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July 27, 2004

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Via HAND DELIVERY

The Honorable Vernon A. Williams
Secretary
Surface Transportation Board
1925 K Street, NW
Washington, DC 20423

PUBLIC VERSION

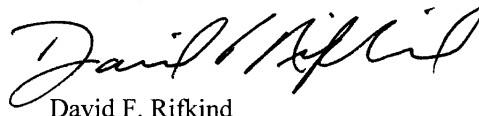
Re: **STB Docket No. 41191 (Sub-No.1), AEP Texas North Company v. The Burlington Northern and Santa Fe Railway Company**

Dear Secretary Williams:

Enclosed for filing in the above-captioned matter are the original and ten copies of the Public version of the Rebuttal Evidence and Argument of The Burlington Northern and Santa Fe Railway Company. The Public version of this Rebuttal Evidence and Argument consists of a single volume containing the Narrative and Exhibits. Also enclosed are three copies of a CD containing a PDF version of the Public Narrative. BNSF is filing the Highly Confidential version of this Rebuttal Evidence and Argument today under a separate cover letter.

Please date stamp the extra copy of this cover letter and return it to the messenger who delivered this filing.

Sincerely,



David F. Rifkind

Enclosures

cc: Counsel for Complainant

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PUBLIC VERSION

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

STB Docket No. 41191 (Sub-No. 1)

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Public Record**

**AEP TEXAS NORTH COMPANY
v.
THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY**

**Rebuttal Evidence of
The Burlington Northern and Santa Fe Railway Company**

NARRATIVE & EXHIBITS

Volume I of I

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July 27, 2004

ATTORNEYS FOR
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TABLE OF CONTENTS

	<u>Page</u>
I. COUNSEL’S ARGUMENT AND SUMMARY OF EVIDENCE	I-1
A. AEP TEXAS FAILED TO ADDRESS BNSF’S ARGUMENTS RELATING TO THE IMPACT OF THE 1996 DECISION ON THIS RATE REASONABLENESS CHALLENGE	I-1
B. THE BOARD SHOULD ADOPT BNSF’S VARIABLE COST CALCULATIONS	I-3
1. AEP Texas’ Purported Movement-Specific Road Property Calculation Dramatically Understates BNSF’s Costs	I-3
a. AEP Texas Has Failed To Show That Its Movement-Specific Adjustment Is Demonstrably Superior To An URCS-Based System-Average Variable Road Property Calculation	I-6
b. BNSF’S Internal FADB Data Cannot Be Used To Produce A Reliable Route-Specific Assessment Of Either Gross Or Net Investment.....	I-7
i. The FADB Does Not Record All Investment On A Segment-Specific Basis.....	I-8
ii. Line-Specific Accumulated Depreciation Developed With The Depreciation Calculator Significantly Overstates Total Accumulated Depreciation Reported In The R-1.....	I-12
c. A Variability Factor Much Higher Than 50 Percent Must Be Used To Calculate Road Property Variable Costs On High Density Lines	I-19
2. The Board Should Not Attempt To Calculate Variable Costs On Movements For Which There Is Inadequate Data In The Record.....	I-34
3. Variable Costs Of The Issue Movement.....	I-35
C. CONCLUSION.....	I-37
II. MARKET DOMINANCE	II-1
A. QUANTITATIVE EVIDENCE.....	II-1
1. Variable Costs.....	II-1
a. Differences In General Cost Estimating Procedures	II-4

i.	General Overhead Ratio For Return On Investment.....	II-4
ii.	Other Mine Origins	II-6
iii.	URCS Linking Factor	II-6
b.	Differences In The Traffic And Operating Characteristics Developed By BNSF And AEP Texas	II-8
i.	Locomotive Cycle Times	II-8
c.	Differences In Variable Costs Developed By BNSF And AEP Texas.....	II-10
i.	Gross Ton-Mile Expenses.....	II-11
ii.	Switching	II-32
iii.	Train-Mile Expense – Crew Wages.....	II-36
iv.	Locomotive Ownership Expense	II-37
v.	Freight Car Ownership.....	II-48
vi.	Freight Car Operating	II-50
vii.	Third-Party Loading Expense.....	II-51
viii.	EOTD Ownership Expense.....	II-51
ix.	Loss And Damage.....	II-52
x.	Car Load Handling.....	II-52
2.	Restatement of Variable Costs and Summary	II-52
IV.	WITNESS QUALIFICATIONS AND VERIFICATIONS	IV-1

TABLE OF ABBREVIATIONS

AEP Texas	AEP Texas North Company
BNSF	The Burlington Northern and Santa Fe Railway Company
DCF	Discounted Cash Flow
EOTDs	End-of-Train Devices
FADB	Fixed Asset Database
FTI	FTI Consulting Inc.
GTM	Gross Ton Mile
ICC	Interstate Commerce Commission
LUM	Locomotive Unit Mile
MERS-TD	Shop Release to Train Departure
MERS- WOAs MOW	Shop Release to Work Order Assign Maintenance of Way
NS	Norfolk Southern
PISNU	Property in Service Not Utilized
PRB	Powder River Basin
RFA	Rail Form A
R/VC	Revenue-to-Variable Cost
SAC	Stand-Alone Cost
SEM	Switch Engine Minute
SFGT	Speed Factored Gross Ton Formula
STB	Surface Transportation Board
T&E	Train and Engine Crew
TPM	Train Performance Model
UP	Union Pacific
URCS	Uniform Railroad Costing System

CASE NAMES

<i>1996 Decision</i>	<i>West Texas Utilities Co. v. Burlington Northern R.R. Co.</i> , 1 STB 636 (served May 3, 1996)
<i>APL</i>	<i>Arkansas Power & Light Co. v. Burlington Northern R.R. Co. et al.</i> , ICC Docket No. 36719 (served May 13, 1987)
<i>CP&L or CPL</i>	<i>Carolina Power and Light Company v. Norfolk Southern Ry. Co.</i> , STB Docket No. 42072 (served Dec. 23, 2003)
<i>CLE</i>	<i>Central Louisiana Elec. Co. v. Burlington Northern R.R. Co. and Missouri Pac. R.R. Co.</i> , ICC Docket No. 37667S (served Feb. 25, 1983)
<i>FMC</i>	<i>FMC Wyoming Corp. v. Union Pacific R.R.</i> , STB Docket 42022 (served May 12, 2000)
<i>General Procedures</i>	<i>General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases</i> , STB Ex Parte No. 347 (Sub-No. 3) (served Mar. 12, 2001)
<i>Georgia Power</i>	<i>Georgia Power Company, et al. v. Southern Railway Company and Norfolk Southern</i> , ICC Docket No. 40581 (served November 8, 1993)
<i>May 2003 Decision</i>	<i>West Texas Utilities v. The Burlington Northern and Santa Fe Ry. Co.</i> , STB Docket No. 41191 (served May 29, 2003)
<i>OPPD</i>	<i>Omaha Public Power Dist. v. The Burlington Northern R.R.</i> , 3 I.C.C.2d 853 (1987)
<i>Otter Tail</i>	<i>Otter Tail Power Company v. The Burlington Northern and Santa Fe Ry. Co.</i> , STB Docket No. 42071
<i>PEPCO</i>	<i>PEPCO v. CSX Transportation Co.</i> , STB Docket No. 41989 (served may 27, 1997)
<i>TMPA</i>	<i>Texas Municipal Power Agency v. The Burlington Northern and Santa Fe Ry. Co.</i> , STB Docket No. 42056 (served Mar. 24, 2003)
<i>WPL</i>	<i>Wisconsin Power & Light Co. v. Union Pacific Ry.</i> , STB Docket No. 42051 (served Sept. 12, 2001)
<i>WTU</i>	<i>West Texas Utilities Co. v. Burlington Northern R.R.</i> , STB Docket No. 41191 (served may 3, 1996)
<i>Xcel</i>	<i>Public Service Company of Colorado D/B/A Xcel Energy v. The Burlington Northern and Santa Fe Ry. Co.</i> , STB Docket No. 42057

I. COUNSEL’S ARGUMENT AND SUMMARY OF EVIDENCE

This is the Rebuttal Evidence and Argument of defendant The Burlington Northern and Santa Fe Railway Company (“BNSF”) in the rate reasonableness proceeding *AEP Texas North Company v. The Burlington Northern and Santa Fe Railway Company*, STB Docket No. 41191 (Sub-No. 1). The format of this Rebuttal Evidence and Argument complies with that prescribed in the Board’s March 12, 2001 decision in STB Ex Parte No. 347 (Sub-No. 3), *General Procedures for Presenting Evidence in Stand-Alone Rate Cases*.

A. AEP TEXAS FAILED TO ADDRESS BNSF’S ARGUMENTS RELATING TO THE IMPACT OF THE 1996 DECISION ON THIS RATE REASONABLENESS CHALLENGE

On opening, BNSF explained why this maximum reasonable rate proceeding should not be before the Board. As BNSF explained, the Board has already considered and ruled on SAC evidence on the maximum reasonable rates for the transportation of PRB coal to AEP Texas’ Oklaunion Station. The Board’s *1996 Decision*, as corrected by its *May 2003 Decision*, prescribed maximum reasonable SAC rates for one PRB mine origin, although the Board’s calculations covered multiple PRB origins, including many of the same origins at issue here.¹ The Board’s 1996 SAC calculations also covered the period 1995-2014, thus encompassing all time periods at issue here. Board decisions should have vitality for the entire 20-year DCF period in a SAC analysis, unless the party seeking a different result meets its burden of showing changed circumstances that warrant a change in the SAC analysis.

On Reply, AEP Texas addresses BNSF’s argument in a single sentence buried in a footnote. AEP Texas asserts that two decisions issued by the Board in this case on March 19, 2004 “effectively moot BNSF’s argument that AEP Texas should be precluded from offering a

¹ *1996 Decision*, 1 S.T.B. at 659.

new SAC analysis for any of the movements at issue.” AEP Texas Reply Nar. at I-3, n.1.² AEP Texas offers no further explanation. In fact, its reliance on those two decisions is misplaced.

The first of the two Board’s March 19, 2004 decisions addressed BNSF’s motion to dismiss AEP Texas’ complaint on the grounds that AEP Texas has refused to pay the rates that it now challenges. That decision found that AEP Texas is required to pay the rates lawfully established by BNSF but further concluded that AEP Texas’ failure to pay the lawful rates did not affect the Board’s jurisdiction over a challenge to the rates. That decision had nothing to do with the effect of the Board’s *1996 Decision* on AEP Texas’ claims in this proceeding.

The other March 19, 2004 decision vacated the rate prescription for the Rawhide mine. That decision also did not address the impact of the *1996 Decision* in this proceeding. However, the Board did acknowledge in that decision that SAC determinations should not be changed unless changes in circumstances affect the continued validity of the maximum rate calculations in the original determination, a critical premise of BNSF’s opening argument on this issue. The Board specifically justified its decision to vacate the *1996 Decision* based on the possibility of changed circumstances:

The economic and regulatory conditions reflected in the SAC analysis can change significantly over [the 20-year DCF] time period. The rate prescription, which was imposed to protect the captive shipper from unreasonably high rates, should not become the source of a rate that would now be considered unreasonable under a SAC analysis.

March 19, 2004 Order at 3.

In BNSF’s Reply Evidence, BNSF showed that there were no circumstances justifying a departure from the *1996 Decision*’s SAC analysis, particularly not a reduction in the previously

² AEP Texas nevertheless tries to have it both ways, arguing that the Board should use the *1996 Decision* as a benchmark for variable cost purposes.

prescribed rate which was already a 31 percent reduction from BNSF's common carrier rate. As BNSF explained on Reply, a single factor is primarily responsible for the differences between AEP Texas' current SAC presentation and the Board's 1996 SAC calculations -- the expansion of the SARR traffic group to include large volumes of cross-over traffic. The basic route of AEP Texas' SARR remains the same; the same core customers are served; the same basic operating conditions apply. AEP Texas simply added a substantial volume of cross-over traffic to the core system that was used in the 1996 SAC presentation as the basis for the Board's SAC calculations. In *Xcel*, the Board stated that cross-over traffic could serve to simplify complex SAC presentations. Here, it is clear that AEP Texas is attempting to use cross-over traffic not to simplify the SAC analysis but to distort SAC calculations that were already made without the use of cross-over traffic. Manipulation of cross-over traffic cannot possibly be a valid basis for departing from the Board's prior maximum rate calculations. The Board's 1996 calculations should be presumed to reflect the maximum reasonable rate here.

B. THE BOARD SHOULD ADOPT BNSF'S VARIABLE COST CALCULATIONS

The focus of BNSF's Rebuttal Narrative is the proper calculation of variable costs for the issue traffic. Most of the issues relevant to that calculation are addressed in detail in the Narrative and there is no need to repeat or summarize them here. There are two variable cost issues, however, that BNSF addresses in the Argument because they raise significant policy concerns. The first issue involves the proper calculation of road property variable costs.

1. AEP Texas' Purported Movement-Specific Road Property Calculation Dramatically Understates BNSF's Costs

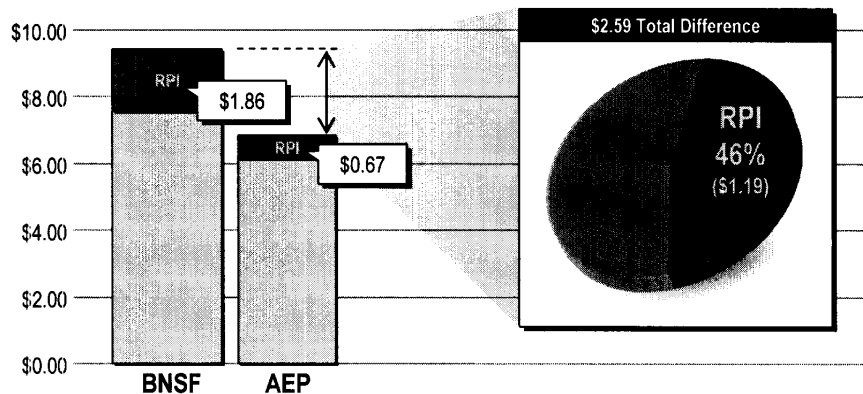
The single most important difference in the parties' respective calculations of variable costs involves the calculation of BNSF's variable road property costs -- its return on investment and depreciation. In this case, BNSF calculates those variable costs for movements from

Buckskin Mine in Third Quarter 2001, a representative movement, to be \$1.86 per ton, or 20 percent of the total variable costs for the issue traffic movement. AEP Texas calculates those variable costs to be \$0.67 per ton, or 10 percent of its estimate of the total variable costs.

Figure 1 compares the parties' resulting road property costs and illustrates that this difference represents more than 45 percent of the total difference between the variable costs calculated by the parties.

FIGURE 1

**AEP Texas' Supposed Route-Specific Road Property Calculation
Accounts For Nearly Half Of The Difference Between The Parties**



The critical importance of this issue is beyond dispute, particularly in a case like this where there is a serious question about the Board's jurisdiction under the quantitative market dominance standard to review the reasonableness of the challenged rate. The Board will have to address this issue carefully in this case.

AEP Texas' Reply Evidence presents variable road property costs on the specific route used by the issue traffic that are only a little more than a third of BNSF's system-average road property variable costs. AEP Texas argues that this substantial reduction in the variable road property costs per gross ton-mile (GTM) below the system-average on the issue traffic route is to

be expected due to the high traffic densities on that route. AEP Texas Reply Nar. At II-A-34. But, as discussed in more detail below, the variable road property costs per GTM developed using the Board's URCS methodology should not change based on the density of a line. Economies of density result from the spreading of *fixed* costs over an increasing traffic base. The URCS principles that lead to this conclusion are straightforward. Under URCS, fixed costs per unit of traffic will be substantially lower on high density lines, reflecting economies of density, but per unit variable costs should not change significantly. These principles are discussed in detail below.

AEP Texas' calculations are based on bad data and bad theory. The data employed by AEP Texas are from a BNSF internal database that is not compatible with the R-1 data relied upon by URCS. As BNSF explained to AEP Texas when it produced those data, the internal database does not include all road property expenditures on particular line segments. Moreover, BNSF does not attempt to maintain accurate data for those expenditures that are included in the database on a route-specific basis. AEP Texas then uses these data to produce an alleged movement-specific road property calculation by applying a flawed methodology that completely ignores the relationship between the variability of road property costs and density. The Board cannot accept a movement-specific variable cost calculation that rests on such a flawed foundation.

BNSF acknowledges that in recent cases the Board has accepted road property calculations similar to those sponsored by AEP Texas here. BNSF does not believe that the Board fairly addressed BNSF's concerns in those cases with the methodology used to produce the supposed movement-specific road property costs. The Board ignored altogether BNSF's concerns over the use of inappropriate depreciation calculations to produce net investment in

road property that is far below the cost reported in BNSF's R-1. The Board also avoided any substantive discussion of BNSF's economic analysis of the need to use higher variability percentages on line segments with higher than average densities. BNSF is very disturbed by the Board's refusal to address this critical issue on substantive grounds. The principles are straightforward and they lead directly to the conclusion that AEP Texas' proposed road property variable costs are a gross distortion of BNSF's costs on the high-density lines at issue. BNSF therefore sets out once again its position on these issues below and asks that the Board fully address them in this case. The evidence supporting this discussion has been set out in detail in prior submissions.

a. AEP Texas Has Failed To Show That Its Movement-Specific Adjustment Is Demonstrably Superior To An URCS-Based System-Average Variable Road Property Calculation

In determining whether it has jurisdiction to review the reasonableness of a challenged rate, the Board is required to carry out a variable cost analysis using URCS. *See* 49 U.S.C. §10707(d)(1)(B). The Board has acknowledged that "[t]he statute specifically envisions use of URCS to determine variable costs in rate cases. . . ."³

URCS is a costing methodology that is based on a railroad's system-wide data, as reported in its R-1, and on system-average unit costs derived from that data. URCS was designed "to develop, in a reasonably simple and inexpensive way, reliable *average* cost estimates."⁴ Accordingly, an URCS variable cost calculation for a particular movement starts out with average unit costs and presumes that those unit costs are appropriate for the movement at issue. Modifications to these system-average costs to account for movement-specific

³ *PEPCO*, slip op. at 3.

⁴ *Review of General Purpose Costing System*, Ex Parte No. 431 (Sub-No. 2), 1997 WL 600068, at *1 (STB served Oct. 1, 1997).

characteristics are only accepted if the “proposed change represents an improvement over current costing procedures.”⁵ In the *1996 Decision* in this case, the Board explained that

we use system average costs in our calculations except where a special study is clearly shown to be more representative of the service being provided to [the shipper] than the system-average data.⁶

Similarly, the ICC explained in adopting URCS that adjustments to URCS would be considered only “in specific cases where their superiority is proven.”⁷

To demonstrate the superiority of any route-specific calculation of road property variable costs, a complainant must satisfy two requirements: (1) the calculation must start with accurate route-specific data on the investments in the line segments at issue, and (2) the calculation must use a valid variability factor to determine the amount of that route’s total investment that is variable. If the complainant cannot meet either requirement, it would be impossible to conclude that the movement-specific calculation is reliable, let alone superior to a system-average calculation that is presumed under URCS to be appropriate. AEP Texas’ evidence fails on *both* accounts.

b. BNSF’S Internal FADB Data Cannot Be Used To Produce A Reliable Route-Specific Assessment Of Either Gross Or Net Investment

The first flaw in AEP Texas’ approach to calculating a supposed movement-specific road property variable cost is that AEP Texas uses internal BNSF data that are not accurate on a segment-specific basis and are not consistent with the R-1 data on which URCS calculations are

⁵ *Id.*

⁶ *1996 Decision*, 1 S.T.B. at 678.

⁷ *Adoption of the Uniform Rail Costing System As a General Purpose Costing System for All Regulatory Costing Purposes*, Ex Parte No. 431 (Sub-No. 1), 5 I.C.C. 2d 894, 899 n. 12 (1989). *See also* *PEPCO* at 2 n.10.

based.⁸ Moreover, use of these internal data understate segment-specific road property costs and the understatement is especially large on high-density lines such as those at issue here. The Board in past cases has failed to recognize the distortions that result when BNSF's FADB database is used to estimate segment-specific road property costs.

i. The FADB Does Not Record All Investment On A Segment-Specific Basis

BNSF's FADB database records gross investments in BNSF's fixed assets. While many gross investments are recorded accurately on a segment-specific, others are not. BNSF's primary concern is that system-wide total investments are accurate. With respect to many categories of investments, BNSF does not even attempt to identify the individual line segment where the investment actually took place. A prominent example involves ballast. Because of the difficult and costly accounting procedures that would be required to record all ballast investments by individual line segments, BNSF often employs a simple "algorithm" that spreads those investments evenly over all line segments in a region on the basis of route miles, even though it is likely that those investments would be concentrated on the high-density lines.⁹ Thus, while ballast expenditures are accurate on a system-wide basis, BNSF's simplified allocation in the FADB understates gross ballast investments on high-density line segments, and correspondingly overstates gross investments on low-density lines.

