

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

**STB DOCKET NO. EP 431 (SUB-NO. 4),
REVIEW OF THE GENERAL PURPOSE COSTING SYSTEM**

OPENING VERIFIED STATEMENT

OF

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My name is Gerald W. Fauth III. I am President of G. W. Fauth & Associates, Inc., an economic consulting firm with offices at 116 South Royal Street, Alexandria, Virginia 22314.

A statement describing my background, experience and qualifications is attached hereto as

Appendix GWF-1.

I have been asked by the Alliance for Rail Competition, Montana Wheat & Barley Committee, Colorado Wheat Administrative Committee, Idaho Barley Commission, Idaho Wheat Commission, Montana Farmers Union, Nebraska Wheat Board, Oklahoma Wheat Commission, South Dakota Wheat Commission, Texas Wheat Producer Board, And Washington Grain Commission, Wyoming Wheat Marketing Commission, National Association of Wheat Growers and U.S. Clay Producers Traffic Association, Inc. (ARC, et al.) to submit these comments in this Surface Transportation Board (STB or Board) proceeding concerning recently proposed changes by the STB to its general purpose costing system, known as the Uniform Railroad Costing System or URCS.

As indicated in Appendix GWF-1, I have over 35 years of hand-on experience working with URCS and its predecessor, Rail Form A (RFA). My experience includes the developing URCS and RFA unit cost data for Class I railroads and applying this unit cost data in the development of the costs associated with many thousands of individual railroad movements. I have previously testified in other STB and Interstate Commerce Commission (ICC) proceedings concerning URCS.¹ I also worked on many proceedings which involved the use and application of URCS costs during my time working at STB as an expert and staff advisor. As a result, I have developed a thorough and comprehensive understanding about the problems associated with the development and application of URCS.

The Board is proposing to adjust the method by which it calculates certain URCS system-average unit costs for individual Class I railroads and to make other changes related to URCS. The STB maintains that the proposed changes to URCS “would result in more accurate movement costs” and would “better reflect railroad operations” by automatically reflecting “economies of scale as shipment size increases.”² The STB’s proposed changes to URCS are summarized below:

¹ For example, I submitted expert testimony concerning URCS in ICC Ex Parte No. 431 (Sub-No. 1), Adoption of the Uniform Railroad Costing System as a General Purpose Costing System for Regulatory Purposes and, more recently, in STB Docket No. 431 (Sub-No.3), Review of the Surface Transportation Board’s General Costing System.

² STB Docket No. 431 (Sub-No.4), Review of the General Purpose Costing System, served February 4, 2013, pages 1 and 4.

Summary Of STB's Proposed Changes To URCS

- **“Make-Whole” Adjustments** - The STB has proposed eliminating the use and application of upward “*make-whole*” adjustments to non-trainload movements (currently less than 50 cars per shipment).³
- **Switching Costs Related to Switch Engine Minutes** - The STB has proposed changing the method by which URCS switching costs are developed by calculating URCS Switch Engine Minute (SEM) cost on a “per shipment” basis rather than on a “per-car” basis. In connection with this proposal, the STB has also proposed a change to the Class I railroad reporting requirements to require information regarding shipments loaded and terminated.
- **Station Clerical Costs** - The STB has also proposed changing the method by which URCS station clerical costs on a “per shipment” basis rather than on a “per-car” basis.
- **Empty/Loaded Ratio (E/L Ratio)** - Currently, URCS applies an empty return ratio of 2.0 to all trainload movements, which assumes all trainloads (50 or more cars per shipment) are dedicated unit trains, which return empty to the same location. For example, a trainload moving 100 loaded miles would assume to have 100 empty miles. The STB has proposed using the carriers’ system average E/L ratios to all trainload movements, which may be greater than or less than 2.0.
- **I&I Switching Mileage** - The STB has proposed increasing the distance between I&I switching from every 200 miles to every 320 miles.
- **Definition of Trainload** - For decades, a trainload, for regulatory purposes, has been defined by the STB and ICC as a shipment consisting of 50 or more cars. The STB has proposed changing this trainload definition from 50 to 80 or more cars per shipment.
- **Locomotive Unit Mile** - The STB has proposed changing the way that URCS allocated locomotive unit mile (LUM) costs. For trainload shipments (80 or more cars), the STB has proposed allocating 100% of the trains’ LUM costs. For single car and multiple car shipments, the allocation would be based on the cars per shipment relative to the minimum trainload size (i.e., 80 cars).

