

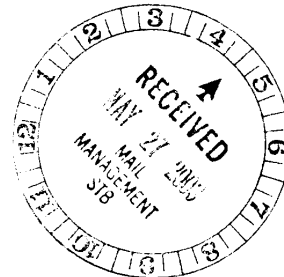
STEPTOE & JOHNSON LLP

ATTORNEYS AT LAW

Anthony J. LaRocca
202.429.8119
alarocca@steptoe.com

1330 Connecticut Avenue, NW
Washington, DC 20036-1795

Telephone 202.429.3000
Facsimile 202.429.3902
www.steptoel.com



May 27, 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 Stand-Alone Cost Reply Evidence and Argument of Defendant The Burlington Northern and Santa Fe Railway Company ("BNSF"). This filing consists of the original and 10 copies of a one volume Narrative and Exhibits. In addition, BNSF is filing three copies of its Narrative and Exhibits on compact disc.

These materials constitute the public version of BNSF's Reply Evidence and Argument. BNSF is filing a Reply containing Highly Confidential and Confidential information under a separate cover letter.

Please note that this filing includes color documents.

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Page 2

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

Sincerely

A handwritten signature in black ink, appearing to read 'Anthony J. LaRocca', with a long horizontal flourish extending to the right.

Anthony J. LaRocca

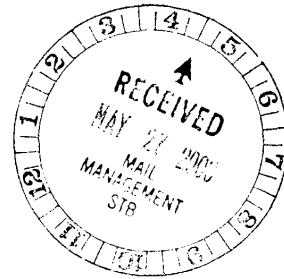
Enclosures

cc: Counsel for Complainant

207903

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**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**

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

Volume I of I

NARRATIVE AND EXHIBITS

Richard E. Weicher
Michael E. Roper
David M. Pryor
THE BURLINGTON NORTHERN AND
SANTA FE RAILWAY COMPANY
2500 Lou Menk Drive
Fort Worth, TX 76131
(817) 352-2353

Samuel M. Sipe, Jr.
Anthony J. LaRocca
Linda S. Stein
STEPTOE & JOHNSON LLP
1330 Connecticut Avenue, N.W.
Washington, DC 20036
(202) 429-3000

May 27, 2003

ATTORNEYS FOR
THE BURLINGTON NORTHERN AND
SANTA FE RAILWAY COMPANY

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ABBREVIATIONS

Terms:

AAR	Association of American Railroads
AEPCO Reply	AEPCO Reply in Opposition to Union Pacific Railroad Company's Petition to Require Submission of New Opening Evidence or, Alternatively, to Dismiss (filed on May 7, 2003)
ATSF	The Atchison Topeka & Santa Fe Railway Company
BN	Burlington Northern Railroad Company
BNSF	The Burlington Northern and Santa Fe Railway Company
CMP	Constrained Market Pricing
DARA	Density Adjusted Revenue Allocation
DCF	Discounted Cash Flow
FTI	FTI Consulting, Inc.
G&A	General and Administrative
ICC	Interstate Commerce Commission
Joint Variable Cost Reply	Joint Variable Cost Reply Evidence of The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company, served May 27, 2003 in <i>AEPCO</i> .
MMP	Modified Mileage Prorate
MOW	Maintenance of Way
PRB	Powder River Basin
RCAF-A	Rail Cost Adjustment Factor - Adjusted
RCAF-U	Rail Cost Adjustment Factor - Unadjusted
RFP	Request for Production
SAC	Stand-Alone Cost

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SARR	Stand-Alone Railroad
Settlement Agreement	Settlement Agreement Between Arizona Electric Power Cooperative, Inc. and Union Pacific Railroad Company In Docket No. 42058, <i>Arizona Electric Power Cooperative, Inc., Complainant, vs. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company, Defendants</i>
SSAC	Simplified Stand-Alone Cost Model
STB	Surface Transportation Board
Term Sheet	Term Sheet between Union Pacific Railroad (UP) and Arizona Electric Power Cooperative, Inc. (AEPCO) February 3, 2003
UP or UPRR	Union Pacific Railroad Company
UP Petition	Petition to Require Submission of New Opening Evidence or, Alternatively, to Dismiss, filed on April 18, 2003
WP	Workpaper

ICC or STB Proceedings:

<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>August 2002 Decision</i>	<i>Arizona Elec. Power Coop., Inc. v. The Burlington Northern and Santa Fe Ry. Co. and Union Pac. R.R. Co.</i> , STB Docket No. 42058 (served Aug. 20, 2002).
<i>Coal Rate Guidelines or Guidelines</i>	<i>Coal Rate Guidelines, Nationwide</i> , 1 I.C.C.2d 520 (1985).
<i>Conrail</i>	<i>Potomac Electric Power Co. v. Consolidated Rail Corp.</i> , 367 I.C.C. 532 (1983).
<i>General Procedures</i>	<i>General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases</i> , STB Ex Parte No. 347 (Sub-No. 3) (STB served Mar. 12, 2001).
<i>Nevada Power</i>	<i>Bituminous Coal - Hiawatha, Utah, to Moapa, Nevada</i> , 6 I.C.C.2d 1 (1989).

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<i>Non-Coal Guidelines</i>	<i>Rate Guidelines - Non-Coal Proceedings</i> , STB Ex Parte No. 347 (Sub-No. 2) (STB served May 8, 2002).
<i>OPPD</i>	<i>Omaha Public Power Dist. v. Burlington Northern R.R. Co.</i> , 3 I.C.C.2d 853 (1987).
<i>PPL</i>	<i>PPL Montana, LLC v. The Burlington Northern & Santa Fe Ry. Co.</i> , STB Docket No. 42054 (STB served Aug. 19, 2002).
<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 Reconsideration</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

This is the Reply Evidence and Argument of Defendant The Burlington Northern and Santa Fe Railway Company (“BNSF”). In this Reply Evidence and Argument, BNSF demonstrates that AEPCO has failed to provide any basis for concluding that the challenged rates are unreasonable, and that the Board should therefore dismiss AEPCO’s complaint. In a separate pleading, BNSF is filing jointly with defendant Union Pacific Railroad Company (“UP”) a reply to AEPCO’s evidence relating to the variable costs of the issue traffic movement. UP is filing a separate reply on stand-alone cost (“SAC”) issues. BNSF’s Reply Evidence follows the format of the Board’s March 12, 2001 decision in STB Ex Parte No. 347 (Sub-No. 3), *General Procedures for Presenting Evidence in Stand-Alone Rate Cases* (“General Procedures”).

A. INTRODUCTION

This proceeding has already had a long and complex history as a result of AEPCO’s repeated attempts to manipulate the Board’s jurisdiction and the SAC methodology. The case began as a relatively straightforward challenge to the reasonableness of a joint rate for the transportation of coal from two New Mexico mines served by defendant BNSF to AEPCO’s Apache Generating Station located near Cochise, AZ, served by UP. Soon after filing its original complaint, however, AEPCO amended the complaint and expanded its challenge to include rates for transportation from mine origins in Colorado and the Powder River Basin (“PRB”). The amended complaint significantly complicated the case. The newly challenged Colorado rates were UP single-line rates from origins hundreds of miles away from the New Mexico mines. The challenged PRB rates had never been used to transport coal.

Defendants were concerned from the beginning that AEPCO would try to use the expansion of its case to distort the SAC analysis. When discovery began on AEPCO’s expanded claims, it became clear that AEPCO did, in fact, intend to use the broad scope of its complaint,

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which now covered the three principal coal origins in the Western United States, to present SAC evidence that relied extensively on cross-subsidies.¹ Defendants urged the Board to order AEPCO to make separate SAC presentations for each of the three relevant coal originating regions in order to limit AEPCO's ability to manipulate the SAC results through subsidies provided by traffic in one group (most likely the PRB shippers) to traffic in the other groups. The Board acknowledged defendants' concerns, and while it did not require the submission of independent SAC presentations for each origin region, the Board did warn AEPCO that it would not accept a SAC presentation that relied on cross-subsidies.²

The Board's express restriction on the use of cross-subsidies limited the benefits that AEPCO could expect from an expanded SAC presentation. This ruling may therefore have been a factor in AEPCO's willingness to settle with UP, {

¹ Defendants' Petition for an Order Requiring Separate Evidentiary Submissions for Each Rate Challenged by AEPCO, (filed on Feb. 15, 2002) at 13-15.

² *Arizona Elec. Power Coop., Inc. v. The Burlington Northern and Santa Fe Ry. Co. and Union Pac. R.R. Co.*, STB Docket No. 42058, slip op. at 3 (served Aug. 20, 2002) ("August 2002 Decision").

³ Settlement Agreement Between Arizona Electric Power Cooperative, Inc. and Union Pacific Railroad Company In Docket No. 42058, *Arizona Electric Power Cooperative, Inc., Complainant, vs. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company, Defendants*, at ¶ 1 ("Settlement Agreement") and Term Sheet between Union Pacific Railroad (UP) and Arizona Electric Power Cooperative, Inc. (AEPCO) February 3, 2003 ("Term Sheet") (both attached as Exhibit I-1).

}

AEPCO's settlement with UP should have ended this litigation. {

} Moreover, AEPCO received these settlement benefits from the rail carrier that effectively controls the rate for transportation of coal to Cochise. UP is the only carrier that serves AEPCO's Cochise plant. While BNSF has exclusive access to the New Mexico mines, UP serves other coal origins that it can serve without BNSF's participation.⁶ By agreement between AEPCO and UP, BNSF can therefore be effectively cut out of any role in transporting coal to Cochise.

But AEPCO did not abandon the litigation after settling with UP, perhaps because AEPCO's consultants had already prepared SAC evidence and the incremental cost to AEPCO of continuing with the litigation was relatively small. AEPCO did not, however, put much effort into preparing credible opening evidence. AEPCO's Opening Evidence was careless and corrupted by fundamental errors on critical issues like traffic selection that should have been obvious with even the most cursory due diligence. UP filed a motion seeking an order requiring AEPCO to refile its opening evidence on grounds that AEPCO's SAC presentation did not even

⁴ Settlement Agreement, at ¶¶ 2, 4(c).

⁵ *Id.* at ¶ 3(a).

⁶ BNSF, therefore, is not able unilaterally to increase its division on the joint line New Mexico movement without risking loss of the traffic altogether.

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provide a basis for defendants to prepare alternative SAC evidence in reply.⁷ BNSF did not join in that motion. BNSF agrees with UP that flaws in AEPCO's opening evidence make it impossible for defendants to present alternative SAC calculations in this case. However, BNSF does not believe that AEPCO -- the party with the burden of proof in this proceeding -- is entitled to an opportunity to revise its opening evidence.

BNSF's Reply Evidence details the flaws in AEPCO's SAC presentation. The many deficiencies in AEPCO's evidence make developing alternative SAC evidence impossible, but such calculations are not necessary to show that AEPCO is not entitled to any relief. AEPCO has presented SAC evidence that cannot possibly support a finding that the challenged rates are unreasonable. As BNSF explains below, almost all of the traffic in AEPCO's traffic group is cross-over traffic and the vast majority of this traffic is exempt from regulation because the rates on that traffic are constrained to reasonable levels by forces of competition. Yet in AEPCO's SAC analysis the revenues from the exempt intermodal and automotive traffic *alone* exceed the SAC costs calculated by AEPCO for the *entire* traffic group by some 70%. This result is nonsensical. It is squarely inconsistent with the agency's conclusion that the railroads do not have market power over the movement of exempt traffic that provide the preponderance of AEPCO's stand-alone revenues. The Board cannot credit a SAC analysis that purports to show that rates on competitive traffic exceed competitive levels by a substantial margin. It is not necessary to carry out detailed SAC calculations to conclude that AEPCO's SAC presentation is flawed beyond repair.

⁷ Petition to Require Submission of New Opening Evidence or, Alternatively, to Dismiss, filed on April 18, 2003 ("UP Petition").

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AEPCO's improbable SAC evidence is partly a result of AEPCO's huge, unwarranted adjustments to defendants' traffic data. AEPCO's SAC results are also the product of its improper use of cross-over traffic, both exempt and non-exempt, which constitutes 99% of the SARR traffic in AEPCO's presentation. BNSF's witness Professor Ordober explains that the Board should not permit any use of cross-over traffic in SAC cases because it invites distortion into the SAC analysis by requiring the use of arbitrary allocations of revenue rather than an examination of actual costs. The SAC results sponsored by AEPCO here -- that exempt traffic is generating revenues far in excess of its SAC costs -- shows that the risk of manipulation through use of cross-over traffic is very much a reality. In addition, AEPCO completely ignored the off-line costs of the cross-over movements included in its SARR. Its opening evidence did not even attempt to address the threshold test that the Board has established as the predicate for any use of cross-over traffic, *i.e.*, that the complainant must demonstrate that the revenues available to the residual incumbent cover at least the attributable costs of the off-line portion of cross-over movements. Nor did AEPCO offer an acceptable basis for allocating any remaining contribution between the SARR and the residual incumbent.

AEPCO's SAC assumptions introduce another distortion into the SAC analysis that invalidates AEPCO's SAC results. Complainants are increasingly using cross-over traffic in ways that impose operational changes on the residual incumbent. The Board has made it clear that such a manipulation of existing traffic arrangements is permissible only if the ramifications of the operating changes are considered and any costs imposed on the residual incumbent are quantified and included in the SAC presentation as the responsibility of the SARR.⁸ The

⁸ *Texas Municipal Power Agency v. The Burlington Northern and Santa Fe Ry. Co.*, STB Docket No. 42056, slip op. at 23 (served Mar. 24, 2003) ("TMPA").

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operating plan for AEPCO's SARR, which supposedly operates only as an overhead carrier for long-haul movements, would impose several onerous and costly changes in BNSF's operations. AEPCO failed utterly to address the ramifications of those changes or the substantial costs that they would impose on the residual BNSF.

In the end, there is very little at stake in this case in light of AEPCO's settlement with UP. {

} BNSF and the Board should not have to commit substantial additional resources to carry out a full SAC analysis under these circumstances. This is a case where the Board should have no reluctance to dismiss AEPCO's claims due to its failure to submit viable opening evidence.

B. AEPCO'S COMPLAINT SHOULD BE DISMISSED BECAUSE FLAWS IN AEPCO'S OPENING EVIDENCE MAKE IT IMPOSSIBLE TO CONDUCT A FULL SAC ANALYSIS

In past SAC cases, the defendant's reply evidence has generally consisted of a demonstration of flaws in the complainant's opening evidence and a presentation of alternative SAC evidence showing the results of a properly conducted SAC test using more reasonable cost and revenue assumptions. Two flaws in AEPCO's Opening Evidence in this case make it impossible for defendants to present alternative SAC evidence here. These errors were addressed in UP's April 18, 2003 Petition. UP's position in that pleading was that AEPCO should be given an opportunity to correct these errors by refiling opening evidence. BNSF does not agree. For the reasons discussed below, BNSF believes that AEPCO's failure to present

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valid SAC evidence on opening should lead the Board to dismiss AEPCO's complaint, particularly where the errors involve the critical threshold SAC issue of the traffic base for the complainant's SARR.

1. AEPCO Failed To Identify The Traffic That Would Be Handled By The SARR

The predicate for any SAC analysis must be an accurate identification of the traffic handled by the SARR. Revenues cannot be accurately determined unless the traffic is adequately identified. Similarly, it is impossible to create an operating plan or to estimate construction costs for the SARR without a clear understanding of the SARR traffic group. In prior cases, complainants have taken unwarranted liberties in identifying a traffic group for their SARRs, but they have at least identified the SARR traffic group and thereby permitted defendants and the Board to carry out a SAC analysis. AEPCO's selection of traffic in this case is so flawed that it is not possible to carry out any SAC analysis.⁹

In this case, as in the prior three coal rate cases that BNSF has been involved in since 2000, BNSF produced to the plaintiff its traffic tapes containing the traffic data requested by AEPCO in discovery. BNSF used the same internal data source that BNSF had used to produce traffic data in the three prior cases. This traffic database contains revenue-related information, derived from waybills, for each BNSF car, container or trailer moved in revenue service. The traffic data relates to the entire movement of the unit on BNSF lines, {

⁹ The following discussion addresses the flaws in AEPCO's selection of SARR traffic from BNSF data. UP addressed the flaws in AEPCO's selection of traffic from UP's data in its April 18, 2003 Petition.

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} This database

permits identification of every revenue unit.

It would have been a straightforward matter for AEPCO to identify and select traffic for its SARR using the traffic data BNSF produced in discovery. This was precisely the same sort of data other complainants, relying on the same consultants as AEPCO, had used to select traffic in the three prior rate cases. AEPCO could have used origin/destination and route mileage information to identify traffic moving over the Vaughn to Defiance (or Belen to Defiance) segment. But AEPCO did not pursue this logical approach.

Instead of using the traffic data to select traffic, AEPCO turned in the first instance to train event data, which BNSF had produced separately in discovery in response to a discrete AEPCO request. The train event database is derived from the same raw data source as the traffic database, but the two databases are used for different purposes. Of particular relevance here, the train event database contains no revenue or net tonnage information. As AEPCO states, the train event data “does not identify the specific cars transported, their origin, destination, contents, net tons, or the revenue generated by such movements.”¹⁰ The train event data are designed {

}

AEPCO chose the train event data to identify the trains the SARR would transport, despite the absence of revenue and net tonnage information in that file. AEPCO then sought to create a “cross walk” from the train event file to the traffic file so that it could assign revenues

¹⁰ See AEPCO Reply in Opposition to Union Pacific Railroad Company’s Petition to Require Submission of New Opening Evidence or, Alternatively, to Dismiss (filed on May 7, 2003) (“AEPCO Reply”) at 7.

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reflected in the traffic file to the trains it had identified from the train event file. However, AEPCO was not able to match accurately data from the two separate files.

AEPCO's failed attempt to match data from the train event and traffic files led it to the flawed conclusion that the number of cars in BNSF's traffic file was understated vis-à-vis the number of cars AEPCO identified in the train event file. This is because AEPCO supposedly "found" more cars in the train event file than in the traffic file. AEPCO's means of dealing with this apparent discrepancy was to adjust upward the traffic volume and revenues it had identified in the traffic file by providing "average" revenue and net tonnage figures for the supposedly missing cars. The effect of the adjustment was to increase 2001 net tons and revenues by 56.2 and 54.5 percent, respectively, above the "unadjusted" tons and revenues AEPCO had identified from the traffic file. Despite the enormity of these adjustments, the only reference to them in AEPCO's opening narrative is contained in a cryptic footnote. AEPCO Nar. at III-A-34 n.26. The effect of AEPCO's "adjustment" was grossly to overstate the traffic and revenues available to the SARR.

AEPCO's "adjustments" are completely invalid because they are based on a fundamental misunderstanding of the underlying data. AEPCO believed that "loaded" cars reported in the train event data were missing from the traffic data because it believed that loaded cars were counted in the same manner in the two sets of data. In fact, as explained in Section III.A of this Narrative, {

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Hence, any attempt to make an “adjustment” based on the differing car counts in the two files is meaningless.

AEPCO’s perception that it needed to make an adjustment stemmed not from missing data but from its own errors. AEPCO chose the wrong starting point for its analysis, then failed properly to match data in the separate train event and traffic files. In fact, there were no “missing railcar revenue data.” AEPCO was merely “correcting” a self-created problem. The internal database from which BNSF selected the subset of traffic data requested by AEPCO is complete and accurate. This is the same database from which the company derives revenue data that are included in reports to the Board and the SEC that BNSF is required by law to report. AEPCO appears to admit as much, stating in its Reply to the UP Petition that “[t]he traffic data may well contain the complete set of revenues, but unless the data can be matched to a particular train, the data might as well be missing altogether.” AEPCO Reply at 13.

AEPCO either knew or should have known that its adjusted revenues and net tonnages were grossly overstated. For example, AEPCO could have determined from publicly available information that, despite the fact that a significant proportion of BNSF’s intermodal traffic does not move across the Defiance to Vaughn segment, the adjusted 2001 intermodal revenues of { } billion that corresponds to intermodal traffic AEPCO claimed for its SARR exceeded the actual 2001 intermodal revenues of \$2.618 billion earned by BNSF across the entire BNSF system. Similarly, AEPCO could have determined from traffic density information provided to it in discovery that the volume of intermodal traffic it claims would move across the Defiance to Vaughn segment of the SARR exceed the actual volume of intermodal traffic BNSF carried over the Defiance to Vaughn segment.

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It would have been a straightforward matter for AEPCO to perform these simple reality checks, but it did not do so. In fact, in its reply to UP's Petition, AEPCO tried to cover up the extent to which its projected revenues and tonnages exceed actual BNSF revenues and tonnages by falsely claiming that it had selected less traffic than it did. AEPCO stated that it had selected BNSF intermodal traffic representing only { } billion in revenues instead of { } billion. AEPCO Reply at 20. But { } billion is the base revenue on which AEPCO calculated its *unadjusted* revenues for the SARR. AEPCO then adjusted those revenues upwards by more than 50 percent to derive the revenues upon which it actually relied. AEPCO's *adjusted* revenues correspond to intermodal traffic representing { } billion in revenue. Moreover, AEPCO does not even attempt to dispute that it used *adjusted* tonnage numbers. Use of adjusted tonnage numbers cannot be reconciled with AEPCO's claim that it selected traffic corresponding only to the *unadjusted* revenues.

AEPCO also seeks in its Reply to UP's Petition to divert attention from the fatal flaws in its analysis by raising specious discovery-related claims. First, AEPCO claims that its data manipulation was necessary because defendants provided train event and traffic revenue data in two separate databases. AEPCO Reply at 11. AEPCO speculates that BNSF "has additional data sources and/or processes" that would have permitted BNSF to provide the data in a more consolidated, user-friendly form, AEPCO Reply at 10, but AEPCO is simply wrong. BNSF does not have such additional sources or processes and simply produced the data in the format that is maintained by BNSF in the ordinary course of business. Moreover, AEPCO should not be heard to complain that the two data sets were "separate" since defendants produced separate data sets in response to separate discovery requests. *See* Exhibit I-2 (RFP No. 42 requests traffic data and RFP No. 53 requests train event data). In any case, AEPCO did not need to use the train event

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data for its traffic selection, so the fact that BNSF keeps train event and traffic data in separate databases should not have been a problem for AEPCO.

Second, AEPCO complains that the railroads produced too much data. AEPCO Reply at 8-9. Here again, AEPCO is complaining about a problem of its own making. BNSF produced data in response to specific AEPCO requests for that data.¹¹ BNSF cannot be held accountable for AEPCO's failure to sensibly limit its discovery requests. Nor is it meaningful to argue that BNSF was somehow guilty of an abuse of discovery because it provided 14 gigabytes of data in response to specific AEPCO requests for that data, but AEPCO only chose to submit 7.2 gigabytes of data with its opening evidence. AEPCO would have received less data if it had not sought to manipulate the SAC process by attempting to combine three separate SAC cases (PRB moves, Colorado moves, and New Mexico moves) into a single case. It was AEPCO's attempt to expand the scope of this proceeding in the first place that required the production of data for a large part of BNSF's network.

Moreover, AEPCO never asked for clarification concerning the meaning and appropriate use of the train event and traffic data. It has been BNSF's experience in previous rate cases that complainants and their consultants (the same consultants used by AEPCO) freely ask follow-up discovery requests if they do not understand the data that BNSF provided. Indeed, during the

¹¹ In fact, BNSF and UP would have been required to produce *even more* data had the Board granted AEPCO's motion to compel the production of traffic and train event data from a broad ten-state area. Instead, the Board gave AEPCO the opportunity to narrow its discovery requests. See STB Docket No. 42058, *Arizona Elec. Power Coop., Inc. v. The Burlington Northern and Santa Fe Ry. Co. and Union Pac. R.R. Co.*, slip op. at 5-6 (served Dec. 31, 2001).

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discovery phase of this proceeding, BNSF responded to several follow-up letters from AEPCO seeking clarification of discovery materials and additional information.¹²

AEPCO's allegations regarding discovery claims in no way justify the "adjustments" it made to BNSF's revenue and tonnage numbers. The volumes and revenues that AEPCO sponsors in its evidence are obviously wrong. BNSF cannot accept this traffic as a starting point for detailed SAC calculations because it does not correspond to traffic that actually moved on BNSF. Indeed, AEPCO has not presented any evidence of traffic moving over BNSF that could be used as a starting point for SAC reply evidence.

2. AEPCO Improperly Relied On Trackage Rights Fees For A Portion Of The SARR Instead Of Assessing The Cost Of Facilities Needed To Provide Service Over That Portion Of The SARR

Another reason that defendants cannot submit alternative SAC calculations in this case is that AEPCO chose to configure its SARR based on a mistaken understanding of the law governing the use of trackage rights in a SAC case. This error also puts defendants into an impossible position in preparing alternative SAC evidence. If defendants were to prepare alternative SAC evidence that did not include AEPCO's trackage rights segment of the SARR, they would have to choose among various potential configurations of the SARR and identify an alternative traffic group for their chosen configuration. But the configuration of a SARR and the selection of the traffic handled by it are elements that have to be presented by the complainant in

¹² AEPCO provides an example of one such follow-up request in its reply. See Exhibit 2 to AEPCO Reply. While AEPCO complains that it received a response several weeks after requesting the information, Exhibit 3 to AEPCO's Reply makes it clear that BNSF had previously advised AEPCO that it would respond to the follow up request as soon as it had the data. AEPCO's assertion that it would have been futile to ask follow-up questions is therefore belied by its own evidence. Moreover, while AEPCO complains about receiving a late response to this particular request, the data at issue in that request had nothing to do with AEPCO's traffic selection.

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its case-in-chief. AEPCO's improper use of trackage rights, like its failure accurately to identify the SARR's traffic, is an error that defendants cannot correct through the filing of reply evidence and therefore is an error that justifies dismissal of AEPCO's complaint without the evaluation of alternative SAC evidence.

The issue traffic originates at mines located on BNSF's main east-west line in New Mexico and terminates at AEPCO's Apache Station located on UP's main east-west line that runs through New Mexico and Arizona. The two lines are roughly parallel and are located about 200 miles apart. In the real world, BNSF moves the traffic between the two east-west lines over a relatively low density line from Belen, NM to Rincon, NM, where it is interchanged to UP. AEPCO did not replicate this line, perhaps because it concluded that the costs of building that line would not be covered by the revenues from traffic, including the issue traffic, that moved over the line. Instead, AEPCO assumed that the issue traffic would be moved farther east, to Vaughn, NM, where it would use trackage rights that BNSF currently has over UP's Vaughn to El Paso line to connect to UP's east-west line.

This SARR configuration is substantially more circuitous and less efficient for the movement of New Mexico coal to destinations located on UP's main line than the route that is used today by the two carriers. UP documented these inefficiencies in detail in its April 18, 2003 Petition and it is not necessary to address them in detail here. In its Reply to UP's Petition, AEPCO does not contest UP's evidence on the inefficiency of the SARR configuration, but suggests that it might provide some responsive evidence on rebuttal. AEPCO Reply at 33. It is difficult to imagine what evidence AEPCO might sponsor on the question of efficiency, though, since the problems with the new route are obvious and substantial. As UP explained, the new route would increase route miles by 43% and increase fuel consumption by at least 57%. It

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would increase cycle times and crew costs, impose additional car costs on shippers using the new route, and create the risk that slow moving coal trains would interfere with the residual incumbents' time-sensitive intermodal and automotive trains moving over lines that are already heavily traveled.

The only conceivable reason that AEPCO could have to configure its SARR in this way was to game the SAC test by including in its SAC costs a rental fee based on trackage rights payments for the Vaughn to El Paso line instead of assessing the true costs to a hypothetical, efficient competitor to provide the issue traffic service. But AEPCO's use of trackage rights over the lines of one of the defendants is inconsistent with SAC precedent and with the economic principles underlying the SAC test.

AEPCO is not the first complainant to try to use trackage rights payments as a substitute for an assessment of SAC costs. In fact, one of the first cases litigated after the ICC adopted Constrained Market Pricing ("CMP") principles to evaluate the reasonableness of coal transportation rates involved an attempt by the complainant to establish SAC costs by reference to trackage rights payments rather than by assessing the true costs of providing service. In that case, *Potomac Electric Power Co. v. Consolidated Rail Corp.*, 367 I.C.C. 532 (1983) ("*Conrail*"), *aff'd sub nom.*, *Potomac Electric Power Co. v. ICC*, 744 F.2d 185 (D.C. Cir. 1984), the complainant Potomac Electric Power Company ("PEPCO") designed a SARR that was assumed to operate over the defendant's existing lines under a trackage rights arrangement in which the SARR paid the defendant an amount that represented the "going market value" of

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trackage rights.¹³ The ICC rejected PEPCO's evidence "because it is entirely at odds with the very nature and purpose of stand-alone costing in our constrained market pricing approach."¹⁴

As the ICC explained, the problem with using trackage rights fees in a SAC analysis is that "[m]uch depends, of course, on how the trackage rights have been valued."¹⁵ Railroads may have an incentive to set trackage rights fees that cover directly attributable costs and make only a small contribution to joint and common costs. *See* Section III.B, below. But the use of such a trackage rights fee would be inconsistent with the objective of the SAC test, which is to ensure that maximum rates reflect the full economic costs of providing the service at issue. Thus, as the ICC concluded, "[a] rate based on such a computation is not even fully compensatory and is wholly inconsistent with differential pricing and our policy of placing greater reliance on the market in setting rates."¹⁶

The use of a trackage rights fee in a SAC case would be appropriate only if the complainant could show that the level of the fee was sufficient to ensure that the attributable *and unattributable* costs of the line were fully covered. But that showing could only be made with SAC evidence. Nothing is gained by relying on a trackage rights fee in the presentation of SAC evidence but the possibility of distortion. The ICC reached this conclusion two years after the *Conrail* case when it adopted the *Coal Rate Guidelines*.¹⁷ There, the ICC noted that "a SAC

¹³ *Conrail*, 367 I.C.C. at 551.

¹⁴ *Id.* at 552.

¹⁵ *Id.*

¹⁶ *Id.* at 553.

¹⁷ *Coal Rate Guidelines, Nationwide*, 1 I.C.C.2d 520 (1985), *aff'd sub nom.*, *Consol. Rail Corp. v. United States*, 812 F.2d 1444 (3d Cir. 1987) ("Guidelines").

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presentation based on trackage rights over the very facilities to which the rate at issue applies is not useful, since the SAC determination would be no different from the ultimate issue in the case. In other words, the return the carrier should make on its existing facilities, and the portion the various users can and should pay, would not turn on whether the charge is in the form of a rate to the shipper or a fee to a trackage rights holder.” *Guidelines*, 1 I.C.C.2d at 543 n.60. The trackage rights fee would only be useful or relevant in a SAC case if it ensured an adequate return on the facilities used to provide the service, but that could only be determined through the use of SAC evidence.

The ICC subsequently ruled that a complainant could use trackage rights over a *third-party* rail line in a SAC presentation, but it relied on an entry barrier rationale that is irrelevant when the *defendant's* lines are at issue. In *Nevada Power*,¹⁸ the complainant did not posit the construction of a portion of its SARR that corresponded to a line segment owned by a third-party, the ATSF, over which UP operated under a trackage rights arrangement. UP argued that the SARR should be required to posit the costs to construct that line just as it must posit the construction costs of other portions of the SARR. The Board agreed with the complainant that since UP did not bear the ownership costs of that line but rather operated over it for a rental fee, it would be an entry barrier to require the SARR to incur the ownership costs of that line by constructing it. *Nevada Power* at 54.

That entry barrier rationale is inapposite in a case involving a defendant's lines because the defendant obviously incurs an ownership cost for its lines. If a defendant, or defendants, must incur the ownership costs associated with the line segments needed to provide service to the

¹⁸ *Bituminous Coal--Hiawatha, Utah to Moapa, Nevada*, 6 I.C.C.2d 1 (1989)(“*Nevada Power*”).

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issue traffic, it is not an entry barrier to require the SARR also to incur those costs. That logic squarely applies here. In this case, there are two possible ways to route coal traffic from the New Mexico mines on BNSF's east-west line to the Apache Station on UP's east-west line. One route involves the Belen line that BNSF owns and the other involves the Vaughn to El Paso line that UP owns. The costs to defendants of owning a line connecting the BNSF and UP main lines are unavoidable in providing the issue traffic service, so the SARR cannot avoid accounting for those ownership costs through the artifice of a trackage rights fee.

AEPCO argues that the Board nevertheless sanctioned the use of a trackage rights fee in this case in its August 2002 Decision. In that decision, the Board addressed three joint ownership and trackage rights arrangements between UP and BNSF that were potentially relevant in assessing UP's Colorado single-line rate. (None of those arrangements involved the Vaughn to El Paso segment.) Since BNSF did not participate in the Colorado movement, BNSF would have been a third party in any SAC analysis of the Colorado rate. Therefore, any reliance by AEPCO on existing trackage rights or joint ownership arrangements between UP and BNSF over particular line segments as an alternative to positing the construction of those line segments might have been justified under the entry barrier rationale. To the extent the defendant -- UP -- did not incur ownership costs of particular line segments used to serve the issue traffic, it could be an entry barrier to require the SARR to incur those ownership costs. But the Board's analysis of those arrangements in the context of the Colorado single-line rate is irrelevant to AEPCO's reliance on trackage rights over the Vaughn to El Paso segment in evaluating the joint-line New Mexico rates at issue here since both BNSF and UP are defendants in the challenge to the New Mexico rates.

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The Board did state that it might be possible under some circumstances for a complainant to rely on cost sharing arrangements between defendants in the context of a challenge to joint rates. August 2002 Decision at 7. However, there is no reason to read the Board's general statement as overturning clear precedent or as calling into question the economic rationale for prohibiting the use of trackage rights involving the defendant's own lines. There might be circumstances where a complainant could demonstrate that its use of a particular cost sharing arrangement in the presentation of SAC evidence relating to a joint line rate ensures the full coverage of the forward looking costs of the facilities used to provide the service at issue. But those circumstances do not exist here. The defendants incur the costs to own facilities needed to move the issue traffic between the BNSF east-west mainline and the UP east-west mainline, whether the traffic moves over the Belen line or, in the implausible circumstance posited by AEPCO, over the Vaughn line. AEPCO's SARR must also be responsible for the ownership costs of those facilities.

The Board's August 2002 Decision clearly did not sanction AEPCO's use of the particular trackage rights arrangement here, *i.e.*, BNSF's trackage rights over UP's lines from Vaughn to El Paso. At the time, the Board had no reason to believe that AEPCO would rely on those trackage rights. In describing its plans for a multi-layered SARR, AEPCO stated that it was contemplating a SARR configuration that would replicate "a *BNSF route* from the New Mexico mines east to or near Vaughn, NM . . . and *UP's route* from Vaughn south to El Paso, TX, and then west (via Deming) to Cochise." August 2002 Decision at 4. AEPCO's theory now is inconsistent with that representation. AEPCO now claims that it is relying on trackage rights over the Vaughn to El Paso line because it is replicating *BNSF's* route over that line. In its Reply to UP's Petition, AEPCO claims that "UP's argument . . . fails because it assumes that the ACE

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is replicating UP's service between Vaughn and El Paso. However, the ACE is instead replicating BNSF service, *i.e.*, service that BNSF can provide using its existing trackage rights over UP's line." AEPCO Reply at 36.

Therefore, the Board's general statement about cost sharing arrangements between defendants clearly did not contemplate this particular arrangement. In addition, the trackage rights arrangement at issue here does not have the characteristics of a cost-sharing arrangement between defendants that the Board indicated it might consider. The Board emphasized that the complainant "may not hypothesize non-existent revenue or cost-sharing arrangements [T]he SARR may be assumed to have the same cost-sharing arrangements as the defendant carriers have on each segment, so long as the terms of those arrangements . . . are the same as those applicable to the defendant carriers." But there is no cost sharing arrangement in place today that applies to the issue traffic.

BNSF currently interchanges the issue traffic with UP at Deming, NM. If BNSF unilaterally chose to route the traffic over the Vaughn/El Paso route using UP trackage rights, it would have no way of bringing the traffic from El Paso to Deming. Some additional cost-sharing arrangement would have to be negotiated before BNSF could take advantage of trackage rights over the Vaughn line. BNSF and UP could potentially negotiate such an arrangement, but it is not an *existing* arrangement and the terms of that hypothetical arrangement are not known. BNSF could not therefore take advantage of any existing trackage rights to provide the issue traffic service unless there were a *new* agreement between BNSF and UP. Moreover, such an agreement, if it were to be negotiated, would undoubtedly result in different, and higher, rates for the issue traffic movement to reflect the higher costs associated with the less efficient movement over Vaughn.

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Nothing in the Board's August 2002 Decision alters the rule set out in the *Conrail* case and the *Guidelines* that a complainant may not base a SAC presentation on use of trackage rights over a defendant's lines to avoid accounting for the full economic costs of facilities that are needed to provide the issue traffic service. AEPCO violated that rule in this case.

