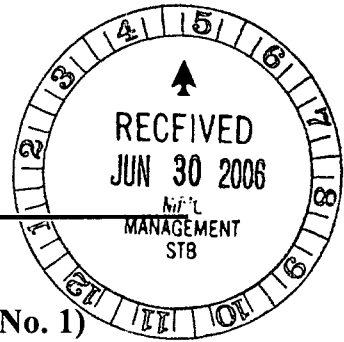


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BEFORE THE
SURFACE TRANSPORTATION BOARD



MAJOR ISSUES IN RAIL RATE CASES) Ex Parte No. 657 (Sub-No. 1)

JOINT REBUTTAL COMMENTS
OF
WESTERN COAL TRAFFIC LEAGUE
CONCERNED CAPTIVE COAL SHIPPERS
WESTERN FUELS ASSOCIATION, INC.
EDISON ELECTRIC INSTITUTE
NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION
AND
AMERICAN PUBLIC POWER ASSOCIATION

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Now come the Western Coal Traffic League, the Concerned Captive Coal Shippers, Western Fuels Association, Inc., the Edison Electric Institute, the National Rural Electric Cooperative Association and the American Public Power Association (collectively, “Coal Shippers”), and submit these Joint Rebuttal Comments in response to the Decision served on February 27, 2006 in this docket (“*Decision*”), and the reply comments filed by various parties on May 31, 2006.

PRELIMINARY STATEMENT

As the Coal Shippers predicted at the outset, the major railroads have sought to exploit the opportunity offered by the Board through the initiation of this proceeding to push for the effective removal of any remaining, meaningful regulatory restraints on their coal pricing practices and future ambitions.

Awash in revenues from coal rate increases of a magnitude not seen since the days of the 1970s Oil Embargo, the four major Class I carriers in particular now claim a right to engage in what amounts to unrestrained monopoly pricing, dictating the terms on which they will make their services available to the end consumers of electricity, and essentially auctioning off their available capacity to the highest bidder. And to the agency charged with regulating their rates and practices where effective competition is not available to offer protection to the public interest, the railroads' preferred message is a sharp "hands off."

The major carriers' positions in response to the issues raised by the Board in its *Decision* have as their common thread a bias of all key determinations under the *Coal Rate Guidelines*¹ away from reasonable regulation, and toward complete deference to the railroads' pricing decisions. In their opening and reply comments, BNSF, UP, CSXT and NS essentially speak with one voice:

- They support the continued use of a rate reduction methodology that lets the defendant's opening price dictate the outcome of the case, and oppose any alternative that would dilute that control.
- They propose methodologies for determining the division of revenues on cross-over traffic that all but ensure that any SARR which includes cross-over traffic will not earn revenues on that traffic in excess of its "attributable" costs.

¹ *Coal Rate Guidelines, Nationwide*, 1 I.C.C. 2d 520, 536 (1985), *aff'd sub nom.*, *Consolidated Rail Corp. v. United States*, 812 F.2d 1444 (3rd Cir. 1987) ("*Coal Rate Guidelines*" or "*Guidelines*").

- They propose perpetuation of a system for indexing SARR operating expenses that guarantees that SARR operating expenses will increase faster than SARR revenues throughout the DCF period.
- They propose to prohibit shippers from presenting evidence of variable service costs on more efficient unit train service that are below system average expenses, while reserving to themselves the right to present evidence of variable costs that are *higher* than system average.
- They support truncation of the DCF period as a mechanism to increase SARR capital costs and limit the duration of any remedial rate prescription.
- They endorse rules for evaluating requests to reopen or vacate rate prescriptions which would unduly limit the scope of evidence that prescription defenders can present, and improperly permit retroactive increases in prescribed rates.
- They oppose any reconsideration of the Board's controversial and flawed "cross-subsidy" test, and advocate application of the test in a manner that would reduce the measure of rate relief in every case and threaten the availability of any relief at all for coal shippers located on light density branch lines.

As the Coal Shippers further demonstrate in these Rebuttal Comments, the railroads' proposals reflect unsound regulatory policy and an indifference to the public interest, and in many cases are contrary to settled law. Their adoption would threaten the *de facto* elimination of any reasonable limits on rates for market dominant coal traffic. In contrast, the reforms advocated by the Coal Shippers would restore some much-needed equity to the regulatory regime, and give real effect to Congress' mandate that the Board genuinely balance the interests of the railroads and their most dependent customers.

REBUTTAL COMMENTS

I. MAXIMUM RATE DETERMINATIONS

In their reply comments, the railroads: (1) attempt to explain away the obvious fact that the percent reduction methodology for allocating rate relief impermissibly allows the defendant railroad to control the SAC outcome; (2) continue to oppose the Board's proposed MCM and MMM approaches to setting maximum reasonable rates; and (3) attack the alternative proposals for allocating SAC rate relief proposed by Western Fuels Association, Inc./Basin Electric Power Cooperative, Inc. ("WFA/Basin") and AEP Texas North Company ("AEP Texas") in their pending, individual rate cases.² The Coal Shippers address each of these positions below.

A. The Railroads' Defense of Percent Reduction Is Unavailing

Under the apparent theory that the best defense is a good offense, the railroads promote the percent reduction method with a claim that the complainants in recent rate cases have attempted to "game" the SAC outcome by including cross-over traffic in their SARR traffic groups, some of which has a short haul compared with the issue traffic. The unstated message seems to be that if shippers can be said to be trying to "game" the SAC outcome, there is nothing wrong with allowing the railroads to "game" the SAC outcome in response.

² Docket No. 42088, *Western Fuels Ass'n, Inc. and Basin Elec. Power Coop., Inc. v. BNSF Ry. Co.* ("Western Fuels"), and Docket No. 41191 (Sub-No. 1), *AEP Texas N. Co. v. BNSF Ry. Co.* ("AEP Texas").

BNSF's Reply Comments are particularly aggressive in this regard:

The Board's proposed changes to the percent reduction methodology purport to stem from a concern over the possibility of railroad manipulation of the SAC process. But the history of recent cases demonstrates that the real manipulation problem has been created by shippers who construct grotesquely distorted SARRs with huge volumes of cross-over traffic that make nominal use of the SARR but nevertheless generate vast revenue windfalls.

Id. at 9. BNSF's strident rhetoric is belied by the facts. As the Coal Shippers demonstrated in their Joint Reply Comments ("*Joint Reply Comments*"), the inclusion of significant volumes of cross-over traffic, including some relatively short-haul traffic, is consistent with every Board decision in SAC cases since *Nevada Power II*³ in 1994. See Coal Shippers' *Joint Opening Comments* ("*Joint Comments*") at 30-33. The decision as to what cross-over traffic to include is dictated largely by geography; *i.e.*, the route used by the issue traffic. For example, as WFA/Basin demonstrate in their Additional Rebuttal Comments in this proceeding, the traffic at issue in the *Western Fuels* case moves less than 200 miles, and there are no other coal destinations along the BNSF route used to transport that traffic. To denigrate WFA/Basin for attempting to build economies of scope and density given the factual circumstances of its case (*see BNSF Reply Comments* at 18, 31-32) is both wrong and inconsistent with the directives of the *Coal Rate Guidelines*.

³ *Bituminous Coal – Hiawatha, Utah to Moapa, Nevada*, 10 I.C.C. 2d 259 (1994).

As the Coal Shippers previously have explained, the problem with the percent reduction method is not the defendant railroad's subjective intent in setting the rates in issue, but the plain fact – which the Board acknowledged at page 8 of the *Decision* – that the method allows the level of the railroad's challenged rate to dictate the SAC outcome. *See Joint Comments* at 15-17 and *Joint Reply Comments* at 8-13. It is irrelevant whether the defendant railroad can be shown to have attempted to purposely manipulate the SAC result, as the railroads suggest⁴ – and requiring such a showing would impose a burden of proof that is impossible to meet.

BNSF alleges that the Coal Shippers' "real purpose in seeking to eliminate the percent reduction methodology is to eliminate a railroad's ability to engage in differential pricing." *BNSF Reply Comments* at 7; *see also UP Reply Submission* at 5 ("none [of these other methodologies] would be as effective as the current percentage reduction method in ensuring that maximum rates are established 'on the basis of Ramsey principles,' as required by the *Guidelines*"). However, as the Coal Shippers' witness Dr. George Borts explains in his Rebuttal Verified Statement, the percent reduction method itself is inconsistent with Ramsey pricing principles because it fails to take into account the necessary relationship between demand elasticity and profit margins. On the other hand, the alternative methodologies proposed by the Board (and by WFA/Basin and AEP Texas) clearly take the relationship between elasticity and profit into account. *See Reb.*

⁴ *See, e.g., NS/CSXT Reply Comments* at 4-5.

V.S. Borts at 1-6. The percent reduction methodology also encourages a defendant railroad to skew existing price relationships (assumed to have been established in accordance with Ramsey principles) by increasing its rate on the issue traffic to a greater degree than it would in the absence of potential rate litigation. While the rates on other traffic likely to be included in a SARR traffic group also may be increased when current contracts expire,⁵ the magnitude of the increases is likely to be much less for the other traffic, given the low probability that any of it will be the subject of a SAC case. Thus, it is ludicrous for UP and BNSF to assert that the percent reduction methodology is more consistent with Ramsey pricing principles than other methods for allocating SAC rate relief, where the initial tariff rate set by the defendant does not play a large role in determining the SAC outcome.

Any SAC decision that results in a rate reduction by definition changes existing rate relationships and affects differential pricing results. Yet the *Coal Rate Guidelines* (and the governing statute, 49 U.S.C. §10701(d), which requires market dominant railroads to establish “reasonable” rates) obviously contemplate that there will

⁵ The railroads are turning away from transportation contracts (which have governed most coal movements since the Staggers Act was enacted) in favor of “public” pricing, characterized by unilaterally dictated service terms and substantial rate increases even for coal traffic previously thought to be competitive.

be Board-ordered rate reductions. Taken to its logical conclusion, the railroads' argument dictates that no rate ever should be held unreasonable.⁶

B. MCM and MMM Should be Adopted, Subject to a Party's Right to Propose an Alternative Methodology

The Coal Shippers have demonstrated that while the Board's proposed MCM and MMM methods for allocating SAC rate relief are not perfect, they are superior to the percent reduction method. Accordingly, the Coal Shippers do not object to the Board's adoption of either methodology, subject to the right of a party to propose (and defend) an alternative methodology, such as the Reasonable Allocation Methodology ("RAM") proposed by WFA/Basin in *Western Fuels*, or the Generalized Percentage Reduction Methodology ("GPRM") proposed in *AEP Texas*. See *Joint Comments* at 17-22 and *Joint Reply Comments* at 13-18.

In their reply comments, the railroads continue their attack on MCM and MMM as being less consistent with Ramsey pricing principles than the percent reduction method, and challenge the Coal Shippers' proposal to allow parties to individual rate cases to propose alternative methodologies if the circumstances so warrant. Neither attack has merit.

⁶ UP's Reply Submission also refers approvingly to BNSF's proposal in its Opening Comments that percent reduction should continue to apply unless it is shown that the challenged rate is not a commercially-sustainable, profit-maximizing rate. *Id.* at 6. In their *Joint Reply Comments*, the Coal Shippers demonstrated that such a standard has no place in maximum-rate regulation, and has been rejected by the courts. *Id.* at 9-13.

With respect to MCM and MMM, NS and CSXT argue that these approaches “would flout differential pricing principles by imposing uniform average rates (measured by ton-mile or revenue-to-variable cost ratio) on all higher rated traffic,” and that as a result these approaches “would effectively assume that all such traffic has the *same* elasticity of demand, thereby abandoning demand-based differential pricing for all such traffic” (*NS/CSXT Reply Comments* at 5-6 (emphasis in original)); *see also UP Reply Submission* at 9-11.

These knee-jerk attacks on MCM and MMM should be rejected. Both methods are consistent with the differential pricing principles that underlie the *Coal Rate Guidelines*, because they allocate SAC among the shippers in a SARR traffic group in a manner that respects their relative elasticities of demand (as measured by the underlying

rate structure).⁷ In addition, both methods allocate SAC revenue reductions to the most demand-inelastic SARR customers. *See* Reply V.S. Borts at 1-2.

In his Rebuttal Verified Statement, Professor Borts notes that under Ramsey pricing principles, rates should be set such that the markup over marginal costs is inversely related to elasticity of demand. The Board's MCM and MMM proposals (as well as the alternative proposals by WFA/Basin and AEP Texas) adhere more closely to

⁷ The railroads' *mantra* that demand elasticities are measured by the railroads' current rate structures is open to question given their current practice of raising all coal rates, across the board, whenever the opportunity arises. *See, e.g., Railroad Earnings to Rise on Strong Demand*, Argus Coal Transportation, Jan. 19, 2006, at 3 ("BNSF, CSX, Norfolk Southern and UP are expected to post double-digit growth in full-year earnings per share, compared with 2004 results, driven in part by increased coal volume and even bigger increases in coal revenues."); *CSX's Coal Revenues, Profits Grow*, Argus Coal Transportation, April 20, 2006, at 3 ("CSX's coal revenues grew by 14 pct in the first quarter, as the Class I carrier benefitted from a 10 pct yield growth and a 4 pct increase in coal volumes compared with the same period last year."); *id.* ("The carrier pointed out it has additional room for price increases, as nearly 20 pct of its coal contracts . . . [are] up for re-pricing this year."); *Demand Fuels Coal Rates*, Traffic World, Feb. 20, 2006, at 30 ("Utilities see prices double . . ."); *Coal Growth Leads Norfolk Southern to First-Quarter Revenue Record*, Coal Outlook, May 1, 2006, at 13 ("Led by a 19.7% growth in coal revenue, Norfolk Southern reported first quarter net income of \$305 million . . . on revenue of an all-time record \$2.3 billion . . ."); *US Rails Reaped Record Revenues in Fourth Quarter*, Argus Coal Transportation, Feb. 9, 2006, at 5-6 ("BNSF coal revenues increased 7.5 pct in 2005 to \$2.45 billion on 1 pct volume and 6.5 pct yield growth, its volumes held back by weather and maintenance The railroads are also becoming pickier about what business they accept. Many have started de-marketing less profitable shippers by offering much higher rates. BNSF Chief Executive Matt Rose said even if shippers pay more that does not guarantee the railroad will want their business. 'We have a focus within the businesses, we call it the 'earn the right to grow,' which means that the businesses have to have returns that exceed their cost of capital, and even when you get to that point, it is not automatic that we will be reinvesting,' Rose said. 'We will look at the strategic nature of each of these businesses and then, quite frankly, the businesses will have to compete amongst themselves for that capital and that line capacity.'").

this principle than the percent reduction methodology, because they take profit margins into account in setting maximum reasonable rates. In particular, these methodologies respect the ordering of rate levels among the members of the SARR traffic group; shippers that pay the lowest mark-ups over marginal cost would continue to do so; and no shipper would pay a higher markup than it experiences under the present rate structure. *See* Reb. V.S. Borts at 2-4. Professor Borts also notes that using URCS variable costs as a surrogate for marginal costs is reasonable and consistent with Board precedent. *See* Reb. V.S. Borts at 3-5; *see also* Reb. V.S. Crowley at 29-42.

UP asserts that no party has embraced the Board's MCM and MMM proposals, and that the Coal Shippers have expressed reservations about them. *UP Reply Submission* at 5. However, as the Coal Shippers explained in their *Joint Reply Comments*, while these approaches are not optimal, they are clearly superior to percent reduction. *Id.* at 14-15. The Coal Shippers do not object to the Board's adoption of either MCM or MMM as the "standard" methodology for allocating SAC rate relief.

The railroads criticize the Coal Shippers for asking the Board also to permit parties to propose other methodologies (such as RAM or GPRM) in individual rate cases. They argue that this is inconsistent with the goals of making SAC cases less complex and expensive. *See UP Reply Submission* at 4; *BNSF Reply Comments* at 8-9; *NS/CSXT Reply Comments* at 10. There is no such inconsistency. Alternative methodologies such as RAM or GPM are no more complex to apply than MCM or MMM, and in any event, if a party is willing to expend the resources needed to advance and support a particular

approach, there is no defensible reason why the Board should not give it fair consideration.

