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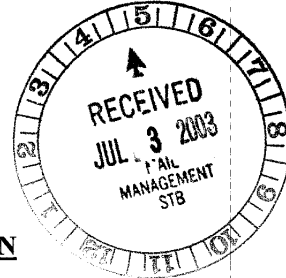
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July 3, 2003

via Hand Delivery

Hon. Vernon A. Williams
Secretary
Surface Transportation Board
1925 K Street, N.W.
Washington, D.C. 20423

PUBLIC VERSION



Re: *Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company, Docket No. 42058*

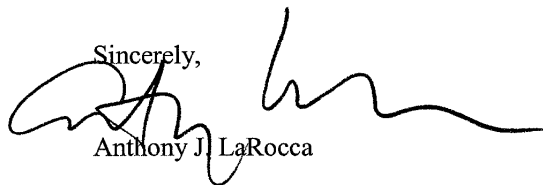
Dear Secretary Williams:

Enclosed for filing in the above-captioned matter is the Joint Variable Cost Rebuttal Evidence of The Burlington Northern and Santa Fe Railway Company ("BNSF") and Union Pacific Railroad Company ("UP"). This filing consists of the original and 10 copies of a one volume Public Joint Narrative and Exhibits. In addition, BNSF and UP are filing three copies of their Joint Narrative and Exhibits on compact disc.

These materials constitute the public version of BNSF and UP's Joint Variable Cost Rebuttal Evidence.

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

Sincerely,


Anthony J. LaRocca

Enclosures

cc: Counsel for Complainant

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PUBLIC VERSION

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

STB Docket No. 42058



**ARIZONA ELECTRIC POWER COOPERATIVE, INC.
v.
THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY AND UNION
PACIFIC RAILROAD COMPANY**

**Joint Variable Cost Rebuttal Evidence of
The Burlington Northern and Santa Fe Railway Company
and
Union Pacific Railroad Company**

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Abbreviations of ICC or STB Decisions:

<i>Adoption of URCS</i>	<i>Adoption of Uniform Rail Costing System as a General Purpose Costing System for All Regulatory Costing Purposes</i> , 5 I.C.C.2d 894 (1989).
<i>Amtrak</i>	<i>National Railroad Passenger Corp. & Consolidated Rail Corp. - Application Under Section 402(a) of the Rail Passenger Service Act for an Order Fixing Just Compensation</i> , 10 I.C.C.2d 863 (1995).
<i>APL</i>	<i>Arkansas Power & Light Co. v. Burlington Northern R.R. Co., et al.</i> , 3 I.C.C.2d 757 (1987).
<i>APS</i>	<i>Arizona Public Serv. Co., et al., v. The Atchison, Topeka & Santa Fe Ry.</i> , 2 S.T.B. 367 (1997).
<i>Central Louisiana Electric</i>	<i>Central Louisiana Elec. Co. v. Burlington Northern R.R. Co. and Missouri Pac. R.R. Co.</i> , ICC Docket No. 37667S (ICC served Feb. 25, 1983).
<i>FMC</i>	<i>FMC Wyoming Corp. v. Union Pacific R.R.</i> , STB Docket No. 42022 (STB served May 12, 2000).
<i>Georgia Power</i>	<i>Georgia Power Co., Southern Co. Servs., Inc., Oglethorpe Power Corp., Municipal Auth. Of Georgia, & City of Dalton v. Southern Ry. Co. & Norfolk Southern Corp.</i> , ICC Docket No. 40581 (ICC served Nov. 8, 1993).
<i>Nevada Power</i>	<i>Bituminous Coal - Hiawatha, Utah, to Moapa, Nevada</i> , 6 I.C.C.2d 1 (1989).
<i>Northern States Power</i>	<i>Northern States Power Co. Minnesota v. Union Pacific R.R.</i> , STB Docket No. 42059 (STB served May 24, 2002).
<i>OPPD</i>	<i>Omaha Public Power Dist. v. Burlington Northern R.R. Co.</i> , 3 I.C.C.2d 123 (1986).
<i>PEPCO</i>	<i>Potomac Elec. Power Co. v. Consolidated Rail Corp.</i> , ICC Docket No. 36114 (Sub-No. 1) (ICC served April 7, 1982).
<i>SAC Procedures</i>	<i>General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases</i> , STB Ex Parte No. 347 (Sub-No. 3) (STB served Mar. 12, 2001).

<i>San Antonio</i>	<i>San Antonio, Texas, Acting By and Through Its City Public Service Board v. Burlington Northern R.R. Co.</i> , 1 I.C.C.2d 561 (1986).
<i>SWRR</i>	<i>Southwestern R.R. Co., Inc.--Acquisition and Operation Exemption - Whitewater and Shattuck Branches of the Atchison, Topeka and Santa Fe Ry. Co.</i> , Finance Docket No. 31613 (Sub-No. 1), 1990 WL 288182 (ICC decided May 23, 1990).
<i>TMPA</i>	<i>Texas Municipal Power Agency v. The Burlington Northern and Santa Fe Ry. Co.</i> , STB Docket No. 42056 (STB served Mar. 24, 2003).
<i>WPL I</i>	<i>Wisconsin Power & Light Co. v. Union Pacific R.R. Co.</i> , STB Docket No. 42051 (STB served Sept. 13, 2001).
<i>WPL II</i>	<i>Wisconsin Power & Light Co. v. Union Pacific R.R. Co.</i> , STB Docket No. 42051 (STB served May 14, 2002).
<i>WTU</i>	<i>West Texas Utils. Co. v. Burlington Northern R.R. Co.</i> , 1 S.T.B. 638 (1996).

**I. Counsel's Argument and
Summary of Evidence**

I. Counsel's Argument and Summary of Evidence
PUBLIC VERSION

I. COUNSEL'S ARGUMENT AND SUMMARY OF EVIDENCE

A. INTRODUCTION

Defendants The Burlington Northern and Santa Fe Railway Company ("BNSF") and Union Pacific Railroad Company ("UP") (jointly, the "Railroads") submit this joint variable cost rebuttal evidence and argument in the rate reasonableness proceeding *Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company*, STB Docket No. 42058.

As explained in the SAC Reply Evidence filed separately by BNSF and UP in this proceeding, the Railroads believe that the complaint filed by Arizona Electric Power Cooperative ("AEPCO") should be dismissed as a result of AEPCO's failure to submit SAC evidence that provides a valid basis for assessing the reasonableness of the challenged rates. Accordingly, this case can and should be resolved without any assessment of variable cost evidence. Nevertheless, the Railroads submit this detailed response to AEPCO's variable cost evidence because there is a serious jurisdictional issue in this case. Many of the complaint movements are below the jurisdictional threshold, thus depriving the Board of authority to prescribe rates even if AEPCO had submitted competent SAC evidence. Table BNSF/UP I-2 below demonstrates that the R/VC ratio for movements from the McKinley Mine ("McKinley") is below the 180 percent jurisdictional threshold in most quarters.¹

¹ BNSF submits that the variable cost evidence presented in this rebuttal filing also supports the summary dismissal of AEPCO's complaint with respect to movements from the Lee Ranch mine. For reasons explained in BNSF's SAC Reply Evidence, the marginal extent to which the R/VC ratio exceeds the jurisdictional threshold for Lee Ranch movements means that AEPCO would be unlikely to receive reparations under any circumstances in light of its settlement with UP. *See* BNSF SAC Reply at I-32 to 37. {

} *Id.* Because there is so little at stake in this proceeding, BNSF does not believe that AEPCO should be permitted to repair the serious flaws in its SAC evidence. The Board should dismiss AEPCO's complaint without any consideration of new SAC evidence.

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In this joint filing, the Railroads address the reply variable cost evidence submitted by AEPCO. This Rebuttal shows how AEPCO continues on reply to understate significantly the Railroads' variable costs of providing service for coal trains moving from Lee Ranch Mine ("Lee Ranch") and McKinley Mine in New Mexico to the Apache Generating Station in Cochise, Arizona ("Apache Station"). It addresses AEPCO's errors and its criticisms of the Railroads' opening evidence, and it explains why the Board should adopt the Railroads' evidence as presented in this Rebuttal and in the Railroads' previous filings in this proceeding.²

Tables BNSF/UP I-1 and BNSF/UP I-2 compare the variable cost per ton and the revenue-to-variable cost ("R/VC") ratios calculated in the Railroads' rebuttal evidence with the calculations in AEPCO's reply evidence. The comparisons show that the parties have narrowed their differences since opening, but that the issues still in dispute are substantial and reflect significant disagreements about costing methodology.

² The Railroads' evidence in this Rebuttal is supported by the testimony of Mr. Thomas Haley, Assistant Vice President - Network & Capital Planning for UP, and Mr. Benton V. Fisher of FTI Consulting, Inc. The witnesses' qualifications and a description of the portion of the Railroads' evidence that each witness sponsored are contained in section IV below. This Rebuttal also incorporates by reference the testimony of other witnesses presented in the Railroads' opening and reply.

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Table BNSF/UP I-1
Rates Per Net Ton, Variable Costs Per Net Ton, and R/VC Ratios
For Shipments from Lee Ranch to Apache Station

Period	Rate	AEP/CO Reply		Railroads Rebuttal	
		Variable Cost	R/VC Ratio	Variable Cost	R/VC Ratio
98-Ton Rate					
1Q01	\$9.35	\$4.31	217%	\$5.28	177%
2Q01	\$9.35	\$3.91	239%	\$4.76	196%
3Q01	\$9.35	\$4.21	222%	\$5.14	182%
4Q01	\$9.35	\$3.64	245%	\$5.29	177%
1Q02	\$9.54	\$3.35	272%	\$4.94	193%
2Q02	\$9.54	\$3.56	255%	\$5.04	189%
3Q02	\$9.54	\$3.51	259%	\$4.92	194%
4Q02	\$9.54	No Shipments Under Challenged Rate			
1Q03	\$9.73	No Shipments Under Challenged Rate			
115-Ton Rate					
1Q01 – 4Q01	\$9.05	No Shipments Under Challenged Rate			
1Q02 – 2Q02	\$9.23	No Shipments Under Challenged Rate			
3Q02	\$9.23	\$3.01	294%	\$4.37	211%
4Q02	\$9.23	\$3.02	293%	\$4.36	211%
1Q03	\$9.41	\$3.17	278% ³	\$4.52	208%

Table BNSF/UP I-2
Rates Per Net Ton, Variable Costs Per Net Ton, and R/VC Ratios
For Shipments from McKinley to Apache Station

Period	Rate	AEP/CO Reply		Railroads Rebuttal	
		Variable Cost	R/VC Ratio	Variable Cost	R/VC Ratio
98-Ton Rate					
1Q01 – 4Q01	\$9.35	No Shipments Under Challenged Rate			
1Q02	\$9.54	No Shipments Under Challenged Rate			
2Q02	\$9.54	\$4.03	226%	\$5.85	163%
3Q02	\$9.54	\$3.92	232%	\$5.48	174%
4Q02	\$9.54	No Shipments Under Challenged Rate			
1Q03	\$9.73	No Shipments Under Challenged Rate			
108-Ton Rate					
1Q01 – 4Q01	\$9.05	No Shipments Under Challenged Rate			
1Q02 – 2Q02	\$9.23	No Shipments Under Challenged Rate			
3Q02	\$9.23	\$3.54	249%	\$4.77	193%
4Q02	\$9.23	\$3.73	237%	\$5.15	179%
1Q03	\$9.41	\$3.82	231% ³	\$5.19	181%

³ As on opening, AEP CO's Reply R/VC calculations for the First Quarter 2003 are based on the year-2002 rate of \$9.23 instead of the correct rate of \$9.41. AEP CO Reply at II-A-102, Table II-A-29.

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The parties no longer disagree about many of the basic operating characteristics for the movements at issue. Although they use different methods to develop data for periods in which complete data were not available, the parties generally agree upon:

- Lading weight;
- Tare weight;
- Cars per train;
- Loaded miles;
- Empty miles;
- Origin loop miles;
- Destination loop miles.

The major differences between the parties continue to be the issues that the Railroads identified on reply: (1) AEPCO's incorrect treatment of payments to the Southwestern Railroad ("SWRR") and other costs related to operations over SWRR; (2) AEPCO's improper adjustment to system-average fuel costs; (3) AEPCO's understatement of locomotive capital costs; (4) AEPCO's improper adjustment to UP's system-average roadway ownership costs; (5) AEPCO's improper adjustment to BNSF's system-average locomotive maintenance costs; (6) AEPCO's improper reliance on the rejected Speed Factored Gross Ton ("SFGT") formula to calculate roadway maintenance costs; (7) AEPCO's understatement of the Railroads' crew costs; and (8) AEPCO's understatement of the Railroads' yard and road switching costs. We discuss each of these major differences below.

B. MAJOR AREAS IN DISPUTE

1. AEPCO Incorrectly Treats Costs Related to Southwestern Railroad

The largest difference between the parties involves the treatment of BNSF payments to SWRR to handle AEPCO coal trains between Rincon and Deming, New Mexico.

I. Counsel's Argument and Summary of Evidence
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The Railroads continue to treat the payments as a cost of providing service to AEPCO. As BNSF locomotives stay with and power the AEPCO train, the Railroads also continue to include the time and distance traveled on the SWRR in developing various costs, including locomotive ownership and operating costs. As explained on reply, the Railroads' treatment of these costs is consistent with governing precedent and properly reflect the actual costs of the movement. RR Reply Nar. at II-6 to 9.

In contrast, AEPCO continues to understate variable costs by deducting from revenue the payments to the SWRR rather than including them as an actual cost, and by excluding most of the time and distance traveled by AEPCO trains on the SWRR.

AEPCO's treatment of these issues primarily relies on a misleading and incorrect interpretation of the Lease Agreement between SWRR and BNSF governing the lease and operation of the line between Rincon and Deming. AEPCO argues that the Lease Agreement refers to the per car charge BNSF pays SWRR as a "division of revenue" and, therefore the charge should be treated as such. AEPCO Reply Nar. at II-A-8 to 10. However, the Lease Agreement also refers to the charge as a "handling charge."⁴ Accordingly, the specific words used in the Lease Agreement are not dispositive in characterizing the charge. What is important is the nature of the payment and responsibilities of the parties. In that respect, the charge does not function like a revenue division. It is independent of the rate and does not change in proportion to a change in the rate. Thus, if the Board prescribed a rate in this case, the amount of the SWRR per car handling charge would be unaffected because the SWRR is not a party to the challenged rate.

⁴ BNSF/SWRR Lease Agreement, §§ 19(c) and 22(b), included at AEPCO Reply workpapers 0046-0047.

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AEPCO also argues that, since SWRR is a common carrier on moves over the SWRR lines, it is appropriate to treat the charge for handling the issue traffic as a division of revenue. AEPCO Reply Nar. at II-A-8 to 10. However, SWRR is not providing common carrier service to AEPCO for the issue traffic even if it provides common carrier service to other shippers. BNSF is responsible for providing the through service on the issue traffic, and BNSF's payments to SWRR are a legitimate cost of providing that service. The Board has held that similar payments to common carriers are "legitimate costs."⁵

AEPCO then claims that the charge should be treated as a revenue division because to treat it as a charge presents the opportunity for collusion by the carriers to artificially inflate variable costs. AEPCO Reply Nar. at II-A-10 to 11. AEPCO presents no evidence, however, that BNSF has tried to game the system here. And, in fact, the evidence shows that the Lease Agreement between SWRR and BNSF represents a legitimate arms-length transaction.

Finally, AEPCO asserts that the ownership and operating costs of the BNSF locomotives that power the AEPCO trains between Rincon and Deming are "subsumed" in the per car handling charge. AEPCO Reply Nar. at II-A-7 to 8. Nothing in the Lease Agreement supports this conclusion. The fact is that the BNSF incurs locomotive ownership and operating costs for movements over the SWRR line and these costs must be included in the variable costs calculation.

2. AEPCO Understates Locomotive Fuel Costs

AEPCO continues to rely on a 1985 fuel study of The Atchison, Topeka & Santa Fe Railway Company ("ATSF") and the Southern Pacific Railroad ("SP") locomotive units to adjust the 2001 BNSF and UP system-average costs. On reply, the Railroads continue to use

⁵ *E.g., FMC* at 68.

I. Counsel's Argument and Summary of Evidence
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system-average fuel costs. The Railroads identified two significant shortcomings in AEPCO's analysis, either of which renders the adjustment invalid. RR Reply Nar. at II-A-42 to 44. First, both the operating characteristics of today's service and the locomotive models and consists that power AEPCO's trains are considerably different than those studied in 1985. Second, the relationship between the 1985 fuel study results and the 1985 system-average costs for the former ATSF and SP is inapplicable to the 2001 fuel-cost experience of BNSF and UP. The Board routinely rejects adjustments that are outdated or inapplicable from one case to another and it should do so here.⁶

3. AEPCO Understates Locomotive Ownership Costs

AEPCO understates locomotive ownership costs by improperly relying upon BNSF agreements with locomotive manufacturers as the basis for locomotive spare-margin requirements, failing to include cycle times for the entire round-trip, and understating the average consist size for movement on UP segments.

4. AEPCO Understates UP's Roadway Ownership Costs

AEPCO understates UP's costs related to road property ownership because it erroneously attempts to adjust UP's system-average costs using data that provide an incomplete and distorted measure of UP's actual investment in the road property used to serve AEPCO's traffic. Moreover, AEPCO further underestimates UP's costs by erroneously applying the URCS system-average variability percentage to its estimate of movement-specific road property investment rather than a higher percentage to reflect the higher-than-system-average traffic

⁶ See e.g., *WPL I* at 55 & n.109 (rejecting WPL's reliance on fuel consumption from a 1980's *Nevada Power* case).

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density on UP's Deming-Cochise line. The Railroads continue to use their respective system-average road property costs.

5. AEPCO Understates BNSF's Locomotive Maintenance Costs

AEPCO improperly adjusts system-average locomotive maintenance costs based on BNSF and UP records that do not reflect the full maintenance costs of the locomotives used in AEPCO service. The Railroads continue to use BNSF's system-average locomotive maintenance costs.

6. AEPCO Understates Roadway Maintenance Costs

AEPCO understates the Railroads' roadway maintenance costs by disregarding the Board's decision in *TMPA* and applying the outdated SFGT formula to allocate roadway maintenance costs. The Railroads continue to use their respective system-average maintenance costs.

7. AEPCO Understates the Railroads' Crew Costs

AEPCO understates the Railroads' crew costs in various ways, including by significantly underestimating BNSF wages for movements originating at McKinley and by incorrectly excluding as "double-counts" the wages paid to certain UP crew members on AEPCO trains.

8. AEPCO Understates Yard and Road Switching Costs

AEPCO understates switching costs by omitting entirely the costs of switching performed by road locomotives on non-yard tracks, despite the Railroads' evidence of switching time and frequency and despite the parties' production of documents in discovery demonstrating that the Railroads incur such costs in providing service to AEPCO. It also understates switching costs by omitting entirely the costs of switching performed by yard locomotives on yard tracks, despite the Railroads' evidence regarding the switching time and frequency. Finally, it

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understates switching costs by relying on its own witness's speculation about switching times rather than the detailed testimony regarding switching activities and time sponsored by the Railroads' operating personnel familiar with the service provided to AEPCO.

C. AEPCO'S CRITICISMS OF THE RAILROADS' OPENING EVIDENCE

AEPCO's reply submission contains two general criticisms of the Railroads' opening evidence. Each warrants no more than a brief response. First, AEPCO complains that the "Railroads have relied on system-average URCS costs for a number of items for which, historically, movement-specific adjustments have been made." AEPCO Reply at I-4.

Specifically, AEPCO complains that the Railroads used system-average URCS costs to develop maintenance-of-way and roadway ownership costs. *Id.* at I-5. However, AEPCO ignores the *TMPA* decision, in which the Board used system-average URCS costs for maintenance-of-way expense and rejected the use of the SFGT formula, which AEPCO proposes to use in this case.⁷ With respect to roadway ownership costs, AEPCO ignores the fact that it elected to use system-average URCS costs to calculate BNSF's roadway ownership costs. Nor does it bother to mention that in rate cases commenced since the adoption of URCS, the Board has *never* used anything except system-average URCS costs to calculate UP's roadway ownership costs. AEPCO's complaints about the Railroads' use of system-average costs are baseless.

Second, AEPCO complains that the Railroads on opening costed only movements that were completed by the close of discovery. AEPCO Reply Nar. at II-A-4, II-A-12 to 14. AEPCO never specifically identified the periods for which it intended to submit evidence, so the Railroads chose a logical cut-off point. In any event, this argument is moot. On reply, the

⁷ Remarkably, AEPCO cites *TMPA* as supporting its assertion that unadjusted system-average URCS costs should not be used for maintenance-of-way. *Id.* at I-5 n.3.

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Railroads fully responded to the cost evidence that AEPCO submitted on opening, including AEPCO's evidence relating to periods after the close of discovery. The Railroads developed their cost evidence for the additional periods using the same methods they described in their opening submission which, unlike AEPCO's submission, amply explained those methods. Moreover, since the Railroads submitted their evidence for the more recent periods on reply, AEPCO has a full opportunity to respond in its rebuttal submission.

D. THE RAILROADS' REBUTTAL VARIABLE COST EVIDENCE

The Railroads' rebuttal variable cost evidence is presented below and follows the same format as the Railroads' reply evidence.

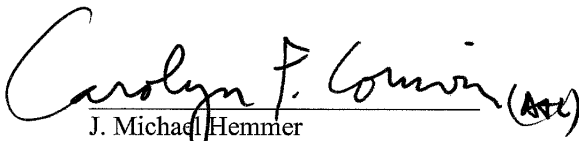
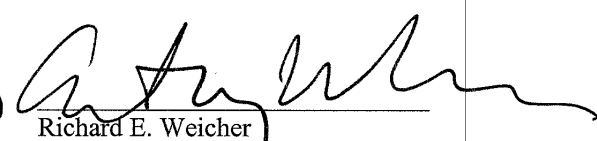
Section II.A.1 of this Rebuttal describes the remaining differences in the parties' variable cost calculations with respect to basic traffic and operating characteristics and costing methodologies. Section II.A.1.a addresses the fundamental differences in the parties' cost estimating procedures that affect many of the individual costing calculations. These differences involve the development of URCS costs for BNSF and UP, the development of movement characteristics for periods in which data are incomplete, and the treatment of the car handling payments made by BNSF to SWRR. Section II.A.1.b addresses the basic differences in the parties' development of traffic and operating characteristics of AEPCO movements. In order to minimize the number of issues in dispute, the Railroads have adopted AEPCO's calculations where possible. In certain instances, however, the magnitude of AEPCO's errors made it impossible to accept those calculations. Section II.A.1.c addresses the differences in the parties' costing methodologies. As the Railroads show, AEPCO frequently departed from established costing conventions and adjusted BNSF and UP costs without explanation.