3. Defendants Cannot And Should Not Be Required To Submit
Alternative SAC Evidence Under These Circumstances

The flaws in AEPCO's traffic selection are profound and pervasive. This is not a case where the complainant made a few errors in selecting traffic for the SARR that can be addressed in reply evidence. Most of the movements in AEPCO's SARR traffic group are affected by the improper adjustments. The result of AEPCO's manipulation of the traffic is that the entire traffic group is little more than an abstraction based on incorrect assumptions and improper adjustments. AEPCO invented large volumes of fictitious traffic and revenues that do not exist. Nothing short of a complete revision of the traffic group would permit the submission of SAC evidence in this case.

It is not up to the defendant railroad to revise the complainant's traffic selection. The ICC made it clear that the defendants are not responsible for positing the traffic group to be evaluated in a SAC test.¹⁹ As the ICC concluded, the SAC test must be based on a theoretically efficient SARR, but the defendant does not have the incentive to choose the most efficient subset of its traffic on which to conduct the SAC analysis.²⁰ This rule also has a practical dimension. There would be no end to the SAC litigation if defendants were to present SAC evidence based on its own selection of traffic. The complainant would be able to challenge defendant's traffic

¹⁹ *McCarty Farms, et al. v. Burlington Northern Inc.*, 4 I.C.C. 2d 262, 271 (1988).

²⁰ *Id.*

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selection on grounds that the complainant would not have wanted a particular movement in the traffic group because of costs associated with that traffic, or claim that additional traffic not included in the group should be included. Indeed, AEPCO's Reply to UP's Petition makes it clear that AEPCO would not accept changes proposed by defendants to its traffic selection.²¹ The complainant clearly must posit the traffic group before the SAC test can be carried out and it must identify the traffic it has selected in its opening evidence.

Moreover, if the defendants in this case posited an alternative traffic group, they would then have to prepare a completely new SAC presentation. The SARR would have to be constructed from the ground up and a new operating plan would have to be developed to correspond to the new traffic group. These are efforts that must be undertaken by the party with the burden of proof. To impose those efforts on the defendants would reverse the burden of proof.

The complainant in a SAC case has the burden of proof and that burden of proof includes the obligation to present its entire case-in-chief on opening.²² As a result, the complainant cannot submit on rebuttal new SAC assumptions or significantly change SAC assumptions made on opening.²³ Thus, if the complainant posits SAC assumptions on opening that are demonstrably wrong or unreasonable, it cannot posit alternative assumptions on rebuttal to show that it might be entitled to relief under a different set of assumptions. Under these rules, the

²¹ See AEPCO Reply at 3 ("AEPCO believes its SARR traffic group and configuration, as presented on Opening and in its subsequent Errata filings, to be fully correct and feasible and has no intention of altering them significantly at a later stage of this proceeding").

²² *General Procedures*, at 5.

²³ *Duke Energy Corp. v. CSX Transp., Inc.*, STB Docket No. 42070, slip op. at 4-5 (served Mar. 25, 2003).

consequence of a complainant's failure adequately to identify the traffic base for its SARR must be dismissal of the complaint.

C. AEPCO'S ERRONEOUS TRAFFIC ASSUMPTIONS ARE COMPOUNDED BY OTHER FUNDAMENTAL FLAWS THAT SUPPORT DISMISSAL OF AEPCO'S COMPLAINT

1. Cross-Over Traffic Should Be Excluded From The Stand-Alone Traffic Group As A Matter Of SAC Theory

AEPCO's stand-alone traffic group consists almost entirely of cross-over traffic. Cross-over traffic accounts for 99 percent of the volume on AEPCO's hypothetical railroad. Because it has not built the facilities to handle this traffic, AEPCO has failed to account for the costs of most of the facilities that would be needed to carry the traffic it has selected. This is not a proper SAC analysis and it is not a rational way to determine whether the challenged rate exceeds a reasonable maximum.²⁴ Moreover, AEPCO has exploited the potential abuses inherent in the use of cross-over traffic by positing cross-over movements that consist primarily of exempt intermodal and automotive traffic. AEPCO blithely assumes that this relatively unprofitable traffic, the rates on which are constrained by market forces, would be able to contribute substantial revenues to the SARR, as calculated by the modified mileage prorate. AEPCO has not even attempted to show that this exempt traffic (or other cross-over traffic) could cover off-line attributable costs, nor has it proffered an acceptable method for allocating any remaining contribution between the on-SARR and off-SARR portions of cross-over movements.²⁵

²⁴ The portions of the residual BNSF that carry cross-over traffic but which AEPCO elected not to build are shown in Exhibit I-3.

²⁵ BNSF does not believe that it is appropriate to permit inclusion of cross-over movements of exempt traffic in a SAC presentation under any circumstances. The Board carries out SAC analyses by comparing the revenues of the entire stand-alone traffic group with the costs needed to provide service to that traffic group. Because the SAC analysis is carried out on a group basis, a finding that SAC revenues exceed SAC costs implies that all movements in the traffic group

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BNSF recognizes that the Board has indicated a willingness to accept cross-over traffic in a stand-alone traffic group. BNSF disputes the legal correctness of that conclusion, which has never been passed on by a reviewing court, on the grounds that it is contrary to SAC principles.²⁶ But the Board need not reach the issue of the conceptual validity of cross-over traffic here. AEPCO's failure to make any showing regarding off-line cost coverage and the impossible results it achieves through reliance on cross-over traffic provide more than sufficient grounds to reject the cross-over component of AEPCO's stand alone traffic group.

AEPCO in effect asks the Board to accept the single most critical data input in its SAC analysis -- revenues from cross-over traffic movements -- as an article of faith. Indeed, AEPCO states in its reply to UP's Petition that "AEPCO objects strongly to any claim that a shipper on opening should be required to undertake a detailed cost analysis of all off-SARR cross-over traffic." AEPCO Reply at 26. Rather than supporting its cross-over traffic revenue divisions with evidence of off-line cost coverage, AEPCO claims that it is entitled to rely on the modified mileage prorate ("MMP") because (1) the Board has endorsed its use in prior cases, (2) its witness Toren has concluded that applying the method to intermodal traffic "provides a sound

are contributing excessive revenues and that the rates to all shippers in the traffic group are excessive. But such a finding would be nonsensical in a case where the traffic group includes exempt traffic, since the rates to those shippers are deemed to be reasonable. The Board does not need to address this issue here, however, because there are numerous other reasons to dismiss AEPCO's complaint.

²⁶ BNSF's testimony regarding the conceptual problems inherent in the use of cross-over traffic is sponsored by Janusz A. Ordover, a Professor of Economics at New York University, who presents a thorough analysis of cross-over traffic and concludes that "inclusion of cross-over traffic revenues is at odds with the core principles of SAC because a hypothetical SARR that relies on revenues derived from interline traffic is not a genuine stand-alone railroad." Ordover Declaration, Exh. III.A.1 at 3. Professor Ordover sponsors testimony in Sections III.A.1.a and III.A.3.c of this Narrative related to cross-over traffic. His declaration is presented in its entirety as an Exhibit to Section III.A so that the Board may have the benefit of reading his analysis in its entirety, which is not possible in the prescribed format of the evidentiary narrative.

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approximation of the division that a bridge carrier in the ACE's situation would receive for handling intermodal traffic,"²⁷ and (3) the railroads refused to produce revenue division data.

AEPCO's claims are unfounded. First, the fact that MMP has been used by the Board in prior cases does not constitute an evidentiary showing that the methodology is acceptable or valid under the facts of this case. The Board has recently emphasized that it has "not adopted a single, preferred procedure for developing revenue divisions on cross-over traffic."²⁸ Second, Mr. Toren's vague testimony regarding divisions of revenue on intermodal movements is not a substitute for an actual showing of coverage of directly attributable off-SARR costs. In any event, Mr. Toren's ability to draw any conclusion about revenue divisions is undercut by his testimony that "there is generally a lack of data regarding divisions for intermodal movements." AEPCO Opening Nar. at III-A-31. Further, Mr. Toren's conclusion only relates to intermodal traffic. While most of the cross-over traffic moving over the SARR is intermodal traffic, that is not the only type of cross-over traffic handled by the SARR. Coal, automotive, grain, manifest and other traffic constitute almost one-quarter of the ACE traffic and Mr. Toren's vague testimony does not address this other cross-over traffic.

Finally, AEPCO's suggestion that it should be able to rely on the "modified mileage prorate" method of allocation because defendants have not produced information in discovery that would permit AEPCO to calculate "market based divisions"²⁹ has no basis in fact or SAC theory. Contrary to AEPCO's claims, the defendants produced revenue data that allowed AEPCO to determine revenue divisions on joint-line movements between BNSF and UP.

²⁷ AEPCO Reply at 25.

²⁸ *IMPA* at 31 n.74.

²⁹ AEPCO Reply at 24.

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Perhaps more important, there is no proposition of SAC theory or economics that would suggest that information about real world divisions between a defendant carrier and its interline partners would provide the rationale for a particular division of revenues in a SAC case. BNSF's divisions with its real world interline partners are not relevant to the question of how much contribution should be allocated to the residual incumbent to provide for coverage of off-line unattributable costs.

If complaining shippers honestly believed that use of cross-over traffic produced the same results that would obtain under a full SAC analysis, they would find a way to meet their burden and make that demonstration to the Board. (Complainants' advisors are nothing if not resourceful.) The fact that AEPCO offers no such demonstration indicates that AEPCO knows perfectly well that reliance on cross-over traffic is not a substitute for a true SAC analysis. AEPCO's unsupported reliance on cross-over traffic as the overwhelming source of revenues for its SARR is a sufficient basis for dismissing AEPCO's complaint. AEPCO has not in any sense shown that "stand-alone revenues" exceed costs.

2. The Results Produced By AEPCO's Reliance On Exempt Traffic Underscores The Improbability And Unreliability Of Its SAC Case

The results produced by AEPCO's reliance on cross-over traffic in this case should make it clear to the Board that cross-over traffic is not simply an evidentiary short-cut that makes it easier for a complaining shipper to present a SAC case. More fundamentally, it is a device for manipulating the results of the SAC analysis.

Such manipulation is vividly illustrated here by AEPCO's use of cross-over movements involving exempt traffic. AEPCO has included a significant amount of exempt traffic in its stand-alone traffic group, none of which is local to the SARR. Over 77 percent of the revenue generated by the stand-alone railroad in base year 2001 is associated with intermodal and

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automotive traffic which has been exempted from regulation by the Board because such rail service is subject to effective competition. The defects in AEPCO's SAC case become obvious when one views the results of AEPCO's use of exempt traffic in this case.

One pre-condition to the Board's exemption of categories of rail traffic from regulation is a finding that that regulation "is not needed to protect shippers from the abuse of market power." 49 U.S.C. 10502(a). The Board has exempted intermodal and automotive traffic from regulation precisely because it has found that shippers of intermodal and automotive traffic are *not* subject to abuses of market power by the railroads. Specifically, in a decision exempting intermodal traffic, the Board's predecessor explained that "continued regulation is not needed to protect shippers from abuses of market power... No one has seriously questioned the existence of vigorous competition between TOFC/COFC and motor carrier service."³⁰ Similarly, in exempting automotive traffic from regulation, the Board's predecessor found that regulation of such service "is not needed to protect shippers from an abuse of market power. On account of motor carrier competition, geographic competition generally, and various shipper options and powers, there is, overall, effective competition for motor vehicles and motor vehicle parts and accessories."³¹

Thus, the through rates on the exempt movements that AEPCO has selected for inclusion in its SARR are undoubtedly rates set at competitive levels. The improbability of AEPCO's SAC case is readily apparent when one compares the base year 2001 revenues that AEPCO

³⁰ *Improvement of TOFC/COFC Regulation*, 364 I.C.C. 731, 732, 734, 736 (1981), *aff'd*, *American Trucking Assn's v. ICC*, 656 F.2d 1115 (5th Cir. 1981).

³¹ *Rail General Exemption Authority--Transportation Equipment* [49 C.F.R. Part 1039], 9 I.C.C.2d 263, 265 (1992); *See also Rail General Exemption Authority: Used Motor Vehicles* [49 C.F.R. Part 1039], 9 I.C.C.2d 884, 886 (1993) (exempting used motor vehicles from regulation).

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allocates to the on-SARR portions of these exempt, cross-over movements to AEPCO's *total* stand-alone revenue requirement for the ACE in base year 2001. Revenues from exempt intermodal and automotive movements are { } million in base year 2001 and exceed the total revenue requirement of { } million by { } million, or some 73 percent. Under the Board's percentage reduction approach to setting reasonable rates, AEPCO's evidence implies that a 42 percent reduction on the rates of all the intermodal and automotive exempt traffic in the stand-alone group would be required to produce revenues that just equal the stand-alone revenue requirement. Given the competitive nature of exempt traffic moves, this result is clearly nonsensical -- it amounts to the proposition that "competitive rates need to be reduced by 42 percent to be at competitive levels." Of course, the rate reduction that AEPCO actually claims under its opening SAC evidence is higher still, due to the inclusion of revenues from the non-exempt traffic that was removed for purposes of illustration in the foregoing discussion.

The nonsensical outcome of AEPCO's SAC analysis undoubtedly stems from a combination of several factors. One of these is AEPCO's manipulation of the cross-over revenue divisions. Another is AEPCO's huge revenue adjustment to non-coal traffic. Understatement of SAC operating expenses and construction costs are likely causes as well. Irrespective of the causes, the result itself underscores the fundamental unreliability of AEPCO's SAC evidence.

In a closely related context, the Board has found that where a maximum rate methodology produced results that are not credible, the methodology could not be relied upon to determine maximum reasonable rates. In Ex Parte No. 347 (Sub-No. 2), *Rate Guidelines -- Non-Coal Proceedings*, 1 S.T.B. 1004 (1996), the Association of American Railroads proffered a simplified stand-alone cost model ("SSAC") as a method for determining the reasonableness of

rates in small rate case disputes. Prior to the creation of the Board, the ICC had tested the SSAC model and found that it did not produce results consistent with real world expectations:

The ICC pointed to the results of one of the test runs conducted . . . as illustrative of the apparent biases of the AAR-SSAC model. . . . That test involved hypothetical traffic moving over the main line of the Kansas City Southern Railway Company (KCS), one of the most profitable railroads in the country. Because the test traffic was confined to a high-density main line, one would expect a substantial traffic group to be included in any SAC analysis. However, after successive passes through the AAR-SSAC profitability subroutine, the traffic group was reduced to less than 1% of the traffic now moving over the line. As the ICC noted . . . this is an unrealistically small amount of traffic to include for main line service over a profitable railroad. Moreover, the extent of the revenue shortfall produced by the AAR-SSAC model exceeded the actual cumulative shortfall experienced by the KCS in the years 1988, 1989 and 1990. . . . [T]his would seem to suggest that the KCS main line, the core of this successful carrier's system, does not earn its reproduction cost and would be uneconomical to replace. . . . [T]he ICC concluded that the anomalous results must be due to the AAR-SSAC model's exclusion of substantial amounts of profitable traffic.

1 S.T.B. at 1016. Not surprisingly, the Board concluded that it would not rely on AAR's SSAC model.

In the current case, the results produced by AEPCO's use of exempt, cross-over traffic are also anomalous. They suggest a need for substantial rate reductions on vast amounts of BNSF exempt traffic that is moving at presumptively competitive rate levels. Such reductions would bring the rates down below the level of variable costs and make them non-compensatory. The Board should decline to give any weight to SAC evidence that produces such anomalous results.

3. AEPCO Failed To Consider The Ramifications Of Operational Changes That The SARR Would Impose On The Residual Incumbent

Complainants' use of cross-over traffic in SAC presentations has created other potential for abuse. When the complainant takes only part of a through movement, the residual incumbent

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may be forced to change the way it provides the remaining service or it may incur costs that do not exist when the movement is handled in through service. In the *TMPA* case, these concerns arose when the complainant took the origination portion of several through movements but gave back the movements to the residual incumbent at interchange points that required the residual incumbent to complete the movements over lines it did not use in the real world. The complainant's failure to consider the ramifications of the changes imposed on the residual incumbent resulted in the exclusion of revenues for the movements at issue.

A similar problem exists in this case, but the effects are more pernicious here and require complete rejection of AEPCO's SAC evidence. As discussed in detail in Section III.C of the Narrative, the central feature of AEPCO's operating plan is that its SARR would be an overhead carrier that only moves traffic between Defiance, NM and Vaughn, NM on its northern line. With very limited exceptions, no switching is carried out at intermediate locations on the SARR and SARR trains do not even stop at intermediate locations. This assumption might allow the creation of a streamlined, low cost overhead carrier, but it would also require enormous operating changes by the residual BNSF and impose substantial additional costs on BNSF.

AEPCO assumes that the SARR trains move across the SARR with a constant number of car loads; a SARR train enters the SARR with the same number of carloads that the train has when it leaves the SARR. And because the trains do not stop at intermediate locations (except for a handful of coal trains), AEPCO's operating plan assumes that no cars are added to or taken from the train as it traverses the SARR. But in the real world, most of the merchandise trains that BNSF operates between Vaughn and Defiance are switched today at Belen, NM and a significant number of BNSF's intermodal trains are switched at Belen. *See* Section III.C.1. This switching occurs at Belen today to support BNSF's local operations in the Southwest. Carloads

destined for Albuquerque, NM, El Paso, TX or Phoenix, AZ, among other destinations, are taken off of cross-country trains at Belen. Similarly, carloads originating locally are added to trains at Belen that are destined for locations outside the Southwest.

To form trains that move across SARR lines without any switching would force BNSF to perform these switching activities at Vaughn and Defiance where BNSF does not even have yards today. In Section III.C.1.b of the Narrative, BNSF presents some examples of traffic movements that AEPCO included in its SARR that would require substantial changes in BNSF operations.³² AEPCO did not even consider these issues and clearly did not attempt to quantify the additional costs that would be imposed on the residual incumbent. Moreover, the costs would be so large that if AEPCO had carried out the required analysis, it is quite possible that AEPCO would have abandoned its central assumption that the SARR would operate only as an overhead carrier. AEPCO's failure to consider the ramifications of its operating plan on the residual BNSF is fatal to its SAC presentation.

AEPCO's operating plan also would create new crew change locations that would degrade the efficiency of defendants' existing movements and impose additional crew-related costs on the residual defendants. BNSF today operates between Clovis, NM and Winslow, AZ with one intermediate crew change at Belen, NM. AEPCO's operating plan would require that two crew changes occur between Clovis and Winslow, one at Vaughn and one at Defiance. AEPCO's operating plan would also require that BNSF establish less efficient turn-around service in new crew districts between Vaughn and Clovis and between Winslow and Defiance.

³² One of the examples also demonstrates one of the many ways in which AEPCO overstated traffic to be handled by the SARR. Notwithstanding its assumption that no switching would occur on SARR trains at Belen, this example shows that AEPCO includes on SARR trains carloads that get added to the trains at Belen.

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By fragmenting the efficient crew districts on these lines into smaller districts, AEPCO would reverse decades of effort by the incumbent to rationalize crew districts on its system, including decisions made by BNSF's predecessor on the lines at issue here. Similar problems would arise on UP's lines. AEPCO's failure to consider any of the ramifications of these operating changes is another serious flaw in its SAC presentation that justifies dismissal of its claims.

D. THE LIMITED AMOUNT AT STAKE IN THIS PROCEEDING DOES NOT JUSTIFY AN ORDER PERMITTING AEPCO TO REFILE OPENING EVIDENCE

As a matter of law, defendants are entitled to dismissal of AEPCO's complaint at this time without permitting AEPCO to refile its opening evidence. As explained previously, AEPCO has the burden of proof, and the evidence it submitted to carry that burden does not support AEPCO's claim that the challenged rates are unreasonably high. The Board should not prolong these proceedings by allowing AEPCO to fix the errors in its opening evidence and refile its SAC case.

In addition, the enormous costs and burdens associated with a full SAC analysis are simply not justified in this case in light of the settlement that AEPCO reached with UP. AEPCO now has a {

} Given the quality of its SAC evidence, AEPCO has already received more from its settlement with UP than it could reasonably expect.

Even if AEPCO's evidence were not fatally flawed, it is extremely unlikely that AEPCO would receive any additional reparations in this proceeding given its settlement with UP. The

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parties to the settlement agreed {

} In addition, the value of any future rate prescription would be minimal since {

} This is a case where the Board should have no qualms dismissing
AEPCO's evidence for failure to support its claims with proper SAC evidence on opening.

The Board should therefore evaluate the flaws in AEPCO's opening evidence and the proper response to those flaws in light of the settlement between UP and AEPCO. The relevant provisions of that settlement agreement are the following:

1. {

}

2. {

}

3. {

}

The significance of each of these provisions is discussed below. The first two provisions create a high threshold that must be satisfied before AEPCO will be entitled to any reparations at all in this case. BNSF demonstrates that it is very unlikely that AEPCO would be able to meet this threshold even if the case were extended through the presentation of new SAC evidence.

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The third provision makes it clear that the value of any rate prescription on the New Mexico rates would be minimal even if AEPCO could establish grounds for such a rate prescription.

1. No Reparations Will Be Owed If The Amount Of Damages That
AEPCO Is Found To Have Suffered Is Less Than { }

The first threshold that would have to be met before AEPCO would be entitled to any reparations on movements made from 2001 through 2003 under the challenged rates is created by {

} Under well established contract law, joint obligors are jointly and severally liable only for the full amount owed. If one obligor pays an amount in settlement that fully satisfies a claim, the non-settling obligor is released from any further obligation because the creditor is not entitled to more than full satisfaction of its claim. Under ICC/STB precedent, carriers participating in a joint-line movement under a through rate are jointly and severally liable to the shipper for any damages resulting from the assessment of unreasonably high rates. *Louisville & Nashville Railroad Co. v. Sloss-Sheffield Steel & Iron Company*, 269 U.S. 217, 232 (1925). Since the two carriers are joint obligors, if one of the carriers pays the shipper through a settlement agreement an amount that covers the shipper's damages, no further damages can be collected from the other carrier.

The law is clear: "Because the law does not sanction a double recovery, the nonsettling obligor's obligation is discharged pro tanto by the amount of the settlement." *Seafirst Ctr. Ltd. Partnership v. Kargianis, Austin & Erickson*, 866 P.2d 60, 64 (Wash. App. 1994), *aff'd and*

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remanded, 898 P.2d 299 (Wash. 1995); *Board of Educ. v. Zando, Martin & Milstead, Inc.*, 182 W. Va. 597, 390 S.E.2d 796, 807 (W.Va. 1990) (“It is generally recognized that there can be only one recovery of damages for one wrong or injury . . . the law does not permit a double satisfaction for a single injury. . .” citing *Harless v. First Nat’l Bank in Fairmont*, 169 W. Va. 673, 289 S.E.2d 692 (1982)). Moreover, the intent of the settling parties has no effect on the remaining obligations of the non-settling party: even if the obligee does not intend to release other parties, the obligee cannot recover more than the full amount. Thus, full payment by one party releases the others.³³

Under this well-established principle of law, AEPCO would not be entitled to any reparations unless the Board found that the total damages suffered by AEPCO exceeded {
}. It is not necessary to evaluate any SAC evidence to conclude that AEPCO’s damages could not exceed { } in this case. The Board need only examine the variable costs of this movement to see that any damage AEPCO suffered from the payment of allegedly unreasonable rates would be less than { } regardless of the outcome of a SAC analysis. In its reply variable cost evidence that BNSF is filing jointly with UP, defendants show that, when properly calculated, the revenue to variable cost ratio for the through movement is very close to the jurisdictional threshold. The Board has no authority to prescribe a joint rate below the 180% threshold. Thus, for the period 2001-2003, even if the rates were set at the lowest point possible -- *i.e.*, at the jurisdictional threshold level of 180% of joint variable costs -- the

³³ *Converse v. James*, 89 Haw. 461; 974 P.2d 1051 (Haw. App. 1997), *cert denied*, (Haw. 1999) (The exercise by a seller in a 3-year agreement of sale (AOS) of an option to waive the full amount owed on the AOS in exchange for the one-half interest in the property of one of the joint obligors released the debt of the second joint obligor who was not a party to, or even aware of, the purchase option because the debt was paid in full and the law does not allow double recovery. This was true even though the option was given by the first obligor as security for a different loan unrelated to the property.)

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maximum reparations that would be due – { } – are well below the { } that AEPCO has already received { } See Section III.H.1. Thus, AEPCO has already been fully compensated for any reparations due on the New Mexico movements.³⁴

2. The Settlement Entitles AEPCO To Receive Reparations { } But BNSF Is Unlikely To Owe Any Reparations

It is well established that the Board evaluates the reasonableness of a through rate on a through basis and that the settlement of one carrier in a joint movement does not restrict the Board's rate reasonableness review to only the remaining carrier's portion of the movement. See *Metropolitan Edison Company v. Conrail, et al.*, 5 I.C.C.2d 385 (1989). However, the settlement in this case creates special circumstances that would require the Board to look only at BNSF's responsibility for reparations. The Settlement Agreement makes it clear that {

³⁴ Even if the Board were to find reparations on the through movement in excess of { }, BNSF would be entitled to a credit of the amount paid by UP. Under contract law, the nonsettling obligor's obligation is discharged pro tanto by the amount of the settlement paid by a settling joint obligor. *Seafirst*, 866 P.2d at 64; *Corbin on Contracts, Interim Edition, Vol. 9, Ch. 52, Joint and Several Contracts, §936* (1951) (Where one obligor makes a separate settlement wholly for his own benefit, the other obligors are discharged to the extent of the satisfaction received); *Board of Educ. v. Zando*, 390 S.E.2d at 808 ("The law is well settled that, where there is a single and indivisible injury . . . any amounts received from one of the defendants must be deducted from the total damages sustained." Citing *Weaver v. Bolton*, 209 N.E.2d 5 (Ill. App. 1965)). *Baldwin v. Ely*, 127 Pa. Super. 110, 193 A. 299, 302 (Pa. Super. 1937) ("an unreleased obligor is entitled to a credit for the proportionate share or shares of those released").

³⁵ Settlement Agreement at ¶ 4(a). BNSF assumes that the Board will be able to resolve this matter by the end of 2003 given the limited scope of remaining issues. The Settlement

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}

At this stage of the case, it is not necessary to address what standards the Board might apply to determine whether and to what extent BNSF would be liable for reparations, given the unique circumstances of this case, including the Settlement Agreement. Litigation of that issue would undoubtedly prolong this already complex case. In light of the settlement, BNSF believes it is highly unlikely that the Board would conclude that any reparations are due from BNSF, even if AEPCO were to be given a second opportunity to present SAC evidence.

3. Dismissal Of This Proceeding Will Have Minimal Impact On Future Movements As The Settlement Agreement Contemplates

{

}

UP and AEPCO have agreed that {

} As a result, the

impact of any rate prescription in this case would be minimal given the small amount of tonnage involved.

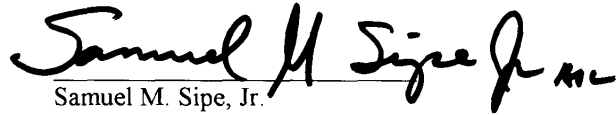
E. CONCLUSION

For the reasons discussed above and in more detail in the following sections of the Narrative, AEPCO's complaint should be dismissed.

Agreement implicitly assumes, correctly, that BNSF would be entitled to receive contribution from UP to the extent it was assessed reparations exceeding the amount for which it was responsible.

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Respectfully submitted,

A handwritten signature in black ink, reading "Samuel M. Sipe, Jr." with a stylized flourish at the end.

Samuel M. Sipe, Jr.
Anthony J. LaRocca
Linda S. Stein
STEPTOE & JOHNSON LLP
1330 Connecticut Avenue, N.W.
Washington, D.C. 20036

Richard E. Weicher
Michael E. Roper
David M. Pryor
THE BURLINGTON NORTHERN AND
SANTA FE RAILWAY COMPANY
2500 Lou Menk Drive
Fort Worth, TX 76131

ATTORNEYS FOR THE BURLINGTON
NORTHERN AND SANTA FE
RAILWAY COMPANY

May 27, 2003

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CERTIFICATE OF SERVICE

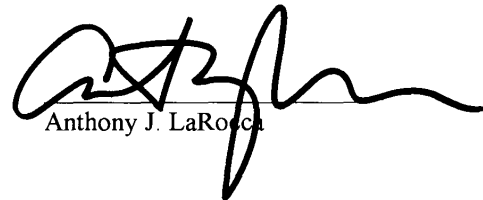
I hereby certify that on May 27, 2003, I caused a copy of the foregoing Reply Evidence of The Burlington Northern and Santa Fe Railway Company to be served by hand upon the following counsel:

Attorneys for
Arizona Electric Power
Cooperative, Inc.

William L. Slover
Christopher A. Mills
Robert D. Rosenberg
Andrew B. Kolesar III
Daniel M. Jaffe
Slover & Loftus
1224 Seventeenth Street, N.W.
Washington, DC 20036

Attorneys for
Union Pacific Railroad
Company

Carolyn F. Corwin
David L. Meyer
Michael L. Rosenthal
Covington & Burling
1201 Pennsylvania Avenue, N.W.
Washington, DC 20004



Anthony J. LaRocca

II. Market Dominance

II. MARKET DOMINANCE

BNSF's evidence related to market dominance is presented in a separate BNSF/UP Joint Variable Cost Reply.

III-A. Traffic Group

III. STAND-ALONE COST

A. TRAFFIC GROUP

AEPCO has developed a hypothetical rail carrier called the Apache, Cochise & Eastern Railroad (“ACE”) that will transport coal and non-coal traffic over its lines in New Mexico, Texas and Arizona from 2001 through 2020. The ACE is comprised of three legs -- a northern east/west leg that replicates portions of the former Atchison Topeka and Santa Fe Railway Company’s (“ATSF”) (now BNSF) mainline in New Mexico, a southern east/west leg that replicates the former Southern Pacific Railroad’s (“SPRR”) (now UP) mainline between El Paso, Texas and Cochise, Arizona, and a former SPRR north/south leg that links Vaughn (on the northern leg) and El Paso (on the southern leg). ACE does not build the Vaughn to El Paso leg but rather claims to use trackage rights that BNSF has to operate over this segment of UP. A schematic of the ACE appears as Exhibit III-A-1 of AEPCO’s opening evidence.

In base year 2001, AEPCO hypothesizes that ACE will transport over 105 million total tons, of which coal traffic comprises 13 million tons and non-coal traffic constitutes over 92 million tons. The vast majority of the traffic handled by the ACE – about 99 percent of AEPCO’s total volume and 100 percent of AEPCO’s non-coal volume in 2001 – is cross-over traffic.¹ Notably, most of the traffic handled by the ACE – more than 76 percent of total SARR revenue in 2001 -- is competitive traffic that is exempt from regulation by the Board. Further,

¹ “Cross-over traffic” is traffic currently handled in its entirety by the incumbent railroad or railroads (here BNSF and UP) that the Complainant assumes would move in interline service between the stand-alone railroad (“SARR”) and the incumbent railroad(s). *See PPL* at 7, n.13.

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AEPCO has made the ACE into a bridge carrier inserting itself into the middle of BNSF's and UP's single-line service.² The ACE is a bridge carrier for all the cross-over traffic it transports.

While AEPCO claims that its traffic volumes are conservative because it caps the ACE volumes at the 2001 base year level, AEPCO's claim is disingenuous. What AEPCO fails to explain is that it derives its base year 2001 non-coal volumes by applying enormous and unjustified "adjustments" to non-coal volumes that AEPCO identified in the traffic tapes produced by BNSF and UP. These "adjustments" increased BNSF's non-coal volumes by 56 percent and UP's non-coal volumes by 32 percent in 2001, with corresponding increases in revenue. Despite the enormity of these unprecedented adjustments, AEPCO does not even mention making any adjustments to 2001 non-coal volumes in its opening narrative. BNSF and UP were only able to discern that such volume adjustments had been made from a footnote to the electronic workpapers submitted with AEPCO's opening evidence.³

Corresponding to its volume adjustments, AEPCO also makes substantial, unjustified "adjustments" to base year 2001 non-coal revenues identified in the traffic tapes -- increasing BNSF and UP revenues by 54 percent and 29 percent, respectively. While AEPCO makes some mention of this revenue "adjustment" in its opening narrative, it only does so in a cryptic footnote that states "[i]n instances in which the Defendants did not provide revenue data for loaded railcars moving over the ACE, AEPCO utilized the average rate per car-mile for the applicable train type to estimate the missing railcar revenue data." AEPCO Nar. at III-A-34, n.

² A "bridge carrier" is a carrier that does not either originate or terminate the traffic but carries the traffic as overhead for a portion of the movement.

³ See AEPCO electronic workpaper "ACE Non-Coal Traffic and Revenue Forecast.xls," at worksheet "ACE BNSF '01 Traf. and Rev.," n.3.

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26. Contrary to AEPCO's claims, there were no revenue data missing from the traffic tapes BNSF produced in discovery.

The Board should reject AEPCO's stand-alone costs ("SAC") evidence due to several fundamental and fatal problems with AEPCO's traffic volumes and revenues. First, AEPCO's traffic selection is not reliable or probative. The "adjustments" made to 2001 non-coal volumes and revenues are obviously incorrect and AEPCO's failure to explain the adjustments in its evidence is deceptive. For example, AEPCO's volume "adjustments" result in more intermodal traffic traversing the Defiance to Vaughn line segments on the SARR than actually traversed those line segments in 2001. This fundamental flaw in AEPCO's traffic selection is particularly significant. Because of it, the Railroads are unable to submit traditional SAC reply evidence in this case.

There are other fundamental errors with AEPCO's traffic and revenue evidence that require the rejection of AEPCO's SAC evidence. First, AEPCO's use of cross-over traffic as the predominant source of revenue for the ACE is seriously flawed. Reliance on cross-over traffic precludes a thorough comparison of revenues and costs which is the essence of the SAC test. Use of cross-over traffic is subject to manipulation, exemplified here by AEPCO's overwhelming reliance on cross-over movements of exempt traffic. The vast majority of the traffic moving over the ACE is automotive and intermodal traffic which the Board has exempted from regulation because this traffic is subject to vigorous competition that constrains rates to reasonable levels. Nevertheless, when one compares the SAC revenues AEPCO associates with this exempt traffic to the SAC costs developed by AEPCO, SAC revenues still exceed SAC costs by a wide margin. This outcome is nonsensical. Second, even if AEPCO's reliance on cross-over traffic were otherwise permissible, AEPCO has made no effort to demonstrate that its

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i. AEPCO's Selection Of BNSF Non-Coal Traffic

ii. AEPCO's Selection Of BNSF Coal Traffic

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i. AEPCO's Selection Of BNSF Non-Coal Traffic

In the past, shippers have generally chosen to make their SAC traffic selections from BNSF's traffic tapes, which provide an individual record of revenues and volumes associated with each car, container or trailer moved in revenue service.⁶ Here, BNSF produced data requested by AEPCO for traffic moving in 10 states that touched the SARR as originally proposed by AEPCO. The traffic tapes provided by BNSF in discovery contain all of the information necessary for AEPCO's selection of non-coal as well as coal traffic. The traffic database contains revenue-related information derived from waybills and covers the entire movement on BNSF lines for each waybill. This database permits identification of every revenue-generating unit, whether that unit is a car, trailer or a container.⁷ {

} While the traffic database does not contain specific routing information, it does contain train, origin, destination and route mileage information from which routing can be determined. *See* AEPCO Opening Exhibit III-A-2, at 2.

For this case, however, AEPCO chose to start its non-coal traffic selection process with BNSF's train event data. As AEPCO itself concedes, the train event database, unlike the traffic database, does not contain two key pieces of information necessary for the traffic selection – revenue information and net tonnage information. *See* AEPCO Opening Exhibit III-A-2, at 2.

⁶ In this proceeding, AEPCO followed the traditional approach for coal traffic and used the traffic data rather than the train event data. AEPCO does not explain why it believed the produced traffic data was complete and reliable for coal traffic but not for non-coal traffic.

⁷ A trailer or container is hereafter referred to as an "intermodal unit."

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cross-over movements leads to an outcome that is impossible under a rational application of SAC. The SAC revenues that AEPCO assumes will be generated by exempt traffic exceed SAC costs by a margin of 73 percent. The Board cannot accept such a result. Each of these problems is addressed in detail below.

a. AEPCO Did Not Adequately Identify The BNSF Non-Coal Traffic It Selected For Its Stand-Alone Railroad

It is impossible to determine from either AEPCO's opening evidence or its workpapers which BNSF non-coal traffic AEPCO selected for its SARR. In essence, this impossibility arises from AEPCO's initial decision to use an inappropriate database – the BNSF train event database – as its starting point for non-coal traffic selection followed by unjustifiable and clearly erroneous “adjustments” to revenue and tonnage data after a failed attempt to compare the train event data to the revenue data contained in BNSF traffic tapes. In following this procedure, AEPCO failed to identify specific shipments to be included in its traffic and generated revenues and tonnages for fictitious shipments that BNSF did not, in fact, transport. AEPCO's failure to link revenues and tonnages to specific shipments prevents identification by BNSF or the Board of the traffic AEPCO was attempting to choose.⁵

⁵ AEPCO does assert in its Reply in Opposition to Union Pacific Railroad Company's Petition to Require Submission of New Opening Evidence or, Alternatively, to Dismiss, at 6 (filed May 7, 2003) (hereafter “AEPCO Reply”), that its BNSF traffic is supposed to consist of “all overhead trainload revenue freight traffic that moved over BNSF's line between Defiance and Vaughn, NM in 2001.” The BNSF revenue and tonnage numbers AEPCO asserts in its opening evidence, however, bear no resemblance to what AEPCO now claims it was trying to select and, as described in detail below, are clearly wrong.

