ASSOCIATION OF AMERICAN RAILROADS
425 3rd Street, SW, Suite 1000
Washington, D.C. 20024

Timothy J. Strafford
Associate General Counsel

Phone: (202) 639-2506
Fax: (202) 639-2868
E-mail: tstrafford@aar.org

241983

ENTERED
Office of Proceedings
November 7, 2016
Part of
Public Record

November 7, 2016

Ms. Cynthia T. Brown
Chief, Section of Administration
Office of Proceedings
Surface Transportation Board
395 E Street, S.W.
Washington, DC 20423

Re: STB Docket No. EP 431 (Sub-No. 4), *Review of the General Purpose Costing System*

Dear Ms. Brown:

Pursuant to the Supplemental Notice of Proposed Rulemaking served on August 4, 2016 in this proceeding, attached please find the Association of American Railroads' reply comments for filing.

Respectfully submitted,

Timothy J. Strafford
Counsel for the Association of American Railroads

BEFORE THE
SURFACE TRANSPORTATION BOARD

STB Ex Parte No. 431 (Sub-No. 4)

REVIEW OF THE GENERAL PURPOSE COSTING SYSTEM

REPLY COMMENTS OF THE ASSOCIATION OF AMERICAN RAILROADS

Pursuant to the schedule established in the Supplemental Notice of Proposed Rulemaking ("SNPRM") served in this proceeding on August 4, 2016 by the Surface Transportation Board ("Board"), the Association of American Railroads ("AAR") respectfully submits these reply comments in response to comments filed by the Western Coal Traffic League ("WCTL"); Highroad Consulting ("Highroad"); and the joint comments of the American Chemistry Council, the Chlorine Institute, and the Fertilizer Institute ("ACC *et al.*"). In support of these reply comments, the AAR also submits the Verified Reply Statement of Michael R. Baranowski and Benton V. Fisher, Senior Managing Directors of FTI Consulting ("Baranowski/Fisher Reply V.S.") as Appendix A.

Throughout this proceeding, the AAR has supported the Board's goal of improving URCS, but, like other stakeholders that have filed comments, has expressed concerns regarding proposed changes that lacked support from empirical data.[1] The AAR has also consistently pointed out discrete areas where URCS could be improved by correcting technical errors and has

[1] *See, e.g.,* SNRPM at 5.

maintained that URCS fails to capture the unique costs associated with toxic-by-inhalation hazards ("TIH") and other hazardous materials.

Because the Board has increasingly relied on unadjusted URCS system average variable costs to make regulatory decisions and propose policy changes, the AAR has stressed throughout this proceeding the importance of accurate costing in URCS. To date, the Board has failed to consider the impact of its proposed changes to URCS on the myriad of regulatory functions the Board is now utilizing URCS for. Those uses include rate prescriptions,[2] the Three-Benchmark test,[3] the "limit price test" for qualitative market dominance analysis,[4] and the efficiency of routes under 49 U.S.C. § 10705.[5] In addition to these already adopted uses, the Board has recently relied on changes to URCS-based revenue-to-variable cost ("R/VC") ratios to justify proposing to revoke certain commodity exemptions[6] and has proposed a new R/VC-based rate reasonableness analysis for very small cases.[7] The Board has also proposed to force railroads to switch traffic where a complainant shows market dominance under an URCS-based test and sought comment on applying the methodology developed in *Arkansas & Missouri Railroad v. Missouri Pacific Railroad*, 6 I.C.C.2d 619 (1990) for pricing that access, further expanding the potential uses of URCS.[8] The Board should not proceed with regulatory changes without first

---

[2] *Major Issues in Rail Rate Cases*, EP 657 (Sub-No. 1) (STB served Oct. 30, 2006).

[3] *Simplified Standards for Rail Rate Cases*, EP 646 (Sub-No. 1) (STB served Sept. 7, 2007).

[4] *See, e.g., Total Petrochemicals & Refining USA, Inc. v. CSX Transportation, Inc.*, NOR 42121 (STB served July 19, 2011).

[5] *Entergy Ark. Inc. and Entergy Serv. Inc. v. Union Pac. R.R. and Mo. & N. Ark. R.R.*, NOR 42104, slip op at 12-14 (STB served Mar. 15, 2011), *recon. denied, Entergy Ark. Inc. and Entergy Serv. Inc. v. Union Pac. R.R. and Mo. & N. Ark. R.R.*, slip op. at 11-13 (STB served Nov. 26, 2012).

[6] *Review of Commodity, Boxcar, and TOFC/COFC Exemptions*, EP 704 (Sub-No. 1) (STB served July 29, 2016).

[7] *Expanding Access to Rate Relief*, EP 665 (Sub-No. 2) (STB served Aug. 31, 2016).

[8] *Reciprocal Switching*, EP 711 (Sub-No. 1), slip op. at 25 (STB served July 27, 2016).

considering how those changes will cumulatively affect the Board's regulation of the railroad industry and its customers.