C. The Alternative Methods Proposed by the Coal Shippers Should be Approved by the Board

Two members of the Coal Shippers, WFA/Basin and AEP Texas, have proposed alternative methods for allocating SAC rate relief in their pending rate cases. These proposals are RAM (proposed by WFA/Basin), GPRM (proposed by AEP Texas), and the Reduced Mark-up Method (a variant of GPRM also proposed by WFA/Basin as an alternative to RAM). In their reply comments, BNSF and UP claim that none of these proposals should be adopted by the Board, because allegedly they are inconsistent with differential pricing principles.

The two individual coal shippers whose proposals are involved address the railroads' arguments concerning their proposals in their separate rebuttal comments.' The Coal Shippers offer the following general response.

RAM. WFA/Basin's proposed RAM approach to maximum rate determinations divides the SARR's customers into two groups: competitive shippers and captive shippers. Under RAM, all shippers pay their variable costs, calculated using a SARR-specific URCS. The competitive shippers do not pay more and all unattributable SARR costs are allocated to the captive shippers on a pro-rata basis. RAM is superior to percent reduction because it does not use the defendant carrier's rate as the starting point for determining maximum rate relief, and it is consistent with Ramsey pricing principles

because captive shippers with similar demand elasticities are assigned a pro rata share of the SARR's unattributable costs.

The railroads' principal objection to RAM is that it assumes the "competitive" and "captive" PRB coal shippers in the SARR traffic group each have identical demand elasticities, whereas in fact demand "varies widely" even among captive shippers. *See BNSF Reply Comments* at 14. However, RAM does not assume that members of the two groups have identical demand elasticities; the only assumption is that their demand elasticities are similar. This is consistent with the way BNSF and UP are presently treating their PRB coal customers in the real world; rates are being raised across the board, with generally larger increases for captive shippers than for those with competitive alternatives.

BNSF also asserts that "[s]etting one group of rates (non-captive) equal to variable cost while forcing the other group of rates (captive) to an average rate per ton-mile is completely inconsistent with what would occur if Ramsey principles were applied to reduce rates" and that "differences in demand elasticity among sole-served shippers would produce different markups, in inverse proportion to demand elasticity . . . [a]ssuming that a railroads' existing price structure is based on perceived differences in demand elasticity among shippers." *Id.* at 14-15.

BNSF's argument is wrong. RAM is patterned after the revenue allocation procedures the ICC utilized in its first set of post-*Guidelines* decisions. The ICC – the agency that authored the *Guidelines* – held that it *was* consistent with the *Guidelines* to

create SARRs where captive PRB coal shippers shared the SARR's unattributable costs on a pro-rata basis and the remaining SARR shippers paid their variable service costs. *See Omaha Pub. Power Dist. v. Burlington N. R.R. Co.*, 3 I.C.C.2d 123, 139-40 (1986), *aff'd on appeal*, 3 I.C.C. 2d 853 (1987) ("OPPD"); *Arkansas Power & Light Co. v. Burlington N. R.R. Co.*, 3 I.C.C.2d 757, 774 (1987).

GPRM. AEP Texas' GPRM approach allocates rate relief by maintaining existing ratios of price markups over marginal cost. It is a variant of percent reduction, in that while the total rate reduction is approximately equal to the overall percentage by which SARR revenues equal SAC, individual reductions vary from shipper to shipper, such that the most price-inelastic shippers receive the greatest benefit, inverse to the presumption that these same shippers pay the highest premiums when the fixed cost burden was higher.

BNSF and UP criticize GPRM as being inconsistent with Ramsey pricing principles because GPRM "considers the supposed markup over marginal costs only for the cross-over portion of the movement, not the through movement [but] [t]here is no shipper demand for a portion of a through movement." *BNSF Reply Comments* at 10; *see also UP Reply Submission* at 10.

While it is true that GPRM focuses on the SARR's portion of a through movement for cross-over traffic, the approach nonetheless is more consistent with Ramsey principles than percent reduction, because it takes into account competition and demand elasticities and does not attempt to set rates based on uniform rate markups or

mark-downs. It also takes into account the presumed characteristics of the defendant's rate structure, because the shippers with demand elasticities that would subject them to the greatest price markups over variable costs when the carrier's overall rate structure likewise will experience greater price reductions when the SAC result requires a reduction in overall SARR revenues.

Moreover, as witness Crowley explains, there is no empirical support for the railroads' presumption that demand elasticities vary on individual segments of a thorough movement. *See* Reb. V.S. Crowley at 8-9, 26. Demand elasticity is movement-specific, not segment-specific, as the Board's own "one-lump" merger theory consistently has recognized. *See Burlington N., Inc. and Burlington N. R.R. Co. – Control and Merger – Santa Fe Pac. Corp. and the Atchison, Topeka and Santa Fe Ry. Co.*, 10 I.C.C. 2d 661, 747-48 (1995). Since the Board's preferred methodology for allocating revenue divisions on cross-over traffic likewise reflects a smooth pattern over the entire through movement, it is reasonable to assume a similarly accurate assessment of elasticity on a line segment basis.

Reduced Mark-up. WFA/Basin's alternative to RAM, the Reduced Mark-up method, is similar to GPRM except that rather than calculating marginal costs for each SARR movement, it calculates the profit contribution for each shipper by determining the difference between the SARR's revenues and its variable costs. In other words, it works in the same way as the percent reduction methodology, but it reduces the SARR shippers' profit margins by requiring each shipper to bear a different share of SAC costs based on

the profit contribution of its traffic as measured by the difference between revenue and variable cost.

II. REVENUE DIVISIONS ON CROSS-OVER TRAFFIC

The STB has used mileage pro-rate methods – MMP⁸ and MSP⁹ – to set SARR divisions in its last ten decisions involving cross-over traffic. *See Joint Comments* at 25-26. These mileage-based methods carry the “norm of regularity” and should be set aside only where “a convincing showing” is made in support of a “superior” alternative. Brief for Respondent STB at 52, *BNSF Ry. Co. v. STB*, No. 05-1030, (D.C. Cir. filed July 21, 2005).

As demonstrated in comments submitted by shippers and carriers, the Board’s proposed ATC divisions method fails this test; similarly, the avoidable cost divisions methodology proposed by BNSF and UP is fatally flawed and clearly *not* a demonstrably superior alternative to the Board’s longstanding mileage pro-rate methods.

The record compiled in this proceeding compels the Board to continue to use MMP/MSP to set SARR divisions on cross-over traffic. The Board’s adoption of ATC divisions, or avoidable cost divisions, would be an error of epic proportions that would render Lilliputian the class of captive coal shippers for whom any form of meaningful maximum rate regulation remains available.

⁸ Modified Straight Mileage Block Pro-rate (“MMP”).

⁹ Modified Straight Mileage Pro-rate (“MSP”).

A. The Board Should Not Adopt the ATC Divisions Method

The Board's proposed ATC method attempts to calculate SARR divisions using a "relative cost" approach. *Decision* at 19-20. The Board should reject ATC for at least four interrelated reasons.

First, the ATC method calls for the allocation of fixed costs to specific traffic movements using cost accounting devices. This exercise is, by definition, arbitrary. *See Rules to Govern the Assembling and Presenting of Cost Evidence*, 337 I.C.C. 298, 395 (1970) ("By definition constant or fixed costs are not allocable or assignable upon a cost of service basis."); *Coal Rate Guidelines* at 526 (fixed costs "cannot be assigned directly to specific movements by any conventional accounting methodology").

There is unusual unanimity among all parties to this proceeding that ATC is fundamentally flawed. As summarized by UP witness Neels:

There is remarkable agreement among railroads and shippers that the Board's proposed ATC method for allocating cross-over traffic revenues suffers from an incurable defect: the impossibility of allocating fixed costs to individual traffic movements or individual segments of any particular movement in anything but an arbitrary way.

* * *

That there is such widespread agreement on the impossibility of allocating fixed costs should come as no surprise. The impossibility of doing so is, as the Coal Shippers point out, a fundamental principal of railroad costing That the Board's ATC proposal violates such a

fundamental and widely-accepted principle is a clear sign that it is fatally flawed.

Reply V.S. Neels at 2-3.

The only carrier witness who attempts to offer any support for ATC is BNSF witness Klick. Mr. Klick agrees that any cost-based method used to allocate fixed costs is arbitrary. *See* Reply V.S. Klick at 21. However, Mr. Klick tries to distinguish the use of arbitrary cost-based allocations to fixed rates (which he admits is impermissible) from the use of arbitrary allocations of fixed costs to set SARR divisions (which he claims is permissible). *Id.* Mr. Klick's proposed distinction is meaningless. Use of accounting methods (like ATC) to allocate fixed costs to specific movements is arbitrary in all contexts. *See* Reb. V.S. Crowley at 72-73.

Second, in *Duke/NS*, the Board rejected the DARA method to set cross-over traffic decisions because it "contains the initial assumption that light density lines have the same fixed costs per mile as heavy density lines." Docket No. 42069, *Duke Energy Corp. v. Norfolk S. Ry. Co.*, Decision served Nov. 6, 2003, at 29. As the Coal Shippers demonstrated in their *Joint Comments*, ATC suffers from the very same defects. ATC assumes that each mile of rail line has the same fixed costs per mile – the carrier's URCS system-average fixed cost per route mile. *See Joint Comments* at 52.

Other commentators concede, as they must, that ATC does not calculate line-specific fixed costs. *See* Reply V.S. Klick at 21. However, they proceed to ignore what the Board held in *Duke/NS*, just as the Board does in its *Decision*. This is obviously

an arbitrary result. The Board is charged with adhering to its precedents – not ignoring them.¹⁰

Third, as the Coal Shippers emphasized in their *Joint Comments*, the fundamental purpose of the *Guidelines* was to develop maximum rate constraints that were not dependent on arbitrary cost-based allocations of carrier fixed costs. The ATC method – or any other strictly “cost-based” divisions methodology – reinserts into the SAC process the very problem the ICC was attempting to eliminate – the use of arbitrary cost formulas to allocate fixed costs. *See Joint Comments* at 52-53.

Significantly, the Coal Shippers and the western coal carriers *agree* that SARR divisions must include a market component in order to comply with the *Guidelines*. *See, e.g., UP Opening Submission* at 23 (the ATC “approach deviates fundamentally from the basic principles of CMP”); *UP Reply Submission* at 17 (“[a]ny means of allocating [fixed] costs among shippers other than actual demand is arbitrary”); *Op. V.S. Kalt* at 36 (criticizing attempts to set SARR divisions using “cost attribution” principles).¹¹

¹⁰ *See* cases cited in *Joint Comments* at 43 n.46.

¹¹ CSX and NS supported the use of market-based divisions standards in the last set of rate cases they participated in at the STB. *See Duke/NS* at 20; Docket No. 42070, *Duke Energy Corp. v. CSX Transp., Inc.*, Decision served Feb. 4, 2004, at 21; Docket No. 42072, *Carolina Power & Light Co. v. Norfolk Southern Ry.*, STB served Dec. 23, 2003 at 20. In these proceedings, CSX and NS offer tepid support for ATC. *See NS/CSXT Op. Comments* at 8 (ATC is “less than ideal”).

Fourth, the *Coal Rate Guidelines* call for shippers to design “least cost” SARR’s that “maximize” traffic densities. *See id.*, 1 I.C.C. 2d at 542-43. While the *Guidelines* call for shippers to “maximize” traffic densities, the Board’s proposed ATC divisions method will arbitrarily allocate disproportionate shares of SARR divisions to lower density off-SARR lines. *See* Reb. V. S. Borts at 6-7. This result flies in the face of the *Guidelines*. If ATC is adopted, complainant shippers will be forced to model SARR’s with less than optimal densities in order to address the revenue penalties inherent in the ATC’s arbitrary allocation of SARR revenues to lower density, off-SARR lines. *See* Op. V.S. Crowley at 8-10.

B. The Board Should Reject BNSF and UP’s Proposed Avoidable Cost Divisions Approach

BNSF and UP claim that SARR divisions on cross-over traffic should be set at the incumbent’s avoidable costs of replicating the SARR service. BNSF and UP theorize that in a “contestable market” the SARR and the incumbent would engage in a fierce price war for the SARR traffic. This war would end when the incumbent makes its last offer – charging rates for the SARR service at its avoidable costs.

As the Coal Shippers discussed in their *Joint Reply Comments*, the ICC properly rejected the avoided cost division approach in *Nevada Power II*, 10 I.C.C.2d at 266, as did the Board in *McCarty Farms*.¹² The Board reaffirmed these rulings in *Duke/NS*. *See id.* at 18. Use of avoidable cost divisions is prohibited because this

¹² *McCarty Farms, Inc. v. Burlington N., Inc.*, 2 S.T.B. 460, 472 (1997)

approach is “inconsistent with the nature and purpose of [the] SAC constraint.” *Nevada Power II*, 10 I.C.C. 2d at 266; *McCarty Farms*, 2 I.C.C. 2d at 472; *Duke/NS* at 18.

In their opening and reply comments, BNSF and UP present elaborate theories addressing why the Board should change course and embrace avoidable cost divisions. *See BNSF Opening Comments*, Op. V.S. Kalt at 40-48; Reply V.S. Kalt at 40-41; Op. V.S. Neels at 14-17; Reply V.S. Neels at 7-10. The Coal Shippers have presented substantial evidence confirming that the Board properly rejected avoidable cost divisions as “inconsistent with the nature and purpose of [the] SAC constraint.”¹³ *See Joint Reply Comments* at 24-31; Reply V.S. Borts at 6-10; Reb. V.S. Borts at 8-11; Reb. V.S. Grimm at 8-11; Reb. V.S. Crowley at 43-46.

As described in detail in the *Joint Comments* and *Joint Reply Comments*, the Board’s SAC procedures call for the separate calculation of SARR revenues and costs. If SARR revenues (*i.e.*, projected real-world market rates) exceed the SARR’s SAC (*i.e.*, the projected maximum SARR rates in a contestable market), a complainant shipper is entitled to rate relief. *See, e.g., Wisconsin Power & Light Co. v. Union Pac. R.R. Co.*, 5 S.T.B. 955, 966 (2001) (“*Wisconsin Power & Light*”) (if total SARR revenues exceed total SARR costs, “we conclude that the existing rate levels are too high”); Docket No. 42056, *Texas Municipal Power Agency v. Burlington N. & Santa Fe Ry. Co.*, 6 S.T.B. 573, 587 (“*TMPA*”).

¹³ *Nevada Power II*, 10 I.C.C. 2d at 266.

BNSF's and UP's proposed avoidable cost divisions approach is intended to deliberately skew the Board's SAC calculations by reducing SARR cross-over traffic revenues to equal the amount these carriers project the SARR would earn in a contestable market. This result confuses, and collapses, the calculation of SARR revenues into the calculation of SAC costs. Under the Board's SAC procedures, SARR revenues cannot be reduced using so-called contestable market principles, because the purpose of the SAC exercise is to identify the differential between the price charged in a non-contestable market (*i.e.*, the SARR's revenues) and the price charged in a contestable market (*i.e.*, the SARR's SAC). *See* Reb. V.S. Borts at 8-11; Reb. V.S. Grimm at 9; Reb. V.S. Crowley at 45. Moreover, if divisions are set at the incumbent's avoidable cost levels – levels that contain little or no contribution to the SARR's fixed costs – it will be virtually impossible for a SARR to be self-sustaining. *See* Reb. V.S. Borts at 11.

The ICC recognized these basic principles in *Nevada Power II*, where the ICC correctly ruled that SARR divisions should be based on projections of “actual (market-based) divisions” (*id.*, 10 I.C.C. 2d at 268), and it properly rejected the use of avoidable cost divisions:

UP's [avoidable cost] construct is inconsistent with the nature and purpose of SAC constraint. Such a competitive scenario would perpetuate UP's hold over this captive market because . . . ‘a potential entrant will shun a market when price retaliation by the incumbent reduces revenue before the entrant has a chance to recoup its costs.’

Id., 10 I.C.C. 2d at 266.

**C. SARR Divisions Should
Reflect Market Factors**

As discussed in the *Joint Comments* and *Joint Reply Comments*, between 1985 and 2003, the ICC and the Board took the position that SARR divisions should be set using real-world market divisions data and, if such data was not available, reasonable mileage-based surrogates (such as MMP and, later, MSP). Carrier commentators take issue with this position. However, this approach is clearly correct.

