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May 31, 2006

Hon. Vernon A. Williams
Secretary
Surface Transportation Board
1925 K Street, N.W.
Suite 700
Washington, DC 20423

Re: Major Issues in Rail Rate Cases, Ex Parte No. 657 (Sub-No. 1); Reply Comments
of Arkansas Electric Cooperative Corporation

Dear Secretary Williams:

Submitted herewith, on behalf of the Arkansas Electric Cooperative Corporation
("AECC"), please find the Reply Testimony of Michael A. Nelson which constitutes AECC's
Reply Comments in this proceeding.

Your attention to the foregoing is appreciated.

Sincerely,

A handwritten signature in black ink, appearing to read "Martin W. Bercovici". The signature is fluid and cursive, with a long, sweeping underline that extends below the printed name.

Martin W. Bercovici

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

STB EX PARTE NO. 657 (Sub-No. 1)

MAJOR ISSUES IN RAIL RATE CASES

**REPLY TESTIMONY OF
MICHAEL A. NELSON**

**ON BEHALF OF
ARKANSAS ELECTRIC COOPERATIVE CORPORATION**

**131 North Street
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May 31, 2006

REPLY TESTIMONY OF MICHAEL A. NELSON

1. Qualifications

My name is Michael A. Nelson. I am an independent transportation systems analyst with over 25 years of experience advising clients on rail transportation issues. My office is in Dalton, Massachusetts. My qualifications were described in detail in the written testimony I submitted on behalf of Arkansas Electric Cooperative Corporation (AECC) in the initial phase of this proceeding.

2. Scope of Testimony

I have been asked by AECC to address three types of issues raised in the initial comments submitted by other parties in this proceeding. These three issue areas include:

- the relationship between the stand-alone cost (SAC) test and railroad revenue adequacy/capacity expansion concerns, including consideration of the unique circumstances of PRB coal movements;
- the ability of a SARR to achieve productivity improvements in future years; and,
- economic and theoretical considerations associated with the allocation of revenues on cross-over traffic.

Issues in these areas are addressed below.

3. SAC Test and Rail Revenues

The initial comments submitted by several parties, including Union Pacific (UP), the Association of American Railroads (AAR) and the U.S. Department of Transportation, attempt to link potential SAC reforms to railroad capacity expansion and revenue adequacy needs. The comments essentially argue that the Board should not change the SAC test in a way that constrains rail revenues to any significant degree,

because the railroads are not yet revenue adequate and face substantial capacity investment requirements.

While superficially appealing, this line of reasoning promotes a cross-subsidy that is contrary to the entire purpose of the SAC test, as well as to the public interest. The SAC test basically determines the revenue from a given subset of a railroad's traffic that is needed to cover the costs of efficient operations and provide a market return on the capital assets required to serve that traffic. Holding aside specific methodological issues,¹ a SAC test that constrains market-based rates simultaneously ensures that the selected traffic group pays for the capacity it needs and is not the source of any overall revenue inadequacy on the part of the defendant carrier.

There are many circumstances that could cause a defendant carrier to be revenue-inadequate even if a SAC test constrains that carrier's market-based rates for one or more specific movements. For example, the carrier may maintain a residual network that is not appropriate for the carrier's off-SARR traffic. Also, the carrier may not have aggressively pursued available productivity-enhancement measures.

Likewise, if a SAC test constrains a carrier's market-based rates, the carrier's other capacity needs are not a relevant consideration because the prescribed rate already covers the costs of supplying the capacity used by the selected traffic group. If the defendant carrier foresees incremental capacity requirements associated with traffic outside the selected traffic group, it should ensure that such traffic is fully paying its own way (as the SAC test ensures for the issue traffic).

¹ Related to the SAC test and/or revenue adequacy criteria.

From a public interest perspective, it would not be appropriate for the Board to permit a defendant carrier to engage in "excessive" differential pricing to counteract the financial impacts of such off-SARR issues. To do so would undermine the market forces that otherwise would motivate remedial management action.² If a carrier maintains an excessive residual network, or fails to keep pace with productivity improvements, or solicits new traffic at rates that don't cover the costs of needed capacity, the financial markets will only react to the extent that the consequences of such decisions impact that carrier's financial results.