With regard to the specific proposals set forth in the SNPRM, the AAR opening comments disputed that the Board's proposals regarding locomotive unit miles ("LUM") and train miles are actually related to the make-whole adjustment. Instead, the AAR explained that the proposal to eliminate step functions in those costs would make URCS less accurate by failing to account for the differences between unit and non-unit trains. Though the AAR did not object to eliminating the step-function effect of the make-whole adjustment, the AAR restated its position that it could not support changes to URCS that change cost relationships without empirical support.[9] The AAR also pointed out a straightforward fix to correct a flaw with how switching costs are allocated. Finally, the AAR asked the Board to consider the full implications of the changes the SNPRM has proposed and to properly phase-in those changes or otherwise account for aspects of URCS or variable costs produced by URCS that have multi-year components.

As discussed in detail below, the AAR agrees with statements made in shipper comments to the SNPRM that contend that changes to URCS should only be undertaken when based on sound empirical data. However, the AAR submits that the comments submitted by shipper interests contained assertions and alternative proposals that themselves lack empirical support and are otherwise flawed.[10] Specifically, WCTL's comments proceed from the unsupported

[9] The AAR also did not object to the Board's proposals to define a unit train in URCS as 75 cars or more, to change the intervals used for calculating and assigning costs associated with intertrain and intratrain ("I&I") switching from 200 to 268 miles, or to the proposal regarding car-mile costs.

[10] For example, Highroad asserts with no supporting evidence whatsoever that "URCS costs are overstated." Highroad Comments at 4. The Board cannot credit testimony that has no factual evidentiary support.

assertion that the variable costs of unit trains produced by URCS are too high. Similarly, the alternative methodology produced by ACC *et al.* for switch engine minutes ("SEM") and station clerical costs and the alternative definition of unit trains are unsupported.

Discussion

I. Stakeholders Filing Comments In This Proceeding Agree That Changes to URCS Should be Based on Empirical Analysis Demonstrating That The Resulting Costs Would Be More Accurate

The common theme running throughout the comments filed in this proceeding by shippers and railroads alike is that proposals to change URCS that substitute the agency's subjective judgments for empirically derived cost relationships should not be adopted.[11] Though the SNPRM declined to conduct new empirical studies to support elimination of the step function effect of the make whole-adjustment, it recognized that "the existing efficiency adjustments and cost relationships in Phase III can form the basis for changes that remedy the problems in the current make-whole adjustment and related Phase III outputs."[12] However, the AAR and several other parties remain concerned that the Board is replacing data-driven cost allocations with subjective judgments.[13]

One area where there is existing empirical data that can make UCRS more accurate was identified in the AAR Opening Comments: the allocation of SEM costs to interterminal and intraterminal switching. The AAR has shown that URCS allocated nearly one million hours representing more than $422 million in variable costs to interterminal and intraterminal switching for the railroad industry in 2011 and that only $12 million of that total was actually

[11] *See, e.g.,* ACC *et al.* Opening Comments at 11 (filed June 20, 2013).

[12] SNPRM at 7.

[13] ACC *et al.* Opening Comments at 4; WCTL Opening Comments at 9.

assigned to shipments in the carload waybill sample ("CWS").[14] The Board should address the imbalance between the service units and costs allocated to interterminal and intraterminal switching within Phase II and the small portion of those costs that is actually assigned to shipments in the CWS. As shown in the AAR Opening Comments, the Board can correct this flaw without unduly expanding the scope of this proceeding by simply replacing the intraterminal and interterminal switch ratios with actual calculated values from the CWS.[15]

II. The Board Should Not Adopt the Self-Serving and Results-Oriented Proposals of the Western Coal Traffic League

The WCTL position in this proceeding is clear: proposals that lower costs for unit trains are good and improve accuracy and proposals that would have the effect of raising variable costs for unit trains are bad and lessen accuracy. Thus, the WCTL statement takes a results-oriented approach designed to lower the costs for unit trains, unsupported by any data or analysis. The Board should reject the WCTL proposals.

WCTL is particularly critical of the Board's proposal to correct a flaw in the current URCS treatment of costs of railroad-provided equipment in switching, which would eliminate the large efficiency savings – cost reductions – from unit-train shipments that currently are inappropriately re-distributed to smaller shipments in other car types. Fixing this misallocation is a necessary correction. As explained by Messrs. Baranowski and Fisher:

> Railroads report freight car costs separately by individual car type in Schedules 414 and 415 of the R-1. These schedules present the repair and maintenance, annual depreciation, and lease and rental expenses and the gross investment and accumulated depreciation balances specific to each car type. Thus, the resulting URCS unit costs per car day and per car mile reflect the costs that each railroad incurred for that car type. In a given year, if a railroad incurred more maintenance and repair costs for open-top hoppers, or more lease rental costs for plain gondolas, then the corresponding unit costs would reflect the

[14] AAR Opening Comments at 18.

[15] AAR Opening Comments, Baranowski/Fisher V.S. at 23.

