risk-free, the appropriate discount rate to use to discount the tax benefits in the terminal value is the nominal risk-free rate. Using the nominal cost of capital of the ANR vastly understates the future tax benefits, which in turn artificially overstates future capital carrying charges. *See, e.g.,* Ross, S.A, Westerfield, R.W., and Jaffe, J.F., *Corporate Finance* (McGraw Hill 6th ed. 2002), at Chapter 7, and AEPCO Rebuttal e-workpaper "Net Present Value and Capital Budgeting.ppt."

In short, the adjustment BNSF/UP seek is outside the scope of the rate case; BNSF/UP were required to pursue it in *Major Issues*, if at all; any

increase in SAC would be more than offset by other adjustments that would be appropriate if *Major Issues* were to be revisited; and BNSF/UP have overstated the adjustment. Accordingly, AEPCO continues to use the 10-year DCF model that the Board prescribed in *Major Issues*.

6. Positive Train Control

BNSF/UP claim that AEPCO's DCF model needs to be modified to reflect investment in Positive Train Control ("PTC"). AEPCO's Rebuttal Part III-C-50-51 shows that it is premature to attempt to reflect PTC investment at this time. Accordingly, AEPCO has not modified its DCF model to reflect PTC investment.

III. H. RESULTS OF SAC ANALYSIS¹

1. Results of SAC DCF Analysis

Similar to AEPCO's presentation on Opening, the results of AEPCO's Rebuttal SAC DCF analysis are presented in Rebuttal Exhibit III-H-1 (Primary analysis), Rebuttal Exhibit III-H-2 (Secondary, reflecting the later Signal Peak Construction), and Rebuttal Exhibit III-H-3 (combined Primary and Secondary DCF analyses).

In Part III-H of their Reply, BNSF/UP present objections to various elements of AEPCO's Opening DCF Analysis.² AEPCO responds to those objections below, although many of the objections are discussed substantively elsewhere in this Rebuttal.

a. Cost of Capital

As explained in Rebuttal Part III-G, AEPCO uses the Board-prescribed cost of capital and/or equity for its DCF analysis, except for 2008, where AEPCO utilizes only the Board's CAPM figure and not the MSDCF figure. BNSF/UP's objection to the exclusion of the MSDCF figure and BNSF/UP's improper inclusion of equity floatation costs (BNSF/UP Reply at III.H-1) are

¹ The evidence in Part III-H is sponsored by AEPCO Witnesses Thomas D. Crowley and Daniel L. Fapp generally and also by Professor George H. Borts of the Brown University Department of Economics in responding to BNSF/UP's claims regarding use of an ANR URCS.

² Contrary to BNSF/UP's assertion, AEPCO did not "deploy[] a variation of the Board's DCF model." BNSF/UP Reply at III.H-1. Rather, AEPCO used the Board's standard DCF model consistent with Board precedent and the Board's *Major Issues* decision.

addressed in Rebuttal Part III-G. As on Opening, AEPCO's Rebuttal e-workpapers contain an alternate calculation that uses the Board-prescribed cost of capital values for all years, including the CAPM/MSDCF average for 2008.

b. Road Property Investment Values

The calculation of road property investment costs is summarized in Table C of Rebuttal Exhibits III-H-1 and III-H-2. The investment costs also incorporate one-time fees paid for land easements. AEPCO incorporates the updated road property investment values addressed in Rebuttal Part III-F, where AEPCO addresses BNSF/UP's contentions regarding road property investment. BNSF/UP's contentions regarding the indexing of land values noted in BNSF/UP Reply at III.H-1-2 are discussed in Rebuttal Part III-G.³

c. Interest During Construction

BNSF/UP accept AEPCO's methodology for calculating Interest During Construction ("IDC"). BNSF/UP Reply at III.H-2. However, BNSF/UP seek to add IDC for assumed investment in Positive Train Control ("PTC"). As explained in Rebuttal Part III-C, it is premature to include investment associated with PTC, and AEPCO has not included any such investment.

³ While not addressed in their Reply narrative, BNSF/UP's Reply e-workpapers note a technical error in Table C of AEPCO's Opening DCF analysis wherein AEPCO's calculations did not index Stations and Office Building expenses for inflation during construction. AEPCO has corrected this technical error in its Rebuttal DCF model.

d. Amortization Schedule of Assets Purchased With Debt Capital

BNSF/UP accept AEPCO's debt amortization schedules for railroad property assets to be placed into service on both January 1, 2009, and January 1, 2012. BNSF/UP Reply at III.H-2. While BNSF/UP have created a separate debt amortization table for the PTC investment, *id.*, inclusion of such investment is premature for reasons explained in Rebuttal Part III-C. Accordingly, AEPCO has included no such investment.

e. Present Value of Replacement Cost

While BNSF/UP state that they accept AEPCO's calculation of the replacement cost of ANR assets, BNSF/UP Reply at III.H-2, their Reply e-workpapers reveal several adjustments to the replacement cost worksheet that result in an overstatement of SAC.⁴

First, instead of using the simple average of the historic railroad industry costs of capital in their replacement calculations, as is the Board's established practice, BNSF/UP develop their replacement costs based on ANR's composite cost for each year from 2009 through 2018.⁵ On Rebuttal, AEPCO continues to follow the STB's preferred practice of using the simple average of the

⁴ BNSF/UP's Reply DCF model corrects a technical error contained in AEPCO's Opening DCF model wherein engineering was improperly allocated to Stations and Office Buildings in the replacement value calculation. AEPCO accepts this correction on Rebuttal.

⁵ See BNSF/UP Reply e-workpaper "Reply Exhibit III-H-1.xlsx," worksheets "Replacement," and "SP Replacement" at cells E24.

historic industry average costs of capital, but updates the calculation to include the 2009 cost of capital as submitted by the Association of American Railroads (“AAR”) in Ex Parte No. 558 (Sub-No. 13), *Railroad Cost of Capital -- 2009*, but without prejudice to whatever values the Board ultimately adopts in that proceeding.

Second, BNSF/UP adjusted the accounting depreciation lives for those assets classified as 15-year assets to 20-year assets. As discussed below, the Board’s established practice is to treat these assets as 15-year assets, which AEPCO continues to do in its Rebuttal replacement cost calculations.

Third, due to an apparent spreadsheet technical error, BNSF/UP miscalculated or failed to calculate depreciation for several classes of assets, including Account 13 – Fences and Snow Sheds, Account 17 – Roadway Buildings, Account 20 – Shops and Enginehouses, Account 27 – Signals and Interlockers, and Account 39 – Public Improvements.⁶

Fourth, BNSF/UP include a separate replacement cost worksheet for PTC investments. BNSF/UP Reply at III.H-2. As inclusion of PTC investment is inappropriate for reasons explained in Rebuttal Part III-C, AEPCO has not included any replacement cost of PTC investment.

⁶ See BNSF/UP Reply e-workpaper “Reply Exhibit III-H-1,” worksheets “Replacement” and “SP Replacement,” cells AA64, AD64, AG64, and AD31 to AF38.

f. Tax Depreciation Schedules

BNSF/UP raise two issues relating to AEPCO's tax depreciation schedules.

BNSF/UP first claim that AEPCO's Opening DCF analysis improperly applied additional or "bonus" depreciation to assets that were acquired before January 1, 2008. BNSF/UP Reply III.H-2-3. AEPCO accepts this criticism and has made an appropriate adjustment as shown in AEPCO Rebuttal e-workpaper "Exhibit III-H-1 Rebuttal.xlsx," tab "Tax Depreciation."

The second issue is that BNSF/UP claim that AEPCO assigned 15-year tax lives to certain assets that BNSF/UP contend should be treated as having 20-year tax lives based on IRS Revenue Procedure 87-56. The assets include investments in Bridges and Trestles (Account 6), Fences & Roadway Signs (Account 13), Roadway Buildings (Account 17), Fuel Stations (Account 19), Shops and Enginehouses (Account 20), and Public Improvements (Account 39). BNSF/UP Reply at III.H-4.