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i. AEPCO's Selection Of BNSF Non-Coal Traffic

In the past, shippers have generally chosen to make their SAC traffic selections from BNSF's traffic tapes, which provide an individual record of revenues and volumes associated with each car, container or trailer moved in revenue service.⁶ Here, BNSF produced data requested by AEPCO for traffic moving in 10 states that touched the SARR as originally proposed by AEPCO. The traffic tapes provided by BNSF in discovery contain all of the information necessary for AEPCO's selection of non-coal as well as coal traffic. The traffic database contains revenue-related information derived from waybills and covers the entire movement on BNSF lines for each waybill. This database permits identification of every revenue-generating unit, whether that unit is a car, trailer or a container.⁷ {

} While the traffic database does not contain specific routing information, it does contain train, origin, destination and route mileage information from which routing can be determined. *See* AEPCO Opening Exhibit III-A-2, at 2.

For this case, however, AEPCO chose to start its non-coal traffic selection process with BNSF's train event data. As AEPCO itself concedes, the train event database, unlike the traffic database, does not contain two key pieces of information necessary for the traffic selection – revenue information and net tonnage information. *See* AEPCO Opening Exhibit III-A-2, at 2.

⁶ In this proceeding, AEPCO followed the traditional approach for coal traffic and used the traffic data rather than the train event data. AEPCO does not explain why it believed the produced traffic data was complete and reliable for coal traffic but not for non-coal traffic.

⁷ A trailer or container is hereafter referred to as an "intermodal unit."

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The train event database is designed to {

} As AEPCO freely admits, the train event database “does not identify the specific cars transported, their origin, destination, contents, net tons, or the revenue generated by such movements.” AEPCO Reply at 7. From this data set, AEPCO generated a list of trains (rather than specific cars or intermodal unit shipments) that it believed would traverse the SARR.

There was no need for AEPCO to use the train event database for any purpose, particularly since it did not contain the individual shipment detail essential for presentation of AEPCO’s SAC evidence. Having chosen the wrong starting point, AEPCO, not surprisingly, encountered difficulties when it sought to translate its *train* identifications into carload or intermodal unit revenue movements. AEPCO found that it needed to turn to the traffic data for the specific revenue and volume information required for its SAC analysis. The two databases, however, contain different sets of information used for different purposes. {

} BNSF personnel do not, in the ordinary course of business, utilize the two databases together or even attempt to correlate information in one database with information in the other database.

AEPCO apparently was not able directly or correctly to identify the revenue movements corresponding to trains it identified from the train event file. As shown in AEPCO’s electronic workpapers, AEPCO’s flawed attempt at matching information between the separate databases

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led it to conclude that the train event file reported many more revenue-generating loaded car movements than the traffic file.⁸

Having failed to locate the same number of revenue carloads for each train that corresponded to the aggregate number of loaded carloads reported for that train in the train event file, AEPCO asserts incorrectly that upward “adjustments” were necessary to correct for revenue and tonnage data that it had been unable to locate in the traffic revenue file. AEPCO’s narrative makes no mention of the volume adjustments and the only reference in its narrative to revenue adjustments is the cryptic statement in a footnote that: “[i]n instances in which the Defendants did not provide revenue data for loaded railcars moving over the ACE, AEPCO utilized the average rate per car-mile for the applicable train type to estimate the missing railcar revenue data.” AEPCO Nar. at III-A-34 n.26.⁹

AEPCO’s adjustment calculations for 2001 BNSF revenues and tonnages are only apparent from a careful examination of its electronic workpaper “ACE Non-Coal Traffic and Revenue Forecast.xls,” at worksheet “ACE BNSF ’01 Traf. and Rev.” {

⁸ See AEPCO electronic workpaper “ACE Non-Coal Traffic and Revenue Forecast.xls,” at worksheet “ACE BNSF ’01 Traf. and Rev.”, columns 9 (“Train File Loaded Cars”) and 11 (“Revenue File Loaded Railcars”).

⁹ AEPCO noted in its electronic workpapers that it was using “Adjusted Revenue file statistics to foot with totals from Train file.” See “ACE Non-Coal Traffic and Revenue Forecast.xls,” at worksheet “ACE BNSF ’01 Traf. and Rev.,” n.3.

¹⁰ Train File Loaded Cars are shown in column 9 (L) of the worksheet and Revenue File Loaded Railcars are shown in column 11 (N) of the worksheet. The worksheet aggregates cars by “Train ID,” shown in column 3 (C). Each “Train ID” may reflect 10s or 100s of individual trains. See column 8 (K). As explained below, “Revenue File Loaded Railcars” is a field created
(Continued ...)

}

AEPCO then derived a total aggregate revenue figure for each train traveling on its SARR by adding the “adjustment” to the revenue figure derived from the traffic file.¹¹ AEPCO made a similar calculation to adjust for “missing” tonnages.¹²

As shown in Table III.A-1, the impact of AEPCO’s “adjustments” was massive. For 2001, AEPCO increased the BNSF revenues it found in the traffic database by 54.5 percent and the BNSF tonnages by 56.2 percent.¹³

by AEPCO based on individual car, container and/or trailer shipments it located in the traffic file.

¹¹ The calculation is shown in column 18 (U) of the worksheet.

¹² The calculation is shown in column 19 (V) of the worksheet.

¹³ As described in the UP Petition, AEPCO made “adjustments” of similar magnitude to UP non-coal revenues and volumes, increasing them by 25 and 26 percent, respectively. *See* Verified Statement of John C. Klick and Julie A. Murphy, at 3 (hereafter “Klick/Murphy VS”) (submitted with the UP Petition).

Table III.A-1
Comparison of “Unadjusted” Volumes and Revenues AEPCO Selected
From BNSF Traffic Data and “Adjusted” Volumes and Revenues
Employed by AEPCO in SAC Analysis¹⁴

	AEPCO “Unadjusted” Traffic Selected From Traffic Files	AEPCO “Adjusted” Traffic Used in SAC Analysis	Percentage Increase
2001			
ACE Share of BNSF Revenue ¹⁵	{ }	{ }	54.5%
Tons	{ }	{ }	56.2%
2002 (first 6 mos.)			
ACE Share of BNSF Revenue	{ }	{ }	64.2%
Tons	{ }	{ }	66.0%

ii. AEPCO’s Improper Revenue and Volume “Adjustments”

By themselves, AEPCO’s adjustments render its traffic evidence incompetent; the Board cannot use this evidence as a basis for decision. AEPCO’s adjustments are based on a flawed comparison between two data fields derived from separate data collections that cannot be compared, as explained below. AEPCO’s fundamental error was treating the train event database as { } See AEPCO Reply at 12-13. Simply put, “Train File Loaded Cars” and “Revenue File Loaded Railcars” count

¹⁴ Source: AEPCO electronic workpaper “ACE Non-Coal Traffic and Revenue Forecast.xls,” at worksheet “ACE BNSF ’01 Traf. and Rev.,” cells P & Q 1156; and at worksheet “ACE BNSF ’02 Traf. and Rev.,” cells P & Q 710. AEPCO Opening Exhibit III-A-5 at 1 shows the “adjusted” BNSF revenues and volumes for 2001. Since AEPCO assumes that non-coal volumes will remain flat at the 2001 traffic levels, it does not rely on the adjusted traffic level that it calculated for 2002, but rather sets the 2002 volume level equal to the 2001 adjusted tonnage level.

¹⁵ “ACE Share of BNSF Revenue” is the SARR’s share of total BNSF revenue on cross-over movements and is calculated by AEPCO using the modified mileage prorate.

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different things.¹⁶ It is therefore completely improper to assign any meaning to the difference between the two numbers or to treat that difference as indicating records “missing” from the traffic data. AEPCO’s “adjustment” is predicated on the assumption that there are gross errors in BNSF’s traffic data. This assumption is completely unsubstantiated and unfounded.

Two examples of how “Train File Loaded Cars” and “Revenue File Loaded Railcars” differ demonstrate why the car-count comparison on which AEPCO bases its “adjustments” is not possible. First, {

¹⁶ These are the two fields in AEPCO’s electronic workpaper used to compare car counts. “Train File Loaded Cars” corresponds to an actual field in the BNSF train event data. “Revenue File Loaded Cars” is a field created by AEPCO based on the individual car, container and/or trailer shipments it located in the traffic file.

} Again, the difference stems from the differing underlying purposes of the two datasets.

Each of these differences creates what AEPCO improperly characterizes as “missing” revenue and volume data because it results in higher “loaded” car counts in the train event file than AEPCO derived from the traffic file. Take, for example, {

}

In making its “adjustments,” AEPCO created phantom traffic and generated fictitious revenues and tonnages for it. Indeed, as described below, AEPCO generated far more intermodal revenue and volume than was transported by BNSF over the Defiance to Vaughn

¹⁷ An articulated railcar is a specialized car designed to accommodate multiple intermodal intermodal units. It is typically much longer than other railcars.

¹⁸ $5 \div 2 = 2.5$, rounded up to 3.

¹⁹ 33 loaded articulated cars minus 2 empty articulated cars equals 31 loaded cars.

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SARR segments in 2001. {

} To the extent that AEPCO made any identification of the overall BNSF traffic it supposedly selected, it did so only in abstract terms of averages and meaningless differences between the number of cars reported in distinct data sets rather than by tying specific actual shipments to specific revenues and tonnages. AEPCO's resort to volume and tonnage estimates that are not linked to actual shipments makes it impossible to determine what traffic AEPCO selected.

In its Reply to the UP Petition, AEPCO sought to support its adjustments, stating:

The need for the adjustments is clear and compelling: the train movement files plainly show that the trains contained revenue-producing cars, and there is no reason to think that the train movement data – provided by the carriers and represented to constitute data to be relied upon – is defective in this regard. If the traffic data does not provide a corresponding carload or other revenue unit, there is no sound reason to think that the revenue-producing cars did not move. The far more plausible explanation is that there is some sort of defect in the traffic tapes designed by the Railroads and provided to AEPCO.

AEPCO Reply at 12-13. This “justification” is nonsense. To the extent that BNSF's production of data constituted a representation, that representation was that *each* set of data was reliable and was suitable for use *for its intended purpose*. AEPCO had no basis to assume that one data set was more or less reliable than the other, and therefore had no basis to assume a defect in the traffic data. As explained above, AEPCO's misinterpretation of the data, not missing records, caused the apparent discrepancies AEPCO sought to correct for. And AEPCO's chosen solution to its self-created problem – to conclude that a database it knew *did not* track individual revenue

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movements provided a more accurate count of such movements than the database that was designed to and actually *did* track those movements – was patently irrational.²⁰

iii. AEPCO's Revenue And Volume "Adjustments" Result
In An Obvious And Gross Overstatement Of BNSF
Intermodal Traffic Volumes And Revenues

AEPCO should have known that something was very wrong with its "adjusted" revenue and tonnage figures. The magnitude of the supposedly missing BNSF 2001 revenue and tonnage data – 54.5 percent and 56.2 percent respectively – ought to have put AEPCO on notice. Moreover, a simple reality check would have revealed to AEPCO that its adjusted SARR revenues and tonnages for BNSF intermodal traffic vastly *exceed* the volumes and revenues associated with the intermodal traffic that BNSF actually moved across the Defiance to Vaughn segment in 2001.

²⁰ AEPCO also makes several spurious discovery allegations relating to the production of traffic data that are addressed above in the Counsel's Argument.

(a) AEPCO's Overstatement Of BNSF
Intermodal Revenues.

Table III.A-2
Comparison of Adjusted and Unadjusted
2001 BNSF Non-Coal Revenues²¹

	Unadjusted 2001 SARR Revenues	Adjusted 2001 SARR Revenues	Unadjusted 2001 BNSF Revenues	Adjusted BNSF 2001 Revenues
Auto	{ }	{ }	{ }	{ }
Grain	{ }	{ }	{ }	{ }
Intermodal	{ }	{ }	{ }	{ }
Manifest	{ }	{ }	{ }	{ }
Other	{ }	{ }	{ }	{ }
Totals	{ }	{ }	{ }	{ }

As shown in Table III.A-2, the effect of AEPCO's revenue "adjustments" is to increase the total revenue earned by BNSF in 2001 on its intermodal traffic that traversed the SARR to { }. This is somewhat higher than the \$2.618 billion in revenue earned by BNSF on *all* of its intermodal traffic in 2001.²² AEPCO should be well aware, however, that a substantial proportion of BNSF intermodal traffic does *not* traverse the SARR. Over {

²¹ Adjusted SARR revenues are taken from AEPCO Opening Exhibit III-A-5. Unadjusted SARR and BNSF revenues are reported in AEPCO electronic workpaper "ACE Non-Coal Traffic and Revenue Forecast.xls," at worksheet "ACE BNSF '01 Traf. and Rev.," and summed using AEPCO's method by traffic type. Adjusted BNSF revenues are calculated by increasing BNSF unadjusted revenues in the same proportion that AEPCO increased SARR revenues, and then summing in the manner used by AEPCO. Calculations underlying the table are shown in BNSF electronic workpaper "Adjusted Revenues.xls."

²² BNSF's intermodal revenues for 2001 can be determined from publicly available sources. See BNSF 2000 SEC Form 10-K & BNSF 2001 SEC Form 10-K. The 2000 10-K, at 7, indicates which categories of traffic are intermodal: Direct Marketing, International, Intermodal Marketing Companies, and Truckload. The 2001 10-K, at 4-5, indicates that these four categories comprised 78 percent of BNSF's 2001 consumer products business. Total consumer products revenues were \$3.356 billion in 2001, *id.* at 10, so intermodal revenues in that year were \$2.618 billion (.78 x \$3.356 billion).

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} of BNSF's intermodal traffic in 2001 moved in BNSF's Pacific Northwest intermodal lanes and did not touch the SARR.²³ In addition, it is well known that BNSF has extensive intermodal operations in numerous additional lanes that do not touch the SARR, including the Chicago-Denver and Chicago-Texas corridors. Thus, contrary to AEPCO's evidence, it would be impossible for the 2001 intermodal traffic crossing the SARR to generate { } in BNSF revenue.

In its Reply to the UP Petition at 20, AEPCO argues that it only selected BNSF intermodal traffic representing { } in revenue and { } in total traffic. As shown in Table III.A-2, above, this claim is false. The figures disingenuously cited by AEPCO in its reply are the *unadjusted* revenue figures for BNSF intermodal and total traffic AEPCO says would cross the SARR. The premise of AEPCO's traffic analysis, however, is that the unadjusted volumes and revenues shown in the traffic data are "missing" approximately 55 percent of the actual revenues and, consequently, are unusable. To correct for "missing" traffic, AEPCO "adjusted" the revenues it claims the SARR would receive to a much higher number. AEPCO obviously cannot adjust the SARR's portion of the revenues received without adjusting the total base BNSF revenues from which they are derived.²⁴ Table III.A-2 shows that the

²³ See "2001 Density by Traffic Type.xls" produced by BNSF in this proceeding at BNSF/AEPCO 01724. This document is included with this filing as an electronic workpaper.

²⁴ AEPCO first calculated the SARR's portion of revenue for cross-over traffic using the modified mileage prorate, and then applied the "adjustment" factors to the ACE's share of revenue. Thus there is a sense in which AEPCO did not literally "select" { } in BNSF intermodal revenues. But the result of AEPCO's sequence of calculations is the same as it would have been if AEPCO had first applied the "adjustment" to total BNSF revenues associated with the selected intermodal traffic, thereby increasing them from { }, and then calculated the SARR's portion of those intermodal revenues by using the modified mileage prorate.

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“adjusted” 2001 BNSF revenue for intermodal traffic that traverses the SARR is { } under AEPCO’s approach. Total “adjusted” 2001 BNSF revenue for non-coal traffic traversing the SARR is { }, not { }, as claimed by AEPCO in its Reply.

In assessing the veracity of AEPCO’s assertion that it only selected { } of BNSF intermodal traffic, the Board should consider AEPCO’s assumption regarding the volume of BNSF intermodal traffic that corresponds to that revenue figure. The { } revenue figure corresponds to { } net tons, AEPCO’s *unadjusted* BNSF intermodal figure for 2001.²⁵ But AEPCO claims that the SARR would transport an adjusted total of { } net tons of BNSF intermodal traffic in 2001, 55.7 percent more than the unadjusted net tons. Similarly, AEPCO claims that the SARR would transport an adjusted total of { } tons of BNSF non-coal traffic in 2001, 56.2 percent more than the unadjusted net tons.²⁶ AEPCO cannot truthfully contend that these “adjusted” tonnage figures correspond to the unadjusted revenue figures it cites as the base BNSF revenue for the SARR.

(b) AEPCO’s Overstatement Of BNSF’s Intermodal Volumes

AEPCO should have seen a similar problem with the BNSF intermodal volumes it specified would move across the SARR in 2001. Those volumes also significantly exceed the total intermodal volumes that BNSF transported across the segments incorporated into the SARR in 2001. BNSF provided traffic density information in discovery from which AEPCO could easily have verified that its “adjusted” BNSF intermodal volumes were well outside the realm of

²⁵ See BNSF electronic workpaper “Adjusted Revenues.xls,” cell AA 1179.

²⁶ See AEPCO Opening Exhibit III-A-5 at 1. The unadjusted net tonnages used to calculate these percentages are contained in BNSF electronic workpaper “Adjusted Revenues.xls.”

the possible.²⁷ The data produced to AEPCO showed that between { } gross tons of BNSF intermodal traffic moved on SARR segments during 2001.²⁸ These gross tonnage figures include both revenue-generating intermodal traffic that would have been reported in the traffic data and non-revenue-generating intermodal traffic, such as loaded cars with empty non-revenue generating intermodal units, that would not have been contained in the traffic data. In addition, due to BNSF's switching operations at Belen, described in detail in Section III.C, a significant portion of the total BNSF traffic that traversed SARR segments would have been considered "local" by AEPCO and not selected for the SARR.²⁹ Consequently, the volume of revenue-generating BNSF intermodal traffic transported by the SARR in 2001 should be substantially lower than { } gross tons. In fact, AEPCO claims to transport more than { } gross tons of BNSF revenue-generating intermodal traffic in 2001.³⁰ Like its "adjusted" intermodal revenue numbers, AEPCO's "adjusted" intermodal volume claims are grossly exaggerated. It is telling that AEPCO does not even dispute the assertion that its BNSF "adjusted" intermodal volumes are vastly overstated in its Reply to the UP Petition.

²⁷ See "2001 Density by Traffic Type.xls" produced by BNSF to AEPCO at BNSF/AEPCO 01724. This document is included with this filing as an electronic workpaper.

²⁸ Gross tonnages for BNSF 2001 movements on the segments selected by AEPCO for its SARR are shown in BNSF electronic workpaper "ACE Non-Coal Traffic and Revenue Forecast_Int Volume Exceeds BNSF Density.xls," at worksheet "BNSF_density 2001," cells T34631, T34635.

²⁹ AEPCO asserts in its Reply to the UP Petition, at 6, that it intended to select only "overhead trainload revenue freight traffic."

³⁰ The calculation supporting this number is shown in BNSF electronic workpaper "ACE Non-Coal Traffic and Revenue Forecast_Int Volume Exceeds BNSF Density.xls," at worksheet "ACE BNSF '01 Traf. and Rev." ACE gross tonnages were calculated by summing unadjusted tare and net tonnages (both reported in AEPCO's workpaper) for each train and adjusting the total in the same proportion used by AEPCO when it adjusted net tonnages.

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iv. As A Result Of AEPCO's Unreliable Traffic Selection,
BNSF Cannot Present Traditional SAC Reply Evidence

As a result of AEPCO's complete failure to present reliable evidence of the traffic base for its SARR, the railroads cannot present traditional SAC reply evidence. Under Board precedent, it is the shipper, not the railroad, that chooses the traffic group for the stand-alone analysis. *See, e.g., Coal Rate Guidelines – Nationwide*, 1 I.C.C.2d 520, 544 (1985) (“The proponent of a particular stand-alone model must identify, and be prepared to defend, the assumptions and selections it has made.”), *aff'd sub nom. Consolidated Rail Corp. v. United States*, 812 F.2d 1444 (3d Cir. 1987); *West Texas Utilities Co. v. Burlington Northern R.R.*, 1 S.T.B. 638, 657 (1996) (“*West Texas Utilities*”) (“Because a SAC analysis is a means of eliminating existing inefficiencies and cross-subsidies between different traffic, the complaining shipper can select any subset of available traffic to determine the least cost at which that subset of traffic could be served independently of other traffic.”).

Although defendants are entitled to critique complainants' traffic selections – for example by demonstrating that the stand-alone railroad could not participate in certain traffic – they may not propose an alternate traffic group for the stand-alone railroad. The Board's predecessor has rejected a railroad's presentation of alternative traffic groups or network configurations, explaining that the “stand-alone system has to be a least cost system” in order for SAC to be an effective determinant of rate reasonableness and a railroad whose rate is being challenged “has little incentive to develop a least cost system.” *McCarty Farms, et al. v. Burlington Northern Inc.*, 4 I.C.C. 2d 262, 271 (1988).

Because AEPCO's traffic data are unreliable, the Railroads are unable to develop typical SAC reply evidence. The volumes and revenues that AEPCO sponsors in its evidence are clearly incorrect and, consequently cannot be used as a starting point for SAC reply evidence. Nor can

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BNSF use AEPCO's unadjusted traffic volumes and revenues as a starting point since they are obviously not the basis for AEPCO's opening evidence. AEPCO's suggestion that the Railroads' should calculate the "correct adjustment" to the ACE's non-coal volumes and revenues (*see* AEPCO Reply at 17, n.18) in their reply evidence is inconsistent with the above-cited Board precedent which precludes the defendant railroad(s) from proposing an alternate traffic group. This is not a case where the complainant made a few errors in selecting traffic that can be addressed in reply evidence. The volume and revenue adjustments made by AEPCO were massive and affected most of the non-coal movements in AEPCO's stand-alone traffic group. Indeed, as explained above, as a result of AEPCO's manipulations, its traffic group is essentially an abstraction with fictitious traffic and revenues.

b. AEPCO's Reliance On Cross-Over Traffic Is Inconsistent With The Fundamental Economics Of The SAC Test

AEPCO has designed a SARR that carries a traffic group consisting almost entirely of cross-over traffic. This reliance on cross-over traffic is improper because it violates SAC principles. The Board should dismiss AEPCO's complaint on the basis of this improper traffic selection.

BNSF's witness Janusz A. Ordover addresses the conceptual flaws in AEPCO's reliance on cross-over traffic.³¹

³¹ The following discussion in this section and the discussion in Section III.A.3.c is extracted from Professor Ordover's declaration, attached as Exhibit III.A-1.

i. The Economic And Public Policy Rationale For
The SAC Test

It has long been recognized that for railroads to recover their efficiently incurred costs (both fixed and variable) some form of differential pricing must be permitted. *Coal Rate Guidelines* at 526-27. The logic behind this claim is now familiar and there is no need to rehash it at any great length. Because railroading is characterized by substantial fixed costs relative to variable (or marginal) costs, pricing rail services at marginal cost would generate insufficient revenues to defray the total forward-looking costs of the railroad.³² Indeed, pricing at variable or marginal cost would condemn the railroad to revenue inadequacy and ultimately lead to its demise and exit from the market.

A second important feature of railroading as an economic activity is that it is characterized by joint and common costs. These are costs that are incurred on behalf of more than one shipper and, as such, can and should be recovered from more than one shipper.³³ The presence of these joint and common costs generates scope economies (defined as savings that are created by having one railroad serve more than one customer, as compared to a base case in which each customer is served by one railroad), which can potentially benefit all shippers.

³² To illustrate, assume that the railroad needs to incur fixed costs of \$10 million to construct the needed facilities and that the variable (marginal) cost per ton-mile is \$1. Plainly, no matter how many ton-miles the railroad carries, it will not recover its full costs if the rate is capped at \$1. Hence, a higher rate is required. Obviously, a railroad that has sunk the necessary \$10 million can carry the traffic at the un-remunerative rate of \$1 as long as it does not have to make another investment in the fixed facilities, but to be viable in the long run the rate must exceed \$1 by enough to cover the full economic costs. The difference between the full costs of its operations and the total variable cost is the “quasi-rent.”

³³ To continue with the example in footnote 32, assume that two shippers, A and B, use the pertinent facilities. In this case, the \$10 million can (and must) be recovered in some proportion from both.

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Because of these scope economies, it is generally efficient for a railroad to serve multiple shippers with its route structure. Furthermore, because of substantial fixed costs, railroads also can and often do exhibit economies of density whereby average costs per unit of traffic decrease as the number of units of traffic using particular facilities increases.³⁴

At least since the Staggers Act, it has been widely recognized that cost recovery in the railroad industry cannot be achieved by requiring that each shipper pay the same mark-up per ton-mile or the same mark-up per dollar of variable cost. As has been demonstrated many times, such an approach to cost recovery is a prescription for inefficiency. It prevents socially profitable services from being offered, and it distorts shipping volumes by suppressing unduly the services utilized by those shippers whose demands are relatively more elastic, while “under-recovering” revenues from those shippers whose demands are relatively less elastic. The principle of Constrained Market Pricing (“CMP”) recognizes that differential pricing conduces to economic efficiency.³⁵ CMP also recognizes that differential pricing can potentially lead to

³⁴ Facilities congestion is the main reason why, once certain density is reached, per unit cost tends to increase.

³⁵ The familiar Ramsey pricing formula states that the price/cost margin earned on any given category of shipment should be inversely proportional to the elasticity of demand of that category with respect to rail rate. (A category of shipment can be defined narrowly as comprising shipments by or to a single customer over a period of time.) That is $L(i) = (p(i) - c(i))/(p(i) = k/E(i))$. In this formula, $p(i)$ is the rail rate applicable to category “i”, $i=1, \dots, N$; $c(i)$ is the underlying marginal (variable) cost of the shipment; $E(i)$ is the pertinent elasticity of demand; k is the so called “Ramsey” multiplier which takes on the value of $k=0$ when the railroad is compelled to price at marginal cost; and $k=1$ when the railroad is allowed to act as a profit-maximizing monopolist. It is important to realize that the elasticity of demand facing a given railroad on a given shipment can reflect not only the usual reduction in “consumption” of railroad services from a price increase but also the presence of intermodal and intramodal competition, where such competition exists. (Modifications of the formula are needed in the presence of cross-elasticities of demand between different categories of shipments. Professor Ordozco abstracts from this complication here.)

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unduly elevated rates for some shippers. In order to protect against this eventuality, the current regulatory regime subjects market dominant railroad rates to the SAC test.³⁶

As originally intended, the SAC test was devised to ensure that no shipper was required to pay more than the full costs of the railroad facilities that it uses. A shipper who paid in excess of the full costs was said to be cross-subsidizing other shippers by paying for facilities from which it derived no benefit. Conceptually, this test is quite compelling and sound as a matter of economics and public policy. Indeed, if entry into railroading were unimpeded by entry barriers – *i.e.*, if the market for provision of railroad services were perfectly contestable, in the language of economics – a railroad seeking to collect from the shipper more than the long-run economic costs of the facilities used by the shipper would be replaced by an entrant that could attract that shipper by charging rates that are slightly lower, yet sufficient to cover its full economic costs. In this way, the SAC test mimics the operations of a perfectly contestable market *even though* railroading as an activity is hardly contestable because a huge share of the overall costs of each railroad is not only fixed but also sunk.³⁷

As the name implies, and as initially conceived, the *stand-alone* cost test was designed to compare the costs incurred to build and operate a *stand-alone railroad* serving the needs of an individual shipper (or a group of shippers) with the revenues generated by that shipper (or a

³⁶ There is no general economic theorem showing that if the railroad is revenue inadequate, none of its rates can exceed SAC. However, it is plain that all of the rates taken together cannot exceed SAC since the railroad *is* revenue inadequate. Hence, simple logic suggests that if the railroad is revenue inadequate, the likelihood that there are many rates in excess of properly developed SAC is low.

³⁷ Sunk costs are those costs that a firm cannot recover if it exits the relevant market (or industry). Thus, rail track may be sold for no more than its scrap value, which is much less than the cost of new rail track, and is thus substantially sunk. Sunk costs are generally regarded as a barrier to entry.

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group of shippers) at the existing rate levels charged by the defendant railroad. The adoption of CMP, and in particular the application of the SAC test, obviated the need to examine whether the railroad's existing rates were consistent with the Ramsey pricing principles. The ICC considered this a significant regulatory advantage because calculating Ramsey prices requires information on demand elasticities that may not be readily available.³⁸ At the same time, recognition that differential pricing was desirable (when subjected to proper constraints) freed the railroads from inefficient pricing and increased the chances of revenue adequacy.

In light of the economies of scope and density discussed above, the ICC determined that complaining shippers should be permitted to design a SARR that could handle both the traffic of the complaining shipper (the "issue" traffic) and other "non-issue" traffic that shared facilities with the issue traffic. Furthermore, the ICC concluded that the complaining shipper would be permitted to define the traffic group and the railroad configuration in the first instance, because it had the incentive to design the most efficient operation that could feasibly handle the issue traffic and other non-issue traffic in the stand-alone traffic group. A complaining shipper has an incentive to group issue traffic with non-issue traffic in a way that makes the largest possible contribution to the recovery of the total forward-looking costs of the SARR in order to demonstrate an excessive rate and obtain a rate reduction. In sum, the ICC's decision to allow a shipper to group issue and non-issue traffic that was to be carried *end-to-end* was fully consistent with the basic precepts of constrained market pricing and with the twin goals of ensuring railroad viability and extending protection to captive shippers.

³⁸ Actually, this calculation also requires the regulator to calculate or infer the value of the Ramsey multiplier, k (see n. 35 above).

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However, the inclusion of cross-over traffic as a component of the stand-alone railroad has undermined the proper SAC construct – and its public policy rationale. As shown below, inclusion of cross-over traffic revenues in the base of revenues attributed to the SARR coupled with the concomitant burdening of the incumbent with the potentially excessive responsibility for the recovery of the costs of operating its residual network distorts the applicability of the SAC test as a test for cross-subsidy. To put it bluntly, by permitting cross-over traffic to be included in a SAC analysis, the Board has enabled the complaining shipper to use strategic revenue shifting and to game the regulatory process by constructing a hypothetical railroad that is neither stand-alone nor required to contribute to the recovery of the long-run costs of the residual incumbent who must defray all of its remaining costs, including the costs of facilities without which cross-over traffic would not be possible.

The inclusion of cross-over traffic in the SAC analysis necessitates arbitrary allocations of net revenues from such traffic. This, in turn, creates a real danger that the SAC test is rendered meaningless and that regulatory policy will be set back to the pre-Staggers Act era in which rates were evaluated using arbitrary cost allocation standards. Indeed, once the revenues from cross-over traffic are incorporated in the SAC test, the finding that the issue rate is excessive does not imply at all that the issue traffic is cross-subsidizing other traffic. As vividly demonstrated by AEPCO's evidence here, reliance on cross-over traffic in the SAC test can lead to unwarranted rate reductions on the issue traffic despite the fact that the properly constructed SARR would not fail the SAC test. This analysis is developed more fully below.

- ii. The Economic Dangers of Permitting Cross-Over Traffic In A SAC Test
 - (a) Distorting Effects Of Cross-Over Traffic In The SAC Test: General Assessment

There is no economically defensible way to “attribute” un-allocable joint and common costs to different traffic groups or different shippers. By definition, these costs are not caused by any particular shipment and thus cost-causality cannot be depended upon to guide cost recovery from any given shipment. Instead, economic efficiency requires that differential pricing (*i.e.*, Ramsey pricing principles) be used to recover these costs from the totality of the traffic that uses the pertinent facilities and, in the aggregate, causes these costs to be incurred. This is the basic principle of cost-causality which states that those who cause costs to be incurred should be responsible for their recovery. In its standard formulation, SAC recognizes and builds on this principle of cost-causality because it tests whether revenues from a group of traffic exceed (or fall short) of all the costs *caused* by that group of traffic. In line with the cost-causality principle, the SAC test compares the total revenues generated by the traffic group with the full economic costs of *all* the facilities needed to serve the movements in the traffic group.

Introduction of cross-over traffic vitiates this approach. It splits what should be a stand-alone railroad into interline segments, strategically chosen by the complaining shipper, some of which are included in the SARR and some that are not built and thus remain with the residual incumbent.³⁹ As a result, while after this strategic split the quantum of costs remains unchanged

³⁹ This artificial severing caused by the use of cross-over traffic must be distinguished from the real world interlining of traffic between railroads. Interlining is a result of arm's length transactions between willing railroads, neither of which in the ordinary situation could provide the through service on its own; whereas, as noted, the dismemberment of the incumbent is a strategic move designed to ensure that the shipper's rate is found to be excessive.

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(besides the putative reduction in costs because the SARR is allegedly designed to be more efficient), the responsibility for the recovery of the efficiently incurred costs is now divided between two entities – the SARR and the residual incumbent. This severing of the joint responsibility for cost recovery and the consequent arbitrary allocation of revenues is inconsistent with the economic rationale for the SAC test and creates incentives for strategic revenue shifting, the objective of which is to ensure that the challenged rate is deemed to be excessive.⁴⁰

The hypothetical SARR carries the cross-over traffic only for a portion of the end-to-end movement that currently occurs over the defendant railroad(s). That traffic is originated, terminated (or both) on the off-SARR portions of the track owned and controlled by the defendant railroad (the residual incumbent) whose rates are being subjected to regulatory scrutiny. It is apparent from the definition of cross-over traffic that the hypothetical stand-alone railroad that incorporates cross-over traffic does not stand-alone after all; it is a SARR only in name but not as an economic entity. Traffic moves on the SARR for only a portion of its journey, not from end-to-end. The SARR remains “attached” to the residual incumbent by means of the cross-over traffic that they jointly carry, potentially siphoning revenue from the residual incumbent without removing any of the unattributable costs of that traffic. But for the presence of the residual incumbent, the so-called “stand-alone” railroad would not, in fact, be able to carry the cross-over traffic, since it chooses not to build all the facilities needed to serve

⁴⁰ A challenged rate is strategically “cross-subsidized” when it is found to be excessive only when cross-over revenues are included but is not excessive when such revenues are excluded. Strategic cross-subsidy does not necessarily imply actual cross-subsidy as this term is defined in economics.

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that traffic. The SARR is thus critically dependent on the residual incumbent to carry traffic from and to it, but since it does not build the lines that carry that traffic end-to-end, the SARR does not incur all the costs required to generate those revenues. Nevertheless, through the allocation rule, it claims a portion of revenues that before the split helped to defray (a portion) of these costs.

The introduction of cross-over traffic into the SAC analysis is a recipe for economic distortions stemming from strategic revenue shifting that results in finding an excessive rate for the issue traffic. The Board tests for cross-subsidy by determining whether revenues from the issue traffic and other traffic in the chosen shipper group exceed SAC. The introduction of cross-over traffic can make such a finding of cross-subsidy a mirage, because the revenues from cross-over movements are claimed without accounting for the costs incurred to generate those revenues. This magical generation of revenues by means of strategic revenue shifting comes at the expense of the residual incumbent which has no guarantee of receiving sufficient contribution to cover the joint and common costs caused by the traffic it carries, including portions of the cross-over movements. The revenue transfer to the SARR from the residual incumbent is a strategic cross-subsidy. In fact, because of the leeway in which the revenues from cross-over traffic are allocated, an issue rate may be deemed excessive or non-excessive depending solely on the share of cross-over revenues that is attributed to the SARR. Such an outcome is impossible if the shipper is required to build a SARR that carries all the claimed traffic end-to-end.

As noted, the inclusion of cross-over traffic puts the two railroads – the SARR and the residual incumbent – in a “vertical relationship” in which the profitability of the SARR is directly (*i.e.*, proportionately) linked to how *unprofitable* the complaining shipper can make the

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residual incumbent by means of strategic revenue shifting. When cross-over traffic is permitted, the complaining shipper no longer has the incentive to design the most efficient stand-alone railroad. Instead it has the incentive to siphon off as much revenue as possible from the residual incumbent while shedding responsibility for contributing adequately to the recovery of all the costs that must be incurred over the long run in order to generate the claimed cross-over traffic revenues.