⁸ The problems with the BNSF's FADB database have been described extensively in several pleadings in recent cases. See BNSF's Reply to [AEPCO's] Third Motion to Compel, STB Docket No. 42058 (filed April 29, 2002); BNSF's Reply to Otter Tail's First Motion to Compel, STB Docket No. 42071 (filed May 1, 2002); BNSF's Reply to [Public Service Company of Colorado d/b/a Xcel Energy's] Third Motion to Compel, STB Docket No. 42057 (filed April 4, 2002); and various evidentiary filings in *TMPA*, *Xcel*, and *Otter Tail*.

⁹ Double- and triple-track line segments that are characteristic of high density lines obviously require more ballast than single-track segments.

A second problem exists with respect to the accounting of BNSF's recent road property investments. BNSF maintains a separate account outside of the FADB for investments that are in service (and therefore recorded in BNSF's R-1) but have not yet been allocated to individual line segments in the FADB – *i.e.*, BNSF's Property In Service Not Unitized account ("PISNU"). The FADB therefore understates BNSF's gross investment in road property (on individual line segments and in total) to the extent those investments are recorded in the PISNU account.

In calculating movement-specific road property variable costs, AEP Texas purports to account for the fact that assets in PISNU are not reflected in the FADB route-specific gross investment data by calculating an adjustment ratio to BNSF's system-average net investment that compares system-wide FADB data to BNSF's system-wide R-1 gross investment *minus* the PISNU investment. As the following diagrams illustrate, however, such an adjustment ratio would be accurate for individual segments *only* if the investment dollars in PISNU are ultimately allocated to individual line segments in direct proportion to each line segment's percentage share of system-wide gross investment.

Figure 2 hypothesizes a system with \$330 total investment. \$100 has already been assigned to each of the system's three segments, *i.e.*, in the FADB, and \$30 is invested in the segments but not yet recorded to individual segments, *i.e.*, in PISNU. To determine segment-specific adjustment ratios, AEP Texas removes the PISNU amount from the total system investment, and then compares that adjusted investment level to only the amounts reported in the FADB for each individual segment. Assuming that each segment carries 10 GTM, AEP Texas' approach would produce FADB investment per GTM of \$10 for each segment ($\$100 / 10 \text{ GTM}$), and \$10 for the system ($\$330 \text{ total investment} - \$30 \text{ PISNU} = \$300 \text{ adjusted investment}$, which divided by 30 total GTM for the system produces $\$10 / \text{GTM}$). Thus, Figure 2 shows that such

an approach would result in the conclusion that each segment experienced system-average investment per GTM.

FIGURE 2
AEP Texas Excludes Unassigned PISNU Amounts From Total System Investment

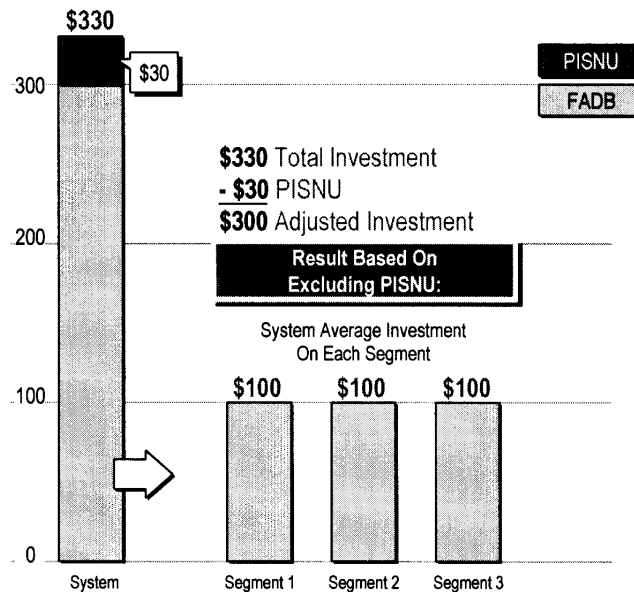


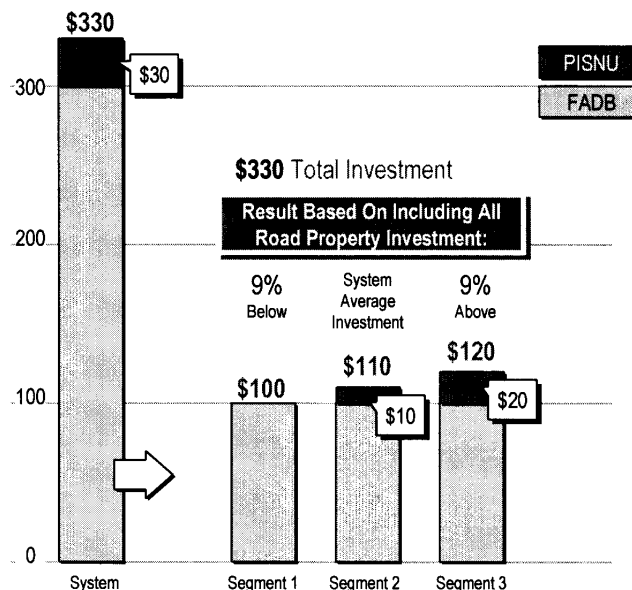
Figure 3 envisions the same system in the hypothetical described above, except that the investments for each line segment includes its proper share of the PISNU expenditures. The hypothetical assumes, consistent with the real world, that PISNU dollars are not spread evenly among all line segments. Instead, segment 2 receives \$10, segment 3 receives \$20 and segment 1 receives \$0. Now, the comparison of each of the segment-specific investments per GTM to the system average indicates that there is one segment with below system-average investment, one at the system-average level, and one above.¹⁰ Figure 3 accurately represents the varying levels of

¹⁰ Including the PISNU in the total investment used to calculate the system average produces a figure of \$11 / GTM (\$330 total investment / 30 GTM). Accounting for the PISNU

investment in the different line segments, while Figure 2, which represents AEP Texas' supposed fix to the PISNU problem, makes it appear that the investment is the same in each line. In fact, the only segment in which AEP Texas' approach produces accurate results is when the ratio of PISNU to total investment on a particular line segment is exactly equal to the ratio of PISNU to total system-wide investment. In all other circumstances, AEP Texas' approach produces inaccurate estimates of the relative gross investment for specific line segments.

FIGURE 3

There Is Only One Scenario In Which AEP Texas' Approach Produces Accurate Segment-Specific Investment When PISNU Is Included



investments on the individual segments results in total investment per GTM of \$10 for Segment 1 (\$100 / 10 GTM), \$11 for Segment 2 (\$110 / 10 GTM), and \$12 for Segment 3 (\$120 / 10 GTM). Comparing these segment-specific figures to the system-average indicates that Segment 1's investment per GTM is actually 9-percent less than the \$11 system average ($10/11=0.91$), Segment 2's is equal to the system average, and Segment 3's investment is actually 9-percent greater than the \$11 system average ($12/11=1.09$).

It is for this reason that the Board in *WPL* rejected the approach that is advocated by AEP Texas here. In that case, the Board reaffirmed its preference for system-average unit costs as the “most appropriate” treatment and denied efforts to calculate movement-specific adjustments by excluding UP’s unassigned investments from the system totals.¹¹ By using an adjustment ratio that excludes BNSF’s PISNU investments from the calculations, AEP Texas is relying on a methodology that was rejected by the Board in *WPL*.¹²

ii. Line-Specific Accumulated Depreciation Developed With The Depreciation Calculator Significantly Overstates Total Accumulated Depreciation Reported In The R-1

Even if the gross investment values in the FADB accurately reflected BNSF’s gross investment for individual line segments, the “return” portion of variable road property cost calculations is based on the *net* investment for each individual line segment.¹³ Starting with the FADB gross investment for individual line segments, AEP Texas calculates net investment for individual line segments by subtracting a supposed line-specific accumulated depreciation for each line segment from the FADB line-specific gross investment. However, the line-specific accumulated depreciation is estimated using a depreciation calculator that employs a simplistic arithmetic algorithm to apply historical depreciation rates to the investment balances reported to

¹¹ *WPL*, slip op. at 53-54.

¹² A similar problem exists with certain expenditures contained in BNSF’s series 9000 accounts. Those expenditures are never assigned to particular line segments. Any attempt to calculate movement-specific results by removing those expenditures from the system-wide totals produces inaccurate results for the same reasons discussed above.

¹³ By definition, net investment for a particular account is the gross investment for that account minus the accumulated depreciation for that account. Net investment represents the amount of the original investment in the assets in that account (*i.e.*, the gross investment of assets in that account) that has not yet been recovered by the investors and on which, therefore, the investors are entitled to earn a return. For a given group of assets, as accumulated investment increases, net investment decreases – until the assets are fully depreciated and net investment equals zero.

each individual line segment. This approach is inconsistent with the way that BNSF calculates accumulated depreciation for the R-1.

In prior cases, as well as in BNSF's Reply Evidence in this case, BNSF has demonstrated why this approach is inappropriate and how it necessarily leads to a significant overstatement of accumulated depreciation. This overstatement of accumulated depreciation results in a corresponding *understatement* of net investment in FADB for the BNSF system as a whole. For those reasons, use of the accumulated depreciation generated by the simplistic depreciation calculator for individual line segments is fatal to any line-specific calculation of road property variable costs that relies on BNSF's FADB data. The Board has completely ignored these concerns in the recent cases. As a result, BNSF is compelled to address again the reasons why the depreciation calculator cannot be used to produce accurate line-specific net investment estimates regardless of the accuracy of the FADB line-specific gross-investment data.

Problem 1: The *methodology* used to calculate line-specific annual and accumulated depreciation in the depreciation calculator is not consistent with the methodology used by BNSF to calculate annual and accumulated depreciation as reported in BNSF's R-1. The Board has approved the use of group-life accounting by BNSF in financial reports, and BNSF's R-1 data therefore contain net investment values obtained by deducting, from system-wide gross investment by account, the system-wide accumulated depreciation developed using group-life accounting. In contrast, the depreciation calculator uses a depreciation methodology akin to straight-line depreciation, which differs significantly from group-life depreciation. Therefore, any comparison of line-specific net investment using the depreciation calculator to system-average net investment developed using group-life depreciation is bound to produce a useless apples-to-oranges result.

Problem 2: Not only is the *methodology* used to develop accumulated depreciation in the FADB significantly different from that used to develop accumulated depreciation in the R-1, the amounts of accumulated depreciation calculated using the two methodologies are radically different. For 2000, the system-wide accumulated depreciation reflected in the FADB (estimated using the depreciation calculator) overstates the system-wide accumulated depreciation for those same assets reflected in BNSF's 2000 R-1 by more than 100 percent.¹⁴ Even if the system-wide gross investment reflected in FADB were fairly comparable to system-wide gross investment reported in the R-1 (after subtracting the PISNU dollars from the R-1 system-wide gross investment amounts), the fact that the system-wide accumulated depreciation reflected in FADB is overstated by a factor of *two* means that system-wide *net* investment must be *understated* by a comparable amount. This is illustrated in the following simple diagram for BNSF's road property assets included in the FADB.

¹⁴ The problems with the depreciation calculator are discussed in detail in the Verified Statement of Cami A. Elliott, included in BNSF Reply Exhibit II.A-4. This comparison can only be made on a system-wide basis since the accumulated depreciation based on the group-life methodology and reported in the R-1 is determined for each account only as system-wide totals.

FIGURE 4

{

}

Since the gross-ton-miles are the same for both the R-1 and FADB investments, the apparent net investment per gross-ton-mile is more than 20 percent lower when the FADB is used, thus necessarily producing an understated estimate of road property variable cost.

Problem 3: This overstatement of depreciation (and corresponding understatement of net investment) cannot be fixed. Although AEP Texas has not done so in this proceeding, in prior rate cases shippers have acknowledged this overstatement of accumulated depreciation when the FADB is used. But there is no way to address the inconsistency between the FADB and the R-1 by calculating line-specific accumulated depreciation on a group-life basis. Group-life accumulated depreciation is developed and reported in the R-1 only on a system-wide basis. Thus, instead of trying to produce accurate segment-specific depreciation estimates, complainants have proposed to adjust the system-wide net investment in the R-1 purportedly to make it comparable to the net investment shown in the FADB by subtracting the overstated FADB accumulated depreciation from the R-1 gross investment. The result is an inaccurate and

understated system-average net investment per gross ton-mile, which the complainants then use as the benchmark for developing line-specific adjustment ratios based on the FADB data.

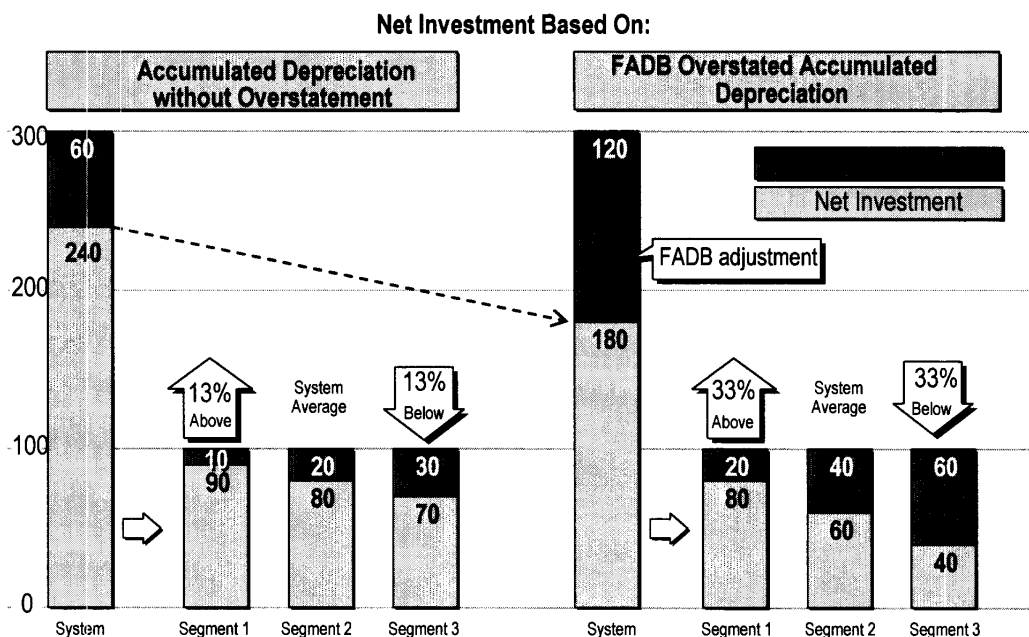
Even if the FADB reflected accurate *gross* investment for individual line segments (which, for the reasons described above, it does not), the following diagram demonstrates that the methodology that shippers have used in other cases to allegedly compensate for the substantially overstated FADB accumulated depreciation would correctly develop net investment for individual line segments *only* if the relationship between accumulated depreciation (accurately calculated) and accumulated depreciation –as calculated by the FADB – were *identical* for *every* line segment on the system.

Figure 5 below hypothesizes a system with three segments to illustrate the inability to produce an accurate net investment calculation using the FADB data and an overstated depreciation assumption. The left side of the figure presents the segment-specific net investment relative to the system-average based on an accurate measure of accumulated depreciation (assuming it were possible to calculate segment-specific depreciation using group-life principles). In this example, each of the three segments has \$100 in gross investment but each segment has been depreciated to a different extent. Specifically, Segment 1 is 10 percent depreciated, Segment 2 is 20 percent depreciated, and Segment 3 is 30 percent depreciated. Assuming 10 GTM for each segment results in net investment per GTM for the three segments of \$9 (\$90 net investment / \$10 GTM), \$8 (\$80 / \$10 GTM), and \$7 (\$70 / \$10 GTM), respectively. The system-average net investment per GTM is \$8 (\$300 total gross investment - \$60 accumulated depreciation = \$240 net investment, which divided by 30 total GTM for the system produces \$8 / GTM). Thus, the relative segment-specific net investment is 13-percent

above system-average for Segment 1 ($\$9 / \$8 = 1.125$), equal to system-average for Segment 2 ($\$8 / \$8 = 1.000$), and 13-percent below system-average for Segment 3 ($\$7 / \$8 = 0.875$).

FIGURE 5

**Any FADB Adjustment To System-Wide Accumulated Depreciation
Significantly Distorts Segment-Specific Results**



The right side of the chart presents the impact of using overstated FADB accumulated depreciation estimates to develop segment-specific net investment figures. The example illustrated above assumes that accumulated depreciation is doubled, slightly less than the extent to which BNSF's FADB calculator overstates accumulated depreciation in road property. As a result, the relative net investment per GTM is lower on each segment, decreasing to \$8 ($\$80 / 10$ GTM), \$6 ($\$60 / 10$ GTM), and \$4 ($\$40 / 10$ GTM) for the Segments 1 through 3, respectively.

The adjustment to make the accumulated depreciation for the system compatible with the overstated accumulated depreciation on each segment also produces a lower system-average net investment per GTM, down from \$8 with the actual accumulated depreciation to \$6 (\$300 total gross investment - \$120 adjusted accumulated depreciation = \$180 net investment, which divided by 30 total GTM for the system produces \$6 / GTM). However, as indicated above, the only segment for which the adjustment to system-average net investment would be the same is Segment 2, which remains at the system-average level. For any other segment, the results would change. In fact, the results of the supposed correction would be to produce a more extreme reduction or increase on segments that were not already at the system average.¹⁵

The only conclusion to be drawn from this example is that there is no way to correct for the inconsistency between the depreciation calculated on a segment-specific basis and the Board-approved group-life depreciation calculated at the system level. The approach that has been attempted in the past produces inaccurate results that may dramatically understate net investment on issue traffic lines.

Problem 4: The overstatement of depreciation using the simplistic depreciation calculator is particularly large on high-density lines as a result of early retirements. This issue is technically complex, and it is described in detail by BNSF's General Director for Property Accounting and Capital Reporting, Cami A. Elliott in her Verified Statement, which was included as BNSF Reply Exhibit II.A-4. It is clear from Figure 5 above that the overstatement of

¹⁵ For example, comparison of Segment 1's \$8 of net investment per GTM cost to the system-average adjusted for the overstated accumulated depreciation of \$6 produces a 33-percent increase to system-average net investment ($\$8 / \$6 = 1.33$), when in fact the actual increase for this segment should be only 13 percent, as calculated above with the correct measure of accumulated depreciation ($\$9 / \$8 = 1.125$).

depreciation on high-density lines is likely to produce a substantial understatement of net investment on those lines.

Problem 5: Mr. Fisher and Ms. Newland further demonstrate below in Section II.A.1.c.i.(b) of the Narrative that any attempt to correct for the inconsistency between the overstated segment-specific accumulated depreciation and the system-wide accumulated depreciation results in an understatement of net investment on a railroad's lines when some, but not all, of a railroad's line segments are subject to a recent purchase accounting write-up. As explained further in the Narrative, the adjustment described above takes the depreciation corresponding to the purchase accounting adjustment and spreads it over all assets, including line segments at issue here that did not receive a purchase accounting write up. This results in an overstatement of depreciation on the issue traffic line segments and an understatement of net investment on those lines.

c. A Variability Factor Much Higher Than 50 Percent Must Be Used To Calculate Road Property Variable Costs On High Density Lines

The second problem with AEP Texas' purported movement-specific road property calculation is that it improperly assumes that the system-average variability percentage used in URCS should be applied in developing line-specific variable costs. It is disingenuous to claim that AEP Texas' calculations are superior to URCS when AEP Texas is relying on the URCS system-average variability that is inapplicable to the line segments at issue.

As discussed below, the 50 percent variability percentage used in URCS to calculate a BNSF *system-average* road property variable unit cost cannot be used to determine the variable costs of an *individual line segment* with densities that are significantly different from the railroad's system-average density. It is irrefutable that use of a 50 percent variability assumption on the high-density line segments at issue here produces an incorrect calculation that understates

BNSF's road property costs. Indeed, in the *TMPA* decision, the Board recognized that BNSF had raised a serious issue with respect to the proper treatment of the variability percentage in making a movement-specific road property calculation.¹⁶ While the Board did not resolve the issue there because the record was not adequately developed, BNSF did present extensive evidence on the variability issue in the *Xcel* case. The Board's *Xcel* decision avoided any discussion of the merits of BNSF's arguments. The Board must carefully address this issue here.

To understand the distortions that are created by the use of the system-average 50 percent variability factor to generate line-specific variable unit costs on high-density lines, it is necessary to review the process by which variable costs are calculated under the Board's URCS methodology.

Railroads report total costs for particular categories of costs (*e.g.*, road property investment) without distinguishing between the "variable" and "non-variable" portions of the total costs. Therefore, to develop variable cost calculations from a railroad's reported data, it is necessary to apply a variability factor or percentage to total reported costs to determine the portion of those costs that are variable. Under URCS, the variability percentage to be applied is different for different cost categories. Most of the variability percentages were derived from regression analyses carried out in the 1980s, although in some cases the variability factors are a legacy of earlier studies. Once the total variable costs for a particular cost category are determined, using the variability percentages, a unit cost is derived by dividing those total system-wide variable costs by the total system-wide number of relevant output units (*e.g.*, gross-ton-miles). The resulting system-wide URCS unit costs can then be used to develop variable

¹⁶ *TMPA*, slip op. at 56 n. 94.

costs for a particular movement by applying them to the quantities of the relevant output units (e.g., gross-ton-miles) associated with an individual movement.