However, shippers, railroads, and Board rate case decisions since *APS* in 1997 have consistently used 15-year asset lives for these asset accounts. These rate cases all post-date the revenue procedure cited by BNSF/UP. In light of the thirteen years of precedent using 15-year tax lives for these accounts, AEPCO continues to use 15-year tax lives on Rebuttal.

g. Average Annual Inflation in Asset Prices

BNSF/UP accept AEPCO's inflation assumptions for assets other than land, but use updated AAR and RCAF indexes, following standard Board practice. BNSF/UP Reply at III.H-4. On Rebuttal, AEPCO uses still more recent AAR and RCAF indexes that are now available. In addition, AEPCO uses an updated version of the Global Insight RCAF projections to forecast inflation indexes through 2018.

h. Discounted Cash Flow

BNSF/UP generally accept AEPCO's calculation of the terminal value after year 10, the last year of the DCF model, but, relying on their discussion of tax liability in Section III.G.4, seek to adjust the unused tax benefits from amortization of debt interest and tax depreciation by discounting these values, and they also seek to add a separate cash flow for PTC implementation. BNSF/UP Reply at III.H.4-5. However, as explained in AEPCO Rebuttal Part III-G, the effort to adjust future tax benefits is contrary to Board precedent and inconsistent with the treatment of pre-operating period tax loss carryforwards, and the attempt to introduce elements of a 20-year model is directly contrary to *Major Issues*. In addition, it would constitute a major change in long-established Board practice solely for the benefit of a single litigant, which is contrary to general Board policy. AEPCO also rejects inclusion of PTC-related investment for reasons explained in Rebuttal Part III-C. Accordingly, AEPCO's Rebuttal retains the approach utilized on Opening.

i. Computation of Tax Liability -- Taxable Income

BNSF/UP accept AEPCO's computation of federal and state rates, but include a separate table for PTC investment. BNSF/UP Reply at III.H-5. AEPCO disagrees with inclusion of PTC investment for reasons explained in Rebuttal Part III-C.

j. Operating Expenses

BNSF/UP accept AEPCO's use of ton-miles instead of tons to index operating expenses. BNSF/UP Reply at III.H-5. However, as BNSF/UP noted in their Reply, AEPCO's use of ton-miles to index operating expenses is at odds with its use of tons to index operating statistics.⁷ BNSF/UP argue that AEPCO must use the same index to develop operating statistics for 2009 (from 2018) and to develop annual operating expenses for 2009 through 2018 in the DCF model. In all recently-decided SAC proceedings, the parties calculated operating statistics for all trains in the peak year, indexed the statistics to the base year using a ton index, and then used a ton index in the DCF model to develop annual operating expenses from the base year through the peak year. Therefore, in Rebuttal AEPCO has adjusted its methodology to eliminate the inconsistency BNSF/UP noted on Reply, and to remain consistent with recent precedent regarding the development of base-year operating statistics and annual operating expenses. Specifically, AEPCO uses a ton index for both operating statistics and operating expenses in Rebuttal.

⁷ See BNSF/UP Reply at III.D-148 to III.D-149.

BNSF/UP disagree with AEPCO's application of the volume adjustment to maintenance of way expenses on the grounds that the expenses are developed on a normalized basis. *Id.* AEPCO agrees that normalized maintenance of way expenses were used on Opening. On Rebuttal, AEPCO uses adjusted calculations that remove the volume adjustment from the normalized maintenance of way expenses.

k. Summary of SAC

BNSF/UP present separate SAC results for the ANR-PRB and the ANR-NM. As BNSF/UP intend, both SARRs fail to produce any SAC relief. The ANR-PRB yields stand-alone costs that exceed stand-alone revenues. The ANR-NM has stand-alone revenues that exceed stand-alone costs, but the Belen-Rincon segment fails the *Otter Tail/PPL Montana* cross-subsidy test. BNSF/UP Reply at III.H-5-8.

However, there is no need to consider the separate ANR-PRB and ANR-NM for reasons explained in AEPCO Rebuttal Part III-A. AEPCO's use of a single SARR that reroutes the Belen-Rincon New Mexico traffic and the issue PRB traffic via Vaughn-El Paso is fully permissible and results in a lower-cost, more-efficient SARR that does not present any *Otter Tail/PPL Montana* cross-subsidy issues.⁸ AEPCO is thus entitled to rely on a single SARR.

⁸ BNSF/UP certainly do not attempt to show that the ANR as designed and constructed by AEPCO has any such cross-subsidy issues. Having made no attempt to do so on Reply, they are precluded from attempting to make any such showing later in the proceeding.

2. Maximum Rate Calculations

a. An ANR URCS Should Not Be Utilized

BNSF/UP recognize that use of a single SARR yields a favorable outcome for AEPCO. Accordingly, in the event that AEPCO is allowed to proceed with a single SARR, BNSF/UP seek a major alteration of how MMM is applied to allocate the SAC relief. BNSF/UP claim that if AEPCO is not required to submit entirely separate SARRs for the New Mexico and PRB issue traffic movements,⁹ then MMM should be applied not using the variable costs of BNSF and UP, but instead using the ANR's variable costs as derived under an "ANR URCS." BNSF/UP claim that their approach is necessary because the ANR is used to challenge the rates of two defendants and because of the diversity of the traffic handled by the ANR. While the nature of BNSF/UP's argument is rather murky, the ultimate impact is that BNSF/UP would increase the variable costs for the coal traffic relative to the variable costs for the non-coal traffic, thereby distributing less of the MMM relief to coal (including the issue traffic) and more of the MMM relief to non-coal traffic. In addition, BNSF/UP's ANR URCS develops lower variable costs in the aggregate when compared to the defendants' URCS costs, which further increases the MMM ratios. Nonetheless, it appears that the resulting rates would still remain far below the jurisdictional threshold, at

⁹ Of course, BNSF/UP's purpose in requiring AEPCO to make separate SARR presentations is to cause the New Mexico SARR to fail the cross-subsidy test over the Belen-Rincon segment and to cause the PRB SARR to fail or at least to yield a much higher MMM result by preventing the SARR from adopting a least-cost, most-efficient configuration.

least according to the analysis presented by BNSF/UP on Reply. BNSF/UP Reply at III.H-8-17.

BNSF/UP's proposal is defective on numerous grounds -- legal, procedural, conceptual, analytical, fairness, and implementation -- any one of which by itself is sufficient to require rejection of their position. AEPCO's discussion below is not meant to exclude additional grounds for rejection.

One of BNSF/UP's two main premises for its ANR URCS proposal is that the ANR is different from other SARRs because it involves two defendants and joint-line movements. However, the Conference Report for the Staggers Rail Act of 1980 makes clear that the rate reasonableness standards for joint rates should not be more onerous or demanding than those in single line rate cases. "The Conference substitute maintains the requirement that joint rates must be reasonable. The conferees intend that the rate standard for the reasonableness of joint rates shall be the same as for all rates." H.R. Rep. No. 96-1430 at 90 (1980). In advocating a different approach based on the presence of more than one defendant, BNSF/UP run afoul of the Congressional intent (as well as a number of SAC principles discussed below).

BNSF/UP's other main premise is that a substantial portion of the ANR's traffic consists of non-coal traffic. But the ANR is not the first SARR to be proposed to handle a diverse traffic base. One need only consider *FMC Wyoming*, *McCarty Farms*, *Otter Tail* and AEPCO's previous rate case, to identify just a few examples. The possibility that a SARR would not be confined to a

single commodity was thus readily apparent at the time that *Major Issues* was being considered by the Board. If BNSF or UP had concerns about how MMM would apply to a SARR with a diverse traffic base, they could and should have presented those matters in *Major Issues*, a decision that has already been upheld on appeal.¹⁰

BNSF/UP cannot plausibly claim that the Board conducted its *Major Issues* in ignorance of the possibility that the SARR traffic group might include different types of traffic with different variable costs. In fact, the Board's Notice of Proposed Rulemaking makes clear that the Board proposed MMM precisely in order to address diversity of the traffic group:

MCM would work best where the traffic group selected for SAC analysis is homogeneous, such that the variable costs per ton-mile would be roughly the same for every movement in the traffic group. It is less-well suited to cases where the traffic group is diverse, such as where it is comprised of both short-haul and long-haul traffic, or both unit-train and manifest traffic. In those cases, the traffic in the group could have differing cost structures per ton-mile....

¹⁰ In this regard, BNSF/UP's claim that their argument regarding the application of MMM constitutes "new evidence within the context of *WFA* at 5 (BNSF/UP Reply at III.H-9) is baffling. In *WFA/Basin II* at 5 n.7, the Board explained that:

The evidence submitted by BNSF is not "new evidence." New evidence is not evidence newly submitted, but evidence that could not have reasonably been presented to the agency during the rulemaking proceeding. All of the arguments raised by BNSF could and should have been raised in the rulemaking...