Section II.A.2 of this Rebuttal presents the Railroads' calculations of the variable costs and R/VC ratios for AEPCO service, taking into account any adjustments necessary to

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respond to AEPCO's evidence, as described in section II.A.1. It also presents AEPCO's reply variable cost calculations. The Railroads' calculations show that AEPCO significantly understates the Railroads' variable costs. The Railroads demonstrate that in several of the periods at issue the R/VC ratios fall *below* the jurisdictional threshold and that, in all periods, the R/VC ratios are far below those calculated by AEPCO.

Respectfully submitted,

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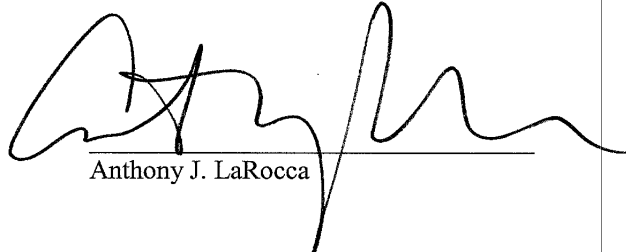
July 3, 2003

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CERTIFICATE OF SERVICE

I hereby certify that on July 3, 2003, I caused a copy of the foregoing Joint Variable Cost Rebuttal Evidence of The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company to be served by hand upon the following counsel for Arizona Electric Power Cooperative, Inc.

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**II.A. Market Dominance -
Quantitative Evidence**

II. MARKET DOMINANCE

A. QUANTITATIVE EVIDENCE

In this section, the Railroads respond to AEPCO's reply variable cost evidence and explain why the Board should adopt the Railroads' cost evidence. The Railroads' rebuttal evidence is sponsored by Benton V. Fisher of FTI Consulting, Inc., and Thomas Haley, Assistant Vice President - Network and Capital Planning for UP.¹ This Rebuttal also incorporates by reference the testimony of other Railroad witnesses presented on opening and reply.

1. Variable Costs

On reply, both parties addressed the variable cost of service for moving coal between New Mexico mine origins and Apache Station for the First Quarter 2001 ("1Q01") through First Quarter 2003 ("1Q03"). The parties' evidence thus covered movements that originated from:

- (i) Lee Ranch, under rates for trains with a minimum average lading weight of 98 tons per carload (the "Lee Ranch 98-ton rate");
- (ii) Lee Ranch, under rates for trains with a minimum of 115 tons per carload (the "Lee Ranch 115-ton rate");
- (iii) McKinley, under rates for trains with a minimum of 98 tons per car (the "McKinley 98-ton rate"); and
- (iv) McKinley, under rates for trains with a minimum of 108 tons per car (the "McKinley 108-ton rate").

Tables BNSF/UP II.A-1 and BNSF/UP II.A-2 compare the variable cost per ton and the R/VC ratios calculated in the Railroads' rebuttal evidence with the calculations in

¹ The witnesses' qualifications and a description of the portion of this Rebuttal that each witness sponsors are contained in section IV below.

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AEPCO's reply evidence for movements from Lee Ranch and McKinley, respectively.² The comparisons reveal significant differences in the parties' cost calculations.

Table BNSF/UP II.A-1
Rates Per Net Ton, Variable Costs Per Net Ton, and R/VC Ratios
For Shipments from Lee Ranch to Apache Station

Period	Rate	AEPCO Reply		Railroads Rebuttal		
		Variable Cost	R/VC Ratio	Variable Cost	R/VC Ratio	
98-Ton Rate						
1Q01	\$9.35	\$4.31	217%	\$5.28	177%	
2Q01	\$9.35	\$3.91	239%	\$4.76	196%	
3Q01	\$9.35	\$4.21	222%	\$5.14	182%	
4Q01	\$9.35	\$3.64	245%	\$5.29	177%	
1Q02	\$9.54	\$3.35	272%	\$4.94	193%	
2Q02	\$9.54	\$3.56	255%	\$5.04	189%	
3Q02	\$9.54	\$3.51	259%	\$4.92	194%	
4Q02	\$9.54	No Shipments Under Challenged Rate				
1Q03	\$9.73	No Shipments Under Challenged Rate				
115-Ton Rate						
1Q01 – 4Q01	\$9.05	No Shipments Under Challenged Rate				
1Q02 – 2Q02	\$9.23	No Shipments Under Challenged Rate				
3Q02	\$9.23	\$3.01	294%	\$4.37	211%	
4Q02	\$9.23	\$3.02	293%	\$4.36	211%	
1Q03	\$9.41	\$3.17	278% ³	\$4.52	208%	

² BNSF/UP Rebuttal Exh. II.A-1 presents separately BNSF and UP costs by component by origin mine and rate for each quarter in which an AEPCO shipment moved.

³ As on opening, AEPCO's Reply R/VC calculations for 1Q03 are based on the year-2002 rate of \$9.23 instead of the correct rate of \$9.41. AEPCO Reply at II-A-102, Table II-A-29.

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Table BNSF/UP II.A-2
Rates Per Net Ton, Variable Costs Per Net Ton, and R/VC Ratios
For Shipments from McKinley to Apache Station

Period	Rate	AEP/CO Reply		Railroads Rebuttal	
		Variable Cost	R/VC Ratio	Variable Cost	R/VC Ratio
98-Ton Rate					
1Q01 – 4Q01	\$9.35	No Shipments Under Challenged Rate			
1Q02	\$9.54	No Shipments Under Challenged Rate			
2Q02	\$9.54	\$4.03	226%	\$5.85	163%
3Q02	\$9.54	\$3.92	232%	\$5.48	174%
4Q02	\$9.54	No Shipments Under Challenged Rate			
1Q03	\$9.73	No Shipments Under Challenged Rate			
108-Ton Rate					
1Q01 – 4Q01	\$9.05	No Shipments Under Challenged Rate			
1Q02 – 2Q02	\$9.23	No Shipments Under Challenged Rate			
3Q02	\$9.23	\$3.54	249%	\$4.77	193%
4Q02	\$9.23	\$3.73	237%	\$5.15	179%
1Q03	\$9.41	\$3.82	231% ³	\$5.19	181%

The remainder of this section is organized based on the format of the Board's *TMPA* decision and is consistent with the Board's *SAC Procedures* decision.⁴ Section II.A.1.a addresses the differences in the general cost estimating procedures used by the Railroads and AEP CO. Section II.A.1.b describes the differences in the traffic and operating characteristics used by the parties and explains why the Board should accept the characteristics used by the Railroads. Section II.A.1.c addresses the differences in certain cost adjustments made by the parties and explains why the Board should accept the Railroads' adjustments and reject AEP CO's. Finally, section II.A.2 presents the variable costs and R/VC ratios for 1Q01 through 1Q03 developed by the Railroads and AEP CO.

⁴ Ex Parte No. 347 (Sub-No. 3) (STB served Mar. 12, 2001).

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a. Differences in General Cost Estimating Procedures

(1) Use of 2002 URCS Unit Costs

In their opening submissions, the Railroads and AEPCO relied on the Board's 2001 URCS data set for BNSF and UP as the base-year costs for their analyses. They indexed the Board's 2001 URCS costs for each quarter of 2001 and for the quarters in 2002 and 2003 that were addressed in their respective submissions. On reply,⁵ the Railroads developed 2002 URCS for BNSF and UP using standard Board procedures and publicly available documents,⁶ and used the 2002 URCS to develop variable costs for each quarter of 2002 and for the first quarter of 2003. In its reply submission, AEPCO continued to use the 2001 URCS.⁷

On rebuttal, the Railroads continue to use 2002 URCS to develop variable costs for each quarter of 2002 and for the first quarter of 2003. Copies of the 2002 URCS developed for BNSF and UP were included in the Railroads' reply electronic workpapers and are being re-submitted with their Rebuttal evidence.⁸

(2) Accounts 76 and 90

On opening, the Railroads adjusted the URCS general overhead markup ratios for return on investment to *include* expenditures recorded in their R-1 reports in Account 90 (Construction in Progress) and *exclude* expenditures recorded in Account 76 (Interest During Construction) when determining the general overhead ratio for return on investment. The

⁵ The information necessary to develop 2002 URCS costs (*e.g.*, the Railroads' 2002 R-1 reports) were not available until after the filing of opening evidence.

⁶ Consistent with its 2001 URCS and the *TMPA* decision, the Railroads modify the URCS calculations to include Account 90 and exclude Account 76, as discussed below in more detail.

⁷ The Board prefers use of the contemporaneous base-year costs, when available. *FMC* at 48.

⁸ BNSF/UP Rebuttal electronic workpapers "BNSF_02.zip" and "UPRR_02.zip."

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Railroads demonstrated that the construction projects reflected in Account 90 were generally of relatively short duration. *See* RR Op. Exh. BNSF/UP II.A.4. AEPCO did not make this adjustment to the general overhead markup ratios.

In its reply submission, AEPCO did not challenge the Railroads' demonstration that the construction projects reflected in their Account 90 balances were of relatively short duration. Instead, it argued that Board precedent does not support the inclusion of amounts in Account 90 for variable cost determinations in rate reasonableness cases, even if those amounts reflect projects of relatively short duration. *See* AEPCO Exh. II-A-24 at 2.

AEPCO's view of Board precedent is incorrect. The Board's position is clear: "unless the construction projects included in Account 90 are long-term in nature," it is appropriate and consistent with ICC and STB precedent to include Account 90 and exclude Account 76.⁹ Most recently, in *TMPA*, the Board accepted evidence comparable to the Railroads' evidence in this case¹⁰ and concluded that a full return on Account 90 investment should be substituted for Account 76 expenses.¹¹ Moreover, AEPCO's arguments are the same as those made by *TMPA* in that case. The Railroads' response to AEPCO's arguments in BNSF/UP Rebuttal Exh. II.A-2 tracks BNSF's response in the *TMPA* case.

Accordingly, the Railroads' rebuttal evidence continues to incorporate an adjustment to BNSF and UP URCS to include Account 90 and exclude Account 76. Because AEPCO did not make this same adjustment in its opening or reply evidence, it understated the

⁹ *TMPA* at 40 n.79; *see also* *FMC* at 48 n.95; *WPL I* at 40; *APS*; *WTU*; *Georgia Power*.

¹⁰ Railroads' Opening electronic workpapers "BNSF Account 90 as of 10-31-02.xls," "BNSF AFE 1998 - 2000.xls," "UP WIP_Passed_2002.xls," and "UP Account 90.xls."

¹¹ *See* *TMPA* at 40.

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URCS general overhead ratio for return on investment and, as a result, understated the variable cost of service for AEPCO trains.

(3) Treatment of Southwestern Railroad

The parties continue to disagree on how to treat the payments BNSF has made to the Southwestern Railroad (“SWRR”) for handling AEPCO trains between Rincon and Deming, New Mexico. Consistent with precedent, the Railroads continue to treat this { } per-carload payment as a cost in their variable cost calculations.¹² The Railroads also continue to include the time and distance AEPCO trains traveled between Rincon and Deming in calculating various variable cost components. In its opening submission, AEPCO improperly treated the payment as a deduction from revenue, and it excluded the time and distance spent traveling between Rincon and Deming after September 7, 2001 (when SWRR took over the line) from its variable cost components. AEPCO Op. Nar. at II-A-4. AEPCO’s approach substantially understates the costs of providing service to AEPCO and accounts for much of the difference between the parties’ variable cost evidence. The Railroads explained in their reply why AEPCO’s treatment of the SWRR costs is improper. RR Reply Nar. at II-6 to 9.

In its reply evidence, AEPCO advances four arguments in support of its treatment of the SWRR handling charge as a deduction from revenue.

First, AEPCO claims that its approach is correct because the Lease Agreement between SWRR and BNSF refers to the payment as a “revenue division.” AEPCO Reply Nar. at 9. As the Railroads explained on reply, the Agreement also refers to the payment as a “handling

¹² RR Opening Nar. at II-44; *see also* BNSF/UP.OP.WP.II-A-0138 to 0144.

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charge.” RR Reply Nar. at II-7.¹³ More important, the substance of the service performed is a handling service. BNSF pays a set per-car charge – a charge that does not vary with the rates charged by BNSF to shippers whose traffic is moved over the line – to the SWRR to handle through traffic between Rincon and Deming. This is a legitimate cost of providing service to AEPCO and should be treated like the other costs.¹⁴

Moreover, AEPCO misrepresents the Lease Agreement in its attempt to convince the Board to treat the per-car charge as a “division of revenue.” For example, AEPCO cites the following quote from section 22(b) {

}

AEPCO Reply Nar. at II-A-9 (emphasis added in AEPCO’s Reply). This quote, however is not even applicable to the AEPCO move. It deals with the payment of charges for moves over the line purchased by SWRR (between Peru Hill and Rincon), and does not apply to moves over the leased line between Deming and Rincon, the route traveled by the AEPCO trains. It is the sentence immediately following the sentence quoted by AEPCO that applies to the AEPCO movement. That sentence provides that {

}¹⁵ (emphasis added). Similarly, while AEPCO cites to section 19 of the Lease

¹³ BNSF/SWRR Lease Agreement, §§ 19(c) and 22(b), included at AEPCO Reply workpapers 0047-48.

¹⁴ *FMC* at 68.

¹⁵ BNSF/SWRR Lease Agreement, § 22(b), included at AEPCO Reply workpaper 0047.

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Agreement¹⁶ which refers to the \${ } charge as a “division,” AEPCO fails to disclose that the same provision also refers to the charge as a “handling charge.”¹⁷

Second, AEPCO argues the handling charge should be treated as a deduction from revenue because the Lease Agreement {

}¹⁸ The language cited by AEPCO, however, applies only to local traffic, not “through traffic” like the AEPCO unit coal trains at issue here. Specifically, the Lease Agreement provides that {

¹⁶ AEPCO Reply Nar. at II-A-9.

¹⁷ RR Reply Nar. at II-7; BNSF/SWRR Lease Agreement, § 19(c), included at AEPCO Reply workpapers 0046.

¹⁸ AEPCO Reply Nar. at II-9, citing to Lease Agreement at § 23 and § 2(b), included at AEPCO Reply workpapers 0048 and 0007-08, respectively.

¹⁹ BNSF/SWRR Lease Agreement at § 18, included at AEPCO Reply workpapers 0045.

²⁰ *Id.* at § 2, included at AEPCO Reply workpapers 0008.

²¹ *Id.* at § 15, included at AEPCO Reply workpapers 0037.

²² *Id.* at § 2(g), included at AEPCO Reply workpapers 0011-0012.

}²³

The fact that SWRR is itself a “common carrier” for some movements (not the issue traffic) is not relevant. As the Railroads explained on reply, BNSF and UP are ultimately responsible for moving the train between origin and destination, pursuant to CCPA-BNSF 99944.²⁴ SWRR is not a party to that pricing authority and has no authority to participate in the ratemaking. BNSF pays SWRR a set cost to handle the train between Rincon and Deming. This is a legitimate cost, no different from the costs incurred by UP in the *FMC* case. There, the Board rejected FMC’s similar attempt to treat UP’s payments to switching carriers at Chicago as revenue deducts rather than variable costs.²⁵ At least one of the carriers handling the traffic at issue in that case, the Belt Railway of Chicago (“BRC”), is a common carrier and the Board agreed with UP that third party payments to this carrier should be treated as variable costs, not revenue deducts.

Third, AEPCO argues that treating the per-car handling charge as a variable cost “hypothetically” presents an opportunity for BNSF to game the system. AEPCO states that “if the variable cost/jurisdictional threshold treatment were simply a function of whether the new short-line is or is not a party to the challenged rates, the defendants could dictate the result by controlling whether or not the short-line becomes a party to the pricing instrument. Such ‘gaming’ of the system should be discouraged, not encouraged.”²⁶ AEPCO’s hypothetical

²³ *Id.* at § 16, included at AEPCO Reply workpapers 0038.

²⁴ RR Reply Nar. at II-7 to 8.

²⁵ *FMC* at 67-68.

²⁶ AEPCO Reply Nar. at II-A-11.

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argument is misplaced since the Railroads' position is based on the nature of the relationship between BNSF and SWRR. SWRR does not receive a "division" of the through revenues, which would mean that its "division" would change with changes in the through revenue. Instead, it receives a fixed handling charge per car. In any event, AEPCO has presented no evidence that BNSF attempted to game the system in this case. The sale and lease agreement reflects an arms-length transaction²⁷ intended to relieve BNSF of { }.²⁸ Moreover, it is implausible that BNSF and SWRR engaged in such a long-term lease transaction, with all its implications for the issue traffic and other traffic on the line, on the remote possibility that the transaction would influence the outcome of a rate reasonableness challenge.

Finally, AEPCO claims that SWRR is responsible for locomotive ownership and operating costs when BNSF's locomotives are on the SWRR and that such costs are "subsumed" in the per-car handling charge that BNSF pays SWRR.²⁹ The Lease Agreement, however, does not support such a conclusion. The Agreement expressly provides that {

²⁷ The ICC previously rejected allegations by the United Transportation Union that a prior lease agreement between the Atchison Topeka & Santa Fe (one of BNSF's predecessors) and SWRR was not negotiated at arms-length. *SWRR*, 1990 WL 288182 at **1-2 (ICC decided May 23, 1990).

²⁸ BNSF discovery documents at BNSF/AEPCO 00068-0070, included as BNSF/UP.RB.WP.II-A-007-009 (included in "BNSF-UP-RB-WP-II-A-001 to 017.pdf").

²⁹ AEPCO Reply Nar. at II-A-8.

³⁰ BNSF/SWRR Lease Agreement at § 16, included at AEPCO Reply workpapers 0038.

³¹ BNSF/SWRR Lease Agreement at § 2(b), included at AEPCO Reply workpapers 0008.

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} By excluding the time spent and distance traveled on the SWRR from its variable cost calculations, AEPCO understates the actual locomotive ownership, maintenance, and fuel costs that BNSF incurs, without reimbursement, in providing service to AEPCO.

(4) Calculation of Operating Statistics and Other Costing Inputs after the Close of Discovery

As noted above, the parties used different data and different methodologies to develop traffic and operating characteristics for periods after the close of discovery, *i.e.*, 3Q02 through 1Q03. The Railroads discuss the specific differences between the parties' approaches below in section II.A.1.b with respect to each relevant traffic or operating characteristic.

b. Differences in the Traffic and Operating Characteristics Developed by the Railroads and AEPCO

On reply, the parties developed traffic and operating characteristics for AEPCO movements between New Mexico origins and Apache Station from 1Q01 through 1Q03. Many of these characteristics are no longer in dispute. The Railroads provide a summary of the traffic and operating characteristics below. They describe the undisputed characteristics and explain why the Board should adopt their approach to the disputed characteristics.

Table BNSF/UP II.A-3 sets forth a comparison of the traffic and operating characteristics for the issue traffic used by the parties to develop the Railroads' 2Q02 variable costs for Lee Ranch originations moving under the 98-ton rate. BNSF/UP Rebuttal Exh. II.A-3 compares the traffic and operating characteristics for originations from each origin mine and rate in each quarter that traffic moved under the challenged rates for the BNSF portion of the AEPCO move, and BNSF/UP Rebuttal Exh. II.A-4 presents this same comparison for the UP portion of

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the AEPCO move. Table BNSF/UP II.A-3 is in the format required by *PEPCO*.³² A discussion of the remaining differences between the parties' evidence regarding traffic and operating characteristics follows the table.³³

Table BNSF/UP II.A-3
Traffic and Operating Characteristics
For Shipments from Lee Ranch Mine to Apache Station
98-Ton Rate, Second Quarter 2002

Item	AEPCO Reply Combined Move	Railroads Rebuttal Combined Move
1. Name of origin mine Name of destination	Lee Ranch, NM Apache Station, AZ	Lee Ranch, NM Apache Station, AZ
2. Milepost at origin Milepost at destination	MP 15.4 MP 1061.3	MP 15.4 MP 1061.3
3. Annual tons	See Below	See Below
4. Date of first shipment	January 2, 2001	January 2, 2001
5. Alpha-numeric car type	K340 and K341	K340 and K341
6. Weight of lading per car (in tons)	99.4	99.4
7. Tare weight per car (in tons)	33.2	33.2
8. Identity of car owner	AEPCO	AEPCO
9. Identity of locomotive owner	BNSF	BNSF
10. Car lease rental	See Below	See Below
11. Locomotive lease rental	See Below	See Below
12. Present rates per net ton/effective date	\$9.73 January 1, 2003	\$9.73 January 1, 2003
13. Proposed rate	N/A	N/A
14. Initial rate/effective date	\$9.35 January 1, 2001	\$9.35 January 1, 2001
15. Amounts (or percent) of rate escalation and date	None	None
16. Cars per train or per shipment	112.2	112.2
17. Loaded miles (excluding loop track)	BNSF—244.1 UP—145.6	BNSF--244.1 UP--145.6 SWRR--54.3

³² ICC Docket No. 36114 (Sub-No. 1) (ICC served Apr. 7, 1982).

³³ Although the inputs listed in Table BNSF/UP II.A.3 are limited to movements under the Lee Ranch 98-ton rate in 2Q02, the discussion that follows applies to all issue movements.

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Item	AEPCO Reply Combined Move	Railroads Rebuttal Combined Move
18. Empty miles	See Item 17	See Item 17
19. Length of origin loop track	41.5 loaded 42.3 empty	41.5 loaded 42.3 empty
20. Length of destination track	4.2 loaded 5.2 empty	4.1 loaded 5.4 empty
21. Number of locomotives	4.87 on BNSF 4.78 on UP	4.87
22. Loading hours	Included in 24	Included in 24
23. Unloading hours	Included in 24	Included in 24
24. Cycle hours	73	78
25. Number of train sets	N/A	N/A
26. Trips/year per train set	N/A	N/A
27. Crew districts, loaded	See Below	See Below
28. Crew districts, empty	See Item 27	See Item 27
29. Turnaround crews	See Below	See Below
30. Locomotive units	See Item 21	See Item 21
31. Cars required (RR-owned)	See Below	See Below
32. Caboose	N/A	N/A
33. Locomotive spare margin	{ }	{ }
34. Car spare margin	10%	N/A
35. Caboose spare margin	10% (EOTDs)	10% (EOTDs)
36. Switching by road-haul locomotives	See Below	See Below
37. Switching by yard locomotives	See Below	See Below
38. Helper service	N/A	N/A
39. Helper crew	N/A	N/A
40. Location of interchanges	N/A	N/A
41. Location of inter- and intra-train switches	See Below	See Below
42. Joint facility payments	N/A	N/A

(1) Name of Mine and Power Plant (Item 1)

The parties agree on the origin mines and the destination power plant.