As long as the SAC test properly ensures the adequacy of the SARR's capacity and revenues, the Board should not permit carriers to cross-subsidize off-SARR inefficiencies or capacity needs through excessive differential pricing on issue traffic. Off-SARR revenue and capacity needs are legitimate concerns of railroad management, but should not prevent the Board from implementing meaningful SAC reforms.

Note Regarding Unique Circumstances of PRB Movements. UP's opening comments discuss at some length the Edgewater rate case and its aftermath. One of the unique features of that case was the Board's finding that the SARR would fully cover its costs at a rate for issue traffic below the 180 percent R/VC jurisdictional threshold. While UP attempts to portray this result as being indicative of defects in SARR analysis procedures, the Board should not be distracted from the unique circumstances of PRB coal movements that may frequently cause this type of result.

UP's own filing indicates that the PRB Joint Line is the heaviest tonnage rail segment in the world, and that it's only going to get busier with robust projected volume

² Allowing excessive returns on issue traffic would also violate the contestability theory upon which the entire methodology is premised.

growth.³ Indeed, the PRB can reasonably be viewed as a leading example of economies of density in railroading. If ever it would be possible for rail traffic to move at comparatively low rates and still pay all of its costs (including a market return on required capital), that would occur on the PRB Joint Line and the high-density connecting outlet lines of UP and BNSF.

For such movements, the Board should not be troubled by a finding that the jurisdictional threshold, and not the SARR, provides the operative constraint on issue traffic rates. Such a finding likely reflects the economic merits of the situation, and not any defects in the analysis procedure.⁴ While the railroads may portray this as incongruous, it is fully consistent with the SAC test for traffic in high-density corridors to move at comparatively lower rates. However, even if the rates paid by the SARR traffic group are substantially lower than the rates paid by other traffic of the defendant carrier, it cannot reliably be concluded that the SAC test is overly restrictive. Rather, if a proper SAC test produces a tight cap for PRB moves in high density corridors, UP and BNSF should be looking at the lower-density portions of their network and the traffic outside the traffic group to address revenue adequacy and capacity concerns.⁵

³ STB Ex Parte No. 657 (Sub-No. 1), Opening Submission of Union Pacific Railroad Company, Exhibit 3, "Summary – Preliminary Findings".

⁴ Indeed, UP has already indicated how acknowledgment of this situation can simplify rate reasonableness challenges (i.e., by taking the SARR out of the picture and allowing the inquiry to focus on the jurisdictional threshold).

⁵ For example, UP foresees substantial capacity investment needs in its Sunset Corridor, but this route carries little if any coal traffic. Compare UP Exhibits TCH-4 and TCH-5. The need for such investment does not provide a valid rationale for raising rates on captive coal traffic, which pays for the capacity it needs through the SAC test.

4. SARR Productivity Improvements

The opening comments of the railroad parties disparage the potential ability of a SARR to achieve future productivity improvements. Those parties generally promote the establishment of an initial fixed period (of 5 to 10 years) during which the SARR would be assumed to have no opportunity to improve productivity.⁶ However, the arguments advanced by the railroads do not support this proposition.

For example, UP witness Haley observes that unit trains are the most efficient form of operation, and that a SARR will generally have no opportunities to achieve efficiency improvements in terminal operations that are available to other types of traffic.⁷ While both of these observations are reasonable and accurate, they are not determinative of the appropriate treatment of SARR productivity. Even though unit trains are already highly efficient compared to other types of traffic, the volumes and costs they represent make it rational for railroads to seek further efficiency improvements. Likewise, the fact that a SARR will not benefit from improved terminal operations does not restrict a SARR's opportunities for productivity improvement, since a SARR does not incur such costs in the first place.

Resolution of the productivity issue ultimately revolves around the concept of "demonstrability". The railroads assert that a SARR can incorporate demonstrated productivity enhancements in its initial design. UP leaves open the further possibility that productivity enhancements could be demonstrated in the future, potentially allowing the shipper to reopen the case to address such situations.

⁶ This would be reflected through the use of RCAF-U to index SARR costs.

⁷ Verified Statement of Thomas C. Haley at 14-17.