The shipper must build out the facilities that are required to carry the issue traffic. Basic logic compels a conclusion that the shipper would build out other facilities if doing so generates less in incremental costs than it generates in revenues. When it comes to cross-over traffic, that traffic imposes no costs (besides directly attributable costs) on the railroad but generates net revenues. Revenue “freed” from responsibility for costs in this manner engenders the risk of strategic “cross subsidy” to the SARR. The true nature of this subsidy is disguised because, in a real setting, the net revenues from cross-over traffic cannot be meaningfully associated with any particular portion of the track over which the cross-over traffic moves. All the fixed facilities used by cross-over traffic contribute to the viability of that traffic and must be paid for with the available sources of railroad revenues. When the SARR captures for itself the net revenues from cross-over traffic, it leaves with other shippers who use the residual incumbent’s lines the burden of paying for those costs that, heretofore, were recovered in part from cross-over traffic revenues. This residual burden is smaller the smaller the portion of revenues that are strategically shifted to the SARR. However, the identified risks cannot be entirely obviated because any allocation is by its very nature arbitrary. It follows that the modified mileage prorate advocated here by AEPCO is no solution to this endemic problem: no allocation methodology can handle the fact that prior to the artificial break up of the incumbent into a

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SARR and a residual incumbent, the net revenues from “cross-over” traffic contributed to the recovery of all fixed costs incurred by the incumbent. After the break up, the same pool of net revenues from cross-over traffic must be arbitrarily allocated among the two railroads whose total costs have been gerrymandered by the complaining shipper for its maximum advantage.

Reliance on cross-over traffic invites distortion into the SAC analysis because it precludes the comparison of total through revenues and end-to-end costs that are at the heart of the SAC test. The unattributable off-line costs that must be incurred in order to enable cross-over traffic, as well as other traffic that may move on these off-line portions of the residual incumbent, cannot be ascertained *unless* the off-line facilities are actually “built” as a part of the SARR. Thus, there is no way of identifying and eliminating the potential distortion created by use of cross-over traffic short of requiring the proponent of a stand-alone system to conduct the test properly by building all the facilities needed to carry its non-issue traffic end-to-end.⁴¹

The Board should have no illusions regarding the incentives that complaining shippers have to exploit cross-over traffic in the manner described above. It should also be clear to the Board that the potentially distorting effect of cross-over traffic increases in magnitude as the

⁴¹ Any time a facility is built out, it may have an additional “layer” of cross-over traffic associated with it. The first layer of cross-over traffic is the traffic that shares facilities with the issue traffic. The next level of cross-over traffic, layer 2 cross-over traffic, does not share such facilities. Hence, the complaining shipper may argue that it has no incentive to build out the initial layer of facilities to handle cross-over traffic unless it receives a share of layer 2 net revenues. Professor Ordoover recognizes the issue raised by the ever-expanding SARR network. The concern it raises must not be exaggerated, however. The problem that exists now is that recent SARRs do not even approach “stand-alone” status and therefore the results of SAC analyses do not even approach the results that would be realized under a true stand-alone analysis.

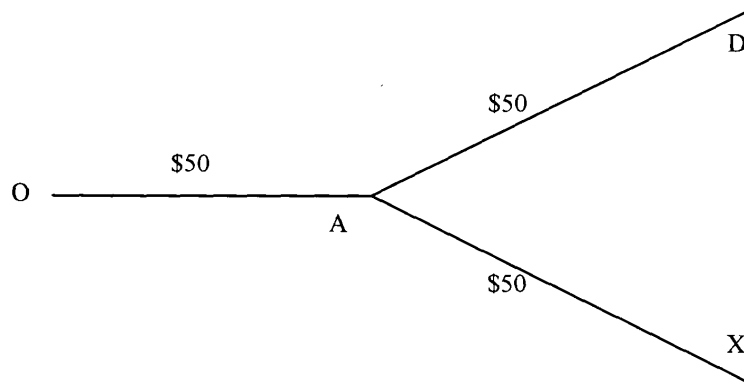
proportion of cross-over traffic in the overall traffic group carried by the putative stand-alone railroad increases, as in AEPCO's case.⁴²

(b) Distorting Effects Of Cross-Over Traffic Revenues
On The Results Of The SAC Test: A Simple
Example

This sub-section sets forth a simplified example which illustrates how use of cross-over traffic can lead to a finding that the issue rate is excessive, where, in fact, such a finding is economically irrational and would undermine the viability of the residual incumbent. Assume that the Board is assessing the reasonableness of a rate charged for traffic moving between origin O and destination D through point A. The fixed costs for that movement, standing alone, are \$100 with \$50 in costs for segment OA and \$50 in costs for segment AD (operating costs are ignored for purposes of this example). Assume that the rates charged by the defendant for the issue traffic generate \$90 of revenue. Therefore, when the issue traffic is analyzed on its own, without any grouping of other traffic, the costs of providing the issue traffic service (\$100) exceed the issue traffic revenues (\$90) by \$10 (\$100-\$90).

⁴² To provide guidance in future cases, the Board could limit the incentives and ability of the complaining shipper to rely on cross-over traffic to lower its rate(s) by limiting the amount of cross-over traffic that it permitted to be included in a SAC model. Similarly, the Board may require that the complaining shipper who wishes to include some cross-over traffic in the SAC test actually build as part of the SARR those "off-line" facilities that are effectively dedicated to the claimed cross-over traffic. Plainly, if the non-included off-line facilities are totally dedicated to cross-over traffic, the cross-over traffic should have to pay for them. The Board can further constrain these incentives and the concomitant misallocations by insisting, as suggested earlier, that the shipper justify why it prefers not to build out all the requisite facilities for the carriage of claimed traffic.

Figure III.A-1
Hypothetical Railroad System



Now assume that the defendant railroad also moves traffic for a different shipper between origin O and destination X through point A. Assume the line segment OA has sufficient capacity to handle traffic for *both* shippers without additional investment. The additional cost of line segment AX is \$50. Also assume that the second shipper has a more elastic demand for the rail service than the complainant. This limits the revenues the incumbent can charge for this movement to \$60 rather than the \$90 which the complainant pays on the issue traffic movement. The total cost for this traffic group is now \$150 ($\$50 + \$50 + \50) and the total revenues are \$150 ($\$90 + \60). In other words, the revenues from the traffic group exactly match the costs of providing service. Recall that the issue traffic standing alone could not cover its full SAC. The grouped traffic can cover the SAC because of the economies of scope that exist in handling both the issue and the non-issue traffic over the line segment OA. This simple example illustrates how shippers presenting SAC evidence can potentially benefit from grouping end-to-end non-issue traffic with issue traffic and realize cost savings from economies of scope. In the example,

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there is no finding of excessive rate, however, since the pertinent revenues exactly match pertinent costs.

To this point, the example does not include cross-over traffic. In fact, it illustrates a circumstance in which the shipper can readily present evidence on the stand-alone costs of the entire system, as the complaining shippers in fact successfully did in the *West Texas Utilities*⁴³ and *APS*⁴⁴ cases. Presenting the stand-alone costs of the complete SARR system required to provide the stand-alone traffic with the same service as the incumbent does today is the only accurate way to ensure that the full economic costs of all of the lines are covered on a stand-alone basis, and to ensure that there is no payment by the stand-alone traffic for facilities it does not use and from which it derives no benefit.

Now, assume that the complainant does not want to build the AX segment but, nevertheless, wants to claim some revenues for carrying traffic on the OA portion of the OAX movement. The complaining shipper thus chooses not to present evidence on the costs of segment AX. It therefore posits a stand-alone railroad that runs only between OA and AD. The OX traffic becomes “cross-over” traffic, *i.e.*, it moves over segment OA but interchanges with the residual incumbent at the fictional interchange point A. The costs of this reduced railroad are only \$100 (\$50 + \$50). The issue traffic contributes \$90 of revenue, as noted above. What then is the revenue contribution from the non-issue traffic for the OA portion of its OAX end-to-end movement? The simple, and the only correct answer, is that this question cannot be answered at

⁴³ *West Texas Util. Co. v. Burlington Northern R.R.*, 1 S.T.B. 638 (1996), *aff'd*, *Burlington Northern R.R. Co. v. Surface Transp. Bd.*, 114 F.3d 206 (D.C. Cir. 1997) (*WTU*).

⁴⁴ *Arizona Public Service Co. and PacifiCorp. v. Atchison, Topeka and Santa Fe Ry. Co.*, 2 S.T.B. 367 (1997) (*APS*).

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all!⁴⁵ The \$60 worth of net revenue from the OAX traffic, *i.e.*, revenue in excess of variable cost, cannot be attributed to either segment, be it OA or AX. As explained earlier, the movement requires that both segments be in place and thus the costs of both segments need to be covered from *all* sources of revenues in order to make the SARR and the residual incumbent sustainable over the long run where all costs are variable.

If the movement from O to A is the same distance as the movement from A to X, the modified mileage prorate (“MMP”) approach proposed by AEPCO in this proceeding to allocate revenues would generate equal division of revenue from the cross-over traffic to each carrier, or \$30 contributed to the SARR and \$30 to the residual incumbent. (Recall that in this example the incumbent receives \$60 of revenue for the OAX through movement.) While having the air of objectivity and even-handedness, it is clear that this approach actually biases the SAC test in favor of the complaining shipper. The theoretical rationale behind this conclusion is that if the complaining shipper believed that it could maximize the excess of total contribution (*i.e.*, maximize the difference between total revenues and total SARR costs) by building out the railroad to include the “off-line” segment, it would have done so! Hence, the mere fact that the complaining shipper prefers to include in its base of revenues the prorate *while incurring no additional costs* is probative evidence that this strategy is intended to yield a higher alleged overcharge on the issue traffic movement than the alternative of building out the full end-to-end railroad.⁴⁶

⁴⁵ Another, equally unhelpful answer is that the number is either \$0 or \$60, or any number in-between.

⁴⁶ Professor Ordover does not claim that this conclusion rises to a level of a theorem. Considerations such as the potential presence of the second layer of “off-off-line” traffic
(Continued ...)

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As was demonstrated above, when the SAC analysis is done correctly and the full costs and revenues are considered, the revenues from the two movements ($\$90 + \60) just equal the full economic costs of providing service to the two shippers ($\$50 + \$50 + \$50$). In other words, the incumbent's costs are fully covered and the rates charged for the issue traffic do not exceed a reasonable maximum. But in the cross-over example, if MMP is used to calculate the contribution from cross-over traffic to the SARR that does not include the AX segment (the "reduced" SARR) then the stand-alone "revenues" of $\$120$ ($\$90 + \30) substantially exceed the costs of $\$100$ ($\$50 + \50). This strategic revenue shift lowers the residual incumbent's share of revenues below its full economic costs of serving the cross-over traffic on the segment that it retains, which is AX.

In the cross-over example, therefore, the rate charged for the issue traffic is determined to be unreasonably high, while in the full SAC analysis the rate would be deemed reasonable. Importantly, for the overall system to remain revenue adequate, the former finding would result in a lower rate for the shipper whose demand has been deemed inelastic and would indicate a need to increase the rate for the shipper (the one moving on the OAX) whose demand has been deemed potentially more elastic. Such "rebalancing" of rates, assuming that the rate to the elastic shipper could even be raised, would harm economic efficiency and would be counter to the principles of Ramsey (differential) pricing. Of course, if the rate to the elastic shipper cannot be raised, because the shipper is not willing to pay more than $\$60$, the residual incumbent will

complicate the general proof. However, if the off-line is preponderantly used for cross-over traffic, or if cross-over traffic is a substantial portion of all the traffic claimed by the SARR, then the force of the conclusion in the text is enhanced.

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become revenue inadequate and, over the long-haul, will have to withdraw service on the AX segment.

(c) Distorting Effects Of Cross-Over Traffic In The SAC Test: Recapitulation of Main Conclusions

As explained above, there is no formula or algorithm that, in the abstract, can calculate the “ideal” allocation for any individual cross-over traffic situation: the only way to determine the allocation that leads to the postulated indifference is to determine what it would cost to construct and operate the lines of the residual incumbent required to move the cross-over traffic to its end-points on the defendant railroad. No single allocation formula can determine that point unless the actual incremental costs of the off-line are calculated and presented. Because shippers have an incentive to use cross-over traffic only when the resulting net revenue contribution to the SARR is higher than it would be if the test were conducted properly, it is a reasonable presumption that any allocation “rule” advocated by shippers is likely to bias the SAC results in favor of the shipper, no matter how vociferously the shippers claim it is “fair” or “even-handed.”

The foregoing example illustrates the three propositions set forth at the beginning of this section.

First, when cross-over traffic is introduced, the stand-alone railroad is no longer “stand-alone.” In the example, segments OA, AD, and AX taken together comprise a stand-alone system. They constitute all the facilities needed to handle all the traffic that the shipper has selected. When cross-over traffic is introduced, the new, putative stand-alone comprises segments OA and AD; these are now severed from segment AX. Nevertheless, the new stand-alone is inextricably linked to the residual incumbent serving the AX movement, because the traffic that moves over from AX is the source of revenue that affects the outcome of the SAC analysis. If the AX segment ceased to exist, the OAX traffic would not move, and the only

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revenue available to cover the \$100 of costs on the OAD segments would be the \$90 in revenue generated by the OAD issue traffic. The complaining shipper cannot have it both ways; if it is entitled to assume that cross-over traffic revenues will be available to defray a portion of the costs of the OAD segment, it must also demonstrate that the AX segment will be viable over the long run. AEPCO has made no such showing in this proceeding with respect to the lines of the residual defendants upon which the movement of cross-over traffic relies.

Second, the use of cross-over traffic is a vehicle for strategic cross subsidy. Of the \$30 in revenues from the movement OAX that is allocated under the modified mileage prorate to the stand-alone, \$20 is actually needed to cover the costs of segment AX. If cross-over traffic is permitted, this \$20 becomes a strategic subsidy from the residual incumbent to the SARR.

Third, the distorting effects of cross-over traffic increase as the share of cross-over traffic in the stand-alone traffic group increases. In the example, the cross-over movement yields contribution to the SARR in excess of costs, and the more such cross-over movements are added to the SARR, the greater the potential magnitude of the alleged overcharge on the issue traffic movement.⁴⁷

⁴⁷ To illustrate, assume that the SAC of the issue traffic is \$100 and that the current rate is \$90. Hence, on the pure SARR basis there is no finding of excessive rate. Now assume that a huge volume of cross-over traffic moves over the portion of the SARR. Assume that this traffic generates \$1000 in net contribution, which is just enough to cover the full costs of the total network (including the \$10 shortfall on the SARR built to carry the original end-to-end traffic). Now assume that the shipper shifts \$50 (or 5%) of that contribution from cross-over traffic to the SARR. With \$50 so allocated, the revenues from the SARR are \$150 which exceeds the SARR's SAC of \$100 by \$50, thus mandating a very substantial rate reduction under the Board's rate prescription methodology. Note that the distortion from the cross-over allocation is far greater in this example, even though only 5 percent of cross-over revenues are allocated to the SARR, than the initial outcome in which 50 percent of the revenues are allocated to the SARR.

(d) AEPCO Evidence

In the current case, AEPCO has pushed the use of cross-over traffic in the evidence for excessive pricing into new territory. The result is substantial distortion of the SAC analysis and an outcome that flies in the face of sound economics. AEPCO has posited a SARR that handles predominantly cross-over traffic. Importantly, the vast majority of that cross-over traffic is exempt from rate regulation because its rates are constrained to reasonable levels by market forces. As shown in Section III.A.1.c below, if the revenues associated with non-exempt traffic were removed from AEPCO's SAC analysis, the remaining revenues from exempt traffic alone would still exceed total SAC as calculated by AEPCO by more than 70 percent.

It is highly unlikely -- in fact, inconceivable -- that the exempt traffic group would be found to generate excessive rates if AEPCO had properly provided for the stand-alone facilities needed to handle this exempt traffic from end-to-end. The exempt traffic that AEPCO has selected is highly competitive. Even though railroad markets are not perfectly contestable, one would expect that forces of competition would drive rates on the competitive traffic below the pertinent SAC. In fact, when competition is intense, rates will be pushed well below SAC, down towards variable costs. Hence, actual competition approximates the effects of perfect contestability on rates.

SAC evidence suggesting that exempt (*i.e.*, competitive) traffic is moving at rates well in excess of SAC is not remotely credible. Moreover, the use of exempt, cross-over movements to make a showing that the issue traffic rates are unreasonably high is an extreme example of strategic revenue shifting that should not be countenanced by the Board. This issue is discussed further below.

c. The Results Of AEPCO's Reliance On Exempt Traffic Illustrates The Improbability And Unreliability Of Its SAC Case

The results produced by AEPCO's use of exempt traffic in this case are incredible and further exemplify the fundamental problems with AEPCO's reliance on cross-over traffic. The Board has exempted certain traffic from regulation because the Board, or its predecessor, the Interstate Commerce Commission ("ICC"), has found that the shippers do not need to be protected from "the abuse of market power" by railroads. 49 U.S.C. § 10502(a).⁴⁸ Consequently, the Board has concluded that there is no need to regulate the rates for such traffic.

The vast majority of the non-coal traffic selected by AEPCO as part of the ACE stand-alone traffic group is traffic exempt from regulation. Two types of non-coal traffic selected by AEPCO -- intermodal and automotive -- are totally exempt from regulation based upon the ICC's finding that there is effective competition for such traffic. Specifically, in exempting intermodal traffic, the ICC explained: "We are also confident, that continued regulation is not needed to protect shippers from abuses of market power. . . . No one has seriously questioned the existence of vigorous competition between TOFC/COFC and motor carrier service We are convinced that geographic and intramodal competition will tend to minimize railroad market power under the exemption."⁴⁹ The ICC also exempted automotive traffic, stating: "We are also convinced that regulation of the rail transportation of STCCs 37-11 [Motor vehicles] and 37-14 [Motor vehicle parts or accessories] is not needed to protect shippers from an abuse of market power.

⁴⁸ Under this provision, the Board may also exempt traffic if "the transaction or service is of limited scope."

⁴⁹ *Improvement of TOFC/COFC Regulation*, 364 I.C.C. 731, 732, 734, 736 (1981), *aff'd*, *American Trucking Assn's v. ICC*, 656 F.2d 1115 (5th Cir. 1981); *see also* 49 C.F.R. § 1090.2 (exempting intermodal service).

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On account of motor carrier competition, geographic competition generally, and various shipper options and powers, there is, overall, effective competition for the rail transportation of motor vehicles and motor vehicle parts and accessories.”⁵⁰

Under AEPCO’s evidence, exempt intermodal traffic constitutes almost 71 percent of the total revenue achieved by the ACE in base year 2001. *See* Exhibit III.A-2. AEPCO’s evidence shows that exempt automotive traffic accounts for over five percent of the total revenue achieved by the ACE in base year 2001. *Id.* The exempt automotive and intermodal traffic, thus, accounts for over 76 percent of the revenue achieved by the ACE in base year 2001.⁵¹ It alone contributes over { } of the ACE’s purported { } total revenues in base year 2001. *See id.*; BNSF workpaper “ACE Traffic Summary.xls.”

The improbability of AEPCO’s SAC case becomes apparent when one compares the revenues it associates with the automotive and intermodal exempt traffic with the stand-alone revenue requirement that AEPCO has developed for the entire SARR in base year 2001. Under AEPCO’s calculations, the SARR’s revenues associated with this exempt traffic alone – {

⁵⁰ *Rail General Exemption Authority--Transportation Equipment* [49 C.F.R. Part 1039], 9 I.C.C.2d 263, 265 (1992). *See also Rail General Exemption Authority: Used Motor Vehicles* [49 C.F.R. Part 1039], 9 I.C.C.2d 884, 886 (1993)(“We find that regulation of the rail transportation of used motor vehicles (STCC 41-118) is not needed to protect shippers from the abuse of market power. Indeed, some of the largest shippers of used motor vehicles have filed comments in support of the exemption... The transportation of used motor vehicles is a highly competitive market... Motor carriers remain powerful competitors for this traffic.”)

⁵¹ This 76 percent revenue figure actually understates the amount of ACE traffic that is exempt. More than 76 percent of the ACE’s revenues are actually received from exempt traffic because AEPCO includes other exempt traffic in its stand-alone traffic group. For example, much of the manifest traffic, which constitutes approximately 15 percent of 2001 ACE revenues, is exempt from regulation. Traffic moving in boxcars, which includes much manifest traffic, is exempt from regulation. 49 C.F.R. § 1039.14. However, the Railroads are unable to determine how much of the manifest traffic selected by AEPCO is exempt because AEPCO did not provide sufficient detail about that traffic.

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} in 2001 -- exceed the *full* SARR's stand-alone revenue requirement in 2001 -- {
} ⁵² -- by approximately { } dollars, or 73 percent. Under the Board's
approach to establishing reasonable rates in SAC cases, AEPCO's evidence implies that a 42
percent reduction on the rates associated with this exempt traffic would be required to produce
revenues equal to the stand-alone revenue requirement.

This result is nonsensical and inconsistent with the fundamental underpinnings of the
SAC test. The stand-alone cost test has, since its adoption by the ICC in 1985, been intended to
replicate results that would be achieved in workably competitive markets. As the ICC explained
in adopting the stand-alone cost test in the *Coal Rate Guidelines*, this "test is used to compute the
rate a competitor in the market-place would need to charge in serving a captive shipper or a
group of shippers who benefit from sharing joint and common costs. A rate level calculated by
the SAC methodology represents the theoretical maximum rate that a railroad could levy on
shippers without substantial diversion of traffic to a hypothetical competing service. It is, in
other words, a simulated competitive price."⁵³

However, the rates for traffic that is already subject to competition and, thus, exempt
from regulation, are at least 73 percent higher than "competitive" rates should be under
AEPCO's SAC analysis. AEPCO's SAC evidence would call for a substantial reduction in these
already competitive rates. The inclusion of AEPCO's own issue traffic and non-exempt traffic in
the analysis results in a purported showing of an even greater rate reduction. The point of

⁵² See AEPCO Opening Exhibit III-H-1 at 26. The stand-alone revenue requirement equals the capital requirement plus operating expense. For year 2001, it is derived by adding together the quarterly revenue requirements for each of the four quarters in 2001 appearing in column 5, lines 1 through 4.

⁵³ 1 I.C.C.2d at 528.

isolating the exempt traffic here is to demonstrate that AEPCO's evidence is not credible and therefore not probative. As explained in the counsel's argument in Section I above, the ICC has rejected methodologies that create such improbable results. *See* Ex Parte No. 347 (Sub-No. 2), *Rate Guidelines – Non-Coal Proceedings*, 1 S.T.B. 1004, 1016 (1996). Consistent with this precedent, the Board should reject AEPCO's SAC evidence here.

The ludicrous result of AEPCO's SAC analysis likely results from a combination of several different factors. It results in part from AEPCO's manipulation of cross-over traffic revenue divisions. It results in part from AEPCO's huge, unsubstantiated "adjustments" to non-coal revenues. It likely results in part from AEPCO's understatement of SAC operating expenses and construction costs. Whatever the cause(s), the analysis of AEPCO's use of exempt traffic demonstrates that AEPCO's SAC evidence is fundamentally deficient.

2. ACE Volumes (Historical And Projected)

As described in Section III.A.1.a above, AEPCO's non-coal traffic volumes were derived using unreliable and unjustified volume "adjustments." As a result, the Railroads' cannot present traditional traffic reply evidence. Due to this fundamental error, the Board should reject AEPCO's traffic evidence.

3. ACE Revenues (Historical And Projected)

As described in Section III.A.1.a above, AEPCO's non-coal traffic revenues were derived using unreliable and unjustified revenue "adjustments." In addition, as explained in Section III.A.1.b and c, AEPCO's inappropriate reliance on cross-over traffic and inappropriate use of exempt traffic warrant a dismissal of this action. Further, as shown below, AEPCO's allocation of cross-over revenues between the SARR and residual incumbent must be rejected because AEPCO has not even attempted to show that its cross-over revenue divisions leave the residual incumbent with sufficient revenues to cover directly attributable costs of the off-line portion of

cross-over movements, as required by the Board. Moreover, the cross-over revenue division methodology used by AEPCO results in the disproportionate allocation of cross-over traffic revenue to the ACE.

a. Single-Line Revenues

ACE's single-line service is limited to the transportation of issue traffic from the McKinley Mine and Lee Ranch Mine to AEPCO's Apache Station. *See* AEPCO Nar. at III-A-25. This traffic accounts for only about 1 percent of the volume of traffic transported by the ACE. *Id.*

b. Divisions Of Revenue -- Existing Interchanges

None of the movements in the ACE traffic group fall within this category.

c. Divisions Of Revenue -- Cross-Over Traffic

Approximately 99 percent of the ACE traffic is cross-over traffic. As explained in Section III.A.1.b, AEPCO's heavy reliance on cross-over traffic in this case represents a conceptually improper implementation of the SAC test. Apart from this conceptual error, AEPCO's calculation of revenue divisions must be rejected because AEPCO has not even attempted to show that its modified mileage prorate ("MMP") methodology leaves the residual incumbent with sufficient revenues to cover directly attributable costs of the off-line portion of cross-over movements.⁵⁴ Nor has AEPCO articulated a principled basis for allocating that portion of revenues on cross-over movements that go to coverage of unattributable costs.

⁵⁴ Illustrative calculations set out in section III.A.3.c.iii suggest that coverage of off-line directly attributable costs alone would leave AEPCO with substantially less revenue for the ACE than it has claimed under MMP.

i. Cost Coverage As A Basis For Divisions On
Cross-Over Movements

A threshold problem with AEPCO's evidence is that AEPCO has not even attempted to show that its MMP methodology leaves the residual incumbent with sufficient revenues to cover directly attributable costs of the off-line portion of cross-over movements. Moreover, absent any information about attributable costs, it is impossible to know how much revenue AEPCO has allocated through the MMP method to coverage of either off-SARR or on-SARR unattributable costs and therefore impossible to divine any rationale for such allocation. In short, AEPCO has ignored entirely the need to address the fundamental policy issue of cost recovery raised by its allocation of revenues on cross-over traffic.

Attributable costs as well as potential contribution to the recovery of unattributable costs must be considered when analyzing the effects of including cross-over revenues in the SAC analysis. This is the case because an allocation rule should not, in principle, undermine the residual incumbent's ability to recover the costs that it must defray to remain viable. The focus on long-run cost recovery is the proper one because the regulatory problem created by cross-over traffic is the inability to make a stand-alone comparison between revenues and forward looking costs as a result of the requisite facilities not having been built.

The Board and its predecessor have indicated in various contexts that the allocation of revenue on cross-over traffic cannot be divorced from the concept of cost-recovery. The treatment of this subject that appears most consistent with the SAC principles is the ICC's discussion in the *OPPD* case. In that case, Burlington Northern criticized a shipper's reliance on

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revenues generated by off-line traffic where the shipper ignored “[c]osts associated with off-line investment.”⁵⁵

The ICC accepted the economic logic of Burlington Northern’s argument that the shipper could not simply assume coverage of off-line costs:

[S]tand-alone analysis, according to BN, cannot be made for a group of shippers unless total group revenues are compared to the total costs of serving the group. . . .

As a general matter, these propositions are correct, and we do not believe that [the Administrative Law Judge] held otherwise.⁵⁶

Notwithstanding its endorsement of this principle, the ICC concluded that the shipper had presented evidence sufficient to support a presumption that the cross-over traffic could both cover off-line costs and contribute to the costs of the SARR.⁵⁷

Most recently, the Board addressed the subject of revenue divisions and cost recovery in its *TPMA* decision:

The revenue each carrier receives should cover the attributable costs of the service it provides and make some contribution to its unattributable costs. As long as the traffic makes any contribution to a carrier’s unattributable cost, the railroad is better off participating in the transportation than not participating in it.⁵⁸

In the context of a different SAC case, where the defendant was sponsoring its own methodology for dividing revenues on cross-over traffic, it would be appropriate to explore the

⁵⁵ *OPPD*, 3 I.C.C.2d at 136.

⁵⁶ *Id.* at 138.

⁵⁷ *Id.* at 142.

⁵⁸ *TPMA*, slip op. at 31 n.73. This statement does not address whether the residual incumbent could or should receive relatively less contribution on its portion of cross-over movements than the defendant actually realizes on through movements.

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principles that should govern the allocation of that portion of cross-over revenues that would be available for coverage of unattributable costs, assuming that cross-over traffic is allowed in the SAC calculation. That showing is not necessary here, because AEPCO has not even made the threshold showing that its revenue division leaves the residual incumbent with sufficient revenues to cover the directly attributable costs of cross-over movements and, consequently, BNSF is not sponsoring any allocation of revenues on cross-over traffic.

ii. AEPCO's Failure Of Proof

In its opening SAC evidence, AEPCO did not purport to make any showing that its proposed revenue division would leave the residual incumbent with sufficient revenues to cover the directly attributable costs of off-line portions of cross-over movements. AEPCO apparently takes the position that it is not required to present any such evidence. AEPCO states in its Reply to the UP Petition that "AEPCO objects strongly to any claim that a shipper on opening should be required to undertake a detailed cost analysis of all off-SARR cross-over traffic." AEPCO Reply at 26. In the absence of such evidence, AEPCO's revenue division on cross-over traffic is completely arbitrary and unprincipled.

Instead of supporting its division of revenues on cross-over traffic with evidence of off-line cost coverage, AEPCO claims that it is entitled to rely on the modified mileage prorate because (1) the Board has endorsed its use in prior cases, (2) its witness "Toren" has concluded that application of the modified mileage block prorate method to intermodal traffic . . . provides a sound approximation of the division that a bridge carrier in the ACE's situation would receive for handling intermodal traffic" (AEPCO Nar. at III-A-32), and (3) the Railroads refused to produce revenue division data. None of these rationales is a substitute for actual evidence of off-line cost coverage.

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AEPCO's claim that it may presume that the MMP is acceptable because it has been used by the Board in prior cases does not constitute an evidentiary showing that MMP is acceptable or valid under the facts of this case. Moreover, the Board itself has recently emphasized that "[w]e have not adopted a single, preferred procedure for developing revenue divisions on cross-over traffic."⁵⁹ AEPCO is not entitled simply to rely on MMP.

Neither is witness Toren's vague testimony regarding divisions of revenue on interline intermodal movements a substitute for an actual showing of coverage of directly attributable off-line costs. Mr. Toren's conclusion that the MMP allocation approximates a division that "a bridge carrier in the ACE's situation would receive for handling intermodal traffic" is undercut by Mr. Toren's own testimony that "most long-haul intermodal traffic does not move in joint service. Instead, the shipper makes separate arrangements with each line-haul carrier. As a result, there is generally a lack of data regarding divisions for intermodal movement." AEPCO Nar. at III-A-31. In short, Mr. Toren does not have a real world basis for his opinion. It is pulled out of thin air. Further, Mr. Toren's conclusion relates only to intermodal traffic. While much of the cross-over traffic is intermodal, the SARR also handles other types of cross-over traffic. Specifically, coal, automotive, grain, manifest and other traffic constitutes almost 25 percent of the ACE's cross-over revenues.

AEPCO's suggestion that it should be able to rely on the MMP methodology due to the Railroads' supposed failure to produce "market-based divisions" information in discovery has no basis in fact or theory. Contrary to AEPCO's claims, the Railroads produced revenue data that allowed AEPCO to estimate the revenue divisions on joint BNSF/UP movements (other than the

⁵⁹ *TMPA* at 31, n. 74.

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issue movements).⁶⁰ More important, there is no proposition in SAC theory or economics that would suggest information about real world divisions between a rail carrier and its interline partners would provide the rationale for a particular division of revenues in a SAC case. Market based divisions negotiations between real world railroads are not the same as the assumed negotiation in the stand-alone world between the SARR and the residual incumbent. The market negotiation that is assumed to take place is a negotiation between the hypothetical SARR and the residual incumbent. It is clearly not a negotiation between the real-world defendant railroad and its potential real-world interline partner(s). In the hypothesized cross-over traffic negotiation, interline revenues are not even at issue: the hypothesized negotiation over the cross-over traffic centers on the allocation of the revenues from a *feasible* on-line move that is split into hypothetical segments. Real-world divisions negotiated between the defendant and its potential interline connections are irrelevant to the economics of the negotiation in the hypothetical stand-alone world in which an efficient carrier capable of carrying the cross-over traffic end-to-end is artificially and arbitrarily split by the shipper whose sole objective is to demonstrate that it pays an excessive rate for the issue traffic. In real-world negotiations over interline rates, the goal is to ensure that the profitable move is made possible where it would be impossible for either

⁶⁰ On December 5, 2002, UP produced traffic data that revealed for BNSF/UP interline movements (other than the issue movements) both (a) the total amount charged to the customer and (b) the UP-only net revenue for those interline movements. In response to subsequent questions from AEPCO's counsel, UP explained what it had provided. *See* letter from Robert D. Rosenberg to Carolyn F. Corwin, dated Dec. 11, 2002 (requesting a detailed explanation of the "Total Freight Amount" and "Union Pacific Revenue" fields in UP's traffic tapes); Letter from Carolyn F. Corwin to Robert D. Rosenberg, dated Dec. 16, 2002 (noting that "UP supplemented its production by providing both the total amount charged to the customer and UP-only revenue for interline moves (other than moves of the complaint traffic.>"). In addition, some of the coal contracts produced by BNSF in discovery contain information about the carriers' revenue divisions.

carrier to take the traffic end-to-end or where the interline movement would be more efficient than a single-line movement.

iii. Sample Calculations Of Off-Line Attributable Costs

Although BNSF is not, under the circumstances presented by this case, presenting evidence regarding the proper division of revenues, BNSF's witness John Klick has undertaken sample calculations of directly attributable costs on intermodal movements. These calculations show that AEPCO's modified mileage prorate distorts the revenue allocation on intermodal shipments by allocating to the ACE a disproportionately large percentage of contribution that can be used to defray unattributable costs. To illustrate this, Mr. Klick selected three actual shipments identified by AEPCO from the BNSF traffic data for inclusion in its traffic group.⁶¹ Mr. Klick developed URCS-based costs for the on-SARR and off-SARR portions of these movements and compared the costs to the revenues that AEPCO allocated to ACE and the residual BNSF.⁶² Mr. Klick selected three different types of intermodal shipments. The first is a Plan I shipment, which is a hub-to-hub movement (*i.e.*, the railroad is not responsible for the drayage associated with picking the intermodal unit up at the shipper's loading dock or delivering the intermodal unit to the receiver's loading dock) in a shipper-owned intermodal unit. The second is also a Plan I, hub-to-hub shipment, but one that occurred in a railroad-owned intermodal unit. The third is a Plan II shipment in a railroad-owned intermodal unit for which the railroad *is* responsible for origin and destination drayage.

⁶¹ The data pertaining to the movements used for purposes of the calculations are as they appear in the traffic file. That is, they do not reflect AEPCO's upward revenue adjustment.

⁶² The calculations supporting Mr. Klick's URCS calculations, and the other figures shown in Table III.A-3, are set forth in BNSF's electronic workpapers at "bnrv 2001 examples for costing.zip."

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As a bridge carrier, the ACE incurs only line-haul costs. Additional terminal costs at origin and destination associated with intermodal shipments would, under the ACE configuration posited by AEPCO, be incurred only by the residual BNSF. Obviously, the additional terminal costs associated with intermodal shipments would be lowest in the first type of shipment and highest in the third.

The following table summarizes the results of this analysis.

**Table III.A-3
Comparison of Modified Mileage Prorate Results
To Costing Results for Sample Intermodal Movements
Included by AEPCO in the ACE Stand-Alone Traffic Group**

	Move 1	Move 2	Move 3
Total Revenues, Through Movement	{ }	{ }	{ }
ACE Revenues	{ }	{ }	{ }
Total One-Way Miles, Through Movement	{ }	{ }	{ }
Terminal Costs Other Than Intermodal	{ }	{ }	{ }
Intermodal-Related Terminal Costs	{ }	{ }	{ }
Total Terminal Costs	{ }	{ }	{ }
Total Line-Haul Costs	{ }	{ }	{ }
Total Costs, Through Movement	{ }	{ }	{ }
Total Costs, ACE	{ }	{ }	{ }
R/VC Ratio, Through Movement	{ }	{ }	{ }
R/VC Ratio, Residual BNSF	{ }	{ }	{ }
R/VC ACE	{ }	{ }	{ }

Table III.A-3 demonstrates that under the modified mileage prorate applied by AEPCO, the ACE obtains a substantially higher proportionate contribution to coverage of unattributable costs, as reflected in its higher R/VC ratios for its small portion of the end-to-end movement, than did the real world BNSF on the through movement. Furthermore, while the ACE R/VC ratios are substantially higher than the real world BNSF's were, the R/VC ratios that the residual

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BNSF realizes, under the MMP revenue allocation, are actually *lower* than those experienced by BNSF historically, and *substantially lower* than those realized by the ACE. This means that under the modified mileage prorate applied by AEPCO, the ACE would be granted a disproportionate share of the contribution with which to defray its unattributable costs, while the residual BNSF's ability to defray its unattributable costs would be diminished. In the case of the third movement, in fact, the residual BNSF is left with a division of revenues that is *below* its attributable costs (calculated using URCS).