**1. The ICC and the STB Relied On a Market
Division Test Between 1985 and 2003**

BNSF argues that the ICC and the STB did not “definitively” establish a market-based standard to determine SARR divisions in the pre-2003 decisions. *See BNSF Reply Comments* at 21-25. BNSF’s argument ignores reality.

In *Nevada Power II*, the ICC relied on a mileage pro-rate method to set SARR divisions because “actual (market-based) divisions [were] not available.” 10 I.C.C. 2d at 268. Chairman McDonald emphasized this result in her concurring comments:

A third generic issue settled by this decision is how to estimate the *revenue* that a SARR would earn on cross-over traffic. Because this traffic is not currently interlined, there are no actual revenue shares, or “divisions” data, available. We find that the proper approach is to estimate what the *market-based* divisions would be, and this will be the standard for future cases.

Id. at 280.

In the next major case involving cross-over traffic (*McCarty Farms*), BNSF itself proposed the use of the MMP method to set cross-over divisions. MMP is the method that the Board continues to use to estimate market-based divisions in its waybill sample procedures. See *Joint Comments* at 47-48.

In cases that followed *McCarty Farms*, defendant carriers refused to provide actual market-division data during discovery, so the Board relied on MMP as a market-based proxy. For example, in *FMC*¹⁴ the Board stated that MMP “is the best procedure for allocating revenues to carriers where market-based divisions are not available.” *Id.* at 726 n.63. Similarly in *TMPA*, the Board approved TMPA’s use of MMP to calculate SARR cross-over divisions:

Normally, when two or more railroads serve a shipper in joint-line service, they negotiate a market-based revenue division of the rate. Lacking information to determine BNSF’s typical percentage division in various market-driven situations, TMPA divided the revenues on cross-over traffic between the GCRR and the residual BNSF based on the modified mileage block prorate (MMBP) method that has been used in prior SAC cases.

Id. at 605 (footnotes omitted).

Contrary to BNSF’s assertions, the Board decisions prior to 2003 clearly state that SARR divisions should be set using actual carrier divisions data and principles.

¹⁴ *FMC Wyoming Corp. v. Union Pac. R.R. Co.*, 4 S.T.B. 699 (2000) (“*FMC*”).

2. The STB Has Ignored Governing Pre-2003 Precedent

Starting with its 2003 decision in *Duke/NS*, the Board has reversed course. In *Duke/NS*, *Xcel*¹⁵ and *Otter Tail*,¹⁶ the Board has abandoned a market-based SARR divisions test for one that is based on “relative costs.” In their *Joint Comments*, the Coal Shippers demonstrated that the shift from a market-based standard to a cost-based standard was arbitrary, *inter alia*, because the Board ignored governing pre-2003 precedent.

NS/CSXT argue that the Coal Shippers’ analysis of the Board’s about-face is “confused” and “mischaracterize[s]” the Board’s decision in *Duke/NS*. See *NS/CSXT Reply Comments* at 13 n.7. Significantly, NS/CSXT make no effort to identify what part of the Coal Shippers’ analysis they find “confus[ing]” or “mischaracteriz[ed].” Instead, they simply refer to the Board’s *Duke/NS* decision, and assert that it speaks for itself.

BNSF argues that the Board’s sequence of decisions in *Duke/NS*, *Xcel* and *Otter Tail* constitute reasoned decisionmaking because, in BNSF’s view, the Board reached the right result, *i.e.*, a result that requires SARR divisions on cross-over traffic to cover off-SARR SAC costs. See *BNSF Reply Comments* at 26-27. BNSF ignores the fact that the ICC and the Board consistently had reached the exact opposite results in pre-2003

¹⁵ Docket No. 42057, *Public Serv. Co. of Colo. d/b/a/ Xcel Energy v. BNSF Ry. Co.*, Decision served June 8, 2004.

¹⁶ Docket No. 42071, *Otter Tail Power Co. v. BNSF Ry. Co.*, Decision served Jan. 27, 2006.

decisions – decisions the Board ignores as well. *See, e.g., Nevada Power II*, 10 I.C.C.2d at 266 (SARR not responsible for covering off-SARR SAC costs); *Rate Guidelines – Non Coal Proceedings*, 1 S.T.B. 1004, 1016 (1996); Docket No. 42054, *PPL Montana, LLC v. Burlington N. and Santa Fe Ry. Co.*, Decision served Aug. 20, 2002 at 9-10 (“*PPL*”).

This contrary line of authority is succinctly summarized in *PPL*:

BNSF also contends that PPL’s SAC presentation should be rejected because PPL has not shown that the revenues allocated to the residual BNSF for all cross-over traffic movements are sufficient to cover the residual BNSF’s stand-alone costs associated with those movements. We do not agree that such a showing is necessary. A residual carrier would agree to move the traffic so long as the revenue division would allow it to cover its attributable costs associated with handling the traffic. *See Guidelines*, 1 I.C.C.2d at 540; *Rate Guidelines–Non-Coal Proceedings*, 1 S.T.B. 1004, 1016 (1996).

Id. at 10 n.20.

Under longstanding precedent – precedent that is ignored in *Duke/NS*, *Xcel*, and *Otter Tail*, the cross-over division methodology should ensure that off-SARR lines receive revenues that equal or exceed off-SARR *attributable costs*. The MMP and MSP methodologies, as applied in prior cases, have met this test – a test that comports with real world divisions principles. *See Rate Guidelines – Non-Coal Cases*, 1 S.T.B. at 1016 (“[a]s a general rule, it is better for a railroad to carry any traffic that covers its own (attributable) costs and makes any contribution . . . to joint and common costs”).

3. Ignoring Market Factors Imposes Entry Barriers on SARRs

The Board's decision to ignore market factors, and to set SARR divisions using a relative cost test designed to penalize high density SARRs, places huge new entry barriers on a SARR in violation of the *Guidelines*.

Carrier commentators vociferously dispute that the use of a relative cost test imposes entry barriers for a SARR. The railroad witnesses raise a plethora of jumbled arguments in support of their contentions, each of which the Coal Shippers refute in their rebuttal evidence. *See* Reb. V.S. Crowley at 42-61. Despite carrier efforts to obfuscate these issues, the bottom line remains the same. The Board is proposing to impose a cost-based divisions requirement on a SARR that is not comparable to any divisions requirement faced by any real world rail carrier.¹⁷ No real world carrier is required to negotiate a division that ensures that its interline connections recover sufficient revenues to cover their SAC costs. This requirement is imposed solely on a SARR and is clearly an impermissible barrier to a SARR's entry into a market. *See West Texas Utils. Co. v. Burlington N. R.R. Co.*, 1 S.T.B. 638, 657 n.37 (1996) ("entry barriers can take the form

¹⁷ BNSF claims the ICC relied solely on cost evidence to set joint line divisions. *See BNSF Reply Comments* at 25. In support of their proposition, BNSF cites a number of older ICC cases culminating with the ICC's 1976 decision in *Expeditious Handling of Divisions in Revenues Cases*, 353 I.C.C. 349 (1976). In *Expeditious Handling*, the ICC held, consistent with its prior rulings, "[w]e are aware that relative costs of service are not the only factors to be considered in determining just divisions" and "[a]s the Supreme Court held in [*United States v. Abilene & S. R.R. Co.*, 265 U.S. 274 (1924)], many factors must be considered, weighed, and balanced in resolving divisions disputes." *Id.* at 358. In fact, the ICC relied on both cost and market factors in setting divisions. *See Joint Comments* at 41-42.

of any friction that would slow entry into the industry and concomitantly increase the cost of entry”) (“*West Texas Utils.*”).

This new requirement also reflects a clear misunderstanding of how the *Guidelines* were intended to work, and did work, until the Board’s recent efforts, starting with *Duke/NS*, to radically alter the SAC test. The *Guidelines* require that a SARR provide origin-to-destination service for the issue traffic. They also permit a complainant shipper to use the same “production technique[s]”¹⁸ that are available to real world rail carriers. These production techniques include the use of cross-over interchange traffic and the ability to set a fair market-based division for the service. *See* Reply V.S. Borts at 9; Reb. V.S. Crowley at 57-61.

The Board repeatedly warns complainant shippers that the development of SARR costs must conform to “the underlying realities of real world railroading.” Docket No. 42057, *Public Serv. Co. of Colo. d/b/a/ Xcel Energy v. BNSF Ry. Co.*, Decision served Jan. 19, 2005 at 12 (“*Xcel II*”). By imposing a SARR divisions test that bears *no* correlation to “the underlying realities of real world railroading,” and one that is intended to penalize high density SARRs, the Board is clearly creating entry barriers that violate the *Guidelines* and, as a practical matter, creating barriers that will severely limit, if not eradicate altogether, SAC as a viable regulatory test for captive coal shippers.

In promulgating the *Guidelines*, the ICC recognized that “[t]he real challenge for the Commission will be to translate these new guidelines into fair and

¹⁸ *Guidelines*, 1 I.C.C.2d at 528.

efficient outcomes.” *Id.* at 551 (Commissioner Strenio, concurring). The Board should keep this admonition in mind in setting SARR divisions on cross-over traffic.

**D. The Board Should Continue to Rely Upon
The MMP or MSP Divisions Methodologies**

The Board has found that the MMP/MSP divisions methods constitute reasonable market-based division standards¹⁹ and reasonable cost-based division standards.²⁰ The Board should continue to rely on these standards to set SARR divisions in the absence of better data or the development of a demonstrably superior alternative procedures. ATC is not such a procedure, nor is BNSF/UP’s proposed avoidable cost divisions method.

III. THE BOARD SHOULD REVISIT ITS “CROSS-SUBSIDY” TEST

In their *Joint Comments*, the Coal Shippers explained that the “internal cross-subsidy” test adopted by the Board in *PPL* and later applied in *Otter Tail* was inconsistent with the basic principles that underlie CMP and the *Coal Rate Guidelines*, and either should be eliminated or reformed. *Inter alia*, the Coal Shippers showed that the test both imposes a burden on a SARR that the Board cannot and does not impose on the incumbent, and employs a definition of “cross-subsidy” that bears no resemblance to the concept as applied by the Board and its predecessor in evaluating real world railroads.

¹⁹ See, e.g., *McCarty Farms* at 472; *FMC* at 726; *TMPA* at 605.

²⁰ *Duke/NS* at 25; *Xcel* at 17-19; *Otter Tail* at 15.

Joint Comments at 55-57. The Coal Shippers also demonstrated that the “second order” cross-subsidy test announced (but not applied) in *Otter Tail* amounted to a mandate for iterative, “segmented SAC” analyses that cannot be squared with the *Coal Rate Guidelines* or the governing statute. *Id.* at 58-66. The Coal Shippers’ positions were supported by the expert testimonies of Professors Curtis Grimm and George Borts.

Among the railroad commentators, only BNSF attempted to respond to the Coal Shippers’ points regarding the cross-subsidy test. BNSF first claims that the Board cannot consider the future of the test in this proceeding, because it was not numbered among the specific issues identified in the *Decision*. *BNSF Reply Comments* at 4-5, 57-58. BNSF then introduces statements from its witnesses Dr. Robert Willig and Mr. John Klick, which are offered as a response to the Coal Shippers’ showing. *Id.* at 59-60. In these respects, however, BNSF’s Reply neither answers the points and authorities presented by the Coal Shippers, nor effectively defends the Board’s flawed cross-subsidy test.

As a threshold matter, the fact that the Board did not specifically solicit comments on the cross-subsidy test in the *Decision* does not preclude its consideration in this proceeding. The stated purpose of this proceeding is to consider “major issues regarding the proper application of the stand-alone cost (SAC) test in rail rate cases.” *Decision* at 2. The Board’s recent decisions imply that the cross-subsidy test will be a standard element of all pending and future coal rate cases. A re-examination of the test in this proceeding is a logical outgrowth of the Board’s initial proposal, and entirely proper.

Crawford v. FCC, 417 F. 3d 1289, 1295-96 (D.C. Cir. 2005). Moreover, BNSF and every other party has had the opportunity to submit comments regarding the issue, and BNSF already has availed itself of that opportunity. Under these circumstances, the carrier's objection is unfounded. *See N.E. Md. Waste Disposal Auth. v. EPA*, 358 F.3d 936, 951-52 (D.C. Cir. 2004).

Likewise, the D.C. Circuit's ruling in *PPL Mont., L.L.C. v. STB*²¹ does not preclude the Board from re-evaluating its cross-subsidy tests, both the *PPL* threshold inquiry and the as-yet unapplied *Otter Tail* second order variant. As the Coal Shippers explained in their *Joint Comments*, the Board remains at liberty to change its policy interpretation after consideration of public comment,²² and the court's limited focus on the *PPL* threshold test in no sense can be read as an endorsement of the second order review subsequently announced in *Otter Tail*, which presently is pending on petition for review in another court.²³

BNSF witness Willig opens his critique with an observation that aptly illustrates the need for a revisitation of the role of any cross-subsidy analysis in the context of CMP. According to Dr. Willig:

The Board's cross-subsidy test . . . comes into play when the proponent of a given [SARR] seeks to make it appear that the

²¹ *PPL Mont., L.L.C. v. STB*, 437 F.3d 1240 (D.C. Cir. 2006).

²² *See Paralyzed Veterans of Am. v. D.C. Arena L.P.*, 117 F.3d 579, 586 (D.C. Cir. 1997).

²³ No. 06-2412, *Otter Tail Power Co. v. STB* (8th Cir. 2006).

issue traffic rates are too high by designing a system that is composed of two essentially separate parts that do not overlap – a lighter density segment (or group of segments) that is utilized by the issue traffic and certain other non-issue traffic, and a heavier-density segment (or group of segments) that is used relatively little or not at all by the issue traffic (and, therefore, is used exclusively, or primarily, by non-issue traffic).

Reply V.S. Willig at 4.

If Dr. Willig's narrow definition of the class of cases in which a cross-subsidy analysis would be appropriate was employed by the Board, some (though plainly not all) of the Coal Shippers' concerns in this area might be assuaged. However, the Board has given no indication that cross-subsidy evaluations only need be performed on those SARRs that appear unnatural in design, or reflect an intent to manipulate the SAC procedures by exploiting economies of density generated solely by facilities that the issue traffic does not use. To the contrary, both the Board and the railroads appear to envision conducting a threshold and a second order cross-subsidy analysis in *every* case, and the Board has offered no guidance as to how a SARR should be "segmented" for cross-subsidy purposes. The latter invites railroad defendants to search a SARR for any low density line segment (of whatever length), and use it to reduce the measure of rate relief available to the complainant and thereby retain revenues in excess of total SAC. Since virtually every utility coal movement ends on a relatively low density line "segment" – such as a short branch from the defendant's main line to a power plant – universal

application of a second order cross-subsidy test will curtail relief from monopoly pricing in just about every case.

Dr. Willig derides as a “doomsday scenario” the observation offered by the Coal Shippers and Professor Grimm that the “sustainability” argument made by the Board in defense of its cross-subsidy test compels a complainant to show that its SARR represents the optimum design for any member of the traffic group, including those over which the Board has no jurisdiction.²⁴ Reply V.S. Willig at 6. Dr. Willig claims that “nothing in the Board’s adoption of the cross-subsidy test forces shippers to take on this burden.” *Id.* at 8. However, the Board in *Otter Tail* clearly did just that:

But other captive shippers in the traffic group could bring a challenge to their own rates in the future. Even rates that are currently under contract will be renegotiated at some point, and the potential regulatory relief that might be available if a contract is not renewed or revised is the backdrop to such negotiations. Furthermore, the goal of the SAC analysis is to simulate the competitive market rate that would prevail in a contestable marketplace, where no rates above the SAC level for any shipper in the selected traffic group would be sustainable without attracting new entry. Thus, our analysis must assume the repeated application of the SAC test to all shippers in the traffic group.

Otter Tail at 11. Obviously, any analysis that the Board considers part of the SAC determination must be undertaken by parties to cases brought under that component of CMP. But as the Coal Shippers showed and BNSF does not refute, this aspect of the

²⁴ See *Joint Comments* at 64-66; Op. V.S. Grimm at 6-8.

Board's cross-subsidy defense is contradicted both by the governing statute and the *Coal Rate Guidelines* themselves. See *Joint Comments* at 64-67.

