STB DOCKET NO. 42054

PPL MONTANA, LLC
v.
THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY

Decided August 19, 2002

The Board finds that the defendant railroad has market dominance over the transportation at issue but that the complainant has failed to establish that the challenged rates are unreasonably high. Accordingly, the complaint is dismissed.

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ACRONYMS USED

AFE	authority for expenditure
AREMA	American Railway Engineering and Maintenance of Way Association
BNSF	Burlington Northern and Santa Fe Railway Company
CMP	constrained market pricing
DCF	discounted cash flow

Exh.	exhibit
FRA	Federal Railroad Administration
ICC	Interstate Commerce Commission
MOW	maintenance-of-way
Open.	opening evidence
OTM	other track material
PPL	PPL Montana, LLC
PRB	Powder River Basin
psi	pounds per square inch
RCAF	Rail Cost Adjustment Factor
Reb.	rebuttal evidence
ROW	right-of-way
SAC	stand-alone cost
SARR	stand-alone railroad
SSP	structural steel pipe
TPG	through plate girder
UP	Union Pacific Railroad Company
V.S.	verified statement
WMCRR	Wyoming Montana Coal Railroad
WP	workpaper
WRPI	Western Railroad Properties, Inc.

BY THE BOARD:

By complaint filed July 6, 2000, PPL Montana, LLC (PPL) challenges the reasonableness of four common carriage rates charged by the Burlington Northern and Santa Fe Railway Company (BNSF) for trainload movements of coal from 17 mines[1] located in the Powder River Basin (PRB) to PPL's Corette electricity generating facility at Billings, MT.[2]

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[1] The 17 mines are the Belle Ayr, Black Thunder, Buckskin, Caballo, Caballo Rojo, Clovis Point, Coal Creek, Cordero, Dry Fork, Eagle Butte, Fort Union, Jacobs Ranch, North Antelope, and Rochelle, Wyoming mines and the East Decker, West Decker, and Spring Creek, Montana mines.

[2] The challenged rates are: $5.33 per ton from the East Decker, West Decker, and Spring Creek mines in the southern Montana PRB; $6.64 per ton from the Buckskin, Clovis Point, Dry Fork, Eagle Butte, and Fort Union mines in the northern Wyoming PRB; $7.00 per ton from the Belle Ayr, Caballo, Caballo Rojo, Coal Creek, and Cordero mines in the southern Wyoming PRB; and $7.74 per ton from the Black Thunder, (continued...)

PPL began using these common carrier rates on July 1, 2000. Prior to that date, PPL's traffic moved under a now-expired rail transportation contract pursuant to 49 U.S.C. 10709. When contract renegotiations were unsuccessful, PPL requested, and BNSF established under 49 U.S.C. 11101, common carriage rates and service terms for transportation from the coal mines to the Corette generating station.

I. MARKET DOMINANCE

We may consider the reasonableness of a challenged rail rate only if we find that the carrier has market dominance over the traffic involved. 49 U.S.C. 10701(d)(1), 10707(b), (c). Market dominance is "an absence of effective competition from other carriers or modes of transportation for the transportation to which a rate applies." 49 U.S.C. 10707(a).[3]

In evaluating whether BNSF has market dominance, we examine whether PPL has inter- or intramodal transportation alternatives that provide effective competition for the BNSF service.[4] PPL asserts that it has no effective inter- or intramodal transportation alternatives, and BNSF has not challenged this assertion. Accordingly, we find that BNSF has market dominance over the traffic at issue.

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[2](...continued)
Jacobs Ranch, North Antelope and Rochelle mines also in the southern Wyoming PRB.

[3] The statute precludes a finding of market dominance where the carrier demonstrates that the revenues produced by the movements at issue are less than 180% of the variable costs to the carrier of providing the service. 49 U.S.C. 10707(d)(1)(A). Here, however, BNSF concedes that, for those mines from which PPL's traffic has actually moved, the challenged rates exceed 180% of the variable cost of service. BNSF Reb. V.S. Kent/Fisher Exh. CK/BF-1 at 1-8.

[4] Under our revised market dominance procedures, we no longer consider evidence of product and geographic competition in determining whether a railroad has market dominance. *Market Dominance Determinations*, 3 S.T.B. 937 (1998), *pets. for reconsideration & clarification denied* 4 S.T.B. 269 (1999), *remanded for further consideration sub nom. Association of Am. Railroads v. STB*, 237 F.3d 676 (D.C. Cir. 2001), *reaffirmed on remand*, 5 S.T.B. 492 (2001), *pet. for judicial review pending sub nom. Association of Am. Railroads v. STB*, No. 01-1213 (D.C. Cir. filed May 15, 2001).

II. RATE REASONABLENESS STANDARDS

A. Constrained Market Pricing

Our general standards for judging the reasonableness of rail freight rates are set forth in *Coal Rate Guidelines, Nationwide*, 1 I.C.C.2d 520 (1985) (*Guidelines*), *aff'd sub nom. Consolidated Rail Corp. v. United States*, 812 F.2d 1444 (3d Cir. 1987). Those guidelines contain a set of pricing principles known as "constrained market pricing" (CMP).[5] CMP imposes three main constraints[6] on the extent to which a railroad may charge differentially higher rates on captive traffic: revenue adequacy,[7] management efficiency,[8] and stand-alone cost (SAC).[9] Although these three constraints are described separately, "[t]hey represent different means of approaching the same basic issue, i.e., the extent of unattributable costs to be covered through differential pricing and the

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[5] The objectives of CMP can be simply stated. A shipper should not be required to pay more than is necessary for the carrier involved to earn adequate revenues. Nor should it pay more than is necessary for efficient service. A shipper should not bear the cost of any facilities or services from which it derives no benefit. Responsibility for payment for facilities or services that are shared by other shippers should be apportioned according to the demand elasticities of the various shippers using them. *Guidelines*, 1 I.C.C.2d at 523-24.

[6] A fourth constraint—phasing—can be used to limit the introduction of otherwise-permissible rate increases if they would lead to undue inflation and dislocation of important economic resources. *Id*. at 546-47.

[7] The revenue adequacy constraint ensures that a captive shipper will "not be required to continue to pay differentially higher rates than other shippers when some or all of that differential is no longer necessary to ensure a financially sound carrier capable of meeting its current and future service needs." *Id*. at 535-36.

[8] The management efficiency constraint protects captive shippers from paying for avoidable inefficiencies that are shown to increase a railroad's revenue need to a point where the shipper's rate is affected. The management efficiency constraint focuses on both short-run and long-run efficiency. *Id.* at 537-42.

[9] The SAC constraint measures efficiency, ensures that cross-subsidies do not exist, and protects shippers from having to pay more than the revenue needed to replicate rail service in the absence of barriers to entry and exit. *Id*. at 542-46.

portion that can be charged to the shipper involved." *Guidelines*, 1 I.C.C.2d at 547.

The revenue adequacy and management efficiency constraints employ a "top-down" approach, examining the incumbent carrier's existing operations. If the carrier is revenue adequate (earning sufficient funds to cover its costs and provide a fair return on its investment), or would be revenue adequate after eliminating unnecessary costs from specifically identified inefficiencies in its operations, the complaining shipper may be entitled to rate relief.[10] The SAC constraint uses a "bottom-up" approach, calculating the revenue requirements that a hypothetical new, optimally efficient carrier would need to meet in order to provide rail service to a selected group of shippers including the complaining shipper. PPL has chosen to proceed here using a SAC analysis.

B. *SAC Test*

The SAC test is intended to ensure that a shipper does not bear the costs of any facilities from which it derives no benefit and that it does not otherwise cross-subsidize other traffic. *Guidelines*, 1 I.C.C.2d at 528. Consistent with this principle, a SAC analysis seeks to determine the lowest cost at which a hypothetical, optimally efficient carrier could provide service to the complaining shipper and selected other traffic (the traffic group) that would benefit from sharing the joint and common costs associated with the provision of the transportation service. *Id*.