**III-B. Stand-Alone
Railroad System**

B. STAND-ALONE RAILROAD SYSTEM

AEPCO's SARR replicates the east-west mainlines of defendants BNSF and UP across the southwestern United States. The issue traffic originates on BNSF's mainline in northwest New Mexico and is delivered to the Apache Station on UP's mainline in southeast Arizona. Those lines run on roughly parallel courses about 200 miles apart. Defendants also own two lines that connect their two main east-west lines. The first is a BNSF line that runs south from Belen, NM where an interchange occurs with UP at Deming, NM. This is the line that is currently used to move the issue traffic. The second line that connects the two main east-west lines is a UP line that runs from Vaughn, NM to El Paso, TX.

While AEPCO's SARR replicated the defendants' east-west mainlines, it did not replicate either line connecting the two mainlines, and it did not posit the construction of an alternative line to connect the two mainlines. Instead, AEPCO assumed that the issue traffic would be routed from the origin mines to Vaughn, 108 miles east of Belen, and it would then be handled by the SARR over UP's Vaughn to El Paso line. The SARR would pay UP a rental fee for use of that line. The rental fee is based on a trackage rights agreement between BNSF and UP that allows the real world BNSF to move certain types of traffic between Vaughn and El Paso. At El Paso, AEPCO assumes that the traffic would be routed back onto SARR lines for movement west to the plant.

BNSF explained in Section I of this Narrative that AEPCO's use of a rental fee for use of UP's line between Vaughn and El Paso is improper. The *Guidelines* and SAC decisions make it clear that a complainant may not base its SAC evidence on a rental fee for the use of a defendant's facilities used to provide the service at issue. *See* Section I.B.2. To ensure that the challenged rates are judged by reference to the full economic costs of providing the service, the

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complainant must include, as part of the stand-alone cost calculation, all of the construction and operating costs for all facilities that are needed to provide the service.

The use of a trackage rental fee would be inconsistent with the objectives of the SAC test unless the fee represented an amount that ensures the full recovery of the joint and common costs of the line at issue. But the only way to determine whether the rental fee is consistent with SAC objectives would be to examine the forward looking costs of constructing and operating the line and the revenues available to cover those costs from shippers using the line, i.e., by examining SAC evidence. Nothing would be gained by relying on a trackage rights fee in the presentation of SAC evidence but the possibility of a distortion of SAC results. If the rental fee and other payments for use of the facilities at issue do not cover the full costs of those facilities, there is no guarantee that the line will be available for the 20 year SAC period. This is precisely what the ICC concluded in *Guidelines*.¹

There is no way of knowing, short of examining SAC evidence, whether a particular trackage rental fee is set at a level that ensures a full recovery of the costs of the line at issue. Differential pricing principles apply in the setting of trackage rights fees just as they apply in the setting of rates to shippers. In either case, market circumstances may be such that in the short-run, it is economically rational to establish rates or trackage rights fees at a level below the forward-looking fully-allocated costs of constructing and maintaining the right-of-way because as long as the fees are high enough to cover the relevant avoidable costs, trackage rights fees contribute to the going concern value of the “landlord” railroad. However, rates or trackage rights fees that only contribute marginally to the joint and common costs of the railroad do not

¹ *Coal Rate Guidelines, Nationwide*, 1 I.C.C.2d 520, 543 n.60 (1985), *aff'd sub nom.*, *Consol. Rail Corp. v. United States*, 812 F.2d 1444 (3d Cir. 1987).

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ensure the railroad's long-term viability. The SAC test is based on the evaluation of a hypothetical railroad that would be viable over the long term.

The ICC has ruled that a SARR may rely on trackage rights over a third party's line instead of assessing the full economic costs associated with that line. But there is a rationale for distinguishing between trackage rights over a defendant's lines and trackage rights over a third party's lines that does not apply here. In the third-party context, the defendant does not have ownership costs associated with the facilities at issue except to the extent those costs are incorporated in the trackage rights payment. The ICC concluded that it would be an entry barrier to require the SARR to incur ownership costs that the incumbent does not have today. *See* Section I.B.2. But in this case, there is no way for defendants to avoid ownership costs associated with a line that links the defendants' east-west mainlines. There are only two ways of moving the issue traffic between the BNSF and UP mainlines and both involve facilities owned by defendants. The defendants cannot avoid the costs of owning those lines, so the SARR cannot avoid accounting for those ownership costs through the artifice of a trackage rights fee.

AEPCO's improper reliance on trackage rights over the Vaughn to El Paso line makes it impossible for defendants to submit alternative SAC evidence. If defendants were to prepare alternative SAC evidence that did not include AEPCO's trackage rights segment of the SARR, they would have to choose among various potential configurations of the SARR and identify an alternative traffic group for their chosen configuration. But the configuration of a SARR and the selection of the traffic handled by it are elements that have to be presented by the complainant in its case-in-chief. *See* Section I.B.3. AEPCO's improper use of trackage rights, like its failure accurately to identify the SARR's traffic, is an error that justifies dismissal of AEPCO's complaint because it is an error defendants cannot correct through the filing of reply evidence.

III-C. Operating Plan

C. OPERATING PLAN

AEPCO's presentation of operating plan evidence is similar in many ways to the approach taken by complainants in recent cases. No evidence is set out in the narrative or exhibits to support AEPCO's calculations or assumptions. The real evidence of SARR operations is buried in complex workpapers, accessible to the Board and defendants only through extremely detailed analysis. Some of the flaws in AEPCO's operating plan, however, are close to the surface. AEPCO's operating statistics are the product of a string program that is merely the latest iteration of a string program that the Board has already rejected.¹ AEPCO did not even bother to modify the program, {

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¹ *TPA*, slip op. at 74.

² See AEPCO Opening electronic workpaper "aepco_string.prg," lines of code 1006-1009, 1682-1685 and 3159-3162.

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While many of the same flaws are therefore present in AEPCO's operating assumptions that the Board has seen in recent cases, this case is different from prior cases in that the defendants are unable to present an alternative assessment of the operating costs of the SARR because of AEPCO's errors in identifying the traffic base for the SARR. The operating plan must be based on an examination of the specific movement of individual trains across the SARR and it must be tailored to the service needs of the shippers whose traffic is handled on specific trains. The operating plan must account for the specific commodities handled, the number of trains, the schedule of specific trains, the number of cars on a train, the weight of the cars, the composition of the train, and other operating characteristics. Until the specific traffic handled by the SARR is identified, no credible operating plan can be developed.

As discussed earlier in this Narrative, AEPCO created a fictional traffic base for its SARR by misusing BNSF's traffic and train event data and by applying inappropriate adjustments to BNSF's actual 2001 and first half 2002 traffic data. An operating plan for the SARR could therefore only be created if AEPCO's traffic assumptions were completely revised. As explained above, that is not something that the defendants can or should be required to do. Therefore, AEPCO's failure to present credible evidence on the traffic handled by the SARR should result in the dismissal of its complaint.

There are, however, other fundamental flaws in AEPCO's operating assumptions. These flaws stem from AEPCO's assumption that its SARR carves out overhead operations between Vaughn and Defiance on BNSF's lines and between Cochise and El Paso on UP's lines. This assumption was apparently intended to simplify the SARR's operations by creating an overhead carrier that would not need to perform costly switching operations for local traffic. Although perhaps simplifying SARR operations, this assumption would also require substantial changes in the residual BNSF's operations and impose enormous costs on it. AEPCO made no attempt to

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evaluate the ramifications of the major changes in the incumbents' operations that the SARR would require, or to estimate the costs that would be imposed on the residual incumbents. In the recent *TMPA* case, the Board made it clear that when a complainant uses cross-over traffic in a way that imposes operational changes on the residual incumbent, it must investigate the impact of those changes and include any costs attributable to them.⁴ AEPCO did not carry out that analysis here.

For legal and practical reasons, this showing must be made by the complainant in its opening evidence. The identification of costs for which the SARR is responsible is an obvious element of the complainant's case-in-chief. Since the SARR is responsible for costs that are imposed on the residual incumbent or other parties as a result of operational changes assumed by the SARR, as the Board has found in recent cases, then those costs must be identified and quantified on opening. And since the complainant cannot submit evidence for the first time on rebuttal, it cannot expect to carry out the required analysis in reply to defendants' evidence.⁵ If the complainant fails to assess the impact of operational changes in its opening evidence, there is no procedural mechanism for considering such evidence unless multiple additional rounds of evidence are permitted. Such an expansion of SAC litigation would clearly be inappropriate.

AEPCO failed to consider any costs or other effects of the operational changes that its SARR would impose on the residual incumbents. As described below, however, the adverse impact of AEPCO's operating plan on the residual BNSF would be substantial.

⁴ *TMPA*, slip op. at 22.

⁵ *Id.* at 56 n.94; *WPL Reconsideration*, slip op. at 16.

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1. AEPCO Ignores The Enormous Costs And Operational Disruptions That Would Be Imposed On The Residual BNSF As A Result Of The Assumption That The SARR Would Bypass The Belen, NM Yard

A critical feature of AEPCO's operating plan is that the SARR is hypothesized to operate as an overhead carrier between the eastern and western terminals of the SARR lines without any significant operations at intermediate points. On BNSF's east-west line, this means that the SARR is assumed to operate as an overhead carrier between Vaughn and Defiance, NM without stopping at Belen, where BNSF currently has an important yard. This deceptively simple assumption would require that BNSF establish new and costly operations and build new yards at Vaughn and Defiance to serve shippers located in the Southwest whose service is now supported through operations at Belen. The impact of AEPCO's operating plan on BNSF's local operations is described below.

a. BNSF's Belen Yard Provides Critical Support For BNSF's Service To Shippers In The Southwest

BNSF's Belen Yard is the operating headquarters for BNSF's Southwest Division, one of thirteen field operating divisions on the BNSF system. Exhibit III.C-1 shows the divisions on the BNSF system. The Southwest Division includes the segment of the BNSF transcontinental route from Clovis, NM to Needles, CA. It also includes the secondary lines north of Belen to La Junta, CO and south of Belen to El Paso, TX, as well as the Carlsbad and Las Vegas branch lines. The Southwest Division General Manager and a significant portion of his management team are located at Belen. They are responsible for the day-to-day operations of the railroad within this area, including local movements within the Southwest Division and transcontinental movements that traverse the Southwest Division. This management team supervises transportation, maintenance of way, maintenance of equipment, safety and budget control. Exhibit III.C-2 is an organization chart for the division personnel located at Belen Yard.

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The Belen Yard provides broad support for train movements through the Southwest Division.⁶ On average, six westbound intermodal trains and six eastbound intermodal trains passing through Belen Yard each day have cars to be set out or picked up in the yard. One eastbound and two westbound vehicle trains move through Belen Yard on the average day, with approximately five carloads of automobiles set out of these trains, and an equivalent number of returning empty cars picked up by these trains. On average, eight manifest trains (including trains originating and terminating at Belen) require switching at Belen Yard each day. Approximately 400 to 500 cars in aggregate are set out from and picked up by these trains at Belen Yard each day.

BNSF also performs car inspection and repair, fueling⁷ and locomotive servicing at Belen. The Belen Yard has extensive facilities to support these operations. A schematic diagram of the Belen Yard is set forth in Exhibit III.C-3. The Belen Yard includes 18 flat lead switching tracks. There are also eight mainline tracks at Belen Yard, used for fueling locomotives and for performing 1,000- and 1,500-mile inspections on all transcontinental trains passing through the terminal -- up to 100 trains per day. These tracks are equipped with fueling platforms and are designed with wide track centers to accommodate the mechanical car inspections. The yard includes a car repair facility for bad-order cars and a locomotive service facility with the capacity to service fully four locomotives at a time, and a turntable.

⁶ The following description of Belen Yard is based on information gathered by BNSF's witness, Mr. Mueller, in a visit to Belen Yard in March, 2003. This information is consistent with data provided by BNSF in discovery.

⁷ All transcontinental trains passing through Belen Yard are fueled at Belen.
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AEPCO assumes that fueling will occur on the SARR at Vaughn, but there is no equivalent source of fuel there today.

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There are four basic local operations that are supported by the Belen Yard. Exhibit III.C-4 depicts the lines for these local operations. First, on average, four roundtrip trains operate between Belen and Albuquerque, located 31 miles north of Belen, each day. The trains assembled at Belen Yard for movement to Albuquerque range from 10 to 50 cars each trip from all three train type groups (intermodal, vehicle and manifest) that have been set out by other trains at Belen Yard. The trains moving from Albuquerque to Belen include both empty and loaded cars to be set out at Belen Yard and picked up by trains from all these train type groups bound for other destinations. The level of daily service operating between Belen and Albuquerque is sufficient to require that one road crew be on duty on a continuous basis to handle it.

Second, BNSF's principal route into and out of El Paso is through Belen, which is 228 miles north of El Paso. On average, one train operates in each direction between Belen and El Paso each day. The train operating from Belen to El Paso is assembled each day with intermodal and merchandise cars set out of trains at Belen Yard. The returning train from El Paso includes cars to be set out at Belen Yard and picked up by trains bound for other destinations.

Third, an average of one train per day in each direction operates between Belen Yard and Phoenix. Phoenix is located 567 miles west of Belen and is reached by heading west on BNSF's mainline and turning south at Williams Jct. All intermodal and manifest traffic coming from the east and bound for Phoenix is set out of trains at Belen Yard. The cars are then assembled at Belen Yard into a train for transportation to Phoenix.

Fourth, on average, one train per day operating between Belen Yard and Barstow will pick up 30 to 50 cars for further movement to Barstow, which is located 731 miles from Belen. These trains include cars from all three train type groups (intermodal, vehicle and manifest) set out from other trains at Belen Yard that are destined for all points in California. Trains returning

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from the west coast through Barstow include cars to be set out at Belen Yard for switching to trains bound for various destinations.

b. AEPCO's Assumption That No Switching Would Be Performed By The SARR At Belen Yard Would Disrupt BNSF's Operations And Impose Enormous Costs On The Residual BNSF

AEPCO's operating plan assumes that the SARR will not carry out any switching or other train-related activity at Belen except to facilitate the interchange of a handful of coal trains between the residual BNSF and the SARR for coal movements originating at the York Canyon mine in New Mexico. AEPCO Nar. at III-C-4. AEPCO's operating plan therefore assumes: (1) that the SARR would be an overhead carrier that simply carries traffic from one end of the SARR to the other; and (2) that the SARR can avoid costs associated with BNSF's local traffic by bypassing Belen Yard. The problem with AEPCO's operating plan stems from the fact that a substantial volume of traffic is switched at Belen today, including trains that AEPCO assumes will bypass Belen altogether in the stand-alone world.

As described above in Section III.A.1 of this Narrative, the starting point for AEPCO's selection of traffic for the SARR was the identification of trains that traversed BNSF's lines between Vaughn and Defiance from BNSF's train event data produced in discovery. This step in AEPCO's traffic selection process was relatively straightforward, since BNSF's train event data identifies the movement of individual trains over particular line segments.⁸ Of the trains identified by AEPCO that moved across the BNSF lines replicated by the SARR between September 12, 2001 and September 18, 2001, approximately 57 percent of manifest trains, 54 percent of vehicle trains, and 20 percent of intermodal trains stopped at Belen and had cars

⁸ AEPCO's subsequent attempt to match these train data to net ton and revenue data in BNSF's traffic file was the source of the AEPCO's erroneous revenue assumptions for the SARR, as discussed in detail above in Section III.A.1.

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removed or added.⁹ The vast majority of this switching involved blocks of cars being switched from one train to another to reroute the traffic. Under AEPCO's operating plan, however, the SARR would bypass Belen. To understand the impact of this assumption on the residual BNSF, it is necessary to consider how AEPCO purported to select from BNSF's train event database only that traffic that supposedly moved between Vaughn and Defiance as overhead traffic.

AEPCO apparently sought to identify only overhead traffic by applying a series of filtering calculations to BNSF's train event data to ensure that the SARR trains would enter and leave the SARR with the same number of cars. This, of course, was required if the train does not stop at an intermediate yard. If the trains are truly operating in overhead service, they cannot pick up or drop off cars along the route. Indeed, AEPCO's string program makes it clear that SARR trains (except the handful of coal trains handling York Canyon coal) do not stop at yards as they traverse the SARR between Vaughn and Defiance.¹⁰

AEPCO's analysis started with a reformatted version of BNSF's Train Event files.¹¹ From this file, AEPCO identified for each train moving on the SARR the first station on the SARR for which there were reported data. (AEPCO refers to the number of loaded cars at this station as LDSON, short for "loads on.")¹² For example, on westbound trains, the first station would normally be Vaughn.¹³ Then AEPCO identified the last station on the SARR for which there were reported data. (AEPCO refers to the number of loaded cars at this station as LDSOF,

⁹ BNSF Reply electronic workpaper "belen switching sept 12-18.xls."

¹⁰ AEPCO Opening electronic workpapers "timese.dbf," "timesl.dbf," and "route.dbf."

¹¹ See AEPCO Opening electronic workpaper III-A-2 "bntr1h01.dbf," "bntr2h01.dbf," and "bntr1h02.dbf."

¹² AEPCO selected the number of loaded cars from the field "trn_ld_tot."

¹³ The actual program logic is in AEPCO's Opening electronic workpaper III-A-2 "bntrncplp.prg."

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short for “loads off.”) On westbound trains, this usually was Defiance.¹⁴ A subsequent program then selected the lesser of the on-SARR loaded car count and the off-SARR loaded car count for each train.¹⁵ The result reflected the number of loaded cars that the SARR was assumed to move in overhead service from Vaughn to Defiance.

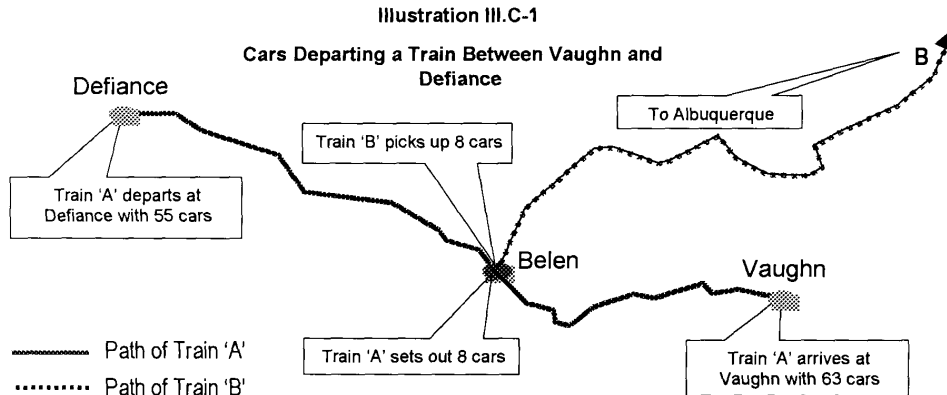
This approach ignores discrepancies between the number of cars coming on and going off of the SARR at Belen. It attempts to limit SARR trains to overhead service and avoid the need for any intermediate switching between SARR end points, but it would create enormous operating problems for the residual BNSF. Three examples illustrate the extent of the disruptions and costs that would be imposed on the residual incumbent.

First, take the example of a real world westbound train that arrives at Vaughn with 63 cars and leaves Defiance with 55 cars. Illustration III.C-1 depicts such a train based on an actual train included by AEPCO in its SARR traffic group, train Z1CHIPHX15B.¹⁶ (The “Z” prefix indicates that this is a high-priority intermodal train.) The following illustration shows how BNSF currently operates this train on the portion of its system replicated by the SARR.

¹⁴ *Id.*

¹⁵ The actual program logic is in AEPCO’s opening electronic workpaper III-A-Supp “replacefields.prg.”

¹⁶ BNSF Reply electronic workpaper “Z1CHIPHX15B details.xls.”



Train Z1CHIPHX15B (Train A in the illustration), traveling westbound, passes through Vaughn with 63 cars and sets out eight cars at Belen Yard, where they are picked up by a local train (Train B in the illustration) for movement north to Albuquerque. The original train continues west from Belen Yard with 55 cars (the original 63 cars less the 8 cars switched out of the train at Belen Yard).

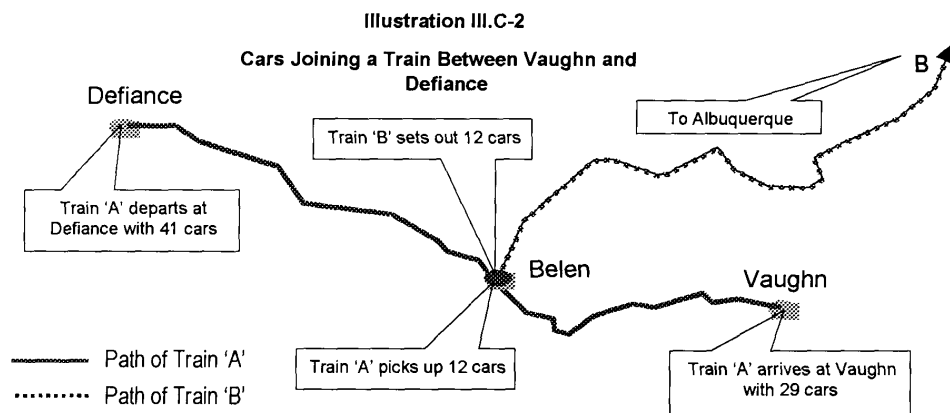
The program applied by AEPCO to create overhead service, described above, assumes that this train will operate differently. AEPCO assumes that the SARR train will handle only 55 cars across the entire SARR, since 55 is the lower of the on-SARR and off-SARR car count. This must mean, however, that 8 cars leave the train at Vaughn so that the SARR train can move across the SARR with only 55 cars. This creates several problems for the residual BNSF. The most obvious problem is that BNSF does not have any yard facilities at Vaughn today, so it has no way of holding, storing or switching any cars at Vaughn. (The same problem exists at Defiance for eastbound trains, where BNSF has no facilities today to handle cars left there by the SARR.) Moreover, those 8 cars are destined to Albuquerque in this example, but they can only get there by going through Belen. BNSF would therefore have to run a special train to move the

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8 cars from Vaughn to Belen so they can be joined to Train B for the movement to Albuquerque.

The inefficiency and expense associated with such an operation is obvious.

AEPCO's attempt to create an overhead carrier created other problems. Take the example of a westbound train that arrives in Vaughn with 29 cars and leaves Defiance with 41 cars. The following illustration depicts how BNSF currently operates this train on the portion of its system replicated by the SARR.



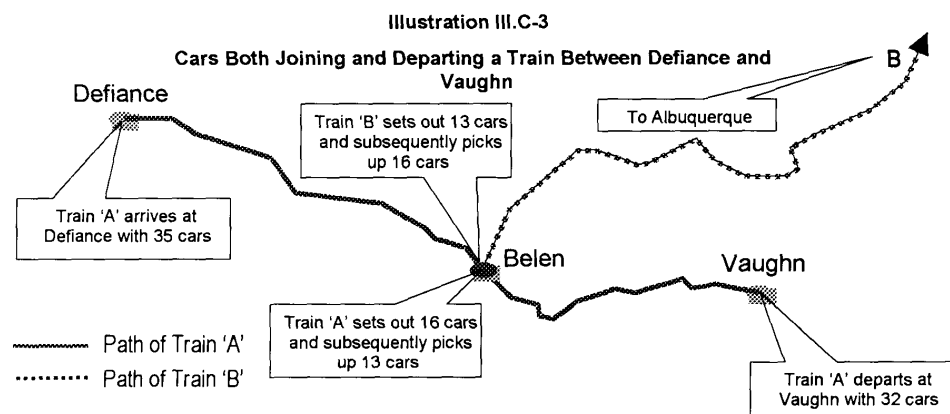
This example is also based on a real world train, Z4WSPLAC12A, included by AEPCO in its traffic group.¹⁷ Train Z4WSPLAC12A (Train A in the illustration), operating westbound, passes through Vaughn with 29 cars and travels to Belen Yard. A local train (Train B in the illustration) arrives at Belen Yard from the north, where it sets out 12 cars. (These cars would have originated at local stations like Albuquerque destined for California.) Train Z4WSPLAC12A picks up these 12 cars at Belen Yard and continues west to Defiance with 41 cars.

¹⁷ BNSF Reply electronic workpaper "Z4WSPLAC12A details.xls."

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Once again, AEPCO has modified the operation of this train. To maintain a constant number of cars on SARR trains across the system, AEPCO assumes that the train enters the SARR at Vaughn with 29 cars and travels through to Defiance without picking up any cars set out by Train B at Belen Yard. AEPCO therefore strands the 12 cars at Belen Yard and leaves it to BNSF to deal with these stranded cars. This would require BNSF to provide additional service to transport these 12 cars from Belen Yard to Defiance, add facilities at Defiance to accommodate the switching of cars there, and incur the costs for these inefficient operations. Since the SARR has supposedly taken all overhead traffic passing through Belen, BNSF would be unable simply to attach these cars to another cross-country train, but would instead have to provide additional costly local service.

A third example shows that in addition to imposing costs on the residual incumbent, AEPCO's assumption that SARR trains bypass the Belen Yard is inconsistent with the fundamental assumption underlying AEPCO's operating plan that the SARR is only an overhead carrier. Take the example of an eastbound train M1BARALT15A, also included by AEPCO in its traffic group (Train A in the following illustration).¹⁸



¹⁸ BNSF Reply electronic workpaper "M1BARALT15A details.xls."

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This train passes through Defiance with 35 cars. At Belen Yard, Train A sets out 16 cars, temporarily reducing the number of cars on the train to 19. A second train (Train B in the illustration) sets out 13 cars at Belen Yard. Assume for purposes of this example that these 13 cars originated at Albuquerque for movement east and that Train B is a local train carrying those cars from Albuquerque to Belen.¹⁹ Those 13 cars are then picked up by Train A, increasing the number of cars in the train to 32. Train A then continues east to Vaughn with 32 cars. Train B then picks up the 16 cars that were set out by Train A at Belen Yard and transports them to local destinations.

In identifying the number of cars transported by Train A, AEPCO's train selection algorithm takes the lower of on-SARR or off-SARR cars and assumes that this number of cars traverses the entire SARR system without stopping at intermediate yards. In other words, AEPCO assumes that this train enters the SARR at Defiance with 32 cars (the lower of 35 or 32) and departs the SARR at Vaughn with 32 cars. There are several problems with this assumption.

The first problem is one already encountered above, namely that the SARR is assumed to drop cars off at Defiance even though BNSF has no facilities there to handle those cars and no means of moving those cars to Belen without special operations. But this example highlights another, more acute flaw that undermines AEPCO's fundamental operating plan assumption that the SARR is only an overhead carrier. Since Train A in the real world drops 16 cars off at Belen, the total number of cars on Train A that actually traverse the SARR all the way from Defiance to Vaughn is 19 (35 minus the 16 dropped off at Belen). Train A picks up 13 cars at Belen, but under AEPCO's operating plan, there is no way for the SARR to pick these cars up at Belen

¹⁹ The specific circumstances of Train B do not affect the analysis here. Train B could be a train arriving from El Paso or it could be another cross-country train switching cars at Belen.

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because AEPCO's operating plan provides for no facilities at Belen to perform this switching activity and includes no costs for these operations.²⁰

In sum, there are many problems with AEPCO's simplistic assumption that the SARR would be only an overhead carrier. One fatal problem is that the operating plan for this overhead carrier would generate substantial disruptions and impose enormous costs on the residual BNSF. AEPCO did not even attempt to evaluate the ramifications of this critical feature of its operating plan and its effects on the residual BNSF. Indeed, the costs associated with these disruptions could be so large that had AEPCO considered the ramifications of these operational changes, it might have decided to posit a completely different SARR. AEPCO's failure to include these substantial costs is another factor justifying dismissal of AEPCO's claims.

2. AEPCO's Creation Of New Crew Change Locations Would Degrade The Efficiency Of BNSF's Existing Movements And Impose Additional Costs On The Residual BNSF

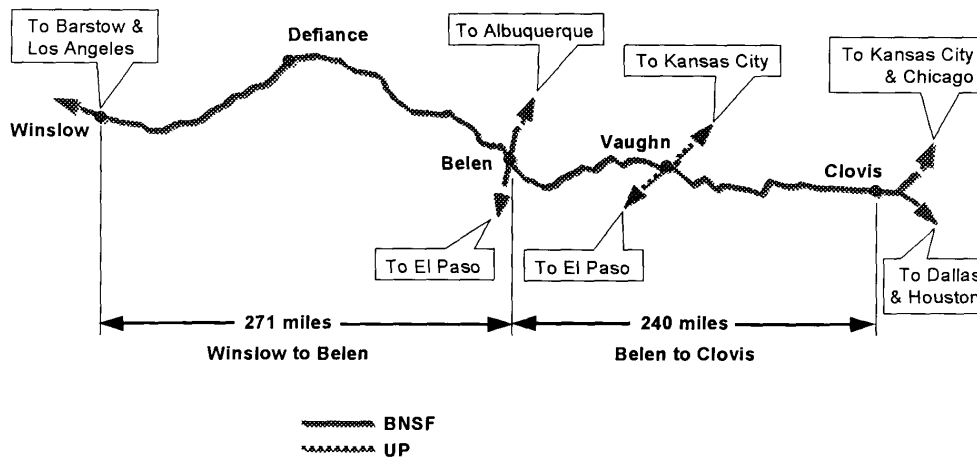
AEPCO's operating plan would also create inefficiencies and impose additional costs on the residual BNSF through the creation of new crew change locations. By positing fictional interchanges with the residual BNSF at points that are not even used today for crew changes, AEPCO is trying to benefit from the use of cross-over traffic without accounting for the additional costs it would impose on the residual incumbent.

BNSF currently has two crew districts between Clovis, NM on the east and Winslow, AZ on the west. One district stretches from Clovis to Belen (approximately 240 miles) and the second is from Belen to Winslow (approximately 271 miles). Crews operate in straightaway service within these districts. For example, a crew boards a train at Clovis and travels to Belen,

²⁰ This example therefore illustrates another way in which AEPCO overstated traffic volume and revenue that could legitimately be included in its SAC presentation.

where it exits the train. The crew is put up overnight at Belen and returns from Belen to Clovis on a train the next day. BNSF's existing crew districts are illustrated below.

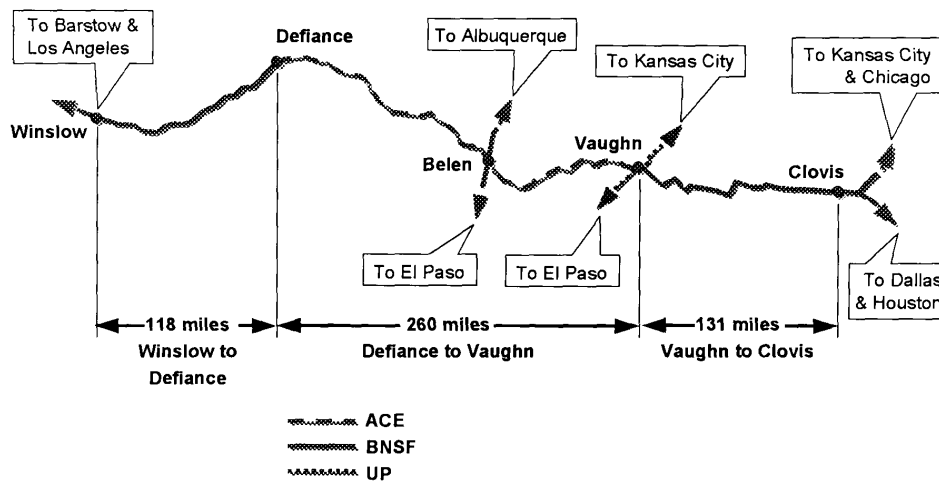
Illustration III.C-4
Current BNSF Crew Districts with Associated Miles
Winslow, AZ to Clovis, NM



AEPCO proposes to insert the SARR on BNSF's lines between Vaughn and Defiance. For traffic interchanged to the SARR, this would impose two shortened crew districts on BNSF - one between Clovis and Vaughn (approximately 131 miles), where BNSF interchanges with the SARR, and one between Winslow and Defiance (approximately 118 miles), where BNSF also interchanges with the SARR. BNSF crews would have to operate in turn-around service between Winslow and Defiance and between Clovis and Vaughn, instead of straightaway service under BNSF's existing crew districts. Moreover, where there is now one crew change between Clovis and Winslow (at Belen), there would be two crew changes under AEPCO's plan (one at

Vaughn and one at Defiance).²¹ The modified BNSF crew districts that would result from AEPCO's proposal are shown in the following illustration.

Illustration III.C-5
ACE and BNSF Modified Crew Districts with Associated Miles
Winslow, AZ to Clovis, NM



AEPCO's creation of an additional crew change location would degrade the efficiency of existing movements across BNSF's main east-west corridor in the southwest. It is also contrary to the efforts of BNSF's predecessors, and other real world railroads, to minimize the number of crew changes that occur on the system. Lengthening crew districts and eliminating crew-change points have had significant benefits for the railroads in four areas -- transit time, facilities, personnel and operating costs. AEPCO's proposal would reverse these productivity gains in order to produce a SARR that appears to have lower costs. But the presentation of SAC evidence based on rail operations that are less efficient than existing operation would be

²¹ BNSF's existing crew change point at Belen Yard would be eliminated under AEPCO's operating plan.

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inconsistent with the policy underlying the SAC test that rates be judged by reference to the operation of a hypothetical efficient competitor.

AEPCO's fragmentation of crew districts would have adverse effects in several areas. BNSF has found that elimination of crew-change points significantly improves transit times. Each time a train slows, stops, and then accelerates for a crew change or any other reason, it adds time to the train's total transit time. Improved transit times have allowed BNSF to capture time-sensitive intermodal traffic. Improved transit times also improve utilization of rolling stock, requiring fewer locomotives and cars to handle the same amount of traffic and, thereby, saving on equipment requirements. Reducing the number of crew-change points also generates savings by reducing or eliminating facilities required to accommodate a crew change. Most important, reducing the number of times a train must stop significantly reduces main line and yard track requirements.²² Elimination of a crew-change point also enables a railroad to achieve savings by reducing its personnel requirements, both operating personnel and managers. Eliminating the need to stop a train for a change in the crew also reduces fuel consumption and locomotive maintenance resulting from wear on brake equipment.

Indeed, efficiency and productivity improvements of the type described above led BNSF's predecessor to modify crew districts along the very lines at issue in this case to create longer crew districts that required fewer crew change points. In the mid-1980s The Atchison, Topeka and Santa Fe Railway carried out a study of the economic feasibility of establishing an interdivisional run-through operation between Winslow, Arizona, and Belen, New Mexico. A copy of this study is included as Exhibit III.C-5. This study considered elimination of a crew-change point at Gallup, New Mexico in order to implement run-through operations between

²² Just as a highway must be widened where toll booths are located, additional mainlines and yard tracks are required when trains must stop to accommodate crew changes.

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Winslow and Belen.²³ The Santa Fe did, in fact, eliminate this crew-change point. AEPCO's proposal would turn back the clock by requiring BNSF to revert to shorter crew districts of the type specifically eliminated in the course of efforts by BNSF's predecessors to improve productivity over the past two decades.

Here again, AEPCO made no effort to assess the costs that would be imposed on the residual BNSF to compensate for the inefficiencies created by AEPCO's plan for fragmented crew districts on the lines between Clovis, NM and Winslow, AZ. No attempt is made to consider the impact on BNSF to handle trains in turn-around service between Clovis and Vaughn or between Defiance and Winslow. Indeed, AEPCO presented no evidence showing that turn-around service would even be viable in these areas. If turn-around service could not be performed, BNSF's crew costs would be substantially increased.

To see the potential impact of AEPCO's fragmented crew districts on the residual BNSF, take the example of a crew operating in turn-around service between Clovis and Vaughn. A BNSF crew would board a train at Clovis and stay on the train until it reaches Vaughn. The BNSF crew would leave the train at Vaughn, where the train is interchanged to the SARR. The BNSF crew then would have to wait for a train at Vaughn that will be returning to Clovis. If a train traveling from Vaughn to Clovis did not arrive in time to enable the crew to return to Clovis within its 12-hours-of-service limitation, the crew would either have to be put up overnight at Vaughn, resulting in lodging and meal expenses, or be transported by van back to Clovis. If the crew is transported by van back to Clovis, a second crew would then have to be brought in, again by van, to take the next train that arrives in Vaughn off the SARR to Clovis. BNSF would still be required to pay its crews for an entire shift, but would get less work from the crew in return.

²³ Gallup is located approximately eight miles east of Defiance.

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The added costs for crew positioning, lodging, van service and meal expenses would further increase the overall crew costs per mile.

AEPCO failed to consider the ramifications and costs of these operational changes that would be imposed on the residual incumbents as a result of the proposed operating plan for its SARR. This fundamental flaw in its opening evidence is yet another reason that the Board should dismiss AEPCO's complaint without consideration of alternative SAC evidence.

III-D. Operating Costs

D. OPERATING COSTS

In a SAC case, the operating costs of a SARR are calculated using operating parameters and operating statistics from the SARR operating plan. However, as discussed previously in this Reply Narrative, an operating plan for the SARR cannot be developed in this case because of the flaws in AEPCO's traffic selection. The starting point for any SARR operating plan must be an accurate identification of SARR traffic, which AEPCO failed to do here.