(2) Milepost at Origin; Milepost at Destination (Item 2)

The parties agree on the mileposts at origin and destination.

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(3) Annual Tons (Item 3)

The parties generally agree on the annual tonnages shipped.

(4) Weight of Lading Per Car (Item 6)

The Railroads accepted AEPCO's average lading weights for 1Q01-4Q02.³⁴

Consequently, the only remaining area of dispute relates to the method of calculating the 1Q03 average lading weight per car for movements under the Lee Ranch 115-ton rate and the McKinley 108-ton rate. On opening and reply, AEPCO used a 1Q03 average lading weight based on information from three shipments that occurred in the first week of January.³⁵ On reply, the Railroads developed 1Q03 average lading weights using BNSF waybill information for *all* 1Q03 movements made under the Lee Ranch 115-ton rate and the McKinley 108-ton rate.³⁶ The Railroads' evidence is superior to AEPCO's because it is based on all movements in 1Q03. Thus, the Railroads continue to rely on their evidence in this Rebuttal.

(5) Tare Weight Per Car (Item 7)

As explained on reply, the Railroads' acceptance of AEPCO's tare weights for 1Q01-4Q02 produces general agreement between the parties in those quarters, with one exception. That exception involves tare weights for movements under the McKinley 108-ton rate from 3Q02 through 1Q03. Although the same AEPCO trainset was used to originate traffic that moved under the Lee Ranch 115-ton rate and the McKinley 108-ton rate, AEPCO's

³⁴ RR Reply Nar. at II-A-12.

³⁵ AEPCO Reply electronic workpaper "T&O REPLY DATA PROVIDED BY AEPCO.123."

³⁶ BNSF/UP.RP.WP.II-A-008 and BNSF/UP Reply electronic workpaper "BNSF Waybills 1Q 03.xls."

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evidence shows a much higher tare weight for the McKinley movement.³⁷ Because the trainset was the same, the tare weight must be the same. AEPCO's tare weights are incorrect because AEPCO relied on incorrect "plugged" values rather than actual empty car weights. On reply, the Railroads therefore applied tare weights for movements under the Lee Ranch 115-ton rate to movements under the McKinley 108-ton rate in corresponding quarters. The Railroads continue to rely on their calculation of tare weights for the McKinley 108-ton rate in this Rebuttal.

(6) Car Lease Rental (Item 10)

The parties continue to disagree on car lease rental costs for substitute cars provided by BNSF. On opening and reply, the Railroads developed the annual substitution ratio and applied the correct measure of costs for all substitute cars provided by BNSF.³⁸ As the Railroads explained on reply, AEPCO calculated the substitution ratio incorrectly because it failed to identify all of the cars provided by BNSF. *See* RR Reply Nar. at II-22. In its reply submission, AEPCO criticized the Railroads for developing an annual substitution ratio rather than a quarterly ratio. As discussed below in section II.A.1.b.(16), the Railroads modify their calculation of car lease rental costs in this Rebuttal to address AEPCO's criticism by developing quarterly ratios of carrier-supplied cars.³⁹ Nevertheless, the parties continue to disagree on car lease rental costs because AEPCO fails to include all substitute cars provided by BNSF.

³⁷ Compare AEPCO Opening workpapers AEP 00623 with AEP 01417, included as BNSF/UP.RP.WP.II-A-009 to 010. On reply, the Railroads explained that McKinley originations cannot load 115 tons per car. The mine bills that AEPCO used to develop the tare weight include a "plugged" tare weight of 33.25 tons that overstates the actual tare to ensure that loadings are below the maximum. *See* BNSF/UP.RP.WP.II-A-010.

³⁸ BNSF/UP Reply electronic workpaper "Cochise Car Info.xls."

³⁹ BNSF/UP Rebuttal electronic workpaper "Cochise Car Info Rebuttal.xls" and BNSF/UP.RB.WP.II-A-0011-0012 (included in "BNSF-UP-RB-WP-II-A-001 to 017.pdf").

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(7) Locomotive Lease Rental (Item 11)

The parties continue to disagree on locomotive lease-rental costs. On opening, the Railroads calculated these costs using BNSF lease costs normalized over the life of the relevant leases for the specific BNSF locomotives used in AEPCO service. *See* RR Op. Nar. at II-19. In its reply submission, AEPCO argued that use of normalized costs was contrary to Board precedent. *See* AEPCO Reply Nar. at II-A-18. However, as the Railroads explain below in section II.A.1.c.(15)(b), the use of normalized costs is consistent with Generally Accepted Accounting Principles (“GAAP”) and with the costs reported in BNSF’s Annual Report R-1.⁴⁰ The Railroads continue to use normalized costs in this Rebuttal.

The parties’ cost calculations also differ because AEPCO included UP locomotives in its calculations, while the Railroads used only BNSF locomotives. As the Railroads explained on reply, most of the UP locomotives that AEPCO included in its calculations were never used to move trains from New Mexico origins but were used for PRB shipments that moved under rates dismissed after settlement. *See* RR Reply Nar. at II-14.⁴¹ AEPCO did not acknowledge this fact in its reply submission. In this Rebuttal, the Railroads continue to rely on the lease costs for BNSF locomotives developed on opening, since their cost calculations are correct and since BNSF locomotives provided more than 95 percent of the locomotive hours in New Mexico service.⁴²

⁴⁰ In fact, in the event the rates are determined on the basis of variable costs, use of the normalized payment in lieu of an annual payment with wide fluctuations would produce a more meaningful figure.

⁴¹ AEPCO electronic workpaper “Loco Cap Inputs.xls.”

⁴² BNSF/UP Op. electronic workpaper “AEPCO Trains 1Q01-2Q02.xls.”

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(8) Cars Per Train (Item 16)

The parties agree on the average number of cars per train, with one exception.⁴³ As with lading weights, that exception involves the correct method of calculating the 1Q03 average cars per train for movements under the Lee Ranch 115-ton rate and the McKinley 108-ton rate. On opening, and again on reply, AEPCO developed its cars-per-train figure from just three shipments that occurred in the first week of January.⁴⁴ On reply, the Railroads developed the average number of cars per train using BNSF waybill information for all 1Q03 movements made under the Lee Ranch 115-ton rate and the McKinley 108-ton rate.⁴⁵ The Railroads' evidence is superior to AEPCO's because it is based on all movements in 1Q03. Thus, the Railroads continue to rely on their evidence in this Rebuttal.

(9) Loaded Miles (Item 17)

Because AEPCO accepted the Railroads' figures on reply, the parties agree on the number of loaded miles, excluding loop tracks, between the New Mexico origins and Apache Station. *See* AEPCO Reply Nar. at II-A-21. The mileages for the segments of AEPCO's routes, based on BNSF and UP track charts produced in discovery, are as follows:

⁴³ The Railroads developed cars per train using freight bills. *See* RR Op. Nar. at II-20. AEPCO asserted in its narrative that it used freight bills (*see* AEPCO Op. Nar. at II-A-16), but it actually used documents described as mine loading reports (*see* AEPCO Opening electronic workpaper "T&O Data Provided By AEPCO.123"). Also, the railroads realize that they inadvertently rounded the number of cars per train to the nearest whole number for McKinley originations on Reply and correct these figures to the nearest tenth on Rebuttal.

⁴⁴ AEPCO Reply electronic workpaper "T&O REPLY DATA PROVIDED BY AEPCO.123."

⁴⁵ BNSF/UP.RP.WP.II-A-008 and BNSF/UP Reply electronic workpaper "BNSF Waybills 1Q 03.xls."

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Table BNSF/UP II.A-4
Agreed-Upon Segment Mileages⁴⁶

Segment	Mileage
McKinley-Belen	169.0
Lee Ranch-Belen	96.8
Belen-Rincon	147.3
Rincon-Deming	54.3
Deming-Apache Station	145.6

Significantly, however, the parties continue to disagree on AEPCO's exclusion of miles between Rincon and Deming for those quarters during which BNSF paid SWRR to handle trains, *i.e.*, 3Q01 to 1Q03. AEPCO's improper exclusion of miles between Rincon and Deming was discussed above in section II.A.1.a.(3).

(10) Length of Origin Loop Track (Item 19)

The parties agree on the origin loop track miles at Lee Ranch Mine. They disagree slightly on the number of empty miles for the origin loop at McKinley, due to AEPCO's use of the wrong milepost at the loop track switch.⁴⁷ In this Rebuttal, the Railroads continue to use the correct miles based on track charts.

(11) Length of Destination Track (Item 20)

The parties agree on the destination loop track miles at Apache Station. Although on opening the parties disagreed slightly about the number of loaded and empty miles, the Railroads adopted AEPCO's calculations on Reply. While AEPCO stated that it adopted the

⁴⁶ Compare BNSF/UP Reply electronic workpaper "network-aepco Reply.xls" with AEPCO Opening electronic workpaper "AEPCO Miles Opening.123." See BNSF/UP.RP.WP.II-A-011 to 020.

⁴⁷ Compare AEPCO Opening workpaper AEP 00026, which shows the milepost at 20.44, with AEPCO Opening electronic workpaper "AEPCO Mile Opening.123," which calculates the loop track distance based on MP 20.84.

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Railroads' figures, AEPCO's workpapers reveal that it reversed the loaded and empty miles.⁴⁸

The Railroads continue to use the figures adopted from AEPCO's opening in this Rebuttal.

(12) Number of Locomotives (Item 21)

The parties continue to disagree on the average consist size of AEPCO trains. On reply, the Railroads explained that the major difference in the parties' opening evidence arose because the Railroads used BNSF train movement data produced in discovery to develop average locomotive consist sizes for the entire route, while AEPCO used BNSF records when trains were on BNSF lines and UP records when trains were on UP lines.⁴⁹ AEPCO failed to acknowledge this relevant difference in its reply submission.⁵⁰ Instead, it asserted that the parties' calculations were "virtually the same" and suggested that they were both developed from BNSF train movement data.⁵¹ In fact, in its reply submission, AEPCO continued to rely on a mix of BNSF and UP records.⁵² However, as the Railroads explained on reply, while they are willing to rely on AEPCO's calculation of consist sizes for the BNSF portion of the move, the UP data understate consist sizes because they do not reflect all of the locomotives required to power AEPCO trains.⁵³ In this Rebuttal, the Railroads continue to rely on AEPCO's calculation of BNSF consist sizes and apply the result to the entire route, as the BNSF units are not changed out on the UP portion.

⁴⁸ AEPCO Reply Nar. II-A-23 and AEPCO Reply electronic workpaper "AEPCO Miles Reply.123."

⁴⁹ See RR Reply Nar. at II-17 to 18.

⁵⁰ See AEPCO Reply Nar. at II-A-23 to 24.

⁵¹ *Id.* at 23-24 & n.24.

⁵² AEPCO Reply electronic workpaper "Composite Loco Inputs Reply.123."

⁵³ See RR Reply Nar. at II-17 to 18, II-60 to 62.

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The parties' calculations continue to differ for two other reasons as well. As the Railroads explained on reply, although AEPCO used BNSF materials to develop the number of locomotives used in 4Q02, it applied the result only to the Lee Ranch moves, and not to the McKinley moves. Because the 4Q02 records for shipments from both issue mines are available, the Railroads used those records to calculate locomotives in 4Q02 rather than using the average that AEPCO derived from shipments in prior quarters. Second, since BNSF data for 1Q03 shipments from Lee Ranch were not available, AEPCO used the average for only the prior three quarters to develop 1Q03 locomotive numbers. The Railroads corrected this approach and developed the locomotive number based upon the average for a full year of shipments under the challenged rates (*i.e.*, 1Q02-4Q02). The Railroad's methodology is more precise and more likely to reflect actual consist sizes where actual data for those quarters were not available.⁵⁴

(13) Cycle Hours (Item 24)

The parties continue to disagree on cycle times. On opening and reply, the Railroads used BNSF train movement files produced in discovery to calculate round-trip cycle times developed from one loaded departure to the next.⁵⁵

On reply, AEPCO modified its cycle time calculations but erroneously continued to exclude a portion of the time that trains spend in AEPCO service between Rincon and Deming. Specifically, AEPCO continued to exclude transit time on SWRR and all dwell time

⁵⁴ BNSF/UP.RP.WP.II-A-021.

⁵⁵ See RR Op. Nar. at II-22. On reply, the Railroads anticipated one of AEPCO's criticisms, see AEPCO Reply Nar. at II-A-27 to 28, and excluded trains that did not return to the issue mines, see RR Reply Nar. at II-20 n.42. Further, despite AEPCO's criticism of including non-issue traffic, its own dwell time calculations include shipments to and from York Canyon. AEPCO Reply workpapers "Time at Demming.xls" and "T&O Summary Reply.123."

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for empty trains, which it attributed to SWRR.⁵⁶ As the Railroads explain in section II.A.1.a.(3), it is inappropriate to exclude any cycle time associated with SWRR because BNSF bears the locomotive ownership costs incurred during that time.

The parties' calculations also continue to differ because the parties used different methods to develop cycle times for 4Q02 and 1Q03. As the Railroads explained on reply, they based 4Q02 through 1Q03 cycle times for Lee Ranch on an average of 4Q01 through 3Q02 cycle times, and they based 4Q02 and 1Q03 cycle times for McKinley on an average of 2Q02 and 3Q02 cycle times.⁵⁷ By contrast, AEPCO developed 4Q02 cycle times for the BNSF portion of Lee Ranch moves using incomplete information from BNSF Train Dispatch Reports and then included its flawed 4Q02 cycle times in its development of 1Q03 cycle times.⁵⁸ The Railroads' methodology is more consistent and more likely to reflect actual cycle times for quarters in which actual data were not available, and thus the Railroads continue to rely on that methodology in this Rebuttal.

⁵⁶ See AEPCO Reply Nar. at II-A-26 to 27.

⁵⁷ See RR Reply Nar. at II-19.

⁵⁸ See *id.* at II-19 to 20. As the Railroads explained on reply, the records that AEPCO identified from the BNSF Train Dispatch reports do not contain the level of detail sufficient to develop locomotive cycle times for the AEPCO trains. See RR Reply Nar. at II-20 n.41 (*citing* AEPCO electronic workpaper "Train Dispatch Reports.123"). The Railroads thus continue to rely solely upon the standard source of cycle times that has been adopted in rate reasonableness cases – train movement data – in the quarters in which they are available, and averages of prior quarters' shipments moving under the challenged rates in quarters in which they are not available.

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Table BNSF/UP II.A-5
Average Cycle Time per Train (Hours)
Railroads Rebuttal versus AEPCO Reply

Quarter	Lee Ranch		McKinley	
	Railroads Rebuttal	AEPCO Reply	Railroads' Rebuttal	AEPCO Reply
1Q01	84	83	No Shipments Under Challenged Rates	
2Q01	78	77		
3Q01	81	78		
4Q01	102	89		
1Q02	88	70		
2Q02	78	73	78	65
3Q02	87	80	79	83
4Q02	89	74	79	75
1Q03	89	76	79	75

(14) Crew Districts, Loaded Direction (Item 27)

The parties apparently now agree on the crew districts in the loaded direction. In its opening submission, AEPCO misidentified several of the endpoints of the crew districts in which crews work AEPCO trains. As the Railroads explained on reply, AEPCO misidentified one endpoint as “New Mexico Origin mines” rather than Gallup, New Mexico, and it misidentified another endpoint as “Apache Station, AZ” rather than Tucson, Arizona.⁵⁹ In its reply submission, however, AEPCO states that the parties “agree regarding this item.”⁶⁰ The Railroads thus understand that AEPCO has accepted the crew districts identified by the Railroads.

(15) Turnaround Crews (Item 29)

The parties apparently now agree on the use of turnaround crews. In its opening submission, AEPCO did not accurately reflect UP’s use of turnaround crews. As the Railroads explained on reply, AEPCO did not recognize UP’s use of a crew that operates in turnaround

⁵⁹ See RR Reply Nar. at II-20.

⁶⁰ AEPCO Reply Nar. at II-A-28.

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service from Tucson. *See* RR Reply Nar. at II-21. However, in its reply submission, AEPCO states that the parties “agree regarding this item.” AEPCO Reply Nar. at II-A-28. The Railroads thus understand that AEPCO has accepted the turnaround crews identified by the Railroads.

(16) Cars Required, RR-Owned (Item 31)

The parties continue to disagree on the percentage of substitute cars provided by BNSF. On opening, the Railroads developed annual ratios of substitute cars based on BNSF traffic tapes. *See* RR Op. Nar. at II-24. In its opening submission, AEPCO based its quarterly calculation of substitute cars on mine loading reports, although that was not clear from AEPCO’s narrative. *See* AEPCO Op. Nar. at II-A-16. As the Railroads explained on reply, AEPCO understated the number of substitute cars because it failed to identify CEFX-initialed cars as cars provided by BNSF. *See* RR Reply Nar. at II-22.⁶¹ In this Rebuttal, the Railroads modify their calculation to develop ratios of substitute cars per train for each quarter from 1Q01 through 2Q02, and they use the average of the prior four quarters (*i.e.*, 3Q01-2Q02) for the 3Q02-1Q03 period after the close of discovery.⁶²

(17) Locomotive Spare Margin (Item 33)

The parties continue to disagree on the locomotive spare margin. On opening, the Railroads included a spare margin based on a special study of available and non-utilized time of BNSF locomotives. *See* RR Op. Nar. at II-24 and II-40 to 44. On reply, the Railroads corrected an error in their calculation of the spare margin and developed a spare margin of { }-percent

⁶¹ *See* BNSF/AEPCO 01716, included as BNSF/UP.WP.RP.II-A-030, and BNSF/UP.WP.RP.II-A-031 to 036.

⁶² BNSF/UP Rebuttal electronic workpaper “Cochise Car Info Rebuttal.xls” and BNSF/UP.RB.WP.II-A-011-012 (included in “BNSF-UP-RB-WP-II-A-001 to 017.pdf”).

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for 2001 and { }-percent for 2002 and the first quarter of 2003. *See* RR Reply Nar. at II-22.⁶³ By contrast, in its opening submission, AEPCO developed a { }-percent spare margin based primarily on availability guarantees included in some BNSF locomotive maintenance contracts, and it used that spare margin in each quarter. *See* AEPCO Op. Nar. at II-A-16. AEPCO continued to use that same understated spare margin on reply. *See* AEPCO Reply Nar. at II-A-28. In section II.A.1.c.(15)(a) below, the Railroads explain their locomotive spare margin calculations and the reasons why AEPCO's spare margin is improper and substantially understates the Railroads' variable costs.

(18) Car Spare Margin (Item 34)

The parties continue to use different approaches with respect to car spare margin. On opening, the Railroads based their cost for railroad-supplied cars on the URCS system-average costs for the actual equipment supplied by BNSF. Because the URCS system-average ownership costs account for a spare margin, the Railroads' variable costs do not include an additional car spare margin in order to avoid a double-count. *See* RR Op. Nar. at II-24. In its opening submission, AEPCO applied a 10-percent spare margin to its calculation of ownership costs for substitute cars provided by BNSF. *See* AEPCO Op. Nar. at II-A-17. The parties maintained their respective positions on reply, notwithstanding AEPCO's statement that it "adopted BNSF/UP's treatment." AEPCO Reply Nar. at II-A-99.⁶⁴ The Railroads continue to

⁶³ BNSF/UP.RP.WP.II-A-038 and BNSF/UP Reply electronic workpaper "Spare Margin Reply.xls."

⁶⁴ Although AEPCO modified its calculations to use the costs of open top hoppers, not plain gondolas, and to eliminate the use of a spurious adjustment to the URCS unit costs, it continued to substitute its own calculation of ownership costs for the URCS system-average that the Railroads use. AEPCO Reply electronic workpapers "BNSF Car Cap Inputs.123," "UP Car Cap Inputs.123," "vc AEPCO BNSF Reply.123," and "vc AEPCO UP Reply.123."

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use system-average costs for railroad-supplied cars, and thus do not apply a separate freight-car spare margin in this Rebuttal.

(19) Switching by Road Haul Locomotives and Yard Locomotives (Items 36 and 37)

The parties continue to disagree on the amount of switching required for AEPCO trains. On opening, the Railroads described the switching activities sponsored by BNSF's AVP-Unit Train Operations, Richard C. Ellis, and UP's Director-Transportation Research, Dale W. Salzman. *See* RR Op. Nar. at II-10 to 14. The Railroads' witnesses testified that AEPCO trains from Lee Ranch require an average of 189 minutes of switching by road haul locomotives and 52 minutes of switching by yard locomotives per train. *See* RR Op. Nar. at II-29 to 32, Tables BNSF/UP II.A.13 and BNSF/UP II.A.14. On reply, the same witnesses explained that switching times were generally comparable for AEPCO trains from McKinley, except that McKinley trains required slightly less time for road haul locomotives to switch repaired cars back into trains. *See* RR Reply Nar. at II-23 to 25.

In its reply submission, AEPCO criticized the Railroads' development of switching minutes. It claimed that it used "concrete data" from "BNSF and UP Train Dispatcher Reports" to determine "the number of cars switched" and that it "estimated switch time of forty minutes per car" to develop 2.52 minutes of switching time for road haul locomotives on yard tracks, which it then doubled "to be conservative." AEPCO Reply Nar. at II-A-29 to 30.⁶⁵ AEPCO also criticized the Railroads for relying on the estimated times to complete switching activities that were supplied by Messrs. Ellis and Salzman. *See id.* at II-A-30

⁶⁵ AEPCO never explained why it doubled the switching time it derived. The answer presumably is that it knew that it had BNSF Train Dispatcher Reports, but not "BNSF and UP Train Dispatcher Reports," as it claimed. *See* AEPCO Reply Nar. at II-A-29.

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to 32. Neither AEPCO's opening evidence nor its reply evidence included any switching time for road haul locomotives on road tracks or for yard locomotives on yard tracks.

The Railroads explained on reply why AEPCO could not rely on "BNSF and UP Train Dispatcher Reports" to determine the frequency of switching activities.⁶⁶ They explained that there were no UP "Train Dispatcher Reports" produced in discovery. With respect to BNSF Train Dispatcher Reports, they explained that AEPCO's study apparently relied solely on the "pickups/setouts" field ("switching field") in those reports, but that the "pickup/setouts" field rarely reflects car switching. *See* RR Reply Nar. at II-24.⁶⁷ They also explained that AEPCO's assertion that there was no switching by road haul locomotives on non-yard tracks and no switching by yard locomotives on yard tracks was incorrect. *See id.* at II-31 to 32. Finally, they explained that the Railroads developed the frequency of car switching using train movement and car movement data, as well as data regarding switching repaired cars at Apache Station provided in discovery by AEPCO. Specifically, the Railroads compared the number of cars inbound and outbound at locations along the route (*e.g.*, Belen) to determine the net change.⁶⁸ With this

⁶⁶ "Train Dispatcher Report" is the nomenclature AEPCO uses for the Train Sheets that BNSF produced in discovery. *See* AEPCO Nar. at II-A-17. For ease of reference, the Railroads use AEPCO's terminology in this narrative.