The same is entirely true of what BNSF/UP seek to introduce here.

We, therefore, also seek public comment on a variant of the MCM approach that could be applied to either a homogeneous or diverse traffic group. We call this alternative the Maximum Markup Method (MMM). This alternative would use URCS to estimate the variable cost of every movement in the traffic group, and then express the maximum contribution towards SAC costs as a markup over variable cost.... Under MMM, a movement with a higher variable cost per ton would have a higher maximum contribution toward total SAC costs, and vice-versa.

STB Ex Parte No. 657 (Sub-No. 1), *Major Issues in Rail Rate Cases* (STB served Feb. 27, 2006), at 13. The issue that BNSF/UP purport to raise is not new, and MMM represents the Board's considered answer.

What BNSF/UP then seek is a major modification in a single rate case of what was adopted in a major rulemaking. The Board has repeatedly made clear that such attempts are procedurally improper. Indeed, BNSF and UP, under the aegis of the AAR, successfully opposed the efforts of the Western Coal Traffic League ("WCTL," of which AEPCO is a member) to have the Board modify its cost of equity estimation method in the 2005 cost of capital proceeding on this basis.¹¹ BNSF and UP seek to accomplish here exactly what they said was improper and inappropriate in similar contexts.

Moreover, AEPCO's application of MMM complies fully with the Board's directives. "Under this [MMM] method, the parties should use unadjusted URCS to estimate the variable cost of each movement in the traffic

¹¹ Of course, a significant difference is that the Board's notice in the cost of capital proceeding specifically sought comment on the Board's methodology.

group, and then determine the maximum contribution of each movement towards SAC costs, expressed as a markup over variable cost.” *Major Issues* at 14. The costs are those of the defendant. Where, as here, there is more than one defendant, the appropriate approach is to use the variable costs of the defendant who handles the movement (or who handles the movement over a particular segment in the case of a joint movement).

As noted, the Board in *Major Issues* at 14-23 gave detailed consideration to the issue of how to allocate SAC relief over traffic with different degrees of elasticity or price-sensitivity, which is the same issue that BNSF/UP claim they are seeking to revisit here. The Board’s unequivocal answer in *Major Issues* is that SAC relief should be allocated under the MMM implementation based on modified Ramsey mark-ups determined using the variable costs of the defendant. “The SAC rate will be expressed as an R/VC ratio because the share of joint and common costs assigned to a movement would be based on its related share of the services provided, as measured by URCS variable costs.” *Id.* at 14. In short, the Board has already considered the issue of how to provide SAC relief when the SARR traffic group is diverse, and MMM calculated based on the variable costs of the defendants is its considered answer.

BNSF/UP’s observation that the two defendants may have different cost structures and variable costs (BNSF/UP Reply at III.H-11) is correct, but hardly constitutes a basis for attempting to base the MMM ratio on the putative variable costs of the SARR. One virtue of expressing the SAC relief in a joint rate

case as a revenue-variable cost ratio is that the ratio can be applied to the separate variable costs of each defendant. In particular, if one defendant has higher variable costs, then it will be allowed to charge a higher rate for its portion of the traffic group (including its portion of the joint rate for the issue traffic), but such issues are inherent in revenue-variable cost approach to SAC relief for a joint rate. Significantly, BNSF/UP do not suggest that SAC relief should be awarded on a basis other than variable costs, besides which the use of variable costs to allocate SAC relief was decided in *Major Issues*.

BNSF/UP's stated concern that "movements on the higher cost defendant would consistently be assigned a higher 'share of services provided' by the SARR" (BNSF/UP Reply at III.H-11) is not really a concern at all. Any other allocation would necessarily shift one carrier's variable costs to the other, raising additional issues of fairness and equity. Furthermore, the defendants can resolve such issues by either (a) not providing a joint rate in the first place, or (b) addressing the issue through their division agreement. With respect to (b), BNSF/UP claim, as discussed in Rebuttal Part III-A, that their division agreement is irrelevant to the rate case and refused to produce it to AEPCO on that basis. That said, the fact that AEPCO's Apache plant is captive to UP at destination suggests that the division is not based on variable costs, particularly under the Board's "one lump" theory.

Furthermore, basing the MMM ratio on the putative variable costs of the SARR would distort and undermine the basic purpose of SAC and MMM.

The purpose of SAC is to determine whether defendants have exploited and abused their market power and measure the extent to which this has occurred. The exploitation is measured by the extent defendants have marked-up their rates excessively, that is, the extent to which they have established revenue-variable cost ratios for their more captive traffic beyond the level needed to serve the designated traffic group on a sustainable basis. MMM “calculate[s] a maximum contribution from each movement in the traffic group such that the total contribution from a traffic group would equal the total SAC costs.” *Id.* at 11. Calculating and applying MMM based on the variable costs of the SARR would negate that objective. In effect, the Board would be attempting to determine the extent to which the SARR, and not the defendants, engaged in excessive market power exploitation. But the purpose of the SAC is to test the reasonableness of the rates of the defendants, not to determine the extent to which the SARR has abused its (non-existent) market power, especially when the SARR does not get to set its pre-MMM rates, but must use those of the defendants. “A SAC presentation should be reasonably tied to its purpose, which is to assess the reasonableness of the rates charges for the traffic at issue.” *AEPCO December 2001* at 6.

Conceptually, BNSF/UP seek to sever the SARR concept from its basic underpinnings and make the SARR an end unto itself, as opposed to a hypothetical construct. However, their approach runs directly counter to numerous aspects of the Board’s SAC methodology and prior decisions.

For example, the SAC analysis begins, as noted, with a traffic group that reflects and embodies the rates charged and the volumes moved by the defendants. Under ATC, the revenues for cross-over traffic are allocated between the SARR and the residual incumbents based upon the defendants' variable and fixed costs, as opposed to the divisions that a SARR might be able to negotiate.¹² Furthermore, the fixed cost calculation in ATC reflects the densities of the defendants, both on and off the portions of their systems replaced by the SARR. The fact that the SARR may have lower densities over its segments than the defendants because the SARR decided not to include some of the defendants' traffic has no bearing on the calculation. Similarly, ATC is based on the actual routings of the defendants, as opposed to the longer routings that the SARR might employ to make its system more efficient. MMM is in turn applied to the SARR's divisions as calculated under ATC. In all these respects, and others, the SAC analysis is directed to testing the revenues and costs of the defendants, and not those of the SARR.

The SAC focus on the defendants, as opposed to the SARR as an independent entity, is also illustrated by actions that the Board took in response to BNSF/UP's claims in AEPCO's prior rate case. Specifically, the Board prevented AEPCO from combining elements of BNSF and UP operations because the Board

¹² "And Coal Shippers' argument that we should presume the SARR could exercise market power in setting revenue divisions because the incumbent exercises market power in the real world ignores the purpose of the SAC test, which is to simulate a competitive market rate in a contestable marketplace where market power and cross-subsidies would not exist." *Major Issues* at 32.

decided that the combination would undermine the proper utilization of SAC to test the defendants' rates and costs. In particular, AEPCO was not permitted to combine the traffic of BNSF and UP, as BNSF and UP cannot do or have not done so in the real world. Instead, AEPCO was required to replace only one defendant at a time along any individual segment.¹³ AEPCO also was not permitted to utilize the trackage rights of BNSF over UP between Vaughn and El Paso. While BNSF surely has the right to use those trackage rights in the real world, the Board found that a SARR based on that approach would not reflect the true costs of the defendants. "Because it is the collective revenue requirements of UP and BNSF that are being tested, all necessary costs of providing facilities for the Vaughn-to-El Paso portion of the joint line movement must be taken into account." *AEPCO March 2005* at 11. What BNSF/UP seek now is entirely contrary to what BNSF/UP argued and the Board decided in AEPCO's prior rate case. AEPCO has

¹³ The Board stated in *AEPCO August 2002*, 6 S.T.B. at 328, that:

But our SAC constraint is meant to serve as a practical tool, not a mere exercise in contestable market theory divorced from its purpose of judging the reasonableness of the defendant carrier's pricing. When the purpose of the SAC exercise is taken into consideration, it becomes clear that a defendant carrier's ability to recover reasonable costs and earn adequate revenues should not be limited by the inclusion in our rate reasonableness analysis of another carrier's traffic and revenues that do not or could not reasonably be expected to pay for the defendant carrier's costs. *Guidelines*, 1 I.C.C.2d at 534. In short, there are limits on the creativity with which a complainant such as AEPCO may develop its SARR.

formulated its SAC presentation to respond directly to the Board's prior criticisms. BNSF/UP should not be allowed to change the rules of the game after AEPCO has relied on the Board's prior rulings.