An operating plan, and the operating costs based on that plan, must account for the needs and characteristics of the specific traffic that would be handled by the SARR. The size and consist of the SARR's locomotive and car fleet depends on the types and amount of traffic to be handled as well as the routing of that traffic. The size of the railroad and its traffic base, including the types and amounts of traffic handled, affect the staffing requirements for both operating and non-operating (mechanical and G&A) personnel. The number and salaries of SARR personnel depend on the types of service offered, the number of trains operated, the lengths of the movements, the number of locomotives and railcars to be operated and maintained, and the types of general and administrative services required to support traffic operations. Similarly, the size of the maintenance of way staff depends on the size and characteristics of the network configuration, including the construction materials and types of facilities needed to accommodate the traffic requirements. In addition, the frequency of track structure replacement and track maintenance activities such as rail grinding and rail testing depends on the levels of tonnage to which each segment of track is subjected.

Therefore, before an operating plan and operating costs could be identified for the SARR, it would be necessary to identify the traffic base for the SARR. But as discussed in Section I.B.3, the identification of the stand-alone traffic group is the responsibility of the complainant. Indeed, if BNSF had attempted to modify AEPCO's traffic selection, AEPCO made it clear in its

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Reply to UP's Petition that it would have rejected those changes. *See* AEPCO Reply at 3.

Moreover, even if BNSF posited an alternative traffic group, it would still have to build an operating plan from the ground up. These are efforts that must be undertaken by the party with the burden of proof. The complainant in a SAC case has the burden of proof, and AEPCO has failed to satisfy that burden of proof here by positing flawed traffic and operating cost evidence.

**III-E. Non-Road Property
Investment**

E. NON-ROAD PROPERTY INVESTMENT

Investments in non-road property assets such as locomotives and railcars are generally addressed in the discussion of operating costs. BNSF's discussion of those issues is contained in Section III.D above.

**III-F. Road Property
Investment**

F. ROAD PROPERTY INVESTMENT

The same errors and inadequacies in AEPCO's Opening Evidence that make it impossible to assess operating costs in this case also make it impossible to assess the costs to construct AEPCO's SARR. AEPCO's SARR is based on traffic assumptions that are clearly erroneous. Since the SARR is designed to provide transportation to a specified traffic group, it is not possible to determine the road property investment costs for the SARR without first knowing the traffic group. In addition, as discussed more fully in Sections I and III.B of this Reply Narrative, and in UP's Petition to Require Submission of New Opening Evidence, or Alternatively, to Dismiss dated April 18, 2003, AEPCO improperly relies on trackage rights for nearly one-third of the route for the issue traffic. AEPCO should have constructed the entire route over which it carries the issue traffic. However, it is unclear which of two possible lines AEPCO would have chosen to construct as the north-south segment of its network -- BNSF's Belen-Deming line or UP's Vaughn-El Paso line -- if it had proceeded from a correct understanding of SAC principles. As it is neither the railroads' burden nor prerogative to design and construct initially a feasible railroad network for the SARR, the railroads cannot develop road property investment costs for either route.

Moreover, under any scenario, because AEPCO's Opening Evidence contained seriously flawed traffic and tonnage evidence, the major changes that would be required to correct those errors would affect the number of trains and the level of tonnage going over the ACE line segments. The number of trains, level of tonnage, and types of traffic (commodities, unit trains, etc.) determine to a large extent the track structure and facilities needed on the SARR, including the appropriate construction standards for building those facilities. Since these elements of AEPCO's case in chief are either missing or flawed, any attempt to reply to AEPCO's road

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property investment evidence even on the line segments that AEPCO did construct would be futile.

**III-G. Discounted Cash
Flow Analysis**

G. DISCOUNTED CASH FLOW ANALYSIS

For the reasons stated above, BNSF has not put in an affirmative SAC case and therefore has not conducted a discounted cash flow analysis in its Reply Evidence.

**III-H. Results of SAC
Analysis**

H. RESULTS OF SAC ANALYSIS

For the reasons stated above, BNSF has not put in affirmative SAC evidence in its Reply Evidence. Nonetheless, BNSF has demonstrated that AEPCO's SAC analysis is flawed beyond repair due to its reliance on improper manipulation of BNSF's traffic data, unacceptable cross-over revenue allocations and reliance on exempt traffic, improper use of trackage rights, and use of a flawed operating plan. UP's April 18, 2003 Petition requested that the Board give AEPCO the opportunity to correct the flaws in its Opening Evidence. In its Reply to that Petition, AEPCO rejected UP's proposal, making it clear that AEPCO intended to stake its claim for relief in this case on the evidence it already filed.¹

BNSF does not believe that AEPCO should be entitled to refile its Opening Evidence. Moreover, BNSF demonstrated that the enormous costs associated with a full SAC analysis are not justified in this case in light of the settlement that AEPCO reached with UP. The terms of that settlement and its effect on this litigation are discussed above in Section I.D of this Narrative. As BNSF explains below, there is a limited amount at stake in this proceeding as a result of the AEPCO/UP settlement.

1. Reparations

First, AEPCO is unlikely to be entitled to any additional reparations in this case under any circumstances. To demonstrate this, BNSF witness Benton Fisher conducted an analysis of what the reparations for the period 2001-2003 would be under the best-case scenario for AEPCO -- *i.e.*, a finding that the SAC maximum rate was below the jurisdictional threshold level of 180% of the joint variable costs for the movement. As described more fully in the BNSF/UP Joint Variable Cost Reply, Mr. Fisher calculated the variable costs for the issue traffic.

¹ See AEPCO Reply at 3.

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BNSF/UP Exhibit II.A-1 presents the variable costs and revenue-to-variable cost (R/VC) ratios for AEPCO shipments under the challenged rates for the First Quarter 2001 through First Quarter 2003.

To determine the maximum potential reparations for the entire 2001-2003 period, Mr. Fisher estimated the variable costs for Second Quarter 2003 through Fourth Quarter 2003. These estimates were based on the AAR's Western Region indices.² Based on the R/VC ratios for each quarter, Mr. Fisher determined the maximum potential rate reduction that would be permitted, *i.e.*, the percentage amount that would reduce the rate to produce an R/VC ratio at the jurisdictional threshold of 1.80. He then applied these reductions to the corresponding revenues for AEPCO shipments at each rate level by quarter. As BNSF Exhibit III.H-1 shows, the maximum reparation amount for tons shipped to AEPCO under the challenged rates for the 2001-2003 period is { }.³

As discussed in Section I.D above, because of the settlement between AEPCO and UP, AEPCO would be entitled to further reparations in this case only if the amount of reparations due exceeds the {

}. As explained above, participating carriers in a through rate are jointly and severally liable for reparations. It is a well-settled principle of law that if one of the jointly liable carriers pays an amount that covers the shipper's damages through a settlement agreement, no further damages can be collected from the other carrier. Thus, AEPCO is entitled to reparations

² Specifically, Mr. Fisher developed the quarterly average over the last four years (1Q99-1Q03) for three AAR Western Region indices. He used a quarterly Fuel index of 4.9% for variable fuel expenses; a quarterly Wages and Wage Supplements index of 1.1% for variable crew expenses; and a quarterly QMPW index (excluding fuel) of 0.9% for all other indexable expenses.

³ An electronic version of BNSF Exhibit III.H-1 is included in BNSF's electronic workpapers at "BNSF Reply Exhibit III.H-1.xls."

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from BNSF only if the amount determined by the Board exceeds the amount of UP's financial exposure under the settlement.⁴

Because the Board has no authority to establish a joint rate below the 180% threshold, the *maximum* that AEPCO could recover would be { }. Since this amount is less than the amount that AEPCO has already received in settlement, no further reparations would be due AEPCO even if it were to present a new SAC case correcting the flaws in its Opening Evidence.

2. Prescription

As discussed in Section I.D, the settlement agreement between UP and AEPCO provides that {

} As a result, the impact of any rate prescription in this case would be minimal { }

⁴

{

}

IV. Witness Qualifications and Verifications

IV. WITNESS QUALIFICATIONS AND VERIFICATIONS

1. **Benton V. Fisher**

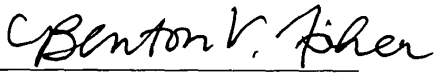
Benton V. Fisher is a Director at FTI Consulting, Inc., an economic and financial consulting firm. His business address is 1201 Eye Street, N.W., Suite 400, Washington, DC 20005. Since 1991, Mr. Fisher has been involved in various aspects of transportation consulting including economic studies involving 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. 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 reparations. His evidence is contained in Section III.H 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 Reply 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 May 22 2003


Benton V. Fisher

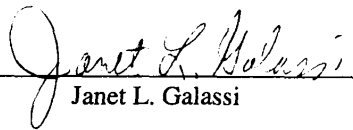
2. Janet L. Galassi

Janet L. Galassi is the BNSF Director of Technology Services responsible for the Transportation Support System (i.e., TSS) application, a position she has held since 1999. Ms. Galassi has been employed by BNSF and one of its predecessors since 1985. Her business address is 2400 Western Center Boulevard, Fort Worth, Texas 76131-1322. In her position, Ms. Galassi's responsibilities include enhancing and supporting the TSS application, which is used to support the execution of BNSF's train service. Ms. Galassi is familiar with the train event database and how it is used to plan and monitor train operations across the BNSF network.

Ms. Galassi is sponsoring evidence relating to the BNSF train event database. Her evidence is contained in Section III.A of the Narrative. Ms. Galassi has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Reply 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 May 21, 2003


Janet L. Galassi

3. John C. Klick

John C. Klick is a Senior Managing Director of FTI Consulting, Inc., an economic and financial consulting firm. His business address is 1201 Eye Street, N.W., Suite 400, Washington, DC 20005.

Mr. Klick graduated in 1970 from Bates College with a Bachelor of Science degree in Mathematics. He also has taken graduate courses in finance, accounting, and operations research. Since 1970, he has been involved continuously in cost-based economic and financial studies for a variety of industries.

Throughout Mr. Klick's career, he has organized and directed cost and economic studies for service providers, state governments, and other public bodies dealing with railroads, pipelines and other network industries. Examples of past studies that he has participated in include (1) organizing and directing traffic, operational, and cost analyses in connection with the valuation of northeastern rail property transferred to the Consolidated Rail Corporation, (2) calculation of stand-alone and long-run incremental costs for major segments of the nation's railroad industry, (3) estimation of the long-run incremental costs of providing various aspects of local telecommunications services, and (4) calculation of marginal, incremental and stand-alone costs for services performed by a major petroleum products pipeline company. Virtually all of these studies have involved the development and/or use of complex, computerized cost models that make extensive use of detailed engineering and operating input and incorporate sophisticated discounted cash flow techniques.

In addition, Mr. Klick has undertaken studies related to economic issues such as the effects of productivity and inflation on the costs of operations, forecasts of traffic volumes and corresponding resource requirements, and valuations of services and facilities.

The results of these studies frequently have been presented in both oral and written testimony before the Surface Transportation Board, the Interstate Commerce Commission, the Federal Energy Regulatory Commission, state public utility commissions, arbitration panels, and the federal and state courts. This testimony has related to subjects such as the development of variable cost of service, marginal costs, incremental costs, stand-alone costs, economic principles related to the maximum and minimum level of rates, and procedures for implementing these maximum and minimum rate principles.

Mr. Klick is sponsoring evidence relating to flaws in AEPCO's traffic selection methodology, AEPCO's use of exempt traffic in this case, AEPCO's use of the modified mileage prorate to calculate revenues for cross-over traffic and AEPCO's improper use of trackage rights. His evidence is contained in Sections III.A and III.B of the Narrative. Mr. Klick has signed a verification of the truth of the statements contained therein. A copy of Mr. Klick's verification is attached hereto.

I declare under penalty of perjury that I have read the Reply 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 May ²²__, 2003


John C. Klick

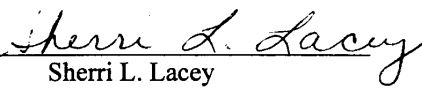
4. Sherri L. Lacey

Sherri L. Lacey is the General Director of Cost and Profitability Systems for the BNSF, a position she has held since 1999. Her business address is 2650 Lou Menk Drive, Fort Worth, Texas 76161-0051. In her position, Ms. Lacey is familiar with the traffic database.

Ms. Lacey is sponsoring evidence relating to the BNSF traffic database. Her evidence is contained in Section III.A of the Narrative. Ms. Lacey has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Reply 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 May 21, 2003


Sherri L. Lacey

5. Loren E. Mueller

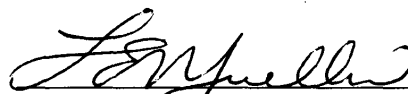
Loren E. Mueller is a railroad transportation consultant. His business address is 614 Regency Crossing, Southlake, Texas 76092.

Mr. Mueller was employed by BNSF and its predecessors for thirty-two years. His management positions with the Burlington Northern Railroad ("BN") began in 1975 as yardmaster at Lincoln, Nebraska. He held a number of positions with the railroad. From 1992 to 1994, Mr. Mueller was General Manager - Coal Operations, responsible for operations of the BN system coal business unit. During this time, he directed major construction and expansion of the BN's operations in the Powder River Basin of Wyoming to include coordination of the joint line with Chicago and North Western Railway Company/Union Pacific. From 1995 through 1996, he was Vice President of Burlington Lines, responsible for the total transportation function for one-third of the BNSF Railroad, including major terminals, mechanical, engineering and operations. Mr. Mueller retired from BNSF in 1996. From May, 2000, through April 30, 2001, he held a one-year assignment as Vice President and Chief Operating Officer of the Alaska Railroad. He was responsible for all aspects of operation for the Alaska Railroad, including operations, engineering, mechanical, marketing and safety.

Mr. Mueller is sponsoring evidence relating to proposed operations of the stand-alone railroad. His evidence is contained in Section III.C of the Narrative. Mr. Mueller has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Reply 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 May 23, 2003


Loren E. Mueller

6. Janusz Aleksander Ordover

Janusz Aleksander Ordover is a Professor of Economics at New York University. His business address is 269 Mercer Street, New York, New York 10003. Following undergraduate work at Warsaw University in Poland, Professor Ordover received an M.A. degree in economics from McGill University in 1968. He received his Ph.D. in economics from Columbia University in 1973.

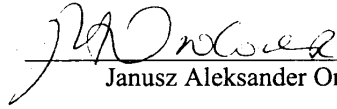
Professor Ordover has been a tenured professor of Economics at New York University since 1982. During the course of his academic career he has taught at other institutions as well, including New York University Law School, Columbia University Law School, Yale Law School, and the Yale University School of Management and Organization. Professor Ordover's numerous publications, covering a range of economic issues, are listed in his curriculum vitae, included as Attachment A.

Professor Ordover served as Deputy Assistant Attorney General for Economics in the U.S. Department of Justice's Antitrust Division from 1991 to 1992. In addition, Professor Ordover has been an economic advisor or consultant to numerous organizations including the Organization for Economic Cooperation and Development, the Polish Ministry of Finance and Anti-Monopoly Office, and the World Bank. Professor Ordover has also been an active participant in numerous activities of the American Bar Association relating to antitrust and economic issues. He has also presented testimony before the Federal Trade Commission and the Senate Judiciary Committee.

Professor Ordover is sponsoring evidence relating to conceptual flaws in AEPCO's reliance on cross-over traffic. His evidence is contained in Section III.A of the Narrative. Professor Ordover has signed a verification of the truth of the statements contained therein. A copy of Professor Ordover's verification is attached hereto.

I declare under penalty of perjury that I have read the Reply 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 May 21st, 2003


Janusz Aleksander Ordover

May 2003

JANUSZ ALEKSANDER ORDOVER

Department of Economics
New York University
269 Mercer Street
New York, New York 10003

Office: (212) 998-8956
Fax: (212) 995-3932
Home: (203) 966-3788
Fax: (203) 972-3615
e-mail: jao@ordover.com

EDUCATION

- 1968-1973 Columbia University, New York, New York
Graduate Department of Economics and European Institute of the School of International Affairs
Doctoral Dissertation: Three Essays on Economic Theory, May 1973. Ph.D. 1973.
- 1967-1968 McGill University, Montreal, Canada
Departments of Economics and Political Science
- 1963-1966 Warsaw University, Warsaw, Poland
Department of Political Economy. B.A. (equiv.), 1966.

HONORS

- 1973 Columbia University: Highest distinction for the doctoral dissertation
- 1971-1972 Columbia University: Honorary President's Fellow
- 1969-1971 Columbia University: President's Fellow
- 1967-1968 McGill University: Honors Student
- 1964, 1965 Warsaw University: Award for Academic Achievement, Department of Political Economy
- Who's Who in the World
Who's Who in America
Who's Who in the East

PROFESSIONAL EXPERIENCE

- June 1982 - Professor of Economics
present Department of Economics, New York University, New York, New York
- Sept. 1996 - Director of Masters in Economics Program
Aug. 2001 Department of Economics, New York University, New York, New York

Summer 1996- 2000	Lecturer International Program on Privatization and Reform Institute for International Development, Harvard University, Cambridge, Massachusetts
Aug. 1991 - Oct. 1992	Deputy Assistant Attorney General for Economics Antitrust Division United States Department of Justice, Washington, D.C.
Sept. 1989 - July 1990	Visiting Professor of Economics School of Management, Yale University, New Haven, Connecticut
	Lecturer in Law Yale Law School
Mar. 1984 - June 1988	Visiting Professor of Economics Universita Commerciale "Luigi Bocconi", Milan, Italy
June 1982 - Feb. 1985	Director of Graduate Studies Department of Economics, New York University
Sept. 1982 - June 1986	Adjunct Professor of Law (part-time) Columbia University Law School, New York, New York
Feb. 1982 - June 1982	Acting Director of Graduate Studies Department of Economics, New York University
June 1978 - June 1982	Associate Professor of Economics Department of Economics, New York University
Sept. 1979 - May 1990	Lecturer in Economics and Antitrust New York University Law School
Sept. 1977 - June 1978	Member, Technical Staff Bell Laboratories, Holmdel, New Jersey
	Associate Professor of Economics Columbia University
	Visiting Research Scholar Center for Law and Economics, University of Miami, Miami, Florida
Sept. 1973 - Aug. 1977	Assistant Professor of Economics New York University
Summer 1976	Fellow, Legal Institute for Economists, Center for Law and Economics, University of Miami
Summer 1976	Visiting Researcher Bell Laboratories, Holmdel, New Jersey

OTHER PROFESSIONAL ACTIVITIES

1997 – 1999	Consultant, Inter-American Development Bank, Washington, D.C.
1997 – present	Board of Editors, <i>Antitrust Report</i>
1995 – 2001	Consultant, The World Bank, Washington, D.C.
1998 – present	Senior Consultant Applied Economic Solutions, Inc., San Francisco, California
1995 - 2000	Senior Affiliate Cornerstone Research, Inc., Palo Alto, California
various	Testimony at Hearings of the Federal Trade Commission
1994 - 1996	Senior Affiliate Law and Economics Consulting Group, Emoryville, California
1994 - 2000	Senior Affiliate Consultants in Industry Economics, LLC, Princeton, New Jersey
1993 - 1994	Director Consultants in Industry Economics, Inc., Princeton, New Jersey
1992 - 1993	Vice-Chair (<i>pro tempore</i>) Economics Committee, American Bar Association, Chicago, Illinois
1992 - 1995 1990 - 1991	Senior Consultant Organization for Economic Cooperation and Development, Paris, France
1991	Member <i>Ad hoc</i> Working Group on Bulgaria's Draft Antitrust Law The Central and East European Law Initiative American Bar Association
1990 - 1991	Advisor Polish Ministry of Finance and Anti-Monopoly Office Warsaw, Poland
1990 - 1991	Member Special Committee on Antitrust Section of Antitrust Law, American Bar Association
1990 - 1991	Director and Senior Advisor Putnam, Hayes & Bartlett, Inc., Washington, D.C.
1990 - 1996	Member Predatory Pricing Monograph Task Force Section of Antitrust Law, American Bar Association

1989	Hearings on Competitive Issues in the Cable TV Industry Subcommittee on Monopolies and Business Rights of the Senate Judiciary Committee Washington, D.C.
1989	Member EEC Merger Control Task Force, American Bar Association
1988 - present	Associate Member American Bar Association
1987 - 1989	Adjunct Member Antitrust and Trade Regulation Committee, The Association of the Bar of the City of New York
1984	Speaker, "Industrial and Intellectual Property: The Antitrust Interface" National Institutes, American Bar Association, Philadelphia, Pennsylvania
1983 - 1990	Director Consultants in Industry Economics, Inc
1982	Member Organizing Committee Tenth Annual Telecommunications Policy Research Conference, Annapolis, Maryland
1981	Member Section 7 Clayton Act Committee, Project on Revising Merger Guidelines American Bar Association
1980	Organizer Invited Session on Law and Economics American Economic Association Meetings, Denver, Colorado
1978 - 1979	Member Department of Commerce Technical Advisory Board Scientific and Technical Information Economics and Pricing Subgroup
1978 – present	Referee for numerous scholarly journals, publishers, and the National Science Foundation

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

American Economic Association
American Bar Association

PUBLICATIONS

A. Journal Articles

"All-units Discounts in Retail Contracts," with S. Kolay and G. Shaffer, *J. of Economics and Management Strategy* (forthcoming).

"Archimedean Leveraging and the GE/Honeywell Transaction," with R. J. Reynolds, *Antitrust Law Journal*, vol. 70, no. 1, 2002, 171-98.

"Entrepreneurship, Access Policy and Economic Development: Lessons from Industrial Organizations," with M. A. Dutz and R. D. Willig, *European Economic Review*, vol. 4, no. 4-6, May 2000.

"Parity Pricing and its Critics: Necessary Condition for Efficiency in Provision of Bottleneck Services to Competitors," with W. J. Baumol and R. D. Willig, *Yale Journal on Regulation*, vol. 14, Winter 1997, 146-63.

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"On the Perils of Vertical Control by a Partial Owner of Downstream Enterprise," with W.J. Baumol, *Revue D'économie industrielle*, No. 69, 3^e trimestre 1994, 7-20.

"Competition Policy for Natural Monopolies in Developing Market Economy," with R.W. Pittman and P. Clyde, *Economics of Transition*, vol. 2, no. 3, September 1994, 317-343. Reprinted in B. Clay (ed), *De-monopolization and Competition Policy in Post-Communist Economies*, Westview Press 1996, 159-193.

"The 1992 Agency Horizontal Merger Guidelines and the Department of Justice's Approach to Bank Merger Analysis," with M. Guerin-Calvert, *Antitrust Bulletin*, vol. 37, no. 3, 667-688. Reprinted in *Proceedings of the 1992 Conference on Bank Structure and Competition: Credit Markets in Transition*, Federal Reserve Bank of Chicago, 1992, 541-560.

"Entry Analysis Under the 1992 Horizontal Merger Guidelines," with Jonathan B. Baker, *Antitrust Law Journal*, vol. 61, no. 1, Summer 1992, 139-146.

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"Equilibrium Vertical Foreclosure: A Reply," with G. Saloner and S.C. Salop, *American Economic Review*, vol. 82, no. 3, 1992, 698-703.

"A Patent System for Both Diffusion and Exclusion," *Journal of Economic Perspectives*, vol. 5, Winter 1991, 43-60.

"R&D Cooperation and Competition," with M. Katz, *Brookings Papers on Economic Activity: Microeconomics*, 1990, 137-203.

"Equilibrium Vertical Foreclosure," with G. Saloner and S. Salop, *American Economic Review*, vol. 80, March 1990, 127-142.

"Antitrust Policy for High-Technology Industries," with W.J. Baumol, *Oxford Review of Economic Policy*, vol. 4, Winter 1988, 13-34. Reprinted in E. Fox and J. Halverson (eds.), *Collaborations Among Competitors: Antitrust Policy and Economics*, American Bar Association, 1991, 949-984.

"Conflicts of Jurisdiction: Antitrust and Industrial Policy," *Law and Contemporary Problems*, vol. 50, Summer 1987, 165-178.

"Market Structure and Optimal Management Organization," with C. Bull, *Rand Journal of Economics*, vol. 18, no. 4, Winter 1987, 480-491.

- "A Sequential Concession Game with Asymmetric Information," with A. Rubinstein, *Quarterly Journal of Economics*, vol. 101, no.4, November 1986, 879-888.
- "The G.M.-Toyota Joint Venture: An Economic Assessment," with C. Shapiro, *Wayne Law Journal*, vol. 31, no. 4, 1985, 1167-1194.
- "Economic Foundations and Considerations in Protecting Industrial and Intellectual Property: An Introduction," *ABA Antitrust Law Journal*, vol. 53, no. 3, 1985. 503-518, Comments, 523-532.
- "Antitrust for High-Technology Industries: Assessing Research Joint Ventures and Mergers," with R.D. Willig, *Journal of Law and Economics*, vol. 28, May 1985, 311-334.
- "Use of Antitrust to Subvert Competition," with W.J. Baumol, *Journal of Law and Economics*, vol. 28, May 1985, 247-266. Reprinted in *Journal of Reprints for Antitrust Law and Economics*, vol. 16, no. 2.
- "Advances in Supervision Technology and Economic Welfare: A General Equilibrium Analysis," with C. Shapiro, *Journal of Public Economics*, vol. 25/3, 1985, 371-390.
- "Predatory Systems Rivalry: A Reply," with A. O. Sykes and R. D. Willig, 83 *Columbia Law Review*, June 1983, 1150-1166. Reprinted in *Corporate Counsel*, Matthew Bender & Company, 1984, 433-450.
- "The 1982 Department of Justice Merger Guidelines: An Economic Assessment," with R. D. Willig, 71 *California Law Review*, March 1983, 535-574. Reprinted in *Antitrust Policy in Transition: The Convergence of Law and Economics*, E. Fox and J. Halverson (eds.), American Bar Association Press, 1984, 267-304.
- "Unfair International Trade Practices," with A. O. Sykes and R. D. Willig, 15 *Journal of International Law and Politics*, Winter 1983, 323-338.
- "On Non-linear Pricing of Inputs," with J. Panzar, *International Economic Review*, October 1982, 659-675.
- "Herfindahl Concentration, Rivalry and Mergers," with A. O. Sykes and R. D. Willig, *Harvard Law Review*, vol. 95, June 1982, 1857-1875.
- "A Reply to 'Journals as Shared Goods: Comment,'" with R. D. Willig, *American Economic Review*, June 1982, 603-607.
- "Proposed Revisions to the Justice Department's Merger Guidelines," with S. Edwards, *et al.*, *Columbia Law Review*, vol. 81, December 1981, 1543-1591.
- "An Economic Definition of Predation: Pricing and Product Innovation," with R.D. Willig, *Yale Law Journal*, vol. 91, November 1981, 8-53.
- "On the Consequences of Costly Litigation in the Model of Single Activity Accidents: Some New Results," *Journal of Legal Studies*, June 1981, 269-291.
- "On the Political Sustainability of Taxes," with A. Schotter, *American Economic Review Papers and Proceedings*, May 1981, 278-282.
- "Information and the Law: Evaluating Legal Restrictions on Competitive Contracts," with A. Weiss, *American Economic Review Papers and Proceedings*, May 1981, 399-404.
- "Redistributing Incomes: *Ex Ante* or *Ex Post*," *Economic Inquiry*, April 1981, 333-349.

"On the Nonexistence of *Pareto Superior* Outlay Schedules," with J. Panzar, *The Bell Journal of Economics*, Spring 1980, 351-354.

"The Role of Information in the Design of Public Policy Towards Externalities," with R. D. Willig, *Journal of Public Economics*, December 1979, 271-299.

"On the Concept of Optimal Taxation in the Overlapping-Generations Model of Efficient Growth," with E.S. Phelps, *Journal of Public Economics*, August 1979, 1-27.

"Products Liability in Markets With Heterogeneous Consumers," *Journal of Legal Studies*, June 1979, 505-525.

"Costly Litigation and the Tort Law: Single Activity Accidents," *Journal of Legal Studies*, June 1978, 243-261.

"On the Optimal Provision of Journals Qua Excludable Public Goods," with R. D. Willig, *American Economic Review*, June 1978, 324-338.

"Distortionary Wage Differentials in a Two-Sector Growth Model: Some Theorems on Factor Earnings," *International Economic Review*, June 1978, 321-333.

"On the Optimality of Public-Goods Pricing with Exclusion Devices," with W.J. Baumol, *Kyklos*, Fasc. 1, 1977, 5-21.

"Public Good Properties in Reality: The Case of Scientific Journals," with W.J. Baumol, *Proceedings of the ASIS Meetings*, San Francisco, October 1976.

"Merger Illusions and Externalities: A Note," with A. Schotter, *Eastern Economic Review*, November 1976, 19-21.

"Distributive Justice and Optimal Taxation of Wages and Interest in a Growing Economy," *Journal of Public Economics*, January 1976, 139-160.

"Linear Taxation of Wealth and Wages for Intragenerational Lifetime Justice: Some Steady-State Cases," with E.S. Phelps, *American Economic Review*, September 1975, 660-673.

B. Books and Monographs

Proceedings of the Tenth Annual Telecommunications Policy Research Conference, editor with O. Gandy and P. Espinosa, ABLEX Publishers, 1983.

Obstacles to Trade and Competition, with L. Goldberg, OECD, Paris, 1993.

Predatory Pricing, with William Green, *et al.*, American Bar Association, Section of Antitrust Law, Monograph 22, 1996.

C. Book Chapters

"Practical Rules for Pricing Access in Telecommunications," with R. D. Willig, Chap. 6, in *Second-Generations Reforms in Infrastructure Services*, F. Basanes and R. D. Willig (eds.), Inter-American Development Bank, Washington, D.C., April 2002, 149-76.

"Sustainable Privatization of Latin American Infrastructure: The Role of Law and Regulatory Institutions," with Evamaria Uribe, Chap. 1 in F. Basanes, E. Uribe, R. D. Willig (eds.), *Can Privatization Deliver? Infrastructure for Latin America*, The Johns Hopkins U. P. for Inter-American Development Bank, 1999, 9-32.

"Access and Bundling in High-Technology Markets," with R. D. Willig, Chap. 6, in J. A. Eisenach and T. M. Leonard, (eds.), *Competition, Innovation, and the Microsoft Monopoly: The Role of Antitrust in the Digital Marketplace*, Kluwer Academic Press, 1999, 103-29.

"The Harmonization of Competition and Trade Law," with E. Fox, Chap. 15 in L. Waverman, *et al.* (eds.), *Competition Policy in the Global Economy*, Routledge, 1997, 407-439.

"Transition to a Market Economy: Some Industrial Organization Issues," with M. Iwanek, Chap. 7 in H. Kierzkowski, *et al.* (eds.), *Stabilization and Structural Adjustment in Poland*, Routledge, 1993, 133-170.

"Competition Policies for Natural Monopolies in a Developing Market Economy," with Russell Pittman, *Butterworth's Trade and Finance in Central and Eastern Europe*, Butterworth Law Publishers Ltd., 1993, 78-88, Reprinted in *Journal for Shareholders* (published by the Russian Union of Shareholder), Moscow, January 1993, 33-36; *Versenyfelugyeleti Ertesito* (Bulletin of Competition Supervision), Budapest, vol. 3, no. 1-2, January 1993, 30-41; *Narodni Hospodarstvi* (National Economy), Prague; *ICE: Revista de Economia*, No. 736 (December 1994) (in Spanish), 69-90.

"Antitrust: Source of Dynamic and Static Inefficiencies?" with W.J. Baumol, in T. Jorde and D. Teece (eds.), *Antitrust, Innovation, and Competitiveness*, Oxford University Press, 1992, 82-97. Reprinted in "The Journal of Reprints for Antitrust Law and Economics," vol. 26, no. 1, 1996.

"Economic Foundations of Competition Policy: A Review of Recent Contributions," in W. Comanor, *et al.*, *Competition Policy in Europe and North America: Economic Issues and Institutions, Fundamentals of Pure and Applied Economics* (Vol. 43), Harwood Academic Publishers, 1990, 7-42.

"The Department of Justice 1988 Guidelines for International Operations: An Economic Assessment," with A.O. Sykes, in B. Hawk (ed.), *European/American Antitrust and Trade Laws*, Matthew Bender, 1989, 4.1-4.18.

"Predation, Monopolization, and Antitrust," with G. Saloner, in R. Schmalensee and R.D. Willig (eds.), *Handbook of Industrial Organization*, vol. 1, North Holland, 1989, 538-596.

"Supervision Technology, Firm Structure, and Employees' Welfare," in *Prices, Competition and Equilibrium*, M. Peston and R.E. Quandt (eds.), Philip Allan Publishers, Ltd., 1986, 142-163.

"Perspectives on Mergers and World Competition," with R.D. Willig, in *Antitrust and Regulation*, R. Grieson (ed.), Lexington Books, 1986, 201-218.

"Transnational Antitrust and Economics," in *Antitrust and Trade Policies in International Trade*, B. Hawk (ed.), Matthew Bender, 1985, 233-248.

"Pricing of Interexchange Access: Some Thoughts on the Third Report and Order in FCC Docket No. 78-72," in *Proceedings of the Eleventh Annual Telecommunications Policy Research Conference*, Vincent Mosco (ed.), ABLEX Publishers, 1984, 145-161.

"Non-Price Anticompetitive Behavior by Dominant Firms Toward the Producers of Complementary Products," with A.O. Sykes and R.D. Willig, in *Antitrust and Regulation: Essays in Memory of John McGowan*, F. Fisher (ed.), MIT Press, 1985, 315-330.

"Local Telephone Pricing in a Competitive Environment," with R.D. Willig, in *Regulating New Telecommunication Networks*, E. Noam (ed.), Harcourt Brace Jovanovich, 1983, 267-289.

"An Economic Definition of Predatory Product Innovation," with R.D. Willig, in *Strategy, Predation and Antitrust Analysis*, S. Salop (ed.), Federal Trade Commission, 1981, 301-396.

"Marginal Cost," in *Encyclopedia of Economics*, D. Greenwald (ed.), McGraw-Hill, 2nd ed. 1994, 627-630.

"Understanding Economic Justice: Some Recent Development in Pure and Applied Welfare Economics," in *Economic Perspectives*, M. Ballabon (ed.) Harwood Academic Publishers, vol. 1, 1979, 51-72.

"Problems of Political Equilibrium in the Soviet Proposals for a European Security Conference," in *Columbia Essays in International Affairs*, Andrew W. Cordier (ed.) Columbia University Press, New York, 1971, 1951-197

D. Other Publications

"Predatory Pricing," in Peter Newman (ed.), *The New Palgrave Dictionary of Economics and the Law*, Grove Dictionaries, New York, 1999.

Book review of L. Philips, *Competition Policy: A Game Theoretic Perspective*, reviewed in *Journal of Economic Literature*, vol. 35, No.3, September 1997, 1408-9.

"The Role of Efficiencies in Merger Assessment: The 1997 Guidelines," *Antitrust Report*, September 1997, 10-17.

"Bingaman's Antitrust Era," *Regulation*, vol. 20, No. 2, Spring 1997, 21-26.

"Competition Policy for High-Technology Industries," *International Business Lawyer*, vol. 24, No. 10, November 1996, 479-82.

"Internationalizing Competition Law to Limit Parochial State and Private Action: Moving Towards the Vision of World Welfare," with E.M. Fox, *International Business Lawyer*, vol. 24, No. 10, November 1996, 458-62.

"Economists' View: The Department of Justice Draft for the Licensing and Acquisition of Intellectual Property," *Antitrust*, vol. 9, No. 2, Spring 1995, 29-36.

"Competition Policy During Transformation to a Centrally Planned Economy: A Comment," with R.W. Pittman, in B. Hawk (ed.), *1992 Fordham Corporate Law Institute*, 533-38.

"Poland: The First 1,000 Days and Beyond," *Economic Times*, vol. 3, no. 9, October 1992, 6-7.

"Interview: Janusz A. Ordover: A Merger of Standards? The 1992 Merger Guidelines," *Antitrust*, vol. 6, no. 3, Summer 1992, 12-16.

"Interview: U.S. Justice Department's New Chief Economist: Janusz A. Ordover," *International Merger Law*, no. 14, October 1991.

"Poland: Economy in Transition," *Business Economics*, vol. 26, no. 1, January 1991, 25-30.

"Economic Analysis of Section 337: Protectionism versus Protection of Intellectual Property," with R.D. Willig, in *Technology, Trade and World Competition*, JEIDA Conference Proceedings, Washington, D.C., 1990, 199-232.

"Eastern Europe Needs Antitrust Now," with E. Fox, *New York Law Journal*, November 23, 1990, 1-4.

"Understanding Econometric Methods of Market Definition," with D. Wall, *Antitrust*, vol. 3, no. 3, Summer 1989, 20-25.

"Proving Entry Barriers: A Practical Guide to Economics of Entry," with D. Wall, *Antitrust*, vol. 2, no. 2, Winter 1988, 12-17.

