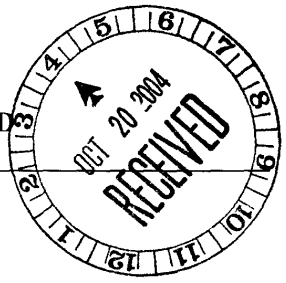
BEFORE THE
SURFACE TRANSPORTATION BOARD



AEP TEXAS NORTH COMPANY	)	
	)	
Complainant,	)	
	)	
v.	)	**Docket No. 41191 (Sub-No.1)**
	)	
THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY	)	217285
	)	
Defendant.	)	

COMPLAINANT AEP TEXAS NORTH COMPANY'S
REPLY TO MOTION TO STRIKE

AEP TEXAS NORTH COMPANY
1 Riverside Plaza
Columbus, OH 43215

By: David M. Cohen, Senior Counsel
AEP Texas North Company
155 West Nationwide Boulevard
Suite 300
Columbus, OH 43215

PUBLIC VERSION

William L. Slover
Kelvin J. Dowd
Christopher A. Mills
Slover & Loftus
1224 Seventeenth Street, N.W.
Washington, D.C. 20036

OF COUNSEL:

Slover & Loftus
1224 Seventeenth Street, N.W.
Washington, D.C. 20036

Dated: October 20, 2004

Attorneys & Practitioners

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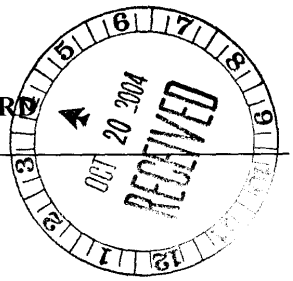
SURFACE TRANSPORTATION BOARD



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21285

COMPLAINANT AEP TEXAS NORTH COMPANY'S
REPLY TO MOTION TO STRIKE

Pursuant to 49 C.F.R. Part 1104.13 (a) and the Board's order served June 21, 2004, Complainant, AEP Texas North Company ("AEP Texas") hereby replies to the Motion To Strike filed on September 9, 2004 ("Motion") by Defendant, The Burlington Northern and Santa Fe Railway Company ("BNSF"). For all the reasons set forth herein, the Motion should be denied.

I. PREFACE

The Rules of Practice provide that the Board "may order that any redundant, irrelevant, immaterial, impertinent, or scandalous matter be stricken from any document." 49 C.F.R. Part 1104.8. Tellingly, BNSF's Motion neither references this rule nor alleges

that any element of AEP Texas' Rebuttal Evidence offends it. Rather, following a practice which unfortunately has become commonplace in proceedings under the *Coal Rate Guidelines,* BNSF offers its Motion as a pretext to submit improper and inadmissible surrebuttal evidence and argument. To protect the integrity of the record, AEP Texas herein replies substantively to the matters raised by BNSF's Motion. Nevertheless, AEP Texas objects to this abuse of the Rules of Practice and challenge to AEP Texas' right to open and close the record, and urges that the Board reject it in the strongest possible terms.

As shown herein, BNSF's claims that various parts of AEP Texas' July 27, 2004 submission exceed the proper scope of rebuttal are wholly without merit, and the new evidence and argument offered by the carrier is not probative. In two instances, BNSF's Motion illuminates the need for minor technical corrections, which AEP Texas has made. In a third area, materials submitted with the Motion reveal for the first time serious defects in a BNSF data source that was relied upon by both parties, and which can and will be corrected by AEP Texas through a forthcoming petition to supplement the record. In all other respects, however, the Motion is but a thinly-disguised and improper effort on BNSF's part to have the last word on matters as to which AEP Texas bears the burden of proof.

Defensive tactics such as BNSF's Motion serve only to unnecessarily delay the final resolution of captive coal rate disputes, and further complicate what already is a

evidence, the Board concluded that "[w]e do not regard PEPCO's rebuttal statements as inappropriate, as they are directed at criticisms raised in CSXT's reply evidence." *Id.* at 5.

Properly read, the Board's subsequent rulings in *Ex Parte No. 347 (Sub-No. 3)*,[2] *TMPA*,[3] *Duke/CSX*[4] and *Duke/NS*[5] are fully consistent with the basic standard enunciated in *PEPCO*. Thus, the Board has admonished that a complainant "is not free on rebuttal to significantly redesign its SARR or alter the core assumptions upon which its case-in-chief is based...." *Duke/NS* at 15.[6] However, it remains entirely proper for a complainant on rebuttal to marshall additional support for its opening positions, incorporate new or updated data that become available after its opening evidence was filed, or "refine its evidence to address issues raised by the railroad" on reply. *Id.* at 14.

In its Motion, BNSF pays lip service to the governing standard, then twists it beyond recognition in support of a view of rebuttal that would nullify the right of a

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[2]Ex Parte No. 347 (Sub-No. 3), *General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases,* Decision served March 12, 2001 at 5.

[3]Docket No. 42056, *Texas Municipal Power Agency v. The Burlington Northern and Santa Fe Railway Company,* Decision served March 24, 2003 at 107.

[4]Docket No. 42070, *Duke Energy Corp. v. CSX Transportation, Inc.,* Decision served March 25, 2003.

[5]Docket No. 42069, *Duke Energy Corp. v. Norfolk Southern Railway Company,* Decision served November 6, 2003 at 14-15.

[6]This is the same rule applied in *Bituminous Coal, supra,* Decision served January 8, 1991.

party with the burden of proof to close the evidentiary record. In BNSF's world, a complainant is limited on rebuttal to either repeating the arguments that it made on opening, or adopting *in toto* the evidence submitted by the railroad on reply. *See, e.g.,* Motion at 5. As regards rebuttal evidence that is *responsive* to the defendant's reply, BNSF claims that "the Board entertains a presumption in favor of the defendant's evidence that must be overcome with a strong showing that the defendant's evidence is *wrong* before any alternative rebuttal evidence will be considered." *Id.* at 6 (emphasis in original). In BNSF's world, a defendant's reply evidence effectively stands as the last word on all SAC issues.

BNSF's cramped interpretation of the law is flatly at odds with *PEPCO* and subsequent rulings, and is without support in either the Rules of Practice or the Board's decisions.[7] It would eviscerate the established right of complainants in coal rate cases to open and close the record, and would violate AEP Texas' right to administrative due process in this case.[8]

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[7]BNSF cites to *Duke/NS* as authority for its "presumption" theory, but no such presumption was adopted by the Board in that case. *See Duke/NS* at 14-15.

[8]*See* F.D. No. 31360, *South Carolina Central Railroad Company, Inc. -- Purchase and Lease -- CSX Transportation, Inc. Lines in Georgia and Alabama,* 1989 WL238547, *9 (I.C.C.); Docket No. AB-1 (Sub-No. 211), *Chicago and Northwestern Transportation Company -- Abandonment Between Marshall Town and Cedar Falls Junction and Between Hicks and Dike,* 1988 WL225134, *20 (I.C.C.); Docket No. 37437, *Arizona Electric Power Corporative v. The Atchison, Topeka & Santa Fe Railway Company, Et Al.,* 1987 WL98485 (I.C.C.).

AEP Texas' Rebuttal Evidence fits squarely within the established parameters of proper rebuttal. Every argument and every piece of evidence is directly responsive to claims made or evidence submitted by BNSF on reply. There has been no redesign of AEP Texas' basic stand-alone rail system, no changes to the core assumptions on which its Opening Evidence was based, and no evidence is offered which should have been presented on Opening. As shown in the sections that follow, BNSF's claims of improper rebuttal and proffers of surrebuttal should be rejected.

III. AEP TEXAS' REBUTTAL EVIDENCE ON STAND-ALONE TRAFFIC AND REVENUES IS PROPER AND CONSISTENT WITH PRECEDENT

A. The 2004 EIA Regional Forecast

BNSF begins with a charge that AEP Texas' use of the 2004 EIA regional (Powder River Basin) coal transportation rate forecast to project stand-alone revenues following the expiration of contracts between BNSF and the members of AEP Texas' designated traffic group constitutes improper rebuttal. Motion at 6-8. To this claim, it appends a far longer, collateral attack on the Board's use of regional EIA forecasts generally,[9] which was featured in the recent decisions in *Duke/NS, Duke/CSX* and

[9] *See* Motion at 8-11; Exhibit 1, at 1-6.

PSCo/Xcel.[10] BNSF's challenge to AEP Texas' reliance on the 2004 EIA forecast is without merit. Its challenge to established Board precedent is prohibited surrebuttal.

BNSF argues that AEP Texas was precluded from using the 2004 regional EIA forecast in its Rebuttal Evidence because (a) AEP Texas used the 2003 forecast on Opening, and (b) BNSF offered only the 2004 *national* EIA forecast on Reply. *See* Motion at 7. BNSF adds that the Board's reliance on the 2004 regional forecast in *PSCo/Xcel* "does not justify the complainant's use of it on rebuttal here" because BNSF allegedly did not have an opportunity to present evidence on the issue. *Id.* at 8. These arguments are specious.

To begin with, BNSF consented to an extension of the deadline for the filing of rebuttal evidence in this case that was specifically intended to "insure that the record in this proceeding reflects the Board's most recent rate decision in [*PSCo/Xcel*]...."[11] Having endorsed incorporation of the Board's findings in *PSCo/Xcel* into the record in this case, it is disingenuous at best for BNSF now to claim that one component of that decision -- the post-contract revenue adjustment methodology -- is off limits.

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[10]Docket No. 42057, *Public Service Company of Colorado d/b/a Xcel Energy v. The Burlington Northern and Santa Fe Railway Company,* Decision served June 8, 2004 at 55.

[11]*See* Order served June 21, 2004 at 1.

Second, AEP Texas' use of the regional EIA forecast is fully consistent with the Board's own practice in recent coal rate decisions, where regional EIA rate forecasts have been relied upon without regard to whether *either* party used them in its evidence. Indeed, in *Duke/NS*, the Board took "official notice" of the updated regional forecast that was available from EIA upon request, even though neither side submitted it on the record. *Duke/NS* at 61, 65. *See also Duke/CSX* at 48; *PSCo/Xcel* at 53 (the Board asked EIA for the regional forecast *sua sponte,* after the record had closed).

BNSF's attempted invocation of the *Duke/NS* "infeasibility" standard (Motion at 8) is particularly inapposite. Not only is the decisional language relied upon by BNSF directed at an entirely different aspect of the SAC analysis,[12] but *Duke/NS* is one of the recent cases in which the Board endorsed the use of EIA regional rate forecasts -- again, without regard to whether either party introduced the forecast during any of the evidentiary phases.

BNSF's collateral challenge to the propriety of using an EIA regional rate forecast in a coal rate proceeding under the SAC constraint (Motion at 8-11) is blatant and improper surrebuttal, which itself should be struck. The Board plainly has settled on

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[12] *See Duke/NS* at 14. In context, it is clear that the Board was addressing circumstances in which a complainant might proffer a major modification of its stand-alone system in response to a defendant's reply evidence, not the use of updated government rate forecasts or indices. As to these, the Board has expressed a clear preference for the most recent data available at all procedural stages. *See PSCo/Xcel* at 55.

the use of EIA regional forecasts in cases brought under the *Coal Rate Guidelines,*[13] and its observation that such forecasts "would be an appropriate impartial source of traffic and rate forecasts to use in all future SAC cases"[14] effectively makes the matter a "settled issue" which should not be subject to repeated relitigation, particularly in the context of a motion to strike. *See Ex Parte No. 347 (Sub-No. 3),* Decision served March 12, 2001 at 6.

As regards BNSF's specific criticisms of the EIA regional forecasts, it is noteworthy that the national forecast that BNSF itself now advocates[15] bears the same "infirmity" that BNSF claims afflicts the regional forecast: it is not specific to the particular utility movements that make up a given stand-alone traffic group. More important, the very modest growth rate implied by the national forecast (2.32% over the 2002-2021 time period, according to BNSF) is wholly unrealistic when considered in light of BNSF's announced policy of aggressively pursuing significant rate increases on western coal traffic wherever possible. *See* AEP Texas Rebuttal Narrative at III-A-77-80.

AEP Texas' inclusion of the 2004 EIA regional coal rate forecast in its Rebuttal complied with the Board's ruling in *PSCo/Xcel,* and was entirely proper.

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[13] *Duke/NS* at 64-65; *Duke/CSX* at 48; *PSCo/Xcel* at 53-55.

[14] *Duke/NS* at 64, n. 78.

[15] The Board's decision in *PSCo/Xcel* (at 55) reports that BNSF proposed reliance on the "2002 EIA PRB rate forecast" in that case, though BNSF claims in its Motion (at 8, n. 13) that it objected to the use of the regional forecast.

BNSF's arguments for use of the less representative national forecast[16] are without merit and constitute unauthorized surrebuttal. They should be rejected.

B. 2003 Coal Volumes

In its Rebuttal Evidence, AEP Texas agreed in general with BNSF to calculate 2003 coal volumes for its stand-alone traffic group by applying the change implicit in the Long Range Plan produced by BNSF in discovery to the 2002 volumes reported in BNSF's traffic tapes. *See* AEP Texas Reb. Narr. at III-A-43-44. An exception was made for thirteen (13) plants in the group whose 2002 volumes reflected their operation at or above an 85% capacity factor. For these plants, AEP Texas applied the Board's established convention[17] and held their volumes constant at 2002 levels for the entire DCF period. *Id.*

Because BNSF's Long Range Plan showed a decline in systemwide average overall coal volumes in 2003, BNSF argues in its Motion that AEP Texas somehow exceeded the bounds of proper rebuttal by not showing reduced volumes for the thirteen (13) plants that already operated at or over an 85% capacity factor. *See* Motion at 12. According to the carrier, once AEP Texas accepted the use of BNSF's Long Range Plan

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[16]Plainly, BNSF's advocacy is grounded in a desire to reduce the level of revenues available to AEP Texas' hypothetical stand-alone railroad.

[17]*See, e.g.,* Docket No. 42051, *Wisconsin Power & Light Company v. Union Pacific Railroad Company,* Decision served September 13, 2001 at 20; *West Texas Utilities Company v. Burlington Northern Railroad,* 1 S.T.B. 638, 663-64 (1996), *aff'd. sub nom., Burlington Northern Railroad Co. v. S.T.B.,* 114 F.3d 206 (D.C. Cir. 1997). .

for the majority of the plants in the traffic group, it was compelled either to use it for all or show that use of the Plan for any purpose was "infeasible." *Id.* Through its witness Julie Murphy, BNSF also asserts that there is no valid basis to "assume that a plant operating at or above an 85% percent capacity factor in 2002 will not reduce its coal deliveries in 2003 consistent with BNSF's average decline in coal deliveries in 2003." Motion, Exhibit 1 at 7. BNSF is wrong on both counts.

Established precedent makes clear that a party in AEP Texas' position is not limited to the "either or" choice advocated by BNSF. On rebuttal, a party is entitled to make adjustments to its opening evidence in response to its opponent's criticisms; it is not compelled to adopt the opponent's evidence *in toto. See PEPCO* at 4. So long as the adjustments do not alter the basic configuration of the stand-alone system, an adjustment directly responsive to an opponent's reply evidence is admissible. *Id.*; *Bituminous Coal,* Decision served December 7, 1988 at 4.

Citing *Duke/NS,* BNSF argues that AEP Texas cannot apply the Board's 85% cap convention to the thirteen (13) plants that already operated at or above that level in 2002 without first demonstrating that BNSF's failure to do so was "infeasible". Motion at 12. As explained *supra,* the passage in *Duke/NS* to which BNSF refers is inapposite in the context of issues such as forecasting models or indices. Indeed, BNSF's proffered application here borders on the absurd: virtually *any* coal volume projection

methodology could be considered "feasible", notwithstanding the availability of other, more accurate and better-supported approaches.

Such is the case here. Contrary to Ms. Murphy's claim, there are several good reasons to assume that the thirteen (13) stations identified by BNSF would not experience a decline in coal volumes from 2002 to 2003. As explained in the accompanying Verified Statement of Gary W. Vicinus, the plants in question generally are base load units, which dispatch at or near the top of each utility's priority list. Unlike BNSF's average system coal volumes, which can vary due to a number of different factors, coal consumption at these specific plants principally is driven by the demand for electricity; if demand goes up, so do the coal volumes. And in fact, as Mr. Vicinus shows, electric demand and coal consumption for this group of plants actually did *increase* by nearly 1% from 2002 to 2003. *See* Exhibit 1, Tables 1 and 2.

The incontrovertible public data shows that there was no reason to assume that coal volumes for the thirteen (13) plants at issue would have declined in 2003, because in fact they did not. Indeed, AEP Texas' application of the 85% capacity factor cap to these units was conservative, as their aggregate coal consumption actually rose. In any event, there was nothing improper in AEP Texas responding to BNSF's criticism of AEP Texas' Opening Evidence on 2003 coal volumes by adopting BNSF's methodology for all plants except those for which the methodology clearly produced the wrong answer.