Dr. Willig and BNSF do not address – much less refute – the Coal Shippers' showings that the *PPL /Otter Tail* cross-subsidy standards differ significantly from those applied by the Board and its predecessor to real world railroads in analogous contexts,²⁵ and amount to a mandate for “segmented SAC” analyses that violate both the governing statutes and the *Coal Rate Guidelines*. *Joint Comments* at 59-67. Instead, BNSF simply falls back on a “symmetry” argument: since CMP allegedly is designed to determine whether the issue traffic is cross-subsidizing other traffic, BNSF argues it is logical to examine each segment of a SARR to ensure that both before and after any rate reduction, the segment does not generate revenues lower than SAC. See *BNSF Reply Comments* at 58; Reply V.S. Willig at 8. However, as Professor Grimm explains, the SAC test is intended only to determine whether the rate for a particular movement is unreasonably high; *i.e.*, whether it exceeds the level needed to cover the cost of the facilities needed to service that movement (and other movements that benefit from the facility) and provide a reasonable return on investment. Whether revenues in excess of a reasonable maximum are used to subsidize other traffic, dedicated to some other purpose, or simply pocketed as excess profits are not questions that the SAC test answers. Reb. V.S. Grimm at 5-6. As the Coal Shippers demonstrated in their *Joint Comments*, the only cross-subsidy test that would be legitimate for application to a SARR is the same

²⁵ *Joint Comments* at 56-58.

threshold test applied by and to real world railroads, solely to determine whether it is economically rational²⁶ to include a given piece of traffic in the customer group. *Joint Comments* at 68.

Finally, Dr. Willig purports to defend the incongruity that held the *PPL* SARR unsustainable under a cross-subsidy test that the real world BNSF could not pass vis-a-vis the same lines, on the ground that BNSF has significant, long-lived investments in those lines (*i.e.*, sunk costs) which make it “economically rational and socially efficient” for BNSF to continue to operate at rates that do not cover long-run incremental costs. Reply V.S. Willig at 9, *citing Guidelines*, 1 I.C.C. 2d at 537-38.²⁷ However, as the ICC squarely held in *Nevada Power II*, the SARR and the incumbent must be treated alike with respect to sunk costs; that is, if costs are sunk for the incumbent, they are deemed sunk for the SARR. 10 I.C.C. 2d at 267. By requiring that all segments of a SARR be shown to independently generate revenues in excess of SAC in order to be considered sustainable, the Board’s cross-subsidy test violates this core principle.

BNSF witness Klick labels “misleading” the Coal Shippers’ showing that the second order cross-subsidy analysis described in *Otter Tail* improperly assumes that a

²⁶ *I.e.*, whether the traffic would generate revenues sufficient to cover its directly variable costs and make some contribution to joint and common costs.

²⁷ In his Verified Statement, Professor Grimm explained how the Board’s new cross-subsidy test – which focuses on full SAC instead of directly variable or short-run marginal costs – produce results sharply at odds with actual railroad practice, whereunder the same lines that the *PPL* test labels unsustainable in fact continue to be operated, despite the ease with which truly unprofitable lines can be abandoned. *See Op. V.S. Grimm* at 8-9.

SARR customer should not share the cost of facilities that it does not actually use, even though the shipper *benefits* from those facilities' support of other traffic that *does* have facilities in common with that customer.²⁸ See Reply V.S. Klick at 22-24. Using a simplification of the schematic included on page 10 of the *Otter Tail* decision and assuming cost values for the "B-C" segment, the Coal Shippers demonstrated why Shipper 3 logically would make some contribution to the "A-B-C" segments used by the complainant (Shipper 1) and Shipper 2, when the latter also shared the B-C segment with Shipper 3. *Joint Comments* at 60-61.

Mr. Klick argues that the positions advanced by the Coal Shippers and Professor Borts are misleading because (a) they suggest that the B-C segment which overlaps lighter and heavier density routes is relatively long; and (b) the *Otter Tail* schematic "is a hypothetical illustration of how a 'second order' cross-subsidy test would be conducted, not an illustration of the way the Board actually applied the cross-subsidy test." Reply V.S. Klick at 22-23. Neither claim undermines the Coal Shippers' demonstration that the second order *Otter Tail* test is flawed, and should not be applied in future cases.

As witness Borts explains in his accompanying testimony and as Mr. Klick himself admits,²⁹ the length of the "B-C" segment is irrelevant to the legitimacy of the Board's approach to cross-subsidies. Reb. V.S. Borts at 17-18. If anything, Mr. Klick's

²⁸ *Joint Comments* at 60-63; Op. V.S. Borts at 12-15.

²⁹ Reply V.S. Klick at 24.

emphasis on the short length of the overlap segments in the “real world” *PPL* and *Otter Tail* cases further supports a revisiting of the cross-subsidy test. Like Dr. Willig, Mr. Klick is suggesting that the test has a meaningful impact only in those circumstances where the sponsor of a SARR designs “a system that is composed of two essentially separate parts,” where one heavier density segment is “used relatively little or not at all by the issue traffic.” Reply V.S. Willig at 4. However, the Board’s recent decisions strongly imply that the cross-subsidy test is to be a staple of all future SAC analyses, including those in which a SARR might replicate a portion of the incumbent’s system which begins in a high density region such as the PRB, and proceeds through corridors where the issue traffic shares assets with (and provides density benefits to) every other member of the SARR group. As Professor Grimm confirms, the interdependence among the different line segments, shippers and traffic densities on such a system makes any attempt to accurately identify and measure internal “cross-subsidies” futile, and explains why real world railroads do not factor such an analysis into their pricing practices. *See* Reb. V.S. Grimm at 5-6.

In their *Joint Comments*, the Coal Shippers showed how the second order analysis described by the Board in *Otter Tail* failed to acknowledge the benefit that Shipper 3 derived from the core facilities, without which it would lose the density economies created by Shipper 2's traffic on the B-C segment and be forced to absorb the

total cost of that segment.³⁰ *Joint Comments* at 62-63; Op. V.S. Borts at 14. Mr. Klick claims some special knowledge of the Board's actual intentions concerning application of its *Otter Tail* variation, which he says averts the flaw and consequences noted above. Reply V.S. Klick at 23. However, the Board's own language in *Otter Tail* belies reliance on his assurances. While Mr. Klick claims the Board *intends*³¹ to conduct the second order analysis on a basis other than full SAC, the Board *states* that it would approach the task by looking at the "total capital and operating costs attributable to serving Shippers 1 and 2," which of course includes the capital cost of the B-C segment, and "the total SAC cost [sic] of serving all three shippers" *Otter Tail* at 10.

In sum, the reasons offered by the Coal Shippers in support of a reconsideration of the Board's new cross-subsidy test remain valid. The Board can and should take the opportunity to correct this major flaw in its implementation of the SAC constraint, either by eliminating the test altogether, or reforming it to function solely as a threshold determinant whether it would be economically rational for a SARR to include the subject traffic, given the associated costs and revenues and the composition of the rest

³⁰ The Coal Shippers demonstrated that even under the percentage reduction method, Shipper 3 realized a rate reduction because of revenue contributions from users of the core facilities, while it would experience a rate increase if those facilities were not in place.

³¹ As noted, Mr. Klick suggests that the example used by the Board in *Otter Tail* is merely a "hypothetical illustration" of how the test would be conducted, "not an illustration of the way the Board actually" applies it. Reply V.S. Klick at 22-23. No such distinction appears in the text of the Board's decision.

of the SARR traffic group. This is the only cross-subsidy test that arguably is applied by or to a real world railroad, and thus should be the rule for SARRs as well.

IV. THE INDEXING OF SARR OPERATING EXPENSES

In their reply comments, all of the major railroads take exception to the Board's and the Coal Shippers' proposals to incorporate a productivity adjustment in the index of SARR operating expenses. The railroads' reply filings largely reiterate the arguments made on opening (*i.e.*, SARRs are already "hyper efficient," productivity improvements are prohibitively expensive, *etc.*), which the Coal Shippers addressed in their own Reply Comments. *See Joint Reply Comments* at 31-46.

The Coal Shippers' Rebuttal Comments are supported by the Joint Rebuttal Statement of Drs. Douglas W. Caves, B. Kelly Eakin, Mark E. Meitzen, and Philip E. Schoech ("Caves *et al.*"), and the Rebuttal Statement of Dr. William J. Brennan, each of whom previously submitted a statement in support of the Coal Shippers' on the issue of SARR productivity. In addition, the Coal Shippers' Rebuttal includes the Verified Statement of David G. Weishaar, who addresses the productivity experience of Western Railroad Properties, Inc. ("WRPI"), a new railroad whose operations were limited to transporting Powder River Basin coal.

A. The Revenue/Cost Indexing Disparity

The most significant topic addressed by the railroads on reply relates to the question of the disparity between the indices used to forecast SARR revenues and SARR

operating expenses. Specifically, BNSF criticizes the Coal Shippers' arguments regarding the indexing "death spiral" imposed by the Board upon SARRs, and insists that the Board's estimates of SARR future revenues and SARR future costs should have no relationship whatsoever with each other:

As BNSF witness Michael R. Baranowski explains in his reply verified statement, because the three indices used in the DCF – one for revenues, one for operating costs, and one for construction costs – *are designed to forecast different elements that are in no way related*, there is no disparity between the ways revenues and operating costs are indexed.

BNSF Reply Comments at 34 (emphasis added); *id.* ("The indices are *suppose* [sic] to measure different future trends."). BNSF's arguments are unavailing, and fail to offer any justification for the continuing presumption in CMP cases that a SARR must face certain long-term bankruptcy.

In his Reply Verified Statement, BNSF's witness Baranowski argues that forecasts of SARR revenues and costs should not be related in any way. Mr. Baranowski characterizes the argument regarding the revenue/cost disparity as "merely a made-for-litigation figment of shippers' imagination," and insists that "[f]orecasts for each component [of the DCF model] are derived independently and are not linked in any way."

Reply V.S. Baranowski at 4-5.³² Significantly, however, Mr. Baranowski concedes that

³² Although Mr. Baranowski does not address the matter in his statement, it has been noted previously that future SARR revenues are derived from existing contracts that the incumbent holds with its shippers. This use of existing contracts is merely the starting point for indexing SARR revenues, and, given the short life of existing contracts (and the rapidly increasing use of public pricing), has very little impact on the indexing of
(continued...)

future revenues of the incumbent carriers will be influenced by their costs. *Id.* at 5 (“[t]hese rates will reflect market conditions (including competition), *costs*, capacity and other relevant factors considered by the incumbent railroads in pricing their services”) (emphasis added).

While Mr. Baranowski claims that the future revenues of an incumbent carrier “have nothing whatsoever to do with the projected cost structure of a SARR” (*id.*), if future incumbent revenues in fact are a function of future incumbent costs (as Mr. Baranowski states elsewhere), there is every reason for future SARR revenues to bear a strong relationship to future SARR costs. Ignoring this correlation amounts to an impermissible entry barrier for SARRs.

If an incumbent carrier will adjust its future rates to reflect its own cost structure, then it cannot be assumed that a SARR will adjust its rates without regard to ongoing cost changes. Stated differently, it is fundamentally inconsistent for the Board to find that a SARR will be willing to pass along productivity-based cost savings to its customers but would not actually realize the benefit of that same productivity for cost purposes.

In his Rebuttal Verified Statement, Dr. Brennan addresses the subject of the disparity between SARR revenue and cost indexing in greater detail. Therein, he explains that the disparity between SARR revenue and expense indexing built into the Board’s

³²(...continued)
SARR revenues over the length of the DCF period.

current approach is improper, and that the railroads are in error to argue that there is not – and should not be – a relationship between SARR revenues and SARR costs. *See* Reb. V.S. Brennan at 5-9.

B. The Railroads' Additional Arguments

In their reply filings, the railroads also emphasize three arguments which the Coal Shippers addressed in their own *Joint Reply Comments*: (1) that a SARR operates in a super-efficient manner using unit train service with no room for improvement; (2) that shippers should be forced to pay for all productivity improvements; and (3) that shippers should be forced to prove (either in their affirmative cases or on reopening) that they will obtain the benefit of specific future productivity improvements.

UP witness John H. Rebensdorf purports to demonstrate that the many productivity improvements that the Coal Shippers described in their *Joint Comments* (on the basis of prior railroad statements regarding the development of these productivity improvements) are unavailable to SARRs, or even to real-world railroads. Mr. Rebensdorf's statement reflects an overly pessimistic view of the railroads' prospects for service or cost improvements that is entirely at odds with the experience of carriers over the last two decades, and with the very clear and very optimistic railroad statements regarding railroad technological progress that the Coal Shippers cited on opening. In that regard, Mr. Weishaar explains that Mr. Rebensdorf's characterization of the experience of WRPI in the Powder River Basin is mistaken. Contrary to the impression conveyed by Mr. Rebensdorf, Mr. Weishaar explains that "WRPI started operations as an optimally

efficient railroad, yet it experienced enormous productivity gains during its brief existence.” Reb. V.S. Weishaar at 3. Mr. Weishaar adds that:

There is no reason to believe a coal-hauling SARR that starts operations as a state-of-the-art railroad, but that is limited by the need to accommodate the train sizes, car types and lading weights, and locomotives of its connecting carriers and customers, would not also continue to experience substantial productivity gains.

Id.

In its *Reply Comments*, BNSF presents the statements of both Mr. Baranowski, noted *supra*, and Dr. Martin Baily. Mr. Baranowski purports to defend the disparity between SARR revenue and cost indexing, and reiterates BNSF’s prior statements regarding the difficulties faced by SARRs in attempting to improve their operations. In his statement, Dr. Baily acknowledges that even “[a]n efficient firm entering the market with new assets, the technology tailored to its operational requirements, and an operating plan reflecting the industry’s best practices would begin to experience productivity improvements at some point in the future” (Reply V.S. Baily at 3), but argues that it is unlikely that this would occur in the early years of the SARR’s existence.

In their Rebuttal Statements, Drs. Caves *et al.* and Dr. Brennan respond to the arguments raised by Dr. Baily and Mr. Baranowski, and confirm that the Board’s proposed approach to incorporating productivity into the operating expense analysis in fact is insufficient to reflect the likely experience of a SARR. For example, Drs. Caves *et*

al. explain that in proceedings before the Federal Communications Commission, a procedure not unlike stand-alone costing is used to evaluate the forward looking costs of a telecommunications carrier. In such proceedings, the FCC requires the hypothetical firm to reduce its operating expenses by 20 percent relative to existing firms in order to ensure that the firm is on the frontier of productive efficiency. Reb. V.S. Caves *et al.* at 8-10. Drs. Caves *et al.* also explain the fallacy of the railroads' proposal that the Board require shippers to prove the existence and timing of specific productivity improvements, demonstrating that this approach fundamentally is incompatible with the recognized concept of total factor productivity and contradicts the entire notion of indexing future expenses. *Id.* at 10-13. Finally, Drs. Caves *et al.* reject the suggestion that the Board should require SARRs to incur separately stated costs in order to obtain the benefits of productivity; these costs are already reflected in the productivity index. *Id.* at 16-17.

Dr. Brennan responds to Mr. Baranowski's claims regarding the disparity between SARR revenue and expense indexing. In addition, Dr. Brennan explains that it is wholly inappropriate to demand that shippers identify, in advance, each source of productivity improvement that their SARRs will achieve. Reb. V.S. Brennan at 9-10. Finally, Dr. Brennan refutes UP witness Baily's criticism of "learning-by-doing," by showing that a firm reasonably can expect to capture "learning-by-doing" productivity gains during the early years of its existence, and that such gains are replaced by the general growth of knowledge and the development and employment of new techniques and technologies. *Id.* at 14-17.

In light of the foregoing, the Coal Shippers submit that it is entirely appropriate for the Board to consider productivity when indexing SARR operating expenses. As the Coal Shippers explained on opening, the Board's proposal on this issue does not go far enough by starting at 100% of the RCAF-U. It is more appropriate to index SARR operating expenses in a manner that would begin with 50% of the RCAF-U and 50% of the RCAF-A in year 1, and increase the share of the RCAF-A utilized in a linear manner until, after year 10, the Board indexes SARR operating expenses using 100% of the RCAF-A. *Joint Comments* at 69-70, 88.