"Proving Predation After Monfort and Matsushita: What the New 'New Learning' has to Offer," with D. Wall, *Antitrust*, vol. 1, no. 3, Summer 1987, 5-11.

"The Costs of the Tort System," with A. Schotter, Economic Policy Paper No. PP-42, New York University, March 1986. Reprinted in *Congressional Record*, U.S. Government Printing Office, Washington, D.C., 1987.

"An Economic Definition of Predation: Pricing and Product Innovation," with R.D. Willig, Report for the Federal Trade Commission, October 1982, 131 pp.

"Market Power and Market Definition," with R.D. Willig, Memorandum for ABA Section 7 Clayton Act Committee, Project on Revising the Merger Guidelines, May 1981.

"Herfindahl Concentration Index," with R.D. Willig, Memorandum for ABA Section 7 Clayton Act Committee, Project on Revising the Merger Guidelines, March 1981.

"Public Interest Pricing of Scientific and Technical Information," Report for the Department of Commerce Technical Advisory Board, September 1979.

"Economics of Property Rights as Applied to Computer Software and Databases," with Y.M. Braunstein, D.M. Fischer, W.J. Baumol, prepared for the National Commission on New Technological Uses of Copyrighted Works, June 1977, 140 pp. Reprinted in part in *Technology and Copyright*, R.H. Dreyfuss (ed.), Lemond Publications, 1978.

Book review of O. Morgenstern and G.L. Thompson, *Economic Theory of Expanding and Contracting Economies*, reviewed in *Southern Economic Journal*, September 1978.

"Manual of Pricing and Cost Determination for Organizations Engaged in Dissemination of Knowledge," with W.J. Baumol, Y.M. Braunstein, D.M. Fischer, prepared for the Division of Science Information, NSF April 1977, 150 pp.

UNPUBLISHED PAPERS

"All Units Discounts in Retail Contracts," with S. Kolay and G. Shaffer, August 2002.

"Economics, Antitrust and the Motion Picture Industry," C.V. Starr Center Policy Paper, July 1983.

"On Bargaining, Settling, and Litigating: A Problem in Multiperiod Games With Imperfect Information," with A. Rubinstein, C.V. Starr Working Paper, December 1982.

"Supervision and Social Welfare: An Expository Example," C.V. Starr Center Working Paper, January 1982.

"Should We Take Rights Seriously: Economic Analysis of the Family Education Rights Act," with M. Manove, November 1977.

"An Echo or a Choice: Product Variety Under Monopolistic Competition," with A. Weiss; presented at the Bell Laboratories Conference on Market Structures, February 1977.

GRANTS RECEIVED

Regulation and Policy Analysis Program, National Science Foundation, Collaborative Research on Antitrust Policy, Principal Investigator, July 15, 1985 - December 31, 1986.

Regulation of Economic Activity Program, National Science Foundation, Microeconomic Analysis of Antitrust Policy, Principal Investigator, April 1, 1983 - March 31, 1984.

Economics Division of the National Science Foundation, "Political Economy of Taxation," Principal Investigator, Summer 1982.

Sloan Workshop in Applied Microeconomics (coordinator), with W.J. Baumol (Principal Coordinator), September 1977 - August 1982.

Economics Division of the National Science Foundation, "Collaborative Research on the Theory of Optimal Taxation and Tax Reform," July 1979 to September 1980, with E.S. Phelps.

Division of Science Information of the National Science Foundation for Research on "Scale Economies and Public Goods Properties of Information," W.J. Baumol, Y.M. Braunstein, M.I. Nadiri, Fall 1974 to Fall 1977.

National Science Foundation Institutional Grant to New York University for Research on Taxation and Distribution of Income, Summer 1974.

7. Robert J. Plum

Robert J. Plum is a Director of FTI Consulting, Inc., an economic and financial consulting firm. His business address is 1201 Eye Street, N.W., Suite 400, Washington, DC 20005. Mr. Plum holds a Bachelor's Degree in Accounting and an M.B.A. degree with a concentration in finance. He began his career in 1979 with Wyer Dick & Company, a consulting firm that specialized in railroad costing issues. Since that time he has been involved continuously in analyzing accounting, cost, financial and engineering issues associated with railroad operations and pricing. He has conducted numerous variable and stand-alone cost studies, conducted field studies of railroad operations, evaluated railroad contract provisions, and developed computer models to evaluate railroad engineering and operating requirements.

Mr. Plum is sponsoring evidence relating to proposed operations of the stand-alone railroad. His evidence is contained in Section III.C of the Narrative. Mr. Plum has signed a verification of the truth of the statements contained therein. A copy of Mr. Plum's verification is attached hereto.

I declare under penalty of perjury that I have read the Reply 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 May 23, 2003



Robert J. Plum

Exhibits
I. Counsel's Argument and
Summary of Evidence

Exhibit I-1

REDACTED

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

ARIZONA ELECTRIC POWER	)	
COOPERATIVE, INC.	)	
	)	
Complainant,	)	
	)	
v.	)	Docket No. 42058
	)	
THE BURLINGTON NORTHERN AND	)	
SANTA FE RAILWAY COMPANY and	)	
UNION PACIFIC RAILROAD COMPANY,	)	
	)	
Defendants.	)	

**COMPLAINANT'S AMENDED INTERROGATORIES AND
REQUESTS FOR PRODUCTION OF DOCUMENTS**

Complainant Arizona Electric Power Cooperative, Inc. ("AEPCO"), pursuant to 49 C.F.R. § 1114.30, hereby submits these Amended Interrogatories and Requests for Production of Documents to Defendants The Burlington Northern and Santa Fe Railway Company ("BNSF") and Union Pacific Railroad Company ("UP"). These amended discovery requests replace and supplement AEPCO's original discovery requests served on January 12, 2001.

Answers to AEPCO's Amended Interrogatories and copies of responsive documents should be delivered to the offices of Slover & Loftus, 1224 Seventeenth Street, N.W., Washington, D.C. 20036, within thirty (30) days from the date hereof unless otherwise agreed by the parties. AEPCO is prepared to cooperate with the Defendants to facilitate the expeditious production of documents with the minimum practicable burden. In particular, AEPCO is requesting variable cost information for routes from Colorado and Powder River Basin origins to AEPCO's Apache Generating Station that AEPCO has not used extensively, if at all, in recent years. AEPCO is willing to discuss the availability and production of appropriate information

(b) (For UP only) Please produce all documents related to any determination by UP of its costs of transporting coal from Origin or Interchange to Destination (and from any mine origin in Wyoming or Montana to Other Arizona Destinations) using any of the information described in Interrogatory No. 2 above and/or produced in response to Request for Production No. 40 (in a computer-readable format if available) during the period from 1998 to the present.

Request for Production No. 42:

Please produce the data bases and computer programs (with all documentation related to these data bases and computer programs), in a computer-readable format, that include the information listed below for each movement you handled as originating, terminating, overhead or single-line carrier that traveled in the SARR States for each year or partial year 1998 to the present:

- a. Commodity (seven-digit Standard Transportation Commodity Code "STCC");
- b. Origin city and state;
- c. Destination city and state;
- d. For shipments that originated on your system, the date and time the shipment was originated;
- e. For shipments you received in interchange, the on junction location and station number;
- f. For shipments you received in interchange, the road received from;
- g. For shipments you received in interchange, the date and time the shipment was interchanged;
- h. For shipments given in interchange, the off junction location and station number
- i. For shipments given in interchange, the road given to;
- j. For shipments given in interchange, the date and time the shipment was interchanged;

1

2

Request for Production No. 49:

Please produce documents, in a computer-readable format to the extent available, which show car movements for each car moving on your line segments in the SARR States for each year or partial year 1998 to the present.

Request for Production No. 50:

Please produce documents, in a computer-readable format to the extent available, which show locomotive utilization and locomotive performance for each locomotive that you owned or leased for each year or partial year 1998 to the present.

Request for Production No. 51:

Please produce the computer-readable model, supporting databases and operating manuals that you use to assign locomotives to each train on your system.

Request for Production No. 52:

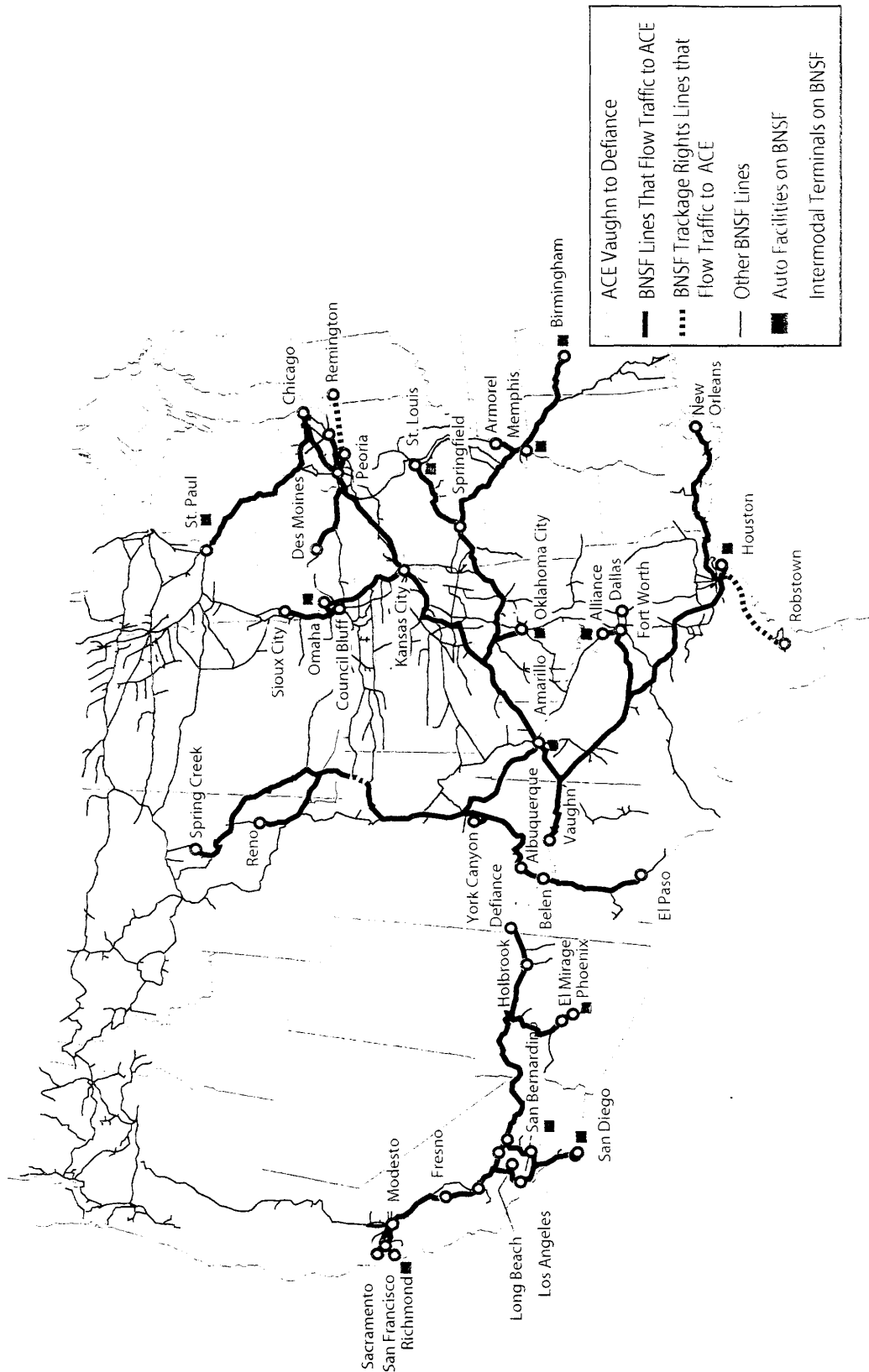
Please produce documents which describe the rules governing the priority given to each train type, i.e., intermodal, local, through, unit, moving on your system.

Request for Production No. 53:

Please produce documents which contain data, in a computer-readable format to the extent available (e.g., BNSF's Transportation Support System), for all car and train movements and yard and hub operations on your system in the SARR States for each year or partial year 1998 to the present.



2001 AEPCO Traffic Depends on BNSF Network



Exhibits
III-A. Traffic Group

DECLARATION OF JANUSZ A. ORDOVER

I. INTRODUCTION AND THE PURPOSE OF THIS STATEMENT

My name is Janusz A. Ordover. I am a Professor of Economics at New York University and a former Deputy Assistant Attorney General for Economics in the Antitrust Division of the U.S. Department of Justice. For over 20 years I have been actively involved in numerous regulatory and deregulatory matters involving network industries, such as railroads, airlines, telecommunications, and electricity in the United States and other countries. My work on competition and regulatory standards for these industries has been relied upon by the Department of Transportation, the Federal Communications Commission, the Federal Energy Regulatory Commission, the World Bank, the OECD, and the Inter-American Development Bank. I am one of the economists who signed the verified statement of economists supporting the principles of Constrained Market Pricing in June, 1983 in the *Coal Rate Guidelines* proceeding.¹

I have been asked by counsel for BNSF to examine the economic issues related to the inclusion of revenues from “cross-over traffic” in the stand-alone cost (“SAC”) test for excessive rates. The question whether use of cross-over traffic should be permitted at all – and, if so, what share of revenues should be allocated to the stand-alone railroad (“SARR”) is perhaps the single most significant public policy issue faced by the Surface Transportation Board (“Board”) in recent and pending stand-alone cost cases. In several proceedings currently before the Board, the claim that the complaining shipper’s rate is above SAC turns largely on the amount of revenue that the complainant has allocated to the SARR from cross-over traffic. Of course, whether any particular rate is found to be excessive often depends on other factors, such as forecasts of SARR traffic volumes and revenues, and the appropriate level of operating expenses and construction

¹ A copy of that statement is attached to this declaration as Attachment 1.

costs, but the distorting impact of inclusion of cross-over traffic revenues on the outcome of the SAC analysis requires that the Board give it full and serious attention.

In this declaration, I shall conclude that the current treatment of the cross-over traffic is contrary to the broad principles of Constrained Market Pricing (“CMP”) that govern regulation of railroad rates in the post-Staggers Act era. Further, I conclude that as a practical matter, the inclusion of cross-over traffic as a component of SAC analysis opens the door to the manipulation by complainants of the stand-alone cost ceiling for railroad rates and, potentially, can be a vehicle for the very sort of “cross subsidy” that the Board seeks to prevent. Such manipulation can lead to unwarranted findings of unreasonable (excessive) rates to shippers whose demand is demonstrably inelastic and who, under CMP principles, should be required to pay rates significantly in excess of pertinent marginal costs. Put another way, economically unsound treatment of cross-over traffic that favors the proponent of a SARR can effectively vitiate the application of the principle of constrained (Ramsey) market pricing and can undermine achievement of the critical goal of revenue adequacy.

As I will discuss in greater detail, the risk of manipulation in this case is not just hypothetical but is demonstrable from the face of the complainant’s SAC evidence. Arizona Electric Power Cooperative (“AEPCO”) has constructed a SARR whose revenue comes almost exclusively from cross-over traffic. The SARR serves as a bridge carrier for large volumes of traffic that moves over BNSF’s and UP’s major east-west lines in the southern corridor. Most of this traffic is intermodal and automotive traffic that has been exempted from regulation because the rates on this traffic are constrained to reasonable levels by workable competition for these types of shipments in the relevant market. Amazingly, as BNSF witness Klick explains, if one eliminates non-exempt traffic from the analysis, AEPCO’s SAC evidence would purport to show

that the remaining revenues generated by exempt, cross-over traffic *alone* are still far in excess of the *total* stand-alone costs calculated by AEPCO to handle all traffic on its SARR.

The suggestion that revenues on exempt traffic exceed SAC cannot stand. By definition, the rates on exempt traffic are reasonable. Rates that exceed SAC are deemed to be unreasonably high. Rates cannot be both reasonable and unreasonably high at the same time. Either the Board's decisions exempting various categories of traffic from regulation are incorrect, which is unlikely, or AEPCO's SAC evidence is deeply flawed. Of course, this seeming paradox resolves itself once we realize that it stems from the fact that the SARR claims revenues from this traffic while eschewing responsibility for the costs that must be incurred to make this traffic economically feasible.

The incoherent result AEPCO espouses here is conclusive evidence that inclusion of cross-over revenues in the SAC model can lead to rate findings that are economically flawed and that could in principle further contribute to railroad revenue inadequacy. An unmistakable defect in AEPCO's SAC evidence is the aforementioned manipulation of the division of revenues on cross-over traffic. I will explain that, on the most fundamental level, inclusion of cross-over traffic revenues is at odds with the core principles of SAC because a hypothetical SARR that relies on revenues derived from interline traffic is not a genuine "stand-alone" railroad. The unavoidable conclusion is that a true SARR would not (and should not) benefit from the revenues generated by cross-over traffic as it would lack the necessary facilities to carry *all selected* traffic end-to-end. In principle, the complaining shipper should be required to build *all* the facilities needed to carry the traffic it selects. If it chooses not to build all the facilities, it should not be entitled to any *net* revenue contribution from traffic for which facilities have not been constructed.

Unless all relevant facilities are built, the comparison of stand-alone revenues and costs that is the basis of SAC analysis is simply impossible. If the SARR is allowed to claim any net revenues from cross-over traffic, the Board will inevitably have to rely on some arbitrary rule for allocating those revenues between the SARR and the residual incumbent in order to calculate the total revenues of the proposed SARR. As the Board very well knows, the inherent arbitrariness in constructing any rule for allocation of cross-over traffic revenues between the residual incumbent and the SARR stems from a simple and irreducible fact of railroad economics, which is that a substantial proportion of railroad costs is fixed as well as joint and common. An end-to-end rate that exceeds directly attributable costs of the movement makes a contribution to the recovery of any and all joint and common costs of the railroad. *Consequently, this contribution cannot be allocated to any particular subset of such joint and common costs or to any particular group of traffic.* This is not a problem when the railroad is integrated since an integrated railroad bears all of its costs and carries the responsibility for their recovery. When the SARR is permitted to include cross-over traffic, the “ownership” of these costs – and thus the responsibility for their recovery – is “split” between the two railroads, viz., the SARR and the residual incumbent.

The split in ownership at a hypothetical interchange point creates the opportunity and incentive for the complaining shipper unilaterally to manipulate the allocation of revenues from cross-over traffic. I term this manipulation “strategic revenue shifting.” In fact, the shipper may attempt to allocate to the SARR such share of the net revenues from the cross-over traffic as to potentially render the residual incumbent non-viable over the long run.² Such an allocation

² At the minimum, such an allocation can render non-viable a portion of the residual incumbent’s extant network.

would be tantamount to an impermissible *strategic* “cross-subsidy” of the issue traffic in the shipper’s SAC construct.³ It is an inexorable conclusion that, since cross-over traffic does not impose any net costs on the SARR but generates net revenues by means of strategic revenue shifting, the Board may find the rate excessive *even if* such rate would not be found excessive either if cross-over revenues were excluded or if the SARR included all the required facilities for the claimed traffic.

Despite years of efforts by the nation’s freight railroads to rationalize rates and routes, real-life incumbent railroads (such as BNSF) are revenue inadequate. Hence, in my view, any allocation rule that shifts contribution from cross-over traffic to the SARR from the incumbent is potentially not sustainable because it will further erode the financial viability of the incumbent. The revenue assumed to be transferred from the residual incumbent to the hypothetical SARR contributes to revenues in excess of SAC, thereby driving down the defendant’s real world rate on the issue traffic. Thus, as a matter of public policy and sound economics, the Board should not accept any allocation rule that allows the shipper to construct a SARR that thrives only because it -- by fiat -- appropriates net cross-over revenues from the residual incumbent. Indeed, if under such an allocation rule, the residual incumbent becomes even more revenue inadequate, the allocation rule effectuates a strategic “cross-subsidy” of the issue traffic.

The SAC methodology, as originally conceived, aimed to remove arbitrary allocations from rate calculations. It is thus a perversion of the letter and spirit of SAC methodology to implement regulatory policy that permits the finding of an excessive rate solely because of the shipper’s reliance on *arbitrary* allocations of cross-over revenues. In brief, I urge the Board to

³ In my terminology, strategic “cross subsidy” arises when the issue rate is not excessive when gauged using only stand-alone revenues but is found excessive when cross-over traffic is allowed and the residual incumbent is revenue inadequate.

insist on a true stand-alone methodology that disallows the use of cross-over traffic revenues in the SAC test and thus eschews the arbitrary allocations necessitated by the inclusion of cross-over traffic.

I understand that in recent cases the Board has permitted complainants to claim revenue contribution from cross-over traffic. There is no basis for the Board to permit AEPCO to do so here. I understand that AEPCO has not attempted any showing here that its allocation procedure provides for coverage of pertinent off-line costs; therefore there is no basis in the record for accepting AEPCO's revenue divisions.

In the next section of this declaration, I briefly review the public policy rationale for the SAC test, including how it fits into an overarching goal of giving railroads a realistic opportunity to achieve revenue adequacy while protecting captive shippers from exercise of market power by the incumbent railroad. In Section III, I identify the key economic characteristics of cross-over traffic and show that they are inconsistent with the economic principles underlying Ramsey pricing and CMP. The final section of my declaration addresses specific aspects of AEPCO's reliance on cross-over traffic in this case and explains why that evidence should be rejected by the Board.

II. THE ECONOMIC AND PUBLIC POLICY RATIONALE FOR THE SAC TEST

It has long been recognized that for railroads to recover their efficiently incurred costs (both fixed and variable) some form of differential pricing must be permitted. *Coal Rate Guidelines* at 526-27. The logic behind this claim is now familiar and there is no need to rehash it at any great length. Because railroading is characterized by substantial fixed costs relative to variable (or marginal) costs, pricing rail services at marginal cost would generate insufficient

revenues to defray the total forward-looking costs of the railroad.⁴ Indeed, pricing at variable or marginal cost would condemn the railroad to revenue inadequacy and ultimately lead to its demise and exit from the market.

A second important feature of railroading as an economic activity is that it is characterized by joint and common costs. These are costs that are incurred on behalf of more than one shipper and, as such, can and should be recovered from more than one shipper.⁵ The presence of these joint and common costs generates scope economies (defined as savings that are created by having one railroad serve more than one customer, as compared to a base case in which each customer is served by one railroad), which can potentially benefit all shippers. Because of these scope economies, it is generally efficient for a railroad to serve multiple shippers with its route structure. Furthermore, because of substantial fixed costs, railroads also can and often do exhibit economies of density whereby average costs per unit of traffic decrease as the number of units of traffic using particular facilities increases.⁶

At least since the Staggers Act, it has been widely recognized that cost recovery in the railroad industry cannot be achieved by requiring that each shipper pay the same mark-up per

⁴ To illustrate, assume that the railroad needs to incur fixed costs of \$10 million to construct the needed facilities and that the variable (marginal) cost per ton-mile is \$1. Plainly, no matter how many ton-miles the railroad carries, it will not recover its full costs if the rate is capped at \$1. Hence, a higher rate is required. Obviously, a railroad that has sunk the necessary \$10 million can carry the traffic at the un-remunerative rate of \$1 as long as it does not have to make another investment in the fixed facilities, but to be viable in the long run the rate must exceed \$1 by enough to cover the full economic costs. The difference between the full costs of its operations and the total variable cost is the “quasi-rent.”

⁵ To continue with the example in footnote 4, assume that two shippers, A and B, use the pertinent facilities. In this case, the \$10 million can (and must) be recovered in some proportion from both.

⁶ Facilities congestion is the main reason why, once certain density is reached, per unit cost tends to increase.

ton-mile or the same mark-up per dollar of variable cost. As has been demonstrated many times, such an approach to cost recovery is a prescription for inefficiency. It prevents socially profitable services from being offered, and it distorts shipping volumes by suppressing unduly the services utilized by those shippers whose demands are relatively more elastic, while “under-recovering” revenues from those shippers whose demands are relatively less elastic. The principle of Constrained Market Pricing recognizes that differential pricing conduces to economic efficiency.⁷ CMP also recognizes that differential pricing can potentially lead to unduly elevated rates for some shippers. In order to protect against this eventuality, the current regulatory regime subjects market dominant railroad rates to the SAC test.⁸

As originally intended, the SAC test was devised to ensure that no shipper was required to pay more than the full costs of the railroad facilities that it uses. A shipper who paid in excess of the full costs was said to be cross-subsidizing other shippers by paying for facilities from which it derived no benefit. Conceptually, this test is quite compelling and sound as a matter of

⁷ The familiar Ramsey pricing formula states that the price/cost margin earned on any given category of shipment should be inversely proportional to the elasticity of demand of that category with respect to rail rate. (A category of shipment can be defined narrowly as comprising shipments by or to a single customer over a period of time.) That is $L(i) = (p(i) - c(i))/p(i) = k/E(i)$. In this formula, $p(i)$ is the rail rate applicable to category “i”, $i=1, \dots, N$; $c(i)$ is the underlying marginal (variable) cost of the shipment; $E(i)$ is the pertinent elasticity of demand; k is the so called “Ramsey” multiplier which takes on the value of $k=0$ when the railroad is compelled to price at marginal cost; and $k=1$ when the railroad is allowed to act as a profit-maximizing monopolist. It is important to realize that the elasticity of demand facing a given railroad on a given shipment can reflect not only the usual reduction in “consumption” of railroad services from a price increase but also the presence of intermodal and intramodal competition, where such competition exists. (Modifications of the formula are needed in the presence of cross-elasticities of demand between different categories of shipments. I shall abstract from this complication here.)

⁸ There is no general economic theorem showing that if the railroad is revenue inadequate, none of its rates can exceed SAC. However, it is plain that all of the rates taken together cannot exceed SAC since the railroad is revenue inadequate. Hence, simple logic suggests that if the railroad is revenue inadequate, the likelihood that there are many rates in excess of properly developed SAC is low.

economics and public policy. Indeed, if entry into railroading were unimpeded by entry barriers – *i.e.*, if the market for provision of railroad services were perfectly contestable, in the language of economics – a railroad seeking to collect from the shipper more than the long-run economic costs of the facilities used by the shipper would be replaced by an entrant that could attract that shipper by charging rates that are slightly lower, yet sufficient to cover its full economic costs. In this way, the SAC test mimics the operations of a perfectly contestable market *even though* railroading as an activity is hardly contestable because a huge share of the overall costs of each railroad is not only fixed but also sunk.⁹

As the name implies, and as initially conceived, the *stand-alone* cost test was designed to compare the costs incurred to build and operate a *stand-alone railroad* serving the needs of an individual shipper (or a group of shippers) with the revenues generated by that shipper (or a group of shippers) at the existing rate levels charged by the defendant railroad. The adoption of CMP, and in particular the application of the SAC test, obviated the need to examine whether the railroad's existing rates were consistent with the Ramsey pricing principles. The ICC considered this a significant regulatory advantage because calculating Ramsey prices requires information on demand elasticities that may not be readily available.¹⁰ At the same time, recognition that differential pricing was desirable (when subjected to proper constraints) freed the railroads from inefficient pricing and increased the chances of revenue adequacy.

In light of the economies of scope and density discussed above, the ICC determined that

⁹ Sunk costs are those costs that a firm cannot recover if it exits the relevant market (or industry). Thus, rail track may be sold for no more than its scrap value, which is much less than the cost of new rail track, and is thus substantially sunk. Sunk costs are generally regarded as a barrier to entry.

¹⁰ Actually, this calculation also requires the regulator to calculate or infer the value of the Ramsey multiplier, k (see fn. 8 above).

complaining shippers should be permitted to design a SARR that could handle both the traffic of the complaining shipper (the “issue” traffic) and other “non-issue” traffic that shared facilities with the issue traffic. Furthermore, the ICC concluded that the complaining shipper would be permitted to define the traffic group and the railroad configuration in the first instance, because it had the incentive to design the most efficient operation that could feasibly handle the issue traffic and other non-issue traffic in the stand-alone traffic group. A complaining shipper has an incentive to group issue traffic with non-issue traffic in a way that makes the largest possible contribution to the recovery of the total forward-looking costs of the SARR in order to demonstrate an excessive rate and obtain a rate reduction. In sum, the ICC’s decision to allow a shipper to group issue and non-issue traffic that was to be carried *end-to-end* was fully consistent with the basic precepts of constrained market pricing and with the twin goals of ensuring railroad viability and extending protection to captive shippers.

However, the inclusion of cross-over traffic as a component of the stand-alone railroad has undermined the proper SAC construct – and its public policy rationale. As we shall see below, inclusion of cross-over traffic revenues in the base of revenues attributed to the SARR coupled with the concomitant burdening of the incumbent with the potentially excessive responsibility for the recovery of the costs of operating its residual network distorts the applicability of the SAC test as a test for cross-subsidy. To put it bluntly, by permitting cross-over traffic to be included in a SAC analysis, the Board has enabled the complaining shipper to use strategic revenue shifting and to game the regulatory process by constructing a hypothetical railroad that is neither stand-alone nor required to contribute to the recovery of the long-run costs of the residual incumbent who must defray all of its remaining costs, including the costs of facilities without which cross-over traffic would not be possible.

The inclusion of cross-over traffic in the SAC analysis necessitates arbitrary allocations of net revenues from such traffic. This, in turn, creates a real danger that the SAC test is rendered meaningless and that regulatory policy will be set back to the pre-Staggers Act era in which rates were evaluated using arbitrary cost allocation standards. Indeed, once the revenues from cross-over traffic are incorporated in the SAC test, the finding that the issue rate is excessive does not imply at all that the issue traffic is cross-subsidizing other traffic. As vividly demonstrated by AEPCO's evidence here, reliance on cross-over traffic in the SAC test can lead to unwarranted rate reductions on the issue traffic despite the fact that the properly constructed SARR would not fail the SAC test. This analysis is developed more fully below.

III. THE ECONOMIC DANGERS OF PERMITTING CROSS-OVER TRAFFIC IN A SAC TEST

A. Distorting Effects of Cross-Over Traffic in the SAC Test: General Assessment

There is no economically defensible way to "attribute" un-allocable joint and common costs to different traffic groups or different shippers. By definition, these costs are not caused by any particular shipment and thus cost-causality cannot be depended upon to guide cost recovery from any given shipment. Instead, economic efficiency requires that differential pricing (*i.e.*, Ramsey pricing principles) be used to recover these costs from the totality of the traffic that uses the pertinent facilities and, in the aggregate, causes these costs to be incurred. This is the basic principle of cost-causality which states that those who cause costs to be incurred should be responsible for their recovery. In its standard formulation, SAC recognizes and builds on this principle of cost-causality because it tests whether revenues from a group of traffic exceed (or fall short) of all the costs *caused* by that group of traffic. In line with the cost-causality principle,

railroad that incorporates cross-over traffic does not stand-alone after all; it is a SARR only in name but not as an economic entity. Traffic moves on the SARR for only a portion of its journey, not from end-to-end. The SARR remains “attached” to the residual incumbent by means of the cross-over traffic that they jointly carry, potentially siphoning revenue from the residual incumbent without removing any of the unattributable costs of that traffic. But for the presence of the residual incumbent, the so-called “stand-alone” railroad would not, in fact, be able to carry the cross-over traffic, since it chooses not to build all the facilities needed to serve that traffic. The SARR is thus critically dependent on the residual incumbent to carry traffic from and to it, but since it does not build the lines that carry that traffic end-to-end, the SARR does not incur all the costs required to generate those revenues. Nevertheless, through the allocation rule, it claims a portion of revenues that before the split helped to defray (a portion) of these costs.

The introduction of cross-over traffic into the SAC analysis is a recipe for economic distortions stemming from strategic revenue shifting that results in finding an excessive rate for the issue traffic, a circumstance that I also termed “strategic” cross-subsidy of the issue traffic. Let me elaborate on this point. The Board tests for cross-subsidy by determining whether revenues from the issue traffic and other traffic in the chosen shipper group exceed SAC. The introduction of cross-over traffic can make such a finding of cross-subsidy a mirage, because the revenues from cross-over movements are claimed without accounting for the costs incurred to generate those revenues. This magical generation of revenues by means of strategic revenue shifting comes at the expense of the residual incumbent which has no guarantee of receiving sufficient contribution to cover the joint and common costs caused by the traffic it carries, including portions of the cross-over movements. The revenue transfer to the SARR from the

residual incumbent is a strategic cross-subsidy. In fact, because of the leeway in which the revenues from cross-over traffic are allocated, an issue rate may be deemed excessive or non-excessive depending solely on the share of cross-over revenues that is attributed to the SARR. Such an outcome is impossible if the shipper is required to build a SARR that carries all the claimed traffic end-to-end.

As noted, the inclusion of cross-over traffic puts the two railroads – the SARR and the residual incumbent – in a “vertical relationship” in which the profitability of the SARR is directly (*i.e.*, proportionately) linked to how *unprofitable* the complaining shipper can make the residual incumbent by means of strategic revenue shifting. When cross-over traffic is permitted, the complaining shipper no longer has the incentive to design the most efficient stand-alone railroad. Instead it has the incentive to siphon off as much revenue as possible from the residual incumbent while shedding responsibility for contributing adequately to the recovery of all the costs that must be incurred over the long run in order to generate the claimed cross-over traffic revenues.

The shipper must build out the facilities that are required to carry the issue traffic. Basic logic compels a conclusion that the shipper would build out other facilities if doing so generates less in incremental costs than it generates in revenues. When it comes to cross-over traffic, that traffic imposes no costs on the railroad but generates net revenues.¹³ Revenue “freed” from responsibility for costs in this manner engenders the risk of strategic “cross subsidy” to the SARR. The true nature of this subsidy is disguised because, in a real setting, the net revenues from cross-over traffic cannot be meaningfully associated with any particular portion of the track over which the cross-over traffic moves. All the fixed facilities used by cross-over traffic

¹³ By this I mean no costs besides directly attributable costs.

contribute to the viability of that traffic and must be paid for with the available sources of railroad revenues. When the SARR captures for itself the net revenues from cross-over traffic, it leaves with other shippers who use the residual incumbent's lines the burden of paying for those costs that, heretofore, were recovered in part from cross-over traffic revenues. This residual burden is smaller the smaller the portion of revenues that are strategically shifted to the SARR. However, the identified risks cannot be entirely obviated because any allocation is by its very nature arbitrary. It follows that the modified mileage prorate advocated here by AEPCO is no solution to this endemic problem: no allocation methodology can handle the fact that prior to the artificial break up of the incumbent into a SARR and a residual incumbent, the net revenues from "cross-over" traffic contributed to the recovery of all fixed costs incurred by the incumbent. After the break up, the same pool of net revenues from cross-over traffic must be arbitrarily allocated among the two railroads whose total costs have been gerrymandered by the complaining shipper for its maximum advantage.

Reliance on cross-over traffic invites distortion into the SAC analysis because it precludes the comparison of total through revenues and end-to-end costs that are at the heart of the SAC test. The unattributable off-line costs that must be incurred in order to enable cross-over traffic, as well as other traffic that may move on these off-line portions of the residual incumbent, cannot be ascertained *unless* the off-line facilities are actually "built" as a part of the SARR. Thus, there is no way of identifying and eliminating the potential distortion created by use of cross-over traffic short of requiring the proponent of a stand-alone system to conduct the test properly by building all the facilities needed to carry its non-issue traffic end-to-end.¹⁴

¹⁴ Any time a facility is built out, it may have an additional "layer" of cross-over traffic associated with it. The first layer of cross-over traffic is the traffic that shares facilities with the issue traffic. The next level of cross-over traffic, layer 2 cross-over traffic, does not share such

The Board should have no illusions regarding the incentives that complaining shippers have to exploit cross-over traffic in the manner described above. It should also be clear to the Board that the potentially distorting effect of cross-over traffic increases in magnitude as the proportion of cross-over traffic in the overall traffic group carried by the putative stand-alone railroad increases, as in AEPCO's case.¹⁵

B. Distorting Effects Of Cross-Over Traffic Revenues On The Results Of The SAC Test: A Simple Example

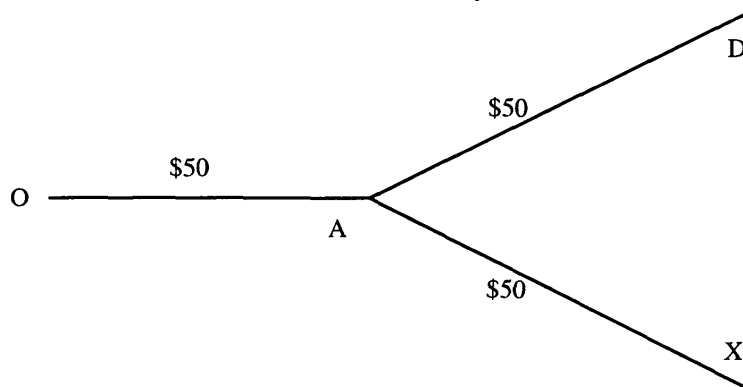
To make the foregoing discussion more transparent, I develop a simplified example which illustrates how use of cross-over traffic can lead to a finding that the issue rate is excessive, where, in fact, such a finding is economically irrational and would undermine the viability of the residual incumbent. Assume that the Board is assessing the reasonableness of a rate charged for traffic moving between origin O and destination D through point A. The fixed costs for that movement, standing alone, are \$100 with \$50 in costs for segment OA and \$50 in costs for segment AD (operating costs are ignored for purposes of this example). Assume that the rates charged by the defendant for the issue traffic generate \$90 of revenue. Therefore, when

facilities. Hence, the complaining shipper may argue that it has no incentive to build out the initial layer of facilities to handle cross-over traffic unless it receives a share of layer 2 net revenues. I recognize the issue raised by the ever-expanding SARR network. The concern it raises must not be exaggerated, however. The problem that exists now is that recent SARRs do not even approach "stand-alone" status and therefore the results of SAC analyses do not even approach the results that would be realized under a true stand-alone analysis.