³ According to the STB’s May 27, 2010 Report to Congress concerning URCS, the make-whole adjustments “redistribute the efficiency savings that a railroad obtains in higher-volume shipments across all of that carrier’s lower-volume shipments. The make-whole adjustment maintains the same total sum of variable costs across all of the carrier’s shipments, while recognizing the efficiency in the carrier’s higher-volume movements.” (page 4) The adjustments are developed by using the STB’s Waybill Sample data and by making separate downward “270” volume shipment adjustments to trainload (50 or more cars) and multiple-car shipments (6 to 49 cars) and then re-allocating the savings in the form of upward adjustments to multiple-car and single car (1 to 5 cars) shipments.

Make-Whole Adjustments

The STB has proposed certain adjustments to URCS which it believes would eliminate the need for so-called separate upward “*make-whole*” adjustments to single-car and multiple car movements. The STB has described various concerns associated with make-whole adjustments. As indicated in the following table, these make-whole adjustments can be significant (e.g., \$992.04 per car for single-car BNSF movements) and vary significantly (i.e., \$8.79 to \$992.04 per car) depending on the railroad and the type of movement:

Table 1
Comparison of 2011 URCS Make-Whole Add-On’s Per Car
For Single-Car and Multiple Car Grain Movements
Moving 1,000 Miles In Class I Single-Line Direct Service⁴

Railroad	Single (1 to 5) Car		Multiple (6 to 49) Cars	
	Railroad Car	Private Car	Railroad Car	Private Car
BNSF	\$992.04	\$696.15	\$360.04	\$254.17
CN	\$131.08	\$58.34	\$21.58	\$8.79
CP	\$374.62	\$179.22	\$90.59	\$50.64
CSX	\$592.38	\$408.82	\$150.70	\$101.59
KCS	\$238.74	\$141.92	\$105.90	\$46.72
NS	\$427.42	\$276.33	\$118.94	\$61.60
UP	\$756.68	\$552.90	\$335.10	\$241.65

Given the significant amounts and wide variations of these figures, the Board has every reason to be concerned about the URCS make-whole adjustments.

⁴ Joint line movements involve an interchange(s) and incur an additional make-whole add on. Multiple car movements also involve the application of the downward “270” adjustments (e.g., 50% of the industry switching cost), therefore, the net increase for multiple car movements would be lower.

Such significant upward cost adjustments to the system-average URCS variable cost can easily make the difference in determining whether or not the railroad traffic is subject to STB jurisdiction. For example, a 1,000-mile single-car captive grain movement in railroad cars via CN-direct (which would have a make-whole adjustment of \$131.08 per car) may be subject to STB jurisdiction, whereas similarly-situated 1,000-mile captive grain movements on BNSF (which dominates the grain market, but has a make-whole adjustment of \$992.04 per car) may not be subject to STB jurisdiction. BNSF's higher URCS make-whole variable cost could make the movement's R/VC percentage lower than 180%.

In my 2009 STB testimony, I recommended that the STB make changes to the make-whole adjustments and the STB, in a subsequent 2010 report to Congress, suggested changes needed to be made to the URCS make-whole adjustments.⁵ I generally applaud the Board's proposal to eliminate the need for these significant upward "make-whole" adjustments by attempting to "more accurately calculate the system-average unit costs." However, it may prove difficult to completely eliminate these or similar accounting adjustments.

For example, if the STB adopts the proposed changes to URCS at issue here and then applies the revised URCS data in the STB's costing of the Waybill Sample records (which the STB currently does and the resulting "Costed" Waybill Sample is used for many purposes), the total variable cost assigned to each Class I railroad will be obviously be different from the total URCS variable cost for that carrier. Depending on the URCS adjustments that are made, the STB's proposals could over or under-allocate URCS costs to the carriers' movements.

Obviously, the "devil is in the details."

⁵ See STB Report to Congress Regarding the Uniform Rail Costing System, dated May 27, 2010.