In some cases, it may be possible to calculate a more precise variable unit cost from a subset of the railroad's cost data in lieu of using the railroad's system-average unit cost. For example, it might be possible to identify a railroad's total road property gross and net investment associated specifically with a particular route used by the issue traffic (although, as discussed above, BNSF's FADB database cannot be used for this purpose). If accurate gross and net investment data were available for the line segments comprising the specific route used by the issue traffic, it would theoretically be possible to determine the variable costs for the route at issue. Those route-specific total variable costs could then be divided by the route-specific total output units to create a unit cost that would be a more precise alternative to the application of a system-average unit cost. To do so, however, it would still be necessary to determine the portion of the total gross and net investment amounts, for each line segment comprising the particular route, that should be treated as "variable" (i.e., attributable to changes in the level of the output variable experienced on each line segment comprising the particular route). This requires the use of a variability percentage that is appropriate for each line segment on the particular route.

In the area of road property costs, URCS applies a 50-percent variability factor when road property variable costs are derived from a railroad's system-wide data. But this does not mean that road property costs are 50 percent variable on all of the railroad's individual lines regardless of the density of the line. As shown in Figure 6 below, use of a 50 percent variability percentage on all lines would suggest that fixed costs actually vary with changes in traffic volumes. But this assumption is directly inconsistent with URCS, which defines *variable* costs

as those costs that change with changes in traffic. Fixed costs are those costs that remain fixed regardless of changes in traffic volumes.

FIGURE 6

AEP Texas Assumes That Road Property Costs Are 50 Percent Variable On Every Segment, Regardless Of Density

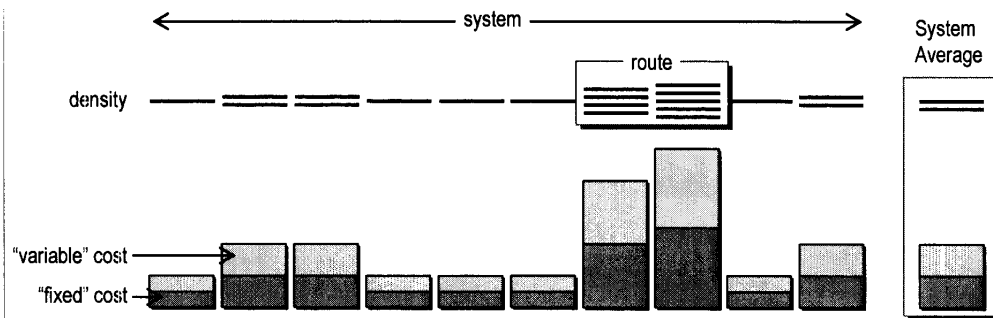


Figure 6 depicts the approach advocated by AEP Texas in this proceeding. AEP Texas starts with line segment-specific data on total investment for line segments comprising the AEP Texas route, which have densities per route mile that are substantially in excess of system-average densities. AEP Texas then multiplies these total investments by the system-average percent variable of 50 percent used in URCS to calculate the variable portion for each line segment in the AEP Texas route – regardless of each line segment’s gross ton-mile per route mile density. AEP Texas then divides this cost by the gross ton-miles on each segment. AEP Texas uses this supposed route-specific cost per GTM to develop an adjustment ratio that is applied to the URCS system-average variable road property unit costs to produce a supposed line-specific variable road property unit cost.

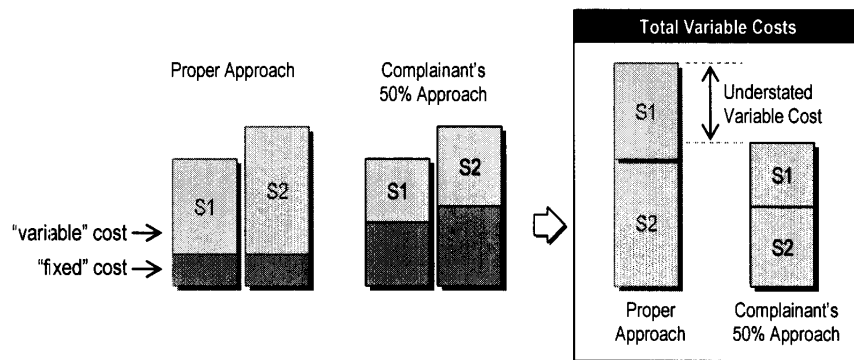
However, Figure 6 makes it clear that there is something wrong with AEP Texas’ approach. Using the AEP Texas methodology, the non-variable (or “fixed”) costs increase when

density increases, and decrease when density decreases. But this is not consistent with the logic of URCS because URCS defines “variable costs” as those costs that increase or decrease as the quantity of output (in this case, gross ton-miles) increases or decreases. The “fixed” costs are defined as those costs that remain the same regardless of the level of density.

In fact, it is a fundamental principle of the Board’s URCS methodology that variability increases with increases in the ratio of the URCS output variable to the URCS capacity variable, *i.e., variability increases with increases in density*. Therefore, if road property costs are 50 percent variable at the railroad’s system-average density, they must be more highly variable on higher density lines. Any attempt to calculate a movement-specific estimate of road property variable costs on higher-density lines by applying the system-average 50 percent variability factor to each line segment used by the movement – as AEP Texas does – will necessarily understate road property variable costs on those higher-density line segments. When the lines at issue are among the highest density lines on a railroad’s network -- as they are in this case involving the PRB -- the understatement of costs is extreme. The following Figure 7 shows that AEP Texas’ approach necessarily understates variable costs on high-density line segments.

FIGURE 7

**AEP Texas' Assumption Significantly Understates
The Actual Variable Costs On High-Density Lines**



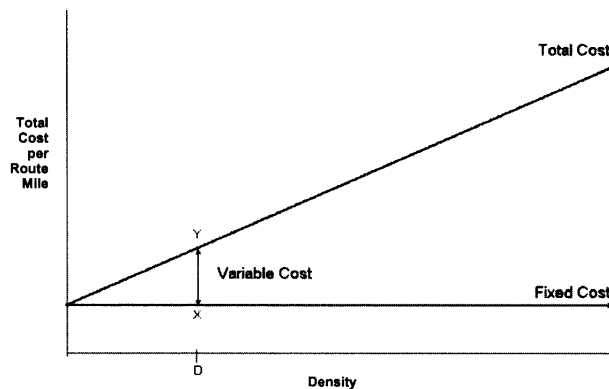
The URCS principle that variability increases as density increases is beyond serious dispute. This principle is the result of three basic assumptions that underlie the Board's URCS cost system. (1) URCS defines "variable" costs as the portion of total costs that vary as traffic levels change. In turn, "fixed" costs are those costs that remain constant regardless of changes in traffic volume.¹⁷ (2) Total costs on a line increase as the traffic density on the line increases. (3) The relationship between total costs and density is linear, *i.e.*, the slope of the total cost line is a constant.¹⁸ These basic principles can be depicted in a simple graph below.

¹⁷ See *Adoption of the Uniform Railroad Costing System as a General Purpose Costing System for all Regulatory Costing Purposes*, ICC *Ex Parte* No. 431 (Sub-No. 1), slip op. at 901 (September 20, 1989) ("In a variety of places, and most particularly in the sections governing the jurisdiction threshold and the apportioning of burdens of proof, the Interstate Commerce Act, as amended by the Staggers Act, uses the term "variable costs." The term is clearly intended to differentiate those costs that change with volume from the fixed costs that rail carriers might endure even in the absence of production . . . The RAPB definition of variable cost is in accord with these well-understood norms.")

¹⁸ See *id.* at 900-901 ("RAPB suggested that the issue of the functional form of the URCS regression equations be given further study before the Commission moved forward with URCS.

FIGURE 8

**URCS Recognizes That Total Costs Per Route Mile Increase
With Density And That The Relationship is Linear**



The flat line above the horizontal axis represents the non-variable, or “fixed” costs. Since these costs do not change with changes in traffic levels -- by definition, they are the non-variable costs -- they remain constant over all density levels. The upward sloping line represents total costs per route mile, which increase as density increases. At density level “D,” total variable costs on the line segment equal the difference between total cost “Y” and fixed cost “X.” The variability percentage at density level “D” is simply the variable costs divided by the total costs, or $((Y-X)/Y)$.¹⁹

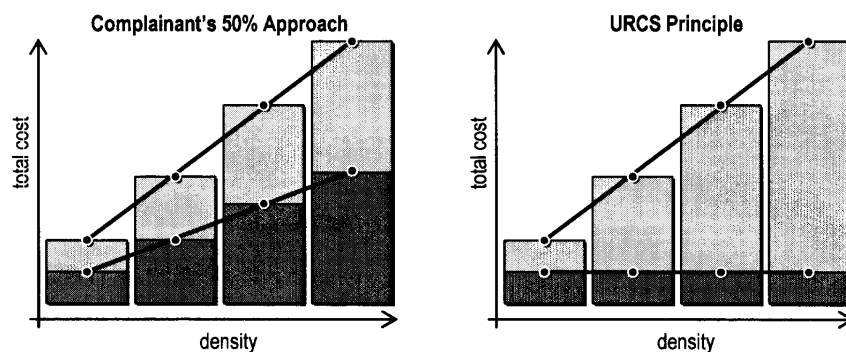
This was done, and for reasons detailed in the *Research Report* and the January NPR, the Commission decided that a linear model would best serve the purposes defined by statute and RAPB.”).

¹⁹ The math underlying this graph is straightforward. The basic road property equation used in Rail Form A and carried over into URCS is: total cost = a*route miles + b*GTM. If you divide both sides of the equation by “route miles,” the result is: total cost/route mile = a +

The proper relationship between fixed costs, variable costs and density is contrasted below in Figure 9 with the assumption underlying AEP Texas' use of a 50 percent variability factor regardless of density.

FIGURE 9

AEP Texas' Approach Is Inconsistent With URCS Cost Principles



It is clear from both Figures 8 and 9 that the amount of variable costs associated with a particular line segment increases as the density of that line increases. Moreover, because fixed costs remain fixed, the variable portion of total costs (i.e., the variability percentage) also must increase with density.²⁰ This relationship between density and the variability percentage is illustrated in Figure 10. This relationship is inherent in URCS and it cannot be ignored in

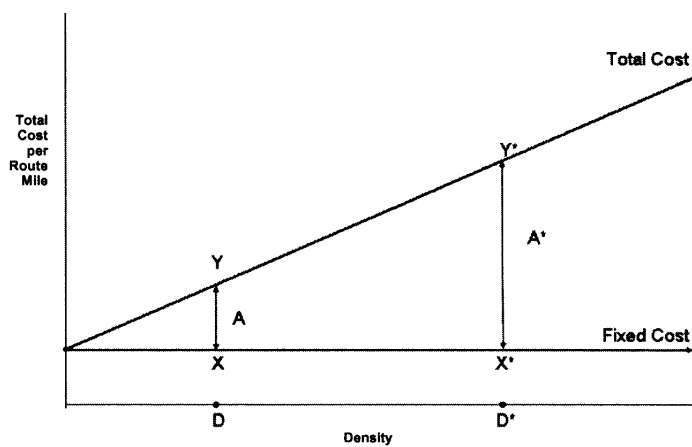
$b \cdot \text{GTM}/\text{route miles}$, where "a" is the fixed cost constant and "b" is the variable cost constant that produces the slope of the total cost line. The y axis is total cost per route mile and the x axis is GTM/route miles, or density.

²⁰ These issues are discussed further in the Verified Statement of John C. Klick at 35-42, included as BNSF Reply Exhibit II.A-4.

making a movement-specific estimate of variable road property costs on a high-density line segment.²¹

FIGURE 10

**The Percentage Of Total Costs That Is Variable
Must Be Higher At Higher Densities**

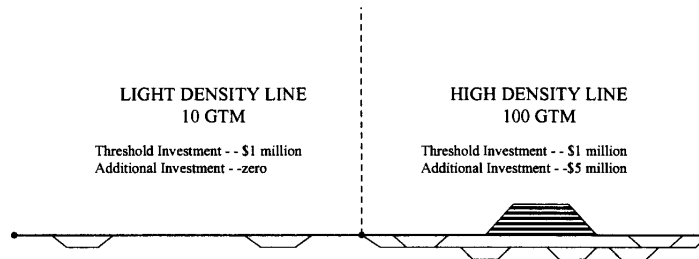


In the *Xcel* decision, the Board appeared to understand this relationship between density and the variability percentage, *i.e.*, that the percentage of total costs that are variable increases with density. The Board presented a schematic at page 19 of the decision in which it depicted two line segments of different density. The Board's schematic is reproduced below in Figure 11.

²¹ Even though BNSF's FADB data are incomplete and cannot be used for a movement-specific road property cost estimate, BNSF's witness Dr. Mercurio shows in Rebuttal Exhibit II.A-4 that the variability of the FADB data changes with density and that the variability of road property investment is higher on high density lines. Using a regression analysis consistent with the regressions used to produce the URCS cost algorithms, Dr. Mercurio shows that the variability of BNSF's FADB data range from less than 1 percent on lines barely utilized up to 84 percent on BNSF's highest density lines.

FIGURE 11

**STB's Road Property Schematic From *Xcel* Illustrating
The Relationship Between Density And Variable Costs**



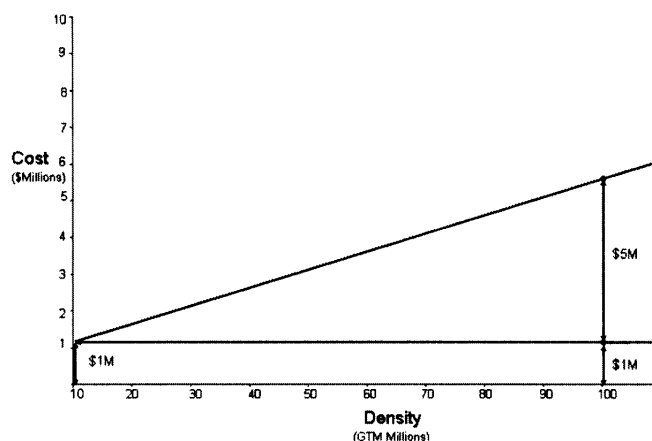
Consistent with URCS, the threshold, or fixed, component of total costs is assumed to be the same on both the low and high density lines -- \$1 million. The variable portion of total costs ranges from zero on the light density line to \$5 million on the high density line. Total costs increase as density increases, as expected. Similarly, the variability percentage -- the percentage of total costs that is variable -- also increases from zero percent (0/\$1 million) to 83 percent (\$5 million/\$6 million) as density increases.²² The Board's example is depicted in graphic form in

²² While the Board correctly depicted the relationship between fixed costs and density in its figure, it drew the wrong conclusion from that figure. The Board claimed that this figure demonstrates that URCS overstates variable costs on low-density lines. This is not correct. Under URCS, the per unit variable cost is the same regardless of the density of the line segment, but the total variable costs on a particular line segment vary widely based on the number of units of traffic, or the density of the line segment. On low-density line segments, there are fewer units of traffic, therefore much lower total variable costs (and lower variability percentages). On high-density line segments, there are more traffic units, more total variable costs and a higher percentage of variable costs relative to the total costs of the line segment. In any event, the Board's conclusion that URCS tends to overstate variable costs on low-density line segments and understate variable costs on high-density line segments is directly contrary to AEP Texas' claim that the road property costs on the high density line segments at issue here are 60 percent *below* the system-average road property variable cost.

Figure 12 below. It is clear that the cost function in the Board's example is consistent with basic URCS principles as depicted in Figures 8 and 10 above.

FIGURE 12

The Board's Road Property Schematic Is Consistent With URCS Principles



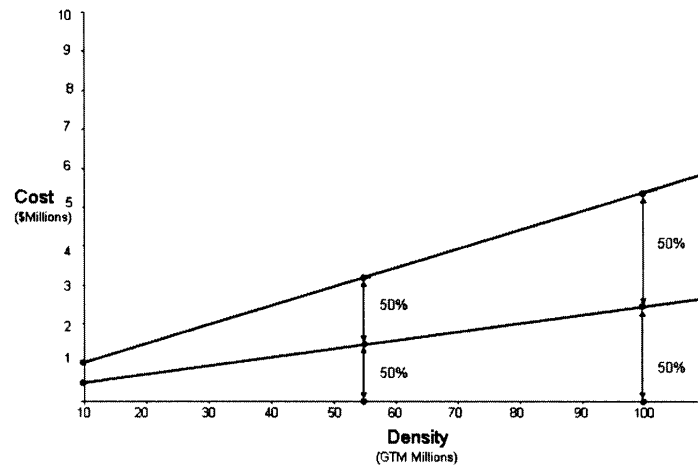
If the Board sought to make a movement-specific calculation of variable road property costs for the high-density 100 GTM line segment depicted in Figure 12, it would start with the \$6 million in total costs (a figure presumably derived from the internal records of the railroad) and apply a variability percentage to determine the variable portion of total costs for the line segment. Those variable costs would then be spread over the traffic using that line segment. But the correct amount of variable costs for this segment can be determined only if the correct variability percentage is used. For example, if the Board assumed that the variability percentage for the high-density line segment was 50 percent, the calculations would indicate that variable costs on that line segment are \$3 million instead of \$5 million. The result would be a substantial understatement of variable costs. The correct variability percentage for the high-density line is

83 percent and use of anything less would produce a flawed estimate of variable costs on that line segment.

URCS uses a 50 percent variability factor when road property variable costs are being determined on a system-average basis. The underlying assumption is that road property variable costs are 50 percent variable at the system-average density level. Thus, there could be some line segments on a railroad's system where the use of a 50 percent variability percentage would be appropriate for a movement-specific calculation, but that would be fortuitous, not conceptually correct. A 50 percent variability factor cannot possibly be correct at all density levels. In fact, the use of a constant 50 percent variability percentage regardless of the density of a particular line is equivalent to an assumption that *all* road property costs vary with changes in traffic volumes. In Figure 13, variable costs are 50 percent of total costs at all density levels. But this Figure makes it clear that all costs are assumed to vary with changes in traffic volume when the same variability factor is used, which is an assumption that is totally inconsistent with URCS.

FIGURE 13

**AEP Texas' Assumption Of A Constant Variability
Factor Across All Densities Is Inconsistent With The Logic Of URCS And
With The Board's Road Property Schematic In *Xcel***



The URCS 50 percent variability factor therefore cannot reasonably be used in making a movement-specific calculation of variable road property costs on high density lines of the type at issue in this case. AEP Texas has not identified the proper variability factor to use, and this failure of proof is fatal to its development of a supposed line-specific road property variable cost calculation. Unless the complainant demonstrates that it has correctly adjusted the variability factor to account for density, the Board is required to rely on URCS system-average calculations as the only approximation of road property variable costs that is consistent with its URCS costing methodology.

Finally, it is necessary to deal with the Board's discussion of the variability issue in the *Xcel* decision. There, the Board accepted a movement-specific calculation of variable road property costs that used the system-average 50 percent variability factor over BNSF's objection

that the variability factor must be adjusted to account for the higher density on the lines at issue. In supporting its decision, the Board noted that BNSF has made movement-specific adjustments in other cost areas -- specifically in the areas of crew, fuel and switching costs -- without increasing the variability factor to account for the higher densities associated with the route at issue. The Board argued that BNSF has not shown why it is appropriate to make a movement-specific calculation in those areas without adjusting the variability percentage but *inappropriate* to make a movement-specific calculation in the road property area without adjusting the variability percentage.

BNSF acknowledges that as a conceptual matter, a movement-specific calculation of variable costs in the areas of crew and fuel costs should include an adjustment to the variability percentage to be consistent with the logic of URCS. BNSF did not make the variability adjustment in the areas of crew and fuel costs because the resulting cost calculations would not have been significantly different. But the fact that BNSF has not attempted to make such an adjustment in the crew and fuel areas does not justify AEP Texas' failure to make the adjustment in the area of road property costs, where BNSF has shown that enormous distortions result from the use of the 50 percent variability factor.

The variability percentages for those two cost categories are already extremely high: crew wages are 84 percent variable and fuel is 96 percent variable at system-average densities. While the variability percentage would be even higher on high-density lines, any increase in total variable cost per ton would necessarily be relatively small. Thus, the calculation of a more accurate movement-specific variable cost based on a variability factor that is consistent with the logic of URCS is not likely to have a significant impact on the variable costs of the movement at issue, and in any event would produce *higher* variable costs in those areas. Therefore, if BNSF

sponsored a more precise movement-specific calculation using adjusted variability percentages in these areas, complainants would clearly object because the resulting variable costs would increase. This would create a new set of issues in the already complex litigation of variable costs. By using system-average variability in these areas, BNSF has made a conservative cost calculation that does not prejudice the complainant in any way. It would be extremely unfair for the Board to use this attempt to simplify variable-cost calculations against BNSF. In essence, BNSF has elected to leave a modest amount of money on the table in the area of crew and fuel costs as the price of avoiding contentious litigation on those issues. The Board cannot logically use this litigation decision as the basis for accepting AEP Texas' defective road property calculations.