BNSF/UP also have not really created an "ANR URCS" at all, nor have they calculated the ANR's variable costs in any meaningful sense. Instead, they have, at best, conveniently combined elements of the URCS of real-world railroads and that of the ANR to yield results that they happen to prefer (for present purposes). For example, the R-1 data that BNSF/UP purport to have compiled for the ANR is not particularly comparable to that of the real-world BNSF/UP. For example, the ANR's capital costs reflect replacement/opportunity costs, whereas BNSF's and UP's capital costs reflect depreciated book values.¹⁴ The difference between historical costs and replacement costs is at least as substantial as the difference between betterment and depreciation accounting data, which was a major factor in the decision of the Board's predecessor to switch from Rail Form A to URCS.¹⁵ In addition, R-1 operating expenses are booked based on

¹⁴ As AEPCO explains in Part III-G, there are good reasons why the cost of equity, at least for 2008, should be lower for the ANR than for BNSF and UP.

¹⁵ Notwithstanding the ANR's higher replacement/opportunity costs, the ANR's overall URCS costs appear to be lower than those of BSNF and UP, at least according to BNSF/UP Table III.H.1 in BNSF/UP Reply at III.H-13. Such an outcome is not particularly paradoxical. To begin with, the ANR's revenue requirement is lower than that of BNSF and UP for the issue traffic, as otherwise there would be no SAC relief available to allocate under MMM. The lower revenue requirement should translate into lower unit costs and URCS costs in terms of a crude mathematical exercise, that is, one is applying the same coefficients to two sets of costs, and one set of costs is greater than the other.

accrual accounting methods that account for non-cash expenses, while operating SAC are nominally based on cash values and by their nature would be less than accrued costs. BNSF/UP's attempt to base MMM relief on the would-be variable costs of the SARR is the equivalent of an attempt to mix apples and oranges.

In view of all these basic differences, it is hardly surprising that an ANR URCS would produce not only different URCS costs for individual movements than the BNSF and UP URCS, but also relatively different URCS costs for broad categories of traffic. In other words, there is no good reason to assume that the relative relationship between URCS costs for the coal and non-coal traffic for the ANR would be the same as that for BNSF and UP.

However, the fact that BNSF/UP can construct an ANR URCS that yields different MMM results than those that arise from the BNSF and UP URCS does not demonstrate that the ANR URCS should be utilized to allocate SAC relief. Again, the fundamental purpose of MMM is to allocate the excess revenues collected by the defendants back to the customers based on Ramsey-pricing principles modified to reduce the maximum revenue-to-variable cost ratios as a reflection of captivity and/or demand inelasticity. *Major Issues* at 14.

Substituting the so-called variable costs of the SARR used to determine the extent of the excess collections for the variable costs of the defendants does not serve that purpose at all.

However, the fact that the ANR URCS costs are lower says nothing about whether a comparison is meaningful.

BNSF/UP's approach would be problematic in an additional respect.

As noted, the URCS costs of the ANR are lower than those of the defendants (Table III.H.1 at BNSF/UP Reply at III.H-13), which appears plausible in that the ANR's revenue requirement is lower than that of the defendants for the traffic group. Accordingly, if one used the ANR URCS to derive the MMM ratio, the MMM ratio would reflect a lower variable cost level. *Id.* The lower variable cost level under the ANR URCS would translate into a higher (overstated) MMM ratio for the ANR as compared to BNSF and UP.¹⁶

Accordingly, one could not properly apply the overstated ANR URCS MMM ratio to the variable costs of the defendants. Doing so would produce overstated revenues based upon overstated revenue to variable cost ratios reflective of understated variable costs. Not surprisingly, BNSF/UP avoid any mention of this issue. Their objective may well be to avoid it altogether, in hopes that they can reclaim the additional mark-up inherent in their higher variable costs. That said, AEPCO notes that constructing an adjustment to convert, translate, link, or "true-up" the SARR variable costs to those of the defendants, or even a single

¹⁶ If one uses the same revenue figure and divides it by a lower variable cost (such as ANR URCS variable cost as opposed to the BNSF or UP URCS costs), the result will be a higher revenue-variable cost ratio (same numerator and lower denominator). To give a crude example, suppose that the ANR MMM ratio was 150% based on an ANR variable cost of 2. Under those circumstances, the maximum rate would be 3. However, suppose that the real-world defendant's variable cost was 2.5. If one applied the same MMM ratio of 150% to the variable cost, one would get a rate of 3.75, substantially higher than that from the ANR MMM.

defendant, is not necessarily a simple or obvious matter. For example, the true-up might be based on the costs of each defendant or both defendants, total costs or variable costs, individual movements or groups of movement, etc., and the answers are unlikely to be the same in each case. However, there is no reason to even begin to consider these implementation problems inherent in BNSF/UP's approach, which can and should be rejected on numerous more basic grounds.

BNSF/UP's larger purpose is to funnel SAC relief away from the coal traffic and towards the non-coal traffic. Table III.H.2 at BNSF/UP Reply at III.H-14. Since intermodal forms the largest component of the ANR's traffic base, BNSF/UP could have sought to accomplish the same end by arguing that the intermodal traffic's variable costs are too high. But BNSF/UP would have at least two basic problems with such an argument. First, BNSF/UP elsewhere claim that the ANR's results are implausible because the ANR relies heavily on intermodal traffic with low revenue-variable cost ratios and that AEPCO's SAC presentation should be rejected outright for that reason. BNSF/UP Reply at I-6. BNSF/UP would undermine this argument if they claimed that the URCS costs for intermodal traffic are overstated. Second, in order to seek lower URCS costs for the intermodal traffic, BNSF/UP would need to show that other URCS costs would need to be increased, and they would probably need to do so in the context of a rulemaking.

In view of these realities, BNSF/UP may well perceive a need to find some other mechanism to block the normal application of MMM. But their

attempt to devise an ANR URCS is defective legally, procedurally, and substantively. In short, there is no basis on which BNSF/UP's ANR URCS MMM analysis can possibly be accepted.

b. Actual Movement Variable Costs Must Be Used

In its concluding paragraph, BNSF/UP assert that if the Board were to conduct any analyses on the ANR as proposed by AEPCO, the URCS costs for the issue traffic should be based on the SARR rerouted miles for both the MMM allocation process and any resulting rate prescriptions. BNSF/UP Reply at III.H-17. BNSF/UP's assertion must be rejected for the reasons noted below and in Rebuttal Part II-A-2.

The MMM model uses the same Phase III URCS variable costs as those used to develop Average Total Cost ("ATC") revenue divisions. A consistent costing approach is required in order to achieve logical, consistent results, *i.e.*, if different approaches were used, then application of MMM to the ATC divisions could result in post-MMM revenues that were greater or less than total SAC costs. The Board has made clear that the variable costs used to calculate ATC divisions are to be developed based upon the mileage along the predominant route utilized by the defendant railroad(s). *WFA/Basin II* at 15. Therefore, under the Board's approach, if the variable costs used to develop ATC divisions are based on the predominant route of movement, then the variable costs used in the MMM and any rate prescription must also be based on the predominant route.

In addition, Board precedent indicates that rate prescriptions, including rates set at the jurisdictional threshold level, are to be set based upon the movement's actual variable costs. There is no logical reason to develop a rate prescription tied to variable costs that does not reflect the actual variable costs of the movement.

c. URCS Index Forecasts Used

AEPCO's Opening explained how AEPCO developed a forecast of each carrier's URCS index to adjust variable costs in the MMM model. *See* AEPCO Opening at III-H-13-14. In its Reply MMM example, BNSF/UP utilize AEPCO's BNSF and UP URCS index forecasts.¹⁷ In its Rebuttal MMM model, AEPCO continues to use the railroad-specific URCS index forecasts to adjust variable costs, but updates the forecasts to reflect (a) the 2009 costs as shown in each railroad's 2009 Form R-1 and (b) the use of current Global Insight and EIA forecasts.

d. SAC Results

The SAC analysis summarized in Rebuttal Parts III-A through III-G and the accompanying Exhibits, and displayed in Rebuttal Exhibit III-H-1, demonstrates that over the 10-year DCF period the revenues generated by the ANR exceed its total capital and operating costs. Rebuttal Table III-H-1 below

¹⁷ *See* BNSF/UP Reply e-workpaper "Reply ANR URCS MMM Model.xlsm," worksheet "ANR URCS MMM," cells R4 to AA8.

shows the measure of excess revenue over SAC in each year of the DCF period for this case.