C. Rerouted Coal Traffic

As described by AEP Texas on Opening, the TNR traffic group includes approximately 28 million tons of coal traffic (in 2002) that originates at TNR-served mines on the Orin Subdivision in the PRB and would be rerouted from its typical BNSF route via Guernsey, WY to the TNR's route via Donkey Creek, WY and Edgemont, SD. Most of this coal traffic is cross-over traffic that the TNR interchanges with BNSF at Alliance, NE, which is located on the real-world route of movement for all the shipments in question. Using the RTC Model to simulate the TNR's operations, AEP Texas demonstrated that the TNR's average peak-period transit times for this traffic are lower than the real-world BNSF average transit times in 2002 (the last full year for which complete train movement data are available). *See* AEP Texas Op. Narr. at III-A-9 to 12, III-C-8 to 11 and Exhibit III-A-5.

On Reply, BNSF objected to inclusion of this internally-rerouted coal traffic and its associated revenues because much of it would travel a longer distance over the TNR route. BNSF claimed that AEP Texas failed to demonstrate that the TNR could provide the same or a higher level of service over the longer route than BNSF provides in the real world. BNSF's objection was based almost entirely on its criticism of AEP Texas' Opening RTC simulation.

On Rebuttal, AEP Texas revised several of the RTC model inputs in response to BNSF's criticisms, and submitted a new simulation that included the rerouted

peak-period coal traffic that BNSF said it had removed from its Reply RTC simulation. The Rebuttal simulation confirmed that in all instances the TNR's average transit times between the PRB mines and Alliance or other points are faster than BNSF's real-world transit times between the same points, notwithstanding the additional distance involved from the five southernmost mines, in particular. *See* AEP Texas Reb. Narr. at III-C-56 to 58 and Reb. Exhibit III-C-2.

BNSF's Motion argues that AEP Texas' Rebuttal evidence concerning the feasibility of including the rerouted coal traffic in the TNR's traffic group based on its RTC simulation should be stricken.[18] Three claims are raised in this regard. First, BNSF asserts that AEP Texas' inclusion of 13 "random failures" in its Rebuttal RTC simulation constituted improper new evidence because AEP Texas did not include any such outages in its Opening RTC simulation. Second, BNSF argues that the manual adjustments that AEP Texas' experts made to the Rebuttal simulation constituted improper rebuttal because such "intervention in the running of the model is a new methodology inappropriately introduced for the first time on rebuttal." Third, BNSF asserts that AEP Texas improperly failed to include in its Rebuttal simulation 17 percent of the peak-

[18]BNSF falsely claims that the RTC simulation represented the "only evidence" that the TNR's service quality would equal or exceed that offered by BNSF. *See* Motion at 13. In addition to the RTC simulation, AEP Texas submitted unchallenged evidence showing that the high priority that the TNR would accord coal traffic -- in contrast to coal's position at the bottom of BNSF's priority list -- would lead to fewer delays, shorter dwell times, and other superior service factors apart from standard transit times. *See* AEP Texas Op. Narr. at III-A-12-13: Reb. Narr. at I-12.

period coal trains included in its Rebuttal traffic group. *See* Motion at 15-20.

As with the other aspects of its Motion, BNSF has not presented valid grounds to strike any of AEP Texas' Rebuttal RTC simulation evidence. Rather, BNSF's Motion is a vehicle for presenting improper surrebuttal evidence -- including new RTC simulation runs -- addressed to the merits of the three issues it has raised.

The ostensible predicate for BNSF's Motion as it relates to the first two RTC issues described above is that AEP Texas supposedly acknowledged that its Opening RTC evidence was "deficient," but in lieu of simply accepting BNSF's evidence *in toto*, submitted responsive modifications to its Opening presentation. Motion at 14. As noted in the discussion of the applicable legal standard for rebuttal submissions, *supra*, AEP Texas was not required to simply accept BNSF's random outage evidence rather than making appropriate modifications to its own simulation. Moreover, as AEP Texas demonstrates below, it did not introduce any "new" assumptions or methodologies, and the minor simulation adjustments disputed in BNSF's Motion were entirely proper under the governing Board standards. With respect to the "missing train" issue, AEP Texas has determined that a defective train file introduced by BNSF on Reply and relied upon by AEP Texas on Rebuttal resulted in anomalies in both parties' RTC runs, and that a revised RTC simulation is required in order to reflect the actual number of coal trains that move in the simulation period relative to the Rebuttal

peak-year traffic group and provide the Board with a sound basis on which to render a reasoned decision.

1. Random Outages

The first false premise of BNSF's Motion with respect to random track outages is its statement that "AEP Texas acknowledged on Rebuttal that its failure to include any random or unplanned track outages in its Opening RTC model was improper." *Id.* at 15. AEP Texas acknowledged no such thing. Rather, its principal operating witness, Paul Reistrup, testified that it was inappropriate to include random outages that occurred on the real-world BNSF in 2002 in a simulation of the TNR's peak period operations in 2020, because the nature and timing of any such outages in 2020 is, by definition, unknown. Mr. Reistrup also demonstrated that 124 of the 137[19] random outages in BNSF's Reply simulation were completely unsupported and manifestly improper. Finally, the Rebuttal RTC simulation showed that even if it was appropriate to include the 13 outages for which there was at least some justification, the TNR still could accommodate its peak-period traffic at average transit times faster than those experienced

[19] At page 16 of its Motion, BNSF states that its Reply simulation included 137 random outage events. In fact, it included over 450 events, most of which involved the presence of UP trains at southern PRB mines that UP and the TNR both serve in 2002. BNSF's Motion is not directed at AEP Texas' Rebuttal evidence demonstrating the impropriety of including outages related to the presence of UP trains at the mines (*see* Motion at 14 n.27; AEP Texas Reb. Narr. at III-B-8-11).

by the real-world BNSF. *See* AEP Texas Reb. Narr. at III-C-38-52, II-C-56-58, and Exhibit II-C-2.

AEP Texas' evidence on random outages and its inclusion of 13 outages in its Rebuttal simulation were directly responsive to BNSF's evidence on this issue, and constituted a permissible adjustment of one element of its Opening evidence in response to points made by BNSF on Reply. *PEPCO* at 3-5. AEP Texas' inclusion of 13 random track outages in its Rebuttal simulation did not "significantly redesign its SARR or alter the core assumptions upon which its case-in-chief is based" (*Duke/NS* at 15). Rather, AEP Texas simply "refine[d] its [simulation] evidence to address issues raised by the railroad" (*Id.* at 14).

BNSF's position that AEP Texas was required either to accept BNSF's random outages in their entirety or stick with its Opening exclusion of any outages is contrary to the established parameters of proper rebuttal. Following BNSF's argument to its logical conclusion, on Rebuttal a complainant could not add any additional passing sidings or yard tracks to its Opening SARR track configuration, short of accepting whatever changes the defendant proposed on Reply. Yet the complainant in every recent coal rate case, including this one, has adjusted the SARR track configuration without objection from the defendant.

BNSF's position boils down to the proposition that AEP Texas was required to accept BNSF's Reply evidence with respect to the inclusion of random

outages "unless that evidence was demonstrably wrong." Motion at 17. Even if this was the proper standard for evaluating whether AEP Texas' inclusion of a smaller number of outage events in its Rebuttal simulation was permissible -- which it is not -- AEP Texas met that standard.

At pages 16-17 of its Motion and in the Wheeler Verified Statement submitted therewith, BNSF presents new evidence disputing AEP Texas' showing that BNSF's inclusion of all but 13 of the random outages that occurred on the lines being replicated in 2002 was (in BNSF's words) "demonstrably wrong." That new evidence constitutes improper surrebuttal on the merits of BNSF's proposed random outages. However, in the interest of a complete record on this issue, and because AEP Texas is the party entitled to open and close the record, AEP Texas responds to BNSF's new evidence through the verified statement of its witness Reistrup, accompanying this Reply.

Mr. Reistrup demonstrates the impropriety of including more than 13 of the random outages incurred by the real-world BNSF in 2002 in a simulation of the TNR's peak period operations. As Mr. Reistrup explains, most of the outages included by BNSF were for "Track Maintenance," without any accompanying explanation of what the maintenance was for or any showing that the track had to be taken out of service for maintenance at the particular time shown in BNSF's 2002 records. This failure of proof is telling, because many kinds of maintenance do not have to be performed at a particular time but rather can be scheduled by the dispatcher during periods (even on the same day

or the next day) when traffic volume is not as heavy, so that interference with train operations can be minimized. V.S. Reistrup at 8-9.

Mr. Reistrup also demonstrates that most of the 2002 outages involving signal problems occurred in areas where the real-world BNSF has old signal hardware and wiring that is much more susceptible to breakdowns than the TNR's signal system (*id.* at 10-11) and that the 2002 outages involving locomotive and train-handling problems likewise cannot be attributed to the TNR because (unlike BNSF's operations on the replicated lines) the TNR begins operations with new, AC locomotives which are replaced regularly under the DCF model (*id.* at 11-12). In short, Mr. Reistrup demonstrates that BNSF's inclusion of 137 random outages during the TNR's peak traffic period is unrealistic and unsupported. AEP Texas thus met even the stringent and inapplicable test proposed by BNSF for including some but not all of the random outages proposed in its Rebuttal RTC simulation.

2. Manual Adjustments

BNSF objects to AEP Texas' experts' "intervention" in the running of the RTC model on Rebuttal by making a *total* of 19 manual adjustments to the empty-train departure times in order to enable the computer to dispatch the railroad successfully over the 19-day simulation period. According to BNSF, "[t]his manual intervention in the running of the RTC model is a new, inappropriate methodology introduced for the first time on rebuttal." Motion at 18. The short answer to this claim is that there was nothing

new about making manual adjustments to the simulation on Rebuttal. Manual adjustments also were made to the Opening RTC simulation, as BNSF undoubtedly was aware given its evident familiarity with AEP Texas' simulation procedures. *See* V.S. Reistrup at 13. The adjustments are shown in AEP Texas Opening electronic workpaper folder "RTC," file "Random Times w. Adjustments.xls."

BNSF's request to strike the Rebuttal RTC simulation because of manual adjustments is a subterfuge, which BNSF again uses to introduce new evidence on the propriety of the specific adjustments made by AEP Texas' operating and RTC experts. In any event, as Mr. Reistrup explains in his Verified Statement, BNSF's criticisms of AEP Texas' adjustments are unfounded.

Mr. Reistrup demonstrates that the manual adjustments he and AEP Texas Witness Walter Schuchmann made both on Opening and Rebuttal are fully consistent with what happens in a real world, Class I railroad dispatch center, where human dispatchers frequently intervene in or override the computerized dispatching systems and alter the decisions made by the computer. V.S. Reistrup at 13-16. While BNSF claims that the manual adjustments Messrs. Reistrup and Schuchmann made are unrealistic because they involved holding trains at the point(s) where they enter the TNR system rather than where congestion actually occurs, Mr. Reistrup shows that this is exactly the kind of thing real-world dispatchers do, because unlike computerized dispatching systems, human dispatchers are able to see problems developing in advance and can (and

do) intervene to hold trains at locations that are a considerable distance from the point where congestion is likely to occur. *Id.* at 14-15. Because the TNR operations are purely hypothetical -- there are no human dispatchers watching a monitor of actual train operations -- the intervention can only be done retrospectively as the results of the RTC simulation are observed. Functionally, however, they closely replicate the real time interventions that occur dozens of times each day on real-world railroads.

3. Missing Trains

BNSF's final claim regarding AEP Texas' Rebuttal RTC simulation is that it failed to model 17 percent of the TNR's coal trains that were supposed to be included in the Rebuttal simulation. Motion at 19-20.

In response to BNSF's allegation, AEP Texas' operating and RTC experts, Paul Reistrup and Walter Schuchmann, conducted a thorough review of the electronic workpapers accompanying BNSF's Reply RTC simulation, including BNSF's Reply RTC train file, which was the basis for the train file used by AEP Texas in the Rebuttal simulation. They discovered that BNSF's train file was riddled with errors and did not include all of the trains BNSF should have modeled based on the coal traffic remaining after the reductions it made to AEP Texas' Opening traffic group. These errors and omissions, which AEP Texas' experts had no reason to believe existed when they

accepted and adopted BNSF's Reply train file as the basis for their Rebuttal RTC simulation,[20] affected AEP Texas' Rebuttal train file.

The impact of BNSF's defective train file on the parties' Reply and Rebuttal RTC simulations are described in detail at pp. 17-22 of Mr. Reistrup's Verified Statement. As Mr. Reistrup explains, AEP Texas adopted BNSF's Reply RTC train file as the starting point for its Rebuttal simulation in order to minimize differences between the parties with respect to certain inputs, in particular train sizes and weights and empty-train simulation start times. However, because BNSF had improperly excluded certain rerouted and other coal traffic, as described in Part III-A-1 of AEP Texas' Rebuttal Narrative, it was necessary to add to BNSF's RTC train file all but six of the loaded coal trains that BNSF said it had removed from AEP Texas' Opening simulation train list. This should have produced a total of 710 loaded coal trains (compared with the 716 loaded coal trains AEP Texas had modeled on Opening).

BNSF's Reply RTC train file purportedly included a total of 500 loaded coal trains. This represented a reduction of about 29% from the 710 loaded coal trains that AEP Texas intended to include in the Rebuttal simulation, which was consistent with

[20]In its Reply, BNSF represented that its RTC simulation included all of the trains modeled by AEP Texas on Opening, less only those rerouted and other coal trains specifically identified by BNSF. *See* BNSF Reply Narr. at III-B-18-19 and Reply electronic workpaper "copkstat BNSF Affirmative."

BNSF's proposed reduction of the TNR's annual coal traffic volume by about 27%.[21] Accordingly, AEP Texas' experts had no reason to question BNSF's train file when they prepared the Rebuttal RTC simulation. However, further investigation of BNSF's RTC train file and related electronic workpapers in response to BNSF's Motion revealed that BNSF actually simulated fewer than 500 loaded coal trains, and excluded from its RTC train file more trains than it should have or that it represented it had, which in turn affected the number of trains in AEP Texas' Rebuttal RTC train file. Thus, both parties' RTC simulations did not reflect the proper number of coal trains based on their versions of the TNR's peak-period traffic group.

The specific problems with the parties' Reply and Rebuttal RTC train files are briefly summarized as follows:

1. BNSF's Reply RTC train file contains a total of 500 peak-period loaded coal trains. However, the Reply RTC route file shows that only 481 loaded coal trains actually ran through the model.

2. Without explanation, BNSF's RTC train file contains 25 loaded coal trains that either operate between O/D pairs that were different from those reflected in AEP Texas' Opening simulation, or that AEP Texas did not include in its Opening simulation. When these trains

[21] The 27% reduction did not include nine UnionPacific/Coleto Creek loaded coal trains that move over a portion of the TNR system via trackage rights during the simulation period. BNSF also removed these trains in its simulation, but AEP Texas added them back in and they are included in the 710-train total that should be reflected in the Rebuttal simulation. In addition to the coal trains, both parties included in their RTC simulations 138 merchandise trains that move overhead between Amarillo and Oklaunion, TX during the simulation period. There is no dispute concerning these merchandise trains.

are properly accounted for, the total number of trains in BNSF's Reply RTC train file is reduced to 475.

3. BNSF's electronic workpapers accompanying its RTC simulation indicate that BNSF removed a net of 181 loaded coal trains from AEP Texas' Opening RTC train file. The removed trains supposedly included the rerouted TNR coal trains described above, as well as the nine UP/Coleto Creek coal trains referred to above.

4. If 181 loaded coal trains are added to the 475 trains that should have been in BNSF's RTC train file, the total number of loaded coal trains to be simulated would be 656. This is 60 trains short of the 716 loaded coal trains included in AEP Texas' Opening simulation. Thus, it appears that a total of 60 loaded coal trains (plus their corresponding empty trains) are missing from BNSF's Reply simulation based on its Reply traffic group. These 60 trains were neither removed from AEP Texas' Opening RTC train list nor included in BNSF's Reply RTC simulation. They are simply unaccounted for in BNSF's evidence.

5. Due to problems in matching train symbols and O/D pairs, AEP Texas added some trains to its Rebuttal train file (primarily "growth"trains that did not operate in 2002) that BNSF had already included in its Reply train file. AEP Texas' total Rebuttal RTC train count was understated in other respects due to the discrepancies between BNSF's RTC train file and what BNSF said it was removing from AEP Texas' Opening RTC train list.

6. BNSF did not continuously cycle local coal trains that the TNR both originates and terminates in its Reply simulation, but rather took them out of the model after one or two cycles and re-inserted them in the model at a later time or date. This resulted in the same kind of "disappearing train" problem the Board has criticized in evaluating the computer simulations of SARR operations performed by complainants in other recent coal rate cases. By using BNSF's Reply RTC train file, AEP Texas passed along the same error (which was not present in its Opening RTC simulation, in which local coal trains were continuously cycled).

See V.S. Reistrup at 19-22.

In sum, neither party's RTC simulation reflects the actual peak-period coal trains that should have been simulated according to their respective traffic groups for the TNR.

Given the problems that AEP Texas' experts uncovered with BNSF's RTC train file, AEP Texas' experts conducted their own side-by-side comparison of these train files to determine exactly how many (and which specific) coal trains should be added to BNSF's Reply RTC train file to: (1) match the total of 710 loaded coal trains reflected in AEP Texas' Rebuttal Exhibit III-B-5, and (2) account for the missing trains that BNSF should have modeled given its reductions to AEP Texas' Opening coal traffic group. The results are shown in Mr. Reistrup's electronic workpaper file "BNSF Trains from Reply Test TRAIN Revised.xls," which accompanies this Reply.