On the issue of switching costs, BNSF does not believe that it would be appropriate to adjust the variability percentage in making a movement-specific adjustment. To calculate movement-specific switching costs, the parties use the system-average unit cost. An adjusted variability factor is necessary only when a movement-specific or route-specific *unit* cost is being developed. Because the system-average unit cost is used in the movement-specific switching calculation, there is no reason to apply an adjusted variability factor and it would not be appropriate to do so.

BNSF has shown why a route-specific road property variable-cost calculation on high-density lines must take account of the higher variability of costs on high-density lines. The Board cannot avoid addressing the substance BNSF's evidence on this issue by referring to cost calculations where the variability question has never arisen and where the variability percentage would have little effect on the variable-cost calculations.

2. The Board Should Not Attempt To Calculate Variable Costs On Movements For Which There Is Inadequate Data In The Record

AEP Texas also asks the Board to establish variable costs for a number of moves for which the record does not contain adequate data. In several cases, AEP Texas has presented variable cost calculations for hypothetical movements from mines that AEP Texas has not used at all. In addition, AEP Texas sponsors variable cost calculations for movements occurring after Second Quarter 2003, the close of the discovery period. As explained on Reply, to calculate variable costs for these movements AEP Texas had to extrapolate costs based on data from prior quarters and other moves. There is no reason to believe that such cost extrapolations will produce accurate costs, and in some cases it is clear that the cost extrapolations will produce erroneous costs. For example, BNSF made significant changes to the Oklaunion train operations in the Second and Third Quarter 2003, including increasing the train size by eleven cars and changing the routing. Therefore, the use of operating assumptions from prior quarters to estimate the costs on these moves will clearly produce distorted cost calculations. In prior cases, the Board has rejected variable-cost evidence for periods in which there was insufficient evidence in the record.²³ Consistent with that precedent, the Board should reject AEP Texas' hypothesized variable-cost estimates for Oklaunion shipments.

AEP Texas also asks the Board to determine variable costs for movements that were sporadic and unrepresentative of the majority of the issue traffic movements. To ensure accurate variable cost calculations, BNSF on Opening presented costs for movements from a particular mine origin in a quarter only if that mine accounted for at least ten percent of the total coal moved to Oklaunion in that quarter. As BNSF explained on Reply, by applying a ten-percent threshold, BNSF eliminated mine origins from which four or fewer shipments originated. BNSF

²³ *TMPA* at 38.

believes that such a limited number of trains provides insufficient information from which to develop reliable variable costs. Nevertheless, in response to concerns expressed by the Board in connection with a technical conference involving variable cost calculations, BNSF explained in its Reply Evidence how variable costs could be estimated for these movements using the data and methodologies relied on by BNSF to develop variable costs for the other issue traffic movements. BNSF Reply Exhibit II.A-1.²⁴

Finally, AEP Texas asks the Board to determine variable costs for shipments that moved outside the statute of limitations, *i.e.*, shipments that were delivered more than two years prior to the August 11, 2003 filing of AEP Texas' complaint. BNSF did not cost these shipments. AEP Texas presents no new argument in its Reply Evidence to support its claim that the Board should disregard the clear language of the statute limiting the Board's jurisdiction over these traffic movements. On Reply, BNSF addressed in detail the reasons that AEP Texas' complaint must be dismissed as to claims relating to traffic moving outside the statutory limitations period.

3. Variable Costs Of The Issue Movement

The R/VC ratios developed by BNSF for the rates paid by AEP Texas are set out below in Table I-1 and in Section II.A.2 of the Narrative. The bases for these calculations are described in the accompanying Narrative. All of the R/VC ratios are below the Board's jurisdictional threshold.

²⁴ To develop these estimates, Mr. Fisher and Ms. Newland relied on the traffic and operating characteristics used by AEP Texas in its Opening Evidence with the exception of switching, helper services, and locomotive consist size. For locomotive consist size, they use AEP Texas' consist size assumptions set forth in the parties' joint letter to the Board dated April 12, 2004. They update these costs in this Rebuttal Evidence, applying the same costing methodologies that they use to develop variable costs for the quarters and mines costed on opening.

Table I-1

Revenue to Variable Cost Ratio Based on Rate Paid by AEP Texas

Period	Mine	Rate/Ton	Variable Cost/Ton	R/VC Ratio
3 rd Qtr 2001	Buckskin	\$13.68	\$9.42	145%
4 th Qtr 2001	Buckskin	\$13.68	\$9.32	147%
4 th Qtr 2001	Jacobs Ranch	\$13.68	\$9.03	151%
1 st Qtr 2002	Jacobs Ranch	\$13.68	\$8.99	152%
2 nd Qtr 2002	Black Thunder	\$13.68	\$9.77	140%
3 rd Qtr 2002	Black Thunder	\$13.68	\$9.85	139%
3 rd Qtr 2002	Jacobs Ranch	\$13.68	\$9.76	140%
4 th Qtr 2002	Black Thunder	\$13.68	\$10.53	130%
4 th Qtr 2002	Jacobs Ranch	\$13.68	\$10.31	133%
1 st Qtr 2003	Eagle Butte	\$13.68	\$10.42	131%
2 nd Qtr 2003	Eagle Butte (117 cars)	\$13.68	\$9.87	139%
2 nd Qtr 2003	Eagle Butte (128 cars)	\$13.68	\$10.13	135%

The R/VC ratios developed by BNSF for the rates established but not paid by AEP Texas are set out below in Table I-2 and in Section II.A.2 of the Narrative. Even using the rate established by BNSF, Table I-2 shows that the Board lacks jurisdiction under the quantitative market dominance standard.²⁵

²⁵ Table II.A-6 in Section II.A.2 of the Narrative shows that a handful of movements from one mine in one quarter generated R/VC ratios above the jurisdictional threshold. But the paucity of data for those unrepresentative movements results in variable cost calculations that should not be relied on.

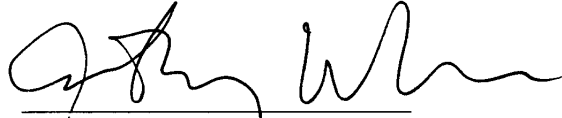
Table I-2
Revenue to Variable Cost Ratio Based on Rates Charged by BNSF

Period	Mine	Rate/Ton	Variable Cost/Ton	R/VC Ratio
3 rd Qtr 2001	Buckskin	\$15.78	\$9.42	168%
4 th Qtr 2001	Buckskin	\$15.78	\$9.32	169%
4 th Qtr 2001	Jacobs Ranch	\$15.78	\$9.03	175%
1 st Qtr 2002	Jacobs Ranch	\$15.78	\$8.99	176%
2 nd Qtr 2002	Black Thunder	\$15.78	\$9.77	161%
3 rd Qtr 2002	Black Thunder	\$16.36	\$9.85	166%
3 rd Qtr 2002	Jacobs Ranch	\$16.46	\$9.76	169%
4 th Qtr 2002	Black Thunder	\$17.25	\$10.53	164%
4 th Qtr 2002	Jacobs Ranch	\$17.25	\$10.31	167%
1 st Qtr 2003	Eagle Butte	\$17.25	\$10.42	131%
2 nd Qtr 2003	Eagle Butte (117 cars)	\$17.53	\$9.87	178%
2 nd Qtr 2003	Eagle Butte (128 cars)	\$18.04	\$10.13	178%

C. CONCLUSION

The Board should dismiss AEP Texas' complaint. The rates under challenge in this proceeding have never exceeded the maximum reasonable rates determined by the Board in a prior SAC case involving the same parties and the same basic transportation service. In addition, the Board lacks jurisdiction to review AEP Texas' claims under the quantitative market dominance test.

Respectfully submitted,

Two handwritten signatures in black ink. The first signature is on the left, and the second is on the right. Both are written in a cursive, flowing style.

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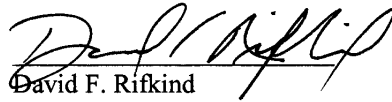
ATTORNEYS FOR THE BURLINGTON
NORTHERN AND SANTA FE
RAILWAY COMPANY

July 27, 2004

CERTIFICATE OF SERVICE

I hereby certify that on July 27, 2004, I caused six copies of the foregoing Rebuttal Evidence of The Burlington Northern and Santa Fe Railway Company to be served by hand upon the following counsel for AEP Texas North:

Kelvin J. Dowd
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David F. Rifkind

II. MARKET DOMINANCE

A. QUANTITATIVE EVIDENCE

1. Variable Costs

BNSF filed Opening and Reply variable cost evidence in this proceeding on March 1, 2004 and May 24, 2004, respectively. In those filings, BNSF presented the variable costs of shipments from PRB mines that originated the vast majority of coal destined to AEP Texas' Oklaunion Generating Station near Vernon, Texas moving under the challenged rates. In order to calculate variable costs, BNSF's principal variable cost witnesses, Benton V. Fisher and Deborah G. Newland, relied upon 2001, 2002, and 2003 BNSF URCS unit costs and, where appropriate, adjusted URCS system-average costs consistent with the results of movement-specific studies. BNSF's Reply Evidence showed Third Quarter 2001 through Second Quarter 2003 variable costs ranging between \$8.88 and \$11.57 per net ton, depending upon the origin mine, resulting in revenue-to-variable cost ("R/VC") ratios ranging between 1.18 and 1.54 under the rate paid by AEP Texas. Under the rate established by BNSF but not paid by AEP Texas, the R/VC ratios ranged between 1.29 and 1.85. In this Rebuttal Evidence, BNSF has made certain minor adjustments to its calculations and shows Third Quarter 2001 through Second Quarter 2003 variable costs ranging from \$8.88 to \$11.56 per net ton, resulting in R/VC ratios ranging from 1.18 to 1.54 under the rate paid by AEP Texas and ratios ranging from 1.29 to 1.85 under the rates charged by BNSF but not paid by AEP Texas.¹

¹ These figures include the mine origins that accounted for less than ten percent of the total coal originated by AEP Texas trains during a given quarter. As discussed elsewhere, BNSF does not believe that there is sufficient data to determine the variable costs of such movements.

AEP Texas also filed opening and reply variable cost evidence on March 1, 2004 and May 24, 2004, respectively. That evidence was principally sponsored by L.E. Peabody Vice President Joseph J. Plaistow. Mr. Plaistow calculated Second Quarter 2001 through Second Quarter 2003 variable costs that ranged between \$6.20 and \$7.53 per net ton depending on the origin mine and quarter. Mr. Plaistow also estimated costs for movements that occurred prior to Third Quarter 2001, which are outside the statutory limitations period, and for movements that occurred after Second Quarter 2003 using extrapolations from data produced in discovery. AEP Texas' variable cost evidence was based on 2000, 2001, 2002, and 2003 BNSF URCS.² Mr. Plaistow adjusted BNSF's URCS system-average costs to reflect the results of AEP Texas' movement-specific studies.

The principal difference between the parties' variable cost results is driven by the parties' respective development of road-property ownership costs. Due to the importance of this issue and BNSF's concern that the Board has not adequately addressed in prior cases the flaws in the methodology used to produce a movement-specific adjustment, BNSF presents a detailed review of the issue in the Argument section of this Rebuttal Evidence. Other flaws in AEP Texas' variable cost calculations are addressed further below.

Like BNSF's Opening and Reply Evidence, the organization of this Narrative is consistent with the Board's Decision on *General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases* ("*General Procedures*")³ and is based on the format used by the Board in its rate-reasonableness case decisions. Specifically, Section II.A.1.a. addresses differences in the

² Like BNSF, AEP Texas submitted variable costs based on a 2003 BNSF URCS run for the first time on reply, as the 2003 inputs used to develop such costs were not available when the parties filed opening evidence. As discussed below, AEP Texas failed to make the required adjustment to include Account 90 investments in its 2003 URCS.

³ See *Ex Parte No. 347 (Sub-No.3)* (STB served Mar. 12, 2001).

general cost estimating procedures used by each party. Section II.A.1.b. describes the remaining differences in the traffic and operating characteristics used by each party and explains why BNSF's assumptions are superior to AEP Texas'. Section II.A.1.c. examines the differences in certain cost adjustments made by the parties. Finally, Section II.A.2 updates BNSF's calculation of the Third Quarter 2001 through Second Quarter 2003 variable costs for the AEP Texas traffic. Table II.A.1 below summarizes BNSF's variable costs for all shipments originating at PRB mines that moved under the challenged rate during the foregoing period and compares these costs to AEP Texas' estimates from its reply evidence. Exhibit II.A-1 compares the parties' variable costs for shipments that originated at PRB mines for the quarters costed by both parties. Exhibit II.A-1 also presents these costs by individual cost components, Exhibit II.A-2 shows the different inputs that the parties used to calculate variable costs for the Oklahoma train, and Exhibit II.A-3 identifies the differences between the parties by specific cost category.

Table II.A-1
Summary of Variable Costs and Revenue To Variable Cost Ratios*

Period	Rate/Ton	Variable Cost/Ton	Revenue to Variable Cost Ratio	
			Based on Rate Established by BNSF	Based on \$13.68 Rate Paid by AEP Texas
Buckskin				
3rd Qtr 2001	\$15.78	\$9.42	168%	145%
4th Qtr 2001	\$15.78	\$9.32	169%	147%
Black Thunder				
3rd Qtr 2001	\$15.78	\$9.48	166%	144%
4th Qtr 2001	\$15.78	\$8.88	178%	154%
2nd Qtr 2002	\$15.78	\$9.77	161%	140%
3rd Qtr 2002	\$16.36	\$9.85	166%	139%
4th Qtr 2002	\$17.25	\$10.53	164%	130%
Caballo				
2nd Qtr 2002	\$15.78	\$10.56	149%	130%
3rd Qtr 2002	\$16.36	\$9.55	171%	143%
4th Qtr 2002	\$17.25	\$10.79	160%	127%
2nd Qtr 2003	\$18.04	\$10.52	171%	130%
Cordero				

Period	Rate/Ton	Variable Cost/Ton	Revenue to Variable Cost Ratio	
			Based on Rate Established by BNSF	Based on \$13.68 Rate Paid by AEP Texas
2nd Qtr 2003	\$18.04	\$9.75	185%	140%
Caballo Rojo				
3rd Qtr 2001	\$15.78	\$9.32	169%	147%
4th Qtr 2001	\$15.78	\$9.46	167%	145%
2nd Qtr 2003	\$18.04	\$11.56	156%	118%
Jacobs Ranch				
3rd Qtr 2001	\$15.78	\$9.12	173%	150%
4th Qtr 2001	\$15.78	\$9.03	175%	151%
1st Qtr 2002	\$15.78	\$8.99	176%	152%
3rd Qtr 2002	\$16.46	\$9.76	169%	140%
4th Qtr 2002	\$17.25	\$10.31	167%	133%
Eagle Butte				
1st Qtr 2003	\$17.25	\$10.42	166%	131%
2nd Qtr 2003 117-Car Train	\$17.53	\$9.87	178%	139%
2nd Qtr 2003 128-Car Train	\$18.04	\$10.13	178%	135%
North Rochelle				
3rd Qtr 2002	\$16.36	\$10.77	152%	127%
Rawhide				
2nd Qtr 2003	\$13.68	\$10.59	129%	129%

* Includes movements from mine origins that accounted for less than ten percent of the coal originated by AEP Texas trains in a given quarter.

a. Differences In General Cost Estimating Procedures

i. General Overhead Ratio For Return On Investment

In developing the General Overhead ratios for Return on Investment, AEP Texas fails to adjust its URCS costs to include Account 90 and exclude Account 76. AEP Texas, however, offers no evidence to support its proposed treatment of these accounts. Rather, AEP Texas argues that in order to justify the adjustment, the burden is on BNSF to establish that construction projects contained in Account 90 are short-term in nature. AEP Texas ignores the fact that BNSF has already met this burden. In the *TMPA* and *Xcel* cases, BNSF presented special studies that showed that the construction projects

contained in Account 90 are indeed short-term in duration. The Board accepted that evidence and in both cases concluded that, during the time period relevant to this case, BNSF's Account 90 projects were of relatively short duration.⁴

Moreover, AEP Texas' argument that the railroad bears the burden in each case to show that projects contained in Account 90 are of short duration misconstrues Board precedent on the proper treatment of Account 90 and Account 76. While it is true that in the *WPL* and *FMC* cases, the Board stated that the adjustment would be made to Account 90 only if the railroad established that the construction projects contained in Account 90 are short-term in nature, BNSF presented evidence in *TMPA* and *Xcel* that showed that construction projects in Account 90 are of relatively short duration. BNSF also showed that in rate cases decided prior to *WPL* and *FMC*, the adjustment to URCS to include Account 90 and exclude Account 76 was made as a matter of course and without placing any evidentiary burden on the railroad to justify the adjustment. Most recently, in *TMPA*, *CP&L*, and *Xcel*, the Board reaffirmed the presumption that railroad construction projects are short-term in nature.⁵ The Board further recognized that it is longstanding precedent to make the adjustment stating that "the longstanding precedent is that substitution of Account 90 for Account 76 is appropriate in a rate case *unless* the construction projects in Account 90 are long term in nature."⁶

⁴ *TMPA* at 40; *Xcel* at 122.

⁵ *TMPA* at 40, *CP&L* at 114, and *Xcel* at 122. This presumption dates back to the ICC's findings in its 1978 decision in *Ex Parte No. 338, Standards and Procedures for the Establishment of Railroad Revenue Levels*, 358 I.C.C. 844, 882 (1978). See also *Georgia Power* at 15..

⁶ E.g. *TMPA* at 40.

The import of the Board's language is unmistakable. It clearly places the burden on the complainant to demonstrate that the substitution should not be made and relieves the railroads of undertaking a burdensome special study in every rate case to prove that railroad construction projects are generally short-term in nature – a fact recognized more than twenty years ago by the Board.

ii. Other Mine Origins

Differences between the time periods and mine origins costed by each party are discussed in Counsel's Argument in this Rebuttal and in BNSF's Reply Narrative at II-6 to 8.

iii. URCS Linking Factor

The parties disagree regarding the propriety of applying the URCS linking factor. The linking factor was developed more than fifteen years ago by the ICC as a bridge from the Rail Form A ("RFA") costing system to the URCS costing system. Its purpose was "to generally preserve the status quo regarding the amount of traffic subject to Commission jurisdiction."⁷ Mr. Fisher and Ms. Newland did not apply the linking factor, which is now obsolete and unnecessary. AEP Texas applies the linking factor and claims that its application in rate cases is a "well settled" issue. This description mischaracterizes the status of this issue.

The Board has not addressed the application of the linking factor in prior rate cases. The sole discussion by the Board of the linking factor's use in rate reasonableness cases appears in the decision establishing the linking factor. The excerpt of that decision

⁷ Ex Parte No. 431 (Sub-No. 1), *Adoption of the Uniform Railroad Costing System for All Regulatory Purposes*, 5 I.C.C. 2d 894 (1989).

quoted by AEP Texas shows that the application of the linking factor is not required. The

ICC stated that:

Such minor differences [*i.e.*, 1.0000 v. 0.9934] are unlikely to materially alter the status quo with respect to the amount of traffic potentially subject to our jurisdiction. However, we make the factor available *for possible use by shippers or carriers which might wish to use the conversion factor*, for example, in submitting evidence or argument relating to traffic which moves at the margin of the jurisdictional threshold. (emphasis added).⁸

In any event, the fact that the linking factor has been used in prior cases does not support its use in future cases. With the passage of time, the rationale for applying a linking factor has faded. It is no longer necessary to create a smooth transition from RFA to URCS, as URCS has now been in use for many years. Moreover, the linking factor is no longer an accurate bridge between the RFA costing system and URCS. The ICC developed the linking factor based on data for the years 1983 through 1987 inclusive by comparing total variable costs calculated using each costing system. Since that calculation was performed, however, there have been substantial changes to components used in the two costing systems that suggest that the linking factor produced in 1988 is no longer valid.

One such component that has changed is the cost of capital. While RFA used the embedded cost of capital, URCS uses the current cost of capital. As Table II.A.2 below shows, since the mid-1980s, there have been significant changes in both the embedded cost of capital and the current cost of capital. The current cost of capital, which URCS uses, has decreased from an average of 22 percent for 1983-1987, to an average of 14.6 percent for 1998-2002. During this same time period, the embedded cost of capital, which RFA used, has also decreased but at a different rate than that of the current cost of capital – from an average of 9.63 percent for

⁸ 5 I.C.C. 2d at 899 n. 15 quoted at AEP Texas Reply Nar. at II-A-100.

1983-1987, to 8.48 percent for 1998-2002. As a result, the 1988 linking factor is, in all likelihood, wrong and should not be used.