> relatively greater expense for that car type. When a costing system assumes larger-block shipments of those car types are more efficient than average, the associated cost savings must be re-distributed to other shipments if all variable costs are to be assigned. Those savings are specific to the unit-train car types and thus should be re-distributed only to shipments of that same car type. It would be incorrect to re-distribute those costs to single-car shipments of other car types. Therefore, the misallocation that occurs under the current "one size fits all" approach to calculating the make-whole for railroad-owned equipment can and should be eliminated to more accurately keep the assignment of such costs to shipments of the same car type.[16]

WCTL also urges the Board to restore its NPRM proposal to allocate LUM costs on a shipment basis. As the AAR's 2013 Opening Comments explained,[17] the Board's current scaling factor more accurately adjusts locomotive costs based on the relative weight of the shipment being costed to account for the relatively higher costs of powering heavier trains – which require more locomotives, more horsepower, and/or more effort and fuel to operate than do smaller, lighter trains – than does the "one size fits all" proposal that WCTL advocates. Union Pacific submitted evidence supporting this fact earlier in this proceeding.[18]

III. The Board Should Reject the Changes Proposed by ACC *et al.*

ACC *et al.* limit their comments to a few aspects of the SNPRM: SEM and station clerical costs and the proposed definition of a unit train. Their witness, Mr. Mulholland, offers an entirely new way to allocate SEM and station clerical costs, unrelated to the SNPRM proposal. As there are any number of ways to mathematically manipulate the cost numbers, the ACC *et al.* proposal could not be adopted wholesale as a logical outgrowth of the SNPRM. Before such an approach could be adopted, the Board would be required to conduct yet another round of supplemental round of notice and comment, for what amounts to an exercise in

[16] Baranowski/Fisher Reply V.S. at 10-11.

[17] *See* AAR Opening Comments, Baranowski/Fisher V.S. at 23.

[18] *See* Union Pacific Railroad Company, Opening Comments at 14-15 (June 21, 2013).

massaging numbers to manipulate the results to a desired outcome. Though Mr. Mulholland begins his analysis by expressing reservations about changing URCS without empirical support, his alternative approach is devoid of any such support indicating that his approach more accurately reflects railroad operations. On its face, Mr. Mulholland's alternate model "flattens out" the Carload Weighted Block ("CWB") cost curves for switching and station clerical costs by effectively reducing the costs for 1-car shipments and increasing the costs for 75+ car shipments relative to those under the SNPRM's asymptotic curves. However, his new curves retain the CWB step functions between 1-car, 2-car, and 3-car shipments.[19] Such step functions create opportunities for regulatory gaming, similar to those introduced by the SNPRM's CWB proposal that were addressed in the AAR Opening Comments.[20]

As explained by Messrs. Baranowski and Fisher, Mr. Mulholland's treatment of industry, intra-terminal, and inter-terminal switching costs and station clerical costs, develops an approach that at its foundation encompasses two separate and distinct cost curves. For single-car and multiple-car shipments, he develops a logarithmic function in which efficiency adjustments vary with the size of the shipment. For unit-train shipments, his proposed curves simply retain the existing trainload efficiency adjustments, regardless of shipment size. Absent any empirical analyses, Mr. Mulholland's illogical proposal to substitute two distinct switching cost curves for the Board's CWB approach would replace existing empirically developed relationships. As demonstrated by Messrs. Baranowski and Fisher, the assumptions underlying the proposal have no basis in the current URCS approach and are otherwise unsupported. The ACC *et al.* approach would change the fundamental constant incremental cost function across all shipment sizes in

[19] Baranowski/Fisher Reply V.S. at 5.

[20] *See* AAR Opening Comments, Baranowski/Fisher V.S. at 10 (filed Oct. 11, 2016).

URCS that both the AAR's proposal related to the NPR and the Board's proposal in the SNPRM would preserve. The ACC *et al.* proposal should therefore be rejected.

In addition to proposing an alternative model for SEM and station clerical costs curves, ACC *et al.* proposes a 57-car threshold for defining a unit train, lower than the Board's proposed 75-car cutoff. Though critical of the Board's analysis of average train lengths in developing its proposal, ACC *et al*. also uses an average train length – specifically the average of through trains and way trains in aggregate. ACC *et al.* assume that the average way and through train length should be the basis for establishing the URCS unit train threshold, but ignore the fact that there are many through trains operating above this average and unit trains operating below this average. Therefore the average of non-unit trains is not an appropriate cutoff above which to assume all shipments are unit trains.[21]

Conclusion

The AAR supports revising URCS to remove the step-function effect of the make-whole adjustment to the extent specified above and in previous comments in this proceeding. In the absence of empirical support for changes to URCS, however, the Board should not change the long-standing cost relationships in URCS. As explained in the AAR opening comments, the Board should also withdraw its proposal with regard to LUM and train miles because the proposals would result in less accurate costing. The Board should also address the technical issues regarding the current misallocation of SEM to interterminal and intraterminal switching identified in the AAR's opening comments. Finally, the Board should carefully and prudently

[21] Also, to the extent that Mr. Mulholland proposes to use the R-1 to determine the unit-train threshold, the factor would have to be re-calculated for each carrier each year. *See* Baranowski/Fisher V.S. at 8.

consider how it will deal with implementation of any changes to URCS, which will make comparisons of R/VC ratios over time incoherent and unreliable.