Rebuttal Table III-H-1					
<u>Summary of DCF Results -- 2009 to 2018</u>					
(\$ in millions)					
<u>Year</u>	<u>Annual Stand-Alone Requirement</u>	<u>Stand-Alone Revenues</u>	<u>Overpayments or Shortfalls</u>	<u>PV Difference</u>	<u>Cumulative PV Difference 1/</u>
(1)	(2)	(3)	(4)	(5)	(6)
2009	\$1,385.1	\$2,075.8	\$690.7	\$655.2	\$655.2
2010	1,460.9	2,295.3	834.3	717.8	1,373.0
2011	1,590.5	2,539.0	948.6	738.3	2,111.3
2012	1,714.2	2,774.8	1,060.6	746.7	2,857.9
2013	1,794.3	2,982.5	1,188.2	756.7	3,614.6
2014	1,879.2	3,167.4	1,288.2	742.1	4,356.8
2015	1,927.9	3,273.5	1,345.6	701.2	5,058.0
2016	2,002.3	3,476.6	1,474.4	695.0	5,753.0
2017	2,060.8	3,680.7	1,619.9	690.8	6,443.8
2018	2,130.6	3,891.7	1,761.1	679.4	7,123.2
1/ Figures may not sum due to rounding.					
Source: Rebuttal Exhibit III-H-1.					

Rebuttal Table III-H-2 shows the MMM results of AEPCO's

Rebuttal analysis and compares the results to those presented on Opening:

Rebuttal Table III-H-2		
MMM Results		
Year	Opening Maximum R/VC	Rebuttal Maximum R/VC
2009	76.0%	94.8%
2010	74.0%	92.1%
2011	72.4%	90.7%
2012	72.4%	92.2%
2013	71.9%	91.8%
2014	71.7%	91.8%
2015	71.6%	92.5%
2016	71.2%	92.1%
2017	70.8%	91.9%
2018	70.2%	91.3%

Source: Opening and Rebuttal Exhibits III-H-4.

As indicated in Rebuttal Table III-H-2, the maximum R/VC ranges from 90.7% to 94.8% over the 10-year DCF period.

As applied to the unadjusted 2009 Phase III URCS variable costs (utilizing the railroad cost of capital for 2009 as submitted by the AAR) for the issue movements, the following MMM maximum reasonable rates apply to shipments to Apache from the various origins at the 1Q09 through 1Q10 wage and price levels:

Rebuttal Table III-H-3					
AEPCO MMM Rates per Ton – 1Q09 Through 1Q10					
Maximum Reasonable Rates for Coal Movements to Apache					
Origin	1Q09	2Q09	3Q09	4Q09	1Q10
Lee Ranch	\$5.33	\$5.33	\$5.51	\$5.61	\$5.60
El Segundo	\$5.25	\$5.26	\$5.43	\$5.53	\$5.52
Gillette Area Mines (Eagle Butte)	\$14.48	\$14.50	\$14.94	\$15.20	\$15.16
Spring Creek	\$15.47	\$15.50	\$15.99	\$16.26	\$16.22
Decker	\$15.41	\$15.43	\$15.91	\$16.18	\$16.15
Source: Rebuttal e-workpaper "Cochise MMM Rates Rebuttal.xlsx." Note that no rates are shown for Signal Peak because that origin does not enter the SARR system until 2012.					

The maximum lawful rates for the transportation of coal from the origins covered by BNSF 57966, 57988, and 58039 equal the greater of the jurisdictional threshold or the MMM maximum rates. Rebuttal Table III-H-4 compares BNSF/UP rates to AEPCO as of January 1, 2009, to the jurisdictional threshold and the MMM maximum. The issue rates are greater than both the jurisdictional threshold and the MMM rates for all origins.

Rebuttal Table III-H-4 Maximum Rate Summary for 1Q09				
Origin	January 1, 2009 BNSF/UP Rate Level	Jurisdictional Threshold per Ton	MMM Rate Per Ton	Maximum Rate Per Ton^{1/}
Lee Ranch	\$14.88	\$10.12	\$5.33	\$10.12
El Segundo	\$14.87	\$9.97	\$5.25	\$9.97
Gillette Area Mines (Eagle Butte)	\$40.32	\$27.50 ^{2/}	\$14.48	\$27.50
Spring Creek	\$42.17	\$29.39	\$15.47	\$29.39
Decker	\$42.16	\$29.27	\$15.41	\$29.27
^{1/} The Maximum Rate Per Ton equals the greater of the Jurisdictional Threshold or MMM Rate per ton. ^{2/} From Eagle Butte Mine. Source: Rebuttal Exhibit III-A-4 and Rebuttal e-workpaper "Cochise MMM Rates Rebuttal.xlsx." No figure is shown for Signal Peak because that origin does not enter the SAC analysis until January 1, 2012.				

3. Reparations

As explained on Opening, BNSF/UP owe AEPCO the difference between the rates paid and the lawful maximum levels in principal reparations payments. Such principal will increase until BNSF/UP comply with a final order of the Board in this proceeding. AEPCO is also entitled to interest on all principal reparations amounts, calculated from the date that the first unlawful charge was paid at the rate described in Opening Part I-D-2, and otherwise in accordance with 49 C.F.R. Part 1141.1, *et seq.*

As AEPCO explained on Opening, the Board has the discretion to grant AEPCO a more appropriate interest rate on reparations than is specified in

the Board's regulations. Significantly, BNSF/UP did not respond to AEPCO's argument in their Reply.

PART IV

WITNESS QUALIFICATIONS AND VERIFICATIONS

This Part contains the Statements of Qualifications and Verifications of additional witnesses who have not previously sponsored evidence on behalf of AEPCO in this proceeding. It also contains the Verifications of AEPCO's other witnesses, whose Statements of Qualifications appear in Part IV of AEPCO's Opening Narrative.

1. DR. GEORGE H. BORTS

Dr. Borts is a Professor of Economics at Brown University. His address is 220 Slater Avenue, Providence, Rhode Island, 02906. Dr. Borts is sponsoring the portions of AEPCO's Rebuttal Evidence that relate to SAC theory and its application (specifically, portions of Parts II, III-A, III-G, and III-H).

Dr. Borts holds a Bachelor of Arts degree from Columbia University, a Master of Arts degree in Economics from the University of Chicago, and a Ph.D in Economics from the University of Chicago. His doctoral thesis is entitled, "Cost and Production Relations in the Railway Industry." Dr. Borts is a member of the American Economics Association, the Econometric Society, and Phi Beta Kappa. He served as Managing Editor of the American Economic Review from 1969 to 1980.

Dr. Borts has nearly fifty years of experience in transportation economics, including statistical and econometric research and its application to regulation. He has presented evidence on economic issues before the Surface Transportation Board and its predecessor, the Interstate Commerce Commission, the Canadian Transport Commission, the Federal Energy Regulatory Commission, and other regulatory authorities in the

United States and Canada. Dr. Borts has testified on matters concerning railroad economics, including stand-alone cost theory and its application; the cost of capital; the pricing of rail services; discounted cash flow methodology in stand-alone cost maximum rate cases; and issues relating to market power, productivity, revenue adequacy, and the hire of freight cars.

Together with J.L. Stein, Dr. Borts co-authored a book entitled Economic Growth in a Free Market, published by the Columbia University Press in 1984. He also authored a monograph entitled Regional Cycles of Manufacturing Employment, published by the National Bureau of Economic Research in 1959. In addition, Dr. Borts has written a number of articles on regulatory matters (including railroad cost and production functions) and on international economics, which were published in Econometrica, the American Economic Review, the Journal of Political Economy and the Journal of International Economics.

VERIFICATION

I, George H. Borts, verify under penalty of perjury that I have read the Rebuttal Evidence of Arizona Electric Power Cooperative, Inc. in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.