When all of the matching problems are resolved, 235 loaded coal trains (including the Coleto Creek trackage rights trains) should be added to BNSF's corrected Reply RTC train file count of 475 trains to reflect AEP Texas's 710 actual peak-period loaded coal train count, and 60 loaded coal trains need to be added to the same 475 trains to reflect BNSF's actual peak-period traffic group (which excludes the rerouted coal traffic, certain other coal traffic, and the nine Coleto Creek trackage rights trains). *See* V.S. Reistrup at 22.

Accurate and complete simulation data for the TNR's peak-period operations obviously is needed in order to assess the feasibility of the parties' respective

operating plans. In prior rate cases, the Board has defaulted to the defendant's simulation evidence and operating plan if it was unable to accept the complainant's plan due to problems with the complainant's computer simulation of the SARR's operations. *See PSCO/Xcel* at 24-27. Here, however, it appears that *both* parties' simulations fail to completely reflect the proper peak-period coal trains, due largely to undiscovered problems with the defendant's data set. In such circumstances, and consistent with its practice in other cases,[22] the Board should permit the submission of additional, corrective simulation evidence that provides a complete record and supports accurate SAC findings.

AEP Texas is in the process of conducting a revised RTC simulation that reflects the proper number of coal trains for its Rebuttal traffic group. However, time has not permitted AEP Texas to document and correct the problems with the parties' RTC

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[22] *See, e.g.,* Docket No. 42054, *PPL Montana, LLC v. The Burlington Northern Railway Company*, Decision served March 21, 2003 at 7 (reopening the record to obtain necessary evidence to correct error related to prior overstatement of certain SARR operating expenses); Docket No. 42071, *Otter Tail Power Company v. The Burlington Northern and Santa Fe Railway Company*, Decision served November 5, 2002 at 10 n.17 (reply to reply considered "in the interest of basing this decision on a more complete record"); Finance Docket No. 32133 *et al.*, *Union Pacific Corporation, et al.–Control–Chicago and North Western Transportation Company, et al.*, Decision served September 12, 1994 at 18 ("we recognize the usefulness of having Dr. Kornhauser's earlier statement clarified and any errors contained therein rectified"); Finance Docket No. 30965, *Delaware and Hudson Railway Company–Lease and Trackage Rights Exemption–Springfield Terminal Railway Company* (Decision served January 5, 1989 at 2 n.6 (motion to supplement the record with alternative implementing plan granted "[i]n the interest of a more complete record").

train files and complete the revised RTC simulation with the corrected data, by the October 20, 2004 due date for this Reply.[23]

AEP Texas intends to submit the results of the revised simulation to the Board at the earliest practicable date. The filing will be accompanied by a petition to supplement the evidentiary record, which is the approved procedure for the introduction of limited, new evidence specified in several recent Board decisions. *See Duke/NS,* Decision served March 25, 2003, at 2; *Duke/CSX,* Decision served March 25, 2003; Docket No. 42072, *Carolina Power & Light Co. v. Norfolk Southern Railway Co.*, Decision served May 12, 2003, at 1-2. This procedure also will allow for the filing of an appropriate evidentiary response by BNSF, using the corrected RTC train file.

IV. THE USE OF UPDATED RCAF VALUES IS WITHIN THE SCOPE OF PROPER REBUTTAL

In its Opening Evidence, which was filed on March 1, 2004, AEP Texas used the September 2003 Global Insights forecast as the source for projected future changes in the Rail Cost Adjustment Factor, commencing with the first quarter of 2004. Projected changes in the RCAF are key components in the calculation of future revenues

[23]In its Motion to extend the due date for this Reply, AEP Texas cited the time needed to complete a revised RTC simulation as the basis for a longer extension than that granted by the Board. *See* Complainant's Motion for Extension of Time filed September 21, 2004, at 4.

and operating expenses for the TNR. In its Reply, BNSF accepted the use of the September 2003 Global Insights forecast. *See* Motion at 21.

By the time AEP Texas filed its Rebuttal Evidence on July 27, 2004, actual RCAF values as calculated and submitted by the Association of American Railroads and audited and published by the Board were available for the first three quarters of 2004. Therefore, consistent with the Board's own standard practice of using actual, updated cost data once it becomes available,[24] on Rebuttal AEP Texas used the actual RCAF values as reported by the AAR for the first, second and third quarters of 2004, while continuing to rely on the September 2003 Global Insights forecast for all future periods.

In its Motion, BNSF accuses AEP Texas of switching on Rebuttal to "a combination of a new June 2004 RCAF forecast (published by Global Insights) for some time periods and the older September 2003 RCAF forecast (published by Global Insights) for other time periods." Motion at 21. This charge is totally groundless. AEP Texas' workpapers clearly show that the sources of the 1Q04-3Q04 RCAF values used in its Rebuttal submission were the AAR and the Board, not a later Global Insights forecast. *See* AEP Texas Reb. Workpapers, Vol. 4 at 01147-01159. There is no mention of a "June 2004" Global Insights forecast anywhere in AEP Texas' evidence, and such a forecast was never considered. To be sure, it is quite possible that a Global Insights forecast

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[24] *See, e.g., CP&L,* Decision served December 23, 2003 at 126-27: *TMPA* at 39 n. 76.

prepared in June 2004 could include the same AAR values for the first three quarters of the year that AEP Texas relied upon. However, such a coincidence doesn't change the fact that AEP Texas' Rebuttal included the actual values approved by the Board.

BNSF complains that once it accepted the September 2003 Global Insights forecast, which included projected values for the first three quarters of 2004, AEP Texas and the Board were foreclosed from later substituting actual RCAF values once they became available. Motion at 22. However, the authorities relied upon by BNSF for this proposition (*id.*, n. 44) are inapposite. All of the "assumptions" addressed by the Board in those decisions were subjective components of one party's SAC analysis;[25] none involved the substitution of updated, publicly available actual costs index values for a prior, projected version. On *that* score, Board precedent supports AEP Texas. *See, e.g., CP&L* at 126-27.

BNSF and its witness Murphy point with alarm to the arithmetic fact that when the actual AAR values for the 1Q04-3Q04 RCAF are substituted for the Global Insights 2003 projected values, the aggregate increase in the RCAF-U for 2004 (3.9%) is higher than the increase predicted in either the September 2003 or June 2004 Global

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[25] *See PSCo/Xcel* at 61 (fuel consumption estimates); *Duke/CSX* at 49, 73, 77 (stand-alone revenue estimates, land requirements and roadbed width); *CP&L* at 79-80 (roadbed width); *Duke/NS* at 14 (general SAC system parameters); *TMPA* at 125, 155 (geotextile fabric requirements and signs).

Insights forecasts. *See* Motion at 23; Exhibit 1 at 9-10.[26] While this observation may be interesting at some level, it is wholly irrelevant to the question whether the Board should use the most recent cost data available. The simple fact is that actual increases in the RCAF-U throughout 2004 out-paced the increases forecast by Global Insights. Indeed, the approach followed by AEP Texas on Rebuttal -- using actual changes in the RCAF measured by the AAR for 1Q04-3Q04 and the Global Insights September 2003 forecast rate of change for 4Q04 and beyond -- is very conservative. The *actual* aggregate annual increase in the RCAF-U for all of 2004 was 7.02%,[27] nearly double the rate reflected in Ms. Murphy's Table 3.

BNSF's challenge to the use of actual AAR values for the 1Q04-3Q04 RCAF, and to AEP Texas' application of those values in calculating operating revenues for the TNR,[28] is without merit and should be rejected. However, a minor technical

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[26]Ms. Murphy purposefully mischaracterizes AEP Texas' Rebuttal approach as a "hybrid, made-for-litigation forecasts [sic]". Motion, Exhibit 1 at 9. As shown above and is plain from AEP Texas' Rebuttal workpapers, the only RCAF forecast used by AEP Texas was the same September 2003 forecast that was used in Opening. The difference in the annual rates of change is an inevitable consequence of substituting the actual AAR values for the first three quarters of 2004 (which were not available on Opening but were on Rebuttal) for the older, estimated values.

[27]*See* Ex Parte No. 290 (Sub-No.5), *Quarterly Rail Cost Adjustment Factor,* Decisions served December 19, 2003 (1Q04 RCAF-U value: 1.05) and September 20, 2004 (4Q04 RCAF-U value: 1.097).

[28]*See* AEP Texas Reb. electronic workpaper "TNR Coal Revenue Forecast Reb revised .xls."

correction in the application of the AAR values to the calculation of stand-alone operating expenses is appropriate.

Specifically, it appears that in moving from the third to the fourth quarter of 2004, where the availability of actual AAR values was exhausted and the September 2003 Global Insights forecast again was applied, AEP Texas' operating expense calculations applied the actual values for the two periods instead of the forecasted rate of change (as had been done on the revenue side).[29] The effect of this technical inconsistency was to create the appearance of different rates of change between operating revenues and expenses, despite the use of identical historical RCAF values and prospective indices. *See* Motion, Exhibit 1 at 11.

AEP Texas has corrected the technical error and restated the relevant operating expenses and resulting comparison between stand-alone revenues and costs. As explained in the accompanying Verified Statement of Thomas Crowley, the effect of the correction is a very modest adjustment in the amount by which stand-alone revenues exceed costs over the 20-year DCF period. As the Board only recently held in connection with minor technical errors discovered in one of its own decisions, such a restatement is the appropriate remedial action. *See TMPA,* Decision served September 27, 2004 at 27. BNSF's request that the inclusion of actual AAR values for the 1Q04-3Q04 RCAF be

[29] *See* AEP Texas Reb. electronic workpaper "Exhibit-III-G-16.xls."

stricken entirely is far off the mark, and would weaken the integrity of the evidentiary record. It should be denied.

V. AEP TEXAS' REBUTTAL PRESENTATION ON LOCOMOTIVE REQUIREMENTS IS NOT "NEW EVIDENCE"

AEP Texas' Rebuttal evidence on the TNR's locomotive requirements included a defense of its Opening development of a locomotive peaking factor to enable the TNR to meet demand during its peak traffic periods. The discussion included a reference to the leasing of additional locomotives on a short-term basis, and cited the common practice in the railroad industry of using short-term locomotive leases to meet peak needs. *See* AEP Texas Reb. Narr. at III-C-11-17.

In its Motion, BNSF asks the Board to strike AEP Texas' Rebuttal evidence regarding the use of short-term locomotive leases on the ground that "[i]n its Opening Evidence, AEP Texas did not include a single word on the possibility that the TNR would satisfy [peak] locomotive requirements through short-term leases." Motion at 24-25. On the basis of this statement, BNSF argues that AEP Texas' Rebuttal evidence concerning the use of such leases constitutes "sandbagging that should be rejected by the Board." *Id.* at 25. BNSF's claim is without foundation, and should be rejected.

There is no question that AEP Texas' Opening Evidence documented the fact that the TNR would utilize short-term leases to meet peak locomotive needs, and

there is no question that BNSF understood – and even addressed – the use of short-term leases in its Reply Evidence. Specifically, AEP Texas' Opening electronic workpaper file "TNR_OP_EXP.xls," sheet "summary," sets forth AEP Texas' calculation of locomotive lease costs. Under the headings of "Locomotive Lease Expense – Peaking Factor," that Opening spreadsheet states (at Line 54, Column D) that an additional 4,719 locomotive peaking days are required to handle the above average (*i.e.*, peak) traffic of the TNR. The spreadsheet further states (at Lines 55 and 56, Column D) that a daily lease rate of ${ } has been applied to this number of days to calculate the total spare fleet cost of ${ }. In the notes supporting this spreadsheet, AEP Texas explains that the 4,719 figure reflects the "Road locomotive count multiplied times 366 days multiplied times peaking factor" and that the daily rate figure of ${ } was derived from "*Daily lease* of units BN 9551 - BN 9564 file 'Tex North Locos 2000-June 03.xls.'" (Emphasis added).[30]

BNSF's argument that AEP Texas did not address the subject of short-term locomotive leases until Rebuttal is further contradicted by BNSF's own Reply Evidence, in which BNSF acknowledged that AEP Texas relied upon the concept of short-term

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[30] The daily lease rate of ${ } annualized equals ${ }, or 14.5% more than the long-term annual locomotive lease rate for SD70MAC locomotives of ${ }. Thus the short-term lease rate used by AEP Texas recognizes the premium that the TNR must pay for using short-term leases for incremental (peaking) locomotives.

leases in its Opening development of locomotive expenses during peak periods. BNSF's Reply specifically identified AEP Texas' evidence regarding daily lease rates:

> The total lease cost specified for the base year consists of two components. The first is 229 locomotives multiplied by an annual lease cost of { }. The second component is a number of locomotive days – calculated by multiplying the 229 locomotives by a "peaking factor" of 5.6 percent times 366 days in the year – multiplied by a "Daily Rate."

See BNSF Reply at III.C-3 to 4. This statement explicitly contradicts the claim in BNSF's Motion that AEP Texas' Opening Evidence did not disclose that the TNR would satisfy peak locomotive requirements through short-term leases.

The discussion of short-term leases in AEP Texas' Rebuttal Narrative and workpapers constituted permissible rebuttal because it responded to BNSF's Reply evidence on the TNR's peak-period locomotive requirements and the locomotive peaking factor by marshaling additional support for AEP Texas' Opening position -- which did not change on Rebuttal. *See Duke/NS* at 14; *PEPCO.*

The balance of BNSF's discussion of the TNR's locomotive requirements in its Motion constitutes blatantly improper surrebuttal. BNSF contends that the use of short-term leases to satisfy peak locomotive demand is "novel" and that the short-term locomotive leases and leasing practices by various railroads (including BNSF) cited by AEP Texas involve different types of locomotives and do not prove that the TNR could lease locomotives on a short-term basis when needed. Motion at 24-26. However, there

is nothing novel about a railroad's decision to have a permanent fleet of locomotives on hand to meet normal requirements and rely on short-term arrangements for peak periods, rather than having on hand at all times locomotives sufficient to satisfy what BNSF refers to as "frequent surges in demand that cannot be predicted significantly in advance of when they occur" (*id.* at 25). Indeed, as AEP Texas noted at page III-C-17 of its Rebuttal Narrative, the Board itself rejected this kind of approach in *PSCo/Xcel*, where it held that BNSF's attempt to base annual train-crew requirements on the SARR's needs during its peak week was the "equivalent of a retail store staffing at the December holiday season levels throughout the entire year." *Id.* at 62. Nor do real-world railroads staff or equip themselves in this manner, as demonstrated by BNSF CEO Matt Rose's comment in the trade press earlier this year that BNSF would not acquire new railcars just to meet peak grain traffic demand because "[w]e won't build a church just for Easter Sunday." (*See* AEP Texas Reb. Narr. at III-C-17).

In its Rebuttal Evidence, AEP Texas demonstrated that short-term locomotive leasing is a common practice in the rail industry and pointed to supporting lease documents provided by BNSF in discovery as well as news articles on the subject. *See* AEP Texas Reb. Narr. at III-C-14 to 16. In its Motion, BNSF asserts that the cited materials did not involve SD70MAC locomotives (the type used by the TNR for road service) and that there is no indication that such locomotives would be available for lease at the times and locations needed. This argument is nothing but makeweight. There is

no reason to doubt that SD70MAC locomotives, which are now in widespread use by the Class I railroads, would be available for lease when needed. To assume otherwise would be inconsistent with the well-settled SAC concept of unconstrained availability of resources.

The use of short-term leases for road locomotives is also confirmed by BNSF's response to Chairman Nober's June 9, 2004 letter to the Class I CEOs requesting information as to how they plan to meet the demands of the 2004 "Fall Peak" shipping season. BNSF Chairman Rose responded to Chairman Nober's request in a letter dated June 23, 2004. Mr. Rose's letter included as an attachment a May 6, 2004 letter from BNSF's senior traffic and operating officers to the railroad's customers. That letter states: "We are adding 350 locomotives this year. This is in addition to some 220 units on *short term leases*, with 60 more scheduled to join the fleet this month." (Emphasis added.) BNSF itself currently relies on the use of short-term leases to supplement its locomotive fleet to meet peak demand. For the Board to require a SARR to act differently would be to impose an entry barrier that is inconsistent with SAC principles.

VI. AEP TEXAS' REBUTTAL EVIDENCE ON STAND-ALONE CONSTRUCTION COSTS IS PROPER

A. Land

AEP Texas' Opening and Rebuttal land costs were identical, and both were based on the same data. Nevertheless, BNSF seeks to strike AEP Texas' Rebuttal land testimony based on the claim that AEP Texas exceeded the permissible scope of rebuttal by submitting new evidence related to the comparables and the quartile methodology used to value those properties. BNSF's arguments on this issue are meritless, and its assertions generally are a screen designed to disguise improper surrebuttal testimony.