Respectfully submitted,

Kathryn D. Kirmayer
Timothy J. Strafford
Association of American Railroads
425 Third Street, S.W.
Suite 1000
Washington, DC 20024
(202) 639-2506
Counsel for the Association of American Railroads

November 7, 2016

Appendix A

BEFORE THE
SURFACE TRANSPORTATION BOARD

STB Ex Parte No. 431 (Sub-No. 4)

REVIEW OF THE GENERAL PURPOSE COSTING SYSTEM

REPLY VERIFIED STATEMENT OF

Michael R. Baranowski
and
Benton V. Fisher

November 7, 2016

TABLE OF CONTENTS

I. INTRODUCTION

We are Michael R. Baranowski and Benton V. Fisher, Senior Managing Directors at FTI Consulting's Network Industries Strategies practice with offices at 1101 K Street NW, Washington DC. We are the same Michael R. Baranowski and Benton V. Fisher who filed a joint verified statement in the opening round of this phase of this proceeding on October 11, 2016, in support of the opening comments of the Association of American Railroads (AAR) to the Board's Ex Parte No. 431 (Sub-No.4) *Review of the General Purpose Costing System* – Supplemental Notice of Proposed Rulemaking (Supplemental NPR). Statements of our qualifications are set forth in Exhibits FTI-1 and 2, respectively, to that verified statement.

We have been asked by the AAR to evaluate the comments and analyses that three groups submitted in the opening round of the Supplemental NPR.

The American Chemistry Council, The Chlorine Institute, and The Fertilizer Institute submitted comments that contain a verified statement from Robert D. Mulholland of L.E. Peabody Associates.[1] That statement expresses concerns regarding the lack of empirical data supporting the Board's proposal and proposes an "alternate model" for calculating switching and station clerical costs.

The Western Coal Traffic League (WCTL) filed comments that focus only on elements of the Board's proposal that would affect the costs for unit trains.[2] WCTL urges the Board to revert back to its initial proposals in the February 4, 2013 Notice of Proposed Rulemaking (2013 NPR) and asks the Board to "maintain the status quo" when calculating the variable cost for shipments in railroad-owned equipment.

[1] *See* Joint Comments of the American Chemistry Council; The Chlorine Institute; and The Fertilizer Institute. Opening Verified Statement of Robert D. Mulholland. October 11, 2016.
[2] *See* Comments of the Western Coal Traffic League. October 11, 2016.

Highroad Consulting submitted comments that criticize the limited focus of the Board's proposed changes, labeling them "piece-meal changes" and "temporary improvements" until the Board conducts a comprehensive review.[3] It also proposes that URCS treat differently empty cars that return as unit trains from those that move in "manifest" train service.

In this statement we explain that these groups propose new approaches or attempt to resurrect Board proposals from the 2013 NPR. All of these proposals lack empirical support and do not represent improvements over the current Board proposals and, as such, should be rejected.

II. OVERVIEW OF EX PARTE 431 PROCEEDING

In the 2013 NPR, the Board set out to adjust how URCS calculates unit costs to better reflect railroad operations, automatically reflect economies of scale and thereby eliminate the need for the "make-whole adjustment," and calculate more accurate movement costs. To eliminate certain make-whole adjustments, the Board proposed calculating switching costs for switch engine minutes and station clerical costs on a per-shipment rather than on a per-car basis and to eliminate the efficiencies for railroad-owned cars during switching.

In our 2013 testimony for the AAR, we explained that many of the Board's proposals were unsupported, did not appear to be based on empirical analysis or study, would dramatically change long-standing cost relationships, and lacked a foundational basis. Other parties expressed similar concerns. The AAR emphasized that absent any analyses, it is imperative that any efforts to eliminate the make-whole adjustments maintain the existing empirically derived cost relationships within URCS and offered an approach in that proceeding to achieve that goal.[4] In

[3] *See* Comments of Highroad Consulting. LTD. Regarding Review of the Surface Transportation Board's General Costing System. October 11, 2016.

[4] BNSF supported the AAR's approach (*see* Review of the General Purpose Costing System. Comments of BNSF Railway Company. June 20, 2013. Pages 6 – 8) and Union Pacific also proposed a time- and event-based approach (*see* Review of the General Purpose Costing System. Comments of Union Pacific Railroad Company. June 21, 2013. Pages 8 – 9).

our verified statement addressing the NPR proposals we explained that switching (measured in switch engine minutes or "SEM") incorporates an event element and a time element, the latter of which is influenced by the number of cars being switched. We offered that in removing the effects of the make-whole adjustment, the Board could better align the SEM costs with the existing URCS relationships by allocating a portion of switching costs on a per-shipment basis and the remainder on a per-car basis. The methodology that we developed also encouraged a change to the average number of intermodal cars comprising an intermodal switching event to account for efficiencies in switching intermodal shipments that had occurred over the past 15 years.[5]

In its Supplemental NPR, the Board remains steadfast in its mission to eliminate the step functions produced by the current URCS efficiencies and make-whole adjustments. It ignored pleas by commenters to the NPR to examine the industry's current switching cost drivers and relationships that have evolved since the empirical studies underlying the present URCS relationships were done. In place of any empirical analyses, the Board established a "reasonable judgment" standard to maintain the existing URCS cost relationships and estimated the time-related (carload basis) and event-related (shipment basis) aspects of switching costs via asymptotic curves it constructs to spread switching costs across all shipment sizes.

Opening comments of shipper groups and consultants on Supplemental NPR provide little to no empirical data in support of their proposals. To the extent that they offered alternatives to the Board's new proposals, those recommendations do not reflect improvements over the subjective asymptotic curves proposed by the Board.

[5] *See* Comments of the Association of American Railroads. Joint Verified Statement of Michael R. Baranowski and Benton V. Fisher. June 20, 2013. Pages 11 to 13.