A SAC presentation hypothesizes a stand-alone railroad (SARR) that could serve the traffic group if the rail industry were free of barriers to entry or exit. (It is such barriers that can make it possible for railroads to engage in monopoly pricing absent regulatory constraint.) Under the SAC constraint, the challenged rate cannot be higher than what the SARR would need to charge to serve the complainant and other selected traffic while fully covering all of its costs, including a reasonable return.

A complaining shipper may design a SARR specifically tailored to serve a selected traffic group, using the optimum physical plant or rail system needed for that traffic. Grouping permits the complaining shipper to "take full advantage of any economies of scope, scale and density" (*Guidelines*, 1 I.C.C.2d at 532) associated with shared facilities by spreading the joint and common costs among a larger traffic base. However, the traffic group that is selected is open to challenge (*id*. at 544):

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[10] *See, e.g., CF Industries, Inc. v. Koch Pipeline Company, L.P.*,4 S.T.B. 637 (2000), *aff'd sub nom. CF Industries, Inc v. STB*, 255 F.3d 816 (D.C. Cir. 2001).

The potential traffic draw and attendant costs and revenues that the hypothetical stand-alone provider could expect are open to scrutiny in individual cases. The proponent of a particular stand-alone system must identify, and be prepared to defend, the assumptions and selections it has made.

Based on the traffic group that is selected, the services to be provided to that traffic group, and the terrain to be traversed, a detailed operating plan is developed to determine the physical plant that would be needed for the SARR.[11] The operating plan is a factor in determining both the capital investment that would be needed and the annual operating costs that would be incurred by the SARR. It is assumed that investments normally would be made prior to the start of service (here July 2000) and that recovery of the investments would occur over the economic life of the assets.[12] We use a computerized discounted cash flow (DCF) model to simulate how the SARR would likely recover its capital investments, taking into account variables such as inflation, Federal and state tax liabilities, and a reasonable rate of return. The SARR's annual capital costs are combined with its annual operating costs to calculate its total annual revenue requirement.

We then compare the costs of building and operating the SARR to the revenues that the SARR could reasonably expect from the traffic group that it is designed to serve. Absent better evidence, we presume that the current revenue contribution from non-issue traffic (traffic included in a SARR traffic group other than the traffic to which the rates at issue apply) would be the revenues produced by the current rates for that traffic. *Guidelines*, 1 I.C.C.2d at 544. Forecasts of the likely future tonnage and rate levels for the traffic group are used to determine the future revenue contributions from that traffic.

By comparing the total costs of the SARR to the total revenues that would be earned over the analysis period, we determine whether there would be over- or under-recovery of costs. Because the analysis period is lengthy, we use a present value analysis that takes into account the time

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[11] For example, roadway must be sufficient to permit the attainment of the speeds and traffic density that are presumed. The length and frequency of passing sidings must be able to accommodate the specific train lengths and frequency of train meets that are assumed, and traffic control devices must be designed to allow trains traveling in opposite directions on the same track to be handled safely and efficiently based on the traffic density assumed in the operating plan.

[12] Our SAC analyses are limited to finite periods of time (here 20 years), but parties provide for sufficient investment to enable the SARR to operate into the indefinite future.

value of money, netting annual over-recoveries and under-recoveries as of a common point in time. If the sum of the present values of over-recoveries exceeds the sum of the under-recoveries, we conclude that the existing rate level is too high. *See, e.g.*, *West Texas Util. v. Burlington N.R.R.*, 1 S.T.B. 638, 677 (1996) (*West Texas*). Conversely, if the present value analysis produces a net loss, the challenged rate is deemed reasonable. *See, e.g.*, *McCarty Farms, Inc. v. Burlington N., Inc.*, 2 S.T.B. 460, 485-86 (1997) (*McCarty*).

III. STAND-ALONE COST ANALYSIS

The SARR that PPL hypothesized in this case is the Wyoming Montana Coal Railroad (WMCRR), depicted in the map contained in Appendix A. The WMCRR would originate coal from the PRB mines identified in the complaint. For purposes of our discussion here, the WMCRR can be viewed in two distinct parts. The "north-south" part includes line segments from Converse to Donkey Creek, WY (serving the southern Wyoming PRB origins); from Donkey Creek to Campbell, WY; and from Campbell to the northern Wyoming PRB mines. The "western" part includes line segments from Campbell to Dutch, WY; from Dutch north to reach the southern Montana PRB mines; from Dutch west to Huntley, MT; and from Huntley (over a line of the Montana Rail Link via trackage rights) to Laurel, MT.

BNSF argues that we must reject all of PPL's SAC evidence because that evidence relies on excess revenue contributions from cross-over traffic[13] that would move only over the north-south part of the WMCRR (and not the western part) to cross-subsidize the traffic that would move over the western part (which includes PPL's traffic). BNSF has compared the costs associated with the north-south part with the revenue contributions that PPL assigned to the traffic using only that part[14] and

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[13] Cross-over traffic consists of traffic currently handled by BNSF that would (hypothetically) move in interline BNSF/WMCRR service. All of the WMCRR traffic, with the exception of the PPL traffic, would be cross-over traffic.

[14] We have not adopted a single preferred procedure for developing revenue divisions on cross-over traffic. PPL allocated revenues for cross-over traffic between WMCRR and the residual BNSF using a modified mileage proration method. Under this procedure, each carrier was assigned one mileage block for each 100-mile portion of a movement that it would handle, and an additional mileage block for any (remaining) (continued...)

calculated that those revenues would exceed the costs for that part of the WMCRR by approximately $163 million in the base year (2000) and by similarly high differentials in each succeeding year of the 20-year SAC analysis period. BNSF contends that traffic on the north-south part of the WMCRR should not pay for facilities and services from which it would derive no benefit. BNSF Reply Arg. of Counsel at 31; *see also* BNSF Reply V.S. Kent/Klick at 15.

PPL responds that BNSF simply seeks to have revenues from the cross-over traffic assigned to cross-subsidize the BNSF residual system instead of the issue traffic. PPL maintains that while, as a complaining captive shipper, it is not required to cross-subsidize facilities from which it receives no benefit, there is no comparable prohibition against other (non-issue) traffic subsidizing its traffic. *See* Reply V.S. Borts submitted August 24, 2001 (in response to a joint motion of the BNSF and Union Pacific Railroad Company (UP) to consolidate this proceeding with other pending SAC cases) at 5; PPL Reb. V.S. Borts at 6.

PPL's contention that non-issue traffic may be used to cross-subsidize the complaining shipper's rate is inconsistent with CMP principles. PPL does not adequately distinguish between cost sharing (the grouping of traffic to share the joint and common, i.e., unattributable, costs of

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[14](...continued)
portion of less than 100 miles that it would handle. In addition, a full mileage block was assigned to the carrier that would originate the movement, and a full mileage block to the carrier that would terminate the movement. The total number of mileage blocks for each movement was computed, and the revenues for the movement apportioned between the carriers based on the proportion of the mileage blocks assigned to each carrier.

BNSF points out that 76% of the SARR's traffic would move no more than 26 miles on the WMCRR before being (hypothetically) interchanged with the residual BNSF at Converse or Donkey Creek. Yet, under PPL's modified mileage prorate method, the WMCRR would be credited with two full mileage blocks—one block for originating the traffic and one block for moving it over a less-than-100-mile segment. The resulting revenues assigned to the WMCRR on this cross-over traffic averaged 82.3 mills per ton-mile, according to BNSF nine times greater than the mills per ton-mile assigned to the residual BNSF for its portion of these cross-over movements. BNSF challenges the reasonableness of using a modified mileage proration method in this case, given the resulting disparity in mills per ton-mile.

providing rail service), which *Guidelines* permits,[15] and cross-subsidization (the recovery of a shipper's attributable costs from other shippers), which *Guidelines* proscribes.[16] Thus, as we have previously observed:

> [A] basic principle of the SAC test is that traffic not be subsidized by other traffic. Indeed, the purpose of the SAC test is to remove such cross-subsidies, while allowing traffic to enjoy the benefits of cost-sharing for those railroad services and facilities that they have in common. Thus, revenues from non-issue traffic should not be relied upon to pay for portions of a SAC system over which that non-issue traffic would not move.

Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company, STB Docket No. 42058 (STB served December 31, 2001) at 6 (citation omitted); *see also PPL Montana, LLC v. Burlington Northern & Santa Fe Railway Co.*, 5 S.T.B. 1105, at 1109-11. If cross-subsidies from traffic not using the facilities needed by PPL's traffic were sanctioned, the SAC test could undermine, rather than advance, the principles of CMP.[17] Thus, both cross-subsidization by and cross-subsidization of the captive issue traffic are proscribed by *Guidelines*.

As noted, a cross-subsidy arises when traffic would be required to pay for facilities that it does not use or when it would be required to pay a

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[15] *Guidelines*, 1 I.C.C.2d at 534 (CMP defines the "unattributable costs to which the shipper must contribute and focuse[s] on the traffic which can reasonably be expected to pay those costs.").

[16] *Id*. at 540 (differential pricing is appropriate only to recover unattributable costs).

[17] PPL argues that use of our percentage reduction method for prescribing rates eliminates the possibility of a cross subsidy:

> Under the STB's percentage reduction method, all traffic on the stand-alone system will receive an equal [percentage] reduction in the rates if stand-alone costs are less than the revenues paid by the stand-alone participants* * * * So long as the percentage reduction method is used, there is no impermissible cross subsidy.

PPL Reb. V.S. Crowley at 34. This is simply not so. Reducing rates for traffic whose revenues do not cover directly attributable costs, and thus which do not make any positive contribution to any other shipper's joint and common costs, would not eliminate a cross-subsidy but only exacerbate it.

portion of costs that are attributable to other traffic.[18] In examining whether the hypothesized WMCRR incorporates a proscribed cross-subsidy, the appropriate inquiry is not, as BNSF suggests, whether a particular subset of traffic is generating revenues in excess of the SAC associated with serving that subset of traffic,[19] but whether there is a readily identifiable subset of traffic that would not cover the collective attributable costs associated with serving the traffic.[20]

Accordingly, as a threshold matter, we examine whether the western leg of the WMCRR would earn sufficient revenues to cover its attributable costs or whether it would require a cross-subsidy in order to be viable over the 20-year analysis period. We find that, even accepting the majority of the evidence submitted by PPL regarding the operations and construction of the western segment of the WMCRR (the line segments west of Campbell, WY) would not be self-sustaining.

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[18] PPL's economic witness acknowledges that "[t]raffic that is covering its attributable cost is not being subsidized." PPL Reb. V.S. Borts at 10. *See also* V.S. Borts submitted August 24, 2001 at 3, 6 ("A shipper is said to be receiving a cross-subsidy when the freight rate is less than the 'attributable' cost that its traffic imposes on the railroad.")

[19] BNSF's proposed standard for limiting the revenue contribution from cross-over traffic in excess of SAC would make it unlikely that a shipper could prevail on a complaint in which the SAC analysis relied extensively on cross-over traffic. Under BNSF's approach, revenues from cross-over traffic could never exceed SAC but, in order to show that a rate is unreasonable, a shipper must demonstrate that revenues from all movements in its traffic group in fact exceed SAC. While it is unnecessary in this proceeding to reach the issue of the reasonableness of the revenue divisions proposed by PPL, we reject BNSF's revenue restriction on cross-over traffic as it could very well eliminate the usefulness of including cross-over traffic in a SAC analysis.

[20] BNSF also contends that PPL's SAC presentation should be rejected because PPL has not shown that the revenues allocated to the residual BNSF for all cross-over traffic movements are sufficient to cover the residual BNSF's stand-alone costs associated with those movements. We do not agree that such a showing is necessary. A residual carrier would agree to move the traffic so long as the revenue division would allow it to cover its attributable costs associated with handling the traffic. *See Guidelines*, 1 I.C.C.2d at 540; *Rate Guidelines—Non-Coal Proceedings*, 1 S.T.B. 1004, 1016 (1996).

IV. CROSS-SUBSIDY ANALYSIS OF WESTERN PART OF WMCRR

To determine whether the western part of the WMCRR could be self-sustaining or would instead depend upon improper cross-subsidization by the north-south part, we have conducted an abbreviated analysis confined to the western part, based upon the following assumptions and findings.

A. *Configuration*

Although the parties disagree on aspects of both the configuration and operating plan of the WMCRR, for administrative convenience, our cross-subsidy analysis here is based upon PPL's configuration of the western part of the WMCRR and PPL's operating plan for the lines west of Campbell.

B. *Traffic Group (Tonnages and Revenues)*

There is significant disagreement between the parties as to the reasonableness of PPL's base-year tonnage and its projected changes in rates and tonnage over time, and these disagreements led to widely divergent projections of revenues. And, as noted above, there is also significant disagreement on this record as to how to apportion revenues to the WMCRR from cross-over traffic. However, for the limited purpose of addressing the threshold cross-subsidy issue, we use all of PPL's figures and assumptions with respect to tonnages and revenues. Moreover, while some of the traffic using the WMCRR's western part also moves on the WMCRR east of Campbell, for purposes of this analysis we credit all of the revenues from those movements to the WMCRR's western part.

C. *Operating Expenses*

In its cross-subsidy presentation, BNSF allocated the operating expenses PPL developed for the entire WMCRR between the north-south and western parts using PPL's computer programs. As it is the only evidence of record on cost allocations between the two parts of the WMCRR system, we use that evidence to determine the portion of PPL's operating costs for the WMCRR to be attributed to the western part. We note that this allocation understates the operating cost for the lines west of Campbell. Under that allocation, no expenses for operating managers, general administrative staff or loss and damage are assigned to the western

part, nor are any maintenance-of-way (MOW) expenses assigned to the western part. With that allocation, the base year 2000 operating expenses for lines west of Campbell would be approximately $22 million.

The parties disagree on how to adjust the base year operating expenses in the succeeding years of the 20-year SAC period to reflect inflation. Both would apply a version of the Rail Cost Adjustment Factor (RCAF), an index that we issue quarterly measuring changes in Class I railroad costs. *See* 49 U.S.C. 10708. BNSF would have us use the version of the index that is unadjusted for changes in railroad productivity (RCAF-U), whereas PPL would have us use the version that is adjusted for changes in railroad productivity (RCAF-A). Whichever version we use, however, would not affect the outcome of our assessment of the viability of the western portion of the WMCRR by itself. Therefore, we use the RCAF-A (the index most favorable to PPL's case) to adjust operating expenses over the 20-year analysis period.

D. *Road Property Investment*

Our use of PPL's operating plan and its configuration of the lines west of Campbell generally determines the assets needed west of Campbell. There are some remaining disagreements between the parties, however, regarding the cost of certain of the assets and the need for certain investment on the western part. Our resolution of those issues and our restatement of the costs of constructing those lines and facilities are contained in Appendix B. Based on our restatement of the cost of procuring and installing those assets, we find the investment required for lines west of Campbell to be approximately $520 million.

E. *DCF Results*

To determine whether the revenues generated by traffic using the western part of the WMCRR would cover the costs directly attributable to that traffic, we have applied the 20-year DCF model submitted by PPL,[21]

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[21] PPL submitted two alternative DCF models reflecting differing methods for distributing the initial capital investment over the projected life of the SARR—one distributes that investment on a tonnage basis and the other on a level annual basis. Consistent with our recent precedent, we use the latter approach here. *See FMC Wyoming Corp. & FMC Corp. v. Union Pacific RR Co.*, 4 S.T.B. 699 (2000) (*FMC*) at 740-741; *Wisconsin Power & Light Co. v. Union Pacific Railroad Company*, 5 S.T.B. 955 (continued...)

using the procedures discussed above for determining each year's revenue and cost figures. The results of this DCF analysis, in Table 1, show that the revenues that would be generated by all the movements using the WMCRR's western part would be less than the directly attributable cost of the western part of the WMCRR in each year from 2000 through 2008, and moreover, cumulatively for the entire 20-year SAC analysis period. Indeed, the present value of the cost of providing service over the western part of the WMCRR leg over the 20-year period would exceed the revenues that would be derived from the traffic moving west of Campbell over that period by over $9.26 million. Thus, we conclude that PPL's SAC evidence relies upon an improper cross-subsidization of the traffic on the western part of the WMCRR, which includes PPL's traffic.