V. MOVEMENT-SPECIFIC VARIABLE COST ADJUSTMENTS

It is evident after two rounds of comments that neither shippers nor railroads are in favor of the Board's proposal to prohibit movement-specific adjustments to variable costs. The Coal Shippers, as stated previously, oppose the proposal entirely, as do CP, CSXT and NS. *See, e.g., Canadian Pacific ("CP") Reply Comments* at 7 ("CPR believes that the potential for reducing the expense and complexity of SAC cases by eliminating all movement-specific adjustments is at best marginal, and that the likely benefits of the Board's proposal do not justify abandoning the agency's longstanding practice of permitting the parties to present movement-specific variable cost evidence."); *NS/CSXT Reply Comments* at 17 ("The comments . . . make clear that, to one degree or another, all parties seek to maintain the right to propose adjustments to URCS costs."). For their parts, BNSF and UP claim to endorse the Board's proposal. However, as the

Coal Shippers explained on Reply, each of these carriers qualifies its support with the argument that only pro-carrier modifications can be made to the Board's system average proposal. *See Joint Reply Comments* at 49, 55-57.

A. UP's Cost/Benefit Analysis

Perhaps the most significant aspect of the railroads' reply comments regarding movement-specific cost adjustments is UP's argument concerning the relative costs and benefits of analyzing movement-specific cost data. In the *Decision*, the Board suggested that the elimination of movement-specific cost adjustments was appropriate, *inter alia*, because "the analysis of proposals for movement-specific adjustments is complex, expensive, and time consuming." *Decision* at 26. The Board added that disputes over movement-specific cost adjustments force the Board and the parties to divert attention from the "core issues" in SAC cases. *Id.*

In their opening submission, the Coal Shippers took exception to the Board's rationale, explaining that "movement-specific cost adjustments are not the driving factor behind the expense of maximum rate cases, and they are not the cause of the substantial uncertainty associated with the outcome of such cases." *Joint Comments* at 91. The Coal Shippers also disputed the Board's suggestion that the jurisdictional threshold does not constitute a "core issue" in cases brought under CMP. *Id.* at 97.

On reply, UP attempts to refute the Coal Shippers' comments regarding the relative cost and importance of variable cost evidence, but actually provides compelling support for the Coal Shippers' argument. UP disputes the Coal Shippers' claim that costs

associated with presenting SAC evidence far exceed the costs associated with presenting variable cost evidence, and comments that “[o]ne reason for the divergence of views may be that shippers do not bear the bulk of discovery costs.” *UP Reply Submission* at 39. In support of its position that spending on variable cost discovery and variable cost evidence must be constrained, UP recounts its experience in the *Northern States Power* case:

To place discovery costs in perspective, it is worth considering that UP’s cost for the discovery phase of *Northern States Power*, in which the parties litigated only variable costs, was more than half the cost of the discovery in *Wisconsin Power & Light*, in which the parties litigated the full range of SAC issues, *even though UP’s total cost for litigating Northern States Power was less than one-third the total cost of Wisconsin Power & Light.*

Id. at 40 (footnotes omitted) (emphasis added).

UP’s apparent purpose in referring to the costs of these two cases is to show that costs associated with variable cost presentations exceed a reasonable share of total litigation costs, but UP’s discussion actually confirms – as the Coal Shippers have asserted – that the principal cost driver in maximum rate reasonableness cases is SAC evidence. UP explains that the total cost of litigating the *Northern States Power* case (which involved only variable cost evidence) was “less than one-third the total cost of *Wisconsin Power & Light*.” *Id.* Stated differently, UP spent more than three times as much on the *Wisconsin Power & Light* case to address SAC and variable cost issues than it spent on the *Northern States Power* case to address variable cost issues. Obviously, the

principal factor leading to increased rate case costs is SAC evidence, and the railroads cannot blame shippers or the variable cost analysis for that expense.

UP adds that it spent “well over \$1 million in *Northern States Power* to file three rounds of detailed variable cost evidence.” *Id.* Combining the two UP statements, it is evident that UP spent well over \$3 million to litigate the *Wisconsin Power & Light* case. UP’s admission thus presents a validation of the Coal Shippers’ position that variable cost issues are not the driving factor behind the high cost of maximum rate cases. Notably, neither UP nor any other railroads has responded to the Board’s observation regarding increased rate case costs by insisting that the Board should decide maximum rate reasonableness cases solely on the basis of the jurisdictional threshold.

B. The Railroads’ Reply Comments Regarding Variability

In the *Decision*, the Board suggested that one reason to suggest that the elimination of movement-specific variable cost adjustments would be appropriate is that “adjustments to URCS may not provide more reliable results than using system-average expenses.” *Decision* at 24. In support of this assertion, the Board described the use of variability parameters in URCS, and suggested that “[a]lthough parties routinely seek to substitute a movement-specific cost in place of a system-average cost, they apply the system-average variability parameter to calculate the proposed movement-specific adjustment.” *Id.* The Board set out a graph drawn from the railroad’s evidence in the *Xcel* case, and stated that “for movements over high-density segments, the variability percentage should be higher than for the ‘system-average’ movement.” *Id.* at 24-25.

From this premise, the Board concluded that any proposed movement-specific adjustment would have a limited impact, if any, on total variable costs because the corresponding change in variability percentage would have the effect of offsetting that cost adjustment.

Id.

In support of their Opening Comments, the Coal Shippers presented the statement of Mr. Joseph J. Plaistow, who responded to the Board's discussion of the variability issue. In his statement, Mr. Plaistow explained that the chart relied upon by the Board to encompass all variable cost categories actually applies only to the road property category, that the chart is not a tested, verified illustration of the road property return function, and that the chart is inconsistent with both the Commission's decision adopting URCS and with the agency's subsequent rate cases (which apply a flat 50% variability at all densities). *See* Op. V.S. Plaistow at 2-3. Mr. Plaistow also commented that the agency routinely has rejected similar railroad arguments regarding the use of a road property variability factor higher than the URCS 50% factor, on the grounds that those arguments lacked "empirical foundation." *Id.* at 4 (citing *San Antonio*, 5 I.C.C.2d at 894, *OPPD*, *TMPA*, and *Xcel*). Finally, Mr. Plaistow explained that if the Board actually were to reopen the long-settled issue of the variability factor for road property, "the variability of road property return and depreciation very likely would be found to be significantly less than 50%" and "is probably much closer to 0% than it is to 100%." Op. V.S. Plaistow at 8-9.

In their reply comments, UP and BNSF respond to the Board's proposal to eliminate movement-specific adjustment of URCS costs by seeking an additional density-based cost adjustment. It is somewhat ironic that in a proceeding in which BNSF and UP purport to agree with the Board's proposal to eliminate movement-specific cost adjustments, those same carriers are arguing that the Board should utilize movement-specific variability factors if the Board declines to proceed with the change that it originally proposed. *See UP Reply Submission* at 42-43 ("Even if the Board withdraws its proposal to simplify the variable cost portion of rate cases, it should make clear that it will not permit the blending of movement-specific road property costs with system-average variability factors."). In any event, UP and BNSF each argues in favor of a change to the Board's standard approach to calculating variable costs for road property and depreciation. *See UP Reply Submission* at 42-47; *BNSF Reply Comments* at 46-48.

In his Rebuttal Statement, Mr. Plaistow responds to the arguments that UP and BNSF have raised on reply. Specifically, Mr. Plaistow shows that the "Variability Factor" example in the Board's *Decision*³³ has no empirical support; that there is no reason to depart from the practice (in place ever since the *Adoption of URCS* decision was issued by the ICC in 1989) of assuming that average variability applies across all levels of density; and that the railroads' own statements confirm that fixed costs do not remain fixed across the entire range of traffic densities. *Reb. V.S. Plaistow* at 3-10.

³³ *See Decision* at 25.

C. Additional Issues Raised by the Board

In addition to the subject of variability percentages, the *Decision* identified several other purported justifications for the elimination of movement-specific adjustments to URCS variable cost calculations. These topics included: the imbalance in railroad record-keeping; the prospect of piecemeal adjustments to URCS; the need for time-consuming analysis of movement-specific evidence; the need for a quick and easy-to-determine regulatory safe harbor; the current URCS use of movement-specific traffic and operating characteristics; and the need to remove “substantial uncertainty” in the current process in order to encourage settlements. *Decision* at 23-27. In their *Joint Comments*, the Coal Shippers explained that the Board’s comments regarding these perceived problems were misdirected. *Inter alia*, the Coal Shippers’ observed that if the Board found that different railroads were maintaining different types of data, there were alternative approaches (*i.e.*, a presumption in favor of the complainant where a railroad has elected not to maintain data, access to internal management cost data, or requiring carriers to undertake some basic data sorting) that the Board could use to ensure a level playing field, which would not have the effect of penalizing shippers. *Joint Comments* at 93-95.

On reply, both BNSF and UP address the Coal Shippers’ observations regarding record-keeping. BNSF suggests that “[e]ach of the shippers’ proposals defies the concerns over efficiency, simplification and certainty that the Board is trying to address in this proceeding. Each proposal is also directly at odds with Congress’s effort

to reduce carriers' regulatory recordkeeping burden." *BNSF Reply Comments* at 45.

BNSF adds that the "shippers' proposal opens the door to massive gaming of the URCS calculations on grounds that the railroad's data are supposedly insufficient." *Id.* UP similarly argues that "[a]s long as their recordkeeping complies with the Board's Uniform System of Accounts ('USOA'), railroads should not face adverse consequences if they do not maintain more detailed information for sole (sic) purpose of responding to discovery in rate cases." *UP Reply Submission* at 42.

It bears emphasis that the Coal Shippers' comments regarding the availability of data for variable cost analyses were made in response to the Board's claim that a problem with disparate railroad record-keeping required the elimination of movement-specific cost adjustments. As stated previously, the Coal Shippers are strongly opposed to the elimination of movement-specific cost adjustments. That same opposition has been expressed by CP, CSXT, and NS. Even BNSF and UP have expressed serious misgivings about the Board's proposal.

Nevertheless, the Coal Shippers stand by their Opening Comments regarding the Board's perceived problems with the current variable cost analysis. If in fact the Board has concluded that the problem with differing railroad record-keeping practices are so acute that it is believed to be necessary to eliminate movement-specific cost adjustments altogether, then the Coal Shippers respectfully submit that consistent with the governing statute (49 U.S.C. §§ 10101(13), and 11163) the Board can and should consider alternatives that do not hinder the interests of captive shippers. Moreover, the

Coal Shippers note that the Board's comments regarding record-keeping were premised upon the observation that certain carriers maintain records needed to make movement-specific cost adjustments and certain carriers do not. It is not the case, as BNSF and UP seem to imply, that the Coal Shippers have insisted that the Board raise the record-keeping requirements for all carriers. The Coal Shippers merely submit that the Board's proposal to address perceived differences among carriers by burdening and prejudicing the interests of shippers is not proper and should not be adopted.

VI. STAND-ALONE COST ANALYSIS PERIOD

As explained in their *Joint Comments*, the Coal Shippers do not oppose the use of a 10-year DCF period to apply in future cases, so long as (i) Table E in the DCF model is appropriately modified and no other changes are made in the Board's current DCF procedures; (ii) the 10-year DCF period is not applied in pending cases; and (iii) provisions are added to ensure that a prescription can extend beyond the 10-year DCF period.

- Table E. Table E in the Board's DCF model contains an amortization schedule of assets purchased with debt capital. Currently, Table E amortizes debt over the DCF model life. If this practice is retained, and the DCF time period is shortened from 20 years to 10 years, the 10-year DCF model will produce higher stand-alone costs than a 20 year model.

There is a simple solution to this problem. The Board's DCF model should be modified so that, regardless of whether a 10-year or 20-year analysis period is utilized,

the involved interest payments are amortized over the life of the asset, rather than the life of the model. As Mr. Crowley observes “amortizing the interest payments over the life of the asset is consistent with actual practice in the rail industry, as rail carriers do not base their financial decisions on the STB’s 20-year time period, but rather the useful life of the assets they acquire.” *See Joint Comments*; V.S. Crowley at 14; Reb.V.S. Crowley at 81-83.

BNSF and NS/CSXT argue that there is no need to adjust Table E in the manner Coal Shippers propose because, they assert, “the use of a 20-year period for the amortization of assets purchased with debt has nothing to do with the length of the SAC analysis period.” *NS/CSXT Reply Comments* at 24; *BNSF Reply Comments*, V.S. Baranowski at 15. The Coal Shippers’ evidence demonstrates that BNSF and NS/CSXT are wrong, the DCF period and the debt amortization period are inextricably linked. *See* Reb. V.S. Crowley at 81-83. The Board should make the Coal Shippers’ requested change in Table E.

- Pending Cases. The Board also proposes in its *Decision* not to retroactively apply a 10-year DCF period analysis to the two pending SAC cases: *Western Fuels* and *AEP Texas*. The Board finds, and the Coal Shippers agree, that “shortening the [DCF] analysis period [in these cases] would require the submission of an essentially new SAC case.” *Decision* at 2. Shippers with pending SAC cases should not, under any circumstances, be required to start all over again, nor should their choice of an applicable

DCF period be retroactively eliminated. As the Coal Shippers discussed in their *Joint Comments*, this result appears to be supported by all commentators.

- Length of Prescription. Finally, the Board's 10-year DCF proposal should not automatically limit the length of a rate prescription to 10 years. Currently, the Board prescribes maximum rates for periods of up to 20 years.³⁴ Part of the Board's rationale for converting to a 10-year DCF period is that significant changes in the assumptions utilized in the DCF analysis reasonably can be anticipated within this period. Consistent with this justification, if the Board adopts a 10-year DCF period, the burden should be on the defendant carrier to demonstrate, at the end of the 10-year period, that significant changes have occurred and these changes require that the prescription be modified or vacated. Stated another way, the Board should not apply its DCF proposals in a fashion that requires a shipper to start all over again in DCF-year 10, unless the defendant carrier demonstrates changed circumstances require this result.

Railroad commentators oppose WCTL's request, *inter alia*, on grounds that changed circumstances will *always* require a prescription to be lifted after 10 years. See *BNSF Reply Comments* at 49-51; *UP Reply Submission* at 49-53; *NS/CSXT Reply Comments* at 18-20. However, rather than rely on an irrebuttable presumption, the defendant carrier should be required to demonstrate that material changes *have* occurred. This result is fair to both parties and preserves the protection a shipper obtains from a rate

³⁴ See *Xcel* at 11; *Wisconsin Power & Light* at 13.

prescription until the defendant carrier actually demonstrates that these protections are no longer necessary.

VII. STANDARDS FOR VACATING RATE PRESCRIPTIONS

In their opening comments, the major railroads generally expressed approval of the Board's proposed procedures for considering requests to vacate rate prescriptions, though they did not address the elements of those procedures in any detail. In contrast, the Coal Shippers offered an extensive discussion of the proposed standards, and explained how certain features of the Board's proposal could not be reconciled with established law, and/or would conflict with the Board's own stated policy of promoting administrative efficiency and stability.

On reply, the railroads expanded their arguments in support of the proposed standards and in opposition to the Coal Shippers' positions. In particular, they argued that (a) the Board lawfully can "lift the prescriptive effect"³⁵ of a rate prescription without conducting a legitimate evidentiary hearing;³⁶ (b) the Board can retroactively apply the results of any subsequent evidentiary hearing;³⁷ and (c) the Board's multi-layer approach,

³⁵ *Decision* at 37.

³⁶ *BNSF Reply Comments* at 54-55; *UP Reply Submission* at 56-57.

³⁷ *UP Reply Submission* at 58.

inspired by the *Arizona Public Service*³⁸ proceeding, represents a sound policy judgment.³⁹ None of these arguments has merit.

The holding of *Arizona Grocery*⁴⁰ is clear and unequivocal:

Specific rates prescribed for the future take the place of the legal tariff rates theretofore in force by the voluntary action of the carriers, and themselves because the legal rate. As to such rates, there is therefore no difference between the legal or published tariff rate and the lawful rate. The carrier cannot change a rate so prescribed and take its chances of an adjudication that the substituted rate will be found reasonable. It is bound to conform to the order of the [Board]. If that body sets too low a rate, the carrier has no redress save a new hearing and the fixing of a more adequate rate for the future.