AEP Texas did not present any new land evidence on Rebuttal. All AEP Texas did on Rebuttal was demonstrate the feasibility of its Opening land costs by showing that its Opening valuation methodology and other, alternative valuation methods yield similar results, thereby confirming the accuracy of AEP Texas Opening land figures. AEP Texas also expounded further on the comparables presented on Opening in response to BNSF's reliance on all the available comparables, rather than a more focused and carefully culled group that most methods required for accurate results. AEP Texas' evidence was within the permissible scope of rebuttal as even BNSF defined it, when it stated that a shipper "may demonstrate that its opening evidence was feasible and supported," and "it may offer to refine its evidence to address issues raised by the railroad regarding its opening evidence." Motion at 5; *see also Duke/NS* at 14-15.

In addition to the fact that AEP Texas did not present any *new* evidence on Rebuttal, it should be pointed out that AEP Texas provided all of the data necessary to analyze the land valuation methodology on Opening, including a large amount of data concerning land sales in the Denver area in particular. BNSF was not "sandbagged" (Motion at 31). BNSF also was not caught off-guard by AEP Texas' use of the quartile approach. Use of this approach was clearly discernable on Opening as evidenced by the fact that BNSF addressed it on Reply. *See* BNSF Reply at III.F-4-5. AEP Texas' Rebuttal evidence offered support for its Opening approach by addressing the concerns raised by BNSF on Reply. On Rebuttal, the information presented on other methodologies does not alter AEP Texas' land valuation estimate, and was offered solely to support and re-affirm the method that was used on Opening.

The same is true of BNSF's claim regarding comparable properties. AEP Texas utilized a method on Opening that on its own took specious data into account, thereby negating the need for culling data. The modifications that were made to the comparables by AEP Texas on Rebuttal were those needed to evaluate the raw data used by BNSF on Reply, and to support the other alternative methodologies which were offered to confirm AEP Texas' Opening approach. The comparables modification was a response to BNSF's Reply, not a change in AEP Texas' Opening evidence.

BNSF argues in its Motion that "it is too late for AEP Texas to argue that the data it sponsored on opening were erroneous or to sponsor new evidence based on

supposed corrections to those data since BNSF accepted the data as the basis for the calculation of the Denver ROW." Motion at 29-30. However, AEP Texas never stated that the Opening data was erroneous. Emulating the railroads' approach in prior rate cases (*Duke/NS* and *Duke/CSX*), AEP Texas provided all of the raw data on Opening in addition to narrative and analysis. AEP Texas did not alter its Opening calculations on Rebuttal. On Rebuttal, AEP Texas merely provided more detail as to why the method used was chosen, and offered alternatives to that method indicating that the data would have to be refined if these other methods were used. As no changes were made to the Opening costs as originally presented, BNSF's allegations are unfounded.[31]

For its next surrebuttal point, BNSF argues that the "across-the-fence" approach is the most reliable or accurate appraisal for "assessing the prospective cost of a railroad ROW." Motion at 33. Typically, the "across-the-fence" approach involves determining land values by evaluating recent sales of comparable adjacent parcels of land. *See* STB Docket No. AB-556 (Sub-No. 2X) *Railroad Ventures, Inc. – Abandonment Exemption – Between Youngstown, OH, and Darlington, PA, in Mahoning and Columbiana Counties, OH, and Beaver County, PA*, decision served Nov. 12, 1999 at 2. As demonstrated on Opening, AEP Texas' land valuation expert physically inspected the

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[31]BNSF also alleges that AEP Texas' Opening Evidence did not explain how it arrived at zoning categories for the TNR ROW. Motion at 28. This is a ridiculous allegation. AEP Texas stated on Opening that its experts conducted an extensive physical inspection of the ROW, and it described the zoning categories in detail. *See* AEP Texas Op. Narr. at III-F-9 to 11.

existing ROW and evaluated and considered all relevant, comparable properties. AEP Texas conducted a very thorough physical as well as documentary analysis of the ROW and the surrounding land. *See* AEP Texas Op. Narr. at III-F-8 to 11; Op. Exhibit III-F-2, pp. 11-47; and Op. electronic workpaper files "TNR All Comps Edited.xls" and "Land_Summary.xls." BNSF's criticism regarding AEP Texas' methodology is misplaced, as that methodology is as or more comprehensive than a standard "across-the-fence" method. In contrast, BNSF's use of the simplified average approach produces extremely unreliable results. *See* AEP Texas Reb. Ex. III-F-15 at 6-7.

Lastly, BNSF argues that AEP Texas took a shortcut approach in evaluating the evidence that produced values for the Denver area ROW. Motion at 27. This is another inappropriate subject for a motion to strike. Regardless of BNSF's opinion, AEP Texas' Rebuttal Evidence substantiated the Opening numbers, and demonstrated that several alternative approaches produced numbers comparable to the those developed using the quartile approach. AEP Texas Reb. Narr. at III-F-8-11. While BNSF may not like the fact that AEP Texas was able to confirm that its Opening numbers were reasonable, this hardly is a reason to strike the confirming evidence.

B. Solid Rock

On Reply, BNSF referenced a highway widening project near Blackhawk, CO in support of its assertion that more expensive equipment would be required for solid rock excavation, as well as "reblasting" of already blasted boulders. BNSF Reply at III.F-

45-47. However, BNSF did not include any cost information or further details, other than a few photographs.

After reviewing BNSF's Reply evidence, AEP Texas attempted to research further details of this project, and could not find a specific "Blackhawk" project. However, AEP Texas' engineering experts did find the Central City Highway project, which is located very close to Blackhawk. As AEP Texas' Rebuttal evidence demonstrated, this project involved very large quantities of rock excavation, and the total cost was only $38.5 million, which had to include over eight miles of paving, two bridges, three box culverts, retaining walls, guard rails, lights and signs. AEP Texas Reb. Narr. at III-F-50-51. Thus, AEP Texas reasonably concluded that the unit cost for rock excavation must have been below AEP Texas' unit cost and far below BNSF's unit cost.

In its Motion, BNSF suggests that AEP Texas' Rebuttal is improper because the Central City Highway project in fact is not the Blackhawk project that BNSF referred to in its Reply. Motion at 34. BNSF's argument is meritless, and its attempt to surrebut AEP Texas' analysis of the Central City Highway project is improper and unpersuasive.

BNSF's Reply submission did not include sufficient information to allow AEP Texas -- or the Board -- to specifically identify the location of the project referenced by BNSF. Under the circumstances, the fact that AEP Texas' good faith identification efforts led it to a larger, similar, adjacent project cannot be held adversely to AEP Texas.

In any event, AEP Texas is free to present rebuttal evidence that generally supports its costs or undermines BNSF's costs – so long as AEP Texas is not changing its position based on new evidence. *PEPCO* at 3 ("on Rebuttal, the proponent may respond to the defenses and criticisms raised by introducing evidence to bolster its original assumptions"). The Central City Highway project clearly shows that solid rock excavation in the same territory costs substantially less than what BNSF posited in its Reply evidence.[32]

BNSF apparently recognizes the folly of its reliance on the Blackhawk project because it tries to rehabilitate its position through impermissible surrebuttal. For example, BNSF now includes the unit costs from the project – suggesting that they support BNSF's position. Motion at 36; V.S. Gouger at 7. But in the same stroke, BNSF undermines its assertion by noting the unusually difficult circumstances involved in the Blackhawk project; namely, excavating a "solid rock ledge perched adjacent to the existing highway." V.S. Gouger at 7. Moreover, the new documents that BNSF provides about the project show that the total excavation is a mere 121,000 CY – a very small sum versus the quantities being excavated in the Central City Highway project, much less the TNR construction project.[33] *Id.*, Attachment 4, p. 2. Thus, the project involved

[32] Incidentally, neither of these projects is located on or near the TNR route.

[33] This sum is below the 250,000 CY threshold that AEP Texas' engineering experts used as a filter to search for information about the Blackhawk project, which is why AEP Texas did not find a "Blackhawk" project. Anything smaller than 250,000 CY (continued...)

particularly difficult terrain, excavation under traffic, and few if any efficiencies due to the small quantities. It is little wonder that the solid rock excavation unit cost ($19.85 per CY) for this project is well above that posited by AEP Texas ($10.93) – though it is still substantially lower than BNSF's proposed unit cost ($22.47).

BNSF also makes contradictory statements about the Central City Highway project. It suggests that the unit costs for rock excavation might be higher than AEP Texas suggested on Rebuttal because it is likely that more than just solid rock was excavated. Motion at 35; V.S. Gouger at 4-5. BNSF also speculates that more than rock excavation must have occurred because pictures of the project show dirt associated with common excavation. Motion at 35; V.S. Gouger at 5-6. Because this was a design-and-build project, BNSF's conclusion is unknowable, but the public documents clearly state that 5.5 million cubic yards of rock excavation was involved. It may be the case that more and different excavation was done, but that does not affect the conclusion. Even if one assumes that some excavation was less expensive, the total budget for the project makes it highly unlikely that unit cost for rock excavation exceeds even AEP Texas' unit costs. For example, if 100 percent of the excavation was common earth, using BNSF's unit cost ($4.95 per CY) this activity would cost $27.2 million ($4.95 x 5.5 million CY). That would leave a mere $11 million for paving, bridges, culverts and all other work.

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[33](...continued)
was deemed unlikely to have been included because the quantities would have no rational relationship to the TNR project.

Even using BNSF's loose rock unit cost of $11.01 (BNSF suggests that a significant amount of the excavation might be loose rock) the excavation cost alone would be $60.5 million ($22 million over the total budget for the project). Motion at 35; V.S. Gouger at 5.

In any event, it is evident from AEP Texas' Rebuttal evidence on the Central City Highway project that a significant amount of the excavation likely was solid rock, based on the public information provided, and it is therefore reasonable to assume that the unit costs likely were well below even BNSF's loose rock excavation unit cost.

BNSF seems to recognize the weakness in its argument about the Central City Highway project because it suggests that the "large volume of excavation that must be carried out and the immense construction equipment used on the CCP create efficiencies that will not be available to the builders of the TNR," and that neither party has posited equipment of this size. V.S. Gouger at 6. BNSF's arguments again are unfounded, and contradictory to its positions taken on Reply. For example, on Reply, BNSF suggested that AEP Texas' use of a three cubic yard shovel to excavate blasted and loose rock was not a good choice because such equipment is really meant for mining, not constructing a railroad. Reply at III.F-39. On Rebuttal, AEP Texas showed that the shovel was appropriate because moving rock is largely the same exercise, whether it is in a construction setting or a mining setting, and that equipment better suited to that task would yield lower unit costs. Reb. at III-F-44. Now, BNSF argues that the use of larger

mining style equipment would be so beneficial that unit costs associated with such work could not be achieved by the TNR. Motion at 35; V.S. Gouger at 6. BNSF cannot have it both ways.

As to the fact that neither party proposed equipment as large as that used in the Central City Highway project, this is a red herring. AEP Texas noted both on Opening and Rebuttal that the exact equipment would be chosen by the contractor, but Means provides the benchmarks to determine a reasonable cost per cubic yard. AEP Texas Op. Narr. at III-F-13; AEP Texas Reb. Narr. at III-F-42. AEP Texas also noted that improving on Means' unit costs through the bidding process is very common, and the Central City Highway project is one such example. AEP Texas Op. Narr. at III-F-14-15; AEP Texas Reb. Narr. at III-F-50. Moreover, AEP Texas could not have used Means to specify the equipment used in the Central City Highway project, because it does not include equipment in that size range.

Finally, BNSF suggests that the quantities of rock involved in the Central City Highway project are much greater than what the TNR would encounter in its most rock-intensive corridor, and therefore might not be accurate. In particular, BNSF suggests that the Crawford Hill area would have about half as much rock per mile as in the Central City Highway project. V.S. Gouger at 6. However, a four lane highway with shoulders is much wider than a double-track railroad. The TNR's Crawford Hill area likely would have quantities very similar to those in the Central City Highway project if

the railroad roadbed were as wide as the highway roadbed. In any event, the Central City Highway project rock excavation costs are certainly more representative of the achievable unit costs than the small, difficult Blackhawk project selected by BNSF.

C. Engineering

On Opening, AEP Texas proposed a total engineering additive of 6.8 percent. AEP Texas Op. Narr. at III-F-111. On Reply, BNSF proposed a vastly inflated 14.6 percent additive. BNSF Reply at III.F-277. Between the filing of BNSF's Reply and AEP Texas' Rebuttal evidence, the Board issued the *PSCo/Xcel* decision, in which the Board adopted a 10 percent additive for all engineering components in that case "and in future cases." *Id.* at 118. Given the Board's clear directive, AEP Texas used a 10 percent additive on Rebuttal. AEP Texas Reb. Narr. at III-F-194. Incredibly, BNSF now moves to strike on the ground that the 10 percent additive is unsupported. Motion at 36.

AEP Texas' compliance with the Board's *PSCo/Xcel* directive plainly is reasonable, given that the Board made a specific finding that it declared would be generally applicable to all cases. Indeed, the Board's decision could be read as barring the parties from proposing any other additive. AEP Texas respectfully submits that rejecting the 10 percent additive here would be reversible error, because the Board cannot announce a rule and then reject evidence in a following case that relies on the rule. *See Arizona Electric Power Cooperative, Inc. v. I.C.C.*, 816 F.2d 1366, 1373-75 (9th Cir.

1987) (shipper was entitled to rely on the then newly-announced *Coal Rate Guidelines* as the standard under which its case would be judged).

BNSF's suggestion that AEP Texas "acknowledged its Opening Evidence was inadequate" (Motion at 37) is absurd. AEP Texas never suggested that its Opening engineering additive was inadequate. AEP Texas merely adopted the Board's subsequently-announced, new standard. AEP Texas did not have to demonstrate that BNSF's additive was infeasible or incorrect in order to use the 10 percent additive mandated by the Board's *PSCo/Xcel* ruling.

Nevertheless, AEP Texas did demonstrate that BNSF's additive was grossly inflated. First, AEP Texas demonstrated that BNSF's costs double count planning and surveying activities. AEP Texas Reb. Narr. at III-F-195-196. Second, AEP Texas demonstrated that construction stakeout is an integral part of the grading contractors' duties, and that modern technology was making that task easier than ever. *Id.* at III-F-198-203. Thus, contrary to BNSF's suggestion in its Motion, AEP Texas demonstrated that such activities are not separately costed, and AEP Texas noted that BNSF could not demonstrate that it paid additional fees for that activity in conjunction with its own construction projects. *Id.* Next, BNSF suggests that AEP Texas' costs were based on a contractor's quote that did not indicate that it covered such activities. Motion at 38. However, AEP Texas' contractor quote was for installing track, which occurs after the roadbed is already aligned, so this point is irrelevant. As for materials testing, AEP Texas

demonstrated that vendors and contractors typically are required to certify that the materials and work meet the contractual requirements, and that any costs to perform the certification are part of the contract bid. *Id.* at III-F-203-204. AEP Texas provided an example of such an arrangement, and noted that BNSF's own AFEs show only one instance where materials testing was listed as a separate line item. *Id. See also* AEP Texas Reb. electronic workpaper file "certs.pdf."

D. Ballast

BNSF has moved to strike several ballast unit costs utilized by AEP Texas on the grounds that they are improperly indexed. Motion at 38. BNSF's Motion is inappropriate in this instance because the unit costs do not constitute improper Rebuttal. Rather, BNSF's request is more akin to a technical correction, which should be the subject of a separate motion. Alternatively, any indexing errors can and will be corrected in the record supplement respecting the revised RTC modeling, described *supra.*

VII. IT IS WITHIN THE SCOPE OF LEGITIMATE REBUTTAL TO ADDRESS BNSF'S DATA PRODUCTION FAILURES

In what may be the most marked example of improper surrebuttal in its entire Motion, BNSF claims that AEP Texas' rebuttal arguments addressing BNSF's refusal to produce data requested by AEP Texas in discovery for the purpose of calculating movement-specific variable costs somehow misstate the record. *See* Motion at 39-41. In fact, the points made by AEP Texas on rebuttal are entirely true and valid,

and all reprise elements of AEP Texas' Opening and Reply Evidence on the same subjects.

The law requires that regulated carriers such as BNSF "make relevant cost data available to shippers...that are a party to a Board proceeding in which such data are required." 49 U.S.C. § 11163. Elsewhere, the Board and its predecessor have acknowledged both that movement-specific variable costs are superior to system average calculations in proceedings to evaluate the reasonableness of rates on high volume, unit train coal movements.[34] Because railroad defendants are the sole possessors of the data needed to develop movement-specific costs, meaningful discovery is essential to the conduct of a proper administrative proceeding.

Despite its status as a regulated entity with a statutory obligation to produce relevant cost data, over the past several years BNSF apparently has modified its internal data retention systems so as to frustrate captive shippers' rights to reasonable discovery. Where once in the ordinary course of business BNSF would organize and sort systemwide data regarding such cost components as locomotive capital and maintenance, maintenance-of-way, road property investment and freight car utilization and expenses (among others) in a manner that could be reported and produced in discovery,[35] now the

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[34] *See, e.g.,* Docket No. 42022, *FMC Wyoming Corp., Et Al. v. Union Pacific Railroad Company,* Decision served May 12, 2000 at 48; *Complaints Filed Under Section 229 of the Staggers Rail Act of 1980,* 365 I.C.C. 507, 512-13 (1982).