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[21](...continued)
(2001) (*WPL*) at 981-982. As explained in those decisions, where, as here, traffic is projected to increase over the 20-year SAC analysis period, it is preferable to allocate the capital carrying charges on a level annual basis to reflect the declining capital investment needed per unit of output as the rail system is used more intensively. This pattern of capital recovery reflects the production economies that characterize the economic structure of the rail industry.

Table 1
WMCRR-WESTERN SEGMENT CASH FLOW
(millions of current dollars)

Year	Capital Costs & Taxes	Operating Expenses	Total Annual Expenses	Total Annual Revenues	Over/ (Under) Payments	Present Value Over/(Under) Payments
2000	$33.39	$11.02	$44.40	$43.11	($1.29)	($1.31)
2001	$67.27	$23.95	$91.22	$84.08	($7.14)	($6.44)
2002	$67.95	$24.55	$92.50	$88.05	($4.45)	($3.62)
2003	$68.63	$25.61	$94.24	$87.96	($6.28)	($4.61)
2004	$69.32	$26.31	$95.63	$90.21	($5.42)	($3.59)
2005	$70.02	$27.04	$97.06	$92.52	($4.54)	($2.71)
2006	$70.72	$27.61	$98.33	$94.78	($3.54)	($1.91)
2007	$71.43	$28.03	$99.46	$97.11	($2.35)	($1.14)
2008	$72.15	$28.41	$100.56	$99.50	($1.06)	($0.46)
2009	$72.88	$28.79	$101.67	$102.02	$0.35	$0.14
2010	$73.62	$29.18	$102.80	$104.67	$1.88	$0.67
2011	$74.36	$29.52	$103.88	$107.17	$3.29	$1.06
2012	$75.11	$29.86	$104.97	$109.72	$4.74	$1.37
2013	$75.87	$30.20	$106.08	$112.33	$6.25	$1.63
2014	$76.64	$30.54	$107.18	$114.95	$7.76	$1.83
2015	$77.42	$30.88	$108.30	$117.63	$9.32	$1.98
2016	$78.21	$31.24	$109.44	$117.50	$8.05	$1.54
2017	$79.00	$31.59	$110.60	$120.27	$9.67	$1.67
2018	$79.81	$31.95	$111.76	$123.11	$11.35	$1.77
2019	$80.62	$32.32	$112.94	$126.02	$13.08	$1.84
2020	$40.62	$16.31	$56.92	$64.50	$7.58	$1.01
					Cumulative Present Value	**($9.26)**

V. CONCLUSION

Based on this cross-subsidy analysis, we find that PPL's SAC presentation is fatally deficient even using, for the most part, PPL's very favorable assumptions regarding the revenues that could be earned and the understated cost of building and operating the western portion of the WMCRR. Thus, PPL has failed to show that the rates charged by BNSF for transporting coal traffic to the Corette power plant are unreasonably high.

This decision will not significantly affect either the quality of the human environment or the conservation of energy resources.

It is ordered:

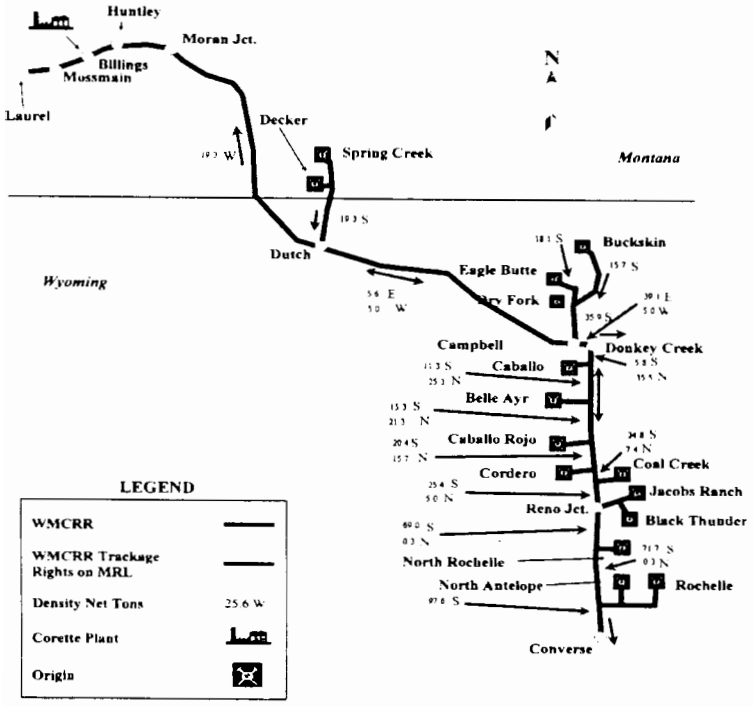
1. The complaint is dismissed and this proceeding is discontinued.

2. This decision is effective September 19, 2002.

By the Board, Chairman Morgan and Vice Chairman Burkes.

APPENDIX A—WMCRR CONFIGURATION

Schematic of Wyoming Montana Coal Railroad
Annual Net Tonnage 2000 (millions)



APPENDIX B—ROAD PROPERTY INVESTMENT WEST OF CAMPBELL, WY

For administrative convenience, we have relied on PPL's configuration and operating plan for the lines west of Campbell in estimating the amount of investment that would be required for purposes of determining whether PPL's SAC presentation relies upon an inappropriate cross-subsidy. We need not resolve the disputes between the parties as to the WMCRR's configuration and operating plan because, regardless of whose evidence we use, the outcome of our analysis would be unaffected—the cost of constructing and operating the western part of the WMCRR could not sustain itself without being cross-subsidized by traffic not traversing that portion of the system.[22]

The analysis that follows restates the investment required on the lines west from Campbell, WY, to Huntley, MT (including the Decker branch line from Dutch, WY to Spring Creek, MT), only to the extent required to resolve disputes between the parties regarding the type and cost of the assets that would be needed for construction and how the construction would reasonably be accomplished.[23] Our restated investment for the lines west of Campbell is approximately $520 million.

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[22] Use of PPL's configuration west of Campbell and its operating plan minimizes the amount of investment that would be required for these lines. To the extent that a full analysis of the parties' arguments regarding the reasonableness of the WMCRR's configuration and operating plan would necessitate additional investment on the lines west of Campbell, an even greater cross-subsidy from traffic utilizing only the north-south part of the WMCRR would be required in order for the WMCRR to cover all its costs.

[23] Those investment categories where the parties agreed on the unit costs and quantities of assets needed are not specifically discussed.

Table B-1

Investment Costs for Western Part of WMCRR ($000's)	
A. Land	$ 7,368
B. Roadbed Preparation	139,541
C. Track Construction	185,528
D. Bridges	41,900
E. Signals & Communications	40,244
F. Buildings and Facilities	1,336
G. Public Improvements	5,752
H. Mobilization	9,202
I. Engineering	43,593
J. Contingency	45,789
TOTAL	**$520,253**

A. Land

The amount of land that the WMCRR would need depends on the length of the railroad, the width of the right-of-way (ROW), the size of yards, and the acreage needed for buildings and other facilities. The parties' land investment differs by approximately $1.5 million, largely due to differences in the appraised value of land needed for the WMCRR. Here, we use PPL's land investment figures because the BNSF spreadsheet used to calculate land investment is non-functional.[24] The

[24] In *Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases*, 5 S.T.B. 441, at 444-45, we put parties on notice that spreadsheets which do not function (will not recalculate) and do not permit a ready determination of how costs are derived fail to meet our evidentiary requirements and that a party submitting such a non-functional spreadsheet runs the risk of having its evidence not considered to be (continued...)