284 U.S. at 387. *Arizona Grocery* remains good law,⁴¹ and as such, it plainly defines the parameters of the Board's authority with respect to the disruption of properly-entered rate prescription orders: once entered, a rate prescription order can only be altered – whether lifted or revised – after a evidentiary hearing and the outcome of that hearing cannot be applied retroactively. As the Coal Shippers explained in their *Joint Comments* (at 106-109), the Board's proposals run afoul of both rules.

³⁸ Docket No. 41185, *Arizona Public Serv. Co. & PacifiCorp. v. BNSF Ry. Co.*, Decision served May 12, 2003.

³⁹ *BNSF Reply Comments* at 58.

⁴⁰ *Arizona Grocery Co. v. Atchison, Topkea & Santa Fe Ry. Co.*, 284 U.S. 370 (1932).

⁴¹ See, e.g., *ACS of Anchorage, Inc. v. F.C.C.*, 290 F. 3d 403, 410-11 (D.C. Cir. 2002); *Burlington N. R.R. Co. v. I.C.C.*, 679 F. 2d 934 (D.C. Cir. 1982).

The railroads argue that 49 U.S.C. § 722 authorizes the Board to “lift the prescriptive effect” of a prior order without an evidentiary hearing, because that is not the type of change that would invoke the *Arizona Grocery* rule,⁴² and because Congress allegedly “delegated broad authority to the Board” that “appears” sufficient to avoid or trump that rule.⁴³ However, procedural powers such as those afforded the Board by Section 722 were available to its predecessor at the time of *Arizona Grocery*,⁴⁴ and yet were not even referenced by the Supreme Court. Moreover, as the Coal Shippers showed in their *Joint Comments*, Section 722 grants powers to the Board that are ancillary to the agency’s explicit statutory authority (in this case 49 U.S.C. § 10704), and cannot be used to evade statutory limits and responsibilities such as those at issue in *Arizona Grocery*. See, e.g., *Burlington N. R.R. Co. v. S.T.B.*, 75 F. 3d 685, 692 (D.C. Cir. 1996). See also *I.C.C. v. American Trucking Ass’n.*, 467 U.S. 354, 365 (1984).

BNSF advances the notion that lifting the prescriptive effect of a rate prescription somehow is substantively different from vacation for *Arizona Grocery* purposes.⁴⁵ *BNSF Reply Comments* at 55. However, as the Coal Shippers explained, a

⁴² *BNSF Reply Comments* at 55.

⁴³ *UP Reply Submission* at 57.

⁴⁴ See former 49 U.S.C. § 16(6).

⁴⁵ Tellingly, both BNSF and UP characterize the Board’s proposal as one to “suspend” the effect of a prescription. *BNSF Reply Comments* at 55; *UP Reply Submission* at 56. Obviously, their word choice conveniently fits with their invocation of Section 722(b). However, the word “suspend” appears nowhere in the Board’s discussion of its proposal, and the Board’s only reference to Section 722(b) attempts to find an

(continued...)

rate prescription order has no effect other than its prescriptive effect; if that effect is “lifted,” there is nothing of meaning left to the order. *Joint Comments* at 107. BNSF argues that the Board only proposes an interim step, to “put the rate prescription on temporary hold pending further investigation.” *BNSF Reply Comments* at 55. But that simply is not an option under *Arizona Grocery*:

The statute does not authorize or suggest the imposition of tentative rates pending investigation or of rates pendente lite in an investigation. Its power in the first place is to declare a rate unreasonable and unjust, and having so declared to replace it with a rate which is reasonable and just.

Atchison T. & S. F. Ry. v. Arizona Grocery Co., 49 F. 2d 563, 566 (9th Cir. 1931).

UP rejoins that since *Congress* could enact a statute giving the Board the power to lift a prescription pending a subsequent hearing, the “broad authority Congress has delegated to the Board” gives the agency “the authority to promulgate such a scheme.” *UP Reply Submission* at 58. This is nonsense. Whatever the scope of the Board’s authority, it does not extend to enacting or amending statutes, or ignoring Supreme Court precedent.⁴⁶ *See State of Michigan v. EPA*, 268 F.3d 1075, 1081-82 (D.C. Cir. 2001); *Town of Deerfield, New York v. FCC*, 992 F. 2d 420, 428 (2d Cir. 1993).

⁴⁵(...continued)

“implicit” power to lift the effect of a prescription pending further hearing. *Decision* at 37. As shown in the text, however, the *Arizona Grocery* doctrine does not sanction such interim, pre-hearing action.

⁴⁶ Indeed, the Board itself has acknowledged that “any prescription, even of an interim rate, requires a full hearing.” *West Texas Utils.*, *Decision* served October 14, 1994 at 5 n. 10.

Arizona Grocery likewise prohibits the Board from applying any changes to a prescription “retroactive to the date of reopening.” *Decision* at 38. *See Joint Comments* at 108-09. The railroads to varying degrees appear to deny that the Board intends to change prescriptions retrospectively,⁴⁷ implicitly acknowledging that such an action is contrary to law. But the language of the Board’s *Decision* is quite plain, as are the purported reasons why the Board suggests that such retroactive ratemaking might pass legal muster. *Decision* at 38. As the Coal Shippers explained, however, putting parties on notice that the Board might decide to change a prior prescription is not nearly the equivalent of the evidentiary hearing required by *Arizona Grocery*, and raising “genuine questions” is far from a formal finding on a complete record that an established prescription no longer is valid and a “more adequate rate for the future”⁴⁸ should be set. *See Joint Comments* at 108.

The railroads also oppose bringing greater fairness and administrative efficiency to the process by having the Board convene a single evidentiary hearing to consider all relevant evidence concerning the continued validity of a prescription, and/or the proper rate to be established for future applications, as the Coal Shippers have proposed. *See Joint Comments* at 109-14. UP misrepresents the Coal Shippers’ position as the “equivalent of allowing litigation of a new complaint.” *UP Reply Submission* at

⁴⁷ *See, e.g., NS/CSXT Reply Comments* at 26-27; *UP Reply Submission* at 57-58.

⁴⁸ *Arizona Grocery*, 284 U.S. at 387.

56. In fact, however, the Coal Shippers simply propose a common sense approach to the reconsideration of prescriptions. If one interested party seeks reopening and/or vacation of a prescription on grounds of changed circumstances, for example, considerations of fairness and administrative efficiency support the Board taking evidence of *all* changes in relevant circumstances in a single hearing, so that competing evidence as to the proper rate level that should be in effect can be considered together.⁴⁹ Particularly in light of the inconsistency of the Board's proposal to "lift the prescriptive effect" of established rate orders with the mandates of *Arizona Grocery*, there is no sound policy reason to pursue a multi-stage approach to the reconsideration or revision of rate prescriptions.

The approach proposed by the Board, patterned after the manner in which the request for vacation in *Arizona Public Service Co.* was handled, will serve only to foment uncertainty, increase administrative burdens and costs, and promote piecemeal litigation. *See Joint Comments* at 112-14. It should not be adopted.

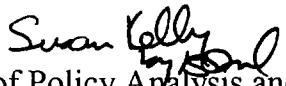
⁴⁹ For example, if a railroad sought reopening on grounds that projected traffic volumes have not materialized, the shipper should be entitled to respond with evidence that new or unanticipated traffic has appeared along the SARR route which offsets the lower projected volumes underlying the original prescription.

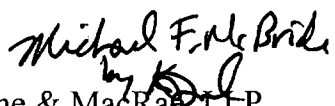
CONCLUSION

The Coal Shippers commend these Joint Rebuttal Comments to the Board's favorable consideration.

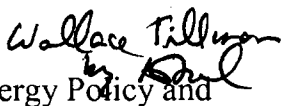
Respectfully submitted,

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Dated: June 30, 2006

CERTIFICATE OF SERVICE

I hereby certify that on this 30th day of June, 2006, I caused a copy of the foregoing Joint Rebuttal Comments of the Western Coal Traffic League, Concerned Captive Shippers, Western Fuels Association, Inc., Edison Electric Institute, National Rural Electric Cooperative Association and American Public Power Association and accompanying cover letter to be served upon all parties of record in this proceeding.



Kelvin J. Dowd

REBUTTAL VERIFIED REBUTTAL STATEMENT OF
GEORGE H. BORTS, PhD.
Professor of Economics
Brown University

Introduction

My name is George H. Borts. I am Professor of Economics at Brown University, Providence, Rhode Island. My Opening Verified Statement (OVS) and Reply Verified Statement (RVS) were submitted to the Board on May 1 and June 1, 2006. My professional qualifications were attached to the OVS as Appendix A.

This Rebuttal Verified Statement is submitted in support of the Joint Rebuttal Comments of the Concerned Captive Coal Shippers, the Western Coal Traffic League, the Western Fuels Association, Inc., the Edison Electric Institute, the National Rural Electric Cooperative Association, and the American Public Power Association, in this proceeding.

This statement will respond to the reply comments by Union Pacific witness Kevin Neels and BNSF witnesses Joseph P. Kalt, John C. Klick, and Robert D. Willig. I will address four topics: Maximum Rate Regulation and the Allocation of SAC Relief; URCS Marginal Cost and Individual Movement Costs; Allocation of Cross-over Traffic Revenue; and Definition and Measurement of Cross-Subsidies.

I. Maximum Rate Regulation and Allocation of SAC Rate Relief

When a railroad is found to be charging a rate in excess of SAC, the question then arises how to calculate the rate relief applicable to each of the SARR's shippers. The exercise is carried out to determine the complainant's appropriate share of the SARR's excess earnings, because any rate reduction goes only to the complainant.

The practice of the Board has been to respect but not strictly apply Ramsey pricing principles. In this vein it has applied rate relief through an equal percentage reduction to all of the SARR's rates, while actually making that reduction applicable only to the complainant's traffic. This is the origin of the often - criticized "percent reduction method." Changing rates without reflecting differences in marginal costs and how they relate to the demand elasticities of the SARR's shippers, as the percent reduction method does, is actually inconsistent with Ramsey pricing principles.

The essence of true Ramsey pricing is that it sets rates differentially across markets to allow the recovery of unattributable costs, while deviating as little as possible from optimal (that is, marginal cost) pricing. It does this by setting freight rates such that the *markup over marginal cost* – not the freight rate – is inversely related to elasticity of demand. By focusing solely on relative freight rates without regard to marginal costs, the percent reduction method distorts Ramsey results. For example, SARR traffic that is not earning its marginal costs is entitled to rate reduction under percentage reduction – an obviously absurd result.

The Board's proposal to eliminate the percent reduction method is welcome relief. Not only is the percent reduction method inconsistent with Ramsey principles, but, as I noted in my RVS, it is contrary to reasoned regulatory policy because the rate set by the railroad in anticipation of litigation determines the SAC outcome. A railroad cannot lose from a rate increase when the percent reduction method is in force. The complainant

shipper can “win” its case, yet be forced to pay a rate increase that the railroad had set as its target at the outset. This conclusion has not been rebutted by BNSF’s witnesses, Drs. Kalt and Willig.¹

Instead they have accepted the percent reduction method as basically consistent with Ramsey pricing, even though it is not. They have devoted their critique to the alternative mechanisms for rate reduction proposed by the Board, the so-called Maximum Markup Methodology (MMM) and Maximum Contribution Methodology (MCM). These methods for rate reduction are based on SAC, and would allocate the SAC among the SARR’s shippers in a manner that respects the ordering of rate levels among them. Under MMM, for example, shippers that pay the lowest markups over marginal cost would continue to do so.² Moreover, no shipper would pay a higher markup than it experiences under the present rate structure. The same is true of the alternatives proposed by two of the Coal Shippers, the Reasonable Allocation Method (“RAM”) and the Generalized Percentage Reduction Methodology (“GRPM”).

II. URCS Marginal Cost and Individual Movement Costs

The railroad economic witnesses’ critique of MMM is that it violates Ramsey pricing principles. However, MMM, unlike percent reduction is intended to remove pricing anomalies (e.g., reducing rates that earn less than marginal costs) and fairly allocate rate reductions among shippers with the highest r/vc ratios.

¹ The issue was not addressed by Union Pacific’s economic witness, Dr. Neels.

² Because of differences in the marginal cost of serving individual shippers, MMM is the more practical approach to assigning rates that generate revenue equal to SAC, and I will focus on its applicability.

The railroad economic witnesses also claim it would be impossible for a shipper or indeed the Board to determine whether MMM rates are Ramsey rates. In order to verify that a rate satisfies the Ramsey condition, one must first calculate the ratio of the rate to the marginal cost of the specific rail movement. The railroad witnesses claim that existing estimates of marginal cost, such as URCS variable cost, are not the same as marginal cost, and that they may be higher in some circumstances and lower in others. Therefore it is impossible to verify whether a formula such as MMM will create rates consistent with the Ramsey condition.

The railroads' witnesses have opened up an issue that has long lay dormant, namely the accuracy of variable cost as a measure of marginal cost. So far as I know the concepts of (average) variable cost and marginal cost have been treated as nearly synonymous, going back to Rail Form A. The Staggers Act made use of the variable cost concept, now implemented by the Board using URCS, to define the jurisdictional threshold identifying freight traffic that cannot be subject to regulation. The definition is employed in a context where it makes sense only where average variable cost and marginal cost are synonymous. The same is true for reports issued by the Interstate Commerce Commission and the Surface Transportation Board on the degree to which various types of commodities make a contribution to the unattributable costs of railroad service.

The Board appears to have put this issue to rest in the ratemaking context when it adopted guidelines for small rate cases. As the Board stated in the rulemaking adopting such guidelines, "[b]ecause the marginal costs associated with handling particular rail traffic are not readily measurable, we rely on the variable costs produced by the URCS

formula as a proxy for LRMC [long run marginal costs].”³ Such variable costs were used to develop simplified methods to measure the reasonableness of rates in small rate cases, while remaining consistent with the Ramsey pricing principles that underlie the agency’s Coal Rate Guidelines.

Additionally, the railroad witnesses who raise this issue provide no evidence to support their contention that variable cost should not be used as a reasonable approximation of marginal cost. In fact, it is not clear that the railroads themselves make this distinction when pricing different types of traffic. In the present PRB coal pricing environment, costs do not appear to be an issue at all, as current market conditions enable price increases nearly across the board.⁴

The railroads’ economic witnesses’ suggestion that URCS variable cost is not a reliable measure of marginal cost attacks a compass that has guided railroad regulation for over two decades. Rate regulation would be blind without a reasonable measure of marginal cost. Variable cost has been accepted over the years as the measure of attributable cost and has served as the standard for the determination of the jurisdictional threshold and the relative contribution of different types of traffic to the unattributable costs of the railroad. If average variable cost is an unacceptable measure of marginal cost, then one must question how it could be used for these traditional functions. Thus,

³ Rate Guidelines – Non-Coal Proceedings, 1 S.T.B. 1004, 1027 (1996).

⁴ My review of the periodical literature indicates that the two railroads serving the PRB have stopped using rail transportation contracts, and are no longer attempting to attract traffic from each other. If the Board sits back and watches this play out without its participation, it will in effect be blessing substantial rate increases on virtually all PRB coal traffic in the near future.

there is more at stake here than the use of MMM, MCM, RAM or GPRM as possible tools for allocating SAC relief among the SARR's customers.

In conclusion, if the Board continues to accept URCS variable cost as a reliable measure of marginal cost, it should give careful and favorable consideration to the use of MMM, as well as the alternatives proposed by individual members of the Coal Shippers group. These methodologies are intended to address carrier rate manipulation concerns inherent in percentage reduction, while, at the same time, producing reasonable allocation of rate reductions to SARR traffic group members.

III. Allocation of Cross-over Traffic Revenue

The railroad's economic witnesses are divided over the best way to allocate revenue on traffic that is interchanged between the incumbent railroad and the SARR. BNSF's witness John C. Klick presents a defense of the Board's proposed Average Total Cost (ATC) formula, while BNSF's witness Joseph P. Kalt and Union Pacific's witness Kevin Neels prefer a market-based standard. I agree that a market-based standard should be used, but disagree, however, with the market based standard UP and BNSF witnesses actually propose. As discussed in my OVS and RVS, the proper market standard is one that looks to actual carrier divisions in the marketplace, or if that data is not available, to reasonable surrogates like the Modified Straight Mileage Block Prorate (MMP) method or the Modified Straight Mileage Prorate (MSP) method.