[35] *See, e.g., West Texas Utilities* 1 S.T.B. at 721; *San Antonio Texas v. Burlington* (continued...)

carrier retains the data only in raw computer files, allowing it to claim that it would be "required to manufacture data or undertake special studies"[36] in order to produce the movement-specific data that readily was made available in the past. While BNSF apparently *does* sort and report the raw data in order to calculate operating costs for individual coal movements, it labels these analyses "internal management costs" and, exploiting prior Board rulings that were based on entirely different justifications,[37] refuses to produce them. The obvious, intended purpose of BNSF's tactics in this regard is to try to force AEP Texas and the Board to rely exclusively on system average costs, thereby ensuring that through its rates, BNSF can keep for itself 100% of the value of the efficiencies that the Board long has recognized are inherent in high volume, repetitive unit train coal movements.

In its Motion, BNSF charges that AEP Texas falsely claimed that "...BNSF refused to provide route-specific FADB data for the years 2001 and 2002," when, in fact, BNSF had done so. Motion at 39. However, AEP Texas made no such claim. On

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[35](...continued)
Northern Railroad, 1 I.C.C. 2d 561, 569-71 (1986).

[36]Motion at 41.

[37]*See* Docket No. 41989, *Potomac Electric Power Co. v. CSX Transportation, Inc.,* Decision served May 27, 1997. When this ruling was made, carriers such as BNSF retained and produced movement-specific data that was readily compatible with the Board's variable costing methodology. The "management costs" that were held to be outside the bounds of discovery were specifically tailored to competitive marketing programs. In denying access to this unique class of data, the Board was not denying the shipper access to relevant, movement-specific cost data.

Rebuttal, AEP Texas pointed out that BNSF had produced "no FADB segment data, total FADB by account nor FADB Accumulated Depreciation"[38] for 2001 and 2002, not route-specific data. Indeed, in its Opening, Reply and Rebuttal Evidence AEP Texas made clear that its road property investment costing procedure relied in part on route-specific FADB data provided by BNSF. To effectively respond to *other* BNSF criticisms of its approach, however, AEP Texas also requested BNSF's *system-wide* FADB data by property account, to permit a reconciliation with BNSF's Report R-1. Despite the fact that the same data was requested and produced in *TMPA*, BNSF refused to provide it to AEP Texas. *See* AEP Texas Reb. Narr. at II-A-18.

BNSF also accuses AEP Texas of making a "false claim" that BNSF never provided the source documentation needed to verify the accumulated depreciation figures included in Table 1 of its witness Cami Elliott's Reply Verified Statement. *See* Motion at 40. *See also* AEP Texas Reb. Exhibit II-A-91 at 21. BNSF insists that it provided the requested data in discovery, and points to its response to an AEP Texas workpaper request.[39] That response, however, states only that "[i]t appears that the data requested...is already in AEP Texas' possession," a statement which in fact was incorrect

[38]AEP Texas Reb. Narr. at II-A-17.

[39]*See* AEP Texas Reb. Workpaper 0026.

when made. The information referred to by BNSF[40] merely repeated the numbers shown in Ms. Elliott's Table. BNSF produced *nothing* that showed how those numbers were calculated, the assumptions and methodologies on which they were based, or any other basis on which they or the conclusions drawn therefrom could be verified. It is BNSF's data production which was "sloppy and irresponsible"; AEP Texas' criticism of that production was squarely on target.

Contrary to BNSF's next claims (Motion at 41), AEP Texas took issue with BNSF's refusal to produce requested locomotive maintenance costs, route-specific maintenance-of-way data, route-specific accumulated depreciation data and freight car operating costs far in advance of the Rebuttal phase of this case. For example, BNSF's failure to provide locomotive expense data was the subject of correspondence between the parties in 2003,[41] and was referenced by AEP Texas in both its Opening and Reply submissions.[42]

The same is true of the other cost categories cited by BNSF. BNSF's route-specific maintenance-of-way data failures were referenced in the correspondence cited

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[40]*See* AEP Texas Op. electronic workpaper "Rd Inv AEP Texas 2001.123."

[41]*See* letter from Daniel M. Jaffe to Brooke L. Gaede, December 16, 2003 (item 6); letter from Brooke L. Gaede to Daniel M. Jaffe, December 23, 2003 (item 6).

[42]*See* AEP Texas Op. Narr. at II-A-37; Reply Narr. at II-A-64.

above,[43] and were argued by AEP Texas at page II-A-33 of its Opening Narrative. The carrier's refusal to produce route-specific depreciation data was noted at pages II-A-35-37 of AEP Texas' Opening Narrative, and page II-A-36 of its Reply. The issue of freight car operating costs was addressed at pages II-A-44-45 of AEP Texas' Opening Narrative, and at page II-A-38 of its Reply.

BNSF's statement that AEP Texas' discovery allegations appear "for the first time on rebuttal" (Motion at 41) also is false, and its companion claim that "BNSF does not have the data to produce" (*id.*) is, at best, misleading. As noted *supra,* BNSF *has* the data, and in past cases has produced it. BNSF also apparently readily sorts and reports such data on a movement-specific basis when it is deemed useful for "internal management" purposes. It is only in contexts such as this case, where production of the data would undermine BNSF's claimed, inflated variable costs, that a simple computer query is transformed into a burdensome "special study," and relevant, probative evidence is withheld from discovery.

Finally, BNSF suggests that the deficiencies in the carrier's data production cited by AEP Texas in its Rebuttal should have been addressed in the Board-sponsored Technical Conference, as if data and documents which BNSF refused to produce during discovery somehow would have been forthcoming had AEP Texas asked yet again during

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[43]The December 23, 2003 Gaede letter (item 3) also makes clear that BNSF was refusing to produce the requested data, not that the carrier already had produced all responsive materials.

a meeting. *See* Motion at 41. As BNSF is well aware, the assigned and sole purpose of the Technical Conference was to provide the parties an opportunity to try to reach agreement on the basic traffic and operating characteristics of the AEP Texas trains that should be used for costing purposes.[44] The Board's charge, which BNSF and AEP Texas largely were successful in meeting, had nothing to do with the quality of BNSF's movement-specific data production or its general compliance with AEP Texas' legitimate discovery requests.

CONCLUSION

For all of the foregoing reasons, BNSF's Motion to Strike should be denied.

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[44] *See, e.g.,* letter from David M. Konschnik, Office of Proceedings, to Timothy P. Stanley, William L. Slover and Samuel M. Sipe, Jr., March 2, 2004; Joint letter from Anthony J. LaRocca and Kelvin J. Dowd to David M. Konschnik, March 15, 2004; Joint letter from Kelvin J. Dowd and David F. Rifkind to David M. Konschnik, March 30, 2004.

Respectfully submitted,

AEP TEXAS NORTH COMPANY
1 Riverside Plaza
Columbus, OH 43215

By: David M. Cohen, Senior Counsel
155 West Nationwide Boulevard
Suite 300
Columbus, OH 43215

William L. Slover
Kelvin J. Dowd
Christopher A. Mills
Slover & Loftus
1224 Seventeenth Street N.W.
Washington, D.C. 20036
(202) 347-7170

Attorneys & Practitioners

OF COUNSEL:

Slover & Loftus
1224 Seventeenth Street, N.W.
Washington, D.C. 20036

Dated: October 20, 2004

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BEFORE THE
SURFACE TRANSPORTATION BOARD

AEP TEXAS NORTH COMPANY	)	
Complainant,	)	
v.	)	**Docket No. 41191 (Sub-No.1)**
THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY	)	
Defendant.	)	

VERIFIED STATEMENT

OF

GARY W. VICINUS

My name is Gary W. Vicinus, and I am Vice President and Senior Advisor to the CEO at Pace Global Energy Services, Inc. I sponsored testimony within Part III-A of AEP Texas' Opening and Rebuttal Evidence in this proceeding. My qualifications are described in Part IV of AEP Texas' Opening Narrative.

I have been asked by AEP Texas North Company to respond to certain assertions made by Ms. Julie A. Murphy of FTI Consulting, Inc. in a Verified Statement dated September 8, 2004, which was included as part of a Motion to Strike filed by BNSF in this proceeding on September 9, 2004.

In her Statement, Ms. Murphy claims that AEP Texas erred in not reducing the 2003 coal volumes attributable to thirteen (13) power plants included in the AEP Texas stand-alone traffic group from 2002 levels, by the { } decline in overall BNSF coal volumes implied by the carrier's internal Long Range Plan. In its Rebuttal Evidence, AEP Texas used BNSF's Long Range Plan to adjust coal volumes for the vast majority of the members of the traffic group over the 2003-2008 time period. However, consistent with the convention adopted by the Board for use in rail coal rate proceedings, AEP Texas held coal volumes constant over the entire 2003-2020 time period for the thirteen (13) plants that operated at or above an 85% capacity factor in 2002. *See* AEP Texas Rebuttal Narrative at III-A-44.

In her Statement, at page 7, Ms. Murphy says that "there is no reason why AEP Texas should assume that a plant operating at or above an 85 percent capacity factor in 2002 will not reduce its coal deliveries in 2003 consistent with BNSF's average decline in coal deliveries in 2003." In fact, there are at least three very sound reasons for such an assumption.

First, the BNSF Long Range Plan is not a forecast of coal demand or consumption by individual utilities or generating stations. Rather, it is a projection of aggregate coal volumes moving over the BNSF system as a whole. It reflects factors specific to BNSF operations which have no relevance to expected changes in the coal volumes transported to utility facilities within a defined traffic group, such as the loss of

customer accounts, the retirement or commencement of operations, or prolonged planned outages at plants outside the defined group. I recognize that the Board has adopted a convention to use such internal forecasts to project near-term changes in coal volumes over hypothetical stand-alone railroads, and it may be that this convention can yield a reasonable approximation of changes in annual coal requirements by power plants whose coal needs tend to fluctuate and/or are not already operating near their rated capacity. A generating station that already is operating at or near capacity, however (as indicated by the Board's 85% capacity factor "cap"), is apt to be a base load facility that ranks at or near the top of a utility's economic dispatch priority. The coal requirements for such a facility will not shift in tandem with the factors that drive aggregate changes in a particular railroad's overall system coal volumes.

Second, coal requirements at base load stations such as the thirteen (13) plants addressed by Ms. Murphy are closely related to the demand for electricity from those stations. As demand rises, so too will coal consumption, all else being equal. From an historic perspective, a simple and straightforward way to measure changes in electricity demand relative to a particular facility is to examine changes in net generation at that facility. Table 1, below, shows the changes in net generation in MWh from 2002 to 2003 for each of the thirteen (13) coal-fired stations identified by Ms. Murphy as reported by the utilities on Form 759 to the Energy Information Administration (EIA), as reported by COALdat.

Table 1

Plant	2001	2002	2003
Arapahoe (PSCO)	1,244,348	1,305,160	928,281
Campbell (CEC)	9,689,238	9,248,179	10,342,011
Gentleman	9,320,830	9,533,220	9,768,561
Harrington	7,901,830	7,807,631	8,039,321
Hawthorn	2,060,311	4,006,834	4,003,259
James River (SPCIUT)	1,506,359	1,564,163	1,594,234
Johnston	5,628,323	5,755,319	5,296,831
Laramie River	12,463,902	12,388,602	13,093,041
Leland Olds	4,370,855	4,571,056	4,141,067
Oklaunion	3,868,709	4,260,807	3,740,549
Rawhide	2,191,774	2,038,445	2,213,242
Sikeston	1,798,495	1,690,866	1,755,666
Whiting (CEC)	2,115,713	2,259,258	2,253,032
TOTAL	**64,160,687**	**66,429,540**	**67,169,095**
PERCENT CHANGE		**3.54%**	**1.11%**

Source for coal consumption & net generation data:
COALdat EIA Form 906/759 data series
COALdat System Version 8.0.1035 - 4/28/04
Data version: 8.0.0104
Data set: Jun. 2004

As the data demonstrates, eleven (11) plants experienced very little change or a net increase in generation -- and, thus, in coal requirements -- in 2003 over 2002 levels. The overall net change among the group was an increase of 1.1%. This publicly reported data flatly contradicts the notion that AEP Texas should have assumed a { } *decline* in coal receipts for those plants in that year.

Third, a review of the record of coal actually consumed at each of the plants in question confirms the legitimacy of holding the 2003 volumes constant at 2002 levels. Table 2, below, compares the amount of coal from all sources consumed at each station in 2003 to the 2002 consumption in thousands of tons, according to data submitted by the involved utilities to the EIA on Form 906 and reported by COALdat.

Table 2

Plant	2001	2002	2003
Arapahoe (PSCO)	858	905	601
Campbell (CEC)	4,456	4,478	5,002
Gentleman	5,762	5,898	5,951
Harrington	4,541	4,472	4,622
Hawthorn	1,225	2,352	2,402
James River (SPCIUT)	917	968	1,019
Johnston	3,803	3,877	3,522
Laramie River	7,928	7,669	8,118
Leland Olds	3,640	3,706	3,442
Oklaunion	2,477	2,587	2,335
Rawhide	1,311	1,200	1,295
Sikeston	1,136	1,064	1,090
Whiting (CEC)	1,119	1,216	1,267
TOTAL	**39,172**	**40,393**	**40,667**
PERCENT CHANGE		**3.12%**	**0.68%**

Source for coal consumption:
COALdat EIA Form 906/759 data series
COALdat System Version 8.0.1035 - 4/28/04
Data version: 8.0.0104
Data set: Jun. 2004

As shown, 2003 coal consumption levels increased over 2002 levels at nine (9) of the thirteen (13) facilities, and the overall net change among the group was an *increase* of 0.68%.

Based upon the foregoing, there is ample justification for AEP Texas' application of the Board's 85% capacity factor cap convention to the thirteen (13) plants whose 2003 (and beyond) coal volumes were fixed at their historic 2002 levels. Indeed, given that both electric generation and coal consumption among this subset of the AEP Texas traffic group increased in 2003, fixing the volumes at 2002 levels conservatively understates actual 2003 stand-alone coal volumes for these facilities.

VERIFICATION

COMMONWEALTH OF VIRGINIA)
) SS:
COUNTY OF FAIRFAX **)**

Gary W. Vicinus, being duly sworn, deposes and says that he has read the foregoing Statement, knows the contents thereof, and that the same are true as stated to the best of his knowledge, information and belief.

Gary Vicinus

Sworn to and subscribed before me
this 28 day of Sept., 2004

Carolyn J. Burchell

Notary Public for the State of VIRGINIA

Carolyn J. Burchell
NOTARY PUBLIC
Commonwealth of Virginia
My Commission Expires
JUNE 30, 2005

My Commission Expires JUNE 30, 2005

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BEFORE THE
SURFACE TRANSPORTATION BOARD

AEP TEXAS NORTH COMPANY,	)	
Complainant,	)	
v.	)	Docket No. 41191 (Sub-No. 1)
THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY,	)	
Defendant.	)	

VERIFIED STATEMENT OF
PAUL H. REISTRUP

My name is Paul H. Reistrup. I am an experienced and credentialed consultant on rail operations and engineering matters. My address is 8614 Brook Road, McLean, VA 22102. I am the same Paul H. Reistrup who has previously sponsored Opening and Rebuttal evidence in this proceeding on behalf of AEP Texas North Company ("AEP Texas") related to the system configuration and operating plan for the Texas & Northern Railroad ("TNR"), which is AEP Texas' stand-alone railroad. My Statement of Qualifications appears at pp. IV-9 to 15 of AEP Texas' Opening Narrative filed in this proceeding on March 1, 2004.

I. Purpose and Scope

On both Opening and Rebuttal, AEP Texas submitted evidence, which I co-sponsored with AEP Texas Witness Walter Schuchmann, demonstrating that the

TNR's traffic moves over the TNR faster than real-world BNSF trains, and that my operating plan for the TNR meets the transportation needs of its traffic group. A key element of this demonstration was a simulation of the TNR's peak-period operations using the computerized Rail Traffic Controller ("RTC") Model. Mr. Schuchmann and I revised the simulation inputs slightly on Rebuttal, primarily to minimize differences between the parties' execution of the RTC model, and re-ran the simulation with very similar results.

BNSF has filed a Motion to Strike ("Motion") which includes a request that the Board strike certain aspects of AEP Texas' Rebuttal evidence concerning the revised RTC simulation, particularly as it relates to rerouted coal traffic. AEP Texas has asked me to respond to the verified statements and other new factual material submitted by BNSF in support of this portion of its Motion.

II. Overview of RTC Simulation Evidence

The TNR route that I designed replicates one of two BNSF coal routes from the Powder River Basin ("PRB") mines to Alliance (and Northport), NE: the "northern" route via Donkey Creek, WY and Edgemont, SD. This route is shorter than BNSF's "southern" route via Guernsey, WY in the case of some PRB mine origins, and longer in the case of others.

The TNR traffic group includes certain coal traffic that BNSF presently moves via Guernsey and that the TNR routes via Donkey Creek and Edgemont.