Table II.A.2
Cost of Capital Comparison

Year	Embedded Cost of Capital		Current Cost of Capital
	BNSF	Avg of Class I's	ICC / STB
1983-1987 Average	8.89%	9.63%	22.0%
1998-2002 Average	6.81%	8.48%	14.6%

Source: BNSF Rebuttal electronic workpaper "Cost of Capital Comparison.xls."

b. Differences In The Traffic And Operating Characteristics Developed By BNSF And AEP Texas

Exhibit II.A-2 compares by quarter and mine the traffic and operating characteristics for the issue traffic used by the parties to develop BNSF's variable costs for the issue movements from the PRB mines that AEP Texas originated coal during Third Quarter 2001 to Second Quarter 2003. With the exception of locomotive cycle times which is discussed below, the differences between the parties' evidence on traffic and operating characteristics are discussed in BNSF's Reply Narrative at II-9 to 14.

i. Locomotive Cycle Times

The parties disagree as to the locomotive cycle times that should be used to calculate variable costs for the issue traffic. In developing cycle times, Mr. Fisher and Ms. Newland adjusted dwell times at Alliance and Guernsey yards in certain instances in order to foreclose any possibility of a double-count between BNSF's cycle-time evidence and its spare-margin evidence. Specifically, for times in which the locomotives were changed out at Alliance or Guernsey, BNSF capped the dwell time at the average dwell time for AEP Texas trains that

arrived and departed with the same locomotives. This adjustment addresses the possibility that the locomotives taken off the Oklahoma train might have been classified as unavailable or unutilized during some of the dwell time at Alliance or Guernsey. If so, the portion of the dwell time on these locomotives that exceeds the standard dwell time on trains where locomotives do not get removed might be included in BNSF's calculation of its spare margin, and it should not be counted both in the cycle-time and in the spare-margin calculation.

When cycle times were discussed by counsel in conjunction with the *Ex Parte No. 638* Technical Conference, BNSF counsel and witnesses explained that the cycle-time evidence was adjusted to reflect BNSF's spare-margin evidence, and therefore it would be inappropriate for AEP Texas to use BNSF's cycle-time evidence without also using its spare-margin evidence. In other words, the shorter cycle times that BNSF calculated were appropriate only if used to avoid a possible double-count associated with BNSF's spare-margin calculation.

On opening, AEP Texas sponsored cycle times that were developed similarly to BNSF's, except that AEP Texas allowed higher dwell times than BNSF at Alliance and Guernsey. AEP Texas applied a 24-hour cap that, as AEP Texas acknowledges, was used in prior rate cases. AEP Texas Reply Nar. at II-A-18. On reply, however, AEP Texas tries to have it both ways by using BNSF's shorter cycle times but refusing to modify its significantly understated and flawed spare-margin calculations.

AEP Texas claims that BNSF's approach is more reasonable because AEP Texas "should not be charged for the time that locomotives sit at a terminal waiting to be placed in another shipper's service." AEP Texas Reply Nar. at II-A-19. This argument suffers from the same flaw underlying AEP Texas' approach to the spare margin. As the Board acknowledged in *Xcel*, it is entirely appropriate that AEP Texas bear a portion of the cost of unutilized locomotive time. If

that time is not included in the cycle time, then it must be captured in the spare margin. In any event, AEP Texas' acceptance of BNSF's cycle times now compels use of BNSF's spare-margin evidence, as the two calculations are inextricably linked.

c. Differences In Variable Costs Developed By BNSF And AEP Texas

Table II.A.3 compares AEP Texas' Reply cost calculations with BNSF's Rebuttal calculations for shipments originating from Eagle Butte in First Quarter 2003. Exhibit II.A-3 presents similar comparisons for each issue movement from each PRB mine that originated coal destined for Oklaunion moving under the challenged rates from Third Quarter 2001 to Second Quarter 2003. The differences between the parties' calculations of the individual cost components are discussed in more detail below.

Table II.A-3
Comparison of Variable Costs Per Carload and Ton
Eagle Butte Mine to Oklaunion Station
First Quarter 2003

Item	BNSF Rebuttal	AEP Texas Reply	Difference
1. Carload O/T – Clerical Expense	{ }	{ }	\$0.00
2. Carload Handling – Other Expense	{ }	{ }	(\$0.05)
3. Switching Expense – Yard Locomotives	{ }	{ }	(\$24.69)
4. Loop Track Expense (GTM and LUM)	{ }	{ }	\$2.10
5. Switching Expense – Road Locomotives	{ }	{ }	(\$1.14)
6. Gross Ton-Mile Expense (GTM)	{ }	{ }	(\$128.29)
7. Train-Mile Expense – Other Than Crew	{ }	{ }	(\$2.22)
8. Locomotive Unit-Mile Expense (excluding Ownership)	{ }	{ }	(\$54.67)
9. Train-Mile-Expense – T&E Crew	{ }	{ }	(\$7.18)
10. Helper Expense – LUM	{ }	{ }	(\$2.02)
11. Helper Expense – Crew	{ }	{ }	(\$5.18)
12. Freight Car Expense (RR-Owned Only)	{ }	{ }	(\$86.51)
13. Loss & Damage Expense	{ }	{ }	(\$0.02)
14. Locomotive Ownership Expense	{ }	{ }	(\$56.77)
15. EOTD Ownership Expense	{ }	{ }	\$0.09
16. Joint Facility Charge	{ }	{ }	\$8.26
17. Total Variable Cost per Carload (Lines 1-18)	\$1145.30	\$787.00	(\$358.30)

Item	BNSF Rebuttal	AEP Texas Reply	Difference
18. RFA-URCS Linking Factor	N/A	0.9934	N/A
19. Linked Variable Cost Per Carload	\$1,145.30	\$781.81	(\$363.49)
20. Net Tons Per Carload	109.9	109.9	0.00
21. Variable Cost Per Ton	\$10.42	\$7.11	(\$3.31)
22. Rate Per Ton	\$17.25	\$17.25	\$0.00
23. R/VC Ratio	1.66	2.43	0.77

i. Gross Ton-Mile Expenses

Gross ton-mile (“GTM”) expenses include the following cost components: maintenance-of-way, road property ownership, fuel, locomotive maintenance, and locomotive and train administrative expense. The parties generally agree on locomotive and train administrative expense costs for the Oklaunion train. The remaining components are addressed separately below. As shown in Table II.A-3 above, the differences in the parties’ gross ton-mile calculations account for most of the total difference between the parties’ variable cost results. Table II.A-4 compares the parties’ GTM calculations by individual cost component.

Table II.A-4
Comparison of GTM Expense Per Carload
Eagle Butte to Oklaunion Station
First Quarter 2003

Item	BNSF Rebuttal	AEP Texas Reply	Difference
Maintenance of Way	\$71.26	\$49.39	(\$21.87)
Road Property Ownership	{ }	{ }	(\$144.33)
Fuel	\$92.87	\$92.87	\$0.00
Locomotive Maintenance*	{ }	{ }	(\$5.99)
Other GTM	\$61.96	\$59.06	(\$2.90)
TOTAL	\$476.01	\$300.94	(\$175.08)

*Excludes AEP Texas’ departmental overhead costs, which are included with “Other GTM” for comparison to BNSF’s expenses.

(a) Maintenance-Of-Way Expense

On opening, AEP Texas proffered a 30-percent reduction to BNSF’s URCS system-average maintenance-of-way (“MOW”) costs using the SFGT formula that the Board rejected as

obsolete in *TMPA* and *Xcel*.⁹ AEP Texas Opening Nar. at II-A-33. In those decisions, the Board found that since the SFGT formula was developed, significant changes have occurred in the rail industry. Those changes include (1) the change from a retirement, replacement, and betterment accounting system to a depreciation accounting system; (2) changes in track materials and their durability; (3) changes in MOW industry practices including capitalization of a greater portion of MOW costs; and (4) the dramatic increase in densities.¹⁰ AEP Texas has not addressed any of these concerns.

Rather, AEP Texas attempts to resuscitate the use of SFGT in this case by claiming to have validated it against its calculation of BNSF's actual movement-specific MOW costs. But as Mr. Fisher and Ms. Newland explained on reply, AEP Texas' movement-specific calculations are themselves fundamentally flawed and cannot be used to support the discredited SFGT formula, nor can they be used for any other movement-specific calculation of MOW costs. Among other problems, AEP Texas' movement-specific calculations are based on BNSF engineering cost center records that do not include all MOW costs for the issue route or for any route. BNSF Reply Nar. at II-23 to 24. Mr. Fisher and Ms. Newland explained in detail the problems with attempting to use the engineering cost center records to develop route-specific MOW costs. These problems were disclosed to AEP Texas in discovery. *Id.* They also explained that the data were inconsistent with the MOW expenses reported in the R-1 and therefore could not be used as a basis for adjusting BNSF's URCS system-average MOW costs. *Id.* at II-25 to 26. Finally, they explained that AEP Texas made a number of errors and used improper calculations in developing its adjustment. *Id.* at II-24 to 27.

⁹ *TMPA* at 55; *Xcel* at 135.

¹⁰ *Xcel* at 135.

In light of the unavailability of data that accurately reflect route-specific MOW costs, Mr. Fisher and Ms. Newland's use of BNSF's URCS system-average MOW costs to calculate variable costs for the issue movement is the best evidence of record and should be accepted by the Board.

(b) Road Property Ownership

The calculation of road property ownership costs for the issue traffic represents the single largest difference between the parties' variable cost evidence – more than 40 percent of the total difference in most quarters. BNSF presents a comprehensive review of the flaws in AEP Texas' calculation of variable road property costs in the Argument of this Rebuttal. The issue must be carefully reviewed in this case, as it has substantial impact on costs and may affect the Board's jurisdiction. In addition, BNSF believes that the Board must carefully address this issue as it relates to fundamental URCS principles that have been misapplied in prior cases.

BNSF submits road property costs based on URCS system-average costs. On opening, AEP Texas proposed an adjustment to URCS system-average costs that supposedly reflects the difference between the net investment in road property per GTM on the issue traffic route of movement and the system-wide net investment per GTM. On reply, BNSF presented evidence demonstrating that AEP Texas' route-specific adjustment is based on flawed data, is methodologically flawed, and cannot be used. In its Reply, AEP Texas presented no new evidence supporting its flawed adjustment.

As explained in detail in BNSF's Reply Evidence and Counsel's Rebuttal Argument, there are fundamental problems with using BNSF's FADB line-specific gross investment data to calculate a movement-specific adjustment, particularly on high-density lines such as the AEP Texas route. The evidence shows that the FADB line-specific data understates gross investment

on high-density lines. BNSF does not repeat here its discussion of those problems. In addition, BNSF has explained that BNSF's line-specific accumulated depreciation data cannot be used to produce accurate net investment calculations on which road property costs are based. BNSF demonstrated that the line-specific depreciation data, which are estimated using a completely different methodology from the system-wide accumulated depreciation reported in the R-1 and used in URCS, massively overstate accumulated depreciation. Moreover, there is no proper way to compensate for the inconsistency between the methodologies used to produce line-specific and system-average accumulated depreciation. This issue is addressed in detail above in the Counsel's Argument.

Mr. Fisher and Ms. Newland explain that an additional problem is created by the inconsistency between BNSF's line-specific and system-average depreciation data when some, but not all, of a railroad's line segments are subject to a recent purchase accounting write-up. As described above in the Counsel's Argument, shippers in past cases have attempted to "correct" for the overstatement in accumulated depreciation produced by the FADB depreciation calculator by increasing R-1 accumulated depreciation to correspond to the system-wide depreciation produced by the FADB depreciation calculator. These complainants have adjusted the accumulated depreciation for the system. Shippers adjust the accumulated depreciation reported in the R-1, which includes both accumulated depreciation in the assets as well as the amortization of the purchase accounting associated with former ATSF assets, to match the totals estimated by the depreciation calculator. However, the FADB depreciation calculator does not consider the ATSF purchase accounting. Thus, by prorating the total balance of accumulated depreciation for all BNSF road property and ATSF purchase accounting to match the amount estimated by the FADB depreciation calculator, complainants spread the amortization of the

purchase accounting associated with the ATSF assets over both former BN and former ATSF assets. This further distorts the accumulated depreciation on the high-density, former BN lines used by the PRB coal traffic, by impermissibly increasing the “share” of total accumulated depreciation that is attributable to the former BN assets. By further overstating the accumulated depreciation on the former BN assets, the shippers’ approach thus understates the net investment of these same assets, producing a resulting adjustment factor that artificially understates the relative net investment of the issue route.

The following figure illustrates the nature of the overstatement produced by the “fix” offered by shippers in recent BNSF cases. {

}

In addition to the problems with the data used by AEP Texas to produce its supposed movement-specific road property calculation, AEP Texas uses a flawed methodology that applies the system-average variability factor – fifty percent – to the high density lines at issue here. As explained in detail in the Counsel’s Argument, this approach is inconsistent with a fundamental URCS principle that the variability percentage must be higher on high-density lines. AEP Texas’ failure to adjust the variability factor to be consistent with URCS is fatal to its proposed calculation even if the FADB data could be used as a starting point. Moreover, as BNSF explains in the Counsel’s Argument, the Board’s treatment of the variability issue in *Xcel* was unjustified since BNSF has shown why no movement-specific calculation of road property costs can be made without an adjustment to the variability factor. BNSF’s use of conservative assumptions in other cost areas cannot fairly be used against BNSF in this area, where the difference between the parties is large.

FTI performed an analysis of BNSF's FADB data in an effort to illustrate the relationship between variability and density on BNSF lines. Even though the FADB segment-specific data are incomplete, they clearly demonstrate that variabilities increased as density increases. Using a standard URCS regression approach and the FADB gross investment data, FTI Manager Matthew Mercurio, Ph.D. determined that the variability of the FADB data range from less than 1 percent on lines that are barely utilized, up to 83 percent on BNSF's highest density lines.¹¹ Dr. Mercurio's analysis is set out in Exhibit II.A-4. Variabilities on the line segments that comprise the issue route range from 60 to 83 percent. This analysis provides empirical support for BNSF's position that the variability percentage increases with increases in density.

(c) Fuel

In its opening evidence, BNSF presented the results of a special study of fuel consumption for AEP Texas trains moving in the Fourth Quarter 2003. That study, which used the same methodology accepted by the Board in *Xcel* and *TMPA*,¹² shows that fuel consumption for AEP Texas trains was approximately five percent above BNSF's system-average fuel consumption rate. BNSF applied the results of the fuel study to the small number of trains operating in the Second Quarter of 2003 that had comparable train characteristics to the study trains, *i.e.*, the longer trains that moved after BNSF increased the size of AEP Texas' trains in June 2003. BNSF did not apply the results of the fuel study to any trains operating before the Second Quarter 2003 because none of those trains had operating characteristics comparable to the study trains. For the vast majority of the movements, BNSF, like AEP Texas, developed variable costs based on system-average fuel consumption.

¹¹ Given the spreading methodologies used to allocate investment in BNSF's FADB, the variabilities shown by this analysis are likely understated.

¹² *Xcel* at 137-38; *TMPA* at 58.

Notwithstanding the small impact of BNSF's fuel study on the variable-cost calculations, AEP Texas devotes a substantial portion of its Reply Evidence to a critique of BNSF's methodology. In its Reply Evidence, AEP Texas makes the following criticisms of BNSF's fuel study:

- BNSF did not make available to AEP Texas a computer program used to read the electronic fuel consumption data;
- BNSF's methodology is flawed;
- BNSF relied on fuel consumption rates that overstate fuel consumption;
- BNSF operated the fuel study locomotives differently in order to increase fuel consumption;
- BNSF did not rely on actual locomotive unit miles;
- BNSF imputed fuel consumption data from one locomotive to another;
- BNSF's fuel study contains inconsistent segment times; and
- BNSF made several mathematical errors that lead to overstated fuel consumption.

As BNSF demonstrates below, AEP Texas' criticisms of the assumptions and methodology underlying the fuel study are not legitimate. Moreover, to the extent AEP Texas has alleged errors in the application of those assumptions and methodologies, none of those alleged errors materially impacts the fuel study results.

(i) BNSF Provided AEP Texas
With Data Sufficient To
Evaluate The Fuel Study
Results

AEP Texas first criticizes BNSF for not providing AEP Texas or the Board a copy of the Quantum software program that was used to read the electronic data downloaded from the locomotive event recorders. In fact, BNSF could not produce the Quantum software to third parties without violating its licensing agreement. In response to AEP Texas' requests for the

software, however, BNSF contacted Quantum and arranged with Quantum to allow AEP Texas to have access under terms similar to those used in other proceedings.¹³ It is BNSF's understanding that Quantum offered the same licensing agreement to AEP Texas that it had offered to complainants in other proceedings, but AEP Texas would not agree to the licensing terms.

When AEP Texas notified BNSF that it was unable to reach agreement with Quantum, BNSF prepared printouts of the event recorder data files so that AEP Texas could evaluate the underlying data in hard-copy form. AEP Texas acknowledged in its Reply Evidence that printouts of the event recorder data files downloaded from the study locomotives would allow AEP Texas to verify that Mr. Wasserburger selected the appropriate beginning and ending points for each segment and that the locomotive was behaving normally. AEP Texas Reply Nar. at II-A-78 n.76. AEP Texas' complaint regarding access to the Quantum software should therefore be moot, because BNSF provided the data that AEP Texas itself suggested would be needed to evaluate BNSF's fuel-study results. *Id.* at II-A-79.

Nevertheless, AEP Texas continues to assert in its Reply Evidence that the Board may not rely on BNSF's fuel study because BNSF did not provide the Quantum software to AEP Texas or the Board. AEP Texas has already admitted that it does not need access to the Quantum software so long as it has printouts of the event recorder data. Whether the Board has access to the Quantum software is not an issue. Consistent with previous cases, the Board can and should rely on the parties to evaluate event recorder data.¹⁴ Based on the parties' analyses of the event recorder data in the *TMPA* and *Xcel* proceedings, the Board was able to determine that

¹³ AEP Texas Reply workpaper 105.

¹⁴ None of the parties in the *TMPA* and *Xcel* proceedings submitted the Quantum software to the Board or argued that the Board needed to access the software.

BNSF's fuel-study results were reliable. The circumstances of this case do not merit a different result.

AEP Texas nevertheless argues that BNSF's inability to produce the Quantum software should preclude any reliance by the Board on BNSF's fuel study.¹⁵ AEP Texas overlooks the fact that BNSF did not produce the Quantum software in either the *TMPA* or *Xcel* case but the Board nevertheless relied on BNSF's fuel study which used that software. AEP Texas' reliance on the Board's treatment of the CANAC railroad simulation model in the *TMPA* decision is inapposite. The Board rejected certain evidence sponsored by BNSF in that case that was based on the CANAC model because CANAC was unwilling to produce the model to complainants under any circumstances due to its commercial sensitivity. Here, the Quantum program is available but AEP Texas chose not to acquire a license. In addition, the Quantum program is not like the CANAC railroad simulation model with complicated inputs and assumptions. The

¹⁵ AEP Texas incorrectly argues that the federal courts do not accept evidence based on computer models that have not been made available to the opposing party. None of the cases support AEP Texas' claim. The first case involved a challenge to a regulatory decision-making in which the court concluded that the agency was required to explain the assumptions and methodology used in preparing a noise model used in its decision-making. *U.S. Air Tour Ass'n v. FAA*, 298 F.3d 997, 1008-1009 (D.C. Cir. 2002). BNSF has clearly explained the assumptions and methodology underlying its fuel study. The second case cited by AEP Texas involved a claim for patent infringement in which the plaintiff relied on a computer model developed by its expert for purposes of the litigation. *Novartis Corp. v. Ben Venue Laboratories, Inc.*, 271 F.3d 1043, 1049 (Fed. Cir. 2001). The court concluded that it could not evaluate whether the simulation prepared by the plaintiff's expert was probative without knowing the model's theoretical foundation and input parameters, which had not been adequately explained in the parties' motions for summary judgment. *Id.* at 1053-1054. The model in *Novartis*, however, was a made-for-litigation model, not a software program that is commercially available. The third case cited by AEP Texas involved a criminal proceeding in which the defendant claimed on appeal that he was not given the opportunity to prepare a defense to computerized material used by the prosecution at trial. *U.S. v. Russo*, 480 F.2d 1228, 1241 (6th Cir. 1973). The court found that the defendant failed to take necessary steps during the discovery stage to review such evidence. This case merely stands for the general principle that a criminal defendant should have an opportunity to evaluate electronic data used by the prosecution. The relevance of a decision in a criminal case is highly questionable here, but in any event, BNSF produced the hard copy printouts that allow AEP Texas to evaluate BNSF's fuel study results.

Quantum program is a straightforward tool used simply to read the locomotive event recorder data and produce output that can then be analyzed. BNSF has already provided the output in hard-copy format, thus giving AEP Texas a full opportunity to evaluate the assumptions that underlie BNSF's fuel-study results.