⁶⁷ Indeed, AEPCO ignored changes in car counts between segments that are recorded in the Train Dispatcher Reports and clearly reflect switching activity on AEPCO trains. According to Mr. Ellis, among the reasons that the switching field does not record all car switching activity is the fact that most of the data in the Train Dispatcher Reports used by AEPCO are generated automatically by BNSF's system of electronic tracking devices (AEI readers) that are located along the line of road and do not track activity within BNSF's yards. The AEI readers along the line of road record the locomotives and cars on a train, but not switching activity. As yard and road switching activities are not captured by the AEI readers, any data in the "switching" field are entered manually. Frequently, however, such data are not entered. *See* RR Reply Nar. at II-24 n.49.

⁶⁸ This analysis is clearly conservative, as it does not identify and account for any switching that occurs when the same number of cars are switched in and out, for example, three bad orders (continued...)

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information, the Railroads provided detailed car movement records to indicate how the bad-ordered cars were returned to the train after repair. This information indicated that 0.7 bad orders per train travel via BNSF manifest and local train service to Gallup to rejoin the AEPCO train near the mine, and 0.5 bad orders per train travel via BNSF and UP manifest and local trains to Deming to rejoin the AEPCO train at the plant.⁶⁹ The Railroads have presented the best evidence of record on the frequency of switching, and they continue to rely on that evidence in this Rebuttal.

The Railroads have also presented the best evidence of record of the time required for the switching activities at issue. In its reply submission, AEPCO specifically criticized the Railroads for relying on their witnesses' estimates of the time required to complete certain switching activities. *See* AEPCO Reply Nar. at II-A-30 to 32. It asserted that the Railroads should have provided "empirical evidence" of switching activities. *See id.* at II-A-32. However, the Railroads' witnesses provided evidence. Specifically Messrs. Ellis and Salzman sponsored verified evidence regarding their respective railroads' switching times. *See* RR Op. Nar. at IV-1 to 2. These witnesses are abundantly qualified to testify about switching times. Mr. Ellis has been employed by BNSF and its predecessors since 1972 and has responsibility for all unit train operations on the BNSF. *See id.* at IV-1. Mr. Salzman has been employed by UP and its

removed and three fill cars returned to the train. Similarly, this approach understates the number of cars switched when cars are removed and added at the same time, for example, if two cars were removed and one was added, the simple comparison would suggest a net change of one car, and not the three that were actually switched.

⁶⁹ Although AEPCO suggests that the 0.7 and 0.5 figures are unsupported, they are fully developed in the Railroads workpapers. BNSF/UP Opening electronic workpapers "AEPCO Trains 1Q01-2Q02.xls" and "Bad Orders via El Paso.xls."

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predecessors since 1965 and is responsible for conducting studies of rail operations. *See id.* at IV-1 to IV-2.

AEPCO did not challenge either of the Railroad witnesses' qualifications. And despite its criticism of the Railroads, AEPCO did not hesitate to have its own witness, Mr. Plaistow, "estimate[] switch time of forty minutes per car" for switching of each bad-order car. *See* AEPCO Reply Nar. at II-A-29.⁷⁰

Moreover, the absence of an empirical study does not mean that the Board cannot evaluate the parties' competing evidence. In this case, the Railroads have clearly presented the best evidence of record. Messrs. Ellis and Salzman recognized that switching times differed depending on the location and the activities performed. *See* RR Op. Nar. at II-10 to 14, II-30 to 32. By contrast, Mr. Plaistow provided a single time estimate that did not distinguish between locations or activities. Moreover, he failed to consider switching by road haul locomotives on non-yard track, switching by yard locomotives on yard track, and switching of cars associated with repair activities at Apache Station.

In this case, the Board's only alternative to using estimated switching times would be to use URCS system-average minutes per intra-train and inter-train ("I&I") switch. However, no party here suggests that the Board should use I&I time. As the Railroads explained on reply, the system-average minutes per I&I switch are heavily influenced by the time required to switch large blocks of cars at major classification yards. They would significantly understate the time required to switch the one, two, or three bad-order cars per AEPCO train. *See* RR Reply Nar. at

⁷⁰ While Messrs. Ellis and Salzman have extensive experience in railroad operations, Mr. Plaistow's only railroad employment was in railroad finance and marketing departments and ended fifteen years ago. *See* AEPCO Op. Nar. at IV-3 to 4.

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II-29 n.56. The Railroads used I&I time in this case when they could not develop a more reliable estimate, *see id.*, but when their witnesses could develop a reliable estimate, they used these estimates.

Finally, in its reply submission, AEPCO criticized the Railroads for using BNSF costs to develop road switching expenses, given that most of the road switching time occurs at Apache Station. AEPCO Reply Nar. at II-A-32 n.32. However, use of BNSF costs is entirely reasonable. BNSF's costs are the best measure of actual switching costs associated with AEPCO movements regardless of whether the switching occurs on BNSF or UP lines. BNSF provides the vast majority of the units that power the AEPCO trains, and costs associated with road switching on non-yard tracks are largely associated with these locomotives, including fuel, repair, and servicing. This is particularly true here in view of the fact that the crew wage portion of switching costs is accounted for in a separate special study. In these circumstances, use of the BNSF costs for road switching on non-yard tracks is appropriate, and the Railroads continue to use these costs.

(20) Location of Inter-Train and Intra-Train Switching
(Item 41)

On opening, the Railroads explained that bad-order cars and other fills may be switched at Belen, Gallup, Grants, Laguna, Deming, Rincon, Lordsburg, Apache Station, as well as other locations along the route. *See* RR Op. Nar. at II-25. In its opening submission, AEPCO erroneously claimed that there was “[n]o inter/intra-train switching” on AEPCO trains moving to Apache Station. *See* AEPCO Op. Nar. at II-A-17. In its reply submission, AEPCO did not directly address inter-train and intra-train switching. The Railroads continue to rely on their description of inter-train and intra-train switching in this Rebuttal.

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(21) Joint Facility Payments (Item 42)

As indicated above, AEPCO uses the flawed SFGT formula to calculate maintenance-of-way costs. As a result, AEPCO's approach excludes all joint-facility payments that the Railroads make. In contrast, the Railroads continue to use system-average MOW costs, which include a system-average allocation of joint-facility payments and credits.

c. Differences in Methodologies Used to Develop Variable Costs

Table BNSF/UP II.A-6 compares AEPCO's Reply cost calculations with the Railroads' Rebuttal calculations for movements under the Lee Ranch 98-ton rate for 2Q02. BNSF/UP Rebuttal Exh. II.A-5 presents similar comparisons for each issue movement by origin mine, rate, and quarter. The differences between the parties' calculations of the individual cost components are discussed in detail below.

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Table BNSF/UP II.A-6
Variable Costs Per Carload and Ton
Lee Ranch Mine to Apache Station
98-Ton Rate, Second Quarter 2002

Item	AEPCO Reply	Railroads Rebuttal
1. Carload O/T - Clerical Expense	{ }	{ }
2. Carload Handling - Other Expense	{ }	{ }
3. Switching Expense - Yard Locomotives	{ }	{ }
4. Loop Track Expense	{ }	{ }
5.A. Switching Expense - Road Locomotives (Non-Yard)	{ }	{ }
5.B. Switching Expense - Road Locomotives (Yard)	{ }	{ }
6. Gross Ton-Mile Expense	{ }	{ }
7. Train-Mile Expense – Other Than Crew	{ }	{ }
8. Locomotive Unit-Mile Expense (excluding ownership)	{ }	{ }
9. Train-Mile-Expense - T&E Crew	{ }	{ }
10. Helper Expense – LUM	{ }	{ }
11. Helper Expense- Crew	{ }	{ }
12. User Responsibility for Freight Car Repairs	{ }	{ }
13. Freight Car Expense (RR-Owned Only)	{ }	{ }
14. Loss & Damage Expense	{ }	{ }
15. Locomotive Ownership Expense	{ }	{ }
16. EOTD Ownership Expense	{ }	{ }
17. SWRR Handling Charge	{ } ⁷¹	{ }
18. Total Variable Cost Per Carload (Lines 1-17)	\$400.35	\$504.03
19. RFA-URCS Linking Factor	0.9934	0.9934
20. Linked Variable Cost Per Carload	\$397.71	\$500.71
21. Net Tons Per Carload	99.4	99.4
22. Variable Cost Per Ton (Line 20 / Line 21)	\$4.00	\$5.04
23. Rate Per Ton	\$9.54	\$9.54
24. R/VC Ratio (Line 23 / Line 22)	238%	189%

⁷¹ For ease of comparison, the SWRR handling charge is included as a variable cost in AEPCO's column in this Table. However, as explained above, AEPCO improperly treated the charge as a deduction from revenue, which resulted in AEPCO's calculation of an R/VC ratio of 255%.

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(1) Carload Originated or Terminated – Clerical (Item 1)

The parties generally agree on station clerical expenses. As the Railroads explained on reply, both parties applied the standard *Ex Parte No. 399* trainload adjustment to URCS system-average unit costs for station clerical expense. *See* RR Reply Nar. at II-28. The minor difference between the parties' costs for this component is due to the Railroads' use of indexed 2002 URCS unit cost for 1Q02 through 4Q02 and 1Q03 and the parties' use of different data to calculate the average number of cars per train in 1Q03.

(2) Carload Handling – Other (Item 2)

The parties generally agree on carload handling costs. As the Railroads explained on reply, in light of the Board's decision in *TMPA*, they accept AEPCO's general methodology for calculating handling costs. They do not, however, accept AEPCO's calculation, because AEPCO used unknown sources and undocumented values to develop its adjustments. *See* RR Reply Nar. at II-28. Although AEPCO corrected its calculation for 2001 in its reply submission, it did not calculate a separate 2002 figure. In this Rebuttal, the Railroads continue to calculate carload handling costs for 2001 and 2002 in a manner consistent with the Board's decision in *TMPA*.⁷²

(3) Switching Expense (Items 3, 5A & 5B)

The parties continue to disagree on the switching expenses. As the Railroads explained on reply, AEPCO failed to account for most switching of bad-order cars and for switching at Apache Station. *See* RR Reply Nar. at II-28 to 31.

⁷² BNSF/UP.RP.WP.II-A-040 to 044 and BNSF/UP Reply electronic workpaper "claimadj modified.123."

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As the Railroads explained above in section II.A.1.b.(19), AEPCO significantly understated switching by failing entirely to account for switching performed by yard locomotives on yard tracks and switching performed by road locomotives on non-yard tracks. It also understated switching by relying on BNSF Train Dispatcher Reports to identify switching by road-haul locomotives, even though those reports do not purport to identify all switching activity and by failing to account for all switching that is reflected in these reports. Finally, it understated switching activity by incorporating into its analysis unsupported assumptions about the times required for various switching activities rather than estimates provided by knowledgeable railroad operating personnel.

(a) Switching Expense - Yard Locomotives (Item 3)

The Railroads' yard switching expenses reflect the costs of removing bad-order cars, transferring them to repair facilities, and returning them to the point where they can be switched back into AEPCO trains. In its opening and reply submissions, AEPCO did not include any costs for yard switching expenses. Instead, it asserted that yard locomotives do not perform switching on its trains. *See* AEPCO Op. Nar at II-A-17 (“[n]o intermediate yard switching is applicable to the AEPCO movement”).

As the Railroads observed on reply, AEPCO's assertion that the Railroads perform no yard switching for AEPCO trains is implausible and incorrect. AEPCO's failure to include yard switching expenses apparently resulted from the misuse of BNSF's Train Dispatcher Reports. As the Railroads explained on reply, AEPCO apparently used the “pickups/setouts” field in those reports to develop switching evidence, but the reports would not specifically reflect yard switching, because they were not designed to capture activities within yards. *See* RR Reply Nar. at II-24 & n.49.

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As the Railroads explained on opening and reply, yard switching occurs at Belen, Gallup, and Lordsburg, New Mexico. The Railroads developed the number of bad-order cars switched at each location based on detailed BNSF car movement records. *See* RR Reply Nar. at II-29 to 30. They developed yard switching time based on Mr. Ellis’s estimates of the amounts of time required to complete the various activities associated with switching bad-order cars at Belen and Gallup and UP’s URCS system-average minutes per I&I switch to estimate switching time for bad-order cars that UP yard engines switch at Lordsburg. *See id.* at II-29 & n.56.

The Railroads have presented the best evidence of yard locomotive switching expenses, and they continue to rely on that evidence in this Rebuttal.

(b) Switching Expense - Road Locomotives
(Non-Yard) (Item 5A)

The Railroads’ expenses for switching performed by road locomotives on non-yard track include the costs associated with handling bad-order cars en route as well as costs associated with switching AEPCO cars to and from a car maintenance facility at Apache Station. In its opening and reply submissions, AEPCO did not include any costs for switching performed by road locomotives on non-yard tracks or any estimate of the time required to perform such switching activities.

As the Railroads observed on reply, AEPCO’s implicit assertion that the Railroads perform no such switching is implausible and incorrect. AEPCO’s failure to include yard switching expenses once again apparently resulted from the misuse of BNSF’s Train Dispatcher Reports. As the Railroads explained on reply, AEPCO apparently used the “pickups/setouts” field in those reports to develop switching evidence, but the “pickups/setouts” field did not reliably reflect switching of bad-order cars en route. *See* RR Reply Nar. at II-24 &

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n.49. The Railroads also explained that AEPCO could have detected this shortcoming and corrected its results through a more detailed examination of the reports. *See id.* at II-24 to 25.

As the Railroads explained on reply, their train movement data produced in discovery show bad-order switching performed by road locomotives en route, and AEPCO's own documents produced in discovery provide evidence of car repair-related switching performed by road locomotives at Apache Station. *See* RR Reply Nar. at II-31 & n.60. Mr. Fisher used the Railroads' train movement and car movement data to identify the frequency of cars switched on the AEPCO trains by location on BNSF and UP, and Messrs. Ellis and Salzman quantified the number of minutes involved in the switching activities.⁷³ The Railroads also identified the frequency of switching related to car repair at Apache Station based on Mr. Salzman's testimony, which is supported by documents produced by AEPCO in discovery.⁷⁴

The Railroads have presented the best evidence of non-yard switching expenses, and they continue to rely on that evidence in this Rebuttal.

(c) Switching Expense – Road Locomotives
(Yard) (Item 5B)

On reply, the Railroads explained that they did not calculate costs for switching performed by road locomotives on yard tracks for AEPCO trains because such activity is infrequent. *See* RR Reply Nar. at II-32. However, this was the only category of switching costs that AEPCO included in its opening and reply submissions. *See, e.g.,* AEPCO Reply Exhibits II-A-22 and 23. As the Railroads explained on reply, AEPCO apparently based its calculation on

⁷³ RR Op. Nar. at II-10 to 14 and 29-32 and BNSF/UP Opening electronic workpapers "AEPCO Trains 1Q01-2Q02.xls" and "Bad Orders via El Paso.xls."

⁷⁴ *See, e.g.,* AEPCO 7872, 7873, 7877, 7975, 8015, 8019, and 8021 included in BNSF/UP Reply electronic workpaper "AEPCO Plant Switching.pdf."

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data from BNSF Train Dispatcher Reports, but as Mr. Ellis explained, those reports do not even identify switching that occurs in yards. *See* RR Reply Nar. at II-32.

(4) Origin and Destination Loop Track Expenses (Item 4)

The parties' loaded and empty loop track miles at Apache Station differ only slightly. Consequently, the differences in the parties' loop track costs are primarily due to AEPCO's inappropriate adjustments to fuel and locomotive maintenance costs, which are described below.

(5) Switching Expense – Road Locomotives (Non-Yard) and Switching Expense – Road Locomotives (Yard) (Items 5A and 5B)

These expenses are addressed in sections II.A.1.b.(19) and II.A.1.c.(3)(b) and (c) above.

(6) Gross Ton-Mile Expense (Item 6)

The parties continue to disagree on gross ton-mile expenses. As the Railroads explained on reply, gross ton-mile ("GTM") expenses are a combination of expenses associated with maintenance of way, road property ownership, fuel, locomotive maintenance, and other locomotive and train administrative activities. The parties' disagreements span all of these categories. The differences between the Railroads' and AEPCO's GTM expense (per carload) for the representative movement used in this Reply (*i.e.*, Lee Ranch-Apache Station, 98-ton rate, 2Q02) are shown in Table BNSF/UP II.A-7.⁷⁵

⁷⁵ A comparison of AEPCO's opening and reply evidence reveals that AEPCO has changed almost all of its GTM expenses, but AEPCO never explains the reasons for any of these changes. *See* AEPCO Reply Nar. at II-A-37, Table II-A-20.

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Table BNSF/UP II.A-7
Comparison of GTM Expense Per Carload
Lee Ranch Mine to Apache Station
98-Ton Rate, Second Quarter 2002

Item	AEPCO Reply	Railroads Rebuttal	Difference
Maintenance of Way	{ }	{ }	(\$2.74)
Road Property Ownership	{ }	{ }	(\$13.74)
Fuel	{ }	{ }	(\$11.27)
Locomotive Maintenance	{ }	{ }	(\$3.10)
Other GTM	{ }	{ }	(\$7.27)
Total	{ }	{ }	(\$38.12)

(a) Maintenance of Way

On opening and reply, AEPCO calculated maintenance-of-way (“MOW”) costs using the SFGT formula. *See* AEPCO Op. Nar. at II-A-20 to 35; AEPCO Reply Nar. at II-A-37 to 51. In their opening evidence, the Railroads showed that this formula is flawed as a tool for calculating variable MOW costs on today’s Class I railroads, and they therefore relied on URCS system-average costs for each carrier for its respective portion of the movement. *See* RR Op. Nar. at II-33 and Exh. BNSF/UP.II.A-5.

Subsequent to the filing of opening evidence, the Board issued its *TMPA* decision, in which it concluded that SFGT does not reflect significant changes in the rail industry and is “too dated to be used.”⁷⁶ The Board found that “the passage of time has rendered the SFGT formula unreliable.”⁷⁷ There is no basis for reaching a different conclusion in this case. The Railroads’ URCS system-average MOW costs are the best evidence of record.

In its reply submission, AEPCO recognized that the arguments presented by the Railroads against the use of the SFGT formula are similar to those accepted by the Board in

⁷⁶ *TMPA* at 55-56.

⁷⁷ *Id.*

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TMPA. AEPCO Reply Nar. at II-A-38. While AEPCO apparently disagrees with the Board’s conclusion, it provides no basis for the Board to reconsider its decision in *TMPA*.

(i) Correlation of SFGT Results With
Actual MOW Costs

While AEPCO takes issue with the Railroads’ evidence demonstrating that SFGT fails to predict BNSF’s and UP’s actual system-wide MOW costs, it apparently misunderstood that evidence. AEPCO erroneously claims that the Railroads’ analysis of actual MOW costs is “irrelevant,” because “the MOW costs calculated by the SFGT formula replace all URCS variable MOW costs that are allocated to the gross ton-mile component . . . , not just the four categories cited by BNSF/UP.” AEPCO Reply Nar. at II-A-39. This argument makes no sense. The Railroads recognized that the SFGT formula purports to reflect all MOW costs. Their evidence did not address URCS. Rather, they compared actual system-wide MOW costs with MOW costs calculated by the SFGT formula and showed that SFGT did not predict actual BNSF and UP system-wide MOW costs. *See* RR Op. Exh. BNSF/UP II.A.5 at 2-5.

AEPCO also argues that “BNSF/UP fail to recognize that the variability percentage for MOW components differs between the SFGT formula and URCS.” AEPCO Reply Nar. at II-A-39. Once again, AEPCO’s argument makes no sense. The Railroads did not address URCS or the variability percentage for MOW. Their evidence simply showed that SFGT failed to predict either the relative mix of BNSF’s or UP’s actual MOW costs or the absolute dollars in particular MOW cost categories. *See* RR Op. Exh. BNSF/UP II.A.5 at 2-5.

Finally, AEPCO criticizes the Railroads’ evidence as being “devoid of any discussion or actual examples of BNSF’s or UP’s internal records that identify the direct MOW expenditures (and accompanying service units) over the route traversed by AEPCO trains.” AEPCO Reply Nar. at II-A-40. However, the Railroads provided actual evidence of BNSF and

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UP's MOW costs on a system-wide basis, and showed that SFGT's line-specific calculations must be flawed since the SFGT-predicted system-wide MOW costs departed so dramatically from BNSF's and UP's actual costs. *See* RR Op. Exh. BNSF/UP II.A.5 at 4.⁷⁸

In light of the Railroads' evidence that SFGT produces flawed results, and AEPCO's failure to provide evidence demonstrating SFGT's validity, the Board should reaffirm its conclusion in *TMPA* that the SFGT formula can no longer be considered a reliable method for estimating variable MOW costs.

(ii) The SFGT Formula Relies on Outdated Railroad Operating, Maintenance and Accounting Practices

AEPCO also takes issue with the Railroads' discussion of the reasons why the Board cannot simply rely on the ICC's original acceptance of SFGT. Its arguments amount to an assertion that the Board accepted MOW costs calculated using the SFGT formula prior to its decision in *TMPA*. The simple answer to these arguments is that, until *TMPA*, no defendant had marshaled sufficient evidence to challenge the Board's continued acceptance of the SFGT formula, including evidence that SFGT fails to predict actual MOW expenses. This evidence

⁷⁸ AEPCO also criticized the Railroads for failing to produce relevant MOW data during discovery, but it did not explain what "relevant" data the Railroads withheld, how it would have used the data if they had been produced, or why it did not seek to compel production if it believed that the Railroads had wrongly withheld relevant data. *See* AEPCO Reply Nar. at II-A-40.

In the *Northern States Power* case, the shipper also complained that UP did not provide line-specific MOW costs in discovery. UP explained there that it does not record line-specific MOW costs in the ordinary course of business, and it produced a sample of the accounting ledger records it maintains. The shipper (who used the same expert witness on MOW issues as AEPCO) reviewed those records and agreed that they were not useful for developing line-specific MOW expenses. The shipper also pursued line-specific MOW records in discovery in that case, and the Board correctly recognized that such records "do not exist." *Northern States Power* at 6.