George H. Borts

Executed on June 25, 2010

2. DR. PATRICIA M. BUHLER

Dr. Buhler is a Professor of Management at Goldey-Beacom College in Wilmington, Delaware and is the owner of Buhler Business Consultants. Dr. Buhler has substantial expertise in the subjects of business administration and corporate organization. Her offices are located at 9 Montague Road, Newark, Delaware, 19713. The specific evidence that Dr. Buhler is sponsoring relates to General & Administrative (“G&A”) staffing levels, the outsourcing of certain G&A functions, and the G&A staff’s use of advanced software packages to perform their required tasks. This evidence appears in Parts III-D-3-c of AEPCO’s Rebuttal Evidence.

Since 1989, Dr. Buhler has worked in academia and as a consultant specializing in business management matters. Specifically, Dr. Buhler has substantial experience in the analysis of business management structures, and has lectured extensively on topics ranging from Management Theory to Organizational Behavior, and from Advanced Human Resources Dynamics to Creative Problem Solving in Business. She has served as a Contributing Editor for Supervision magazine and the author of a bi-monthly column entitled *Managing in the New Millennium*.

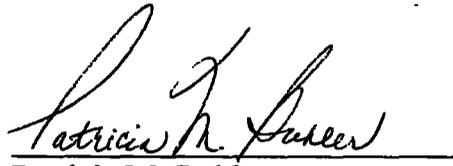
Dr. Buhler holds a Bachelor of Science Degree in Political Science from the University of Delaware, an Associate of Arts Degree in Business Administration from the College of San Mateo, a Master of Business Administration in Management from Pace University, and a Doctorate in Business Administration from Nova Southeastern University.

Dr. Buhler is the author of a number of books and articles regarding business management and organizational structure. In addition, she has provided seminars and training to business in areas of general management, strategic management, and human resource management.

A copy of Dr. Buhler's resume is attached.

VERIFICATION

I, Patricia M. Buhler, verify under penalty of perjury that I have read the Rebuttal Evidence of Arizona Electric Power Cooperative, Inc. in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.


Patricia M. Buhler

Executed on June 25, 2010

Patricia M. Buhler
9 Montague Road
Newark, Delaware 19713
(302) 292-1377
patbuhler@aol.com

Strengths:

Oral and written communication skills
Classroom presence and teaching skills
Broad business and managerial experience

Research skills
Interpersonal skills

Academic Background:

Doctorate in Business Administration Nova Southeastern University Overall G.P.A. 4.0/4.0 Dissertation: The Role of Stereotypes in Expatriate Management: An Issue for Improved International HRM Staffing Decisions	2/97
Master of Business Administration in Management Pace University, White Plains, New York Overall G.P.A. 3.9/4.0 Outstanding Student of the Year; Delta Mu Delta; President Management Association, Assistant Editor of Graduate Business School Newspaper	5/86
Associate of Arts in Business Administration College of San Mateo, San Mateo, California	8/81
Bachelor of Science in Political Science University of Delaware, Newark, Delaware	6/75

Employment History:

Goldey-Beacom College Wilmington, Delaware	9/89 to present
Professor (Aug 2007 – present) Associate Professor (August 2001 – 2007) Adjunct Associate Professor (Aug. 1999 – August 2001) Cluster Coordinator/Associate Professor (Sept. 1997 – May 1999) Lecturer (Sept. 1995 – May 1997) Teach management courses in the graduate and undergraduate programs.	

Courses have included Operations Management; Organizational Behavior; Human Resource Management; Management Administration and Theory; Business Policy and Strategic Management; and Small Group Communications. Teach graduate level courses in the MBA program including Advanced Human Resource Management, Training & Development, Team Dynamics, and Seminar in Strategic Management. Serve as course leader for several upper level management courses; responsible for updating courses of study and reviewing textbooks. Elected to the College Forum to determine policy. Chaired the Subcommittee for Curriculum for the institution's Self-Study for Middle States. Responsible for creating/designing courses. Delivered 1996, 2006, 2008, 2009 and 2010 New Student Orientation keynote address. Presented teamwork seminar for 1995, 1996, 1997, and 1998 graduate student orientation. Served as Chair of the Curriculum Committee (1995 to 1999). Member of the Academic Honesty Committee. Serve as Chair of the Committee for a Respectful Learning Environment and Co-Chair of the Strategic Planning and Assessment Committee. Received Faculty Service Award 2003, Excellence in Teaching Award 1992 and 2004. Faculty advisor to Entrepreneurial Society, Society for Human Resource Management, and Women in Networks. Serve as Co-Chair for institution-wide judicial board.

Served as Acting Director of Admissions from September 1993 to September 1994 while a search ensued for a new director. Supervised professional and clerical staff as well as college work studies. Responsible for all domestic and international recruiting efforts including travel to launch recruiting efforts in new markets. Responsible for all admissions functions including liaison with financial aid, student affairs, and academic advisement. Served on the Search Committee for the Director of Admissions. Served on the Provost's Advisory Council, the Admissions Committee, and the Academic Affairs Committee. Responsible for hosting/ coordinating on-campus visits and open house activities for prospective students.

Buhler Business Consultants
Newark, Delaware

2/89 to present

Owner: Management consultant, freelance writer.

Served as Editor of the Disabled American Veterans' Newsline for Delaware from February 1989 to September 1994.

Contributing Editor for Supervision magazine and author of bimonthly column entitled *Managing in the 90's* and *Managing in the New Millennium* 1989 - 2010.

Provide seminars/training to regional businesses in areas of general management, strategic management and human resource management. Clients have included MBNA, Columbia Gas, Wilmington Trust Bank, the Internal Revenue Service, W.L. Gore, Astra Zeneca, Claymont Community Center, and General Service Corporation.

Pace University
White Plains, New York

1/85 to 5/86

Graduate Assistant: Served as Graduate Student Council Coordinator and Assistant Editor of the newspaper for the Lubin Graduate School of Business.

American Pecco Corporation
Millwood, New York

3/83 to 1/85

Service Administrator: Performed office duties and accounting. Part-time while attending graduate school.

The Robert A. McNeil Corporation
San Mateo, California

9/81 to 3/83

Accounts Receivable Manager: Assignment upon returning to the parent company. Supervised department responsible for auditing and reporting rental income for national real estate syndicator. Researched and presented accounting reports to senior management.

Real Estate Accounting Manager: Special assignment to company subsidiary to assist President in the sale of the subsidiary. Designed and organized procedures for a transitional real estate accounting department. Served as accounting liaison to the President and the prospective buyers. Researched second mortgage industry procedures.

Cash Management Supervisor: Supervised banking and investment activities of department. Researched and implemented computerized investment portfolio system.

The Gap Stores, Inc.
San Bruno, California

3/76 to 12/80

Cash Audit Manager: Promoted and transferred to corporate headquarters in May 1978. Managed department of over thirty professionals and clericals responsible for auditing and reporting retail sales of \$350 million. Initiated and revised store systems and procedures. Assisted in writing corporate responses to audit reports. Served as Corporate Observer during distribution center inventories.

Store Manager: Assisted with internal operations and trained sales and management personnel. Responsible for operating store budget and all facets of human resources.

Awards:

Role Model Award: Goldey-Beacom College 1993 and 1994
Excellence in Teaching: Goldey-Beacom College 1992
Excellence in Teaching: Goldey-Beacom College 2004
Service Award: Goldey-Beacom College 2001

Ron Shane HR Lifetime Achievement Award: Delaware SHRM 2005

Areas of Interest:

General Management
Strategic Management
Creativity and Innovation
Communication
Human Resource Management

Professional Memberships:

American Management Association
Society for Human Resource Management
National Association of Female Executives
American Compensation Association
Association of Women in Higher Education
President Elect of Delaware State Council of Society for Human Resource Management

Community Activities:

Past member Mt. Aviat Academy Board of Trustees
Past chair of the Education Committee for Mt. Aviat Academy
Disabled American Veterans Auxiliary
Mentor for Junior Achievement's Young Women's Call to Action (2003 and 2004)
Advisory Board to Delaware Vo-Tech Schools
Industry Advisory Board to Advanced Staffing Training Institute

Partial List of Publications:

Books:

Teach Yourself Management Skills in 24 Hours
Human Resources Management: All the Information You Need to Manage Your Staff and Meet Your Business Objectives
The Employee Satisfaction Revolution: Understanding and Unleashing the Power of a Satisfied Workforce (2009)

Business Briefs/White Paper:

The New Workforce: Five Sweeping Trends That Will Shape Your Company's Future
American Management Association Business Brief (2007)

Partial List of Published Articles:

Group Management: The Group as a Change Agent
Motivation: What is Behind the Motivation of Employees?
Power and Conflict in the Workplace
What Kind of Leader Are You, Anyway?