(ii) BNSF's Study Methodology
Has Been Accepted By The
Board

Second, AEP Texas argues that the methodology underlying BNSF's fuel study is flawed. As explained on opening, BNSF's fuel study is straightforward. BNSF downloaded event recorder data from locomotives powering AEP Texas trains during a study period. The event recorder captures the amount of time the locomotives spent in each throttle position. Using time in throttle position and the locomotive manufacturers' fuel consumption tables, BNSF calculated the total amount of fuel consumed by the study trains. This relatively simple methodology is identical to that methodology accepted by the Board in the fuel studies presented by BNSF in the *Xcel* and *TMPA* cases.¹⁶

AEP Texas makes the unsubstantiated claim that there are flaws in BNSF's fuel study methodology that are similar to flaws in a fuel study presented by NS in Docket No. 42072, *Carolina Power & Light Co. v. Norfolk Southern Ry. Co.* ("*CP&L*"). BNSF is not familiar with the details of NS's fuel study. However, BNSF understands that the *CP&L* study was *not* an event recorder-based fuel study like the studies BNSF presented in *TMPA*, *Xcel*, and in this proceeding. Moreover, according to the Board's decision in *CP&L*, NS's fuel study suffered from multiple defects, including the use of an unrepresentative group of locomotives, the

¹⁶ *Xcel* at 137-38; *TMPA* at 58.

inclusion of non-issue traffic, and the use of fuel readings from different segments to develop fuel consumption data.¹⁷ None of these defects can be attributed to BNSF's fuel study.

(iii) BNSF Used Reliable And
Appropriate Manufacturer's
Fuel Consumption Rates In
Its Fuel Study

AEP Texas claims that the existence of multiple fuel consumption tables with different consumption rates undermines the validity of any fuel study based on locomotive event recorders.¹⁸ Xcel made the same argument in its Reply Evidence and that argument was rejected by the Board.¹⁹

As BNSF explained in its Opening Evidence, there are multiple tables for each locomotive model.²⁰ Generally, when manufacturers make design changes to their models, they perform extensive tests to develop highly precise fuel consumption figures. As a result, there are several potentially relevant fuel consumption tables. The important question is whether the fuel consumption tables actually used in the fuel study correspond to the fuel consumption rates on the locomotives used in the study. BNSF carried out a special field test along with the complainants in the *TMPA* and *Xcel* cases to confirm the accuracy of the manufacturer's SC70MAC fuel consumption table. As explained in BNSF's Reply Evidence, the field test used a BNSF test car equipped with flow meters that measured the amount of fuel actually injected into two locomotives as they moved empty coal cars from Guernsey, Wyoming to a mine in the Powder River Basin for loading and then returned to Guernsey with loaded cars. The data

¹⁷ *CP&L* at 127.

¹⁸ AEP Texas Reply at II-A-82 to 83.

¹⁹ *Xcel* at 137.

²⁰ BNSF Opening Exh. II.A-3 at 1.

generated by the test car were then compared to fuel consumption figures developed by applying the fuel consumption table to the event recorder data downloaded from the locomotives used in the field test.²¹ The event recorder calculations for the combined fuel consumption of the two locomotives monitored were within one percent of the test car measurements.²² In its *Xcel* decision, the Board found this evidence persuasive and determined that “there is no evidence to support Xcel’s claim that BNSF relied on incorrect fuel tables.” *Xcel* at 137.

AEP Texas points to the fact that BNSF’s Train Performance Model (“TPM”) includes a slightly different fuel consumption table from the table that BNSF used in its fuel study. In the attached Verified Statement, Mr. Gary Agnew, BNSF’s General Director of Resource Planning, explains that the fuel consumption table included in BNSF’s TPM was provided by the locomotive manufacturer in 1993 and that BNSF has not updated the table in the TPM since that time. BNSF Rebuttal Exhibit II.A-5. Mr. Agnew also explains that, since BNSF does not collect movement-specific fuel consumption data, it has not attempted to validate the table for purposes of estimating actual fuel consumption. In any event, there is no reason to engage in speculation as to the best fuel consumption table to use since BNSF already carried out a field test that confirms the accuracy of the fuel consumption table that it used in its fuel study of the locomotives on the issue traffic trains.

²¹ BNSF relied on this same EMD fuel consumption table to determine fuel consumption in its special studies of TMPA, Xcel, and AEP Texas trains.

²² BNSF Reply Nar. at III.D-15-16. AEP Texas’ fuel consumption witness, Mr. Johnson, was also a witness for TMPA and Xcel and was present during the field test and subsequent event recorder analysis. The test car reports, Quantum reports, and the fuel consumption table used in the field test were provided to Mr. Johnson upon the completion of the field test and event recorder analysis. These materials were provided in support of BNSF’s SAC evidence at BNSF.RP.WP.III.D-0036 to 0058. In his testimony in any of these proceedings, Mr. Johnson has never disputed the close correlation between the event recorder data and the test car results.

(iv) AEP Texas' Allegation That
BNSF Improperly Operated
The Fuel Study Trains Is
False

In its opening evidence, BNSF's witness Mr. Wasserburger accounted for the fact that certain locomotives on the trains returning empty from Oklaunion to Guernsey or Alliance were isolated and therefore not consuming fuel at the rate indicated by the locomotives' throttle positions. In its Reply Evidence, AEP Texas claims that BNSF's fuel consumption results are overstated because they fail to account for other locomotives that were not isolated during the fuel study but should have been. AEP Texas Reply Nar. at 83-86. Xcel made the same argument in its Reply Evidence and that argument was rejected by the Board:

Xcel's argument that BNSF could have reduced fuel consumption by isolating locomotives on the empty return trip from Pawnee is purely hypothetical. The variable cost calculation is addressed to actual - not hypothetical - operations.²³

AEP Texas' claim that BNSF operates its trains in a way that results in excessive fuel use is implausible and fails to take into account real-world operational conditions. Engineers are instructed to isolate locomotives on the Oklaunion to Alliance/Guernsey route whenever it is operationally feasible to do so.²⁴ However, there are a number of reasons why locomotives may not have been isolated during the empty return from Oklaunion to Alliance/Guernsey. For example, under certain weather conditions, such as when the train is traveling into a strong headwind, tractive effort from all three locomotives will be needed over this route. Alternatively, the dispatcher may instruct the engineer not to isolate a locomotive because the train will impede the flow of other trains, resulting in increases in cycle times and jeopardizing

²³ Xcel at 138.

²⁴ In fact, BNSF's engineers isolated one or more locomotives for all or part of the return trip from Oklaunion to Alliance/Guernsey on 80% (12/15) of the fuel study trains. See BNSF.OP.WP.II.A-0038 to 0343.

contract commitments. This is particularly true in the PRB where, due to the traffic densities on the route from Alliance/Guernsey to the mines and time sensitivities associated with mine loadings, BNSF does not require its engineers to isolate locomotives. AEP Texas completely ignores these operating realities when arguing for an adjustment that the Board has properly deemed “purely hypothetical.”

(v) BNSF Used Appropriate
Mileage Data To Develop
Gallons Per Locomotive Unit
Mile

AEP Texas attempts to liken BNSF’s event recorder fuel study to an NS fuel study conducted on trains handling CP&L traffic. That study was not based on event recorder data and was rejected by the Board for a variety of reasons. One of the Board’s many reasons for rejecting NS’s fuel study was that NS apparently failed to account for the actual locomotive miles traveled by the study trains. AEP Texas claims that BNSF also failed to account for actual miles in its fuel study. Specifically, AEP Texas claims that BNSF did not account for “deviation from the customary route, [for] miles traveled while in yards, or miles traveled while switching cars if required.” AEP Texas Rep. Nar. at II-A-87. In response to AEP Texas’ Reply Evidence, BNSF reviewed its URCS-based fuel consumption calculations and made minor modifications that have a small effect on BNSF’s system-average fuel costs and resulting adjustment for the AEP Texas trains.²⁵

BNSF has already accounted for possible route deviations. For example, BNSF determined whether each train departed from or returned to Alliance or Guernsey, and used the appropriate mileages for the specific routes. BNSF also included with its Opening Evidence an

²⁵ BNSF Reb. electronic workpaper “REBUT_Fuel_Study_With Rd Swi & Loops 15 Trains.123.”

electronic workpaper, "Fuel_trains_movement.xls," that provides a station-by-station listing for each study train from mine to Oklaunion and return. This workpaper confirms that BNSF's mileage data corresponds to each train's actual route of movement.

AEP Texas also suggests that BNSF has not accounted for miles traveled in yards or for switching cars. However, for purposes of calculating system-average fuel, locomotive yard and switching miles are irrelevant. Locomotive fuel consumed while working in yards or switching is measured in terms of time, not miles. Ms. Newland and Mr. Fisher modified their system-average calculation to include 76+ minutes of switching, as well as distances traveled over loop and lead tracks at origin and destination, which were not included in BNSF's Reply calculations.²⁶ As a result, BNSF's system-average fuel consumption accounts for actual miles and time associated with switching, as does the fuel-study consumption to which it is compared. These revisions conform BNSF's development of system-average fuel consumption to the same methodology previously used by BNSF and accepted by the Board in the *TMPA* and *Xcel* cases.

(vi) BNSF's Methodology For Imputing Data From One Locomotive To Another Is Appropriate And Has Been Accepted By The Board

As explained in BNSF's Opening Evidence, Mr. Wasserburger substituted fuel consumption data from one locomotive in a consist when the event recorder data from another locomotive were unavailable.²⁷ AEP Texas objects to BNSF's use of imputed data and suggests

²⁶ *Id.* Ms. Newland and Mr. Fisher also updated their application of the fuel-study results to shipments from other mines, as described in BNSF's Reply evidence at II-43 n. 92. Also, when calculating the variable costs of Eagle Butte shipments, Ms. Newland and Mr. Fisher use the results for only the Oklaunion trains originating from Eagle Butte, rather than the average of all trains in the fuel study. BNSF Rebuttal electronic workpaper "Rebut Fuel Adjustments-Other.xls."

²⁷ BNSF Op. Exh. II.A-3 at 4-5.

that BNSF should have eliminated the affected trains from the fuel study. The Board rejected this argument in its *Xcel* decision, finding that “BNSF used reasonable procedures to correct data collection problems that are inherent to studies of this nature.”²⁸

The facts of this case warrant the same finding. BNSF’s fuel-study data show that consumption rates for two locomotives of the same type are comparable. Therefore, Mr. Wasserburger’s estimates of fuel consumption data for missing locomotives based on the consumption measured for comparable locomotives are reasonable.²⁹ There is simply no justification for excluding these trains from the fuel study. Moreover, if fuel consumption data for the trains for which Mr. Wasserburger estimated data were *excluded* from the study, average fuel consumption for the remaining study trains would slightly *increase*.³⁰

(vii) Inconsistent Segment Times
For Individual Locomotives
On The Same Train

AEP Texas claims that BNSF’s fuel study is flawed because it allegedly shows locomotives on the same train experiencing different transit times over the same segment. Similar criticisms made by *Xcel* were rejected by the Board.³¹ The alleged discrepancies generally result from the event-based methodology used by Mr. Wasserburger to identify arrival and departure times for each locomotive for each segment, and they are immaterial to the results of the fuel consumption study.

²⁸ *Xcel* at 138.

²⁹ For example, compare the fuel consumption data for locomotives BN 9894 and BNSF 9767 on train CEBMOKO045A at BNSF.OP.WP.II.A-0030. Fuel consumption for each locomotive differs by less than one gallon out of a total of 2,900 gallons.

³⁰ BNSF Reb. electronic workpaper “Fuel Adjustment less Trains with Imputed Data.123.”

³¹ *Xcel* at 138.

As explained in BNSF's Opening Evidence, Mr. Wasserburger divided each round-trip movement into six segments and calculated fuel consumption by segment for each locomotive.³² Mr. Wasserburger examined the event recorder data for each locomotive to find evidence of specific events that signify appropriate beginning and ending points for each segment.³³ Based on the beginning and ending times shown on the Quantum reports prepared by Mr. Wasserburger, AEP Texas prepared a workpaper that purports to show discrepancies in time between individual locomotives in a consist.³⁴ The purported discrepancies highlighted in AEP Texas' workpaper typically occur during three segments of the movement. The first is the segment from Alliance/Guernsey to the mine. The second is the segment from Amarillo to Oklaunion, and the third is the segment associated with the unloading at Oklaunion.

The vast majority of the purported time discrepancies for these segments are in fact less than five minutes. The largest discrepancy identified by AEP Texas for any of these segments is one hour. Time differences such as these are caused by the fact that train activities on certain segments make it difficult to identify one consistent end point for each locomotive in a consist. Because fuel expenses are based on the entire round-trip movement as a whole, the fact that one locomotive spends a somewhat longer portion of time in one segment than another locomotive in the same consist is irrelevant and does not result in a double-count of fuel consumption. The appropriate comparison is the entire cycle time, which AEP Texas did not attempt to compare.

³² BNSF Op. Exh. II.A-3 at 3.

³³ *Id.* at 3-4. Since event recorders' internal clocks are not synchronized, it is not feasible to use the event recorder time stamps to determine the appropriate beginning and ending point for each locomotive reading in each of the six segments. Mr. Wasserburger therefore used the event-based approach. As a result, the time elapsed for individual locomotives between the beginning and ending points identified by Mr. Wasserburger may not be identical. This fact does not affect the reliability of the fuel study.

³⁴ See AEP Texas Reply electronic workpaper "Segment Times.xls."

AEP Texas has failed to present evidence showing that these purported inconsistencies would remain if the entire cycle was considered.

(viii) Mathematical Errors

AEP Texas claims that it found two mathematical errors in BNSF's fuel study evidence. The first involves BNSF's inadvertent inclusion of mileage data in its fuel-consumption estimate for train CEBMOKO047A. BNSF reviewed the data for this train and determined that the locomotive at issue, BNSF 8817, was not operating while on the AEP Texas train. Therefore, BNSF removed that locomotive's data from its fuel study results. This represents a decrease of 78 gallons for one segment on one move and does not materially impact the results of BNSF's fuel study.

The second error alleged by AEP Texas relates to mileage data for locomotive 9410 on train CBTMOKO027A. BNSF noted that this locomotive was on the AEP Texas train from Amarillo to Colorado Springs to Alliance and traveled a total of 312.02 miles for this movement. BNSF in fact used the correct mileage data for this locomotive, but inadvertently entered the wrong description for the segment traveled, which should have been Colorado Springs to Alliance.³⁵

(d) Locomotive Maintenance

Because BNSF does not possess data from which locomotive maintenance costs for a specific locomotive, locomotive model, or series can be determined, Mr. Fisher and Ms.

³⁵ This can be verified by reviewing BNSF's train movement data for this train, included as an electronic workpaper to BNSF's opening evidence, "Fuel_trains_movement.xls," "sheet 1," range 3167A to 3190V.

Newland use BNSF's URCS system-average locomotive maintenance cost to calculate variable costs for the issue move. This approach was accepted by the Board in *TMPA* and *Xcel*.³⁶

AEP Texas, on the other hand, uses a combination of BNSF's maintenance contracts with third-party vendors and BNSF's URCS system-average locomotive maintenance cost to develop an adjustment to the system-average cost. BNSF described on Reply the errors in AEP Texas' approach. BNSF Reply Nar. at II-43 to 51. Those errors include, among other things, the use of maintenance contracts that the Board has already concluded do not account for all of BNSF's locomotive maintenance costs.³⁷ Moreover, AEP Texas misapplied the provisions of the maintenance contracts and used contrived and unrealistic operating data (rather than the actual operating data produced by BNSF) to develop BNSF's supposed maintenance costs under the contracts.³⁸ Specifically, AEP Texas grossly understated overhaul costs and used fictional locomotive utilization data to develop per-mile costs. BNSF Reply Nar. at II-45 to 50. As a result, for the units under contract, AEP Texas calculated costs that are significantly lower than those that BNSF actually paid when the contract was in effect and are an implausible 60 percent lower than BNSF's URCS system-average locomotive maintenance costs.³⁹

In its Reply, AEP Texas purports to have compensated for the fact that, as the Board found in *TMPA*, BNSF's contracts do not account for all BNSF locomotive maintenance costs.⁴⁰

³⁶ *TMPA* at 58; *Xcel* at 138.

³⁷ *Id.*

³⁸ AEP Texas alleges that it was necessary to apply this methodology because of BNSF's "refusal to produce actual locomotive maintenance data." AEP Texas Nar. at II-A-14. However, as the Board has previously acknowledged and as AEP Texas acknowledged in its opening narrative, BNSF does not maintain such data. Moreover, as explained on reply, AEP Texas' methodology ignores the data BNSF produced. BNSF Reply Nar. at II-38 to 41.

³⁹ AEP Texas Opening Exh. II-A-19.

⁴⁰ *TMPA* at 58.

Specifically, AEP Texas claims that its “determination of locomotive maintenance costs in the instant proceeding addresses the Board’s *TMPA* concerns by identifying the maintenance costs that reflect ‘costs incurred due to wrecks, derailments, vandalism, abuse, or running out of fuel’ and treating those costs on a system average basis.” AEP Texas Reply Nar. at II-A-65. What AEP Texas actually did was to assume that these costs were reflected in the URCS accounts Clearing Wrecks, Locomotive Equipment Damaged and Other Locomotive Casualties and included those costs at system-average. *Id.* at II-A-65, n.65. The Board rejected this claim in *Xcel* at 138 and should do so here.

The problem with AEP Texas’ argument is that the non-routine locomotive maintenance costs (*i.e.*, costs not covered by the maintenance contracts with the locomotive manufacturers) are often reported to the very accounts to which BNSF reports routine maintenance costs covered by its contracts with the locomotive manufacturers. Indeed, BNSF reports no locomotive repair costs to the “Clearing Wrecks” account. As its name suggests, that account reflects the cost of moving a wreck from a track, and not the cost of repairing the wrecked unit.⁴¹ Further, in its Reply, BNSF identified various *routine* costs (*i.e.*, expenses in addition to and not associated with the wrecks, derailments, etc.) that were not covered by the contracts. BNSF Reply Nar. at II-44 n.96. AEP Texas did not account for these costs either.

AEP Texas also claims that it is reasonable to expect the Oklahoma train locomotives to experience below system-average maintenance costs because of their age, model type (*i.e.*, AC v. DC units), and utilization relative to the rest of BNSF’s fleet. AEP Texas Reply Nar. at II-A-66. Such vague assertions cannot overcome the deficiencies in proof it offers on this cost item.

⁴¹ 49 C.F.R. Pt. 1201, Subpart A, Operating Expense Accounts, Section 3(c)(2)(63).

Moreover, BNSF explained on reply why AEP Texas' premise is wrong. BNSF Reply Nar. at II-50 to 51. Use of a system-average cost is appropriate here.

ii. Switching

The parties disagree on the amount of switching activity associated with AEP Texas trains. On opening, AEP Texas claimed that it had performed a special study that proves that BNSF performs less than *three minutes* of switching on each Oklaunion train, including less than *two seconds of yard switching* for the 117+ cars on each round-trip. AEP Texas Exhibit II-A-25. This absurdly small amount of time was purported to cover all switching activity, including switching of bad order cars en route and in yards. Mr. Fisher and Ms. Newland explained on Reply that AEP Texas' switching evidence was based on a flawed study that substantially understated the frequency of switching activity performed on Oklaunion trains. Indeed, the Board rejected a similar study in *Xcel*.⁴² On Reply, AEP Texas abandoned its flawed study in favor of a different approach.

AEP Texas based its Reply Evidence on the switching costs used by the Board in the *TMPA* rate case. As a result, AEP Texas allots 34 minutes of switching per train, including just six minutes of yard switching. AEP Texas Exhibit II-A-85. AEP Texas argues that adopting the *TMPA* approach here is conservative since the Oklaunion move is shorter than the *TMPA* move. But this rationale fails to stand up in light of the *Xcel* decision, where the Board included substantially more switching time than it did in *TMPA* even though the *Xcel* move is considerably shorter than the *TMPA* move.

⁴² *Xcel* at 128.

Moreover, the Board's calculations in *TMPA* clearly understated switching costs associated with TMPA service.⁴³ First, the Board failed to include yard switching time in *TMPA* because BNSF's study of yard switching was dated and was not movement-specific. The undisputed evidence showed, however, that BNSF performed yard switching on the TMPA trains. Similarly, the evidence in this case clearly shows that there is yard switching performed on the AEP Texas trains.

The Board also understated switching costs in *TMPA* by applying the URCS system-average time per I&I switch event (1.38 minutes) to switching events identified by BNSF and TMPA, even though both parties presented evidence that the time associated with many of the switching activities was considerably higher than 1.38 minutes per event.

Indeed the Board's approach in *TMPA* is inconsistent with its approach in *Xcel*. In *Xcel*, the Board also used system-average URCS I&I switching time but found considerably more yard switching time than in *TMPA*. The reason for the different results in *TMPA* and *Xcel* is principally attributable to the fact that in *Xcel*, the Board applied the I&I switch time on a per-car basis. In *TMPA*, the Board applied the I&I switch time only to a subset of switching events associated with that movement.