However, all of the coal traffic that the TNR re-routes via Edgemont either moves to TNR-served destinations, or is interchanged with BNSF at a location that is on the route BNSF currently uses to move this traffic. The rerouted traffic originates at southern PRB mines served via the Orin Subdivision, and most of it is interchanged to BNSF at Alliance. The TNR's "northern" route to Alliance is longer than BNSF's "southern" route to Alliance by 10 miles or more only for coal originating at the five southernmost mines (Black Thunder, Jacobs Ranch, North Rochelle, North Antelope/Rochelle, and Antelope). The maximum increase in distance is 57 miles.

AEP Texas' Opening RTC simulation included 716 loaded coal trains and their corresponding empty trains, and 138 merchandise trains that operate only between Amarillo and Oklaunion, TX. The simulation demonstrated that the TNR operates trains between the five southernmost PRB mines and Alliance during the 2020 peak period faster than BNSF did in 2002 which is the most recent year for which complete BNSF train movement data were provided in discovery. For example, as shown in AEP Texas Exhibit III-A-5, the TNR's average round-trip transit time between Rochelle/North Antelope and Alliance is 9 hours and 54 minutes faster than BNSF's actual average round-trip transit time in 2002. Between Antelope Mine and Alliance, where the distance differential is greatest, the TNR's average round-trip transit time is 12.5 hours faster than the BNSF 2002 average. The time differential is even larger in the TNR's favor for movements originating at the Black Thunder, Jacobs Ranch and North Rochelle Mines.

BNSF conducted its own RTC simulation of the TNR's peak-period operations for purposes of its Reply Evidence in this case. BNSF's simulation involved a smaller coal traffic group for the TNR's peak year (2020), and thus a smaller number of coal trains that operate in the peak simulation period. However, the reduction in trains was more than offset by other changes to the RTC model inputs made by BNSF, such as taking tracks out of service at jointly served mines more than 300 times as a result of the presence of Union Pacific trains (which resulted in a double-count of delay time), and the inclusion of 137 other kinds of "random" track outages. These changes substantially reduced the TNR's track capacity during the simulation period.[1]

Notwithstanding BNSF's changes to the RTC inputs, its Reply simulation showed transit times for TNR coal trains that are very similar to those shown in AEP Texas' Opening simulation. For example, as shown in Table III.C-4 on page III.C-18 of BNSF's Reply Narrative, the round-trip transit time for TNR coal trains between Donkey Creek and Alliance produced by BNSF's simulation was 14 hours and 29 minutes, which is 23 minutes less than the 14 hours and 52 minutes shown in AEP Texas' Opening simulation. (The Donkey Creek-Alliance segment comprises more than 75% of the

[1] I addressed the issue of delays caused by the presence of UP trains at the jointly served southern PRB mines at pp. III-B-8-11 of AEP Texas' Rebuttal Narrative, and demonstrated that the presence of UP trains at these mines was accounted for by my allowance of 5.5 hours of origin dwell time for train loading at these mines compared to the two hours or less of actual required loading and the fact that all of these mines can accommodate at least two trains simultaneously and some can accommodate up to 12 trains on site. I addressed the impropriety of including time for most of BNSF's other random outages in the RTC simulation at pp. III-C-38-52 of the Rebuttal Narrative.

distance between the southerly Orin Subdivision mines and Alliance, and is the busiest segment of the route between these mines and Alliance in terms of daily train volume.)

The input changes that Mr. Schuchmann and I made to the RTC simulation on Rebuttal were minor, and did not have a significant impact on the modeling results. This can be seen by comparing the average transit times calculated by AEP Texas for "TNR RT Transit" (Column 19) in AEP Texas Opening Exhibit III-A-5 and in AEP Texas Rebuttal Exhibit III-C-2.

The principal change we made in the Rebuttal simulation was to use BNSF's Reply RTC train file as the starting point. This change was not necessary to provide valid simulation results, as the Opening simulation methodology and inputs were appropriate and produced reliable results for the universe of peak-period trains included in the simulation.[2] We decided to switch to BNSF's train file so that both parties would be using the same starting points and times for each simulated train and the same train sizes and weights, thus minimizing areas of dispute. However, because AEP Texas' Rebuttal traffic group included almost all of the coal traffic that BNSF said it had removed on Reply, it was necessary to add numerous coal trains that BNSF had not simulated. Although it could not be discerned at the time, adding back into the simulation

[2] For example, on Opening we assumed each train moving between each distinct O/D pair had the same length (and weight) as the longest train moving between that O/D pair, rather than using actual train sizes and weights. This understated train weight in a few instances, but overstated it in most. The net effect of using the maximum train size rather than actual train size and weight on the simulation results was very minor, and probably resulted in a net increase in the cycle times of the simulated trains.

the correct number of coal trains to match the Rebuttal peak-period train list (AEP Texas Reb. Exhibit III-B-5) proved to be problematic due to errors in BNSF's Reply RTC train file. These errors are discussed in detail later in my Statement.

III. Response to Specific RTC Allegations in BNSF's Motion

BNSF requests the Board to strike three aspects of AEP Texas' Rebuttal RTC simulation. They relate to (1) the inclusion of 13 random track outages in the Rebuttal simulation, rather than either none (as on Opening) or the 137 track, signal and equipment-related outages that BNSF included in its Reply simulation; (2) the manual adjustments Mr. Schuchmann and I made to the start times of a few trains in the RTC Model to facilitate the successful Rebuttal simulation; and (3) the alleged failure to simulate all of the peak-period coal trains included in the TNR's Rebuttal traffic group for the peak year. I will respond to BNSF's new factual material on each of these items in turn.

A. Random Track Outages

BNSF's Motion first characterizes my testimony at pp. III-B-11-12 of AEP Texas' Rebuttal Narrative as an acknowledgment that the failure to include any random or unplanned track outages in the Opening RTC model was "improper," and an admission that AEP Texas' Opening Evidence "was flawed in this area" (Motion at 15). This is a mis-characterization, as the Narrative that I sponsored did not state that the exclusion of random track outages from the Opening simulation was either "improper" or "flawed." It

is impossible to determine when "random" outages will occur in the future, and it is wrong to assume that outages that actually occurred on the replicated BNSF lines in 2002 would occur on the TNR in 2020. It is also totally unrealistic to assume that any outages that do occur in 2020 would occur at the same times and on the same dates as comparable outages in 2002.

Nonetheless, to show that the inclusion of outages of the kind that realistically might be incurred by the TNR in the peak simulation period would not materially impact the simulation or the resulting train transit times, I instructed Mr. Schuchmann to include 13 of the outages that actually occurred on the replicated BNSF lines in 2002 in the Rebuttal simulation. Based on the very limited information provided by BNSF, these 13 events were the only ones that appeared likely to require immediate remedial action and would be likely to affect train operations.

BNSF's position appears to be that AEP Texas should either have included zero outage events in the Rebuttal simulation, which was the approach used for the Opening simulation, or accepted all 137 events BNSF included in its simulation.[3] However, BNSF's inclusion of all but 13 of these outages was completely unjustified.

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[3] In fact, BNSF included 471 outages in its RTC simulation, of which 334 were due to the presence of UP trains at jointly-served mines. *See* BNSF's "Form B" file included in Rebuttal Workpapers Vol. 2, pp. 00337-347. Although the parties continue to differ on the propriety of including any of these 334 "outages," BNSF has removed them from the list of outages that supposedly should have been included for purposes of the Rebuttal simulation (*see* footnote 27 on page 14 of BNSF's Motion), which reduces the outages BNSF says AEP Texas should have accepted to 137.

As stated on pages III-C-46-51 of AEP Texas' Rebuttal Narrative, the listed cause of a large number of the 137 outages in 2002 that BNSF wants to include in the RTC simulation was simply "Track Maintenance." In other words, a particular track (or tracks) at a particular location was affected by maintenance activities for some period of time.[4] However, it is impossible to determine from the documentation provided by BNSF what specific maintenance activity was being conducted, or whether the activity was of a nature that it had to be undertaken immediately as opposed to being scheduled at the discretion of the dispatcher – *i.e.*, during a time window when the activity could be performed without interfering with train operations.

Most track maintenance activities that involve taking a stretch of track out of service for a few hours are discretionary in terms of timing. Examples include spot surfacing and lining of a rough area reported by a track inspector or train crew, replacement of a deteriorated insulated rail joint, repairing or replacing a frog, or grinding and adjusting switch points following twice-weekly FRA track inspections. The maintenance-of-way department normally requests track time for these kinds of activities from the dispatcher, and dispatchers do not allow track to be taken out of service for them during periods of heavy traffic volume. Rather, a dispatcher schedules the activity when he knows – based on conditions over the entire dispatching district and

[4] As indicated at page III-C-45 of AEP Texas' Rebuttal Narrative, the time during which the track was actually out of service due to track maintenance is not necessarily the same as the duration of the outage event as listed in BNSF's Form B reports.

communication with the dispatchers responsible for adjoining districts – that train movements at the particular location will be relatively infrequent and will not disrupted by a modest maintenance window. Thus track outages for these activities are not "random."

Neither BNSF's Reply filing nor the verified statements accompanying its Motion contain any details concerning the nature of any of the outage events listed in BNSF's Form B file as "Track Maintenance." Nor is there any evidence that the track had to be taken out of service at the time specified in the Form B file to correct the problem.[5] Given this fact, the fact that the TNR's operations will be conducted on a different track structure with different equipment and a different mix of trains than BNSF's operation, and the absence of any basis to assume that TNR operations in 2020 will mirror BNSF operations in 2002, it is completely unrealistic to assume that the "Track Maintenance" and related outages that BNSF incurred in 2002 should be imputed to the TNR. Only an outage that reasonably appears to have required immediate remedial action, such as a CTC failure or a derailment, could appropriately be included in the simulation.

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[5] In other instances where a form of maintenance outage was involved, the Form B file is somewhat more specific, *i.e.*, "Switch Points" or "Frog Issue." However, maintenance of switch points and frogs ordinarily can be performed at a time of the dispatcher's choosing. BNSF has provided no empirical evidence indicating whether, or why, the maintenance activity had to be performed at any particular time or whether the activity caused a track closure that affected train operations.

Several failures experienced by BNSF in 2002, and that BNSF included in its RTC simulation, involved specific signal-related problems such as "Short," "Red Signal," "Signal Bulb," and "Track Current." Because of the advanced age and deteriorated condition of the signal system and related wiring on the BNSF lines replicated by the TNR located south of Alliance, which I observed during my two field inspection trips in late 2003 and early 2004, it is unrealistic to attribute these kinds of failures to the TNR.

In contrast, BNSF's Orin Subdivision is relatively new, having been first constructed in the 1970's, and BNSF's realigned trackage in the area of Crawford Hill on the Butte Subdivision also is relatively new. The track and signals in these areas were built to modern standards. The BNSF line between Donkey Creek and Alliance has experienced substantial coal traffic increases over the past 25 years, and progressive track/signal upgrades have been made to this line as a result. As these lines more closely resemble those of the TNR, I concluded that, for example, an outage for a "signal bulb" failure that occurred on the Orin Subdivision in 2002 reasonably could be incurred by the TNR, and thus included it among the 13 random outages included in AEP Texas' Rebuttal simulation. (This outage is the first one listed in AEP Texas Rebuttal Exhibit III-C-4.)

BNSF's lines south of Alliance were not built to the same standards, and the replicated lines east and south of Pueblo, CO, in particular, are at the other end of the spectrum. Prior to September 2003, the Boise City Subdivision did not carry much if any

coal traffic, and this line has an older roadbed and signal system that experiences frequent outages and increased maintenance requirements. The variety of prior railroad ownerships and maintenance standards and practices, as well as the advanced age and deteriorated condition of the signal system south of Pueblo, was much in evidence during my recent field inspection trips.

Another large category of outages that BNSF experienced in 2002 and that its witnesses included in BNSF's simulation involved locomotive and train-handling failures, such as "Loco Failure," "Broken Knuckle" and "Train Stall." Again, it is unrealistic to include such failures in a simulation of the TNR's operations. As explained at pp. III-C-51 of AEP Texas' Rebuttal Narrative, BNSF still operates several different types and ages of locomotives on the lines replicated by the TNR, including the lines emanating out of the PRB. Based on my recent field inspections, many of these locomotives are older DC models quite obviously nearing the end of their useful lives. The TNR, on the other hand, commences operations with brand-new, high-horsepower, AC-traction SD70MAC road locomotives.

BNSF states on page 16 of its Motion that locomotive failures and train handling problems should not be "assumed away" as the result of old equipment because the RTC model simulates the TNR's peak traffic year, when the railroad will be 20 years old. However, that does not mean that the TNR locomotive fleet will be that old. The TNR starts out with all-new, state-of-the art AC locomotives, and under the Board's DCF model is assumed to regularly replace its assets. It is thus illogical to assume that the

TNR will incur the kind of locomotive failures in 2020 that occurred on the real-world BNSF in 2002.

On page 2 of his verified statement accompanying BNSF's Motion, BNSF Witness Wheeler states that in programming the 137 random outages into the RTC Model he "did not specify as part of this programming that particular trains be delayed. Rather, I programmed the location and duration of the event and let the RTC model determine whether any delays for trains would be caused." However, Mr. Wheeler also programmed in the reductions in train speeds specified by BNSF Witnesses Albin and Mueller for the duration of each event as shown in BNSF's Form B file. As noted in AEP Texas' Rebuttal Narrative, the duration of the event shown in the Form B file did not necessarily mean that even the real-world BNSF train operations actually were affected for that length of time. The supporting data for the underlying 2002 outages provided in BNSF's workpapers provides no indication that train speeds actually had to be reduced for a track or signal-related outage, much less what the speed restriction may have been.

Only two train speeds are shown in BNSF's Form B file for the various outages used in the Reply RTC simulation: 0 MPH and 10 MPH. A speed of zero is appropriate where trains have to be stopped completely, as for a red signal. However, for problems such as a dark signal bulb, in most instances the dispatcher will "talk" the train past the dark signal, and once past, normal speed resumes. It is completely arbitrary and unrealistic to assume that all other outages require a speed reduction to 10 MPH. Many outages warrant a speed reduction to 40 or 25 miles per hour, depending on the FRA track

classification involved, and some may not warrant a speed reduction at all – particularly on the adjacent track in double-track territory. *See* pp. III-C-52-54 of AEP Texas' Rebuttal Narrative.

In summary, there is no empirical evidence either in BNSF's Reply filing or in its Motion that supports its witnesses' assumption that all of the 137 random outages included in the BNSF Reply RTC simulation (1) reasonably could be expected to occur on the TNR in 2020, (2) required that the track be taken out of service or that train operations be interrupted at any particular time, or (3) required uniform reductions in train speed. Inclusion of all of these outages is unsupported. However, I did deem it proper to include 13 of the outages in AEP Texas' Rebuttal RTC simulation – with more realistic train speed reductions – because those 13 appeared to involve the kinds of outages that the TNR reasonably might experience.

B. Manual Adustments

In running the Rebuttal RTC simulation Mr. Schuchmann and I made a total of 19 manual adjustments to the model's handling of trains in order to avoid train conflicts. Mr. Wheeler states on pages 2-3 of his verified statement that these adjustments "were a new methodology that AEP Texas introduced on Rebuttal." This is incorrect. Mr. Schuchmann and I also made manual adjustments to some trains in AEP Texas' Opening RTC simulation. These adjustments are shown in AEP Texas' Opening electronic workpaper folder "RTC," file "Random Times w. Adjustments.xls" (instances where the start times in Columns B and G differ).

Mr. Wheeler implies that there is something improper about making manual adjustments to a computer simulation model by delaying some trains or altering the way the model handles them. However, as explained at pp. III-C-55-56 of AEP Texas' Rebuttal Narrative, manual adjustments to computerized train dispatching systems are a matter of routine on real-world railroads, and there is no reason why a hypothetical stand-alone railroad should be treated any differently.

All of the Class I railroads now have computerized central dispatching systems in place. However, no real-world railroad allows a computer to dispatch trains on heavy-density lines without manual intervention by human dispatchers for even a few hours, much less a 19-day period such as the RTC simulation period involved here. If they did, their operations would grind to a halt.

I am personally familiar with CSXT's computerized dispatching system, located at CSXT's dispatch center in Jacksonville, FL, and I have observed it in operation on numerous occasions. BNSF and UP have similar systems, as does Amtrak (another system with which I am personally familiar). These systems can be programmed with an "auto-route" function, with priority dispatch inputs (*i.e.*, type of train) that are similar to those used in the RTC Model. The computer then proceeds to dispatch trains, allowing the human dispatcher (who constantly monitors the computer's decisions) to plan and exercise oversight rather than aligning switches and clearing signals.

None of the real-world computerized dispatching systems can dispatch trains effectively without real-time human intervention. Computers do not have the same

picture of the railroad's facilities that experienced human dispatchers have and they are not able to see congestion developing far enough in advance to determine, for example, whether to delay the departure of a train from a yard (and delay ordering a crew) before it gets to the congested area.

As indicated explained in AEP Texas' Rebuttal Narrative, the 19 manual interventions that were performed at my direction equated to an average of about one per day during the simulation period. Mr. Wheeler notes on page 3 of his verified statement that as many as four or five adjustments were made on certain individual days of the peak week. While this is true, five manual interventions in a single day actually is a small number compared to what occurs on real-world railroads. For example, CSXT's human dispatchers intervene and override the computer's dispatching decisions at least once *per hour* on the busy but relatively short line from Washington, DC to Rocky Mount, NC.