III. AMERICAN CHEMISTRY COUNCIL WITNESS LIMITS HIS COMMENTS TO CERTAIN ELEMENTS OF THE SUPPLEMENTAL NPR AND OFFERS AN "ALTERNATE MODEL" THAT LACKS ANY EMPIRICAL BASIS, DOES NOT PRESERVE THE EXISTING COST RELATIONSHIPS IN URCS, AND SHOULD BE REJECTED

Mr. Mulholland limits his comments on behalf of the ACC, *et.al.* to only a few of the elements in the Board's Supplemental NPR. Specifically, he addresses the Board's proposed treatment of switching and station clerical costs and its threshold for defining unit trains, but does not address the other material aspects of the Board's proposals, including railroad-owned equipment costs during switching, empty-to-load ratio, locomotive unit miles, and train-miles. His alternate model for the elements that he does address should be rejected because it lacks empirical basis, unlike existing URCS cost relationships that do reflect empirical data.

A. Switching and Station Clerical Costs

With regard to switching and station clerical costs, Mr. Mulholland criticizes the Board's Supplemental NPR proposals for largely discarding the existing cost relationships in URCS, observing among other things that the Board's CWB model merely moves the "steps left compared to the current model" (*i.e.*, to occur between smaller shipment sizes). [6] He also expresses strong reservations with implementing major changes in URCS without conducting empirical studies to validate the accuracy of the changes. Yet without any empirical analyses of his own Mr. Mulholland offers that – if the Board "must change the URCS model" – it should consider an alternate model that he alleges is "far simpler" and "better aligned with the cost relationships currently reflected in URCS." [7]

[6] *See* Opening Verified Statement of Robert D. Mulholland. October 11, 2016. Page 16.
[7] *See* Opening Verified Statement of Robert D. Mulholland. October 11, 2016. Page 37.

On its face, Mr. Mulholland's alternate model "flattens out" the Board's CWB cost curves for switching and station clerical costs by effectively reducing the costs for 1-car shipments and increasing the costs for 75+ car shipments relative to those under the Board's asymptotic curves. However, his new curves retain the CWB step functions between 1-car, 2-car, and 3-car shipments. For example, under the Board's CWB approach for industry switching, the cost per car decreases 46% from 1-car to 2-car shipments and 28% from 2-car to 3-car shipments. Under Mr. Mulholland's approach the decreases are 35% and 20% respectively.[8] Such step functions create opportunities for regulatory gaming, similar to those introduced by the Board's CWB proposal that we addressed in our Opening comments.[9]

1. Industry, Intra-Terminal, and Inter-Terminal Switching and Station Clerical

For industry, intra-terminal, and inter-terminal switching costs and station clerical costs, Mr. Mulholland develops an approach that at its foundation encompasses two separate and distinct cost curves – one that captures asserted economies of scale for switching single-car and multiple-car shipments and a second for unit-train shipments where the asserted economies of scale mysteriously disappear. For single-car and multiple-car shipments, he develops a logarithmic function in which efficiency adjustments vary with the size of the shipment. For unit-train shipments, his proposed curve simply retains the existing trainload efficiency adjustments, regardless of shipment size. Mr. Mulholland attempts to justify his conflicting assumptions for single-car and multiple-car shipments versus unit-train shipments with anecdotal assertions, claiming "increasing efficiency of larger less-than-trainload shipments relative to smaller ones" and what he describes as essentially homogenous terminal handling and facilities

[8] *See* ACC Opening workpaper "EP431S4_SEMs LEPA2.xlsx" tab "Carload Impact Table" cells R12:R14.
[9] *See* Verified Statement of Michael R. Baranowski and Benton V. Fisher. October 11, 2016. Page 10.

design for unit trains.[10] These anecdotes are mere examples and do not encompass the myriad variables that affect the switching activities across shipment sizes.[11] Absent any empirical analyses, Mr. Mulholland's illogical proposal to substitute two distinct switching cost curves for the Board's CWB approach would replace existing empirically developed relationships and should be rejected.