BNSF spreadsheet contains only values, rather than equations, making it impossible for us to determine how BNSF computed the various components of its land valuation.[25]

B. Roadbed Preparation

1. *Earthwork*

Because we use PPL's configuration for purposes of our cross-subsidy analysis, we use PPL's earthwork quantities to determine grading cost. The parties agree on most of the unit costs that would be associated with earthwork on the WMCRR. However, BNSF argues that the earthmoving scrapers specified by PPL for excavation[26] are only capable of dumping material in large piles and not in the 6-inch layers required for compaction. BNSF contends that, in addition to scrapers, bulldozers would be needed to spread the piles of earth prior to compaction. However, scrapers generally distribute earth evenly and BNSF has offered no substantiation for its assertion that a scraper could not effectively accomplish the spreading of earth required to construct the WMCRR. Therefore, we use PPL's unit cost for excavation.

The parties also disagree on the unit cost for handling materials to fill depressions in the ROW that could not be filled using the excess material excavated from other portions of the ROW. Without explanation, PPL used a unit cost for handling clay, till or blasted rock material for fill even though it assumed that all other excavation on the WMCRR would involve common earth. In contrast, BNSF's figures for the WMCRR's excavation work are based on only common earth being involved. We accept BNSF's unit cost for fill material because PPL has not explained why a lower cost for handling clay, till or blasted rock material should be used.

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[24](...continued)
complete and persuasive.

[25] We also note there is an inconsistency between the overall land values used by BNSF in its electronic spreadsheet "Appendix B–ROW Valuation Units" and those calculated by its witness Tesh in BNSF Reb. V.S. Tesh at Appendix B, Total Land.

[26] PPL specified an 11 cubic yard scraper from R.S. Means Manual (*Means*).

2. *Lateral Drainage Pipes*

BNSF argues that PPL omitted the cost to re-excavate the graded roadbed for the placement of pipes for lateral drainage.[27] PPL counters that drainage pipes would be installed when the roadbed would be graded, not after grading would have been completed.

In a SAC analysis, the complaining shipper is entitled to employ the most efficient, least costly procedures. BNSF has not explained why it would not be practical to install drainage pipes at the time of the initial grading. Therefore, we accept PPL's less costly procedure for installing lateral drainage pipe.

3. *Culverts*

Culverts allow water to pass under the track structure by means of metal or concrete pipes. The parties agree on the placement of culverts west of Campbell and on the unit costs for those culverts, except that BNSF would have structural steel pipe (SSP) culverts coated with asphalt. PPL states that in its inspection of the existing ROW, it found no evidence that existing SSP culverts have been coated with asphalt. Accordingly, we accept PPL's cost for SSP culverts.

The parties also disagree on culvert installation costs. As with lateral drainage pipe, BNSF assumes that culverts would not be installed until after initial grading had been completed, whereas PPL would have the WMCRR install culverts during the initial grading process. As BNSF has not shown why PPL's approach is not reasonable, we accept PPL's assumption.

4. *Drainage Ditches*

Drainage ditches would parallel the roadbed, channeling water away from the tracks. PPL would have the WMCRR install 2-foot wide trapezoidal ditches, whereas BNSF would have it use 3-foot wide trapezoidal ditches based on a general American Railway Engineering and Maintenance of Way Association (AREMA) recommendation for new construction. Because PPL has provided evidence that the actual rail lines

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[27] The parties differ slightly on the amount of pipe that would be installed. We use the amount of pipe in PPL's opening evidence, as that is based on the ICC Engineering Reports, compiled by the ICC's Bureau of Valuation in the early 1900s, which contain a survey of the physical assets of all rail lines.

that would be replicated by the WMCRR use 2-foot wide ditches, we accept PPL's specifications.

5. *Utility Relocation and Protection*

PPL included the cost of relocating and protecting utilities on the WMCRR line that would replicate the more recently constructed Decker Branch, but excluded these costs for the Campbell-to-Huntley line because that line (constructed in the late 1800s) was in existence prior to installation of the existing utility structures. PPL relies upon our well-established policy to exclude costs that the incumbent carrier (or its predecessors) did not incur. We exclude the cost of utility relocation. *See, e.g.*, *WPL* at 1024-25.

6. *Topsoil/Seeding*

The spreading of topsoil and seed is used to encourage revegetation of cleared ground, thereby reducing erosion that could undermine the roadbed, foul ballast, and clog drainage ditches. BNSF argues that the WMCRR would need to spread topsoil and seed along the entire line west of Campbell including the Decker Branch. PPL notes that there is no evidence that topsoil or seed was spread along the Campbell line in the ICC Engineering Reports and argues that the WMCRR should not be saddled with costs not incurred by the existing carrier. PPL includes the cost of spreading topsoil along the more recently constructed Decker Branch but not the costs for seeding that branch.

Our practice is generally to include topsoil placement and seeding costs only when the incumbent has incurred such costs.[28] Thus, we exclude topsoil and seeding costs for all but the Decker Branch. As to the Decker Branch, PPL has failed to demonstrate that seeding costs were not incurred by BNSF and has not explained why under modern construction practices topsoil would be spread but not then protected from erosion by seeding. Therefore, we will include the costs for both topsoil placement and seeding on the portion of the WMCRR replicating the Decker Branch.

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[28] *See Arizona Pub. Serv. Co. v. Atchison, T.&S.R. Ry.*, 2 S.T.B. 367, 386, 408 (1997); *FMC* at 801.

7. *Water for Compaction*

In arid areas, water must be added to the soil to ensure adequate compaction to withstand the stresses from the heavy coal trains that would traverse the WMCRR. PPL and BNSF agree that water would be necessary to compact fill in arid areas traversed by the WMCRR. They agree on the cost per gallon for water, but disagree on the number of gallons that would be required for each cubic yard of fill. PPL contends that 10 gallons of water would be sufficient,[29] but, based on evidence submitted in ICC Docket No. 37029, *Iowa Pub. Serv. Co. v. Burlington N.R.R. et al.* and its experience constructing the Orin Line,[30] BNSF contends that 20 gallons would be needed for each cubic yard of fill. PPL's evidence lacks support, whereas BNSF's evidence is based on the same testimony (in ICC Docket No. 37029) that PPL relied on to estimate earthwork costs in this proceeding. Therefore, we use BNSF's figure.

8. *Surfacing of Roads*

Although the parties agree on the unit cost for road surfacing, they do not agree on the amount of road paving that would be needed. PPL included no road surfacing costs on the Campbell-to-Huntley line, because when this line was constructed there were no roads that required paving. Absent evidence that BNSF incurred the costs of road construction and resurfacing on the Campbell-to-Huntley segment, we exclude those costs from our restatement.

PPL did include costs for surfacing detour roads for the Decker Branch, which was constructed later. But as to that part, PPL estimated quantities by using data on construction of the entire Orin Line (Reno to Orin, WY). BNSF argues that quantities should be based on construction of the section of the Orin Line that the WMCRR would replicate. BNSF assumes that similar amounts of paving would be needed on all lines west of Campbell. PPL has not explained why information on portions of the Orin Line that the WMCRR would not replicate would produce a better

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[29] PPL claims that one of its expert witnesses was in charge of construction of the Western Rail Properties, Inc. line (WRPI Line), which connects to the Orin Line south of Converse, and that his recollection is that 10 gallons of water per cubic yard of fill was used. But PPL has offered no evidence to corroborate his recollection.

[30] The Orin Line is the jointly owned BNSF-UP line into the PRB. The north-south part of the WMCRR would replicate the portion of the Orin Line north from Converse, WY.

estimate of material quantities than information limited to those portions of the line the stand-alone railroad would replace. Accordingly, for the Decker Branch we use the agreed-to unit cost and apply it to the quantities developed by BNSF from the actual portion of the Orin Line that the WMCRR would replace.