If the Board's logic, rationale and reasoning associated with the URCS proposals prove correct (which cannot be determined until the railroads submit additional information), the differences (and any associated make-whole adjustments) would be minimal. Of course, the opposite could also be true and the proposed URCS changes could result in significant over or under URCS variable cost allocations. For this reason, the STB's URCS proposals should be thoroughly tested before they are formally adopted by the Board.

The Board recognized this cost allocation problem in its Report to Congress Regarding the Uniform Rail Costing System, dated May 27, 2010 (page 19):

There is some concern among stakeholders that the make-whole adjustment does not accurately reflect current railroad operations. Railroads have been encouraging shippers to move product in longer trains, which the railroads can move more cost-effectively and thus better utilize assets. This is particularly true in coal, grain, and intermodal markets.

Because more traffic moves in volume shipments, there are ever-fewer single-car shipments left to absorb the "shortfall," a value that increases with the number of volume shipments. Accordingly, a study of this issue might reveal that the current method for allocating the "shortfall" and modern shipments practices results in an upward distortion of the single-car shipment variable costs. In an extreme hypothetical, if only one shipment were transported as a single car shipment, resulting in a large shortfall, all of the shortfall costs would be added to that lone single-car shipment, providing a nonsensical result.

Should the Board determine that the make-whole adjustment warrants revision, one potential change could be to allocate the shortfall to all shipments, not just the single-car shipments. This would result in smaller cost reductions for the volume shipments (as they get some of the shortfall added back to them) and smaller cost additions to the single-car shipments (because a portion of the shortfall is set aside and added back to the volume shipments instead). Therefore, if unit trains constitute the overwhelming majority of a carrier's traffic, they will closely resemble the system average and URCS will not overly burden the few single-car movements with a large cost allocation.

Switching Costs Related to Switch Engine Minutes

The largest component associated with the STB's make-whole adjustments is related to URCS switching costs. URCS develops "switch engine minute" or SEM unit costs and allocates this SEM unit costs based on the average switch engine minutes for the type of switching (i.e., industry, inter-train & intra-train (I&I), interchange, intra-terminal and inter-terminal switching) and the number of loaded and empty cars switched.

The STB maintains that SEM costs are "better accounted for on a per-shipment basis rather than per-car basis."⁶ Whether this statement is true or not, such a change to URCS could have a significant impact on the variable cost of a movement, especially for shippers with smaller shipments in terms of the number of cars per shipment. Smaller shippers have to switch more shipments in order to move the same number of cars as large shippers. For example, 100 single-car shipments and a single 100-car shipment both equal 100 cars shipped. Therefore, it is very likely that more URCS variable switching costs will be allocated to smaller shipments if switching cost is allocated on a per shipment basis. This is demonstrated in the following table:

⁶ STB Docket No. 431 (Sub-No.4), served February 4, 2013, page 5.

Table 2

**Example of The Potential Impact Associated With
The Proposed Change in URCS SEM Cost Development
From a “Per Car” to a “Per Shipment” Basis**

Ln.	Item	Amount
1	Total Railroad Switching Cost (Assumed - Crew, Locomotive, Fuel, etc.)	\$1,000,000
2	Total Number of Switches (Assumed)	500
3	Total Cost Per Switch (L.1 / L.2)	\$2,000.00
4	Total Railroad Cars Handled (Assumed)	25,100
5	Total Cost Per Car Handled (L.1 / L.4)	\$39.84
Origin A – 1 Car Per Switch, 100 Switches and 100 Total Cars		
6	Origin A - Switching Cost Based on Number of Switches (L.3 x 100)	\$200,000
7	Origin A - Switching Cost Based on Cars Handled (L.5 x 100)	\$3,984
Origin B – 25 Cars Per Switch, 100 Switches and 2,500 Total Cars		
8	Origin B - Switching Cost Based on Number of Switches (L.3 x 100)	\$200,000
9	Origin B - Switching Cost Based on Cars Handled (L.5 x 2,500)	\$99,602
Origin C – 50 Cars Per Switch, 100 Switches and 5,000 Total Cars		
10	Origin C - Switching Cost Based on Number of Switches (L.3 x 100)	\$200,000
11	Origin C - Switching Cost Based on Cars Handled (L.5 x 5,000)	\$199,203
Origin D – 75 Cars Per Switch, 100 Switches and 7,500 Total Cars		
12	Origin D - Switching Cost Based on Number of Switches (L.3 x 100)	\$200,000
13	Origin D - Switching Cost Based on Cars Handled (L.5 x 7,500)	\$298,805
Origin E – 100 Cars Per Switch, 100 Switches and 10,000 Total Cars		
14	Origin E - Switching Cost Based on Number of Switches (L.3 x 100)	\$200,000
15	Origin E - Switching Cost Based on Cars Handled (L.5 x 10,000)	\$398,406
Total– 500 Switches and 25,100 Cars		
16	Total - Switching Cost Based on Switches (L.6+L.8+L.10+L.12+L.14)	\$1,000,000
17	Total - Switching Cost Based on Cars Handled (L.7+L.9+L.11+L.13+L.15)	\$1,000,000