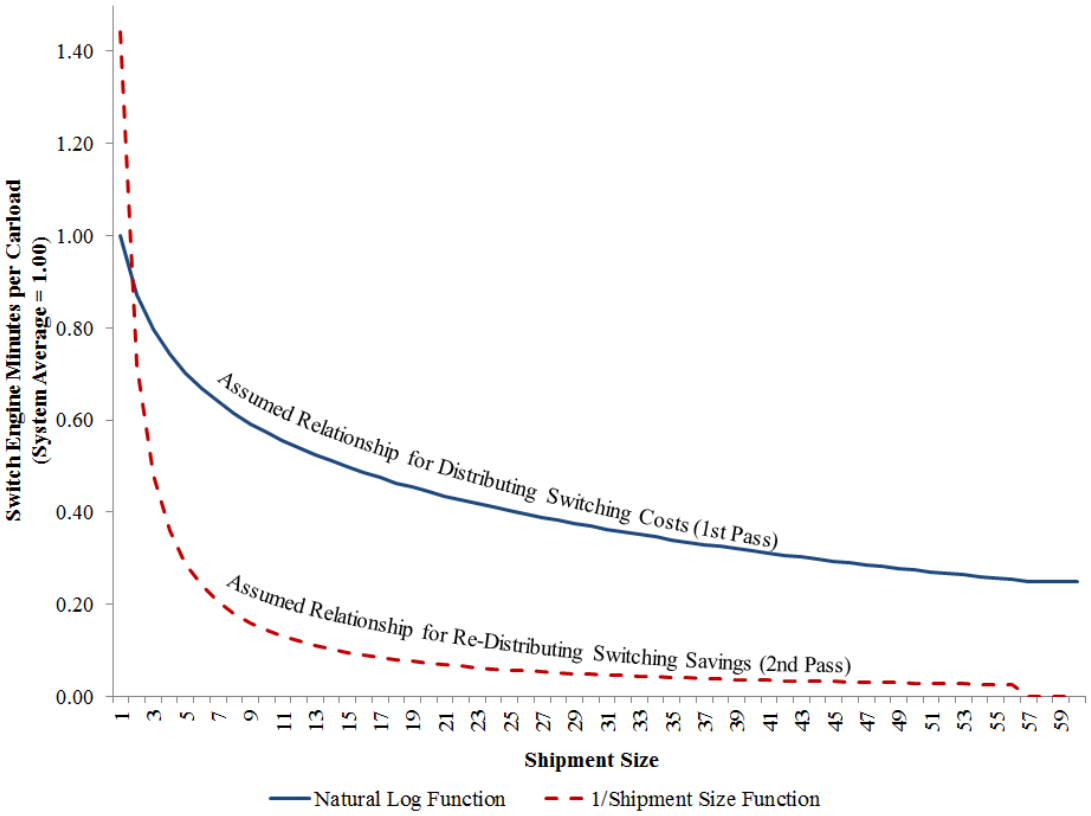
Further, both the AAR's proposal in response to the NPR and the Board's proposal in the Supplemental NPR acknowledge and preserve current URCS's constant incremental cost function across all shipment sizes. Specifically, URCS empirically derived formulas assume that the incremental effort involved with switching an additional car is consistent within the single-car, multiple-car and unit-train shipment sizes. Mr. Mulholland's proposal without support changes these fundamental relationships.

First, in his alternate model Mr. Mulholland calculates his measure of efficiency for each single-car and multiple-car shipment using a natural log function. In this first pass, for single-car and multiple-car shipments he calculates the ratio between the natural logarithm of the shipment size for the particular shipment to the natural logarithm of the smallest unit-train shipment. Mr. Mulholland then re-distributes the efficiency savings to single-car and multiple-car shipments using a different non-linear function. For that second pass, Mr. Mulholland assumes a factor of 1/shipment size. In other words, he assumes – again without any analyses – that a 1-car shipment receives twice the make-whole re-distribution of that assigned to a 2-car shipment, three times that of a 3-car shipment, and 56 times that of a 56-car shipment.[12] This assumption,

[10] *See* Opening Verified Statement of Robert D. Mulholland. October 11, 2016. Page 41.
[11] These anecdotes also ignore evidence submitted in the record describing switching operations for unit trains. *See* Comments of Union Pacific Railroad Company. June 21, 2013. Appendix A and Appendix B.
[12] *See* ACC Opening workpaper "EP431S4_SEMs LEPA2.xlsx" tab "Calculations" cells H15:H1094 and Y15:Y1094.

like the natural log function, has no basis in the current URCS approach, which adds back the same make-whole amount for each carload, regardless of shipment size. Figure 1 below shows the different cost curves that Mr. Mulholland subjectively assumes should be used to allocate switching and station clerical costs.[13]

Figure 1: Mulholland Proposal Presumes Multiple Relationships between Switching Costs and Shipment Size (Industry Switching)



2. Interchange and I&I Switching

For other switching costs (interchange and I&I switching), Mr. Mulholland abandons the natural log function when calculating efficiencies and instead uses the existing efficiency factors from current URCS. Mr. Mulholland distributes the efficiency savings based on the 1/shipment size ratio, which as described above has no basis in URCS.

[13] *See* ACC Opening workpaper "EP431S4_SEMs LEPA2.xlsx" tab "Carload Impact Table" columns L and M.

B. Definition of Unit-Train Shipment Size

In addition to proposing an alternative model, Mr. Mulholland recommends a 57-car threshold for defining a unit train, lower than the Board's proposed 75-car cutoff. Mr. Mulholland is critical of the Board's analysis of *average train* lengths on which it based its proposal to increase the minimum unit-train size. His counter-proposal, however, would also use an *average train size* as the basis for the threshold – specifically the average of through trains and way trains in aggregate. Mr. Mulholland's assumption that the average combined way and through train length should be the basis for establishing the URCS unit train threshold ignores the key fact that there are many through trains operating above this average and unit trains operating below this average. Therefore the average of non-unit trains is not an appropriate cutoff above which to assume all shipments are unit trains.[14] The Board's proposed 75-car threshold recognizes this key element. Mr. Mulholland's proposal should be rejected.