A. Cross-over Revenue Allocation based on the ATC Formula

In my OVS and RVS, I discussed and criticized the Board's proposed Average Total Cost (ATC) formula for allocating cross-over revenues. I focused on the anomaly of allocating less revenue to track segments that experience heavier utilization. For this

is the implication of applying a formula that relies in part on the allocation of fixed costs. All other things being equal, the more traffic moving on the segment, the less revenue it receives from the ATC formula, because the fixed cost component of ATC declines with the volume of traffic. It is hard to believe that a well-run enterprise would allocate more resources to its least used facilities, in an environment where the allocation had no effect on the distribution of the firm's effort among its facilities.

In his comments on my analysis, Mr. Klick (Klick RVS, pp. 20-21) does not resolve the anomaly, but rather diverts attention from it. I paraphrase his arguments in favor of ATC:

- a. The problem of finding a revenue divisions formula would not arise if the SARR were restricted to a full SAC analysis that did not allow cross-over traffic.
- b. While it is true that fully allocated costs are not an appropriate basis for setting prices, here we are seeking to allocate the incumbent's end-to-end revenues in a manner that reflects the defendant carrier's relative average costs of providing service over the two segments.
- c. It is appropriate to allocate fixed costs even though they do not vary with output, because they are the costs of changing capacity.
- d. Because of economies of density, average costs decline with greater density. Thus the cost of operating the more intensively utilized facility is lower than that of the lightly used facility.

None of the above arguments explains why one would assign more revenue to a lightly used facility. The argument in a. above is a non-starter, because it diverts

attention to an issue that is not part of this investigation, namely SARRs that do not carry cross-over traffic. The Board has made it clear in its Notice instituting this proceeding that SARRs can utilize cross-over traffic. The argument in b. above simply restates the argument that allocation of fixed cost is necessary to allocate fixed cost. The argument in c. above is only relevant if it can be shown that greater capacity is necessary to carry greater tonnage. In such a case, capacity costs would not be fixed, and it is not obvious what effect this would have on the division of revenues between light and heavy density track segments. The argument in d. above restates the truism that average fixed costs decline with tonnage, because they are fixed.

B. Avoidable Cost Divisions

A totally different approach to the allocation of cross-over revenue is presented in the testimony of Drs. Kalt and Neels. They theorize that in what they characterize as the “contestable world,” the SARR and the incumbent will engage in a price war for the SARR’s traffic and hypothesize that the low bidder will gain the traffic. The SARR’s cross-over traffic must be priced just below the lowest price the incumbent could charge that still covers its variable cost. This variable cost, which is the incumbent’s avoided cost, then becomes the SARR’s rate division.⁵

As I discussed in my RVS, calculating SARR cross-over traffic divisions using this avoidable cost approach, which Mr. Neels refers to as the “Efficient Component Pricing Rule,” was properly rejected by the ICC in Bituminous Coal – Hiawatha, Utah to

⁵ In the pending Western Fuels case, the incumbent’s avoidable costs were calculated as equaling the incumbent’s variable costs as calculated under URCS. Presumably such evidence will be rejected in the future should the Board agree with the railroad’s economic witnesses that URCS variable cost is not an accurate measure of marginal costs. See section I of this testimony above.

Moapa, Nevada, 10 I.C.C.2d 259 (1994) (“Nevada Power II”) as “inconsistent with the nature and purpose of the SAC constraint.”

[U]nder UP’s “efficient component pricing” rule, NPRR’s revenue division for cross-over traffic would be no higher than UP’s incremental cost of providing the service – a level UP admits would allow for only a minimal contribution to the NPRR’s joint and common costs.

UP’s construct is inconsistent with the nature and purpose of SAC constraint. Such a competitive scenario would perpetuate UP’s hold over this captive market because, as NPC points out, “a potential entrant will shun a market when price retaliation by the incumbent reduces revenue before the entrant has a chance to recoup its costs.”

Id. at 265-66 (citation omitted). The STB reaffirmed the ICC’s disapproval of avoidable costs divisions in McCarty Farms Inc. v. Burlington Northern Inc., 2 S.T.B. 460, 471 (1997) and Duke Energy Corp. v. Norfolk Southern Ry., STB Docket No. 42069 (STB served Nov. 6, 2003) at 18-19.

Kalt/Neels contend that the ICC’s, and the Board’s, repeated rejection of the avoided cost divisions approach runs afoul of the contestable market theory and the Guidelines. However, as I discussed in my RVS, the ICC and the Board have properly applied contestability theory and the Guidelines in their repeated rejection of the avoided cost divisions approach. Contestability theory calls for potential marketplace entrants to “evaluate the profitability of entry at the incumbent firm’s pre-entry prices” without “fear of retaliatory price alterations” by the incumbent:

A contestable market is one in which the positions of incumbents are easily contested by entrants. In brief, a perfectly contestable economic market is defined to be one into which entry is completely free, from which exit is costless, in which entrants and incumbents compete on completely symmetric terms, and entry is not impeded by fear of retaliatory price alterations.

* * *

[the] potential entrants evaluate the profitability of entry at the incumbent firms' pre-entry prices. That is, although the potential entrants recognize that an expansion of industry outputs leads to lower prices – in accord with the market demand curves – the entrants nevertheless assume that if they undercut incumbents' prices they can sell as much of the corresponding good as the quantity demanded by the market at their own prices.

Baumol, Panzar and Willig, Contestable Markets and the Theory of Industry Structure at 349, 5 (Rev. ed. 1988) ("Contestable Markets")⁶

Of course the contestable market scenario posited by Kalt/Neels calls for "retaliatory price alterations" in the form of a price war between the SARR and the incumbent. This result violates basic tenets of contestable theory because, as Professor Martin has observed, entry "is much less plausible" if a new entrant must judge profitability of its entry "at the expected post-entry price."

The results of contestability theory require not only that rapid entry and exit be possible, but that potential entrants make their decisions taking the market price as given. This definition defines sustainability in terms of entrant profitability given the number of incumbents, their output, and the price at which that output clears the market. Under this definition of sustainability, the entrant is not permitted to take account of the price reduction that its own output will produce when it assesses the profitability of entry. The entrant is not permitted to take account of possible reactions of incumbents. Hit-and-run entry is supposed to occur if the potential entrant could make a profit at the pre-entry price. If the potential entrant comes into the market

⁶ See also Bailey & Baumol, Deregulation and the Theory of Contestable Markets, 1 Yale J. on Reg. 111, 114 (1984) ("[a] contestable market works most effectively if, in response to a profit-making opportunity, new firms can enter quickly, earn profits at least temporarily (before incumbents can constitute countermeasures) and then leave without any loss of investment or sunk capital.").

only if it could make a profit at the expected post-entry price, hit-and-run entry is much less plausible.

S. Martin, The Theory of Contestable Markets at 10 (July 2000).

Any use of avoidable cost divisions is also flatly inconsistent with the Guidelines' procedures for calculating SARR revenue and costs. On the revenue side, the SARR's revenue is calibrated at the projected market rates the SARR could collect from its traffic group over the analysis period if it replaced the defendant carrier's service. These revenues are then compared to SAC to determine whether the SARR revenue level exceeds SAC. A rate war between the incumbent and the SARR will reduce that revenue. Were the Board to evaluate the SARR's profitability using the freight rates that result from a price war (i.e. avoidable costs), it would be unable to determine whether the incumbent's existing freight rates are too high.⁷

On the SARR SAC cost side, the use of avoidable cost divisions is likely in most instances to produce SARR divisions on cross-over traffic well below the full SAC costs of providing service. Obviously, a SARR, or any new market entrant, will not enter (or remain) in a market where it cannot recoup its total costs.

I conclude, as I did in my OVR and RVS, that the ICC and the STB have properly applied contestability principles under the Guidelines in rejecting the use of avoidable cost divisions to set SARR divisions.

C. Actual Market Divisions

Kalt/Neels also argue that actual "real world" market division principles and data have no place in a SAC analysis. I disagree.

⁷ Also, the incumbent is not reducing its rates simply because the SARR has been posited by a shipper.

The Guidelines provide that SARR revenues are presumed to equal the incumbent carrier's actual real-world market rates in the base discounted cash flow (DCF) period. Thus, in making the SARR revenue calculations, the parties in SAC cases use, for base period calculations, the defendant carrier's actual market rates for the issue traffic; the defendant carrier's actual market rates when the SARR replicates the incumbent's origin to destination service for non-issue traffic; and use the defendant carrier's actual market divisions when the SARR replicates the incumbent's portion of a joint line movement.

For cross-over traffic movements, there is no identical corresponding market rate. The issue becomes how to set that rate. In Nevada Power II, the ICC concluded that "the proper approach is to estimate what the *market-based* divisions would be . . ." 10 I.C.C. 2d at 280; emphasis in original. The Board proceeded to follow the Nevada Power II cross-over traffic divisions standards for years. For example, in STB Docket No. 42022, FMC Wyoming Corp. v. Union Pacific R.R. Co., (STB served May 12, 2000), the Board used the MMP procedure to set cross-over traffic divisions, finding that use of MMP "is the best procedure for allocating revenues to carriers where market based divisions are not available." Id. at 27. Similarly, in Docket No. 42056, Texas Municipal Power Agency v. Burlington Northern and Santa Fe Ry., (STB served Mar. 24, 2003), the Board relied on MMP to set SARR divisions on cross-over traffic:

Normally, when two or more railroads serve a shipper in joint-line service, they negotiate a market-based revenue division of the rate. Lacking information to determine BNSF's typical market division in various market-driven situations, TMPA divided the revenues on cross-over traffic between the GCRR and the residual BNSF based on the [MMP] method that has been used in prior SAC cases.

Id. at 31.

The Board's SAC procedures call for SARR revenue calculations that replicate the actual market rates and divisions. As I have stated in my OVS and RVS, the proper method to set SARR divisions on cross-over traffic is to estimate these divisions using real world market data supplied by the defendant carrier and, in situations where that data is unavailable, to use reasonable surrogates like MMP and MSP, formulas that properly set SARR divisions by factoring both cost and market factors.

D. Rate Divisions on Through Movements

Dr. Willig argues that it is impossible to divide a so-called "through" movement into SARR and off-SARR segments for SAC purposes. Reply V.S. Willig at 4-9. This assertion finds no support at all in the real world of railroading. There are thousands of existing "through" movements that are provided by more than one carrier. Carriers negotiate divisions on these movements every day, and the STB has the authority to set these divisions if the carriers cannot agree, authority that the ICC also had and exercised frequently. Nor is there any validity to the contention raised by Dr. Willig that it is impossible to estimate the demand characteristics of a joint line movement. This exercise is undertaken on a regular basis in the marketplace as railroads participating in joint line movements price the traffic in accordance with applicable market and regulatory factors.

IV. Definition and Measurement of Cross-Subsidies

In Docket No. 42054, PPL Montana, LLC v. Burlington Northern and Santa Fe Ry. Co., (STB served Aug. 20, 2002), a cross-subsidy was defined as the excess of the attributable costs of moving the issue traffic on the SARR over the revenue such traffic generated. (Id. at 9-10). Issue traffic that requires the use of light density rail segments

will be vulnerable to this test if the SARR is shown to be more profitable without the issue traffic.

A second test was outlined in STB Docket No. 42071, Otter Tail Power Co. v. BNSF Railway Co., (STB served Jan. 27, 2006) (“Otter Tail”), though it was not applied in that case. Under this variant of the test, relief from rate overcharges would be limited to the lesser of either the SARR’s excess profit over total SAC or the shipper’s excess freight charges over its attributable cost to the SARR. The stated purpose of this second test is to prevent a cross-subsidy from arising through the profit the SARR can generate through the inclusion of revenue from non-issue traffic.

In my OVS, I criticized two aspects of the new test: its inconsistency with the freedom granted by the Guidelines to combine issue and non-issue traffic without any limitation on the respective revenue contributions; and the fact that as applied in Otter Tail, the new test does not faithfully adhere to the Board’s stated definition of cross subsidy (namely the excess of attributable cost over revenue). I demonstrated that the Board’s example incorrectly calculated the attributable cost of the issue traffic, and in so doing exaggerated the magnitude of any possible cross-subsidy.

In commenting on the second part of my critique, John Klick defended the Board on the ground that its practice does not suffer from the deficiency of the stylized example. However, this is a dangerous place to leave the debate, because the existence of a vaguely defined and inconsistent rule opens the door to misinterpretation and excessive administrative discretion.

A. The Board's Decision Erred in its Discussion of the Otter Tail Subsidy

To see the Otter Tail subsidy, it is necessary to return to my OVS, where I employed a stylized model of a stand-alone railroad that was originally presented on pages 8-11 of the Board's decision.

The model is based on the assumption that there are three captive shippers receiving coal from mines in the PRB. As in Otter Tail, Shipper 1 who has challenged a PRB rate is located north of the PRB and receives coal from Cordero and other mines north of Cordero. Shipper 2, located near Shipper 1, also uses those core facilities, and takes coal as well from mines as far South as Rochelle. Shipper 3 is located South of the PRB and receives its coal exclusively from Cordero and mines South of Cordero.

The SARR is depicted as a horizontal straight line, with Shippers 1 and 2 on the left side and Shipper 3 on the right. In between are three line segments: between Shippers 1 and 2 (at point A) and Cordero (at point B); between Cordero (point B) and Rochelle (point C); between Rochelle (point C) and Shipper 3 (point D). The right of way costs of each segment are shown below, and it is assumed that each shipper covers its own operating costs. The right of way cost of the AB segment will be \$70, the BC segment \$30, and the CD segment \$10.

Shippers 1 and 2	Cordero	Rochelle	Shipper 3
A ←	→ B ←	→ C ←	→ D
\$70	\$30	\$10	

The stand-alone right of way cost of serving the three shippers is \$110; the revenue contribution (in excess of operating cost) from Shippers 1 and 2 is \$110; and from Shipper 3 it is \$20. Using the PPL test, Shippers 1 and 2 must pay the SARR at

least \$70 to cover the right of way cost of segment AB, and Shipper 3 must pay at least \$10 to cover the right of way cost of Segment CD.

The SARR is making a profit of \$20 (= Revenue in excess of operating cost of \$130 – SAC in excess of operating cost of \$110). Applying the PPL test, there is no cross subsidy paid to the complainant shipper by Shipper 3. Shippers 1 and 2 are more than covering their attributable costs of \$70. For the same reason, Shipper 3 is not being subsidized by the other two. Its revenue contribution more than covers its attributable costs of \$10.

The three shippers' revenue contributions (in excess of operating cost) exceed \$110. How much of a rate reduction might be given to Shippers 1 and 2 without creating a cross subsidy from Shipper 3? In Otter Tail (at 10-11), the Board concluded that the refund may not exceed \$10. It argued that any refund in excess of \$10 would imply that Shippers 1 and 2 are paying less than their attributable costs of \$100. This is incorrect.

The decision is in error, because it assumes that the \$100 of attributable costs for the A-B-C-segments are solely the responsibility of Shippers 1 and 2. Under a correct application of the PPL test, Shippers 1 and 2 must cover the \$70 right of way cost of the AB segment, but they alone are not responsible for the \$30 right of way cost of the BC segment. That cost will be shared with Shipper 3. There is no reason why Shipper 3 should be permitted to use the SARR's BC segment for nothing. The only attributable costs are those that would disappear if the shipper's traffic disappeared. If Shippers 1 and 2 disappeared, Shipper 3 would still have to cover the right of way cost of the BC segment. Service to Shipper 3 would then impose on it a right of way cost of \$40.

So long as Shipper 3 is willing to pay a contribution for the use of the BC segment, Shippers 1 and 2 should be allowed to benefit by reducing the revenue contribution they must make toward the operation of the SARR. In this circumstance, it is inaccurate and improper to regard Shipper 3's contribution to the cost of the BC segment as an involuntary subsidy. It is willingly paying a rate of \$20 over and above the operating costs of transporting its coal. It cannot go off on its own and set up a SARR that would charge it less than the \$20 it is currently paying over and above its operating costs; indeed, the implication of the example is that its contribution to right-of-way costs could double. It is not valid for the Board to argue that Shipper 3 would be subsidizing Shippers 1 and 2 by contributing to the right of way cost of the BC segment.