The Marginal Employee
Rewards in the Organization
What is Your MQ: Managerial Quotient?
What Attributes Does the Better Manager Possess?
Miscommunication: Did I Hear You Correctly?
Building a Management Team: Part I (co-authored with Michael McCann)
Building a Management Team: Part II (co-authored with Michael McCann)
What To Do As Workers Age
When You Are Being Manipulated: How to Take Control
How To Ask For - and Get - What You Want
Are You On Your Way To Becoming Obsolete?
Women Still Facing Barriers in Business
Are you Getting the Most Out Of Your Employees?
The Manager of the 90's
How Can We Encourage Ethical Behavior?
Do You Lay the Groundwork for Excellence?
Are You Really a Motivator? The Tough Cases
Evaluating an Employee's Performance
Hiring the Disabled
Wanted: Humor in the Workplace
Are You Really Saying What You Mean?
The Impact of Women in the 90's
The Keys to Shaping Behavior
Gaining an Edge During Downsizing
How to Work Smarter - More Than Time Management
The Other Component of Communication - Listening
Hiring the Right Person for the Job
A Guide to More Effective Meetings
What a Changing Workforce Means to Us as Managers
Vision and the Change Process in the 90's
The Flip Side of Leadership - Cultivating Followers
What's All This Talk About "Soft" Management?
Stress Management
Are Your Human Resources Becoming Obsolete?
Understanding Cultural Diversity and its Benefits
What Is Corporate Culture and Why Is It Important?
Administering Discipline in the Organization
A New Breed of Manager
Strategic Management: A Process for Supervisors
Organization-wide
Group Membership
Motivating the Employee of the 90's
Navigating the Waters of Organizational Politics
Scientific Management's Impact on Modern Management Thought
Downsizing
Projecting a Positive Image

The Quality Journey: A Road Worth Traveling
Leaders vs. Managers
The Changing Workplace
Creating Flexibility in Today's Workplace
Time Management is Really Self-Management
Recruitment: A Partner in Creating a Competitive Advantage
Becoming More Effective - Lessons from Covey (Part I)
Becoming More Effective - Lessons from Covey (Part II)
Becoming More Effective - Lessons from Covey (Part III)
Becoming More Effective - Lessons from Covey (Part IV)
Barriers to the Implementation of Strategic Management
Scanning the Environment: Environmental Trends Affecting the Workplace
Managing the Telecommuting Employee
Managing Your Career
Communication in the 90s
The Role of Stereotypes in Expatriate Management
The Manager as Mentor and Protégé: Benefits to All
Managers: Out with the Old; In with the New - Skills That Is
Selecting the Right Person for the Job: No Small Challenge
Meeting the Challenge of Retaining Employees
A New Role for Managers: The Move from Directing to Coaching
The Evolving Leader of Today
Opening Up Management Communication: Learning from Open Book Management
An Examination of Sex Stereotypes: Masculinity and Femininity in Business School
Students

Papers Delivered:

Scientific Management's Impact on Modern Management Thought
Southeastern Chapter of the Institute of Management Sciences
Myrtle Beach, SC October 1994. .

Strategic Flexibility.
Institute for International Research.
Chicago, IL September 1995.

A Case Study of CASA (co-authored with Marios Katsioloudes).
ARNOVA.
Cincinnati, OH November, 1995.

Barriers to Implementing Strategic Management.
SE INFORMS.
Myrtle, Beach, SC October 1996.

The Role of Stereotypes in Expatriate Management
SE INFORMS
Myrtle Beach, SC October 1997

An Examination of Sex Stereotypes: Masculinity and Femininity in Business School Students
SE INFORMS
Myrtle Beach, SC October 1998

Professional Association Speeches Delivered:

Humor in the Workplace
Institute of Management Accountants
Wilmington, DE

The Role of Creativity and Innovation in the Work Place
American Marketing Association
Wilmington, DE

The Rhetoric of Contemporary Business Issues
IABC
Wilmington, DE

Business Ethics (Panel Discussion)
IABC
Wilmington, DE

Mentoring 90s Style
Zeneca
Wilmington, DE

Guest Lecturer:

Penn State, Great Valley, PA September 1992

Seminars Delivered:

The Managers' Role in the Organization
Power and Conflict in the Workplace
Communication: More than the words we speak

Intercultural Communication
Humor in the Workplace
The Role of Humor in Today's World
Projecting a Positive Image
Is the Elephant Dancing?
Creativity and Innovation in the Firm
Professional Polish: The Competitive Edge
Designing the Flexible Organization

References furnished upon request.

3. GEORGE L. DONKIN

Mr. Donkin is an economist and Vice President of J.W. Wilson & Associates, an economic consulting firm specializing in energy economics, public utility regulation, antitrust, business and property valuation, telecommunications and other topics in the field of economics. His offices are located at Rosslyn Plaza C, Suite 1104, 1601 North Kent Street, Arlington, VA 22209. The specific evidence that Mr. Donkin is sponsoring relates to the availability and cost of diesel fuel to the SARR at Texico, NM; West Vaughn, NM, and West El Paso, TX in Parts III-B-3-a and III-D-1-c of AEPCO's Rebuttal Evidence.

Since 1974, Mr. Donkin has worked as a consulting economist specializing in oil and natural gas economics, public utility regulation and antitrust economics, with a particular focus on economic and competitive issues in the petroleum and natural gas industries. Mr. Donkin has consulted for a wide range of clients including federal and state government agencies, state utility commissions, public and private gas and electric utilities, gas pipelines, oil and gas producers, gas marketers, industrial firms and non-profit organizations. Mr. Donkin has performed numerous economic analyses of the cost of constructing pipelines to transport natural gas and petroleum products, as well as the cost of delivering commodities via such pipelines.

Mr. Donkin has appeared as an expert witness on energy, regulatory and antitrust matters on over 150 occasions, in federal and state courts, before regulatory commissions and arbitration panels, and before the United States Congress. Mr. Donkin sponsored evidence related to the SARR's fuel cost at Vaughn, NM on behalf of AEPCO

in the prior rate case involving AEPCO and BNSF (STB Docket No. 42058), but that case was decided on procedural grounds and the STB did not address the parties' evidence concerning SARR fuel costs.

Mr. Donkin began his professional career in 1970 as a summer intern at the Federal Power Commission ("FPC") (the predecessor of the Federal Energy Regulatory Commission). After his time as an intern, he accepted a permanent position as an industry economist at the FPC in 1971.

Mr. Donkin holds a Bachelor of Arts degree and a Masters degree in economics from the University of Maryland. His major fields of study were industrial organization, antitrust economics, and institutional economics.

VERIFICATION

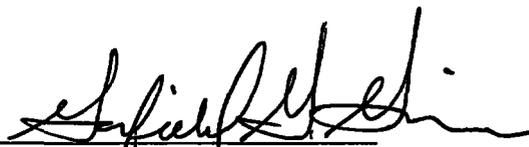
I, George L. Donkin, verify under penalty of perjury that I have read the portions of the Rebuttal Evidence of Arizona Electric Cooperative, Inc. in this proceeding that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.


George L. Donkin

Executed on: June 7, 2010

VERIFICATION

I, Garfield G. Grim, verify under penalty of perjury that I am the same Garfield G. Grim whose Statement of Qualifications appears in Part IV of the Narrative portion of AEPCO's Opening Evidence in this proceeding; that I am sponsoring the portions of AEPCO's Rebuttal Evidence that relate to the discussion of AEPCO's need for PRB and Signal Peak rates (Part III-A); that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

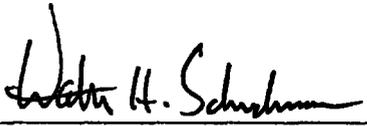


Garfield G. Grim

Executed on: June 18, 2010

VERIFICATION

I, Walter H. Schuchmann, verify under penalty of perjury that I am the same Walter H. Schuchmann whose Statement of Qualifications appears in Part IV of the Narrative portion of AEPCO's Opening Evidence in this proceeding; that I conducted the Rebuttal simulation of the SARR's operations using the RTC model described in Part III-C-2 and that I am co-sponsoring the portions of AEPCO's Rebuttal Evidence that relate to the configuration and capacity of the SARR system (Parts III-B and III-C); that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.