BNSF's Witness Wheeler says that the manual adjustments Mr. Schuchmann and I made to the Rebuttal RTC simulation are dissimilar to what a real-world dispatcher does because we held trains at their origination point on the TNR network (*i.e.*, an interchange point), whereas a real-world dispatcher "cannot travel backward in time and hold a train at a convenient point because a model has foretold that the train will encounter congestion due to meets, passes or unexpected outages if he does not." (Wheeler V.S. at 4). Our approach does not imply that a dispatcher can travel backward in time. Human dispatchers – unlike computers – have the ability to see potential congestion problems developing in advance. A dispatcher can and frequently

does hold a train at a yard or other point a considerable distance from the location where the congestion is likely to occur. Our decision to hold a few TNR trains on available TNR tracks at the point where they enter the system to avoid congestion at a point further up the line is fully consistent with what real-world dispatchers do.

While it should be too obvious to require explanation, computerized rail capacity models such as the RTC Model are simply tools for testing infrastructure options and establishing priorities for investment. They are not set up for human intervention in real time, and they cannot be used to actually "run the railroad," because once the model is programmed, it has to run to completion. In a hypothetical modeling exercise, no human dispatchers monitor train operations as they occur, as is the case with real-world computerized dispatching systems. Intervention in the RTC Model's dispatching decisions thus can only be done retrospectively, after the results of the simulation are observed. Functionally, however, the kinds of manual adjustments Mr. Schuchmann and I made to the RTC simulation are the same as the real-time interventions that occur with much greater frequency on real-world railroads. And there is nothing unusual about holding trains many miles from "pinch" points that can become "choke" points.[6]

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[6] For example, I had experience working with a senior operating officer at a large Class I railroad who ordered *all* trains to depart yards on schedule. The dispatching system was programmed accordingly, trains departed yards on schedule, and the main lines across an entire division became hopelessly plugged. Needless to say, the order was rescinded. Holding one train for a better operating window can make the entire division become much more fluid.

C. Missing Trains

On Opening, AEP Texas simulated the operation of 716 loaded coal trains (and their corresponding empties to the extent they moved during the simulation period) and 138 merchandise trains, representing the portion of the TNR's peak-year traffic that moved during the corresponding peak seven days in 2020 plus a four-day warmup and a four-day warmdown period. Most of the coal trains originated at TNR-served mines and moved either to local (TNR-served) destinations or to interchange points with other railroads (primarily BNSF). The merchandise trains operated in overhead service on the TNR between Amarillo and Oklaunion, TX. Both parties included the 138 merchandise trains in their RTC simulations, so they are not in dispute.

As I indicated earlier, BNSF disagreed with AEP Texas' Opening coal traffic group and reduced it by over 63 million tons (at the 2020 level), or about 27 percent, with most of the reductions representing traffic that AEP Texas rerouted over the TNR's northern route from the PRB mines to and beyond Alliance, NE. Accordingly, in performing its own Reply RTC simulation of the TNR's peak-period operations, BNSF eliminated from the simulation what its electronic workpapers stated were 183 loaded coal trains that AEP Texas had simulated on Opening.[7]

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[7] *See* BNSF Reply Electronic Workpapers, Folder "RTC Affirmative," file "copkstat BNSF Affirmative, Worksheet "Removed." According to the train symbols used in this file 151 loaded coal trains were removed, but more than one train is covered by some ID symbols and the total number of trains removed according to the "2020 Train Count" column equals 183 trains. However, after manually matching BNSF's and AEP Texas' trains coal trains moving between the same O/D pairs, Mr. Schuchmann and I

Mr. Schuchmann and I decided to use BNSF's Reply RTC train file as the starting point for our Rebuttal RTC simulation in order to minimize differences between the operating inputs the parties used in their simulations. However, because AEP Texas restored almost all of the BNSF-removed coal traffic to its Rebuttal traffic group, it was necessary to add a number of coal trains to BNSF's Reply RTC train file, with the objective of simulating a total of 710 loaded coal trains, or a net reduction of six trains from the 716 loaded coal trains that AEP Texas had modeled on Opening. These trains are shown in AEP Texas Rebuttal Exhibit III-B-5.

BNSF's Reply RTC train file included 500 loaded coal trains, which is about 29% less than the 710 loaded coal trains that represented the portion of the TNR's Rebuttal peak-year coal traffic group that moved during the simulation period.[8] Because the percentage reductions in BNSF's peak-year coal traffic group and in the number of coal trains included in BNSF's RTC simulation were nearly the same, we had no reason at the time to question the completeness of BNSF's RTC train file.

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determined that the total number of removed trains according to BNSF's workpaper was reduced by two, to 181 trains. The removed trains included nine "Coleto Creek" trains, that is, loaded coal trains that the Union Pacific Railroad operates over the portion of the TNR between Pueblo, CO and Oklaunion, TX in the simulation period using its existing trackage rights over the corresponding BNSF lines.

[8] BNSF's RTC train file is included in its Reply electronic workpapers as "BNSF Reply Final-AEP2.TRAIN." The file includes 138 merchandise trains, which are not in issue here as both parties modeled the same number of merchandise trains.

After reviewing BNSF's Motion, Mr. Schuchmann and I conducted a thorough review of BNSF's Reply RTC train file and related electronic workpapers to determine whether and why any coal trains could have been inadvertently excluded from AEP Texas' Rebuttal RTC simulation. As described below, our review revealed that BNSF's Reply RTC train file was defective, and that as a result there had been a considerable number of exclusions.

1. BNSF simulated fewer than 500 coal trains. BNSF's Reply RTC train file lists a total of 500 loaded coal trains. However, the Reply RTC route file ("BNSF Reply Final-AEP2.ROUTE"), which contains the trains actually simulated, shows that only 481 loaded coal trains actually ran through the model. In addition, BNSF's Reply RTC train file includes some trains that were not included in AEP Texas' Opening RTC simulation. The Reply RTC train file contains 25 loaded coal trains that either operated between O/D pairs that are different from those reflected in AEP Texas' Opening simulation, or did not appear in the Opening simulation at all.[9] BNSF provided no explanation for why these 25 trains appeared in its simulation, and they never should have been there because they are not part of AEP Texas' coal traffic group. Removing them reduces the total number of loaded coal trains that *should* be in BNSF's Reply RTC train file to 475.

[9] The 25 trains are identified in my accompanying electronic workpaper file "BNSF Trains from Reply Test TRAIN Revised.xls," Tab "Trains Inc. by BNSF Unexplained."

2. BNSF removed too many trains from AEP Texas' Opening simulation. As I have noted, the electronic workpapers accompanying BNSF's Reply RTC simulation contain a list of 183 loaded coal trains that BNSF ostensibly removed from the peak-period train count used in AEP Texas' Opening RTC simulation. Mr. Schuchmann and I compared the parties' train files, and made a manual match of the trains in those files. We determined that BNSF actually removed a net of 181 trains, or a reduction of two.[10] If 181 trains are added to the 475 trains that should have been in BNSF's Reply RTC train file, the total number of loaded coal trains that should be simulated to cover AEP Texas' Opening traffic group is 656. This is 60 trains short of the 716 loaded coal trains actually included in AEP Texas' Opening simulation. In other words, BNSF failed to account for 60 loaded coal trains that it neither removed from AEP Texas' Opening simulation nor modeled in its own Reply simulation.[11] BNSF provided no explanation why 60 loaded coal trains (plus their corresponding empty trains) are missing from its Reply simulation.

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[10] BNSF removed all coal trains moving under the symbol "CNAMAGCX" from AEP Texas' Opening RTC train list, but in developing the list of trains that it used in its affirmative RTC presentation BNSF added two trains with this symbol but with different train numbers than those used by AEP Texas. By manually matching the O/D train symbols and train numbers, we determined that BNSF had effectively removed two fewer trains from the simulation than its workpapers showed, thus reducing the total number of trains removed from 183 to 181. These manually-matched trains are shown in electronic workpaper file "BNSF Trains from Reply Test TRAIN Revised.xls," Tab "Comparison Sheet," p. 10 of 12.

[11] These 60 trains are identified in "BNSF Trains from Reply Test TRAIN Revised.xls," Tab "Trains Unaccounted for by BNSF."

3. Double-counts and other discrepancies. After an exhaustive manual matching of train symbols and O/D pairs, Mr. Schuchmann and I determined that AEP Texas's Rebuttal RTC train file included 24 loaded coal trains that were already listed in BNSF's Reply RTC train file.[12] These trains were primarily "growth" trains that did not operate in 2002 but that do operate in 2020. They should have been removed from the Rebuttal train file to avoid a double-count. However, due to the discrepancies between BNSF's Reply RTC train file and what BNSF claimed to have removed from AEP Texas' Opening simulation, AEP Texas' Rebuttal train file was understated in other respects, and the understatements substantially outnumbered any double counts.

4. Disappearing Trains. In its Reply RTC simulation, BNSF did not cycle the local TNR coal trains reflected in its Reply RTC train file. Instead, after one or two cycles (depending on the specific destination involved), BNSF simply removed the train from the simulation after its arrival at the power plant, and put it back in the simulation at a later time. BNSF does not explain why it did this. Since AEP Texas used the same train file as the starting point for its Rebuttal simulation, AEP Texas inadvertently passed along this error.

In prior coal rate cases the Board has rejected computer simulations of stand-alone railroad operations because of a so-called "disappearing train" problem, in which trains are not cycled continuously but are removed from the model for some period

[12] *See* "BNSF Trains from Reply Test TRAIN Revised.xls," Tab "Duplicates."

of time with no facilities provided to accommodate the trains while they are idle. In its Opening RTC simulation, AEP Texas avoided this problem by starting the cycle for each local coal train with the loaded train's mine release time, and then cycling the train continuously throughout the modeling period. BNSF, however, did not follow the same approach in its Reply simulation, which started the cycle with the release of the empty train at destination. Thus, unlike AEP Texas' Opening RTC simulation, BNSF's Reply simulation suffers from this "disappearing train" problem.

At my request and under my direction, Mr. Schuchmann conducted a detailed, side-by-side comparison of the parties' RTC train files to determine exactly how many trains should be added to BNSF's Reply RTC train file to match BNSF's Reply coal traffic group and AEP Texas' Rebuttal traffic group for the peak year. This was first done electronically, and then double-checked by means of a manual count. The results are as follows:

- 235 loaded coal trains (including the nine Coleto Creek trackage rights trains) should be added to BNSF's corrected RTC train count of 475 coal trains to reflect AEP Texas' Rebuttal peak-period count of 710 coal trains.
- 60 loaded coal trains should be added to BNSF's corrected RTC train file count of 475 trains to reflect BNSF's Reply peak-period traffic group, which excludes the rerouted coal traffic described earlier, certain other "growth" coal traffic, and the nine Coleto Creek trackage rights trains.[13]

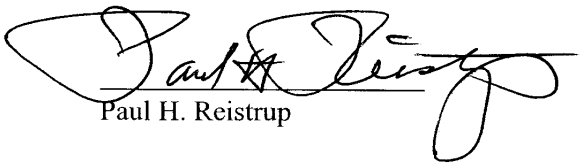
[13] For the reasons explained at pp. III-A-17-55 of AEP Texas' Rebuttal Narrative, these exclusions are unsupported by the evidence and improper.

Because both the BNSF Reply and AEP Texas Rebuttal RTC simulations fail to model the actual number of peak-period coal trains based on the parties' respective peak-year traffic groups, Mr. Schuchmann and I are in the process of conducting a revised RTC simulation using the corrected train counts for AEP Texas' peak-year traffic group. A considerable amount of time has been required to parse through the BNSF RTC train file and identify and correct the problems described above, and we have not been able to complete the revised simulation in time to include the results with this Verified Statement. I understand that AEP Texas intends to submit the revised simulation to the Board in a supplemental filing, after it has been completed and documented.

I would point out that the problems described above with respect to the RTC modeling do not affect most of the TNR's Rebuttal peak-period operating statistics on which the TNR's annual operating expenses are based, such as locomotive miles, car-miles, train crew starts, etc. I developed these statistics using the full peak-period train counts shown in AEP Texas Reb. Exhibit III-B-5, not the Rebuttal RTC train file. Thus all trains are accounted for in the development of all TNR operating statistics other than those based on locomotive and car hours, which only would be affected if average transit times change materially as a result of a corrected simulation.

VERIFICATION

I, Paul H. Reistrup, verify under penalty of perjury that I have read the foregoing Verified Statement, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this Verified Statement.



Paul H. Reistrup

Executed on: October 19, 2004

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BEFORE THE
SURFACE TRANSPORTATION BOARD

AEP TEXAS NORTH COMPANY,	)	
Complainant,	)	
v.	)	Docket No. 41191 (Sub-No. 1)
THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY,	)	
Defendant.	)	

VERIFIED STATEMENT OF
THOMAS D. CROWLEY

My name is Thomas D. Crowley. My business address is 1501 Duke Street, Alexandria, Virginia 22314. I am the same Thomas D. Crowley who has previously sponsored Opening and Rebuttal evidence in this proceeding on behalf of AEP Texas North Company ("AEP Texas") related to the 20-year DCF analysis for the Texas & Northern Railroad ("TNR"), which is AEP Texas' stand-alone railroad. My Statement of Qualifications appears at pp. IV-19 to 21 of AEP Texas' Opening Narrative filed in this proceeding on March 1, 2004.

I. Purpose and Scope

BNSF has filed a Motion to Strike certain portions of the DCF analysis that AEP Texas included in its Rebuttal, arguing that the operating expense portion of the

DCF reflected improper indexing of the Rail Cost Adjustment Factor ("RCAF"). Motion at 20-24. Specifically, BNSF called into question the change in RCAF value from the third quarter of 2004 to the fourth quarter, as shown in AEP Texas Rebuttal DCF calculations. In its electronic workpapers accompanying the Motion, BNSF included an update of the DCF calculations that purported to make the necessary adjustments to the operating costs over the DCF period.

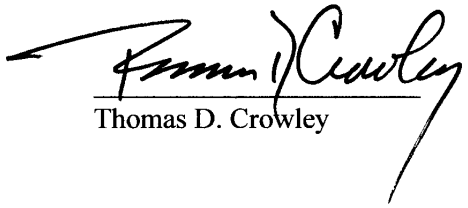
The merits of BNSF's position are discussed in AEP Texas' Reply to the Motion to Strike at pages 29-34. My statement concerns only the application of any such adjustments to the RCAF and its impact on the DCF calculations.

II. DCF Model Runs

AEP Texas updated its Rebuttal DCF to show a transition from 3Q04 to 4Q04 that is consistent with the calculations BNSF performed and with AEP Texas treatment of this component on the revenue side of the DCF. *See* Attachment 1, Columns (8) and (9) and electronic workpaper file "Exhibit III-H-3FPRev.XLS." However, BNSF did not perform a similar update for AEP Texas' DCF calculation that reflects the capital refinancing strategy described by AEP Texas on Opening and Rebuttal. Consequently, I have updated that spreadsheet as well for the Board's use. *See* Attachment 2, Column (11) and electronic workpaper file "Exhibit III-H-3SPRev.XLS."

VERIFICATION

I, Thomas D. Crowley, verify under penalty of perjury that I have read the foregoing Verified Statement, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this Verified Statement.