In any event, the Board improperly treated all switching events as I&I switching in *TMPA* and *Xcel*, further understating switching costs in both cases. I&I switching

⁴³ BNSF did not challenge the Board's treatment of switching costs in either *TMPA* or *Xcel* because it did not affect the outcome in either case. It is BNSF's view that such a challenge would not have met the Board's standards for reconsideration. Indeed, if the Board were to require the parties to address all issues on reconsideration regardless of their impact, it would render the reconsideration process unwieldy and impractical. Therefore, BNSF cannot be precluded from showing why the Board's treatment of switching costs in those cases should not be extended to this case.

refers to a specific type of switching activity -- intertrain and intratrain switching. The ICC defined intertrain switching as switching by the road haul carrier from road train to road train en route. It defined intratrain switching as the switching of cars within the same train.⁴⁴ Such switching is generally not reflective of the activities associated with unit coal train operations, such as AEP Texas' and TMPA's, where I&I switching occurs only when a bad ordered car that was cut out en route is switched between manifest trains in order to return it to Alliance or Guernsey. The switching activity performed to cut the bad ordered car out of the unit coal train and set it out on a siding or repair track, whether en route or in a yard, however, is not I&I switching, and the use of the system-average I&I minute factor dramatically understates the switching costs associated with unit coal train operations.⁴⁵

Moreover, as explained on reply, the I&I switch time is heavily influenced by block switching. The economies of scale of switching blocks of cars result in a per-car I&I switch time that is considerably less than the amount of time it takes to switch out just one or two cars. But the switching activity most frequently performed on the AEP Texas train, and unit coal trains generally, involves switching individual cars. Consequently, treating all switching activities associated with unit coal train service as I&I switching greatly understates the switching that is actually performed on unit coal trains such as AEP Texas'.

AEP Texas criticizes BNSF's use of system-average switching as inappropriately treating origin and destination loop track costs as switching activity rather than part of the

⁴⁴ *Explanation of Rail Cost Finding Procedures and Principles Relating To the Use of Costs*, I.C.C. statement 7-63, at 117.A.1.

⁴⁵ See BNSF Rebuttal electronic workpaper "Guernsey Switch Study 1989.pdf"; *TMPA* at 45 n.85.

line-haul movement. According to AEP Texas, there are long recognized efficiencies with unit train operations on loop tracks and application of system-average switching costs overstate those efficiencies. Mr. Fisher and Ms. Newland, however, have recognized those efficiencies by including *Ex Parte No. 399* adjustments that are expressly intended to account for unit coal train efficiencies at origin and destination.

Moreover, BNSF's switching evidence generally accounts for all costs that are incurred by BNSF on the loop tracks in addition to costs associated with switching activities. These costs include payments to third parties for loading Oklahoma trains at each of the mines except Black Thunder, and payments to third parties for unloading at the plant. BNSF does not include these costs separately in its variable cost calculations. AEP Texas did not include these costs at all.

It is beyond dispute that AEP Texas trains require switching. But the available data do not reveal either the actual frequency or the amount of time in which BNSF performs the switching on AEP Texas trains. In light of this, BNSF's URCS system-average approach should be accepted.

In its Reply Evidence, AEP Texas identified that in calculating the SEM unit costs, Mr. Fisher and Ms. Newland did not normalize the costs over the appropriate number of years. Mr. Fisher and Ms. Newland correct this error in this Rebuttal Evidence.⁴⁶

⁴⁶ BNSF Rebuttal electronic workpapers "BNSF-01-SWITCH SPLIT-Rebut.123," "BNSF-02-SWITCH SPLIT-Rebut.123," and "BNSF-03-SWITCH SPLIT-Rebut.123."

iii. Train-Mile Expense – Crew Wages

In its Reply Evidence, AEP Texas criticized BNSF's use of system-average crew wages in its opening evidence. As Mr. Fisher and Ms. Newland adopted AEP Texas' movement-specific approach in BNSF's Reply Evidence, these criticisms are moot. The differences that remain between the parties' calculations of crew wages account for between 1 and 5 percent of the total difference between the parties' variable cost evidence, depending on the quarter and origin mine. BNSF Rebuttal Exh. II.A-3.

The differences between the parties' movement-specific crew wage costs result primarily from AEP Texas' failure to include productivity fund payments and from methodological differences in the parties' respective development of the mark-up ratios. These issues are discussed in BNSF's Reply Evidence at II-51 to 57.

After Reply Evidence was filed in this case, the Board issued its June 8, 2004 decision in *Xcel* and addressed the dispute between the parties over the appropriate methodology for developing the mark-up ratios. In *Xcel*, the Board accepted BNSF's use of mark-up ratios specifically applicable to each service as more accurate than the single aggregate mark-up ratio approach advocated by AEP Texas.⁴⁷

Differences in the parties' crew cost calculations also result from AEP Texas' understatement of the number of BNSF loading crews that work the Oklahoma trains, and from AEP Texas' erroneous adjustments to BNSF's crew wage data. Those issues are adequately addressed in BNSF's Reply Evidence at II-55 to 56 and that discussion is not repeated here.

The parties also disagree on the crew wage evidence for Rawhide movements. On reply, Mr. Fisher and Ms. Newland explained that AEP Texas calculated crew wages for Rawhide

⁴⁷ *Xcel* at 139-140.

movements from the incomplete wage data for Rawhide movements that appeared incidentally in the crew wage data produced in discovery for the shipments moving under the challenged rate. In its Reply, AEP Texas acknowledged that the discovery data for Rawhide movements were incomplete and should not be relied upon to calculate crew wages for that move. AEP Texas further claims that, because the data are incomplete, it did not use them to estimate crew wages for the Rawhide move. AEP Texas Reply Nar. at II-A-72, n.20. But its workpapers show that for 2003 Rawhide movements, AEP Texas in fact used these incomplete data to calculate crew wages.⁴⁸ As a result, its 2003 crew wages for Rawhide movements are clearly wrong and should be rejected.

iv. Locomotive Ownership Expense

The parties disagree on the calculation of locomotive ownership costs. AEP Texas uses URCS system-average locomotion ownership costs. AEP Texas trains, however, are powered predominantly by SD70MACs, which are among the most expensive units in BNSF's fleet. As a result, AEP Texas' use of URCS system-average cost understates the actual cost of locomotive ownership for the units used on AEP Texas trains.

Mr. Fisher and Ms. Newland use the actual ownership costs for the units used in AEP Texas service. AEP Texas criticizes (1) the locomotives included in Mr. Fisher and Ms. Newland's calculation; (2) their development of operating lease payments; and (3) their development of BNSF's spare margin. These items are addressed below.

⁴⁸ AEP Opening electronic workpaper "Open-Road Crew Wages, 2003," worksheet "Rawhide distr" contains the average wages by crew district for Rawhide trains, using the figures for the Rawhide symbols "CRWMOKO" and "EOKORWM." Further, the "summary w mu's" worksheet states in footnote 2 that "Wages for trains originating at Rawhide mine developed using payroll data extracted from the "full wages" file "road03" in the "AEPTX FullWages database ..."

(a) Locomotives Included In The Calculation

AEP Texas criticizes BNSF's use of different groups of locomotives to develop the separate components of locomotive costs. AEP Texas Reply Nar. at II-A-43 to 44. Specifically, AEP Texas argues that it is wrong for BNSF to base its locomotive ownership costs on the specific locomotives (more than 97 percent of which were SD70MACs in 2002) that powered the Oklaunion trains, but then to base a locomotive spare margin on all SD70MACs in the Alliance Pool and to base locomotive maintenance costs on all units in the BNSF fleet. *Id.* However, BNSF's approach was accepted in *WPL*, *TMPA* and *Xcel*.⁴⁹ Mr. Fisher and Ms. Newland have used the most specific level of detail that is available for each item, and have developed specific inputs that are applicable to the Oklaunion trains. AEP Texas presented no evidence that the use of any of these three groups of locomotives is incorrect.

Moreover, AEP Texas' criticism is disingenuous in light of the fact that AEP Texas' own locomotive maintenance costs are based on a hybrid of two different groups of locomotives. AEP Texas uses BNSF's system-average locomotive maintenance costs for locomotives not covered by a maintenance contract and uses BNSF's supposed contract maintenance costs for SD70MACs in the Alliance Pool covered by a maintenance contract. AEP Texas Reply Nar. at II-A-65. AEP Texas even gives the same rationale as BNSF for using different pools of locomotives: "Using this method, AEP Texas has captured movement-specific costs where the underlying records will allow such a determination to be made." *Id.* at 65-66.

AEP Texas argues that instead of basing ownership costs on actual locomotives used in AEP Texas service, locomotive ownership costs should be based on an average of *all* locomotives in the Alliance Pool that are of the same model used in AEP Texas service. AEP

⁴⁹ *WPL* at 58-59; *TMPA* at 61; *Xcel* at 141-42.

Texas Reply Nar. at II-A-58. However, BNSF's approach has been repeatedly accepted by the Board.⁵⁰ A calculation based on actual locomotives used in AEP Texas service is obviously more accurate than AEP Texas' approach which includes ownership costs of locomotives that were not actually used in the issue traffic service.

Further, AEP Texas claims that BNSF failed to include 362 of the 702 individual locomotives used on Oklaunion trains in 2002. AEP Texas Reply Nar. at II-A-60. All 362 locomotives identified by AEP Texas, however, appeared only on Oklaunion trains originating from Rawhide. However, all 2002 Rawhide shipments moved under a prescribed rate, and those movements are not the subject of this rate challenge. Mr. Fisher and Ms. Newland did not develop variable costs for 2002 Rawhide shipments and did not include the units used on these Rawhide shipments in calculating locomotive ownership costs for the shipments from other origins that actually moved under the challenged rate.

In any event, inclusion of these units would have a negligible impact on ownership costs. The units that appear on the Rawhide trains are predominantly SD70MACs, as are the units that appear on the non-Rawhide Oklaunion trains. The cost of ownership for these units is within one percent of the cost of ownership for the units included in Mr. Fisher and Ms. Newland's calculation of locomotive ownership costs.⁵¹

The Board should accept BNSF's locomotive ownership costs which are accurate and consistent with Board precedent.

⁵⁰ *Id.*

⁵¹ BNSF Rebuttal electronic work paper "Loco 2002.xls"

(b) Development Of Operating Lease Payments

AEP Texas also challenges BNSF's use of the average rental cost over the life of the lease for units acquired under operating leases. AEP Texas Reply Nar. at II-A-58. AEP Texas argues that BNSF's approach is inconsistent with *WPL*. *Id.* In the *Xcel* decision, issued after the parties filed Reply Evidence in this case, the Board once again used actual lease payments instead of normalized payments.⁵² The Board cited the *WPL* decision as support for this approach, but it did not offer any further explanation as to why actual rather than normalized lease payments should be used. In *WPL*, however, the Board was concerned that UP's locomotive leases might include an annual rent inflation factor and, as a result, use of a normalized lease cost might improperly increase lease costs by taking future inflation into account in assessing current costs.⁵³ This is not a concern here, as BNSF's locomotive leases for the units used in AEP Texas service do not include an inflation adjustment factor. Further, BNSF's normalized lease cost calculations do not assume that future payments will increase with inflation. Rather, normalization of BNSF's lease costs simply addresses the uneven nature of BNSF's lease payment schedules.⁵⁴

⁵² *Xcel* at 142.

⁵³ *WPL* at 58.

⁵⁴ According to AEP Texas, use of BNSF's approach should yield lease costs that are nearly the same as costs based on actual lease payments. This is because, according to AEP Texas "most leases have relatively even lease payment schedules." AEP Texas Reply Nar. at II-A-59. If AEP Texas is correct, then normalization of the leases should have little or no impact on the costs.

BNSF did not challenge the Board's finding on this issue in *Xcel* because that finding had no impact on the Board's jurisdictional determination or on the rate prescription.⁵⁵ Nevertheless, BNSF believes that the Board's holding in *Xcel* is wrong. Use of actual lease payments is inconsistent both with relevant accounting standards and with BNSF's R-1 reporting. As Edward E. Scott, a Director in BNSF's Capital Investment Accounting Department, explains in his Verified Statement attached hereto as Exhibit II.A-6, FASB No. 13 requires that lease payments be accounted for on a normalized basis.⁵⁶ For this reason, BNSF reports its locomotive lease costs on a normalized basis using the same accounting data that Mr. Fisher and Ms. Newland used to calculate locomotive lease costs here. *Id.*⁵⁷

Moreover, in *Xcel* the Board used Xcel's evidence which was based on actual lease payments because it viewed it as superior to BNSF's evidence. In this case, however, AEP Texas has not sponsored a movement-specific adjustment to BNSF's system-average locomotive cost. Instead, it relies on system-average costs which clearly understate the actual costs of providing locomotive power to AEP Texas trains. AEP Texas trains are powered predominantly by SD70MACs, which are among the most expensive locomotives in BNSF's fleet. Even if the

⁵⁵ As the Board's treatment of lease costs in *Xcel* had no impact on the outcome of that case, BNSF does not believe that it could have sought reconsideration under the Board's standards.

⁵⁶ FASB No. 13, which sets forth the standard for accounting for operating leases, provides, in part, the following:

Normally, rental on an operating lease shall be charged to expense over the lease term as it becomes payable. If rental payments are not made on a straight-line basis, rental expense nevertheless shall be recognized on a straight-line basis unless another systematic and rational basis is more representative of the time pattern in which use benefit is derived from the leased property, in which case that basis shall be used.

⁵⁷ The Board's approach in *Xcel* is also unwise as a matter of policy, as it could produce variable costs that vary widely from year to year. That result is not appropriate when the carrier's own reported costs do not reflect such fluctuations in cost because the carrier has adopted accounting standards that require such costs to be smoothed out over time.

actual lease payments were superior to normalized lease payments, as the Board found in *Xcel*, normalized payments are clearly superior to system-average ownership costs. Consequently, BNSF's movement-specific evidence is the best evidence of record.

AEP Texas claims that the reason it did not sponsor a movement-specific adjustment is that BNSF failed to provide the requested locomotive ownership data in discovery. This claim is wrong. In discovery, BNSF produced locomotive lease cost information in the form that it maintains it in the ordinary course of business, *i.e.*, the daily lease rental cost. The actual leases and payment schedules, however, were also available to AEP Texas' consultants to inspect and copy on their visit to Fort Worth. If AEP Texas chose not to devote the resources to collect such data, it cannot blame BNSF for the fact that the record does not include data on the specific lease payments.

(c) Spare Margin

The parties' different approaches to developing an appropriate spare margin represent the single largest source of differences in the calculation of locomotive ownership costs. As explained on opening, BNSF based its spare-margin calculations on records of the actual locomotive availability and utilization for Alliance Pool SD70MACs that BNSF provided to AEP Texas in discovery. BNSF Opening Nar. at II-54 to 57. This approach was accepted by the Board in *Xcel*.⁵⁸ In this case, BNSF calculated variable costs based on composite spare margins of { } percent, depending on the year.⁵⁹

On reply, AEP Texas criticizes BNSF's use of a spare margin based solely on the SD70MAC Alliance Pool for all locomotives powering the Oklaunion trains. AEP Texas also

⁵⁸ *Xcel* at 142-143.

⁵⁹ BNSF Rebuttal electronic workpapers "Spare Margin.xls."

claims that BNSF's approach fails to reflect "availability guarantees" in BNSF locomotive maintenance contracts, incorrectly defines spare margin to include non-utilized time, and contains other errors. AEP Texas Reply Nar. at II-A-44 to 57. These same criticisms were rejected by the Board in *Xcel* at 142-143 and should be rejected here.

(i) BNSF's Locomotive Maintenance Contracts Are Not Relevant To The Proper Calculation Of BNSF's Spare Margin

In its Reply, BNSF explained that the locomotive availability guarantees previously found in BNSF's maintenance agreement with { } have not been in effect since the challenged rate went into effect.⁶⁰ BNSF Reply Nar. at II-69. Although AEP Texas incorporated in its evidence the 1998 and 1999 Amendments (the Fourth and Fifth Amendments, respectively) to BNSF's agreement with { }, it ignored the January 2001 Sixth Amendment that BNSF provided in discovery.⁶¹ In this amendment, BNSF and { } recognized that {

}, thus

terminating the very basis on which AEP Texas principally relies in calculating the spare margin for SD70MACs that are subject to the maintenance contracts. BNSF Reply Nar. at II-69.

Further, BNSF explained in its Reply Evidence why the availability guarantees would not be an appropriate measure of availability even if they were still in effect -- namely that the time that a locomotive would be deemed unavailable under the contract does not include all time that a locomotive is in fact unavailable. BNSF Reply Nar. at II-68 to 69. The same is true of the

⁶⁰ *Xcel* at 142.

⁶¹ BNSF RP.WP.II.A-0056 to 0058.

{

} AEP Texas

Reply Nar. at II-A-50. Such events clearly would lead to periods of time that the locomotives are unavailable to the railroad in excess of the level guaranteed by the maintenance contractor.

AEP Texas, however, asserts that its own records show “no occurrences of {

}. *Id.* AEP Texas produced no such records supporting this claim. Moreover, the notion that AEP Texas *would* or *could* maintain useful records of BNSF’s locomotive maintenance and operating events is implausible. AEP Texas also claims that BNSF’s train event file does not reflect such events. *Id.* But that is because such events are not recorded in those data.

(ii) BNSF’s Definition Of Spare
Margin Is Consistent With
Board Precedent

AEP Texas also argues that BNSF’s use of unavailable *and* unutilized time for the Alliance Pool SD70MACs would “redefine” spare margin. AEP Texas Reply Nar. at 52. AEP Texas asserts that the Board has previously rejected the inclusion of non-utilized time in locomotive spare margin. As the Board concluded in *Xcel*, this argument is specious. In the cases cited by AEP Texas, the ICC accepted the general proposition that a spare margin can include non-utilized time, but it rejected BN’s studies quantifying that time.⁶² BN’s studies, according to the ICC, were rejected because they failed to account for a number of factors that might influence spare-margin levels. The flaws in BN’s studies that led the ICC to reject BN’s spare-margin evidence in those cases do not exist in BNSF’s evidence in this case. The excerpt

⁶² *APL; OPPD; CLE.*

from the *APL* decision quoted by AEP Texas indicates that the ICC was concerned about the impact of non-coal movements on the spare margins of a pool of locomotives used to provide service for coal and non-coal shippers.⁶³ But the Alliance Pool's SD70MACs are almost entirely dedicated to serving PRB coal operations. The fact that the pool is dedicated to coal insulates the SD70MACs from fluctuations in freight traffic levels that could otherwise produce spare-margin levels that vary widely throughout the year. As BNSF's workpapers indicate, the spare margins calculated for each month range by less than five percent throughout 2002.⁶⁴

Further, non-utilized time must be included in order to comply with a fundamental principle of URCS, *i.e.*, that the URCS-based costs for all specific BNSF movements add up to the costs reported in the R-1. Obviously, BNSF's coal fleet must be sufficient to provide service to its coal customers, and BNSF makes every effort to maximize the utilization of its coal fleet. No railroad, however, can keep all of its locomotives in service all the time. There are times when a locomotive is cut out of a consist because the ruling grade of the remaining trip does not warrant the additional power, only to be added back to the consist on the return trip. At other times, locomotives are moved into a different service after they are repositioned close to their assigned shops, just prior to a scheduled maintenance, lowering the utilization of those locomotives. Nevertheless, BNSF incurs ownership costs during this non-utilized time. Those ownership costs are reported in the R-1 and are an input to URCS. URCS requires that a portion of these ownership costs be allocated to each move. Otherwise, a substantial portion of BNSF's locomotive ownership costs would never be recovered.

BNSF's evidence is based on its measure of the actual spare margin on which it evaluates the performance of its locomotive fleet. The availability and utilization report produced to AEP

⁶³ *APL* at 4-5.

⁶⁴ BNSF Rebuttal electronic workpaper "Spare Margin.xls."

Texas in discovery is prepared by BNSF in the normal course of business. {

} Tactically, BNSF reviews the non-utilized margin to determine where power should be repositioned into alternative services in order to get better utilization out of its fleet. BNSF's calculations, based on actual records maintained by BNSF in the normal course of business, identify the appropriate amount of spare margin to be included in determining locomotive ownership costs.

(iii) AEP Texas' Claims Of Errors
Are Wrong

AEP Texas claims that there are other potential errors in BNSF's methodology and in the data underlying BNSF's calculations. None of AEP Texas' arguments is valid.

AEP Texas claims that BNSF's spare-margin calculation might result in a double-count of the time associated with overlapping events. AEP Texas Reply at II-A-57. AEP Texas claims that the MERS-WOAS ("Shop Release to Work Order Assign") could account for the same time accounted for by MERS-TD ("Shop Release to Train Departure"). *Id.* However, a locomotive reports either the MERS-WOAS and then WOAS-TD ("Work Order Assign to Train Departure") sequence of events, or reports only MERS-TD, but not both. No double-count exists.