Table 2 illustrates that a change in the development of URCS SEM cost to a “per shipment” basis could significantly reduce the switching cost allocated to larger shippers (e.g., see Origin E, L.14 and L.15) while significantly increasing the switching costs allocated to shippers with small shipment sizes (e.g. see Origin A, L.6 and L.7). Consequently, such a change could further reduce number of shippers who may be subject to STB rate jurisdiction and, thus, should be adequately tested before it is formally adopted by the Board.

Unfortunately, the STB’s proposal to adjust URCS SEM costs cannot be adequately tested since it requires additional reporting requirements. In order to calculate the SEM unit costs on a per-shipment basis, the STB has proposed to adjust the Class I reporting requirements of both the Annual Report of Cars Loaded and Cars Terminated (Form STB-54) and the Quarterly Report of Freight Commodity Statistics (Form QCS) in order to require information on the number of shipments loaded and terminated.

The railroads are already in possession of this shipment data and should, without too much effort, be able to provide shipment data for the last three years (2010, 2011 and 2012) which could then be used by the STB and other parties to test the Board’s proposal in regard to the proposed URCS SEM adjustments. As indicated by the STB, these proposed reporting requirements “should not pose a significant burden on the Class I rail carriers because it is likely that they are already tracking this information.”⁷

Aside from the problem of inadequate data to test the Board’s proposed change as to switching costs, the Board’s reasoning is incorrect and misplaced. Specifically, the decision states:

⁷ *Ibid*

Operationally, a shipment of rail cars is generally connected into a contiguous block of cars prior to loading, and is handled as a contiguous block from origin to destination. As such, the costs to switch a shipment of a four-car block should be the same as the costs to switch a shipment of an eight-car block. For this reason, the costs for each type of SEM switching are better accounted for on a per-shipment basis rather than a per-car basis. This change would not only better reflect actual operating costs, but the per-car cost of switching would drop as shipment size increases, thus properly reflecting economies of scale. (page 5)

The Board maintains that most shipments are handled and switched individually and this is true in many cases, such as large, multiple-car and trainload shipments. In fact, many large shipments, such as BNSF's 110-car shuttle-train grain movements and many unit train coal movements, essentially involve and incur no (zero) switching costs since the locomotives and crews remain with trains and often involve "loop" tracks. The Board states that "the costs to switch a shipment of a four-car block should be the same as the costs to switch a shipment of an eight-car block." The total switching costs may be nearly the same, but, for example, the 4-car block could contain 4 single-car shipments or the 8-car block could contain two 4-car shipments. Therefore, the allocation of the switching costs may not always be equal.

This appears to be especially true for grain shipments. For example, the 2011 Public Waybill Sample indicates that 407,240 STCC 01 carloads (which represent over 22% of the total STCC 01 carloads) moved in single-car (1 car) shipments. However, it is likely that only a very small minority of these single-car shipments were actually switched as single cars. In fact, almost 90% of the 2011 Public Waybill Sample records (530,852 out of 599,284 records) included in the Waybill Sample are single-car (1 car) shipments, whereas, less than 1% of the records (2,103 records) are two-car shipments. This demonstrates that the railroads (presumably for accounting purposes) currently treat as single-car shipments many shipments that involve more than 1 car per switch.