C. Track Construction

Track construction includes the installation of geotextile fabric, ballast and subballast, ties, rail, other track material (OTM) (such as tie plates, rail anchors, insulated joints and spikes), and turnouts. Track construction costs also include material transportation and track construction labor.

1. *Geotextile*

Geotextile fabric is a material that is placed between the earth and the subballast to keep the subballast and ballast clean and to provide soil stability in areas of soft or fine-grained soils. The parties agree that fabric would be used under turnouts. BNSF further contends that geotextile fabric should be installed under all highway grade crossings.

PPL argues that the WMCRR should not be responsible for any of the construction costs associated with highway crossings on the line between Campbell and Huntley, because the existing railroad was in place before highways were built. PPL also claims that during construction of the WRPI Line, lightly traveled road crossings typically found in Wyoming did not have geotextile fabric installed under the crossings.

Because the Campbell-to-Huntley line was in place prior to the construction of area highways, and because BNSF has not shown it has incurred any costs associated with the installation of geotextile fabric at crossings on this line, we exclude the cost for geotextiles at highway grade crossings in our restatement.

2. *Ballast and Subballast*

Subballast is the first layer of rock material placed on the graded roadbed to form the foundation for the track structure. Ballast is the upper layer of rock that holds the ties in place and provides drainage. Using the specifications for construction of the WRPI Line, PPL would have the WMCRR install 12 inches of ballast over 6 inches of subballast. BNSF contends that PPL's specification would not have the required bearing capacity of 20 pounds per square inch (psi). Using standard railroad engineering equations, BNSF has demonstrated that, based on the traffic

characteristics anticipated for the WMCRR, a minimum ballast/subballast combined depth of 20 inches is necessary to meet the required bearing capacity.[31] While PPL took its specification from construction of the WRPI Line, BNSF argues that the 18-inch ballast/subballast section depth used there was designed initially for a lighter loading and would be inadequate for the WMCRR.[32] BNSF asserts that under current standards the WMCRR would need 8 inches of ballast over 12 inches of subballast.

PPL notes that BNSF's specification of only 8 inches of ballast does not meet any of AREMA's recommendations. With respect to the total depth of ballast and subballast, PPL acknowledges that the ballast/subballast should be capable of supporting 20 psi, but argues that BNSF ignores the real-world experience of the WRPI Line.[33] PPL further observes that most railroads in the country are now handling 286,000-lb. cars and all were constructed prior to the implementation of the current standard.

We accept PPL's use of 12 inches of ballast because it has shown that a 12-inch ballast specification is commonly used and is recommended by AREMA.[34] Regarding the combined depth of ballast and subballast, BNSF has shown that PPL's 6-inch subballast under 12 inches of ballast would not meet the agreed-to 20 psi specification. Thus, we find that, based on standard engineering calculations, the WMCRR would need 8 inches of subballast to achieve the 20 psi loading requirement. While the WRPI was initially constructed with only 18 inches of ballast/subballast,

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[31] BNSF Reply WP Albin at 29-30.

[32] According to BNSF, the subballast material was subjected to an additional crushing process to give it the necessary strength. BNSF notes that PPL's specifications and costs do not provide for specially-prepared subballast.

[33] The WRPI Line handles, on average, over 30 unit coal trains per day, many with 286,000-lb. cars. PPL contends that the subballast used on WRPI was not specially prepared. Rather, the subballast used on the WRPI Line was partially comprised of materials left over from crushing operations used to produce ballast with additional subballast created by passing the ballast through another crushing process.

[34] While the parties agree on the quarry from which the rock material would be obtained and cost per ton for ballast, they arrived at differing costs per cubic yard. BNSF used a conversion factor of 3,275 lbs/cy to convert the price of rock per ton to a unit cost per cubic yard. PPL used a weight of 3,150 lbs/cy to compute its unit cost for ballast, pointing out that BNSF acknowledged (BNSF Reply V.S. Albin at 20) that ballast weighs 3,150 lbs/cy. Accordingly, we use PPL's figure.

that line has no doubt been resurfaced several times. Generally, when resurfacing, additional ballast is added to the roadbed; thus, the WRPI Line is likely to now have at least 20 inches of ballast/subballast to support the heavy loads moving over that line today.

3. *Ties*

The parties agree on the type of ties (wood), the number of ties per mile and the unit costs for ties that would be used to construct the WMCRR. The parties disagree on the size of ties that would be needed at grade crossings and turnout locations.

PPL's evidence assumes the use of standard 8.5-foot ties. BNSF argues that 10-foot ties would be needed at grade crossings to allow for the attachment of highway surfacing material and to provide sufficient lateral stability needed for vehicular traffic. BNSF also asserts that larger ties would be required under the rail approaching turnouts to provide needed stability in the transition from the flexible main track to the rigid section of turnouts. However, BNSF has not supported that assertions with reference to general industry standards.

PPL contends that, because the WMCRR highway crossings would be located in areas with only light vehicular traffic, standard size ties would provide an adequate surface for attaching highway surfacing material as well as sufficient lateral stability. Moreover, PPL notes that 10-foot ties were not used on the WRPI Line, either at grade crossings or prior to turnouts. Accordingly, we accept the use of standard ties at such locations.

4. *Rail*

PPL assumed that standard rail would be used for the entire WMCRR west of Campbell. BNSF contends that premium rail would be needed on curves of 2 degrees or greater. BNSF contends that the use of premium rail on curves is an industry standard and would be essential for the WMCRR to minimize the level of future disruptive maintenance activities.

The choice between standard and premium rail represents a tradeoff between initial investment cost and future maintenance cost. As a general matter, where current industry practice is to use premium rail on certain density track, we believe that such a practice represents an efficient balance between initial investment and future maintenance costs. Here, however, unlike the high density lines involved in the recent *FMC* and *WPL* SAC cases (where our analysis was based on use of premium rail on high-density mainlines and on curves greater than 2 degrees), the lines

west of Campbell would be lighter density. BNSF has not shown that industry standards would require the use of premium rail on such lighter-density lines. Therefore, for the lines west of Campbell, we base our analysis on use of standard rail.

5. *Other Track Material*

The parties' disagreement on several OTM items are discussed below.

a. *115-lb. Tie Plates.* PPL used the same price for 115-lb. tie plates as for 136- and 132-lb. tie plates, claiming the only difference in the plates is the punch pattern. However, as BNSF's workpapers show, the cutout for the base of the rail also differs.[35] BNSF contends that the price for 115-lb. tie plates is higher than that for 136- and 132-lb. plates and notes that PPL's workpapers reflect a higher price for 115-lb. tie plates. Based on PPL's own evidence, suggesting that there are differences in prices, we use the cost for 115-lb. tie plates found in PPL's opening workpaper.[36]

b. *Rail Anchors*. The parties agree on the number of rail anchors needed per mile of track but disagree on the total number of rail anchors the WMCRR would need. PPL underestimates the number of anchors by using the route miles of the WMCRR to develop its estimate. Because there can be multiple sets of track on a particular line segment, the number of rail anchors is related to the track miles rather than route miles. Because BNSF's estimate is appropriately based on track miles, we accept its evidence.

c. *Insulated Joints*. The parties agree on the number and types of insulated joints that would be needed, but they disagree on the costs for the various size joints. PPL used the same costs for all types of insulated joints. BNSF argues that different prices are associated with different size joints and points out that PPL's opening workpapers contains costs for various types of insulated joints. We agree that different size joints would likely have different costs. Accordingly, we use the costs for insulated joints found in PPL's opening workpapers.[37]

d. *Spikes*. The parties disagree on the number of spikes that would be used per mile of tangent track and curved track of less than 1 degree. BNSF would use 8 spikes per tie (4 spikes per tie plate) on these

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[35] BNSF Reply WP Albin at 72. The rail base for 115-lb. rail is 5.5 inches, whereas the rail base for 136- and 132-lb. rail is 6 inches.