AEP Texas also criticizes BNSF's spare-margin calculation as relying on flawed data. Specifically, AEP Texas identifies the fact that the January 2002 "hours utilized" exceed both the "hours available" and the "total measurable" hours for the subset of locomotive reported as assigned to BNSF's maintenance responsibility. *Id.* This anomaly, which is unique to that month when the contract expired, reflects the mis-assignment of time for locomotives that were

transitioned from { }’s responsibility to BNSF’s responsibility. However, BNSF’s spare-margin calculation uses only the relationship between the “hours utilized” and the “hours non-utilized” (*i.e.*, the “available, but not utilized” component of spare margin) and the relationship between the “hours available” and the “total measurable” hours (*i.e.*, the “unavailable” component of spare margin). BNSF’s calculation makes no comparison of the absolute levels of “hours utilized” to “hours available” or “total measurable” hours that could be affected by the mis-assigned totals. Thus, correcting the data does not change the spare margin.⁶⁵

AEP Texas argues that neither BNSF’s spare margin nor its locomotive capital costs account for penalties that might have been paid by the locomotive manufacturers for failing to achieve availability guarantees. AEP Texas Reply Nar. at II-A-56. In fact, any penalty paid by the locomotive manufacturers would be included as a credit against BNSF’s locomotive maintenance costs and recorded as such in BNSF’s R-1 data. Since BNSF relies on system-average locomotive maintenance costs in developing variable costs for the issue move, BNSF has, in fact, accounted for such payments in the event any were made.

AEP Texas’ claim that BNSF fails to account for the lease credits for the “Reliability” locomotives is yet another red herring. *Id.* Reliability units were units that BNSF leased from the manufacturer. If the manufacturer failed to meet the availability guarantee then, under certain circumstances, BNSF was to receive lease payment credits. However, there were only { } reliability units in the Alliance Pool and those { } locomotives were purchased by BNSF in January 2001.⁶⁶ Since there have been no reliability locomotives since January 2001, they are irrelevant to BNSF’s spare-margin calculation.

⁶⁵ BNSF Rebuttal electronic workpaper “Spare Margin.xls.”

⁶⁶ BNSF/AEPTX 07439 to 07441 included as BNSF.RP.WP.II.A-0056 to 0058.

AEP Texas also claims that the locomotive spare-margin study does not fully account for the provision of foreign locomotives or payments from other carriers resulting from operation of BNSF locomotives off-line in run-through service. AEP Texas Reply Nar. at II-A-56 to 57. This criticism is unwarranted. AEP Texas' argument, however, appears to be premised on the implausible assumption that foreign locomotives are available and utilized 100 percent of the time while they are on BNSF lines. There is no reason to believe that foreign locomotives are available or utilized more than BNSF's own locomotives when on BNSF lines.

Finally, AEP Texas criticizes BNSF for basing its spare margin on the SD70MACs in the Alliance Pool. In *Xcel*, the Board accepted BNSF's approach as reasonable because Alliance Pool SD70MACs represent over 96.5 percent of the locomotives used in Xcel service.⁶⁷ The Board should reach the same conclusion here where, as AEP Texas acknowledges, the vast majority of units used in Oklaunion service are Alliance Pool SD70MACs.

v. Freight Car Ownership

On opening, Mr. Fisher and Ms. Newland developed freight-car ownership costs using BNSF URCS system-average costs for plain gondolas, the predominant car type, used on the Oklaunion train. In its Opening Evidence, AEP Texas used a non-URCS based system-average cost that it developed for each car type used in AEP Texas service and then weighted its results by the relative mix of different car types used in Oklaunion trains.⁶⁸

On reply, each party adopted the other party's general approach with regards to the mix of units costed: AEP Texas based its Reply Evidence on plain gondolas only and

⁶⁷ *Xcel* at 142.

⁶⁸ In addition to plain gondolas, general service open-top hoppers and special service open-top hoppers are used on the Oklaunion train.

BNSF based its Reply Evidence on the mix of cars actually used in on the Oklaunion train.⁶⁹ As plain gondolas account for more than 90 percent of the cars used on the Oklaunion train, the differences in the mix of cars costed by the parties is not a significant source of the total difference between the parties' respective cost calculations. Since use of the actual mix of cars yields a more precise estimate of freight car ownership costs for the issue traffic, however, Mr. Fisher and Ms. Newland continue to use the actual mix of cars in this Rebuttal Evidence.

The primary sources of the difference between the parties' car ownership costs are the parties' use of different freight car cycle times and their use of different spare margin factors. Mr. Fisher and Ms. Newland apply the URCS system-average cycle time to the URCS car type-specific unit costs. Since this approach accounts for BNSF's spare-margin requirements, they do not apply a separate spare-margin factor. AEP Texas criticizes use of the system-average cycle time. According to AEP Texas, BNSF should have used the shorter movement-specific car cycle times that AEP Texas uses. AEP Texas' use of movement-specific cycle times in this instance is inappropriate.

In developing system-average freight car ownership unit costs, URCS allocates costs for a given car type, such as a gondola, on a distance basis (car-miles) and on a time basis (car-days). In doing so, URCS assumes a system-average distance-time relationship, *i.e.*, the number of miles that a gondola travels in one day. This system-average distance-time relationship is based on data for the entire pool of gondolas and takes into account the generally high utilization rates of cars used in coal unit train

⁶⁹ As explained at BNSF Reply Nar. II-62 to 63, in its Opening Evidence, AEP Texas improperly adjusted the mix of car types. In BNSF's Reply Evidence and in this Rebuttal, Mr. Fisher and Ms. Newland used the actual mix of car types used on the Oklaunion train.

service, such as AEP Texas service. Consequently, AEP Texas' substitution of the movement-specific car cycle times for the system-average distance-time relationship assumed by URCS is overreaching as the higher utilization rates for AEP Texas cars are already accounted for in the calculation of the system-average unit costs. Moreover, it improperly changes the assumptions on which the system-average unit cost is based without changing the system-average unit cost.

As to the separate spare-margin factor used by AEP Texas, the flaws in AEP Texas' development of that factor are addressed in detail at BNSF Reply Nar. II-63 to 65.

vi. Freight Car Operating

Differences between the parties' freight-car operating cost evidence account for approximately 20 percent of the difference between the parties. The principal source of the differences is AEP Texas' improper "active to calendar day" adjustment. As explained on reply, this adjustment was roundly rejected by the Board in *TMPA* at 63 and again in *Xcel* at 143 as a "collateral attack on the [URCS] model itself." Nevertheless, AEP Texas applies the adjustment without offering any argument to support its application. For the same reasons the Board rejected this adjustment in *TMPA* and *Xcel*, it should do so here.

The remainder of the differences between the parties' car operating cost evidence results from (1) the mix of units used by the parties, which is addressed in above Section II.A.1.c.v.; and (2) AEP Texas' improper adjustment to reflect cars maintained under a full service lease which is addressed at BNSF Reply Nar. II-65 to 67.

vii. Third-Party Loading Expense

As explained in BNSF's Reply evidence, BNSF pays a third-party approximately { } per ton to load Oklaunion trains at all PRB origin mines except Black Thunder, which uses BNSF loading crews.⁷⁰ BNSF also pays a third party { } per train to unload Oklaunion trains at the plant.⁷¹ AEP Texas includes neither of these costs that BNSF incurs in providing service to AEP Texas.

As Mr. Fisher and Ms. Newland use URCS system-average switching costs to account for costs incurred on the loop track at origin and destination, they do not include separately BNSF's payments to third parties for loading and unloading.

viii. EOTD Ownership Expense

BNSF uses system-average EOTD costs. AEP Texas claims that system-average ownership costs overstate EOTD costs by \$0.09 per car. However, in calculating EOTD costs, AEP Texas' wrongly assumes that EOTD's are used only on two-thirds of AEP Texas' trains.⁷² In fact, every AEP Texas train must have an EOTD for the entire trip. Correcting this error further narrows an already negligible difference between the parties on this issue.

⁷⁰ BNSF Reply Nar. at II-55, 71 and BNSF Reply electronic workpaper "Third Party Loaders.pdf."

⁷¹ BNSF Rebuttal electronic workpaper "Third Party Unloading Contract.pdf." The contract for unloading is between AEP Texas and the third party unloader. Under a separate agreement between BNSF and AEP Texas, BNSF bears the cost of the third party unloader.

⁷² AEP Texas Opening electronic workpaper "AEPTX Train Activity Summary.123," Tab "A," cell "L37."

ix. Loss And Damage

AEP Texas errs by relying on loss and damage estimates other than the values stipulated to by the parties at the *Ex Parte No. 638* Technical Conference.⁷³ BNSF uses the stipulated values.

x. Carload Handling

AEP Texas errs by relying on carload handling costs other than the costs stipulated to by the parties at the *Ex Parte No. 638* Technical Conference.⁷⁴ BNSF uses the stipulated values.

2. Restatement Of Variable Costs And Summary

As described above, BNSF updated the variable costs for Third Quarter 2001 through Second Quarter 2003. Table II.A-5 below shows the results by quarter for shipments moving under the challenged rate from mine origins that accounted for at least 10 percent of the coal originated by AEP Texas trains in a given quarter. Table II.A-6 shows the results for shipments from mine origins that accounted for less than 10 percent of the coal in a given quarter. It also includes the results for Rawhide shipments occurring in the Second Quarter 2003. Exhibit II.A-1 presents the variable costs for each component by origin mine, rate, and quarter for movements under the challenged rates. BNSF's electronic workpapers contain the detailed calculations.⁷⁵

⁷³ BNSF Rebuttal electronic workpaper "Letter to the Board 4_12.pdf."

⁷⁴ *Id.*

⁷⁵ BNSF Rebuttal electronic workpaper "BNSF AEP REBUTTAL PRG.123."

Table II.A-5
Summary of Variable Costs and Revenue To Variable Cost Ratios for Mines Origins
Accounting for at Least Ten Percent in a Given Quarters

Period	Rate/Ton Charged by BNSF	Variable Cost/Ton	Revenue to Variable Cost Ratio	
			Based on Rate Established by BNSF	Based on \$13.68 Rate Paid by AEP Texas
Buckskin				
3rd Qtr 2001	\$15.78	\$9.42	168%	145%
4th Qtr 2001	\$15.78	\$9.32	169%	147%
Black Thunder				
2nd Qtr 2002	\$15.78	\$9.77	161%	140%
3rd Qtr 2002	\$16.36	\$9.85	166%	139%
4th Qtr 2002	\$17.25	\$10.53	164%	130%
Jacobs Ranch				
4th Qtr 2001	\$15.78	\$9.03	175%	151%
1st Qtr 2002	\$15.78	\$8.99	176%	152%
3rd Qtr 2002	\$16.46	\$9.76	169%	140%
4th Qtr 2002	\$17.25	\$10.31	167%	133%
Eagle Butte				
1st Qtr 2003	\$17.25	\$10.42	166%	131%
2nd Qtr 2003 117-Car Train	\$17.53	\$9.87	178%	139%
2nd Qtr 2003 128-Car Train	\$18.04	\$10.13	178%	135%

Table II.A-6
Summary of Variable Costs and Revenue To Variable Cost Ratios For Mine Origins
Accounting for Less Than Ten Percent of Coal Originated in a Given Quarter*

Period	Rate/Ton Charged by BNSF	Variable Cost/Ton	Revenue to Variable Cost Ratio	
			Based on Rate Established by BNSF	Based on \$13.68 Rate Paid by AEP Texas
Black Thunder				
3rd Qtr 2001	\$15.78	\$9.48	166%	144%
4th Qtr 2001	\$15.78	\$8.88	178%	154%
Caballo				
2 nd Qtr 2002	\$15.78	\$10.56	149%	130%
3 rd Qtr 2002	\$16.36	\$9.55	171%	143%
4th Qtr 2002	\$17.25	\$10.79	160%	127%
2nd Qtr 2003	\$18.04	\$10.52	171%	130%
Cordero				
2nd Qtr 2003	\$18.04	\$9.75	185%	140%
Caballo Rojo				
3rd Qtr 2001	\$15.78	\$9.32	169%	147%
4th Qtr 2001	\$15.78	\$9.46	167%	145%
2nd Qtr 2003	\$18.04	\$11.56	156%	118%
Jacobs Ranch				
3rd Qtr 2001	\$15.78	\$9.12	173%	150%
North Rochelle				
3rd Qtr 2002	\$16.36	\$10.77	152%	127%
Rawhide				
2nd Qtr 2003	\$13.68	\$10.59	129%	129%

*Also includes Rawhide 2nd Qtr. 2003 which moved under a Board prescribed rate.

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**BNSF REBUTTAL EXHIBIT II.A-1
HAS BEEN REDACTED**

**BNSF REBUTTAL EXHIBIT II.A-2
HAS BEEN REDACTED**

**BNSF REBUTTAL EXHIBIT II.A-3
HAS BEEN REDACTED**

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

AEP TEXAS NORTH COMPANY,

Complainant,

v.

**THE BURLINGTON NORTHERN AND
SANTA FE RAILWAY COMPANY,**

Defendant.

Docket No. 41191 (Sub-No. 1)

VERIFIED STATEMENT OF MATTHEW G. MERCURIO

I am Matthew G. Mercurio. I am a Manager of FTI Consulting, Inc., with offices at 1201 Eye Street, N.W., Suite 400, Washington, DC 20005. I was awarded a Ph.D. in economics by Princeton University in 1996. In addition, I hold a Masters Degree in economics, also from Princeton University, and a Bachelor of Arts degree in mathematics and economics from Boston University. My qualifications are further described in Section IV of this Narrative.

I understand that a critical issue in the determination of the variable costs of AEP Texas service is the treatment of BNSF's road property investment and depreciation. AEP Texas proposes a movement-specific calculation of road property variable costs that fails to take into account the effect of changes in density on individual line segments on the "variability" of road property costs, *i.e.*, the extent to which total costs on a particular line are variable costs. Rather, AEP Texas applies a 50 percent variability factor to all line segments on the issue route. The 50 percent variability factor is the factor used by URCS to determine system-average road property costs. BNSF contends that variability changes with density on a linear basis and that any movement-specific adjustment must reflect this fact. The purpose of my statement is to provide

empirical support to BNSF's contention that the percentage of road property investments that are properly treated as variable (output-related) versus fixed (capacity-related) increases with route density, and thus cannot be reasonably approximated by the use of a 50 percent variability assumption regardless of the density of the line.

In order to determine the relationship between line density and variability, I used BNSF's FADB investment data to estimate regressions based on the standard UCRS regression framework. BNSF has explained elsewhere that the FADB data are not complete and cannot be used to produce accurate estimates of investment on particular line segments. Nevertheless, I analyzed these data to determine whether they support BNSF's contention that the variability of road property costs changes with changes in density. The approach I used is a natural extension of the framework described by Dr. Daniel Westbrook in his 1988 report: "The UCRS regression phase dichotomizes activity expenses into a component that is associated with the level of activity of the railroad (the *variable* component) and a component that is associated with the capacity of the railroad (the *fixed* component) by regressing expense against measures of railroad activity and capacity."¹ There is nothing in principle which prevents such a regression from isolating the portion of increases in road investment which are variable versus fixed.

Data Issues

There are several differences between the data I used and those used by Dr. Westbrook. First, there is no time series component in the BNSF data. This issue is essentially moot, since in Westbrook's original work the time component is plagued by high autocorrelation, and Westbrook himself notes "Moreover, the time period [five years] is so brief that the stochastic

¹ "RESEARCH REPORT ON UCRS REGRESSION EQUATIONS," M. Daniel Westbrook, Ph.D., Revised October 17, 1988, at 14.

components of railroad operations may well swamp systematic variations, particularly in slow-to-change variables like those that measure capacity.”²

Second, the data I used do not have a formal panel aspect to them since I employed BNSF-specific data. However, Westbrook himself rejects the notion that the parameters of interest are the same across all railroads in his analysis; indeed, the panel aspect of his data causes numerous problems in his estimation which do not arise here. Furthermore, the data I used involve numerous BNSF routes and therefore show tremendous variation in density, length, and expenditures, probably far greater than the variation in Westbrook’s original data.

Econometric Details

The equation estimated is:

$$\text{Gross Investment} = \text{constant} + \text{capacity} * (\text{route miles}) + \text{output} * (\text{gross ton-miles})$$

Note that the regression utilizes route miles as the measure of railroad capacity, not the track miles used in many of Westbrook’s other regressions. The use of route miles is consistent with Rail Form A (using Statement 7-63), where the calculation is based on route miles, not track miles. Because URCS merely adopted the earlier Rail Form A variability percentages for road property, it is appropriate to use route miles in an analysis of the FADB data.

The results of the above regression applied to the BNSF FADB data are presented below:³

² Westbrook report, p. 26.

³ Like the regressions estimated by Westbrook, my regression indicates heteroskedasticity with regard to the estimated residuals. Like Westbrook, I employed GLS estimation, and the standard errors displayed are corrected for heteroskedasticity.

The MODEL Procedure						
Nonlinear GMM Summary of Residual Errors						
Equation	DF	DF	SSE	MSE	Root MSE	R-Square
gross	Model	Error				
	3	235	4.261E17	1.813E15	42581671	0.8779
						0.8769
Nonlinear GMM Parameter Estimates						
Parameter	Estimate	Std Err	t Value	Pr > t		
const	501144.1	2322111	0.22	0.8293		
capacity	192305.1	32815.5	5.86	<.0001		
output	7851.683	1068.8	7.35	<.0001		
Number of Observations			Statistics for System			
Used	238		Objective	0.0218		
Missing	0		Objective*N	5.1778		

The model finds a strong relationship between road investments and both the capacity as well as the output measure, as expected. The overall fit of the model is excellent, with a high R^2 of 87.79%.

In practical terms, the above regression indicates that the proportion of variable costs range by segment from less than 1 percent on BNSF's lowest density lines to 83 percent on BNSF's highest density lines. The proportion of variable costs range by segment on the route traveled by AEP Texas trains from 60 percent to 83 percent. The average proportion of variable costs for the overall BNSF system is 58 percent. Furthermore, 86 percent of the total gross ton miles are on segments with greater than 50 percent variable costs, and 78 percent of the gross ton miles are on segments with greater than 60 percent variable costs. The ultimate conclusions of our analysis are that costs increase with density and that the portion of costs that are variable increase with density.

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

AEP TEXAS NORTH COMPANY

Complainant,

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Defendant.

Docket No. 41191 (Sub-No. 1)

VERIFIED STATEMENT OF GARY D. AGNEW

My name is Gary D. Agnew. I am General Director of Resource Planning for The Burlington Northern and Santa Fe Railway Company (“BNSF”). I am responsible for analysis of BNSF’s line capacity in support of capital expansion projects and train scheduling efforts on BNSF rail lines. I began my career with the BNSF in 1982 in the marketing department. I moved from marketing to operations in 1989 and have been responsible for line capacity analysis for the last six years.

In that capacity, I regularly use and supervise the use of railroad simulation models, including BNSF's Train Performance Model ("TPM"), which was produced to AEP Texas in discovery. One of BNSF's predecessors, the Burlington Northern Railroad ("BN"), developed this model in the 1970s. When the BN first began receiving the newly manufactured EMD SD70MAC locomotives in 1993, we incorporated the manufacturer's fuel consumption rates for these locomotives into the TPM. We have not updated or revised these rates since we originally incorporated them into the TPM. We also have not attempted to validate these rates for purposes

of estimating actual fuel consumption, because we do not collect movement-specific fuel consumption data in the ordinary course of business.

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Defendant.

Docket No. 41191 (Sub-No. 1)

VERIFIED STATEMENT OF EDWARD E. SCOTT

I am a Director in BNSF's Capital Investment Accounting Department. My business address is 2600 Lou Menk Drive, Forth Worth, Texas, 76131-2830. I have responsibility for accounting for BNSF's fixed assets. I have direct experience with BNSF's accounting for locomotive lease costs. I have been employed by BNSF since August, 1998.

The purpose of my statement is to explain BNSF's accounting and reporting practices with respect to locomotive lease costs. I am submitting this verified statement to explain to the Board that BNSF uses a normalized lease cost in its financial reporting, and that such accounting of its lease payments is consistent with Generally Accepted Accounting Practices (GAAP) and FASB 13 as amended by FAS 98.

BNSF's locomotive lease payment schedules typically fluctuate over the life of the lease. That is, lease payments may be higher in some payment periods and lower in other payment periods. In accordance with FASB 13, rent expense associated with leases that have uneven payment schedules are required to be accounted for on a straight-line basis. FASB 13 states in

relevant part that “If rental payments are not made on a straight-line basis, rental expense nevertheless shall be recognized on a straight-line basis ...” BNSF’s accounting and financial reporting practices are consistent with GAAP and FASB 13. At the beginning of a lease term, BNSF divides all payments to be made by the lease term, in order to calculate an annual straight-line accrual rate. The straight-line annual accrual rate is then charged to the appropriate expense account and reported in the R-1. When BNSF’s treasury department makes a payment to a locomotive lessor, the payment is recorded against the accrual account. Although the actual lease payments may be higher or lower than the straight-line accrual rate, at the end of the lease term, the accrual account will reflect a zero balance. No adjustments are made to the expense account to reflect payments that are higher or lower than the accrual rate. It is the expense account, which contains the straight-line lease expenses, that is reported in BNSF’s R-1.