The same is true for many other commodities. For example, over the years I have observed and conducted many studies of the origin and destination switching associated with railroad clay shipments from Georgia. Although this traffic predominantly moves under one shipment/car per waybill, this traffic is rarely, if ever, switched or handled by the railroad as a single car. The single-car clay shipments are usually placed in multiple-car blocks of single-car shipments at the origin by the shipper, then are switched or handled by the railroad in multiple-car blocks, and then delivered by the railroad to the destination in multiple car blocks, which often include other blocks of cars/shipments to the same destination (such as export clay shipments to Savannah).

I have conducted numerous studies using the STB's Confidential Waybill Sample in a wide-variety of STB proceedings. Based on my previous studies, I believe that there are many thousands of shipments included in the Waybill Sample as single shipments which moved via the same railroad with other shipments from the same facility on the same day. In most such cases, it would be extremely doubtful, very rare and inefficient if the railroads would switch one car and come back to the same location later to switch another single car.

It should be noted that ARC requested access to the Confidential Waybill for use in this proceeding, however, the Board provided only limited access which excluded information related to the origin, destination and railroads (see STB decision in EP 431 (Sub-No. 4), served April 25, 2013). It is not clear why the Board imposed such restrictions on access to the Costed Waybill Sample in a proceeding in which costing and the impacts of costing changes are so clearly at issue. These restrictions are far more disadvantageous to shipper parties like ARC, et al. than to railroad parties. As a result of the inadequate data made available by the Board, ARC has been unable to develop data that might clarify the extent to which the single-car designation is used by railroads in a way that appears to produce inaccurate switching cost data.

In order to account for this problem, the STB should consider requiring information from the railroads relating to the number of shipments per switching event or block. The railroads could produce information relating to the number of shipments per switch based on car ownership, car type and commodity and this data could be used by the STB to develop URCS adjustments to the SEM cost per shipment. For example, most coal movements and many shuttle trains of grain involve one shipment per switch, whereas other commodities may have a ratios of, say, 1.25 or 30 shipments per switch, which could be used to adjust the URCS SEM cost.

Station Clerical Costs

The STB has also proposed to change the way in which URCS station clerical cost are calculated by also developing these costs on a “per shipment” basis. Based on modern electronic waybilling, the Board may be correct in assuming that “there is little difference in the administrative costs between shipments of different sizes.”⁸ However, the Board’s proposal also requires additional information on the number of shipments in order to be adequately analyzed and tested.⁹ Again, the railroads possess this data and should be able to provide shipment data for the last three years (2010, 2011 and 2012) which could then be used by the STB and other parties to analyze and test the Board’s proposal in regard to the proposed URCS Station Clerical cost adjustments.

Empty/Loaded Ratio (E/L Ratio)

Currently, the STB’s URCS Phase III costing program applies an empty return ratio of 2.0 to all trainload movements (currently 50 or more cars per shipment), which assumes all

⁸ STB Docket No. EP 431 (Sub-No. 4), served February 4, 2013, page 7.

⁹ I note that the current “270” adjustments to multiple car, trainload and unit train movements assume the 75% of the station clerical cost is associated with the shipment and 25% is related to the number of carloads.

trainloads are dedicated unit trains and return empty to the same location. For example, a trainload moving 100 loaded miles would be assumed to also move 100 empty miles. The STB has proposed using the carriers' system average E/L ratios to all trainload movements, which may be greater than or less than 2.0. The following table shows the 2011 E/L ratios for the Class I railroads:

Table 3
2011 URCS E/L Ratios For
Railroad and Private Covered Hoppers

Railroad	Railroad Cars	Private Cars
BNSF	1.97101	2.01601
CN	2.10721	2.10293
CP	1.94370	2.02312
CSX	2.03691	1.84734
KCS	1.99723	2.00841
NS	2.09281	2.03287
UP	2.03525	1.97275

As can be seen, in most cases (9 out of 14), the E/L ratios for covered-hoppers are higher than 2.0. In these cases, there are more empty than loaded miles allocated to the movements. The STB's proposed approach would treat trainloads and dedicated unit trains the same, which could have an adverse costing impact on efficient shuttle train grain movements.