¹⁵ To provide guidance in future cases, the Board could limit the incentives and ability of the complaining shipper to rely on cross-over traffic to lower its rate(s) by limiting the amount of cross-over traffic that it permitted to be included in a SAC model. Similarly, the Board may require that the complaining shipper who wishes to include some cross-over traffic in the SAC test actually build as part of the SARR those "off-line" facilities that are effectively dedicated to the claimed cross-over traffic. Plainly, if the non-included off-line facilities are totally dedicated to cross-over traffic, the cross-over traffic should have to pay for them. The Board can further constrain these incentives and the concomitant misallocations by insisting, as I suggested earlier, that the shipper justify why it prefers not to build out all the requisite facilities for the carriage of claimed traffic.

the issue traffic is analyzed on its own, without any grouping of other traffic, the costs of providing the issue traffic service (\$100) exceed the issue traffic revenues (\$90) by \$10 (\$100-\$90).

Figure 1
Hypothetical Railroad System



Now assume that the defendant railroad also moves traffic for a different shipper between origin O and destination X through point A. Assume the line segment OA has sufficient capacity to handle traffic for *both* shippers without additional investment. The additional cost of line segment AX is \$50. Also assume that the second shipper has a more elastic demand for the rail service than the complainant. This limits the revenues the incumbent can charge for this movement to \$60 rather than the \$90 which the complainant pays on the issue traffic movement. The total cost for this traffic group is now \$150 (\$50 + \$50 + \$50) and the total revenues are \$150 (\$90 + \$60). In other words, the revenues from the traffic group exactly match the costs of providing service. Recall that the issue traffic standing alone could not cover its full SAC. The grouped traffic can cover the SAC because of the economies of scope that exist in handling both the issue and the non-issue traffic over the line segment OA. This simple example illustrates

how shippers presenting SAC evidence can potentially benefit from grouping end-to-end non-issue traffic with issue traffic and realize cost savings from economies of scope. In the example, there is no finding of excessive rate, however, since the pertinent revenues exactly match pertinent costs.

To this point, the example does not include cross-over traffic. In fact, it illustrates a circumstance in which the shipper can readily present evidence on the stand-alone costs of the entire system, as the complaining shippers in fact successfully did in the *West Texas Utilities*¹⁶ and *APS*¹⁷ cases. Presenting the stand-alone costs of the complete SARR system required to provide the stand-alone traffic with the same service as the incumbent does today is the only accurate way to ensure that the full economic costs of all of the lines are covered on a stand-alone basis, and to ensure that there is no payment by the stand-alone traffic for facilities it does not use and from which it derives no benefit.

Now, assume that the complainant does not want to build the AX segment but, nevertheless, wants to claim some revenues for carrying traffic on the OA portion of the OAX movement. The complaining shipper thus chooses not to present evidence on the costs of segment AX. It therefore posits a stand-alone railroad that runs only between OA and AD. The OX traffic becomes “cross-over” traffic, *i.e.*, it moves over segment OA but interchanges with the residual incumbent at the fictional interchange point A. The costs of this reduced railroad are only \$100 (\$50 + \$50). The issue traffic contributes \$90 of revenue, as noted above. What then is the revenue contribution from the non-issue traffic for the OA portion of its OAX end-to-end

¹⁶ *West Texas Util. Co. v. Burlington Northern R.R.*, 1 S.T.B. 638 (1996), *aff'd*. *Burlington Northern R.R. Co. v. Surface Transp. Bd.*, 114 F.3d 206 (D.C. Cir. 1997) (WTU).

¹⁷ *Arizona Public Service Co. and PacifiCorp. v. Atchison, Topeka and Santa Fe Ry. Co.*, 2 S.T.B. 367 (1997) (APS).

movement? The simple, and the only correct answer, is that this question cannot be answered at all!¹⁸ The \$60 worth of net revenue from the OAX traffic, *i.e.*, revenue in excess of variable cost, cannot be attributed to either segment, be it OA or AX. As explained earlier, the movement requires that both segments be in place and thus the costs of both segments need to be covered from *all* sources of revenues in order to make the SARR and the residual incumbent sustainable over the long run where all costs are variable.

If the movement from O to A is the same distance as the movement from A to X, the modified mileage prorate (“MMP”) approach proposed by AEPCO in this proceeding to allocate revenues would generate equal division of revenue from the cross-over traffic to each carrier, or \$30 contributed to the SARR and \$30 to the residual incumbent. (Recall that in this example the incumbent receives \$60 of revenue for the OAX through movement.) While having the air of objectivity and even-handedness, it is clear that this approach actually biases the SAC test in favor of the complaining shipper. The theoretical rationale behind this conclusion is that if the complaining shipper believed that it could maximize the excess of total contribution (*i.e.*, maximize the difference between total revenues and total SARR costs) by building out the railroad to include the “off-line” segment, it would have done so! Hence, the mere fact that the complaining shipper prefers to include in its base of revenues the prorate *while incurring no additional costs* is probative evidence that this strategy is intended to yield a higher alleged overcharge on the issue traffic movement than the alternative of building out the full end-to-end railroad.¹⁹

¹⁸ Another, equally unhelpful answer is that the number is either \$0 or \$60, or any number in-between.

¹⁹ I am not claiming that this conclusion rises to a level of a theorem. Considerations such as the potential presence of the second layer of “off-off-line” traffic complicate the general

As was demonstrated above, when the SAC analysis is done correctly and the full costs and revenues are considered, the revenues from the two movements (\$90 + \$60) just equal the full economic costs of providing service to the two shippers (\$50 + \$50 + \$50). In other words, the incumbent's costs are fully covered and the rates charged for the issue traffic do not exceed a reasonable maximum. But in the cross-over example, if MMP is used to calculate the contribution from cross-over traffic to the SARR that does not include the AX segment (the "reduced" SARR) then the stand-alone "revenues" of \$120 (\$90 + \$30) substantially exceed the costs of \$100 (\$50 + \$50). This strategic revenue shift lowers the residual incumbent's share of revenues below its full economic costs of serving the cross-over traffic on the segment that it retains, which is AX.

In the cross-over example, therefore, the rate charged for the issue traffic is determined to be unreasonably high, while in the full SAC analysis the rate would be deemed reasonable. Importantly, for the overall system to remain revenue adequate, the former finding would result in a lower rate for the shipper whose demand has been deemed inelastic and would indicate a need to increase the rate for the shipper (the one moving on the OAX) whose demand has been deemed potentially more elastic. Such "rebalancing" of rates, assuming that the rate to the elastic shipper could even be raised, would harm economic efficiency and would be counter to the principles of Ramsey (differential) pricing. Of course, if the rate to the elastic shipper cannot be raised, because the shipper is not willing to pay more than \$60, the residual incumbent will become revenue inadequate and, over the long-haul, will have to withdraw service on the AX segment.

proof. However, if the off-line is preponderantly used for cross-over traffic, or if cross-over traffic is a substantial portion of all the traffic claimed by the SARR, then the force of the conclusion in the text is enhanced.

C. Distorting Effects of Cross-Over Traffic in the SAC Test: Recapitulation of Main Conclusions

As I have explained above, there is no formula or algorithm that, in the abstract, can calculate the “ideal” allocation for any individual cross-over traffic situation: the only way to determine the allocation that leads to the postulated indifference is to determine what it would cost to construct and operate the lines of the residual incumbent required to move the cross-over traffic to its end-points on the defendant railroad. No single allocation formula can determine that point unless the actual incremental costs of the off-line are calculated and presented. Because shippers have an incentive to use cross-over traffic only when the resulting net revenue contribution to the SARR is higher than it would be if the test were conducted properly, it is a reasonable presumption that any allocation “rule” advocated by shippers is likely to bias the SAC results in favor of the shipper, no matter how vociferously the shippers claim it is “fair” or “even-handed.”

Let me recapitulate by pointing out how the foregoing example illustrates the three propositions set forth at the beginning of this section.

First, when cross-over traffic is introduced, the stand-alone railroad is no longer “stand-alone.” In the example, segments OA, AD, and AX taken together comprise a stand-alone system. They constitute all the facilities needed to handle all the traffic that the shipper has selected. When cross-over traffic is introduced, the new, putative stand-alone comprises segments OA and AD; these are now severed from segment AX. Nevertheless, the new stand-alone is inextricably linked to the residual incumbent serving the AX movement, because the traffic that moves over from AX is the source of revenue that affects the outcome of the SAC analysis. If the AX segment ceased to exist, the OAX traffic would not move, and the only revenue available to cover the \$100 of costs on the OAD segments would be the \$90 in revenue

generated by the OAD issue traffic. The complaining shipper cannot have it both ways; if it is entitled to assume that cross-over traffic revenues will be available to defray a portion of the costs of the OAD segment, it must also demonstrate that the AX segment will be viable over the long run. AEPCO has made no such showing in this proceeding with respect to the lines of the residual defendants upon which the movement of cross-over traffic relies.

Second, the use of cross-over traffic is a vehicle for strategic cross subsidy. Of the \$30 in revenues from the movement OAX that is allocated under the modified mileage prorate to the stand-alone, \$20 is actually needed to cover the costs of segment AX. If cross-over traffic is permitted, this \$20 becomes a strategic subsidy from the residual incumbent to the SARR.

Third, the distorting effects of cross-over traffic increase as the share of cross-over traffic in the stand-alone traffic group increases. In the example, the cross-over movement yields contribution to the SARR in excess of costs, and the more such cross-over movements are added to the SARR, the greater the potential magnitude of the alleged overcharge on the issue traffic movement.²⁰

D. AEPCO Evidence

I understand that in the current case, AEPCO has pushed the use of cross-over traffic in the evidence for excessive pricing into new territory. The result is substantial distortion of the

²⁰ To illustrate, assume that the SAC of the issue traffic is \$100 and that the current rate is \$90. Hence, on the pure SARR basis there is no finding of excessive rate. Now assume that a huge volume of cross-over traffic moves over the portion of the SARR. Assume that this traffic generates \$1000 in net contribution, which is just enough to cover the full costs of the total network (including the \$10 shortfall on the SARR built to carry the original end-to-end traffic). Now assume that the shipper shifts \$50 (or 5%) of that contribution from cross-over traffic to the SARR. With \$50 so allocated, the revenues from the SARR are \$150 which exceeds the SARR's SAC of \$100 by \$50, thus mandating a very substantial rate reduction under the Board's rate prescription methodology. Note that the distortion from the cross-over allocation is far greater in this example, even though only 5 percent of cross-over revenues are allocated to the SARR, than the initial outcome in which 50 percent of the revenues are allocated to the SARR.

SAC analysis and an outcome that flies in the face of sound economics. AEPCO has posited a SARR that handles predominantly cross-over traffic. Importantly, the vast majority of that cross-over traffic is exempt from rate regulation because its rates are constrained to reasonable levels by market forces. I have been informed that Mr. Klick has performed a calculation showing that if the revenues associated with non-exempt traffic were removed from AEPCO's SAC analysis, the remaining revenues from exempt traffic alone would still exceed total SAC as calculated by AEPCO by some 70 percent.

It is highly unlikely -- in fact, inconceivable -- that the exempt traffic group would be found to generate excessive rates if AEPCO had properly provided for the stand-alone facilities needed to handle this exempt traffic from end-to-end. The exempt traffic that AEPCO has selected is highly competitive. Even though railroad markets are not perfectly contestable, we would expect that forces of competition would drive rates on the competitive traffic below the pertinent SAC. In fact, when competition is intense, rates will be pushed well below SAC, down towards variable costs. Hence, actual competition approximates the effects of perfect contestability on rates.

SAC evidence suggesting that exempt (i.e., competitive) traffic is moving at rates well in excess of SAC is not remotely credible. Moreover, the use of exempt, cross-over movements to make a showing that the issue traffic rates are unreasonably high is an extreme example of strategic revenue shifting that should not be countenanced by the Board.

IV. AEPCO'S REVENUE ALLOCATION PROCEDURE

In a previous STB SAC case involving movements to the Public Service Company of Colorado Pawnee Station, I have discussed the principles that should guide the development of a rule for allocating revenues on cross-over traffic that is likely to be less harmful to the viability

of the residual incumbent railroad and more in line with the principles of constrained market pricing than the MMP proffered by the complainant in that case and by AEPCO here. I understand, however, that BNSF is not sponsoring evidence of revenue divisions for purposes of the SAC analysis. In these circumstances, I will limit my observations regarding revenue allocation to a brief discussion of AEPCO's flawed approach and an identification of the principles that should inform any such second best undertaking.

A threshold problem with AEPCO's evidence as I understand it is that AEPCO has not even attempted to show that its MMP methodology leaves the residual incumbent with sufficient revenues to cover directly attributable costs of the off-line portion of cross-over movements. Moreover, absent any information about attributable costs, it is impossible to know how much revenue AEPCO has allocated through the MMP method to coverage of either off-SARR or on-SARR unattributable costs and therefore impossible to divine any rationale for such allocation. In short, AEPCO has ignored entirely the need to address the fundamental policy issue of cost recovery raised by its allocation of revenues on cross-over traffic.

Attributable costs as well as potential contribution to the recovery of unattributable costs must be considered when analyzing the effects of including cross-over revenues in the SAC analysis. This is the case because an allocation rule should not, in principle, undermine the residual incumbent's ability to recover the costs that it must defray to remain viable. The focus on long-run cost recovery is the proper one because the regulatory problem created by cross-over traffic is the inability to make a stand-alone comparison between revenues and forward looking costs as a result of the requisite facilities not having been built.

The Board and its predecessor have indicated in various contexts that the allocation of revenue on cross-over traffic cannot be divorced from the concept of cost-recovery. The

treatment of this subject that appears most consistent with the SAC principles is the ICC's discussion in the *OPPD* case. In that case, Burlington Northern criticized a shipper's reliance on revenues generated by off-line traffic where the shipper ignored "[c]osts associated with off-line investment."²¹

The ICC accepted the economic logic of Burlington Northern's argument that the shipper could not simply assume coverage of off-line costs:

[S]tand-alone analysis, according to BN, cannot be made for a group of shippers unless total group revenues are compared to the total costs of serving the group. . . .

As a general matter, these propositions are correct, and we do not believe that [the Administrative Law Judge] held otherwise.²²

Notwithstanding its endorsement of this principle, the ICC concluded that the shipper had presented evidence sufficient to support a presumption that the cross-over traffic could both cover off-line costs and contribute to the costs of the SARR.²³

Most recently, the Board addressed the subject of revenue divisions and cost recovery in its *TMPA* decision:

The revenue each carrier receives should cover the attributable costs of the service it provides and make some contribution to its unattributable costs. As long as the traffic makes any contribution to a carrier's unattributable cost, the railroad is better off participating in the transportation than not participating in it.²⁴

²¹ *OPPD*, 3 I.C.C.2d at 136.

²² *Id.* at 138.

²³ *Id.* at 142.

²⁴ *TMPA*, slip op. at 31 n.73. This statement does not address whether the residual incumbent could or should receive relatively less contribution on its portion of cross-over movements than the defendant actually realizes on through movements.

In the context of a different SAC case, where the defendant was sponsoring its own methodology for dividing revenues on cross-over traffic, it would be appropriate to explore the principles that should govern the allocation of that portion of cross-over revenues that would be available for coverage of unattributable costs, assuming that cross-over traffic is allowed in the SAC calculation. I have argued in another context that such allocation should take account of traffic densities on the respective line segments. That argument will not be repeated here, as BNSF is not sponsoring any allocation of revenues on cross-over traffic.

Verified Statement of Economists
Supporting the Principles of
Constrained Market Pricing

Submitted to the
Interstate Commerce Commission
Coal Rate Guidelines – Nationwide
Ex Parte No. 347 (Sub-No. 1)

June 1983

APPENDIX A

VERIFIED STATEMENT OF ECONOMISTS
SUPPORTING THE PRINCIPLES OF
CONSTRAINED MARKET PRICING

On February 24, 1983, the Interstate Commerce Commission announced its proposal to adopt a new policy called "Constrained Market Pricing" to govern the regulation of railroad rates on coal traffic subject to the Commission's jurisdiction. In many important respects, this proposal represents a breakthrough in bringing federal regulatory policy in line with modern economic theory. We, the undersigned economists, many of whom have participated in the development of this theory, join in this statement to express our support for the principles which the Commission has proposed to adopt to shape its new policy.

We understand the key principles of the new policy to include the following: (1) regulation must afford railroads the opportunity to earn a rate of return on their investment equal to the current cost of capital; (2) permitting railroads to set their rates in accordance with the principles of Ramsey Pricing will lead to economic efficiency in the market for railroad transportation; (3) in addition to promoting efficiency in other respects, the role of proper regulation is to prevent any abuse of monopoly power by ensuring that revenues derived from the rates for any particular rail

service or group of rail services do not exceed so-called "stand-alone costs," the minimum current costs of providing that service or group of services in isolation; and (4) attempts to impose rate ceilings based on arbitrary cost allocation schemes, such as fully allocated costs, will cause economic inefficiency in railroad transportation.

In the ensuing discussion, we shall explain the basis of our agreement with each of these points.

1. Regulation Must Permit Railroads To Earn A Competitive Return On Their Investment.

At page 7 of the decision, the Commission addresses the need for rate regulation to afford railroads the opportunity to earn "adequate revenues." The Commission states:

In Ex Parte No. 393, Standards for Determining Railroad Revenue Adequacy, 364 I.C.C. 803 (1981), aff'd sub nom. Bessemer & Lake Erie R.R. Co., ___ F.2d ___ (No. 81-1492, 3d Cir., Oct. 1982), we concluded that railroads should have the opportunity to achieve earnings sufficient to yield a return on investment equal to the current cost of capital. As we explained in that case, railroads can obtain funds for investment only by offering rates of return comparable to other investment opportunities. Investments earning less than the cost of capital will not be able to retain existing funding or obtain new fundings, because investors could invest available funds elsewhere at a higher rate of return. Thus, if railroads are to provide adequate service to the shipping public, then we must construct a maximum rate standard which gives them the opportunity to earn adequate revenues.

We concur fully with the statement. If regulation is to serve the public interest, it must not only protect ratepayers from abuses of monopoly power; it must also allow the regulated entities (here, railroads) the opportunity to attract the capital necessary to build and maintain the facilities on which their service depends. The capital markets being highly competitive, railroads can only attract that capital if they have the opportunity to earn a rate of return that is comparable to the rates of return expected to be available on investments of similar risks. This is what is commonly understood to be a "current cost of capital" return. If a system of regulation is imposed which, a priori, forecloses the opportunity to earn such a rate of return, investors can be expected to take their funds elsewhere, and the railroads' services will eventually disappear. Thus, the Commission has properly recognized that its system of regulation must afford railroads the opportunity to earn a rate of return on their investment equal to the current cost of capital.

2. Pricing In Accordance With Ramsey Principles
Will Lead To Economic Efficiency.

The decision poses the issue of what principles should govern the determination of maximum reasonable rates in an industry characterized by a significant proportion of

costs that are not directly attributable to any individual service, but are instead joint or common to groups of services. The Commission has chosen the principles of Ramsey pricing to fulfill this role. As the Commission explains:

Ramsey pricing is designed to apply when marginal costs are less than average total costs. In such instances, marginal cost pricing would not permit recovery of total costs. Ramsey pricing assigns a mark up above marginal cost on the basis of inverse demand elasticity. Thus, the highest mark up would be charged to the traffic most dependent on the service provided (low elasticity traffic). By contrast, a highly competitive (highly elastic) rail service market would tolerate only a small markup over the attributable cost of providing that service. * * * Ramsey pricing analysis yields economically efficient rates, because the resulting rates do not bias the demand patterns that would be achieved under marginal cost pricing. We emphasize that Ramsey pricing is not the same as monopoly pricing because the markups above marginal cost can be constrained by whatever limits on the firm's overall earnings are set by the regulator * * *.

* * *

The constrained market pricing system we are proposing allows carriers to use market demand as the basis for their rate-making. By this approach, the carriers take the ratemaking initiative, as contemplated by the statute, on all traffic. [Decision at 9-10.]

The Commission's adoption of Ramsey pricing principles is correct, and its analysis of why Ramsey pricing

leads to economically efficient rates is sound. By apportioning all unattributable costs on the basis of the values of the services to shippers, as reflected by their demand elasticities, Ramsey pricing maximizes shippers' total net benefits among the prices that are compatible with the financial viability of the railroad. Since it is the railroads themselves that are closest to the market and best apprised of demand and cost conditions, pricing and resource allocation will be most efficient when the railroads are permitted to take the ratemaking initiative. Unless otherwise constrained by regulation, they will have the incentive to price in accordance with the principles of Ramsey pricing.

3. The Stand-Alone Cost Test Is A Proper Check On The Abuse Of Any Monopoly Power.

To ensure that rates on captive traffic set in accordance with Ramsey principles do not exceed levels that could be charged under competition, the Commission proposes to adopt the "stand-alone cost test." As the Commission explains:

The "stand-alone cost" to any given shipper (or shipper group) is the cost of serving that shipper alone, as if it were isolated from the railroads' other customers. It represents that level at which the shipper could provide the service itself. No shipper would reasonably agree to pay more to a railroad for transportation than it would cost to produce

in isolation itself, or more than it would cost a competitor of the railroad to provide the service to it. Thus, the stand-alone cost serves as a surrogate for competition; it enforces a competitive standard on rail rates in the absence of any real competitive alternative.

* * *

Because the stand-alone cost represents the cost of obtaining service from another source (i.e., reproducing the service capability), the cost of facilities must be based on replacement cost, or the current cost of producing equipment or plant with equivalent capabilities. This is appropriate since, to insure continuity of service, a long-run pricing strategy must permit sufficient income to allow for replacement of existing assets. [Decision at 11-12; footnotes omitted.]

We agree with this analysis. To prevent abuse of any monopoly power, there is no need to regulate prices that are no higher than those which could prevail under effective competition. Where competition is effective, no railroad will be able to charge any shipper rates in excess of the minimum cost (including the capital costs) that would be incurred currently to provide the service in isolation. The reason for this constraint is simple: in a market subject to effective active or potential competition, any railroad charging in excess of that amount would invite entry into the market by a firm willing to charge no more than is necessary just to cover that level of costs. Since the stand-alone cost is the minimum current cost of providing a

service in isolation, the stand-alone cost test is the proper means to ensure that rates do not involve any abuse of monopoly power.

The Commission is also correct in recognizing that the stand-alone cost test applies to rates for groups of services or shippers as well as individual services. Just as rates that return revenues in excess of the minimum current cost of providing a single service will invite entry by a competitor willing to charge rates which earn no more than that level of costs, rates consistently in excess of the minimum current cost of providing any group of services will also invite competition.

We agree, further, that stand-alone costs must include or reflect the total current replacement costs of providing a service or group of services in isolation. This is so whether current costs are higher or lower than costs that were incurred in the past, for the costs that affect pricing in competitive markets, i.e., the costs of entry, are always current replacement costs.

Finally, the Commission has properly recognized that the stand-alone cost test serves as a check against cross-subsidy:

The stand-alone cost defines the point at which cross-subsidy would begin to take place. No shipper can be said to be cross-subsidizing other shippers

if it pays no more than the cost to the railroad of providing service dedicated solely to it. (If it pays less than the stand-alone cost, it simply benefits from the economies of scope and density that exist in the railroad's system.) Thus, with the stand-alone cost as a rate cap, shippers can be assured that they will not be required to contribute toward the cost of facilities that do not serve them. [Decision at 11; footnotes omitted.]

This is an entirely correct analysis of economic cross-subsidy. Cross-subsidies are properly of concern to economists and regulators because they may result in a misallocation of resources by encouraging inefficient investment. For customers of a railroad, they may be of concern because they are perceived as unfair. Yet, while shippers who pay more for their service than other shippers may feel that they are being forced to "cross-subsidize" the other shippers, mere payment of a relatively higher rate is not evidence of a cross-subsidy where fixed and common costs must be covered. Rather, as the Commission recognizes, a cross-subsidy can only occur in an economic sense where a shipper (or group of shippers) pays more than the total cost of serving it alone. Where no shipper or shipper group pays more than that amount, differences in their rates simply reflect differing contributions to the common costs of the system, and not cross-subsidies.

4. Regulation Based On Arbitrary Cost Allocations
Will Lead To Economic Inefficiency.

In adopting Ramsey pricing as the theoretical framework for assessing the reasonableness of the common cost allocations reflected in rail rates, the Commission explicitly rejects the alternative of arbitrary cost allocation schemes:

We seriously doubt that any system of rate regulation based solely upon an arbitrary cost-allocation formula will enable rail carriers to achieve revenue adequacy. We cannot assume that traffic will actually move in each market at the fully allocated cost rate level as determined by a cost allocation formula. Carriers must charge competitive rates in competitive markets or lose the traffic. * * * [T]he market ignores the "scientific" assignment of certain costs to each of the carrier's rates. Yet, if an arbitrary allocation of costs were used to formulate and impose a rate ceiling, the carrier could not make up for the revenue shortfall it would suffer on movements that fall below the rate necessary to contribute the allocated amount.

It is only through a demand-based pricing system that the nonattributable costs can be allocated in an efficient manner. * * *

* * *

By incorporating demand elasticity into ratemaking, Ramsey pricing should encourage more shippers to purchase transportation service than if an arbitrary cost-apportionment formula were used to set rates. As noted earlier, "fully allocated cost" and other similar methodologies frequently "over-" or "underassign" to a particular service (relative to

actual market demand) portions of the carrier's common or unattributable costs. As a result, a carrier actually levying such a rate would acquire less than maximum net revenue contribution. If, however, the carrier is allowed to allocate costs on the basis of demand elasticity, the contribution should be maximized and the carrier's resources more efficiently utilized. [Decision at 8-10.]

This discussion accurately points up the indefensibility of any arbitrary cost allocation approach to setting prices. By failing to reflect differences in shipper demand, rates based on such approaches can preclude carriers from covering their total costs. They also tend to promote economic inefficiency by unnecessarily diverting traffic that could make a positive contribution to the railroads' common costs at lower rates, and by failing to obtain required contributions from shippers of other, less elastic traffic which they are able and willing to pay.

Marcus Alexis
 Marcus Alexis
 Northwestern University

Stephen M. Goldfeld
 Stephen M. Goldfeld
 Princeton University

Kenneth J. Arrow
 Kenneth J. Arrow
 Stanford University

Professor Janusz Ordover
 Professor Janusz Ordover
 New York University

Elizabeth E. Bailey
 Elizabeth E. Bailey
 Carnegie-Mellon University

Professor John Panzar
 Professor John Panzar
 Northwestern University

Professor William J. Baumol
 Professor William J. Baumol
 Princeton and New York Universities

Professor Almarin Phillips
 Professor Almarin Phillips
 University of Pennsylvania

Professor Charles E. Berry
 Professor Charles E. Berry
 Princeton University

Professor James Rosse
 Professor James Rosse
 Stanford University

Ronald R. Braeutigam
 Ronald R. Braeutigam
 Northwestern University

Professor David Sappington
 Professor David Sappington
 University of Pennsylvania

Professor Ann F. Friedlaender
 Professor Ann F. Friedlaender
 I.T.

Professor Robert D. Willig
 Professor Robert D. Willig
 Princeton University

Professor Richard Gilbert
 Professor Richard Gilbert
 Stanford University

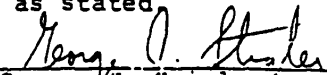
APPENDIX BVERIFIED STATEMENT OF
GEORGE J. STIGLER

My name is George J. Stigler, and I am a Professor in the Graduate School of Business at the University of Chicago. I have read the "Verified Statement of Economists Supporting the Principles of Constrained Market Pricing" signed by Professor William Baumol and others for submission in proceedings before the Interstate Commerce Commission in Coal Rate Guidelines -- Nationwide, Ex Parte No. 347 (Sub-No. 1). Since I have not participated in that proceeding nor have I participated in the development of the Ramsey Pricing Theory, it seems desirable to make a separate statement.

I have specialized in studies of prices and public regulation. I am confident that adoption of the Interstate Commerce Commission's proposed maximum rail rate policy set forth in its decision of February 8, 1983, with regard to coal and other traffic as well, would lead to a major improvement in and a rationalization of our railroads' rate structures, and in the efficiency of the rail industry.

Verification

George J. Stigler, being duly sworn, states that he has read the foregoing statement, knows the contents thereof, and that the same are true as stated.


George J. Stigler

Subscribed and sworn to before me this 13 day of June, 1983.

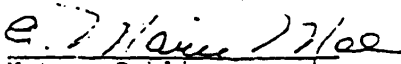

Notary Public
My Commission expires:

Exhibit III.A-2

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Exhibits
III-C. Operating Plan

Exhibit III.C-2

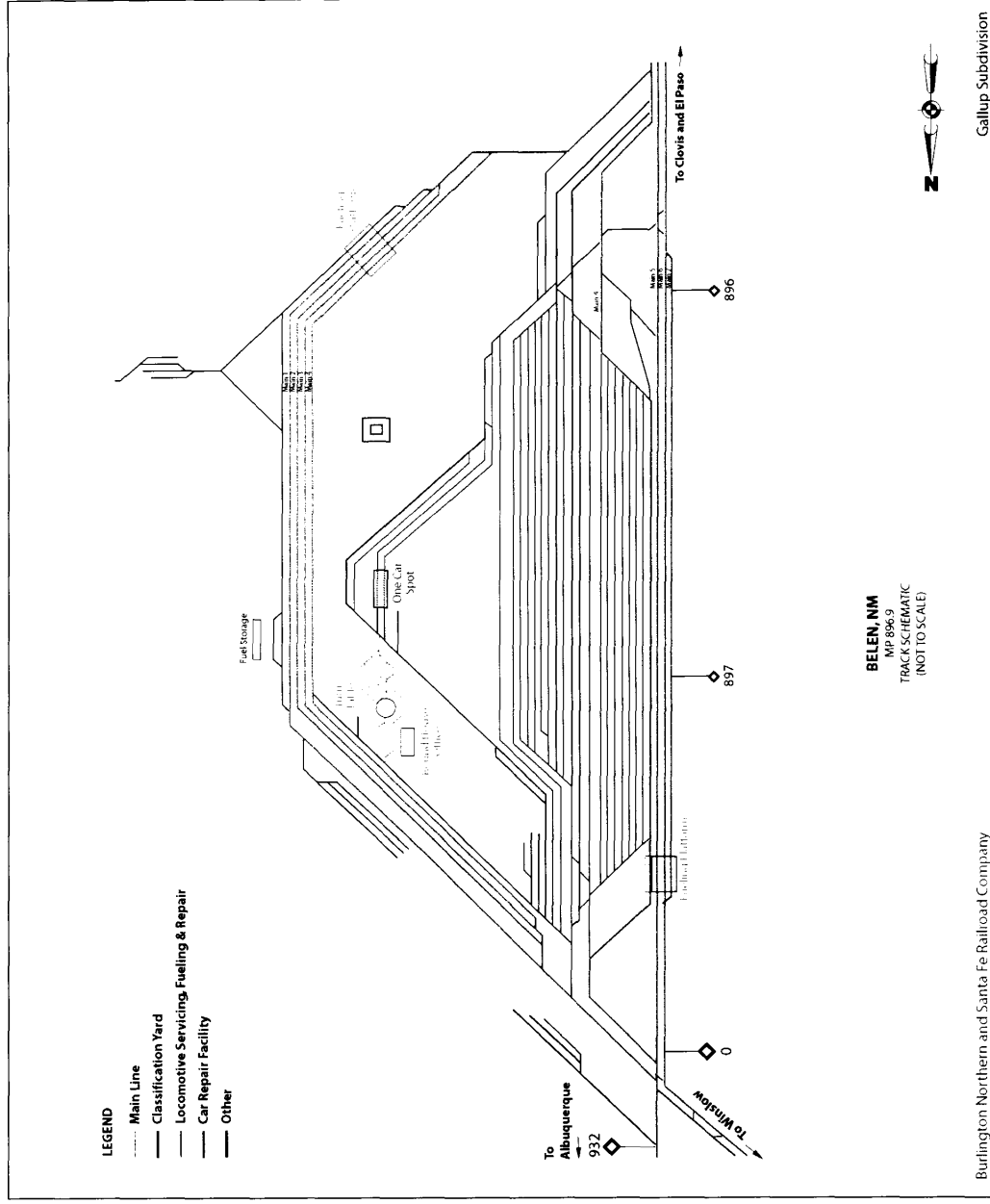
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Belen, NM

BNSF



Exhibit Page



Principal Local Operations Supported by Belen Yard

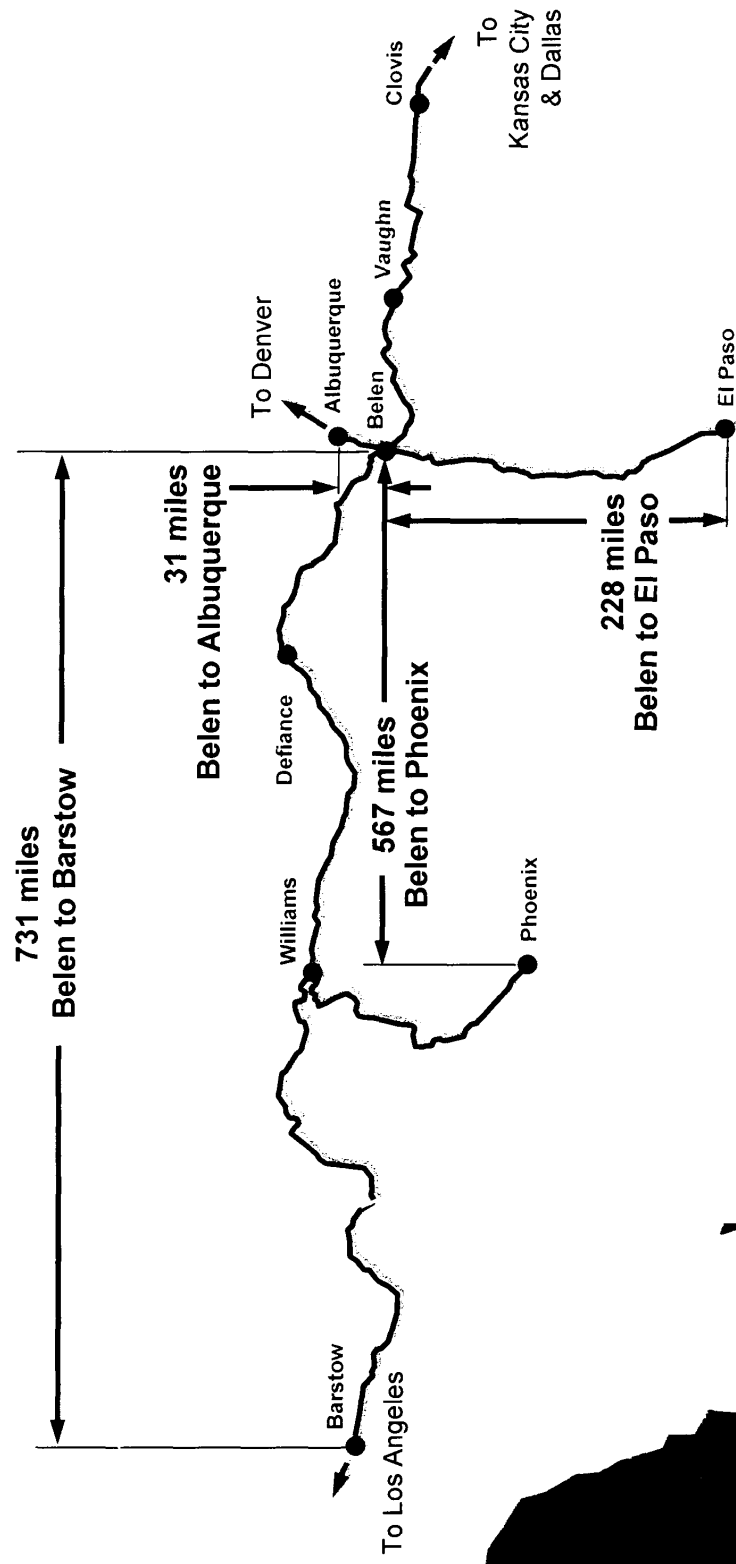


Exhibit III.C-5

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Exhibit III.H-1

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