There are at least three problems with the railroads' view of "demonstrability" in the context of productivity improvements:

- a. For the initial design of the SARR, the railroads do not explain why the incumbent carrier would not have already incorporated demonstrated productivity enhancements in its current operations. If a method has been proven, it is most reasonable to expect that it would have been adopted by the incumbent (which otherwise would have to explain its laxity in implementing proven cost reductions to its shareholders). Put another way, if a SARR is implementing a demonstrated productivity enhancement, it is likely to be duplicating the practices of the incumbent rather than inhibiting its own ability to match future productivity improvements by the incumbent.
- b. For productivity enhancements that have not yet been demonstrated or adopted by the incumbents, the railroad proposals to rely on RCAF-U yield results that are statistically biased. The railroads have a lengthy track record of success in identifying, developing and implementing productivity improvements that reduce the costs of unit train operations. Many more such initiatives are available and understood to be under development for future implementation. For example, recent press reports have described railroad efforts related to introduction of one-person crews and electronically-controlled pneumatic (ECP) brakes. While it may be premature to set a "demonstrated" value for either of these initiatives, both are in the queue to prospectively join the numerous other specific actions that form the lengthy historical track record of unit train productivity improvements. For any SARR

that resembles current operations, the expected value of future productivity improvements is clearly greater than the 0 implied by use of RCAF-U, regardless of the degree to which specific impacts can be demonstrated for specific actions. The railroad proposals to use a value of zero are therefore biased in a statistical sense, and inappropriate for use in SAC procedures.⁸

- c. Any methodology that links the tightness of the SAC constraint in one or more rate cases to the demonstration of specific productivity enhancements could potentially create an economic incentive for railroads to retard development and introduction of productivity-enhancement measures. Use of an index that reflects a reasonably attainable rate of productivity improvement is therefore preferable to any methodology that requires specific railroads to implement specific measures on specific movements before productivity adjustments are incorporated in rate cases.

5. Cross-Over Traffic

UP and BNSF offer testimony by economic experts in support of alternative proposals for the treatment of revenue from cross-over traffic. UP offers testimony by Dr. Kevin Neels, while BNSF offers testimony by Professors Joseph Kalt and Robert Willig. Each of these submissions is discussed below.

a. UP/Neels

UP witness Neels presents considerable discussion regarding the inconsistency of the proposed ATC method with relevant aspects of economic theory. While this

⁸ While the UP proposal appears to be more enlightened than those of the other railroad parties in the way it acknowledges the possibility of future SARR productivity improvements, it still contemplates use of RCAF-U for an indefinite initial period. It also would entail the prospect of extensive future litigation,

theoretical discussion generally appears to be reasonable, the application proposed by Dr. Neels of the "Efficient Component Pricing Rule" (ECPR) lacks validity and usefulness in the context of the SAC test.

Dr. Neels' basic proposal would allocate to the SARR only the variable cost associated with the portions of cross-over movements it serves. Under this proposal, all of the contribution from the original movement would accrue to the residual incumbent. The SARR would only be able to earn a contribution from this traffic to the extent that it is able to operate more efficiently (i.e., at lower variable cost) than the incumbent.

This proposal has several critical infirmities, including the following:

- the ECPR was formulated to address the pricing of access to a monopolist's facilities by an actual new competitor, and has no direct connection to the hypothetical construct (SARR) used to assess the sufficiency of the revenues derived by the monopolist from its own facilities, as in the SAC test;
- if it were applicable, the ECPR would nullify the need for the SAC test – or any Board involvement in maximum rail rate reasonableness, for that matter – since it essentially would forbid the imposition of any constraint on the profit resulting from the monopoly pricing conducted by the incumbent carrier;
- ECPR ostensibly promotes economic efficiency by ensuring that new entry cannot be made by providers whose costs are higher than those of the incumbent. This is irrelevant in a SAC test, where the SARR can be presumed (and, in the case of potential internal reroutes, required) to be at least as efficient as the incumbent carrier;

depending upon the number of productivity improvements affecting unit train operations that eventually achieve implementation.