In recent years, BNSF (which dominates the grain market), has significantly increased the number of shuttle train grain elevators and terminals which are capable of handling at least 110-car dedicated shuttle trains. BNSF states that "BNSF's Dedicated Train service is the most efficient and economical way to move high-volumes of single commodities from a single origin

to a single destination.”¹⁰ For URCS costing of such dedicated unit train service, the STB should allow parties to use a 2.0 E/L Ratio. The STB may also want to consider requiring the railroads to identify such dedicated shuttle and unit trains in the waybill sample reporting. This would allow the STB to properly use and apply the 2.0 E/L Ratio to dedicated unit and shuttle trains in its costing of the waybill sample records.

I&I Switching Mileage

The STB has proposed increasing the distance between I&I switching from every 200 miles to every 320 miles. The STB developed this figure “Based on a comparison of the average length of haul for the Class I railroads in 1990 (pre-mergers) and 2011 (post-mergers).” The Board “observed a 60% increase in the overall length of haul” and therefore has proposed “to increase the distance between I&I switches by 60%, from 200 miles to 320 miles.” The Board acknowledged that “the actual average distance between I&I switches may be greater than 320 miles” and encouraged interested parties to submit data and comments on whether 60% is an appropriate increase, or whether the Board should consider an alternative distance between I&I switches that more accurately reflects railroad operations.”¹¹

ARC and other interested shipper parties have no way to determine “whether 60% is an appropriate increase.” The railroads maintain this I&I switching data and have provided it in the past.¹² Rather than using a number such as 320 miles, for which no support has been provided, the STB should require the railroads to submit data concerning I&I switching and allow parties to comment of the railroads data.

¹⁰ <http://www.bnsf.com/customers/how-can-i-ship/dedicated-train-service/#%23subtabs-2>
¹¹ STB Docket No. EP 431 (Sub-No. 4), served February 4, 2013, page 8.

¹² STB Docket No. EP 431 (Sub-No.2), Review of the General Purpose Costing System, decided December 5, 1997, 2 S.T.B 755, indicates that the AAR submitted data which showed that TOFC/COFC incurred I&I switching every 4,163 miles.

Definition of Trainload

For decades, a trainload, for regulatory purposes, has been defined by the STB and ICC as a shipment consisting of 50 or more cars. The STB has proposed changing this long-held trainload definition from 50 to 80 or more cars per shipment. Based on the current and proposed URCS methodologies, this change in the URCS trainload default value will likely result in significant increases in variable cost for shipments ranging from 50 to 79 cars per shipments. The following table summarizes the numbers of carloads moving in shipment sizes ranging from 50 to 79 cars for the major commodity (STCC) traffic groups:

Table 4

Summary of 2011 Rail Carloads Moving in Shipments Ranging from 50 to 79 Carloads

STCC	Description	Total	
		Carloads	%
01	Farm Products	251,005	21.20%
10	Metallic Ores	78,944	6.67%
11	Coal	370,449	31.29%
13	Crude Petroleum, Natural Gas or Gas	9,696	0.82%
14	Non-Metallic Ores	271,203	22.90%
20	Food or Kindred Products	14,768	1.25%
24	Lumber or Wood Products	1,140	0.10%
28	Chemicals or Allied Products	93,784	7.92%
29	Petroleum or Coal Products	17,872	1.51%
32	Clay, Concrete, Glass or Stone Products	19,282	1.63%
33	Primary Metal Products	33,623	2.84%
35	Machinery, Excl. Electrical	1,502	0.13%
37	Transportation Equipment	9,274	0.78%
40	Waste of Scrap Materials	872	0.07%
41	Misc. Freight Shipments	9,484	0.80%
48	Waste Hazardous Materials	1,155	0.10%
Total 50 to 79 Car Shipments		1,184,053	100.00%

As can be seen, 1,184,053 million carloads moved in shipments ranging from 50 to 79 carloads per shipment in 2011. These large shipments carried approximately 124 million tons and generated over \$2.1 billion in annual railroad freight charges. This demonstrates that the STB's proposed change in the definition of a trainload could impact a significant amount of rail traffic. Shippers of Farm Products (STCC 01) would be among the largest traffic groups impacted by the STB's proposed change, as over 250,000 carloads moved in shipments ranging from 50 to 79 cars per shipments. Corn shipments make up the largest STCC 01 group. In 2011, approximately 174,000 rail carloads of corn moved in shipments ranging from 50 to 79 cars per shipment.