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renders irrelevant AEPCO's arguments that (i) the SFGT formula has been "updated and refined over the years" and was accepted "as recently as the 2002 *WPL II* decision," and (ii) the formula has been accepted "in numerous proceedings" despite changes in railroad accounting procedures. See AEPCO Reply Nar. at II-A-42; *id.* at II-A-44. In light of the Railroads' evidence, AEPCO's mere assertions that the SFGT formula has kept pace with changes in railroad operations are entitled to no weight.

On opening, the Railroads also explained that substantial changes in freight railroad industry track structure and associated maintenance practices in the 25 years that have passed since SFGT was developed have rendered SFGT's inputs obsolete. BNSF/UP Opening Exh. II.A.5. In response, AEPCO suggests that "the SFGT formula has been revised and updated several times," and enumerates the extensive changes to SFGT that occurred between 1975 and the January 1986 *OPPD* decision that produced the formula used by AEPCO in this proceeding. AEPCO Reply Nar. at II-A-41 to 42. However, even AEPCO acknowledges that significant changes have occurred since those supposed "updates" to SFGT were made. Following its claim about updates to SFGT, AEPCO presents a comparison of the dramatic differences between MOW costs and densities in 1983 (the period on which the engineering inputs to *OPPD*'s and AEPCO's SFGT formula are based) and 2001 (the period to which the MOW costs that AEPCO is using the SFGT formula to allocate apply). For example, AEPCO's Table II-A-21 shows that average traffic density has more than doubled in that time frame, while only a third more maintenance costs were expensed, due to the rising trend towards capitalizing track work, as shown in the Railroads' opening evidence. Thus, AEPCO's own evidence shows that, despite considerable changes in the relationship between freight traffic and MOW costs over the last 17 years, the SFGT formula has remained unchanged during that period.

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Moreover, to the extent the SFGT formula has been updated since its early presentation in *San Antonio*, any validation that was made in the *San Antonio* case is no longer applicable to the formula used today.⁷⁹ AEPCO cannot have it both ways. It cannot claim that SFGT has been significantly improved and still argue that its results have been validated.

(iii) Economies of Density

In its reply submission, AEPCO offered evidence purporting to show that economies of density affect MOW costs, apparently in response to the Railroads' argument that SFGT overstates such economies. *See* AEPCO Reply Nar. at II-A-44 to 49. But, the Railroads never claimed that economies of density do not affect MOW costs at any density levels. Rather, their position is that such economies are not present at the higher traffic densities found today. *See* RR Op. Exh. BNSF/UP II.A.5 at 5-7. This view is consistent with the ICC's conclusion in the *Amtrak* case.⁸⁰ In other words, AEPCO's effort to prove the existence of economies of density fails to address the relevant question, which is whether SFGT reflects those economies more accurately than URCS. AEPCO's evidence does not purport to address the validity in today's railroad environment of SFGT's assumption that certain MOW costs increase in

⁷⁹ Compare the formula used in *San Antonio* to the formula used by AEPCO in this case. *See* 1 I.C.C. 2d at 604.

⁸⁰ *See Amtrak*. AEPCO claimed that *Amtrak* is irrelevant because it involved a "modified" version of the SFGT formula and because it dealt with the allocation of maintenance expenses and depreciation rather than the calculation of variable MOW costs. *See* AEPCO Reply Nar. at II-A-42 to 43. However, those alleged distinctions have no bearing on the ICC's conclusion that "there are economies of density for MOW costs on lower density but not on higher density lines." *Amtrak*, 10 I.C.C.2d at 876.

Moreover, the SFGT formula used in *Amtrak* and the formula used by AEPCO both rely on the same faulty assumption about economies of density, which is discussed below in more detail. AEPCO claimed that SFGT has been modified over time, but none of the modifications corrected the flawed square-root-of-density assumption embedded in the formula.

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proportion to the square root of density. It is plainly insufficient to justify use of SFGT in this proceeding.

Moreover, when AEPCO's evidence is restated to reflect changes in productivity and accounting practices, it actually confirms the conclusion that economies of density do not exist at the higher densities found today. In Table II-A-21 of its Reply Evidence, AEPCO attempted to show that MOW expenses per gross ton-mile declined as BNSF's and UP's density per route-mile increased. *See* AEPCO Reply Nar. at II-A-47, Table II-A-21. However, its presentation, which incorporated apples-to-oranges comparisons of MOW costs, erred in attributing much of the recent improvement in MOW productivity to "economies of density." At least two key elements are missing from AEPCO's analysis.

First, AEPCO examined only operating MOW costs; it excluded BNSF's and UP's capital MOW expenditures from its analysis. Because both MOW practices and accounting practices have changed over time, a proportionately lower percentage of MOW dollars is expensed today than in 1983. *See* RR Op. Exh. BNSF/UP II.A.5 at 8-11.⁸¹ In order to eliminate

⁸¹ As discussed above, AEPCO asserted that changes in accounting practices do not undermine SFGT because the ICC and STB have used SFGT in several proceedings since the adoption of URCS. *See* AEPCO Reply Nar. at II-A-44. However, to the best of the Railroads' knowledge, SFGT has never been validated against "real world" results since the ICC adopted depreciation accounting. Indeed, the Railroads believe that SFGT has never been tested against real world data gathered after 1978, and the pre-1978 data that were used to test SFGT involved a different railroad operating over lines with substantially lower densities than those at issue here. *See San Antonio*, 1 I.C.C.2d at 585. At the time of the *San Antonio* proceeding, the average density of the 1,200-mile Burlington Northern route from the PRB to Fort Worth was approximately 13 million gross-tons per mile. *See* RR Op. Exh. BNSF/UP II.A.5 at 6. By contrast, in 2001 the density on BNSF's line between Baca and Belen was { } million gross-tons per mile, and the density on UP's line between Deming and Cochise was { } million gross-tons per mile. *See id.*

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the differences that reflect changes in maintenance practices and accounting practices, it is necessary to include capital expenditures in the comparison.⁸²

Second, AEPCO failed to account for railroad productivity improvement between 1983 and 2001. As explained in *Amtrak*, recent improvements in the quality of track materials and maintenance techniques such as rail lubrication and rail grinding have significantly improved MOW productivity.⁸³ Productivity has also increased as a result of greater use of machinery, which has reduced the size of the necessary labor force. In order to eliminate differences that are attributable to productivity gains rather than increased densities, it is necessary to incorporate a measure of productivity gains in the comparison.

In order to account for the shortcomings of AEPCO's presentation, the Railroads restate AEPCO's Table II-A-21 to incorporate capital expenditures and productivity improvement. The restatement includes capital expenditures in all years. In order to account for productivity improvements between 1983 and 2001, the Railroads develop a composite using the Bureau of Labor Statistics Industry Multifactor Productivity data for rail transportation for the period from 1983 through 1990, and the ICC/STB-calculated RCAF productivity for 1990 through 2001.⁸⁴ In response to AEPCO's suggestion that use of "actual" rather than "constant"

⁸² In *WPL I*, the Board criticized this argument on the ground that capitalized maintenance costs "are accounted for by the depreciation expense that WPL has included." *WPL I* at 51 n.98. In the restatement below, the Railroads acknowledge the Board's criticism by removing depreciation expenses from MOW operating expenses before adding capitalized maintenance costs.

⁸³ *Amtrak*, 10 I.C.C.2d at 879.

⁸⁴ In *WPL I*, the Board criticized UP's productivity calculations because they were based on extrapolations from ICC/STB-calculated RCAF productivity data, since comparable data were not available before 1987. *See WPL I* at 51 n.98. The Railroads use the Bureau of Labor Standards data prior to 1990 in order to fill the gap. Railroads' Rebuttal electronic workpaper "mow.xls."

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dollars somehow downplays the magnitude of the economies of density, (*see* AEPCO Reply Nar. at II-A-48), the Railroads use constant dollars in their restatement. The results of the restatement are presented in Table BNSF/UP II.A-8.

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Table BNSF/UP II.A-8
Restatement of AEP CO Table II-A-21
Changes in BNSF & UP Density and Maintenance Costs Per Gross Ton-Mile 1983-2001

		<u>Source</u>	<u>1983</u>	<u>2001</u>	<u>1983-2001</u>
BNSF					
1.	MOW Costs				
1a.	Operating Expense	Sch. 410, Line 151, col. (f)	\$906,060	\$1,234,906	36%
1b.	Depreciation Expense	Sch. 410, Line 136-138, col. (f)	\$198,877	\$640,088	222%
1c.	Capital Expenditures	Sch. 330, Line 30, col. (e)	\$525,599	\$1,362,846	159%
2.	Total (Operating + Capital - Depreciation)	L1a+L1c-L1b	\$1,232,782	\$1,957,664	59%
3.	Operating Expense Portion of Total	L1a/L2	57%	30%	-27%
4.	Inflation		1.5735		
5.	Productivity		2.4693		
6.	Expenditures at 2001 Dollars and Productivity Levels		\$785,550	\$1,957,664	149%
7.	Total GTMs Excluding Locomotives	Sch. 755, Line 99-101, col. (b)	461,421	895,936	94%
8.	Route-Miles	Sch. 755, Line 1, col. (b)	40,138	33,025	-18%
9.	Average Density per Mile	L7/L8	11.50	27.13	136%
10.	MOW Costs per Million GTM	L6/L7	\$1,702	\$2,185	28%
UP					
11.	MOW Costs				
11a.	Operating Expense	Sch. 410, Line 151, col. (f)	\$1,095,818	\$1,455,291	33%
11b.	Depreciation Expense	Sch. 410, Line 136-138, col. (f)	\$245,270	\$764,784	212%
11c.	Capital Expenditures	Sch. 330, Line 30, col. (e)	\$653,398	\$1,485,617	127%
12.	Total (Operating + Capital - Depreciation)	L11a+L11c-L11b	\$1,503,946	\$2,176,124	45%
13.	Operating Expense Portion of Total	L11a/L12	57%	32%	-25%
14.	Inflation		1.5735		
15.	Productivity		2.4693		
16.	Expenditures at 2001 Dollars and Productivity Levels		\$958,340	\$2,176,124	127%
17.	Total GTMs Excluding Locomotives	Sch. 755, Line 99-101, col. (b)	475,213	959,426	102%
18.	Route-Miles	Sch. 755, Line 1, col. (b)	48,014	33,586	-30%
19.	Average Density per Mile	L17/L18	9.90	28.57	189%
20.	MOW Costs per Million GTM	L16/L17	\$2,017	\$2,268	12%

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As Table BNSF/UP II.A-8 shows, when an apples-to-apples comparison of MOW costs is used (*i.e.*, when capitalized expenditures are included and productivity is taken into account), there appear to be no economies of density at today's density levels. On BNSF, although average density per mile increased from 11.5 million gross tons in 1983 to 27.1 million gross tons in 2001, BNSF's MOW expenditures per million gross ton-miles increased from \$1,702 to \$2,185 over the period. On UP, although average density per mile increased from 9.9 million gross tons in 1983 to 28.6 million gross tons in 2001, UP's MOW expenditures per million gross ton-miles did not decrease but instead increased from \$2,017 to \$2,268 between those years.

The SFGT formula, which incorporates an assumption that the same economies of density exist at all traffic levels, is clearly inappropriate for use in this proceeding.

(iv) Summary

In *TMPA*, the Board concluded that "the passage of time has rendered the SFGT formula unreliable."⁸⁵ Nothing in this proceeding should lead the Board to a different conclusion. The Railroads have presented substantial evidence demonstrating that SFGT fails to predict actual MOW costs, as well as substantial evidence demonstrating that the economies of density assumed by SFGT do not exist at the higher density levels found today.

By contrast, AEPCO presented no evidence demonstrating that SFGT reflects the Railroads' actual MOW costs for the lines traversed by AEPCO trains more accurately than URCS. At most, it attempted to show that economies of density exist at some level of operations, but URCS also reflects economies of density. AEPCO has completely failed to meet

⁸⁵ *TMPA* at 56.

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its burden of demonstrating that the SFGT methodology produces results that are superior to the use of system-average URCS.⁸⁶

On this record, the Board should reaffirm its conclusion in *TMPA* and rely on system-average URCS to determine the Railroads' MOW costs.

(b) Road Property Return and Depreciation

In its reply submission, AEPCO complained that the “instant case reveals a determined effort by BNSF and UP to force the Board to rely on system-average costs for road property.” *See* AEPCO Reply Nar. at II-A-52 n.32. AEPCO's complaint is baseless. The Railroads produced in discovery the same type of information they have produced in other rate cases. AEPCO never identified what information the Railroads supposedly failed to produce in discovery. AEPCO actually developed an adjustment to UP's system-average costs in this case and claimed that it used “reliable movement-specific data for the UP line segments involved.” *Id.* at II-A-52. AEPCO did not develop an adjustment to BNSF's costs, but the likely reason is that the methodology AEPCO's experts employed in past cases involving BNSF would have resulted in roadway ownership costs exceeding BNSF's unadjusted system-average costs for UP in this case.

(i) UP Valuation Section Records
Cannot Be Used to Develop
Movement-Specific Estimates That
Are Superior to System-Average
URCS Costs

With respect to AEPCO's adjustments to UP's system-average costs, UP explained on opening why its valuation section records cannot be used to provide a reliable

⁸⁶ *See Adoption of URCS*, 5 I.C.C.2d at 899 n. 12; 49 U.S.C. § 10707(d)(1)(B).

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estimate of line-specific roadway ownership costs, much less a demonstrably superior alternative to unadjusted URCS system-average costs. *See* RR Op. Exh. BNSF/UP II.A.6 at 4-13.⁸⁷ In its reply submission, AEPCO conceded the many flaws in its approach to estimating UP's line-specific roadway ownership costs, but attempted to minimize them.⁸⁸ However, AEPCO never demonstrated that its flawed approach produced results that are "demonstrably superior" to the use of system-average costs. Instead, it improperly attempted to shift the burden of proof by arguing, in the face of the governing statute and precedent, that *UP* should bear the burden of proving that AEPCO's approach is *not* "demonstrably superior" to use of system-average costs.⁸⁹ AEPCO's concessions and its failure to offer proof that its approach nonetheless produces results that are "demonstrably superior" to use of system-average costs are sufficient reasons for the Board to rely on unadjusted system-average roadway ownership costs in this case.

While these reasons are sufficient to resolve the matter, AEPCO's assertions regarding UP's record keeping practices and the Board's rejection of similar attempts to adjust UP's system-average roadway ownership costs require a brief response.

⁸⁷ AEPCO incorrectly claims that UP's position in this case is inconsistent with its position in *WPL I* (*see* AEPCO Reply Nar. at II-A-53). In that case, UP initially used URCS system-average return on road property costs, and it calculated depreciation costs using the WSAC model. In its reply submission, UP criticized the shipper's attempt to develop route-specific costs based on UP's valuation section records, and it attempted to correct the shipper's most egregious errors. However, UP agreed with the Board's conclusion that unadjusted URCS system-average roadway ownership costs were superior to the calculations offered by either party. In *WPL I*, the shipper, not UP, sought reconsideration of, and then appealed, the Board's decision to rely on unadjusted URCS system-average roadway ownership expenses. *See WPL II* at 1.

⁸⁸ *See, e.g.* AEPCO Reply Nar. at II-A-57 (acknowledging that its "allocation procedure may not produce a 'perfect' valuation estimate"); *id.* at II-A-60 (acknowledging that allocations of investment within a valuation section "does not produce 'perfect' results").

⁸⁹ *See, e.g.* AEPCO Reply Nar. at II-A-58 (arguing that the Railroads "have made no attempt to show that use of the valuation section investments resulting from UP's allocation procedures produces results that are not 'demonstrably superior' to system average results").

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UP's valuation section data. The fundamental issue on which the parties disagree is whether AEPCO has demonstrated that its adjustment to UP's system-average URCS unit costs for roadway ownership produces results that are "demonstrably superior" to unadjusted system-average URCS costs.⁹⁰ In its reply submission, AEPCO attempted to cloud this issue by asserting that UP's arguments amount to "an attack on UP's own accounting data" and "litigation-driven conclusions." *See* AEPCO Reply Nar. at II-A-56, 58. UP is not attacking its own data. UP has always maintained that its data are valid for the purposes for which they are intended – *i.e.*, for tax and R-1 reporting purposes. UP's records satisfy its accounting and reporting obligations, but none of those obligations requires UP to reflect actual investment in track assets at the valuation section level. *See* RR Op. Exh. BNSF/UP II.A.6 at 5. If AEPCO wanted to use these data, which the Board already has held are not necessary to develop adequate and reliable variable cost estimates,⁹¹ to develop movement-specific cost estimates, it had the burden of proving that such estimates are demonstrably superior to system-average URCS.⁹² AEPCO did not meet this burden.

UP's valuation section data do not contain all investment costs associated with former SP lines. On opening and reply, UP explained that its valuation section records understate the investment in road property on the route traversed by AEPCO traffic, because they do not fully reflect UP's investment in road property assets acquired when UP merged with Southern Pacific ("SP"), including the former SP line between Deming and Cochise. *See* RR

⁹⁰ *See* 49 U.S.C. § 10707(d)(1)(B); *Adoption of URCS*, 5 I.C.C.2d 894 at 899 n.12 (1989); *WPL II* at 2; *FMC* at 70 n.112.

⁹¹ *See Uniform System of Records of Property Changes for Railroad Companies*, STB Ex Parte No. 512, at 1-2 (STB served Mar. 7, 1996).

⁹² *See* statute and cases cited in note 90, *supra*.

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Op. Exh. BNSF/UP II.A.6 at 6-7; RR Reply Nar. at II-38 to 39. In its reply submission, AEPCO did not dispute the evidence that UP's valuation section records do not reflect the purchase costs associated with assets that UP acquired when it merged with SP. Instead, it asserted that it adequately accounted for those costs by distributing the purchase costs to the Deming to Cochise line segment on a per-track-mile basis. See AEPCO Reply Nar. at II-A-57; *id.*, Exh. II-A-25 at 3. It asserted that its methodology addressed the concerns regarding allocation of merger purchase costs that the Board expressed in *WPL II*. See AEPCO Reply Nar. at II-A-55 to 56.

AEPCO is wrong on both counts.⁹³ As the Railroads explained on reply, AEPCO's simplistic, track-mile-based methodology is no substitute for the actual, segment-specific data the Board required in *WPL II*. See RR Reply Nar. at II-38 to 39. In that decision, recently upheld by the United States Court of Appeals for the District of Columbia Circuit, the Board rejected a similar allocation effort. It stated: "Because the record did not contain data on the 1995 acquisition costs associated with specific CNW/WRPI line segments (nor do reports filed with the Board), no accurate restatement of the acquisition value of those former CNW/WRPI assets now used by [the shipper's] traffic was possible."⁹⁴ AEPCO's evidence

⁹³ Moreover, as the Railroads also explained on reply, AEPCO's allocation method is patently flawed. In order to develop a per-mile adjustment, AEPCO spread the acquisition cost adjustment over the entire SP system on the basis of SP's total 1995 track miles – including both running and yard tracks. See AEPCO Opening workpaper AEP 01979. In assigning that per-mile cost to its own route, however, AEPCO multiplied the per-mile cost only by the number of miles of running track in the valuation sections that comprised its route, thus understating the total investment associated with its route and improperly preventing the Railroads from fully recovering their costs.

⁹⁴ See *WPL II* at 16.

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similarly contains no data on the acquisition costs associated with specific SP line segments used by AEPCO traffic. Thus, the Board should reject its methodology.⁹⁵

UP's valuation sections along AEPCO's route do not include all investment necessary to serve AEPCO. On opening and reply, UP explained that its valuation section records corresponding to AEPCO's route understate the investment in the road property used by AEPCO's traffic, because assets used to provide service to AEPCO are assigned to valuation sections not part of the AEPCO route. *See* RR Op. Exh. II.A.6. at 12; RR Reply Nar. at II-39 to 40. In its reply submission, AEPCO attempted to address UP's example of the Harriman Center and claimed that its methodology accounted for those costs. *See* AEPCO Reply Nar. at II-A-59. However, UP anticipated these arguments, and it demonstrated on reply that AEPCO's methodology did not account for roadway ownership costs associated with the Harriman Center, because AEPCO improperly assumed that UP's investment for the Harriman Center was recorded in Account 26 (Communications System) and neglected to consider that a portion of the investment was also recorded in Account 27 (Signals and Interlockers). *See* RR Reply Nar. at II-40.

⁹⁵ AEPCO also asserts that its approach is better than "the Railroads' approach that weights road property in Seattle (and every other location on the combined UP/SP system) equally with the Deming to Cochise road property." AEPCO Reply Nar. at II-A-57. UP's approach is simply to use system-average costs for roadway ownership. AEPCO weighted the entire SP purchase cost equally on a per-track-mile basis, regardless of whether costs were associated with property in Oregon, Chicago, Louisiana, or anywhere else on the former-SP system. It then imposed that arbitrary allocation on its already inappropriate use of UP valuation section records. UP's approach has the benefit of simplicity and consistency: by using system-average costs rather than a patchwork of adjustments, UP is better assured of being able to recover all its variable costs on an overall basis.

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One of the Board's central concerns in the *WPL* proceedings was that the shipper had not included in its variable cost calculations costs that were not assigned to the lines traversed by the shipper's traffic.⁹⁶ AEPCO repeats that mistake here.

UP valuation section records cannot be used to determine whether specific assets within a valuation section along AEPCO's route are used for AEPCO traffic. On opening and reply, UP explained that it does not maintain the detail that would be necessary to determine whether investment in specific track assets within a valuation section is used for specific trains. UP explained that this problem is particularly relevant in this case because AEPCO trains traverse two valuation sections, and they traverse less than 50 percent of each. *See* RR Op. Exh. II.A.6 at 12; RR Reply Nar. at II-41. In its reply submission, AEPCO described its method for allocating investment costs on a gross-ton-mile basis. *See* AEPCO Reply Nar. at II-A-60. However, AEPCO's allocation methodology merely illustrates the problem – it does not solve it. AEPCO allocated investment in entire valuation sections, without any consideration of which of the assets are actually used by AEPCO traffic. AEPCO asserted that its allocation disadvantages its coal traffic but it did not explain why. *See id.* In fact, it is impossible to determine the impact of AEPCO's methodology on the allocation in this case without knowing what underlying investment in the valuation sections is actually used by AEPCO trains.⁹⁷

⁹⁶ *See WPL I* at 54; *WPL II* at 3 & n.6.

⁹⁷ While AEPCO suggested that the Board approved a similar allocation methodology in *TMPA*, *see id.* & n.36, the *TMPA* decision did not address this issue. *See TMPA* at 56-57.