- application of ECPR in the rail context could well decrease economic efficiency by increasing the incentive for a shipper to construct a duplicative parallel facility (buildout);
- there is no safeguard to ensure that the contribution retained by the residual incumbent does not exceed the amount needed to ensure adequate revenue on the segments used by the cross-over traffic. Indeed, in cases where a "full SARR" would earn more than adequate revenues, Dr. Neels' proposal would reduce or eliminate the constraint on issue traffic pricing that would be provided by a "truncated SARR";
- the fact that Dr. Neels' proposal yields different results depending upon the inclusion of exclusion of specific segments is inconsistent with Board's stated expectation that the SAC test with cross-over traffic should approximate the results of a "full SAC" test;
- under Dr. Neels' proposal, the benefit received by the SARR from cross-over traffic is inconsistent with and systematically lower than the benefit received by the incumbent from the same traffic as a result of its investment in the facilities used by the SARR;
- the "buildouts" hypothesized by Dr. Neels to capture contribution on specific segments would be nullified by the types of segment analyses applied by the Board in recent cases; and,
- the claims advanced by Dr. Neels to the effect that ECPR is the "only" cross-over traffic revenue allocation procedure that is (a) consistent with contestable market principles and (b) able to assure the viability of off-SARR segments, are simply incorrect. The proposed methodology described in my written testimony in this

proceeding (submitted May 1, 2006) also has these desirable properties, without the shortcomings of Dr. Neels' proposal itemized above.

In short, Dr. Neels' attempt to inject ECPR into the SAC test is unsubstantiated and unpersuasive. The railroads may like the sound of any theory that assumes they should always be able to keep all of their monopoly profits, but the Board should give no weight to this in the context of SAC procedures.

b. BNSF/Kalt

Professor Kalt postulates an environment in which a SARR will compete vigorously with the residual incumbent for cross-over traffic. This leads to his conclusion that SARR should receive no more than the avoidable cost of the incumbent for the "contested" portion of cross-over movements.

If the incumbent retains an ability to serve the entire cross-over movement, as Professor Kalt postulates, there is no need to allocate cross-over revenue, since it can safely be presumed that the SARR won't handle any cross-over traffic at all. Only if the SARR stands in place of a portion of the incumbent's network can its investment in that portion of the network be evaluated on a basis consistent with the incumbent's investment. Professor Kalt's methodology ignores the way contestability would permit a rational SARR to provide the facilities used by the issue traffic at rates lower than those commanded by the market-dominant incumbent. Instead, it introduces head-to-head competition not faced by the incumbent that artificially deflates the value of cross-over traffic for the SARR relative to the incumbent.

In this light, it is ironic for Professor Kalt to invoke the forces of competition to keep the SARR from being able to effectively constrain the rates charged by the market-

dominant carrier that the shipper faces in the real world. The numbers that come out of his proposed exercise may show that the issue traffic would need to pay high rates to justify investment in the facilities it uses if all cross-over traffic were to face vigorous competition. They do not establish the traffic group rates needed to ensure that the defendant carrier's investment in the facilities used by the issue traffic is economically rational but not excessively profitable.

Like Dr. Neels, Professor Kalt proposes that a shipper should have to build a more extensive SARR to capture the benefits of cross-over traffic, and would obtain different results by doing so. As was the case for Dr. Neels' proposal, this is inconsistent with the Board's expectation that the methodology for a limited SARR should approximate the result that would be obtained from a full SARR. Likewise, Professor Kalt's proposal provides no safeguard to ensure that the contribution retained by the residual incumbent does not exceed the amount needed to ensure adequate revenue on the segments used by the cross-over traffic.

c. BNSF/Willig

Professor Willig discusses some of the possible benefits of Professor Kalt's approach, but focuses primarily on – and embraces – the Board's view that the cross-over revenue allocation methodology should approximate the results of a full SAC analysis. In doing so, he implicitly rebuts Dr. Neels and Professor Kalt, whose proposed methods do not possess this property.

It should also be noted that Professor Willig is cited by Dr. Neels as an authoritative source regarding use of the ECPR.⁹ Professor Willig does not discuss ECPR

⁹ Verified Statement of Kevin Neels (V.S. Neels) at 14, n.14.

in his testimony, and certainly does not promote its use in the SAC test. This would appear to undermine Dr. Neels' proposed reliance on ECPR in this context.