It should be noted that NS initiated a 75-car shuttle trains program in 2000 to enable NS "to deliver higher volumes of grain with fewer cars and less congestion on our rail lines. Features of the shuttle program include assigned power, improved transit times, and faster loading at origin and unloading at destination."¹³ However, NS's efficient 75-car grain shuttle trains would not be considered trainloads under the Board's proposal.

The number of 50 to 79 car shipments by BNSF dropped significantly in recent years as a result of BNSF's 2009 change in certain grain tariffs from "52-car minimum" rate to "48-car cars." This change was the subject to an unreasonable practice complaint case before the STB in STB Docket No. 42124, State of Montana v. BNSF Railway Company. It is clear from the evidence in that proceeding that BNSF made this change to take advantage of the URCS 50-car trainload default value, which is an issue in this proceeding.¹⁴ As a result of BNSF's change, the number of 50 to 79-car grain shipments decreased significantly.

¹³ <http://www.nscorp.com/nscportal/nscorp/Customers/Industrial-Products/Agriculture/>

¹⁴ I submitted expert testimony on behalf of the State of Montana in STB Docket No. 42124.

Currently, the majority of 50 to 79-car rail traffic moves at R/VC ratios which are equal to or above the STB's jurisdictional threshold of 180%. However, there is a great risk that the STB's proposed change in the definition of a trainload from 50 to 80 cars will result in the *defacto* deregulation of this 50 to 79 car traffic. ARC (and others) requested access to the STB's Confidential Costed Waybill Sample data in order to evaluate the jurisdictional impact on traffic, but the STB denied ARC's request to access this data.¹⁵

The STB recognizes that under the STB's current URCS approach there is a significant difference in the URCS variable cost associated with 49-car shipment and a 50-car shipment, which is a result of the current definition of a trainload 50 or more cars per shipment. Under the current approach, shipments with less than 50 cars are impacted by the upward make-whole adjustments (which the STB now proposes to eliminate), whereas shipments with 50 or more cars per shipment receive the downward "270" adjustments. The proposed elimination of the make-whole adjustment could impact that difference, but it will not completely eliminate the differences resulting from the costing methodology used for trainload and non-trainload movements. In addition, if the Board's proposal allocates significantly more costs to 79-car shipments than to 80-car shipments, the Board must recognize the danger that railroads might attempt to prevent shippers from reaching the 80-car shipment threshold for lower URCS costs. The Board has said it hopes to avoid a significant costing break point at 80 cars, but its success in that effort cannot be tested based on currently available data.

¹⁵ See STB decision in EP 431 (Sub-No.4), served April 25, 2013.

Locomotive Unit Mile

One of the major differences in URCS costing of trainload (currently 50 or more cars) and non-trainload (currently less than 50 cars) shipments is in the development of URCS Locomotive Unit-Mile (LUM) cost. This is demonstrated in the in the following table:

Table 5
Comparison of 2011 URCS LUM URCS Cost Per Car
For Non-Trainloads (49-Cars) and Trainloads (50-Cars) Movements
Moving 1,000 Miles In Class I Single-Line Direct Service

Railroad	49-Cars LUM	50-Cars LUM
BNSF	\$748.64	\$461.56
CSX	\$723.52	\$415.09
NS	\$740.15	\$412.17
UP	\$614.16	\$364.52

These differences in trainload and non-trainload URCS LUM costing result from the fact that that LUM costs are allocated based on the system average gross-ton-miles for trainloads and non-trainloads (which are based on system average gross-ton-miles for way-trains and through trains). The average gross-ton-miles are generally smaller than way trains and through trains. Therefore, the LUM costs for way and through trains are generally higher. The following table summarizes the 2011 URCS system average trailing gross-tons for unit trains, way trains and through trains:

Table 6

**Comparison of 2011 URCS Average Trailing Gross-Tons
For Unit Trains, Way Trains and Trainloads**

Railroad	Unit Trains / Trainloads	Way Trains	Through Trains
BNSF	9,440.36	2,044.79	5,616.91
CN	8,341.12	3,118.05	7,809.21
CP	7,734.63	1,794.89	5,593.91
CSX	7,481.13	1,198.86	4,937.98
KCS	6,228.26	3,648.87	8,553.21
NS	7,994.21	1,997.82	4,603.06
UP	9,695.41	2,110.47	5,809.36