C. Model Simplicity

Mr. Mulholland claims that his alternate model is "far simpler" than the Board's carload weighted block (CWB) model. We disagree. The most burdensome aspect to the Board's CWB model is the annual analysis of the Carload Waybill Sample (CWS), which is used to generate many of the statistics (*e.g.*, carrier-specific measures of carloads by shipment size and type of switch event) required to develop the switching cost inputs to the CWB model. However, a detailed analysis of the CWS data and a determination of the different switch-event counts by shipment size and carrier is required for both the Board's CWB model and Mr. Mulholland's alternate model. In fact, as shown in his workpapers, Mr. Mulholland starts with the same CWS

[14] Also, to the extent that Mr. Mulholland proposes to use the R-1 to determine the unit-train threshold, the factor would have to be re-calculated for each carrier each year.

statistics upon which the Board's model relies when generating his alternate model.[15] Once these CWS statistics have been generated, determining the car- and shipment- weighting factors for the Board's CWB model is much less time-consuming, in particular given that the Board has already generated the template for performing that calculation, which was included in its workpapers.[16]

IV. THE WESTERN COAL TRAFFIC LEAGUE'S PROPOSAL TO RESURRECT THE BOARD'S PROPOSALS FROM THE 2013 NPR AND TO RETAIN THE EXISTING MISALLOCATION OF RAILROAD-OWNED- EQUIPMENT COSTS IN URCS WOULD RESULT IN LESS ACCURATE COSTS AND SHOULD BE REJECTED

The primary thrust behind the opening comments submitted by WCTL is to argue that URCS currently assigns too many costs to unit-train shipments. As a result, nearly every recommendation in WCTL's comments is intended to accomplish one outcome: even lower costs for unit trains.

To accomplish this, WCTL rejects the changes that the Board recently proposed in the Supplemental NPR and instead asks that the Board "revive" and "restore" the modifications presented in the NPR three years ago. WCTL's preference is likely predicated on the fact that the Board's original proposals would have assigned even lower switching costs and locomotive unit-miles to unit-train shipments, by assuming a constant cost across all shipments, regardless of the number of cars. Based on criticisms and evidence presented in comments in the 2013 NPR,[17]

[15] *See* ACC Opening workpaper "EP431S4_SEMs LEPA2.xlsx" tab "Calculations."
[16] Both the Board's CWB model and Mr. Mulholland's alternate model rely on the confidential CWS. To the extent that parties will not have access to these data, the generation of the switching and station clerical curves will remain a "black box," like the make-whole determination under current URCS. Carriers, shippers, and other interested parties will be unable to review the calculations and generate URCS estimates prior to the Board's official release, which is typically at the end of the following year (*e.g.*, the 2014 URCS was released in November 2015).
[17] *See* Comments of the Association of American Railroads, Comments of BNSF Railway Company, and Comments of Union Pacific Railroad Company. June 20, 2013.

the Board has properly stepped away from those discredited modifications and should not consider reversing course.

A. Railroad-Owned Equipment Costs During Switching

WCTL is particularly critical of the Board's proposal to correct a flaw in the current URCS treatment of costs of railroad-provided equipment in switching. The Board's proposal would eliminate the large efficiency savings (cost reductions) from unit-train shipments that currently are inappropriately re-distributed to smaller shipments in other car types.[18] Under the Board's Supplemental NPR approach, URCS efficiencies for unit-train operations in railroad-owned gondolas and open top hoppers can no longer be distributed away from coal unit trains to shipments in box cars, covered hoppers and other car types. Because the efficiency savings are not redistributed to other services, the unit-train costs under the Board's Supplemental NPR would generally increase. In opposing the change, however, WCTL rejects as a "bald assertion" that the Board's current make-whole adjustment misallocates costs, claiming "there is no evidence in the record that variable costs differ significantly by car type." WCTL is wrong.

Railroads report freight car costs separately by individual car type in Schedules 414 and 415 of the R-1. These schedules present the repair and maintenance, annual depreciation, and lease and rental expenses and the gross investment and accumulated depreciation balances specific to each car type. Thus, the resulting URCS unit costs per car day and per car mile reflect the costs that each railroad incurred for that car type. In a given year, if a railroad incurred more maintenance and repair costs for open-top hoppers, or more lease rental costs for plain gondolas, then the corresponding unit costs would reflect the relatively greater expense for that car type. When a costing system assumes larger-block shipments of those car types are

[18] *See* Supplemental NPR at 14-16.

more efficient than average, the associated cost savings must be re-distributed to other shipments if all variable costs are to be assigned. Those savings are specific to the unit-train car types and thus should be re-distributed only to shipments of that same car type. It would be incorrect to re-distribute those costs to single-car shipments of other car types.[19] Therefore, the misallocation that occurs under the current "one size fits all" approach to calculating the make-whole for railroad-owned equipment can and should be eliminated to more accurately keep the assignment of such costs to shipments of the same car type.

B. Locomotive Unit Mile Costs

WCTL urges the Board to restore its NPR proposal to allocate locomotive unit-mile costs on a shipment basis. As the AAR's 2013 Opening Comments explained,[20] the Board's current scaling factor more accurately adjusts locomotive costs based on the relative weight of the shipment being costed to account for the relatively higher costs of powering heavier trains – which require more locomotives, more horsepower, and/or more effort and fuel to operate than do smaller, lighter trains – than does the "one size fits all" proposal that WCTL advocates.

Finally, WCTL does not submit any data or analysis to support its assertions.[21] The Board should reject the WCTL proposals.