[36] PPL Open. WP McDonald at 25205.

[37] PPL Open. WP McDonald at 25206.

types of track, claiming that when pre-plating ties, two spikes are generally used to hold the tie plate to the tie and then two additional spikes are used to hold the rail in place. PPL notes that during the construction of the WRPI Line only one spike was used to pre-plate ties because this makes aligning the plate and rail simpler. Accordingly, PPL would have the WMCRR use only 3 spikes per tie plate.

We accept PPL's evidence that only 3 spikes per tie plate would be necessary. Indeed, notwithstanding its testimony to the contrary, BNSF's workpapers reflect the use of only three spikes per plate.[38]

6. *Turnouts*

Turnouts allow trains to move from one track to another. The parties disagree on the materials included in the turnout cost data furnished by BNSF during discovery. PPL claims that the cost of a complete turnout included insulated joints and switch stands. BNSF maintains that insulated joints and switch stands were not included in the turnout information furnished to PPL.

We have reviewed the material furnished by BNSF, which shows both a price for complete turnouts and the price for the individual components of turnouts. Because neither insulated joints nor switch stands are included in the list of materials, we treat them as separate cost items and apply the agreed-upon costs for these items.

In its opening evidence, PPL failed to adjust the 1998 turnout costs to reflect 2000 prices, the year turnouts would be installed on the WMCRR. In its reply evidence, BNSF indexed PPL's 1998 cost figures for turnouts to 2000 levels. On rebuttal, rather than comment on BNSF's indexation, PPL substituted alternate 2000 costs from a source not used in either PPL's opening evidence or in BNSF's reply evidence. While the use of actual costs rather than indexed costs is generally preferable, the introduction of new source material on rebuttal after the railroad has accepted the complainant's opening evidence is inappropriate because the railroad has no opportunity to review the new evidence. Accordingly, we use the parties' agreed-to 1998 turnout costs indexed to 2000.

The parties agree on the number of electric locks that would be needed for turnouts, but they disagree on the unit cost for the locks. BNSF developed prices from a 1997 authority for expenditure (AFE),[39]

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[38] BNSF Reply WP Albin at 77.
[39] BNSF Reply WP Albin at 0234.

while PPL used costs from a 1999 AFE.[40] Because more up-to-date cost information is preferable, we use PPL's 1999 cost data indexed to 2000.

7. *Material Transportation*

Initially, PPL estimated that transportation costs would be 20% of material costs. In contrast, BNSF estimated that transportation costs would amount to $0.035 per ton-mile. On rebuttal, PPL adopted BNSF's methodology, but assumed that ballast and subballast would be obtained from the Lusk, WY quarry, rather than the Granite Canyon quarry from which prices for ballast and subballast were obtained.

Having priced rock material for the WMCRR at a specific quarry,[41] it is inappropriate to assume that the rock would be transported from a different quarry. Moreover, by waiting until rebuttal to offer this evidence, PPL precluded BNSF from replying to this evidence. Therefore, we calculate transportation from the agreed-upon quarry at Granite Canyon.

D. Bridges

BNSF and PPL generally agree on the number and types of bridges that would be needed,[42] but disagree on the number of walkways that would need to be installed and on the need for inner guard rails on through plate girder (TPG) bridges. BNSF claims that walkways and guardrails are required by Federal Railroad Administration (FRA) standards. However, as PPL notes, BNSF has failed to cite a specific FRA requirement or offer evidence that its existing bridges have walkways.

While disagreeing with the need for walkways on both sides of bridges, PPL agrees that, for inspection purposes, walkways should be installed on one side of all bridges greater than 50 feet. Because there is no evidence that FRA requires walkways on both sides of bridges nor that

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[40] PPL Open. WP McDonald at 25215.

[41] PPL's opening workpapers show crushed rock cost varies by quarry. PPL Open. WP McDonald at 25220.

[42] BNSF would include railroad bridges over three state highways. PPL excluded the cost associated with these bridges, claiming that the lines to be replicated west of Campbell pre-date the construction of highways. Because BNSF has not shown that it or its predecessors paid for the bridges over highways, we exclude the cost of those bridges from construction costs.

it is a common industry practice to install double walkways, we accept PPL's specification of only a single walkway per bridge.

PPL agrees that there should be inner guardrails on TPG bridges, but disagrees with BNSF's costs, claiming that scrap rail, rather than second-hand rail, could be used for inner guardrails. PPL also contends that guard rails would need to extend only 50 feet beyond the bridge, not 60 feet as BNSF claims. However, PPL has provided no source for the cost of scrap rail, nor evidence that any existing bridge has guardrails extending only 50 feet beyond bridges. Consequently, we use BNSF's guardrail evidence.

E. Signals and Communications

The parties generally agree on the amount and cost of signal[43] and communication investment that would be needed to construct the WMCRR.

F. Buildings and Facilities

Buildings and facilities consists of locomotive and car repair shops, office buildings, fueling facilities, and roadway buildings for MOW personnel. No locomotive, car repair or office buildings would be located west of Campbell.[44]

1. *Fueling Facilities*

The parties agree on the unit cost for fueling facilities and the need for two fueling facilities east of Campbell, but they disagree on the need for a fueling facility west of Campbell. Although BNSF claims that

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[43] The parties disagreed on the number of dragging equipment detectors that would be needed. But because the number of detectors is dependent on the operating plan, and we use PPL's operating plan, we accept PPL's specification for the number of detectors.

[44] Some of the costs of such facilities elsewhere on the WMCRR would be appropriately attributable to the traffic moving west of Campbell, but there is no evidence by which to apportion any of the costs of these buildings to that traffic. Thus, while we cannot be precise in this regard, it is apparent that the investment cost associated with the western part of the WMCRR in our restatement and the amount of cross-subsidy needed to make the western portion of the WMCRR viable are understated.

a fueling facility would be required at Dutch, WY, BNSF's electronic spreadsheet contains investment for only two facilities. Because BNSF's source data does not include investment for a fueling facility at Dutch, we do not include any investment for fueling facilities west of Campbell in our restatement.[45]

2. *Roadway Buildings*

The parties generally agree on the cost of constructing various types of roadway buildings, although there are minor differences due to building specifications. Because we use PPL's system configuration west of Campbell, we use PPL's building specifications and unit costs for roadway buildings.

G. Public Improvements

Public improvements along the ROW would consist of fences, signs, grade crossings, and highway overpasses.

1. *Fences and Signs*

Based on an inspection of the ROW, PPL would have the WMCRR fence the entire length of one side of the Campbell-Huntley segment and 50% of the other side.[46] It also would have both sides of the ROW for the Decker Branch fenced. Based on the ICC Engineering Reports, BNSF would fence 93.65% of both sides of the ROW from Campbell to the Wyoming/Montana border and 98.40% of both sides of the ROW from the Wyoming/Montana border to Huntley. While the ICC Engineering Reports show more fencing of the ROW than PPL's evidence, PPL's line inspection provides a more up-to-date assessment of

[45] Obviously, locomotives would use fuel west of Campbell and, therefore, some of the costs of fueling facilities, no matter where located, would be attributable to the traffic moving west of Campbell. Thus, as with the buildings and facilities, in this regard as well our restated investment figures and the resulting amount of cross-subsidy that would be required are understated.

[46] PPL states that, during its inspection trip of the ROW, it observed no snow fences along the lines. Therefore, snow fences are not included.

the fencing needs today. Therefore, we use PPL's fencing figures[47] as the better evidence of record.

BNSF contends that PPL failed to provide adequate roadway signs to assure safe operation of the WMCRR. BNSF argues for an increased number of signs for mileposts, whistle posts, stations, and yard limits, as well as signs for speed restrictions, advance warning for yard limits, flangers, and speed resumption. BNSF would used PPL's unit costs for each sign, but would add installation costs to them.