The STB has proposed changing the way that URCS allocates locomotive unit mile (LUM) costs. For trainload shipments (80 or more cars), the STB has proposed allocating 100% of the trains' LUM costs. For single car and multiple car shipments, the allocation would be based on the cars per shipment relative to the minimum trainload size (i.e., 80 cars). The STB describes the proposed changes as follows:¹⁶

We therefore propose two modifications to how URCS currently allocates LUM costs. First, the entire train's LUM costs would be allocated to the trainload shipment, regardless of the gross tons of the trainload shipment relative to the average gross tons of a particular train. This should be more accurate than the current approach because, by definition, a trainload shipment has no other shipments that should share the LUM costs of that train.

¹⁶ STB Docket No. EP 431 (Sub-No. 4), served February 4, 2013, pages 9 and 10.

Second, the allocation of LUM costs for single and multi-car shipments would be based on the number of cars in the shipment relative to the minimum number of cars in a trainload shipment, which, as described above, we propose to be 80 cars. For example, a 20-car shipment would be allocated 25% (20/80) of the LUM costs. While the current allocation of LUM costs to single and multi-car shipments is based on the gross tons of the shipment relative to the average gross tons of way trains and through trains, basing the allocation on the number of cars in the shipment should be sufficiently precise, particularly if most cars are homogenously loaded at or near the maximum weight. Moreover, whenever practical, we seek a smooth cost function, such that there is no large cost discrepancy between a 79-car multi-car movement and an 80-car trainload movement. Basing this allocation on the number of cars in the shipment should assign LUM costs consistently on a prorated share of the total LUM costs and produce a smooth cost function across all shipment sizes, including trainload shipments.

The following table compares the current and proposed LUM costs per car differences for the major Class I railroads:

Table 7

**Comparison of Current and Proposed
2011 URCS LUM URCS Cost Per Car For
50-Car, 79-Car, 80-Car and 110-Car Shipments
Moving 1,000 Miles in Class I Single-Line Direct Service**

Railroad	Cars/ Shipment	Current LUM/Car	Proposed LUM/Car	Difference LUM/Car
BNSF	50	\$461.56	\$594.96	\$133.40
BNSF	79	\$461.56	\$594.96	\$133.40
BNSF	80	\$461.56	\$621.25	\$159.69
BNSF	110	\$461.56	\$451.82	(\$9.74)
CSX	50	\$415.09	\$508.91	\$93.82
CSX	79	\$415.09	\$508.91	\$93.82
CSX	80	\$415.09	\$457.56	\$42.47
CSX	110	\$415.09	\$332.77	(\$82.32)
NS	50	\$412.17	\$494.75	\$82.58
NS	79	\$412.17	\$494.75	\$82.58
NS	80	\$412.17	\$498.82	\$86.66
NS	110	\$412.17	\$362.78	(\$49.39)
UP	50	\$364.52	\$513.79	\$149.27
UP	79	\$364.52	\$513.79	\$149.27
UP	80	\$364.52	\$520.32	\$155.80
UP	110	\$364.52	\$378.42	\$13.90

As indicated, 1,184,053 million carloads moved in shipment sizes ranging from 50 to 79 carloads. As indicated in the previous table, the LUM costs for these shipments are likely to increase. However, the URCS LUM costs for some large trainload shipments (110 cars) may decrease slightly.

Summary

Depending on the URCS adjustments that are made, the STB's proposals could over or under-allocate URCS costs to the carriers' movements. For this reason, the STB's URCS proposals should be thoroughly tested before they are formally adopted by the Board. The railroads should be required to provide shipment data for the last three years (2010, 2011 and 2012), which could then be used by the STB and interested parties to test the Board's proposed URCS SEM adjustments.

For URCS costing of dedicated train service, such as shuttle and unit train movements, the STB should allow parties to use a 2.0 E/L Ratio. The STB should also require the railroads to identify such dedicated shuttle and unit trains in the waybill sample reporting. This would allow the STB to properly use and apply the 2.0 E/L Ratio to dedicated unit and shuttle trains in its costing of the waybill sample records.