---

[19] The build-up of car-type specific URCS costs for railroad-owned equipment differs from the other make-whole adjustments for switching and station clerical costs. Those SEM and station clerical costs are all based on expenses that are reported in aggregate for shipments regardless of car type in the Schedule 410. In contrast, such non-car type specific costs – such as fringe benefits and administration – constitute only a small minority of railroad-owned car-day and car-mile costs. *See* URCS Phase II Worktable D6.

[20] *See* Comments of the Association of American Railroads. Joint Verified Statement of Michael R. Baranowski and Benton V. Fisher. June 20, 2013. Page 23.

[21] In contrast, evidence was submitted that typically more locomotives are assigned to heavier trains. *See* Comments of Union Pacific Railroad Company. June 20, 2013. Pages 14-15.

V. HIGHROAD CONSULTING IS CRITICAL OF THE PIECE-MEAL NATURE OF THE BOARD'S PROPOSAL AND RECOMMENDS A COMPREHENSIVE REVIEW OF URCS

In the comments for Highroad Consulting, Ms. Sandra Dearden asserts that URCS costs are overstated based on a claim that they produce costs that are "significantly higher" than those calculated by Highroad's internal costing model. Ms. Dearden provides no details or insight into Highroad's model. Therefore, it is not possible to evaluate this claim or to determine whether Highroad's model understates costs.

A. Piece-Meal Changes

Highroad also states that the Board should not implement "piece-meal" changes to URCS. As we explained in our Opening Comments to the Supplemental NPR, the Board acknowledged in its 2010 Report to Congress that Congress intended for URCS to be updated periodically so that it would continue to produce accurate costs as the railroad industry evolved over time.[22] In that report the Board identified critical improvements such as revisiting the make-whole adjustment, modifying URCS to more appropriately assign relevant costs to hazardous materials, updating and expanding certain of the annual R-1 reporting requirements to allow for improved cost allocations within URCS, and examining the current URCS regressions with the possibility of recalculating using a more recent dataset or conducting a more in-depth evaluation of the expense account groupings within each regression equation. Instead of updating URCS to reflect the dramatic changes in the railroad industry since URCS's adoption in 1989, the Board proposes modest changes related in large part to the current make-whole adjustments. In fact, regarding shipments of hazardous materials, the Board changed course

[22] *See* Verified Statement of Michael R. Baranowski and Benton V. Fisher. October 11, 2016. Page 6.

from its past recognition of the unique operating costs associated with the transportation of such materials and instead discontinued the proceeding in a decision served September 22, 2016.[23]

We share Highroad's view that the Board's proposal attempts only to implement piece-meal fixes rather than undertake a more comprehensive review. Furthermore, these limited changes – in contrast to the broader changes that the Board itself has identified – are at distinct odds with the Board's increasing reliance on URCS in multiple settings, including the use of R/VC ratios to assess whether a commodity's exemption should be revoked (Ex Parte 704 (Sub No. 1)) and expanding the use of R/VC ratios to assess rate reasonableness (Ex Parte 665 (Sub. No. 2)).

B. Costing Unit-Train Moves

Finally, Highroad also recommends that there should be two options when costing unit train moves, distinguishing between empty cars that move in unit trains and those that return in manifest train service. Highroad does not explain why the empty-return costs are overstated when being costed as a unit train shipment, nor does it produce any empirical analysis. Identifying the manner in which empties return as Highroad suggests would require railroads to collect and report additional information for the Carload Waybill Sample. The information sought by Highroad's proposal is not maintained with the transactional or accounting data that supply most of the CWS information, and would require detailed review of operational records – including car event or train movement histories that are often voluminous – to determine the type of empty movement. The Board should reject this proposal.

[23] *See* Class I Railroad Accounting and Financial Reporting – Transportation of Hazardous Materials. Decision served September 22, 2016.

VI. CONCLUSION

The Board in its Supplemental NPR rejected the AAR's recommendation that it refrain from making any changes to URCS without any empirical basis. The Verified Statement that we submitted along with the AAR's Opening Comments to the Supplemental NPR explained that in addition to lacking an empirical basis, the Board's proposals contain a number of shortcomings.

The new proposals presented by the three groups addressed here in their opening comments lack empirical support and are no better than the Board's own efforts to maintain existing costing relationships while eliminating the make-whole adjustments and related step functions. While we expressed concerns about the Board's CWB model in our opening comments, it is preferable to Mr. Mulholland's alternate model, which incorporates two distinct cost curves and assumes a natural logarithmic relationship to assign costs and a 1/shipment size relationship to re-distribute cost savings that have no basis in URCS. Mr. Mulholland's use of a 57-car threshold, based on the average way and through train size, is also not appropriate for defining unit trains. The Board should reject the WCTL's attempts to restore the proposals from the 2013 NPR and to revert back to the current make-whole formula for railroad-owned car costs during switching, which result in less accurate costs. Finally, we share Highroad's view that the Board should undertake a more comprehensive review of URCS but disagree with Highroad's proposal to provide two options regarding the manner in which empty cars are costed for unit trains.

VERIFICATION

I declare under penalty of perjury that the foregoing is true and correct. I further certify that I am qualified and authorized to sponsor and file this testimony.

Executed on November 7, 2016

Michael R. Baranowski

VERIFICATION

I declare under penalty of perjury that the foregoing is true and correct. I further certify that I am qualified and authorized to sponsor and file this testimony.

Executed on November 7, 2016

Benton V. Fisher

Benton V. Fisher