Walter H. Schuchmann

Executed on: June 16, 2010

VERIFICATION

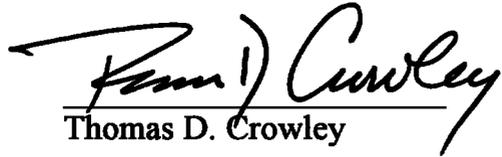
I, Paul H. Reistrup, verify under penalty of perjury that I am the same Paul H. Reistrup whose Statement of Qualifications appears in Part IV of the Narrative portion of AEPCO's Opening Evidence in this proceeding; that I am cosponsoring the portions of AEPCO's Rebuttal Evidence that relate to the SARR system, operating plan and operating expenses (Parts III-B, III-C, and III-D) except for equipment lease costs, fuel costs, information technology expenses, train crew counts, and compensation for Operating and General & Administrative personnel presented in Part III-D; that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.


Paul H. Reistrup

Executed on: June 14, 2010

VERIFICATION

I, Thomas D. Crowley, verify under penalty of perjury that I am the same Thomas D. Crowley whose Statement of Qualifications appears in Part IV of the Narrative portion of AEPCO's Opening Evidence in this proceeding; that I am sponsoring the portions of AEPCO's Rebuttal Evidence in this proceeding that relate to quantitative market dominance (Part II-A-1 and 2), the SARR traffic group, including volumes and revenues (Part III-A-1, 2, and 3), identification of the SARR peak traffic period and peak period train counts and development of the peak year traffic density by line segment and identification of movements in railroad-owned cars (Part III-C-2), non-road property investment (Part III-E), the discounted cash flow analysis (Part III-G), and the results of the SAC analysis (Part III-H); that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.


Thomas D. Crowley

Executed on: June 28, 2010

VERIFICATION

I, Michael E. Lillis, verify under penalty of perjury that I am the same Michael E. Lillis whose Statement of Qualifications appears in Part IV of the Narrative portion of AEPCO's Opening Evidence in this proceeding; that, together with Mr. Crowley, I am co-sponsoring the portion of AEPCO's Rebuttal Evidence that relates to the development of the ANR's route miles as set forth in Part III-B-1; that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



Michael E. Lillis

Executed on: June 28, 2010

VERIFICATION

I, Robert D. Mulholland, verify under penalty of perjury that I am the same Robert D. Mulholland whose Statement of Qualifications appears in Part IV of the Narrative portion of AEPCO's Opening Evidence in this proceeding; that, together with Mr. Crowley, I am co-sponsoring Parts III-A-2 and 3 of AEPCO's Rebuttal Evidence with respect to general freight and intermodal traffic; that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.


Robert D. Mulholland

Executed on: June 28, 2010

VERIFICATION

I, Philip H. Burris, verify under penalty of perjury that I am the same Philip H. Burris whose Statement of Qualifications appears in Part IV of the Narrative portion of AEPCO's Opening Evidence in this proceeding; that I am sponsoring the portions of AEPCO's Rebuttal Evidence relating to the development of SARR operating statistics based on the output of the RTC model and the operating plan, including the development of train crew personnel requirements (Part III-D), the development of equipment lease, maintenance and servicing costs (Parts III-D-1 and 2), operating unit costs (Parts III-D-3 and III-D-5 through 9), compensation levels for all the SARR transportation and operating (including engineering) employees, non-operating (General and Administrative) personnel, training and recruiting costs (Parts III-D-2, III-D-3-d, and III-D-4), and the application of the SARR operating unit costs to the operating statistics, thus yielding the SARR operating expenses in the base year and the development of the land value index for use in the DCF model (Part III-G-2); that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

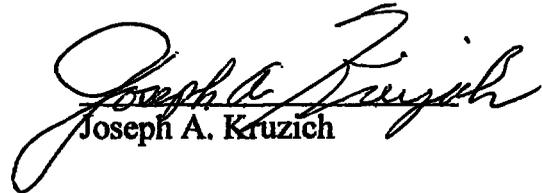


Philip H. Burris

Executed on: June 28, 2010

VERIFICATION

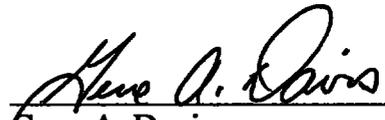
I, Joseph A. Kruzich, verify under penalty of perjury that I am the same Joseph A. Kruzich whose Statement of Qualifications appears in Part IV of the Narrative portion of AEPCO's Opening Evidence in this proceeding; that I am sponsoring the portions of AEPCO's Rebuttal Evidence related to the SARR's information technology personnel and capital (hardware) requirements and other expenses for the SARR (Part III-D-3-c); that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.


Joseph A. Kruzich

Executed on: June 16, 2010

VERIFICATION

I, Gene A. Davis, verify under penalty of perjury that I am the same Gene A. Davis whose Statement of Qualifications appears in Part IV of the Narrative portion of AEPCO's Opening Evidence in this proceeding; that I am sponsoring the portions of AEPCO's Rebuttal Evidence in Part III-D-4 related to the SARR's maintenance-of-way ("MOW") plan and annual MOW operating expenses, and co-sponsoring with Messrs. Reistrup and Schuchmann the portion of AEPCO's Rebuttal Evidence in Part III-C-2-c-xi related to random outages on the SARR; that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.


Gene A. Davis

Executed on: June 14, 2010

VERIFICATION

I, Willard R. Whitbred, verify under penalty of perjury that I am the same Willard R. Whitbred whose Statement of Qualifications appears in Part IV of the Narrative portion of AEPCO's Opening Evidence in this proceeding; that I am sponsoring the portions of AEPCO's Rebuttal Evidence in Part III-F relating to the SARR's construction costs, including the costs for the SARR's signal and communications system and the ANR's track miles as set forth in part III-B and know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



Willard R. Whitbred

Executed on: June 14, 2010

VERIFICATION

I, Timothy Wells, verify under penalty of perjury that I am the same Timothy Wells whose Statement of Qualifications appears in Part IV of the Narrative portion of AEPCO's Opening Evidence in this proceeding; that I assisted Mr. Whitbred in developing the SARR's construction plan and costs as described in Part III-F of AEPCO's Rebuttal Evidence; that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



Timothy Wells

Executed on: June 14, 2010

VERIFICATION

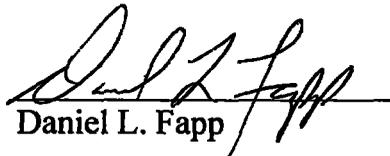
I, Charles A. Stedman, verify under penalty of perjury that I am the same Charles A. Stedman whose Statement of Qualifications appears in Part IV of the Narrative portion of AEPCO's Opening Evidence in this proceeding; that I am co-sponsoring the portions of AEPCO's Rebuttal Evidence that relate to the roadbed preparation/earthworks component of the road property investment cost of the SARR, exclusive of culverts, roadbed specifications and yard drainage (Part III-F-2); that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.


Charles A. Stedman

Executed on: June 28, 2010

VERIFICATION

I, Daniel L. Fapp, verify under penalty of perjury that I am the same Daniel L. Fapp whose Statement of Qualifications appears in Part IV of the Narrative portion of AEPCO's Opening Evidence in this proceeding; that together with Mr. Crowley, I am co-sponsoring Parts III-A-2 and 3 of AEPCO's Rebuttal Evidence with respect to coal traffic, the discounted cash-flow analysis (Part III-G), and the results of the SAC analysis (Part III-H); that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.


Daniel L. Fapp

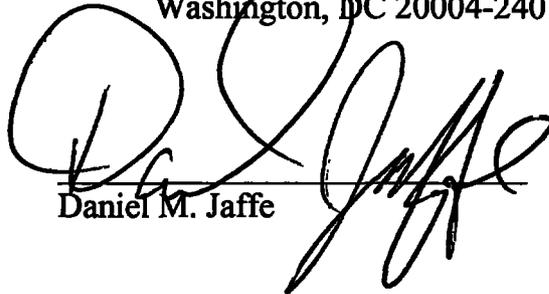
Executed on: June 28, 2010

CERTIFICATE OF SERVICE

I hereby certify that on this 1st day of July, 2010, I caused copies of AEPCO's Rebuttal Evidence, including the Narrative, Exhibits and electronic workpapers, to be served by hand-delivery on counsel for Defendants Union Pacific Railroad Company and BNSF Railway Company, as follows:

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