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- (ii) AEPCO Fails to Account For the Relationship Between Density and the Variability Percentages for Roadway Ownership Costs

On opening, the Railroads argued that, even if accurate, line-specific road property investment data were available, any line-specific adjustment to URCS system-average return on investment and depreciation costs would have to be accompanied by a line-specific adjustment to the default system-average variability percentage for those URCS costs. *See* RR Op. Exh. BNSF/UP II.A.6 at 13-14. The Railroads explained that, if system-average variability percentages are applied in calculating line-specific roadway ownership costs of the high-density lines over which AEPCO's traffic moves, the result would be variable roadway ownership costs that are much too low. *See id.* at 14-17.

In an exhibit to its reply submission, AEPCO advanced several arguments to support its application of the system-average variability percentage to supposedly line-specific roadway ownership costs. *See* AEPCO Reply Exh. II-A-26. None of these arguments justifies AEPCO's approach of mixing and matching system-average variability with supposedly line-specific investment.

First, AEPCO presented calculations purporting to show that, as a result of economies of density, on a per-unit basis, road property costs on high-density lines are lower than system-average costs. *See id.* at 1-3 and Table I. It asserted that the Railroads' contention that the variability percentage increases as density increases is equivalent to an argument that economies of density do not exist. *See* AEPCO Reply Nar. at II-A-62; *id.*, Exh. II-A-26 at 3. That is a mischaracterization of the Railroads' argument, and it is ultimately irrelevant.

The Railroads never argued that economies of density do not exist. Such economies certainly do exist, but they affect *fixed costs*, not *variable costs*. Average total cost

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(i.e., fixed plus variable cost) per unit of output declines as average density increases, because the *fixed cost* component of total cost is spread over ever-increasing volumes of traffic. Thus, while there are economies of density, those economies do not affect *variable costs*. To the extent it has any value,⁹⁸ AEPCO's illustration merely reflects the unremarkable proposition that average total cost declines as average density increases; it says nothing about the relationship between *variable costs* and density, or, as is relevant to the issue here, does not refute the fact that the variable portion of total cost increases with density.

Second, AEPCO argued that the variability of roadway ownership costs need not be adjusted upward for higher density lines because the true variability is closer to zero than to the 50-percent default factor used by URCS. *See* AEPCO Reply Exh. II-A-26 at 5-7. It argued that road property investments are largely fixed because "once the investment is made, the road property is capable of handling enormous increases in traffic volume before the next capacity-expanding road property investments have to be made." *Id.* at 7. This argument is simply wrong.

AEPCO badly misunderstands the nature of railroad road property investment and the capacity expansion process. Contrary to AEPCO's claims, road property investments designed to accommodate increases in traffic density are rarely all-or-nothing projects. *See* AEPCO Reply Exh. II-A-26 at 7. According to Thomas Haley, UP's Assistant Vice President - Network & Capital Planning, railroads carefully calibrate their investments to accommodate incremental traffic increases through incremental capacity improvements. The railroad capacity

⁹⁸ AEPCO's Table I uses valuation data from BNSF's Fixed Asset Database, even though AEPCO elsewhere claimed that BNSF's valuation data were so inadequate that it was forced to rely on system-average road property capital costs for BNSF line segments. *See* AEPCO Reply Nar. at II-A-52. AEPCO never explained this obvious inconsistency.

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planning process is focused on analyzing existing and projected rail traffic and identifying “bottleneck” locations where the railroad can expand throughput with incremental investment. For example, one of the most basic steps a railroad can take to expand capacity is to modernize its signaling system by replacing a less sophisticated Track Warrant Control (“TWC”) or Automatic Block System (“ABS”) and hand-thrown switches with more advanced Centralized Traffic Control (“CTC”) and power switches. This is not an all-or-nothing process. Instead, CTC can be installed on portions of a line, and the CTC territory can be extended as traffic growth warrants. Another step a railroad can take as traffic grows is to construct new sidings at appropriate locations to relieve bottlenecks. In time, as traffic continues to grow, a railroad will add more and more sidings. If traffic continues to grow even further, a railroad will begin to connect those sidings to form stretches of double-track. This process allows a railroad to increase its investment in road property as demand increases.

The UP portion of the route over which AEPCO’s trains travel provides a perfect example of this process of incremental investment. According to Mr. Haley, at the time of the UP/SP merger, the Sunset Route between El Paso and Los Angeles was CTC line and approximately 23 percent double-track. Through incremental growth since the merger, the line is now approximately 31 percent double-track. AEPCO refers to the Powder River Basin as an example of a sudden capacity expansion, *see* AEPCO Reply Ex. II-A-26 at 7, but according to Mr. Haley, UP has been following a similar incremental approach for nearly 20 years in expanding its route capacity from the mines in Wyoming to North Platte, Nebraska. As Mr. Haley explains, UP began with a single-track branch line, and then incrementally added sidings, installed CTC, connected sidings to form stretches of double track, then extended the double

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track and installed triple and quadruple track on certain segments as traffic grew from just a few trains a day to approximately 65 trains a day over the 20-year period.

AEPCO also failed to recognize that a significant portion of railroad road property investment reflects capitalized maintenance costs. As the Railroads explained in the context of MOW costs, the shift from replacement, retirement, and betterment (“RRB”) accounting to depreciation accounting for track structures required railroads to capitalize many of the MOW expenditures they had previously expensed. *See* RR Op. Exh. BNSF/UP II.A.5 at 8-12. When these MOW expenditures are capitalized, they are reflected in road property accounts. The shift toward capitalizing a larger portion of MOW expenditures means that the system-average variability percentage for road property costs should approach the system-average variability percentage for MOW costs, which was 73 percent for UP in 2002. In other words, the 50-percent default factor (which was set in place before the shift to depreciation accounting for track structures) likely *understates* the actual variability of today’s roadway ownership costs, particularly on high-density lines, where the variability percentage would be higher than the system average.

AEPCO based its claim that the variability of road property costs is close to zero percent in part on a misrepresentation of railroad testimony submitted in the proceeding in which the ICC adopted URCS. In that proceeding, Hillary Rawert, a witness for the Association of American Railroads, argued that the variability percentage for road property costs should be below the percentage assigned for equipment return, because road property assets cannot as

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easily be purchased or sold in response to changing traffic conditions.⁹⁹ AEPCO distorts this argument to suggest that the railroads believed that road property assets are fixed assets that do not vary with density. *See* AEPCO Reply Exh. II-A-26 at 5-6. However, Mr. Rawert was simply advocating that the ICC adopt the variability ratios developed for running track maintenance, rather than equipment return.¹⁰⁰ This certainly makes sense because, as discussed above, road property accounts reflect substantial amounts of capitalized maintenance. As noted above, these maintenance costs are not fixed, but are more than 70-percent variable with density.

Moreover, AEPCO's arguments that the variability of road property investment cost is close to zero is based on its assertion that road property assets are "fixed assets" and "not fungible." *See* AEPCO Reply Exh. II-A-26 at 6. But AEPCO's terminology is irrelevant to the issues here. Whether an asset is "fixed" or "fungible" does not address the issue that is central to variability under URCS. As the ICC's URCS expert, Dr. M. Daniel Westbrook, explained, under URCS the relevant question is whether the "inputs can be varied during the time period under consideration to produce variations in the level of output."¹⁰¹ It is thus the "time period under consideration" that "defines which inputs are regarded as fixed and which are regarded as variable inputs,"¹⁰² not whether an asset is "expected to be consumed or converted into cash" or

⁹⁹ *See* Comments of Association of American Railroads, *Adoption of Uniform Railroad Costing System as a General Purpose Costing System for All Regulatory Costing Purposes*, Ex Parte No. 431 (Sub-No. 1) (filed Mar. 20, 1989) ("AAR Comments") at 17-18.

¹⁰⁰ *See* AAR Comments at 18-19.

¹⁰¹ Dr. M. Daniel Westbrook, "Research Report on URCS Regression Equations," Oct. 17, 1998, p. 7, included as the Railroads Rebuttal electronic workpaper "Westbrook.pdf."

¹⁰² *Id.*

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“freely exchangeable . . . or another like nature or kind.”¹⁰³ AEPCO Reply Exh. II-A-26 at 6 n.9, 10. As the Railroads explained above, under the URCS definition of “variable cost,” most road property investment is highly variable. Railroads can vary this investment in the short term in order to respond to changes in demand and produce variations in the level of output. Thus, one would expect the variability percentage for roadway ownership costs to be high, and higher still on high-density lines.

AEPCO also argued that the Railroads failed to provide any “empirical support” to justify a departure from the ICC’s and the Board’s past reliance on a 50-percent variability factor. *See* AEPCO Reply Exh. II-A-26 at 4-5, 7-9. It argued in particular that there is no support for the Railroads’ treatment of road property ownership costs as a linear function. *See id.* at 9. These arguments wrongly attempt to shift away from AEPCO the burden of justifying a departure from system-average URCS, and they misrepresent the Railroads’ position.

Unlike AEPCO (which seeks to develop line-specific road property costs), the Railroads are not attempting to advance an alternative to system-average URCS. Contrary to AEPCO’s assertion (*id.* at 9), they do not argue that the Board should use “something other than” the system-average 50-percent variability factor for road property. Instead, the Railroads argue for system-average road property costs. Thus, they are under no obligation to provide any “empirical support” for their argument. It is AEPCO that bears this burden.

In any event, no “empirical support” is necessary to show that the percentage of total road property costs that are variable increases as density on a line increases. This

¹⁰³ Dr. Westbrook’s definition of fixed and variable costs is fully consistent with the definition used by the Railroad Accounting Principles Board. *See* Railroad Accounting Principles, RAPB Final Report (Sept. 1, 1987), Vol. 2 at 115, included as the Railroads’ Rebuttal electronic workpaper “RAPB.pdf.”

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proposition does not depend on the specific shape of the cost function. It is evident that increasing volumes of traffic generate additional costs and that, by definition, these are variable costs. When traffic increases, fixed costs remain constant (by definition), and it is variable costs that increase. Thus, the ratio of variable costs to total costs (*i.e.*, the variability percentage) will necessarily increase with increased traffic density. *See* RR Op. Exh. BNSF/UP II.A.6 at 14-15.

The ICC recognized, when it adopted URCS, that variability increases with increases in density, but the agency was unable to determine the precise relationship for road property; it therefore relied on a default variability percentage reflecting average densities.¹⁰⁴ The fact that a default variability percentage is used to determine system-average URCS road property ownership costs does not make this the appropriate variability percentage for use in line-specific adjustments to URCS road property costs of the type AEPCO urges. Indeed, because the ICC recognized that variability increases with increases in density, any party seeking to make a line-specific adjustment to road property costs for high-density lines has a high burden to show that its adjustment has properly accounted for the effect of higher density on the variability percentage used in connection with the adjustment. Since the ICC was unable to identify an appropriate adjustment to the variability factor after studying the issue, the proponent of a line-specific adjustment must show how it was able to succeed where the agency could not. AEPCO has not even attempted to make such a showing. Its mix-and-match approach to calculating road property costs should be rejected.

¹⁰⁴ *Adoption of URCS*, 5 I.C.C.2d at 921 n.81.

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(c) Fuel

The parties continue to disagree on the fuel costs associated with the issue movements. On opening and reply, the Railroads developed locomotive fuel costs for the entire route using BNSF's unadjusted URCS system-average unit costs, because BNSF provides both the fuel and the locomotives used for the issue movements. *See* RR Op. Nar. at II-34; RR Reply Nar. at 42. By contrast, in its opening submission, AEPCO calculated fuel costs based on a fuel study conducted in 1985. *See* AEPCO Op. Nar. at II-A-41 to 43. AEPCO continued to rely upon the same study on reply. *See* AEPCO Reply Nar. at II-A-63.

In their reply, the Railroads explained that AEPCO's approach was severely flawed. In short, AEPCO committed two basic errors.

First, while AEPCO used BNSF fuel costs for BNSF's portion of the route, it used UP fuel costs for UP's portion of the route. As the Railroads explained on reply, AEPCO's use of UP costs for the UP portion of the route was improper. BNSF provides the fuel and locomotives for the issue movements. Thus, BNSF's costs more closely reflect the actual costs of fuel for AEPCO trains. *See* RR Reply Nar. at 43.¹⁰⁵

Second, AEPCO developed each railroad's costs by adjusting its URCS system-average costs based on a 1985 fuel study AEPCO conducted in a rate case involving The Atchison, Topeka, & Santa Fe Railway ("ATSF") and SP, prior to their mergers with Burlington Northern Railroad Company ("BN") and UP, respectively. As the Railroads explained on reply, the movement parameters addressed in the 1985 fuel study bear little resemblance to those of the

¹⁰⁵ UP pays BNSF a fixed amount per train to reflect BNSF's fuel costs for movements of AEPCO trains between Deming and Cochise, but UP's payments to BNSF are transfer payments between carriers that must be disregarded under Board precedent. *See Bituminous Coal — Hiawatha, UT, to Moapa, NV*, 6 I.C.C. 2d 1, 26 (1989).

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current AEPCO move. *See* RR Reply Nar. at 43. The 1985 move involved different railroads, a different origin mine, different locomotive models, a different locomotive consist size, and different train sizes and weights, as shown in Table BNSF/UP II.A-9, which is reproduced from the Railroads' Reply.

Table BNSF/UP II.A-9
Comparison of 1985 AEPCO Fuel Study
Trains to Current Service

	1985 Fuel Study Trains	2Q02 AEPCO Trains (98-Ton)	3Q02 AEPCO Trains (115-Ton)
Railroads	ATSF, SP	BNSF, UP	BNSF, UP
Predominant Loco Type	3,000HP SD40-2	4,400HP C44-9W	4,400HP C44-9W
Average Number of Locos	5.72	4.87	4.38
Number of Cars	104.5	112.2	107.1
Average Trailing Weight	13,500	14,900	15,300
Origin Mine	Mentmore, NM	Lee Ranch	Lee Ranch (McKinley at 108-Tons)

Moreover, AEPCO's adjustment is based on the relationship of fuel consumption shown in the 1985 fuel study to the ATSF and SP's system-average fuel consumption at that time. But those railroads' system-average fuel consumption figures were based on locomotive fleets, traffic mixes, and railroad operations that are far different from the BNSF's or UP's current fleets, traffic mixes, and operations. As the Railroads explained on reply, there is no reason to conclude that the relationship between fuel consumption for AEPCO trains and system-average fuel consumption has remained the same over the past 18 years, given the changes in movement characteristics, locomotives used in AEPCO service, and ATSF/SP and BNSF/UP locomotive fleets and traffic mixes. *See* RR Reply Nar. at 44.

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The Board has recognized the dangers of using stale studies, and it has regularly rejected them in the context of fuel studies.¹⁰⁶ The Board should reject AEPCO's fuel costs because AEPCO has made "no attempt to show that the [1985] study is applicable to [BNSF's and UP's] current operations."¹⁰⁷ The Board should instead rely on the Railroads' use of unadjusted BNSF URCS system-average costs as the best evidence of record.

(d) Locomotive Maintenance Costs

Because BNSF does not have data from which locomotive maintenance costs for a specific locomotive, locomotive model, or series can be determined, the Railroads' variable cost evidence uses system-average locomotive maintenance costs to calculate variable costs for the issue move. AEPCO, on the other hand, used BNSF's maintenance contracts with locomotive manufacturers to develop an adjustment to BNSF's URCS system-average locomotive maintenance cost, and it used a year 2000 UP analysis of certain locomotive repair costs to develop an adjustment to UP's URCS system-average locomotive maintenance cost.¹⁰⁸ The Railroads explained on reply the errors in AEPCO's approach. Those errors included:

- failure to account for non-routine locomotive maintenance costs;¹⁰⁹

¹⁰⁶ See *WPL I* at 55 & n.109 (rejecting WPL's reliance on fuel consumption from a 1980's *Nevada Power* case); *San Antonio*, 1 I.C.C.2d 561, App. B at B-26 (1986).

¹⁰⁷ *TPMA* at 45.

¹⁰⁸ AEPCO Opening Nar. at II-A-38 to 41. Since BNSF locomotives account for the vast majority of the locomotive hours on AEPCO trains, UP's costs are largely irrelevant. In any event, UP explained on reply that AEPCO misapplied and misinterpreted UP's analysis to develop its adjustment to UP's system-average locomotive maintenance costs. RR Reply Exh. II.A-5.

¹⁰⁹ RR Reply Nar. at II-45 to 46, citing *TPMA* at 58.

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- improper accounting for the cost of locomotive overhauls;¹¹⁰ and
- failure to include miles traveled by BNSF locomotives between Rincon and Cochise.¹¹¹

The Railroads also explained that AEPCO misapplied the contracts and disregarded actual operating data to develop BNSF’s alleged maintenance costs under the contracts.¹¹² Specifically, AEPCO ignored the fact that BNSF’s payments were based on { } and AEPCO applied the contract to fictional locomotive utilization data to develop per-mile costs. AEPCO calculated contract maintenance costs that are significantly lower than those that BNSF actually pays on a per-mile basis.

In its reply, AEPCO purported 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.¹¹³ Specifically, AEPCO said it “addresses the Board’s *TMPA* concerns by identifying the locomotive maintenance costs that reflect { } and treating those costs on a system average basis.”

AEPCO Reply Nar. at II-A-65. AEPCO, however, identified no such costs. In a footnote, AEPCO claimed that these non-routine costs are “charged to accounts such as {

} *Id.* at n.45. AEPCO then claimed to have

accounted for non-routine costs by including these accounts in its development of variable costs unadjusted by its special study of locomotive maintenance costs. *Id.* BNSF, however, often

¹¹⁰ *Id.* at II-46.

¹¹¹ *Id.* at II-47.

¹¹² *Id.* at II-46 to 47.

¹¹³ *TMPA* at 58.

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reports non-routine locomotive maintenance costs (*i.e.*, costs not covered by the maintenance contracts with the locomotive manufacturers) to the very accounts to which it reports routine maintenance costs covered by its contracts with the locomotive manufacturers. Indeed, BNSF reports no locomotive repair costs to the {

}¹¹⁴

AEPCO's reply submission also criticized the Railroads' use of system-average locomotive maintenance costs on the ground that such costs ignore the fact that the locomotives used in AEPCO service are newer { } than the average age of the BNSF locomotive fleet { }. AEPCO Reply Nar. at II-A-65. AEPCO offered no evidence to support its argument. Indeed, there is no reason to believe this to be the case. The age of a locomotive is not a reliable indicator of dependability. BNSF locomotives typically undergo a major overhaul every seven years. After an overhaul, a locomotive should operate as if new. Thus, a 15-year-old locomotive should be as reliable as a locomotive that is only one year old.

Moreover, any increased maintenance expense for older locomotives is compensated for by the fact that BNSF's use of newer, more powerful model locomotives on AEPCO trains has enabled it to power longer, heavier trains with fewer locomotives. In fact, because BNSF is able to use only four to five units to power the AEPCO train, the use of the newer and more powerful locomotives produces lower locomotive maintenance costs for the issue traffic. This is because a portion of locomotive maintenance costs is based on the number of total unit-miles. Thus, AEPCO's claim that the Railroads' maintenance costs are overstated

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

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because older units require more maintenance than the newer ones is misleading, as AEPCO's trains required nearly six 3,000HP SD40-2 units,¹¹⁵ but require only four to five of the 4,400HP C44-9W and 4,000HP C40-8W units. Thus, the Railroads' locomotive costs are already lower on a per-train basis than those calculated for trains with more units. AEPCO cannot have it both ways.

(e) Other GTM

The parties continue to disagree about this cost category. The differences between the parties continue to reflect primarily the impact on overhead costs of AEPCO's fuel and locomotive maintenance adjustments, discussed above in sections II.A.1.c.(6)(c), (d).

(7) Train-Mile Expense - Other than Crew (Item 7)

The parties continue to disagree slightly about this cost category. In its reply submission, AEPCO claimed to have eliminated any difference by adopting the Railroads' indexing method. *See* AEPCO Reply Nar. at II-A-68. However, the parties' calculations differ because, as explained in the Railroads' reply, the Railroads used base-year 2002 URCS costs for movements in 2002 and 2003, whereas AEPCO relied on costs indexed from its 2001 URCS. *See* RR Reply Nar. at II-A-49.

(8) Locomotive Unit-Mile Expense (Item 8)

The parties continue to disagree about the locomotive unit-mile expense. As the Railroads explained on reply, this expense (excluding locomotive ownership¹¹⁶) is comprised of (1) fuel; (2) locomotive maintenance; (3) locomotive servicing; and (4) other expenses including overhead. The differences between the parties with respect to fuel and locomotive maintenance

¹¹⁵ AEPCO Opening supplemental workpapers 05204-05210.

¹¹⁶ Locomotive ownership is discussed in section II.A.1.(c)(15).

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are addressed in sections II.A.1.c.(6)(c) and II.A.1c.(6)(d), respectively. The parties agree on the unit costs for locomotive servicing. They present differing costs for other expenses, due to the impact on overhead costs of AEPCO's inappropriate adjustments to fuel and locomotive maintenance expenses.

(9) Train-Mile Expense - Crew (Item 9)

The parties continue to disagree on the calculation of train crew expenses, although they have narrowed their differences. As the Railroads explained on reply, they developed crew expenses using BNSF and UP payroll records produced in discovery. AEPCO also used the payroll records produced in discovery, but its calculations reflected omissions and unsubstantiated adjustments to those records that resulted in an understatement of variable costs.

(a) BNSF Wages

In its reply submission, AEPCO criticized the Railroads' crew wage expense for including wages associated with firemen and misrouted movements and for improperly developing the mark-up ratio to account for BNSF's full wage expense. AEPCO Reply Nar. at II-A-70 to 75.

First, AEPCO complained that the Railroads' analysis included constructive allowance payments made to firemen assigned to Cochise trains. *Id.* at II-A-70. BNSF's workpapers indicate that these allowances totaled only \$150 dollars in meal payments, out of a total of nearly \$500,000 in train-related wages paid to train and engine crews that worked Cochise trains between 1Q01 and 1Q02.¹¹⁷ Although AEPCO suggested that there is no straight-time pay for firemen assigned to its trains, its treatment of the constructive allowances precludes

¹¹⁷ Railroads' Reply electronic workpaper "aepco.bnsf roadcrew wages reply.xls."

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the Railroads from recovering their “train-related” expenses. As the records are assigned to the Cochise train symbol, the Railroads continue to include approximately one dollar per train for these meal payments in their variable cost calculations.

Second, AEPCO claimed that the Railroads’ methodology of calculating wages per train “failed to eliminate erroneous data.”¹¹⁸ Specifically, AEPCO complained that BNSF’s calculations included wages for crews that worked from Albuquerque to Raton, not along the route typically traversed by Cochise trains from Lee Ranch or McKinley mines. In this Rebuttal, the Railroads remove the wages associated with this move, which apparently reflected an empty movement to York Canyon that followed a loaded shipment from Lee Ranch.