PPL contends that BNSF overstates the number of roadway signs that would be needed for safe operation of the WMCRR. PPL notes that operating time-tables (which the WMCRR would use) negate the need for advance warning, speed reduction and resume speed signs. PPL also points out that flanger signs are unnecessary at bridges, turnouts, crossings or other places where snowplow operators can see the obstruction. Finally, PPL disagrees with BNSF's addition of an installation cost for each sign, as its discovery request for sign cost asked for the installed price.

BNSF has offered no support for the quantities of warning signs that it advocates. While claiming that "standard safety procedure" requires signs at all of the locations that it has specified, BNSF failed to provide a specific example from its operating instructions that these signs are required. Moreover, we agree with PPL that yard limit, reduce speed and resume speed signs would not be required when appropriate instructions are included in operating timetables. Finally, PPL's discovery request specifically asked for an installed price. While the material provided by BNSF in response to the discovery request noted that transportation and storage costs were not included in the unit cost, there was no mention of a separate installation cost. Thus, it is reasonable to assume that the information it supplied includes installation costs.

2. *At-Grade Road Crossings*

The parties agree on the unit costs for highway crossings, as well as the various types of grade crossing protection that would be needed. However, PPL contends that, because most of the rail line to be replicated was in place prior to the advent of motorized traffic, the WMCRR should not be required to pay for any grade crossings other than those along the Decker Branch where roads were in place prior to construction of the rail line.

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[47] Fencing costs include the cost for fence materials, gates, panels and cattle guards.

BNSF notes that the ICC Engineering Reports for the Campbell-to-Huntley line segment include some unspecified crossing investment made by its predecessor, and on that basis BNSF would include the cost for all of the at-grade crossings that would be needed on the WMCRR. PPL argues that the ICC Engineering Reports were produced in the 1920s, post-dating the completion of the Donkey Creek-to-Huntley rail line by several decades and that railroads were permitted to place the cost of the crossings on the books in those reports if they paid for any part of the crossing or the actual party paying for the crossing could not be determined.[48]

It is unclear from this record what road crossings BNSF's predecessors actually paid for on the Campbell-to-Huntley line. We need not resolve that issue, however, as the outcome of our rate analysis would not be affected. Thus, for administrative convenience, we use PPL's lower cost estimate.

3. *Highway Overpasses*

PPL claims that the rail lines from Campbell to Huntley were in place prior to the need for highway overpasses and, therefore, the incumbent railroad would not have paid for the installation of overpasses. BNSF argues that the WMCRR should be required to pay for overpasses, as the ICC Engineering Reports show evidence of a particular highway overpass on this line, suggesting that the incumbent railroad incurred overpass cost. We include only the cost of the particular overpass for which the railroad has been shown to have incurred a cost. BNSF has not shown that its predecessor paid for any other overpasses.

H. Mobilization

Mobilization costs reflect the costs of assembling equipment, personnel and facilities at designated places so that construction may commence, the costs of disposing of equipment and removing temporary facilities used during construction, and the costs of procuring a bond to ensure completion of the project. In its opening evidence, PPL estimated that mobilization would amount to 1% of the investment costs (exclusive of land and track materials) needed to construct the WMCRR. In contrast, BNSF developed mobilization costs on an individual component basis, yielding an overall mobilization cost of $21,791,959—which translates

[48] *See Texas Midland Railroad*, 75 I.C.C. 1, 116 (1918).

into approximately 2.5%[49] of BNSF's estimated total construction cost excluding land only,[50] or 3.5% of construction costs excluding both land and track materials.

On rebuttal, PPL acknowledged that its 1% mobilization factor would "not provide sufficient monies for the mobilization (and demobilization) of the forces necessary to construct the [WMCRR]."[51] PPL then stated that it accepted BNSF's aggregate 2.5% mobilization factor, which PPL then applied to its restated construction costs less both land and track materials. Acceptance of BNSF's evidence, however, would require either that the 2.5% factor be applied to all construction costs except land or that a 3.5% mobilization factor be applied to the subset of investment used by PPL.

As PPL has acknowledged that its initial 1% mobilization factor is incorrect but provided no support for application of a 2.5% factor to a different subset of total investment, we find that BNSF's evidence is the better evidence of record. Because our restatement is concerned only with construction of the western portion of the WMCRR, however, it would be inappropriate to use BNSF's entire ($21,791,959) figure as an estimate of mobilization costs. Rather, to estimate the mobilization expense that would be associated with construction of only the western portion of the WMCRR, we apply a 3.5% mobilization factor to the restated construction costs less land and track materials.[52]

I. Engineering

The parties agree on the costs for design and engineering (5.0% of construction cost) and mapping and subsurface investigation ($8,464 per route-mile), but not on the costs for construction management and inspection. PPL estimates that construction management and inspection would amount to 2.5% of the WMCRR construction costs. PPL separates this percentage into two components: construction management at 1.5% and inspection at 1% of construction cost. It claims that its engineering witness oversaw the construction of the WRPI Line and found these percentages to be reasonable. BNSF claims that an 8% additive for

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[49] While both PPL and BNSF refer to a mobilization percentage of 2.5%, the figure is actually 2.4% ($21.7mil./$908 mil.).

[50] BNSF Reply V.S. Albin at 59; PPL Reb. V.S. McDonald at 125.

[51] PPL Reb. V.S. McDonald at 125.

[52] We note that the 3.5% factor, which equates to 2.5% of total construction costs, is comparable to that adopted in *WPL* at 1036 and *FMC* at 819.

construction management and inspections is appropriate, but its claim is based solely on the unsupported statement of its witness.

We use PPL's source document (*Means*) to estimate the construction management percentage. The *Means* estimate for construction management for projects $5 million or larger ranges between 2.5% and 4%. While costs for construction management may decrease with the size of the project, the lowest percentage is 2.5%. Therefore, in the absence of any evidence that construction management costs continue to decline as the size of the construction project grows, we use the *Means* 2.5% figure, rather than PPL's 1.5% figure, for the estimated cost of construction management. Because PPL offered the only separate inspection cost evidence, we accept that evidence. We combine the WMCRR construction management (2.5%) and inspection (1.0%) costs, for a total of 3.5% of total construction cost.[53]

J. Contingencies

A contingency account provides funds to address unforeseen costs that may arise during construction. PPL assumed differing contingency percentages for different components of construction.[54] BNSF argues that the WMCRR would need a contingency account equal to 10% of construction costs.[55]

PPL argues that contingencies would be limited because the wealth of information that is available about the existing BNSF system decreases the uncertainty that would otherwise be associated with construction of the WMCRR. We have previously rejected that argument. *See McCarty*, 2 S.T.B. at 521; *FMC* at 823. As in prior cases, we find that an overall contingency factor of 10% is appropriate.

K. Construction Schedule

PPL assumes that construction of the WMCRR would require 30 months. BNSF argues that PPL has not allowed sufficient time to analyze the data from the field investigations nor accounted for winter weather

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[53] We note that this is the same percentage we found appropriate in *WPL* at 1037-38.

[54] PPL used a contingency factor of 15% for bridges; 10% for grading, culverts, buildings and engineering; and 5% for track materials, signal and communication devices and highway crossings.

[55] BNSF's contingency figure is used by the U.S. Army Corps of Engineers for projects above $10 million.

reducing the productivity of the construction process. Based on its experience, BNSF claims that the construction would require approximately 33 months.

PPL's construction schedule is based on direct experience with the WRPI Line, which was constructed in a 14-month period. PPL points out that BNSF's experience is limited to the construction of short segments of second and third main track, rather than overall projects such as WMCRR. PPL contends that the direct experience with WRPI is more relevant.

We agree that construction of the WRPI Line provides a good frame of reference, because it included all construction aspects of the 135-mile line and associated facilities to serve PRB mines. Moreover, in SAC cases we base the construction time period on the amount of time it would take to construct the single most complex and time-consuming project on the stand-alone railroad. *See West Texas*, 1 S.T.B. at 674. Given the limited time it took to build the WRPI Line and the fact that there would be no unusually difficult construction projects on the WMCRR, we find that PPL's 30-month estimate is the best evidence of record.