Thomas D. Crowley

Executed on: October 19, 2004

TABLE L: TNRR CALCULATED CASH FLOW

Quarterly Revenue Requirements to Cover Total Stand-Alone

Period	Quarter	Quarterly Capital Requirement Road Property	Quarterly Operating Expense	Annual Stand-Alone Requirement	Quarterly Stand-Alone Revenues	Annual Stand-Alone Revenues	Overpayments Or Shortfalls In Revenues	Reduction In Rates	Rate Charged	SAC Rate Based on Equalized % Reduction
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	June 16-30, 2000	$10,934,458	$11,101,545	$22,036,003	$30,699,733		$8,663,730	28.22%	$15.33	$11.00
2	2000 3 Qtr	67,100,010	67,097,130	134,197,140	188,291,697		54,094,557	28.73%	15.33	10.93
3	2000 4 Qtr	67,180,311	67,475,497	134,655,808	188,291,697	$407,283,127	53,635,889	28.49%	15.33	10.96
4	2001 1 Qtr	68,302,583	71,603,112	139,905,696	190,815,351		50,909,656	26.68%	15.59	11.43
5	2001 2 Qtr	68,956,503	70,681,749	139,638,251	190,815,351		51,177,100	26.82%	15.59	11.41
6	2001 3 Qtr	69,376,530	70,550,125	139,926,655	190,815,351		50,888,696	26.67%	15.59	11.43
7	2001 4 Qtr	69,402,249	70,418,502	139,820,751	190,815,351	763,261,404	50,994,600	26.72%	15.59	11.42
8	2002 1 Qtr	70,731,058	68,895,514	139,626,572	191,205,542		51,578,971	26.98%	15.36	
9	2002 2 Qtr	70,634,332	67,725,590	138,359,922	191,205,542		52,845,620	27.64%	15.36	
10	2002 3 Qtr	70,370,265	67,335,615	137,705,880	191,205,542		53,499,662	27.98%	15.36	
11	2002 4 Qtr	69,536,927	67,465,607	137,002,533	191,205,542	764,822,170	54,203,009	28.35%	15.36	
12	2003 1 Qtr	69,771,455	65,562,907	135,334,362	187,455,387		52,121,025	27.80%	16.49	
13	2003 2 Qtr	72,242,460	66,966,004	139,208,464	187,455,387		48,246,923	25.74%	16.49	
14	2003 3 Qtr	72,586,284	66,710,895	139,297,179	187,455,387		48,158,208	25.69%	16.49	
15	2003 4 Qtr	72,946,421	66,328,232	139,274,653	187,455,387	749,821,547	48,180,734	25.70%	16.49	
16	2004 1 Qtr	74,177,984	70,169,091	144,347,075	197,603,626		53,256,552	26.95%	18.83	
17	2004 2 Qtr	74,413,041	70,571,590	144,984,631	197,603,626		52,618,996	26.63%	18.83	
18	2004 3 Qtr	75,267,702	72,852,421	148,120,123	197,603,626		49,483,503	25.04%	18.83	
19	2004 4 Qtr	75,982,017	73,487,907	149,469,924	197,603,626	790,414,506	48,133,702	24.36%	18.83	
20	2005 1 Qtr	76,273,845	71,874,544		196,195,838					
21	2005 2 Qtr	76,338,056	71,690,703		196,195,838					
22	2005 3 Qtr	76,733,348	71,914,305		196,195,838					
23	2005 4 Qtr	76,886,436	72,271,754	593,982,992	196,195,838	784,783,352	190,800,360	24.31%		
24	2006 1 Qtr	77,365,548	72,830,313		201,567,086					
25	2006 2 Qtr	77,847,978	72,964,442		201,567,086					
26	2006 3 Qtr	78,333,752	73,098,461		201,567,086					
27	2006 4 Qtr	78,822,893	73,228,794	604,492,181	201,567,086	806,268,344	201,776,164	25.03%		
28	2007 1 Qtr	79,301,591	74,326,263		209,147,713					
29	2007 2 Qtr	79,783,372	74,582,639		209,147,713					
30	2007 3 Qtr	80,268,255	74,820,853		209,147,713					
31	2007 4 Qtr	80,756,261	75,037,411	618,876,644	209,147,713	836,590,850	217,714,206	26.02%		
32	2008 1 Qtr	81,228,274	76,027,583		218,886,641					
33	2008 2 Qtr	81,703,225	76,229,529		218,886,641					
34	2008 3 Qtr	82,181,134	76,447,286		218,886,641					
35	2008 4 Qtr	82,662,020	76,680,726	633,159,777	218,886,641	875,546,563	242,386,786	27.68%		
36	2009 1 Qtr	83,163,253	78,456,606		227,966,562					
37	2009 2 Qtr	83,667,787	78,666,017		227,966,562					
38	2009 3 Qtr	84,175,642	78,882,697		227,966,562					
39	2009 4 Qtr	84,686,843	79,106,581	650,805,426	227,966,562	911,866,250	261,060,824	28.63%		
40	2010 1 Qtr	85,188,747	79,852,055		235,796,627					

TABLE L: TNRR CALCULATED CASH FLOW
(Continued)

Period	Quarter	Quarterly Capital Requirement Road Property	Quarterly Operating Expense	Annual Stand-Alone Requirement	Quarterly Stand-Alone Revenues	Annual Stand-Alone Revenues	Overpayments Or Shortfalls In Revenues	Reduction In Rates	Rate Charged	SAC Rate Based on Equalized % Reduction
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
41	2010 2 Qtr	$85,693,862	$80,097,323		235,796,627					
42	2010 3 Qtr	86,202,212	80,358,241		235,796,627					
43	2010 4 Qtr	86,713,817	80,630,913	664,737,170	235,796,627	943,186,507	278,449,337	29.52%		
44	2011 1 Qtr	87,260,557	81,548,181		242,857,587					
45	2011 2 Qtr	87,810,967	81,820,071		242,857,587					
46	2011 3 Qtr	88,365,073	82,082,045		242,857,587					
47	2011 4 Qtr	88,922,899	82,334,181	680,143,974	242,857,587	971,430,349	291,286,376	29.99%		
48	2012 1 Qtr	89,463,428	84,086,240		250,556,954					
49	2012 2 Qtr	90,007,473	84,354,288		250,556,954					
50	2012 3 Qtr	90,555,057	84,623,946		250,556,954					
51	2012 4 Qtr	91,106,205	84,895,220	699,091,856	250,556,954	1,002,227,818	303,135,961	30.25%		
52	2013 1 Qtr	91,690,262	86,223,072		259,793,277					
53	2013 2 Qtr	92,278,266	86,524,586		259,793,277					
54	2013 3 Qtr	92,870,245	86,827,778		259,793,277					
55	2013 4 Qtr	93,466,228	87,128,717	717,009,153	259,793,277	1,039,173,106	322,163,953	31.00%		
56	2014 1 Qtr	94,066,241	87,994,342		267,328,209					
57	2014 2 Qtr	94,670,314	88,300,620		267,328,209					
58	2014 3 Qtr	95,278,474	88,608,608		267,328,209					
59	2014 4 Qtr	95,890,751	88,918,313	733,727,663	267,328,209	1,069,312,838	335,585,175	31.38%		
60	2015 1 Qtr	96,507,174	90,055,782		276,095,793					
61	2015 2 Qtr	97,127,770	90,367,824		276,095,793					
62	2015 3 Qtr	97,752,570	90,681,615		276,095,793					
63	2015 4 Qtr	98,381,603	90,997,161	751,871,500	276,095,793	1,104,383,170	352,511,671	31.92%		
64	2016 1 Qtr	99,014,899	91,556,987		283,406,396					
65	2016 2 Qtr	99,652,487	91,876,913		283,406,396					
66	2016 3 Qtr	100,294,399	92,198,620		283,406,396					
67	2016 4 Qtr	100,940,663	92,518,068	768,053,036	283,406,396	1,133,625,585	365,572,549	32.25%		
68	2017 1 Qtr	101,591,310	93,111,039		290,332,193					
69	2017 2 Qtr	102,246,372	93,435,020		290,332,193					
70	2017 3 Qtr	102,905,880	93,760,811		290,332,193					
71	2017 4 Qtr	103,569,864	94,088,418	784,708,714	290,332,193	1,161,328,770	376,620,057	32.43%		
72	2018 1 Qtr	104,238,356	94,399,589		299,393,488					
73	2018 2 Qtr	104,911,387	94,726,711		299,393,488					
74	2018 3 Qtr	105,588,990	95,055,666		299,393,488					
75	2018 4 Qtr	106,271,196	95,386,462	800,578,357	299,393,488	1,197,573,951	396,995,594	33.15%		
76	2019 1 Qtr	106,958,039	96,052,351		305,755,646					
77	2019 2 Qtr	107,649,549	96,388,014		305,755,646					
78	2019 3 Qtr	108,345,762	96,725,546		305,755,646					
79	2019 4 Qtr	109,046,708	97,060,843	818,226,812	305,755,646	1,223,022,586	404,795,774	33.10%		
80	2020 1 Qtr	109,752,422	97,727,276		305,755,646					
81	2020 2 Qtr	110,462,937	98,067,484		305,755,646					
82	2020 3 Qtr	111,178,287	98,409,591		305,755,646					
83	2020 4 Qtr	111,898,506	98,753,605	836,250,109	305,755,646	1,251,340,745	415,090,636	33.17%		

Rebuttal With Revised RCAF-U Index

TABLE L: TNRR CALCULATED CASH FLOW

Quarterly Revenue Requirements to Cover Total Stand-Alone

Period	Quarter	Quarterly Capital Requirement Road Property	Quarterly Operating Expense	Annual Stand-Alone Requirement	Quarterly Stand-Alone Revenues	Annual Stand-Alone Revenues	Overpayments Or Shortfalls In Revenues	Reduction In Rates	Rate Charged	SAC Rate Based on Equalized % Reduction
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	June 16-30, 2000	$10,934,458	$11,101,545	$22,036,003	$30,699,733		$8,663,730	28.22%	$15.33	$11.00
2	2000 3 Qtr	67,100,010	67,097,130	134,197,140	188,291,697		54,094,557	28.73%	15.33	10.93
3	2000 4 Qtr	67,180,311	67,475,497	134,655,808	188,291,697	$407,283,127	53,635,889	28.49%	15.33	10.96
4	2001 1 Qtr	68,302,583	71,603,112	139,905,696	190,815,351		50,909,656	26.68%	15.59	11.43
5	2001 2 Qtr	68,956,503	70,681,749	139,638,251	190,815,351		51,177,100	26.82%	15.59	11.41
6	2001 3 Qtr	69,376,530	70,550,125	139,926,655	190,815,351		50,888,696	26.67%	15.59	11.43
7	2001 4 Qtr	69,402,249	70,418,502	139,820,751	190,815,351	763,261,404	50,994,600	26.72%	15.59	11.42
8	2002 1 Qtr	64,417,260	68,895,514	133,312,773	191,205,542		57,892,769	30.28%	15.36	10.71
9	2002 2 Qtr	64,329,168	67,725,590	132,054,758	191,205,542		59,150,784	30.94%	15.36	10.61
10	2002 3 Qtr	64,088,673	67,335,615	131,424,288	191,205,542		59,781,254	31.27%	15.36	10.56
11	2002 4 Qtr	63,329,722	67,465,607	130,795,329	191,205,542	764,822,170	60,410,213	31.59%	15.36	10.51
12	2003 1 Qtr	63,543,316	65,562,907	129,106,222	187,455,387		58,349,165	31.13%	16.49	11.36
13	2003 2 Qtr	65,793,747	66,966,004	132,759,751	187,455,387		54,695,636	29.18%	16.49	11.68
14	2003 3 Qtr	66,106,879	66,710,895	132,817,774	187,455,387		54,637,613	29.15%	16.49	11.68
15	2003 4 Qtr	66,434,869	66,328,232	132,763,101	187,455,387	749,821,547	54,692,286	29.18%	16.49	11.68
16	2004 1 Qtr	67,556,497	70,169,091	137,725,587	197,603,626		59,878,039	30.30%	18.83	13.12
17	2004 2 Qtr	67,770,571	70,571,590	138,342,161	197,603,626		59,261,465	29.99%	18.83	13.18
18	2004 3 Qtr	68,548,941	72,852,421	141,401,362	197,603,626		56,202,264	28.44%	18.83	13.47
19	2004 4 Qtr	69,199,492	73,487,907	142,687,400	197,603,626	790,414,506	54,916,226	27.79%	18.83	13.60
20	2005 1 Qtr	69,465,271	71,874,544		196,195,838					
21	2005 2 Qtr	69,523,750	71,690,703		196,195,838					
22	2005 3 Qtr	69,883,756	71,914,305		196,195,838					
23	2005 4 Qtr	70,023,179	72,271,754	566,647,263	196,195,838	784,783,352	218,136,089	27.80%	$19.23	$13.89
24	2006 1 Qtr	70,459,523	72,830,313		201,567,086					
25	2006 2 Qtr	70,898,889	72,964,442		201,567,086					
26	2006 3 Qtr	71,341,300	73,098,461		201,567,086					
27	2006 4 Qtr	71,786,778	73,228,794	576,608,500	201,567,086	806,268,344	229,659,844	28.48%	$19.49	$13.94
28	2007 1 Qtr	72,222,746	74,326,263		209,147,713					
29	2007 2 Qtr	72,661,520	74,582,639		209,147,713					
30	2007 3 Qtr	73,103,120	74,820,853		209,147,713					
31	2007 4 Qtr	73,547,564	75,037,411	590,302,116	209,147,713	836,590,850	246,288,735	29.44%	$19.75	$13.94
32	2008 1 Qtr	73,977,443	76,027,583		218,886,641					
33	2008 2 Qtr	74,409,998	76,229,529		218,886,641					
34	2008 3 Qtr	74,845,246	76,447,286		218,886,641					
35	2008 4 Qtr	75,283,206	76,680,726	603,901,017	218,886,641	875,546,563	271,645,545	31.03%	$19.99	$13.79
36	2009 1 Qtr	75,739,697	78,456,606		227,966,562					
37	2009 2 Qtr	76,199,193	78,666,017		227,966,562					
38	2009 3 Qtr	76,661,715	78,882,697		227,966,562					
39	2009 4 Qtr	77,127,284	79,106,581	620,839,790	227,966,562	911,866,250	291,026,460	31.92%	$20.25	$13.79
40	2010 1 Qtr	77,584,385	79,852,055		235,796,627					

Rebuttal With Revised RCAF-U Index

TABLE L: TNRR CALCULATED CASH FLOW

(Continued)

Period	Quarter	Quarterly Capital Requirement Road Property	Quarterly Operating Expense	Annual Stand-Alone Requirement	Quarterly Stand-Alone Revenues	Annual Stand-Alone Revenues	Overpayments Or Shortfalls In Revenues	Reduction In Rates	Rate Charged	SAC Rate Based on Equalized % Reduction
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
41	2010 2 Qtr	$78,044,412	$80,097,323		235,796,627					
42	2010 3 Qtr	78,507,384	80,358,241		235,796,627					
43	2010 4 Qtr	78,973,320	80,630,913	634,048,032	235,796,627	943,186,507	309,138,475	32.78%	$20.83	$14.00
44	2011 1 Qtr	79,471,256	81,548,181		242,857,587					
45	2011 2 Qtr	79,972,533	81,820,071		242,857,587					
46	2011 3 Qtr	80,477,177	82,082,045		242,857,587					
47	2011 4 Qtr	80,985,209	82,334,181	648,690,652	242,857,587	971,430,349	322,739,697	33.22%	$21.27	$14.21
48	2012 1 Qtr	81,477,487	84,086,240		250,556,954					
49	2012 2 Qtr	81,972,968	84,354,288		250,556,954					
50	2012 3 Qtr	82,471,672	84,623,946		250,556,954					
51	2012 4 Qtr	82,973,623	84,895,220	666,855,444	250,556,954	1,002,227,818	335,372,374	33.46%	$21.42	$14.25
52	2013 1 Qtr	83,505,543	86,223,072		259,793,277					
53	2013 2 Qtr	84,041,059	86,524,586		259,793,277					
54	2013 3 Qtr	84,580,196	86,827,778		259,793,277					
55	2013 4 Qtr	85,122,978	87,128,717	683,953,928	259,793,277	1,039,173,106	355,219,178	34.18%	$21.90	$14.42
56	2014 1 Qtr	85,669,431	87,994,342		267,328,209					
57	2014 2 Qtr	86,219,581	88,300,620		267,328,209					
58	2014 3 Qtr	86,773,455	88,608,608		267,328,209					
59	2014 4 Qtr	87,331,077	88,918,313	699,815,426	267,328,209	1,069,312,838	369,497,412	34.55%	$22.36	$14.64
60	2015 1 Qtr	87,892,474	90,055,782		276,095,793					
61	2015 2 Qtr	88,457,673	90,367,824		276,095,793					
62	2015 3 Qtr	89,026,700	90,681,615		276,095,793					
63	2015 4 Qtr	89,599,583	90,997,161	717,078,813	276,095,793	1,104,383,170	387,304,357	35.07%	$22.81	$14.81
64	2016 1 Qtr	90,176,348	91,556,987		283,406,396					
65	2016 2 Qtr	90,757,022	91,876,913		283,406,396					
66	2016 3 Qtr	91,341,633	92,198,620		283,406,396					
67	2016 4 Qtr	91,930,208	92,518,068	732,355,799	283,406,396	1,133,625,585	401,269,786	35.40%	$23.28	$15.04
68	2017 1 Qtr	92,522,776	93,111,039		290,332,193					
69	2017 2 Qtr	93,119,364	93,435,020		290,332,193					
70	2017 3 Qtr	93,720,001	93,760,811		290,332,193					
71	2017 4 Qtr	94,324,714	94,088,418	748,082,142	290,332,193	1,161,328,770	413,246,628	35.58%	$23.68	$15.26
72	2018 1 Qtr	94,933,533	94,399,589		299,393,488					
73	2018 2 Qtr	95,546,486	94,726,711		299,393,488					
74	2018 3 Qtr	96,163,603	95,055,666		299,393,488					
75	2018 4 Qtr	96,784,913	95,386,462	762,996,964	299,393,488	1,197,573,951	434,576,987	36.29%	$24.43	$15.57
76	2019 1 Qtr	97,410,444	96,052,351		305,755,646					
77	2019 2 Qtr	98,040,227	96,388,014		305,755,646					
78	2019 3 Qtr	98,674,292	96,725,546		305,755,646					
79	2019 4 Qtr	99,312,669	97,060,843	779,664,386	305,755,646	1,223,022,586	443,358,199	36.25%	$24.83	$15.83
80	2020 1 Qtr	99,955,387	97,727,276		305,755,646					
81	2020 2 Qtr	100,602,478	98,067,484		305,755,646					
82	2020 3 Qtr	101,253,973	98,409,591		305,755,646					
83	2020 4 Qtr	101,909,901	98,753,605	796,679,696	305,755,646	1,251,340,745	454,661,049	36.33%	$25.26	$16.08