AEPCO also stated that the Railroads’ analysis included wages for other “misrouted” trains. *Id.* at II-A-70. The four other cases that AEPCO identified, however, all relate to issue trains that moved over the issue route between the mines and Belen where a crew member’s on and off duty points were reversed. For example, AEPCO excluded wages associated with the empty Train 29.¹¹⁹ The Railroads’ workpapers include a payroll record for each member of the three-person crew working this train.¹²⁰ While the records for the conductor and brakeman show that each reports on duty at Belen and off duty at Gallup, the engineer’s record shows on duty at Gallup and off duty at Belen. Although AEPCO has correctly pointed

¹¹⁸ AEPCO Reply Nar. at II-A-70. Its concerns regarding BNSF’s methodology for summarizing wages are apparently not significant, however, for after proffering a two-paragraph critique, AEPCO then adopts BNSF’s approach of compiling wages by train. AEPCO Reply Nar. at II-A-71.

¹¹⁹ AEPCO Reply electronic workpaper “BN Reply Compare Wages by trn,occ,dist.xls.”

¹²⁰ Railroads’ Reply electronic workpaper “aepco.bnsf roadcrew wages reply.xls,” Tab “Total Data (Revised).”

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out that the on and off duty points were reversed for one of the three crew members on this train, this is not a reason to exclude the wages for this crew that worked a Cochise train.

Finally, AEPCO took issue with the Railroads' calculation of a mark-up ratio to account for wages not associated with specific trains but paid for activities such as vacations, holidays, etc. AEPCO claimed that the 2001 mark-up ratio that the Railroads submitted on opening included a mix of 2001 and 2002 records. The Railroads corrected this on reply, and, like AEPCO, continue to use only 2001 data for the 2001 mark-up ratio.¹²¹ While the Railroads limited their 2002 mark-up ratio to include only records from 2002 in their reply, the Railroads accept AEPCO's use of data from the prior 12-month period (*i.e.*, 2Q01-1Q02) to calculate the mark-up ratio to apply to 2002 wages in their rebuttal.¹²²

In light of the Railroads' acceptance of AEPCO's base time periods for calculating the mark-up ratios, the only difference remaining in the mark-up ratio is the treatment of pay as train-related or non-train-related. In its reply, AEPCO stated that it adjusted the classification of 19 constructive allowances, leaving seven in dispute. AEPCO Reply Nar. at II-A-73 to 74. In their reply, the Railroads accepted AEPCO's treatment of five of these seven codes. RR Reply Narr. at II-51. Because the two codes remaining in dispute total less than \$10 thousand out of \$13 million in total wages paid to crew members on AEPCO trains in 2001, there is no significant difference between the parties' mark-up ratios for BNSF.¹²³

¹²¹ Railroads' Reply electronic workpaper "aepco.bnsf markup 01&02 reply.xls," Tab "SMOCNM01."

¹²² Railroads' Rebuttal electronic workpaper "aepco.bnsf markup 01&02 with months rebuttal.xls."

¹²³ Railroads' Rebuttal electronic workpaper "aepco.bnsf markup 01&02 with months rebuttal.xls," Tab "SMOCNMM1."

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On reply, the Railroads identified three significant errors in AEPCO's calculation of crew wages. RR Reply Nar. at II-49 to 52. In its reply evidence, AEPCO corrected its exclusion of engineer pay reported to various occupation codes (AEPCO Reply Nar. at II-A-74) and, as described above, significantly reduced the number of pay codes for which the parties differ in assignment to the train-related or non-train-related category. Although the parties' calculations of BNSF crew wages for Lee Ranch originations are much closer, AEPCO continued to understate significantly the wages for McKinley originations. On reply, the Railroads explained that the wages should be higher than, not lower than, those from Lee Ranch. RR Reply Nar. at II-51 to 52.

(b) UP Wages

In its reply submission, AEPCO identified three differences between the parties' calculations of UP crew wages: (1) the Railroads included wages for two engineers working certain AEPCO trains; (2) the Railroads included wages for Tucson turnaround crews working the AEPCO trains and reporting to train symbol "CCQCQ"; and (3) the parties differed in their calculations of the mark-up ratio to account for UP's full wage expense. The Railroads discuss each difference in turn.

First, on reply, both the Railroads and AEPCO noted that certain AEPCO train crews included a conductor and two engineers. For those trains, AEPCO excluded the wages for one of the engineers from its calculation of train-specific wages. As the Railroads explained on reply, AEPCO failed to justify its exclusion of the second engineer's wages. AEPCO simply labeled such instances "double-counts," despite the fact that UP records clearly showed that the wages were paid to two different crew members. RR Reply Nar. at II-53 to 54. On reply, AEPCO redefined its "double-count" claim by arguing that the inclusion of wages for engineers

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during training runs as train-specific wages would create a double-count because training wages were already accounted for by application of mark-up ratios. *See* AEPCO Reply Nar. at II-A-77. However, AEPCO is incorrect. When two engineers work the AEPCO train, UP reports both crew members' straight-time and overtime wages (if any) to the AEPCO train symbol. The Railroads treated all wages assigned to a particular train symbol as "train-related" for costing purposes. Thus, they did not include any of the wages for a second engineer in the "non-train-related" wages that comprise the mark-up ratio. The "training" pay accounted for by the mark-up ratio includes wages paid for classroom time and other training activities that are considered "non-train-related wages" because they cannot be assigned to particular trains. It does not include wages paid to engineers for training runs on a specific train. By excluding wages paid to the second engineer from its calculation of train-specific wages, AEPCO avoids all of those costs of training engineers on AEPCO trains and thus improperly understates the actual cost of providing service to the AEPCO trains. Its exclusion should therefore be rejected.¹²⁴

Second, in its opening evidence, AEPCO failed to include any wages for the crews that worked certain AEPCO trains designated by the symbol CCQCQ. RR Reply Nar. at II-53. On reply, AEPCO acknowledged that such wages should be included. AEPCO Reply Nar. at II-A-79. However, in attempting to include these wages it made an error. Although its

¹²⁴ AEPCO does not appear to be arguing as a general matter that the Railroads *should* be recording wages associated with training engineers on specific trains as "non-train-related wages" in order to spread those costs against all customers. As discussed below, elsewhere in its reply submission AEPCO criticizes UP for including payments to engineers for FRA Certification as "non-train-related wages" on the ground that UP records assign those payments to specific trains, even though the certification would allow the engineer to operate trains for different customers. Moreover, AEPCO made no effort to increase UP's "non-train-related wages" to account for all of the other situations in which engineer wages for training runs were assigned to specific trains and thus to ensure that AEPCO paid its "fair share" of UP's overall engineer training costs through application of the non-train-related mark-up ratio.

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workpapers properly link to the appropriate crew cost associated with the CCQCQ symbol for most quarters, its calculation for 1Q02 is wrong. Rather than using the conductor wages for 1Q02, AEPCO based its crew wages on the cost for 1Q01, a period before trains with the CCQCQ symbol were regularly used in AEPCO service.¹²⁵ AEPCO Reply Table II-A-26 itself suggests that the 1Q02 figure is in error; that value is 35 to 50 percent lower than the values in the other quarters.¹²⁶

Finally, AEPCO identified four constructive allowances that the parties classified differently (as train-related or non-train related), and it concluded that this pay accounted for over 75 percent of the total difference between the parties' wage classifications. AEPCO Reply Nar. at II-A-82-83. On reply, the Railroads accepted AEPCO's classification as "train-related" for three of the four allowances. RR Reply Nar. at II-54. In this Rebuttal, the Railroads accept AEPCO's classification of wages associated with the fourth constructive allowance that AEPCO identified (FRA Certification). The Railroads believe that AEPCO was correct to identify these payments with specific trains.

¹²⁵ See AEPCO Reply electronic workpaper "UP-Wage by train – AEPCO Reply.xls," Tab "2002 Wages." On reply, the Railroads explained, and the underlying workpapers show, that crews began reporting to the CCQCQ symbol in mid-2001. RR Reply Nar. at II-53, citing RR Op. Nar. at II-35.

¹²⁶ See AEPCO Reply Nar. at II-A-81 AEPCO's reply restatement of UP crew wages contained a further error. In attempting to reclassify train-related wages, AEPCO reduced the 2Q01 conductor wages by nearly \$450. See AEPCO Reply Nar. at II-A-85, Table II-A-27. Its workpapers indicate, however, that these lower crew wages were associated with a Colorado train (train symbol "CCQAI"), and not the New Mexico traffic at issue in this proceeding. See AEPCO Reply electronic workpaper "UP-added train related wages-Reply.xls," Tab "2001." Table II-A-27 shows that AEPCO's improper adjustment resulted in 2Q01 wages that are even lower than the flawed 1Q02 figure described above, and 10 to 20 percent lower than the wages in the other quarters.

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Table BNSF/UP II.A-10 compares the parties' calculations of BNSF and UP crew wages per train for AEPCO shipments.

Table BNSF/UP II.A-10
Comparison of Railroads and AEPCO Crew Wages per Train

	BNSF			UP		
	Railroads Rebuttal	AEPCO Reply	Percent Difference	Railroads Rebuttal	AEPCO Reply	Percent Difference
<i>Lee Ranch</i>						
1Q 2001	{ }	{ }	0%	{ }	{ }	-21%
2Q 2001	{ }	{ }	-2%	{ }	{ }	-27%
3Q 2001	{ }	{ }	0%	{ }	{ }	-5%
4Q 2001	{ }	{ }	-2%	{ }	{ }	-12%
1Q 2002	{ }	{ }	-4%	{ }	{ }	-14%
2Q 2002	{ }	{ }	-4%	{ }	{ }	0%
3Q 2002	{ }	{ }	-4%	{ }	{ }	6%
4Q 2002	{ }	{ }	-4%	{ }	{ }	10%
1Q 2003	{ }	{ }	-6%	{ }	{ }	8%
<i>McKinley</i>						
2Q 2002	{ }	{ }	-18%	{ }	{ }	0%
3Q 2002	{ }	{ }	-18%	{ }	{ }	6%
4Q 2002	{ }	{ }	-18%	{ }	{ }	10%
1Q 2003	{ }	{ }	-20%	{ }	{ }	8%

(10) Helper Expense - LUM (Item 10)

The parties agree that there are no such expenses associated with AEPCO trains.

(11) Helper Expense - Crew (Item 11)

The parties agree that there are no such expenses associated with AEPCO trains.

(12) User Responsibility for Freight Car Repairs (Item 12)

The parties generally agree about this cost category. As the Railroads explained on reply, both parties calculated this expense using 9.51 percent of URCS system-average costs

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as specified by the ICC.¹²⁷ Both parties also applied 9.51 percent respectively of BNSF's and UP's URCS freight car repair cost per mile to each carrier's portion of the AEPCO move.

(13) Car Expense (RR-Owned Only) (Item 13)

The parties continue to disagree about the costs associated with railroad-owned cars substituted in AEPCO trainsets. As discussed above in section II.A.1.b.(6), AEPCO continues to understate the ratio of substitute cars and replace the URCS ownership costs with its own calculation. In this Rebuttal, the Railroads calculate the substitute-car ratio on a quarterly basis.

(14) Loss and Damage Expenses (Item 14)

The parties continue to disagree on the amount of loss and damage expenses to include in their variable cost calculations. The Railroads continue to use URCS system-average costs, which they believe provide the best measure of loss and damage expenses likely to be incurred in the medium to long run.

(15) Locomotive Ownership Expense (Item 15)

The parties continue to have significant disagreement about the proper calculation of locomotive ownership expense. Given each party's continued reliance on the methodologies and calculations submitted on opening, the differences in the parties' calculations remain primarily due to the different approaches they take with respect to the following factors:

- spare margin;
- development of lease costs;

¹²⁷ See *Car Service Compensation – Basic Per Diem Charges – Formula Revision in Accordance with the Railroad Revitalization and Regulatory Reform Act of 1976*, 358 I.C.C. 716, 804 (1977).

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- calculation of average consist size; and
- development of cycle times.

Also, the parties' calculations continue to differ because the Railroads rely solely on data regarding BNSF locomotives in AEPCO service, while AEPCO develops ownership costs based on an incorrect weighting of BNSF and UP locomotives. As discussed above in connection with locomotive maintenance expenses, UP locomotives are rarely used on AEPCO trains – they accounted for only 1.5 out of more than 900 locomotive days in AEPCO's own calculations for 2001.¹²⁸ The Railroads continue to develop locomotive ownership costs using BNSF locomotives in this Rebuttal.

(a) Spare Margin

The parties' different approaches to developing an appropriate spare margin represent the single largest source of difference in the calculation of locomotive ownership costs. As explained on opening, the Railroads based their spare margin calculations on data showing actual locomotive availability and utilization that BNSF provided to AEPCO in discovery.¹²⁹ This information, which BNSF corrected on reply, indicated that the locomotives used in AEPCO service are unavailable or are available but not utilized { } percent of the time.¹³⁰

¹²⁸ The Railroads explained on reply that AEPCO mistakenly included UP locomotives used to deliver Power River Basin coal to Apache Station. RR Reply Nar. at II-57. While AEPCO continues to advocate a 23-percent weighting for UP locomotives, its workpapers indicate that the vast majority of this time is comprised of five UP units that made a round-trip to Black Thunder mine in April and four UP units on a North Rochelle train in July. AEPCO Opening electronic workpaper "AEPCO Train Data.xls." The records for New Mexico shipments include only four UP locomotives for five locomotive days each, out of nearly 600 total locomotive days. Thus, as in 2001, BNSF provided more than 95 percent of the locomotives used in the issue service in 2002.

¹²⁹ RR Opening Nar. at II-40.

¹³⁰ RR Reply Nar. at II-59 and BNSF/UP Reply workpaper "Spare Margin Reply.xls."

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AEPCO made two general criticisms of the Railroads' study. First, AEPCO claimed that the Railroads' approach fails to reflect "availability guarantees" in BNSF locomotive maintenance contracts. AEPCO Reply Nar. at II-A-92. The Railroads already have explained in their reply evidence why the availability guarantees are not an appropriate measure of locomotive availability. RR Reply Nar. at II-58 to 59. The Railroads do not repeat those arguments here.

Second, AEPCO claimed that the Railroads are in error by including non-utilized time in the spare margin calculation.¹³¹ Specifically, AEPCO argued that BNSF's use of unavailable *and* unutilized time would "re-define" spare margin. AEPCO asserted that the Board has rejected previously the inclusion of non-utilized time in locomotive spare margin. This is not true. In the cases cited by AEPCO, the ICC accepted the general proposition that a spare margin can include non-utilized time, but it rejected BN's studies quantifying that time.¹³²

Moreover, non-utilized time must be included in developing a locomotive spare margin in order to comply with a fundamental principle of URCS, *i.e.*, that the URCS-based costs for all specific BNSF movements total to the costs reported in the R-1. Obviously, BNSF's coal fleet must be sufficient in size 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 its locomotives in service all the time. 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.

¹³¹ AEPCO Reply Nar. at II-A-94.

¹³² *APL; OPPD; Central Louisiana Electric.*

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Finally, BNSF's evidence is based on the measure of the actual spare margin on which BNSF operates its railroad and evaluates its performance in the ordinary course of business. The availability and utilization report produced to AEPCO 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 data maintained by BNSF in the normal course of business, identify the appropriate amount of spare margin to be included in calculating locomotive ownership costs.

AEPCO also claimed that the Railroads' study is flawed for several additional reasons. First, AEPCO criticized the locomotive spare margin study on the ground that it includes locomotives not used in AEPCO service. AEPCO Reply Nar. at II-A-96. AEPCO did not suggest, however, that this overstates the results. Indeed, Mr. Fisher's study was based on the most detailed data available. BNSF maintains availability and utilization data in the ordinary course of business by locomotive class and pool location. As the Railroads explained on opening, to calculate locomotive spare margin, Mr. Fisher first identified the locomotives that powered the AEPCO coal trains from the train movement records that were produced to AEPCO in discovery. Next, he identified the pool locations from which the locomotives were drawn. Using the availability and utilization data, he calculated the spare margin weighted to reflect the number of locomotive hours attributable to each class of locomotive and pool location. RR Op. Nar. at II-40 to 44. This approach yields movement-specific results.

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AEPCO also claimed that the study overstates AEPCO's spare margin because it includes locomotive repositioning time that is not relevant to the AEPCO move. AEPCO Reply Nar. at II-A-97. Repositioning is necessary when a train, such as the AEPCO train, does not pass through a locomotive maintenance facility. For such movements, when a locomotive is due for inspection or is in need of repair, BNSF must move a freshly serviced locomotive from a repair facility to the route of movement to replace the unit in need of service and then must move the locomotive that is in need of service to a locomotive maintenance facility. The locomotive can be repositioned either as an additional unit or as part of the standard sized locomotive consist on a train that passes through both the maintenance facility and the route-of-movement of the train on which the locomotives are being swapped. AEPCO's argument assumes that the time in which a locomotive is being repositioned as an additional unit on a train is treated as "unutilized" time and accounted for in the Railroads' spare margin. This is not correct. If a locomotive is on a train and is not otherwise in a bad ordered status, it is treated as utilized in BNSF's data. For example, if BNSF places a fourth unit on a train that is typically powered by three units to reposition the locomotive, all four units are included as available and utilized during the repositioning. BNSF does not distinguish locomotives being repositioned from the locomotives powering the train. Accordingly, the spare margin generally is not influenced by locomotive repositioning operations whether for AEPCO or other trains.

AEPCO claimed that BNSF's special study *might* overstate locomotive spare margin because it includes time that locomotives are in horsepower limiting defect status. *Id.* AEPCO speculates that even though locomotives are in horsepower limiting defect status, it is possible that some of these locomotives could be used in some capacity. BNSF, however, includes as "unavailable" only locomotives that are in horsepower limited defect status 1, 2, or 3.

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These are locomotives that must travel dead in consist or isolated, *i.e.*, providing no tractive effort.¹³³

AEPCO argued 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. AEPCO Reply Nar. at II-A-97 to 98. In fact, to the extent there have been any penalties paid by the locomotive manufacturers, they are included as a credit against BNSF's locomotive maintenance costs and are recorded as such in BNSF's R-1 data. Since the Railroads rely on BNSF's system-average locomotive maintenance costs in developing variable costs for the issue move, the Railroads have, in fact, accounted for such payments. Accounting for such payments in the spare margin would represent a double-count and a windfall to AEPCO.

AEPCO's claim that the Railroads fail to account for the lease credits for the "Reliability" locomotives is yet another red herring. *Id.* Reliability units are units that BNSF leases from the manufacturer. If the manufacturer fails to meet the availability guarantee then, under certain circumstances, BNSF receives lease payment credits. However, there are only { } reliability units in the { } units covered by the contracts.¹³⁴ Thus, to the extent there have been any such credits, the impact is inconsequential. Moreover, BNSF receives credits only if the manufacturer fails to achieve the "availability" guarantee *under the contract*. But, as explained above, the fact that a locomotive is deemed "available" under the contract does not

¹³³ RR Rebuttal electronic workpaper "Defect Codes.pdf."

¹³⁴ AEPCO Opening workpapers 00237, 00254 and AEPCO Reply Exhibit II.A-28.

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mean the unit is, in fact, available for use by BNSF. Indeed, the utilization data produced in discovery demonstrate the gap between contract availability and actual availability.¹³⁵

AEPCO also claimed 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. AEPCO Reply Nar. at II-A-98. This criticism is unwarranted. AEPCO's argument, however, appears to be premised on the unreasonable 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. In fact, it is more likely that such substitute locomotives are utilized less than BNSF-owned locomotives on BNSF lines, as BNSF must coordinate return of substitute locomotives to their owners.

Finally, AEPCO asserts that some of BNSF's non-utilized categories might double-count time. AEPCO 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.

In summary, the BNSF spare margin study appropriately accounts for actual (as opposed to contract) unavailable time and for non-utilized locomotive time. This non-utilized time is not captured by AEPCO's grossly understated spare margin based on maintenance contracts.

¹³⁵ Compare RR Reply electronic workpaper "Spare Margin Reply.xls" to AEPCO Reply electronic workpaper "BNSF Spare Margins from Agreements.123."

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(b) Development of BNSF Lease Costs

AEPCO also challenged the Railroads' use of BNSF's average annual payment over the life of the lease for units acquired under operating leases.¹³⁶ AEPCO argued that the Railroads' approach is inconsistent with *WPL I*.¹³⁷ The Railroads explained on opening, and again on reply, that its approach is consistent with both relevant Generally Accepted Accounting Procedures (GAAP) and its R-1 reporting, and it presents a truer calculation of BNSF's lease costs than AEPCO's approach.¹³⁸ This does not appear to have been the case in *WPL I*.¹³⁹ The Railroads also explained that because URCS costs are based on the R-1 and since Congress has mandated that variable costs be based on URCS, it is appropriate to use normalized payments in the calculation of locomotive ownership costs.¹⁴⁰

AEPCO's reply, however, argued that because both parties substitute movement-specific costs, the calculation of BNSF's URCS system-average cost is irrelevant to the development of variable costs for this expense.¹⁴¹ Not only does AEPCO's argument fly in the face of the Congressional mandate that variable costs be based on URCS, it also overlooks the fact that both AEPCO and the Railroads very much rely on URCS methodology to develop their respective movement-specific estimates of locomotive lease costs. Both AEPCO and the Railroads apply the URCS variability factor and the URCS deferred tax ratio to develop their

¹³⁶ AEPCO Reply Nar. at II-A-89 to 91.

¹³⁷ *Id.* at II-A-90.

¹³⁸ RR Op. Nar. at II-39 to 40; RR Reply Nar. at II-59 to 60.

¹³⁹ *WPL I* at 58.

¹⁴⁰ RR Op. Nar. at II-39 to 40.

¹⁴¹ AEPCO Reply Nar. at II-A-90.

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locomotive costs. AEPCO's attempt to cherry-pick from the URCS methodology only those steps that reduce variable costs is inappropriate.

Moreover, the URCS methodology is intended to provide an assessment of costs over an "intermediate term perspective."¹⁴² It would be inconsistent with URCS methodology, as well as GAAP, to base the lease costs for locomotives used to power AEPCO trains on a single year and thereby ignore the fact that lease payments often vary from year-to-year and include balloon payments in certain years that AEPCO's approach would exclude entirely. Normalization of the lease costs as an input is consistent with URCS's intermediate-term outlook.

AEPCO also claimed that the Railroads' approach is unnecessary because "most leases have relatively even payment schedules."¹⁴³ In response to BNSF's demonstration of varying annual costs over the life of the leases for locomotives used on AEPCO trains, AEPCO called two of BNSF's illustrative leases "extreme examples" that are "not representative of the Railroad's lease payments based on the leases provided to AEPCO in discovery."¹⁴⁴ This claim does not stand up to scrutiny. In fact, some of the leases produced to AEPCO in discovery include payment schedules that vary to a greater extent than the lease payment schedules BNSF cited to in its opening evidence.¹⁴⁵ Moreover, if AEPCO were correct, then normalization of the leases would have little or no impact on the costs.

¹⁴² *Adoption of URCS*, 5 I.C.C. 2d 894, 895 (1989).

¹⁴³ AEPCO Reply Nar. at II-A-90 to 91.

¹⁴⁴ *Id.* at II-A-90.

¹⁴⁵ For example, lease { }. *See*, BNSF/UP Rebuttal electronic workpaper "BNSF Uneven Loco Lease Payments.xls."

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(c) Development of Average Consist Sizes

As discussed above in section II.A.1.b.(12), the parties disagree on the average consist sizes used to develop locomotive ownership costs. On opening, the Railroads used BNSF train movement data produced in discovery to develop average locomotive consist sizes by quarter for the entire route. *See id.* By contrast, in its opening submission, AEPCO developed locomotive consist sizes using BNSF records when trains were on BNSF lines and UP records when trains were on UP lines. *See id.* AEPCO's methodology is inferior for two reasons.

First, AEPCO unnecessarily complicated the costing process by using two data sources for locomotive consist sizes. As the Railroads explained on opening, BNSF provides the locomotive power for the issue movements under a run-through agreement with UP. *See RR Op. Nar. at II-24 n.33.* According to Mr. Salzman, UP does not add or remove locomotives while AEPCO trains are on the UP portion of the route. Absent an unusual event (such as a complete mechanical breakdown requiring a unit's removal from the consist), UP moves AEPCO trains from Deming to Apache Station and back using the same BNSF locomotives it receives on the loaded train at Deming.¹⁴⁶ Thus, there is no need to use both Railroads' data.

Second, UP's data contain obvious errors that led AEPCO to understate the average number of locomotives on AEPCO trains for the UP portion of the route. The Railroads presented specific examples of AEPCO's calculations for incomplete consists, which were confirmed by fuel bills produced in discovery.¹⁴⁷

The Railroads further explained that the apparent differences between BNSF consist sizes and UP consist sizes reflect failures of UP's AEI readers or software to record or

¹⁴⁶ RR Reply Nar. at II-60.

¹⁴⁷ RR Reply Nar. at II-A-61 and BNSF/UP.RP.WP.II-A-027.

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properly identify all of the BNSF locomotives moving past a reader, rather than actual changes in consist size as AEPCO trains moved over UP's portion of the route.¹⁴⁸ AEPCO never acknowledged, let alone explained, its counterintuitive conclusion that locomotive consist size would be different on BNSF's and UP's portions of the route.

As explained above in section II.A.1.b.(12) of this Reply, the Railroads generally accept AEPCO's calculation of average consist sizes developed from BNSF data¹⁴⁹ and correctly recognize that the consist sizes do not decrease on UP's portion of the route.

(d) Cycle Times

As discussed above, the parties disagree on cycle times because AEPCO failed to include a significant portion of the time its trains spend in AEPCO service between Rincon and Deming. *See* section II.A.1.b.(13), *supra*. AEPCO understated cycle times for the period after SWRR began handling AEPCO's trains by omitting the time that the trains were being handled by SWRR in either direction, as well as the interchange time for loaded trains at Rincon and empty trains at Deming. As a result of these omissions, AEPCO failed to include costs related to locomotive ownership, despite the fact that SWRR makes no payments to BNSF nor provides horsepower-hour equalization for the locomotive time.

Although on reply AEPCO increased its cycle times to include dwell times at Deming before the SWRR began handling the trains, its continued exclusion of the time between Rincon and Deming is indefensible. The locomotives on AEPCO trains remain in AEPCO service for the entire round-trip between the origin mines and Apache Station, and the Railroads must recover locomotive ownership costs for the entire movement.

¹⁴⁸ RR Reply Nar. at II-A-62.

¹⁴⁹ BNSF/UP.RP.WP.II-A-021.

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The Railroads' cycle times are based on BNSF train movement data produced in discovery. The use of a single data source avoids inconsistencies introduced by AEPCO's attempt to match BNSF and UP data, and it allows the capture of all time, including periods when the trains were handled by SWRR.

The Railroads continue to rely on their evidence of cycle times in this Reply.

(16) Caboose and EOTD Ownership Expenses (Item 16)

The parties continue to disagree slightly in their calculation of EOTD ownership expenses. As the Railroads explained on reply, AEPCO understated EOTD costs because it used incomplete cycle times and a general overhead ratio that improperly excluded the Railroads' investments reported to Account 90. *See* RR Reply Nar. at 64. As the Railroads also explained on reply, the parties' unit costs also differ because AEPCO included UP's EOTD costs, while the Railroads used BNSF's EOTD investments for the entire movement, and because AEPCO excluded from its calculation the purchase of 173 units that was documented in the discovery materials when developing its average price for BNSF's EOTDs. *See id.*¹⁵⁰

(17) SWRR Handling Charge (Item 17)

The differences in the parties' treatment of the SWRR handling charge are discussed above in section II.A.1.a.(3).

(18) Indexing

Although the parties' indices are quite close on reply, two differences remain. First, AEPCO continues to apply quarterly indices to the results of its special study of UP crew wages. This is unnecessary, as the UP payroll records that AEPCO compiles are already specific

¹⁵⁰ Compare AEPCO electronic workpaper "BNSF EOTD.123" with BNSF/AEPCO 01724, included in BNSF/UP opening electronic workpaper "BNSF EOTD Data 2001.123."

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to each of the quarters from 1Q01-2Q02. Second, AEPCO indexes base-year 2001 costs to 2002 and 1Q03 levels. The Railroads calculate variable costs for 1Q02 and later periods based on 2002 URCS costs, which they index to each quarter.¹⁵¹

2. Rate and Resulting R/VC Calculations

Tables BNSF/UP II.A-11 and BNSF/UP II.A-12 present the rates, variable costs, and resulting R/VC calculations for the AEPCO traffic that moved under the challenged rates from 1Q01 through 1Q03 for Lee Ranch and McKinley, respectively.

**Table BNSF/UP II.A-11
Rates, Variable Costs Per Net Ton, and R/VC Ratios
For Shipments from Lee Ranch to Apache Station**

Period	Rate	AEPco Reply		Railroads Reply	
		Variable Cost	R/VC Ratio	Variable Cost	R/VC Ratio
98-Ton Rate					
1Q01	\$9.35	\$4.31	217%	\$5.28	177%
2Q01	\$9.35	\$3.91	239%	\$4.76	196%
3Q01	\$9.35	\$4.21	222%	\$5.14	182%
4Q01	\$9.35	\$3.64	245%	\$5.29	177%
1Q02	\$9.54	\$3.35	272%	\$4.94	193%
2Q02	\$9.54	\$3.56	255%	\$5.04	189%
3Q02	\$9.54	\$3.51	259%	\$4.92	194%
4Q02	\$9.54	No Shipments Under Challenged Rate			
1Q03	\$9.73	No Shipments Under Challenged Rate			
115-Ton Rate					
1Q01 – 4Q01	\$9.05	No Shipments Under Challenged Rate			
1Q02 – 2Q02	\$9.23	No Shipments Under Challenged Rate			
3Q02	\$9.23	\$3.01	294%	\$4.37	211%
4Q02	\$9.23	\$3.02	293%	\$4.36	211%
1Q03	\$9.41	\$3.17	278% ¹⁵²	\$4.52	208%

¹⁵¹ BNSF/UP.RP.WP.II-A-083 to 146 and BNSF/UP Reply electronic workpapers “BNSF-02-IE3-Index-Reply.123” and “UP-02-IE3-Index-Reply.123.”

¹⁵² As on opening, AEPCO’s Reply R/VC calculations for 1Q03 are based on the year-2002 rate of \$9.23 instead of the correct rate of \$9.41. AEPCO Reply Table II-A-29 at II-A-102.

II.A. Quantitative Evidence – Variable Costs
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Table BNSF/UP II.A-12
Rates, Variable Costs Per Net Ton, and R/VC Ratios
For Shipments from McKinley to Apache Station

Period	Rate	AEPCO Opening		Railroads Reply	
		Variable Cost	R/VC Ratio	Variable Cost	R/VC Ratio
98-Ton Rate					
1Q01 – 4Q01	\$9.35	No Shipments Under Challenged Rate			
1Q02	\$9.54	No Shipments Under Challenged Rate			
2Q02	\$9.54	\$4.03	226%	\$5.85	163%
3Q02	\$9.54	\$3.92	232%	\$5.48	174%
4Q02	\$9.54	No Shipments Under Challenged Rate			
1Q03	\$9.73	No Shipments Under Challenged Rate			
108-Ton Rate					
1Q01 – 4Q01	\$9.05	No Shipments Under Challenged Rate			
1Q02 – 2Q02	\$9.23	No Shipments Under Challenged Rate			
3Q02	\$9.23	\$3.54	249%	\$4.77	193%
4Q02	\$9.23	\$3.73	237%	\$5.15	179%
1Q03	\$9.41	\$3.82	231% ¹⁵²	\$5.19	181%

**IV. Witness Qualifications
and Verifications**

IV. WITNESS QUALIFICATIONS AND VERIFICATIONS

1. Benton V. Fisher

Benton V. Fisher is a Director at FTI Consulting, Inc., an economic and financial consulting firm. His business address is 1201 Eye Street, N.W., Suite 400, Washington, DC 20005. Since 1991, Mr. Fisher has been involved in various aspects of transportation consulting including economic studies involving costs and revenues, traffic and operating analyses, and work with performance measurement and financial reporting systems.

Mr. Fisher holds a Bachelor of Science in Engineering degree from Princeton University. In 1991, he joined Klick, Kent & Allen, Inc. ("KK&A"), which was acquired by FTI Consulting, Inc. ("FTI") in 1998. While with KK&A and FTI, Mr. Fisher has performed numerous analyses for and assisted in the preparation of expert testimony related to merger applications, rate reasonableness proceedings, contract disputes, and other regulatory costing issues before the Interstate Commerce Commission, Surface Transportation Board, Federal Energy Regulatory Commission, Postal Rate Commission, Federal Court, and State Utility Commissions.

Mr. Fisher is sponsoring evidence relating to BNSF's and UP's variable costs for the issue movement. His evidence is contained in Section II.A of the Narrative. Mr. Fisher has signed a verification of the truth of the statements contained therein. A copy of Mr. Fisher's verification is attached hereto.

I declare under penalty of perjury that I have read the Rebuttal Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on July 1, 2003

A handwritten signature in cursive script, reading "Benton V. Fisher", written over a horizontal line.

Benton V. Fisher

2. Thomas C. Haley

Thomas C. Haley is Assistant Vice President Network & Capital Planning for Union Pacific Railroad Company ("UP"). As UP's Assistant Vice President - Network & Capital Planning he has responsibility for planning and analysis of UP's key operating resources, including infrastructure capacity, for evaluating operating performance, and for improving operating efficiency through process engineering.

Mr. Haley has been employed with UP since 1989. He began his career as a Senior Analyst in the UP Finance group after receiving an MBA from Indiana University. Since that time, he has held various positions in UP's Finance, Operating, and Network Design & Integration Departments. He assumed his current position in 1998.

Mr. Haley is sponsoring evidence related to railroads' ability to invest incrementally in road property assets in order to accommodate increases in traffic density. His evidence is contained in Section II.A.1.c.(6).(b) of the Narrative. Mr. Haley has signed a verification of the truth of the statements contained therein. A copy of Mr. Haley's verification is attached hereto.

STATE OF NEBRASKA)
) ss
COUNTY OF DOUGLAS)

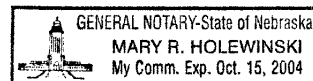
VERIFICATION

Thomas Haley, being duly sworn, deposes and says that he has read the Rebuttal Evidence that he has sponsored, as described in his foregoing Statement of Qualifications, and that the contents thereof are true and correct to the best of his knowledge and belief.

Thomas Haley
Thomas Haley

Subscribed and sworn to before me on this 1st day of July, 2003.

Mary R. Holewinski
Notary Public



My Commission expires: October 15, 2004

REDACTED

RAILROADS' RESPONSE TO AEP CO'S CLAIMS
REGARDING THE PROPER REGULATORY AND
ECONOMIC TREATMENT OF ACCOUNT 90

On opening, the Railroads explained that the Board should follow the ICC's established practice to include Account 90 and exclude Account 76 in the calculation of an overhead ratio. The Railroads explained that four ICC decisions in the late 1970s, when URCS was being developed, expressly held that Account 90 should be included in calculating a carrier's investment base for regulatory purposes. The first two decisions were issued in 1978 in Ex Parte No. 338, *Standards and Procedures for the Establishment of Adequate Revenue Levels*.¹ In the first of those decisions, the ICC determined that, unlike construction projects undertaken by public utilities, rail construction projects are generally of a short term nature and "therefore inclusion of Construction Work in Progress is both proper and realistic and should be adopted."² On an appeal of this decision, the ICC affirmed that "we will include account 90 rather than account 76 with respect to capital invested in construction projects."³

Subsequently, the ICC issued a decision in Ex Parte No. 290⁴ that made, without discussion, technical amendments to the costing procedures for general rate increase cases. The purpose of these amendments was to conform the costing methodology used in rate cases to the ICC's Ex Parte No. 338 decision on the proper treatment of Construction Work in Progress. The Railroads further explained that when URCS was implemented, it failed to reflect this treatment

¹ See, 358 I.C.C. 844, 881-82 (1978) and 359 I.C.C. 270 (1978).

² 358 I.C.C. at 881-82

³ 359 I.C.C. 270.

⁴ *Procedures Governing Rail General Increase Proceedings, Ex Parte No. 290; Standards and Procedures for the Establishment of Adequate Railroad Revenue Levels, Ex Parte No. 338*, slip op. at 3 and App. B (I.C.C. served November 20, 1978).

of Construction Work in Progress. Specifically, the URCS Phase II program excluded account 90 instead of including it. In 1993, this problem was brought to the ICC's attention in *Georgia Power*, and the ICC concluded that the URCS formula had failed to incorporate the holding in Ex Parte No. 338 and instructed that Account 90 should be included and Account 76 excluded from the overhead calculation.⁵ The Railroads also explained that the Board followed this approach in subsequent cases, specifically in *WTU* and *APS*. In *TMPA*, the Board acknowledged that BNSF was correct regarding its prior treatment of Account 90.⁶ Finally, the Railroads presented special studies which demonstrate that projects in Account 90 are generally of short-term duration.

In its reply evidence, AEPCO does not challenge the evidence presented by the Railroads as to the short-term duration of construction projects included in Account 90 but does take issue with the Railroads' description of the regulatory history of Account 90. As explained below, AEPCO's arguments are erroneous and should be given no weight.

First, AEPCO argues that the ICC's decision in Ex Parte No. 338 concerned revenue adequacy determinations and is therefore irrelevant to the determination of variable costs. AEPCO Reply Nar., Ex. II-A-24, at 1-2. While it is true that the discussion of these issues appears in Ex Parte No. 338, as noted above, the ICC in Ex Parte No. 290 specifically incorporated its treatment of Construction Work in Progress for purposes of revenue adequacy determinations into its treatment of variable costs for purposes of rate challenges. Indeed, there

⁵ *Georgia Power Company, Southern Company Services, Inc., Oglethorpe Power Corporation, Municipal Authority of Georgia, and the City of Dalton v. Southern Railway Company and Norfolk Southern Corporation*, Docket No. 40581 (ICC served November 8, 1993) at 15. See also Aug. 19, 1993 Staff Report at 12-14.

⁶ *TMPA* at 40.

is no rationale for distinguishing between the treatment of these accounts for revenue adequacy and rate reasonableness purposes. The Railroad Accounting Principles Board ("RAPB") has already found that it is appropriate to use the same asset base for both revenue adequacy proceedings and URCS costing.⁷ Moreover, Congress specifically linked the assessment of revenue adequacy and the determination of reasonable rates by instructing the ICC and the Board that when determining the reasonableness of a rate, the agency must make continuing efforts to assist freight railroads to achieve revenue adequacy.⁸

Second, AEPCO argues that the following quote from Ex Parte 338 indicates that the ICC "*specifically declined* to encompass variable costs in the scope of its ruling [in Ex Parte No. 338]." AEPCO Reply Nar., Ex. II-A-24, at 2.

Cost of capital in variable costs. — Some of the petitions included comments on the question of whether variable cost should be measured in such a way as to include the *full current cost of capital*. As we indicated in our report, this is a question that will be taken up in another context. Some of the parties emphasize that the only appropriate context would be a rulemaking proceeding where all affected persons can be heard. We fully agree, and it is our intention to follow rulemaking procedures in resolving this question.

359 I.C.C. 275-276 (emphasis added).

The topic of this quote has *nothing* to do with the proper treatment of Accounts 76 or 90. The quoted language related *exclusively* to the question of whether variable costs calculated in individual rate proceedings should reflect the full current *cost of capital*.⁹

⁷ *Railroad Accounting Principles: Final Report*, September 1, 1987, Volume 2 - Detailed Report at 40-41.

⁸ 49 USC §10704(a)(2).

⁹ This was a recommendation of the RAPB that was subsequently adopted by the ICC. *See* 5 I.C.C. 2d at 895.

Third, AEPCO claims that even if the ICC concluded in Ex Parte No. 290 that Account 90 should be included and Account 76 excluded, that proceeding applied only to general rate increases, not proceedings challenging particular rates. AEPCO Reply Nar., Ex. II-A-24, at 5. This is a distinction without a difference. AEPCO offers no reason to conclude that the treatment of costs for purposes of general rate increases should differ at all from the treatment of costs for purposes of a challenge to particular rates. In fact, there is no reason to develop a carrier's rate base differently under those circumstances.

Fourth, AEPCO argues that Ex Parte No. 290 is irrelevant because it dealt with costs developed under Rail Form A, not URCS. *Id.* While it is true that Ex Parte No. 290 dealt with Rail Form A, URCS is the successor to Rail Form A. URCS was principally designed and developed in the years 1977 to 1979 and was based on Rail Form A costing methodologies.¹⁰ Thus, the 1978 decisions by the ICC to include Account 90 and to exclude Account 76 for both revenue adequacy and variable costs determinations were contemporaneous with the URCS development. It is implausible that, as AEPCO argues, the Commission established the proper treatment of Account 90 funds for purposes of Rail Form A and, without explanation, rejected that same treatment in the URCS program it was developing at the same time to replace Rail Form A. If the ICC had rejected that treatment of Account 90 for URCS but accepted it for Rail Form A, it is reasonable to assume that the ICC would have explained why it took such action. AEPCO has pointed to no such explanation, and none exists.

Finally, AEPCO claims that the current treatment of Accounts 76 and 90 in URCS was no mistake and that after much study, the ICC reversed the 1978 decisions and expressly

¹⁰ *An Introduction to the Uniform Rail Costing System: Development, Functions and Regulatory Role*, at 8.

determined that Account 90 should be excluded in the URCS program. AEPCO Reply Nar., Ex. II-A-24, at 4. AEPCO provides no support at all for this proposition. Between the issuance of the decisions in Ex Parte Nos. 338 and 290 in 1978 (when URCS was in development) and November 1993, when the *Georgia Power* decision was issued, there is no record of any discussion whatsoever by the ICC of the proper treatment of Accounts 76 and 90. Moreover, the ICC implicitly concluded in *Georgia Power* that the failure to include Account 90 in the calculation of the overhead ratio in URCS was a mistake, based on the ICC's clear statement in Ex Parte No. 338 of the proper treatment of that account.¹¹ The ICC in *Georgia Power* was certainly unaware of any clear statement by the ICC to disavow its prior treatment of Account 90.

¹¹ *Georgia Power*, at 15. See also Aug. 19, 1993 Staff Report at 12-14.

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Worksheet Index

**BNSF/UP
Index of Workpapers Included In
BNSF-UP-RB-WP-II-A-001 to 017.pdf**

Section	Description	Page Numbers
II.A	Electronic Workpaper Descriptions.....	BNSF/UP.RB.WP.II-A-002 to 003
	Rebuttal Changes Outline	BNSF/UP.RB.WP.II-A-004 to 005
	SWRR	BNSF/UP.RB.WP.II-A-006 to 009
	Substitute Cars	BNSF/UP.RB.WP.II-A-010 to 012
	Crew Wages	BNSF/UP.RB.WP.II-A-013 to 017

BNSF
Electronic Work Papers

Section	File Name	Description
II A	<i>Crew Wages</i>	
	aepco.bnsf markup 01&02 with months rebuttal.xls	Development of non-train related wages mark-up ratio
	aepco.bnsf roadcrew wages rebuttal.xls	Calculation of quarterly road-crew crew wages
	CA Codes by Type rebuttal.xls	Classification of constructive allowance codes by pay type
	Cochise 2001 2002 Qtr Sum.xls	List of shipments by train ID's and date
	<i>Equipment</i>	
	BNSF Uneven Loco Lease Payments.xls	Examples of uneven locomotive lease payments
	Cochise Car Info Rebuttal.xls	Substitute car ratios by quarter
	<i>Variable Costs</i>	
	BNSF_02.zip	2002 BNSF URCS
	BNSF-0102-T&E-ADJ-Rebuttal.123	BNSF wages
	BNSF AL.123	BNSF cost program
	Defect Codes	Locomotive defect codes
	Exhibit BNSF Comparison EPCO	Page 1 of RVC comparison exhibit
	Exh II-A-2 BNSF Input Comparison.123	BNSF input comparison exhibits
	Exh II-A-4 Combined Output Comparison.123	Combined output exhibits
	mow.xls	Changes in BNSF & UP density and maintenance costs
	RAPB.pdf	RAPB report
	Rebuttal Changes Outline.xls	Outline of rebuttal changes
	Westbrook.pdf	Westbrook article

UP
Electronic Work Papers

Section	File Name	Description
II A	<i>Crew Wages</i>	
	CQCQ train wages rebuttal.xls	Calculation of quarterly road-crew crew wages for only CCQCQ train symbols
	markup01&02 UP-AEPCO rebuttal.xls	Development of non-train related wages mark-up ratio
	UP Crew Wages 01&02 rebuttal.xls	Calculation of quarterly road-crew crew wages
	<i>Variable Costs</i>	
	Exh II-A-4 UP Input Comparison.123	UP input comparison exhibit
	UP-0102-T&E-ADJ-Rebuttal.123	UP wages
	UP-AEPCO-REBUTTAL.123	UP cost program
	UPRR_02.zip	2002 UP URCS