Mr. Klick's commentary fails to acknowledge the Board's error. Moreover, he fails to recognize that the Board's application of the cross-subsidy test is considerably simplified by focusing on what he calls "right-of-way" costs, assuming that each shipper covers its "operating" costs.

B. Cross-Subsidy and the Length of the BC Segment

Mr. Klick expresses the belief (RVS, p. 24) that the likelihood of finding a cross-subsidy of the Otter Tail variety depends on the length of the rail segment which carries both issue and non-issue traffic, and he conjectures that the shorter the segment, the greater the likelihood a subsidy will be found. This is an observation based on rail operations in the PRB, which is marked by heavy movements on a relatively short trunk, with coal traffic branching out from the trunk for longer hauls on lighter density lines. Mr. Klick does recognize, however, that not all coal movements need display such a

relationship. There is nothing in the nature of mixed use of a rail line segment to imply that shorter segments will display greater mixed use than longer segments.

It is noteworthy that both Mr. Klick and Dr. Willig attempt to defend the Otter Tail test by suggesting a narrow definition of the factual circumstances in which it would have a material effect on the outcome of a rate challenge. For example, Dr. Willig states:

The Board's cross-subsidy test . . . comes into play when the proponent of a [SARR] seeks to make it appear that the issue traffic rates are too high by designing a system that is composed of two essentially separate parts that do not extensively overlap – a lighter-density segment (or group of segments) that is utilized by the issue traffic and certain other non-issue traffic, and a heavier-density segment (or group of segments) that is used relatively little or not at all by the issue traffic.

Reply V.S. Willig at 4. However, no such limitation is explicit in the Otter Tail ruling, or implicit in the apparent scope of the test's application. Virtually every SARR – even one which replicates identically a defendant's main coal corridor – will include branch lines to destination facilities and other lighter-density segments that do not “extensively overlap” with heavier-density lines but nevertheless are part of the same unified carrier system. In each such case, the Board's cross-subsidy test, which no real world carrier would or could apply to its own system, will reduce the measure of rate relief available to a successful complainant and permit the defendant to retain revenues over and above total SAC levels.

C. Cross-Subsidy and the Guidelines

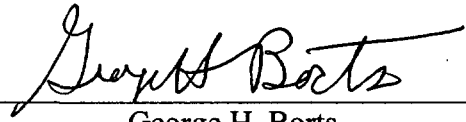
Mr. Klick's hunt for Otter Tail type cross-subsidies also raises the question of its inconsistency with the Guidelines. What is the rationale for restricting the revenue contribution (in excess of operating costs) from the SARR's non-issue traffic to the

“right-of-way” costs on segments such as BC?⁸ If revenue generated from non-issue traffic exceed right-of-way costs, that revenue should be refunded to the complainant shipper, and in principle to all other shippers who can demonstrate an overcharge. In Otter Tail, the Board speaks of reserving revenue that would allow overcharges to be repaid to other captive shippers who might bring a challenge to their own rates in the future. Id. at 11. But in reality, in the absence of such challenges, the SARR’s revenues continue to exceed its SAC, and the overage is retained by the defendant. That is, the challenged rate is proved unreasonable, yet the defendant is permitted to continue to reap the benefit.

⁸ Note that this has nothing to do with cross-over traffic. The discussion in this section assumes the absence of cross-over traffic.

VERIFICATION

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

A handwritten signature in cursive script, reading "George H. Borts", is written over a horizontal line.

George H. Borts

Executed on: June 28, 2006

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

MAJOR ISSUES IN RAIL RATE CASES

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Ex Parte 657 (Sub No. 1)

**REBUTTAL VERIFIED STATEMENT
OF
THOMAS D. CROWLEY
*President***

**L. E. PEABODY & ASSOCIATES, INC.
ECONOMIC CONSULTANTS**

June 30, 2006

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**REBUTTAL VERIFIED STATEMENT
OF
THOMAS D. CROWLEY**

I. INTRODUCTION

My name is Thomas D. Crowley. I am an economist and President of the economic consulting firm of L. E. Peabody & Associates, Inc. My qualifications and experience are attached as Exhibit No. 1 to my Opening Verified Statement I filed in this proceeding on May 1, 2006 ("Crowley Opening VS").

The Coal Shippers,¹ Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. ("WFA/Basin"), and AEP Texas North Company ("AEP Texas") have asked me to address certain issues raised by BNSF Railway Company ("BNSF") and Union Pacific Railroad Company ("UP") in their May 31, 2006 Reply comments in this proceeding. These issues include: (1) general considerations regarding the application of rate reduction methodologies under Constrained Market Pricing ("CMP") and the Surface Transportation Board's ("STB") Stand-Alone Cost ("SAC") test; (2) criticisms of the Reasonable Allocation Methodology ("RAM") proposed by WFA/Basin; (3) criticisms of the Generalized Percent Reduction Methodology ("GPRM") proposed by AEP Texas; (4) criticisms of utilizing actual real-world, market-based divisions for the allocation of stand-alone railroad ("SARR") revenues on cross-over traffic; (5) the fallacy of viewing cross-over traffic as a simplification of a "Full SARR" analysis; (6) the economic inadequacy of the STB's proposed Average Total Cost ("ATC") division method; (7) the appropriateness of adjusting the debt

¹Western Coal Traffic League, Concerned Captive Shippers, Western Fuels Association, Inc., Edison Electric Institute, National Rural Electric Cooperative Association and American Public Power Association

amortization scheduled in the STB's discounted cash-flow ("DCF") model when shifting from a 20 year recovery model to a 10 year recovery model; and (8) the conclusion that the demand elasticity for coal transportation to captive destinations varies significantly.

The remainder of my Rebuttal Verified Statement addresses these issues under the following topical headings:

- II. General Consideration of Rate Reduction Methodologies
- III. RAM Is An Appropriate Rate Reduction Methodology
- IV. Cost Inputs Into GPRM Are Appropriate And Adequate
- V. Theory And Precedent Call For Market-Based Divisions
- VI. Full SARR Analyses Are Contrary To CMP And SAC Principles
- VII. The ACT Division Method Is Arbitrary And Inconsistent
- VIII. Debt Amortization Schedule
- IX. Demand Elasticities

II. GENERAL CONSIDERATION OF RATE REDUCTION METHODOLOGIES

In their Opening Comments in this proceeding, the Coal Shippers agreed with the STB that the Percent Reduction Methodology (“PRM”) currently employed by the STB to adjust rates under the SAC test should be retired due to the fact that, under that methodology, the initial rate set by the defendant carrier largely pre-determines the SAC outcome.² The Coal Shippers also did not object to the STB’s adoption of the Maximum Contribution Method (“MCM”) or the Maximum Mark-up Method (“MMM”) as alternative replacements for PRM.³ Finally, the Coal Shippers indicated that while MCM and MMM are improvements over PRM, the STB should not adopt them as exclusive methods for allocating SAC rate relief in proceedings pursuant to the Interstate Commerce Commission’s (“ICC”) ruling in Ex Parte No. 347 (Sub No. 1), Coal Rate Guidelines, Nationwide, Decided August 8, 1985 (“Guidelines”). Instead, the Coal Shippers pointed toward two other maximum rate determination methodologies, RAM and GPRM, that are superior to MMM and MCM in terms of consistency with the core principles of Ramsey Pricing, and that should be endorsed by the STB as valid alternatives that may be used in individual rate cases.

In reply to the Coal Shippers’ Opening Comments, BNSF presented the reply verified statement (“RVS”) of Dr. Joseph P. Kalt (“Kalt”). Kalt defended the appropriateness of the PRM, and explained why the MMM, MCM, RAM and GRPM allegedly are inconsistent with Ramsey Pricing and/or CMP principles. BNSF also presented the reply verified statements of Dr. Robert D. Willig

²See Coal Shippers Opening Comments at 22.

³See Coal Shippers Opening Comments at 22.

(“Willig”) and Mr. John C. Klick (“Klick”), who, collectively with Kalt, made the claim that whatever rate reduction methodology is used, the rates used should reflect the complete origin-to-destination rates (“through rates”) of the shippers included in the SARR’s traffic group and not the rates reflected in the SARR’s cross-over revenues. In addition, Willig also claimed that if the proposed rate reduction methodology utilizes an explicit calculation or estimate of marginal costs, the method should employ the calculation or estimate of the incumbent railroad’s marginal costs and not that of the SARR’s marginal cost of service. Furthermore, Willig argued that whatever method or methods the STB adopts should not unduly harm the incumbent railroad’s rate structure. Each of the claims and assertions made by BNSF’s witnesses are in fact incorrect as I explain below.

**A. PRM IS FLAWED BEYOND ITS
ABILITY TO BE MANIPULATED**

At Page 27 of his RVS, Kalt asserts that PRM is the best rate reduction methodology available if the STB does not use his Contestable Market approach to rate reduction.⁴ Kalt believes that the PRM is consistent with the economics of contestability and the economics of Ramsey Pricing, insofar as it recognizes that contestability will place downward pressure on, and preserve the relative

⁴Under Kalt’s Contestable Market approach, revenues for cross-over traffic are set equal to the incumbent railroad’s avoidable costs of service over the section of the incumbent replaced by the SARR. Any difference between the aggregated non-issue traffic revenues and SAC is then attributable to the issue movement. If the difference on a per-ton basis is greater than the common carrier rate being charged, then the rate is presumed to be reasonable and no reduction is warranted. If the difference on a per ton basis is less than the common carrier rate, the difference per ton reflects the reasonable rate available to the complainant. I do not address Kalt’s Contestable Market approach here because it was soundly refuted as being inconsistent with contestable market theory and STB/ICC precedent in WFA/Basin’s Rebuttal Testimony in STB Docket No. 42088, Western Fuels Association, Inc. and Basin Electric Cooperative Inc. v. BNSF Railway Company. See WFA/Basin’s Publicly Available Rebuttal Testimony in Docket No. 42088 at III-A-32.

ranking of, all rail rates.⁵ Kalt also dismisses the claims made by the Coal Shippers and the STB that the various proposed alternatives to PRM, including MCM, MMM, GPRM and RAM, move the rate reduction process closer to Ramsey principles. Instead, Kalt asserts that none of the methods in fact move closer to Ramsey pricing because the methods are inconsistent with the tenets of Ramsey pricing, improperly compress the rate structure, rely too much on proxy costs that distort the results, or, in some cases, all of the above.⁶

While I address Kalt's claim about the alternative methods' reliance upon proxy costs below, I address here Kalt's incorrect claim that PRM is more consistent with Ramsey prices and does not improperly compress the rate structure.

**1. PRM Departs From
Ramsey Pricing Principles**

There is a consensus among economists that fixed cost recovery poses a regulatory dilemma. Setting rates at marginal cost is economically efficient, in that it maximizes the value resulting from the production and consumption of the goods or services in question. However, marginal cost pricing will not always allow the vendor to recover all of its fixed and/or overhead costs. Raising rates above marginal cost results in revenues in excess of operating costs to provide a contribution to fixed costs, but these prices are inefficient in that they will act as a disincentive to maximum economic activity among some customers. The essence of Ramsey pricing is that it sets prices differentially across markets to allow additional revenue recovery while minimizing the deviation

⁵See Kalt RVS at 26.

⁶See Kalt RVS at 28.

from optimal quantities. It does this by setting prices such that the markup of price over marginal cost is inversely related to the elasticity of demand. Because Ramsey pricing deviates from optimal or “first-best” marginal cost pricing but does so in a manner that minimizes deviations from optimal quantities, Ramsey pricing also is referred to as “second best” pricing.

Because it bases pricing differentials on inverse demand elasticities, Ramsey pricing often has been characterized as a “demand-based” approach as opposed to a “cost-based” approach. However, Ramsey pricing also has a “cost-based” side, as the foundation for Ramsey pricing is marginal cost pricing, with markups being determined by what is necessary to recover fixed cost in a manner that minimizes quantity distortions. Thus, Ramsey pricing both blends and transcends cost-based and demand-based pricing. The determinants of the Ramsey prices are the elasticities of demand, operating costs, fixed costs, and market-specific costs.

The percentage reduction method departs from Ramsey principles by focusing on the maintenance of price level relationships. In an apparent effort to move toward demand-based pricing, PRM abandons the basic foundation of Ramsey pricing - i.e., the markup of price over marginal cost. The rationale for using an equal percentage reduction in rates to maintain relative prices is fundamentally flawed because it focuses on the wrong concept - the ratio of prices. In actuality, the proper focus should be the relative markups above marginal cost that characterize the various participants in the market under scrutiny.

In addition, the STB approves Ramsey pricing principles as the basis for the establishment of rates above marginal cost to serve the goal of revenue adequacy. However, the current PRM

allocates rate relief proportionately, regardless of how prices originally were marked up when revenue need was greater. Thus, it is inconsistent with Ramsey and demand-based pricing principles.

2. PRM Also Leads To Rate Compression

Kalt asserts that the MMM, MCM and RAM approaches improperly distort pricing relationships by “compressing” rate structures and destroying the relationships that have supposedly been based on shippers’ elasticities of demand.⁷ He contends that the PRM eliminates the issue of rate compression by placing downward pressure on all rates in the stand-alone traffic group. Unfortunately, Kalt’s belief that PRM eliminates the issue of rate compression is incorrect if PRM is correctly applied pursuant to the Guidelines.

As anyone familiar with the Guidelines knows, the Guidelines not only layout the methodology for determining a maximum reasonable rate allowable under the law, they also explain the methodology for determining a minimum reasonable rate as well. The Guidelines indicate that a minimum reasonable rail rate must cover a movement’s short run marginal cost to be in compliance with rate regulation.⁸ Simply stated, there is a price floor under which rail rates may not fall.

Kalt contends that PRM is a preferred method for allocating SAC rate relief because it reduces all rates by equal percentages, thereby retaining relative pricing relationships. However, given the presence of a regulatory price floor, some rates cannot be legally reduced. In those situations, even under PRM, the rate structure will be compressed, and relative pricing relationships changed. The

⁷See Kalt RVS at 28.

⁸See Guidelines at 540.

simple fact that regulatory price ceilings and floors exist undermines Kalt's argument that maintenance of pricing relationships is the end-all of pricing regulation.⁹

**B. RATE REDUCTIONS MUST BE BASED ON THE
SARR'S REVENUES, NOT THE INCUMBENT'S**

Kalt, Willig and Klick collectively assert that whatever rate reduction approach the STB chooses to adopt, if the SARR developed by the shipper utilizes cross-over traffic, then the rate reduction process should use the incumbent carrier's through rail rates for the cross-over traffic, and not the SARR's share or division of the through rates.¹⁰ Kalt, Willig and Klick base their assertion on the premise that Ramsey principles, as manifested in differential prices, are represented only on through rates, not on rates from an artificial cross-over traffic construct. They contend that it is an indefensible leap of faith to assume that a rate on a cross-over movement reflects the through movement's elasticity of demand. Therefore, to be consistent with Ramsey principles, rate reductions must be applied to the incumbent carrier's through rates and not the SARR's cross-over rates for the movements.

However, Kalt, Willig and Klick offer no support for the implicit notion that demand elasticities differ on different segments of a single movement. In fact, the contrary is true. Demand elasticity

⁹Some might argue that pricing floors are irrelevant in maximum reasonable rate cases involving coal shipments since coal shipments are in almost all cases priced above the regulatory pricing floor level. While this point is arguable, what is not is the fact that in numerous recent maximum reasonable rate cases the SARRs proposed by the complaining shippers have included highly competitive intermodal traffic, that by the railroads' own admissions, moves at extremely low rates barely above the railroad's directly variable costs. See, for example, Otter Tail and AEPCO. Any rate reductions in these cases would most likely lower these extremely low rates below the regulatory price floor.

¹⁰See Kalt VS at 41, Willig VS at 12 and Klick VS at 7.

is movement-specific in the sense that a shipper's dependency on a particular carrier is the same over the entirety of the movement. This is the essence of the "one lump" theory consistently applied by the STB in assessing the competitive impacts of railroad mergers.¹¹ Likewise, the rate set for the shipper's traffic reflects the demand elasticity of the entire movement, not its individual segments. Since market based revenue allocation methods such as the Straight Mileage Prorate ("MSP") methodology allocate revenue relatively smoothly over the through movement, the demand elasticity reflected in the through rate apportioned by MSP likewise is carried through to the portion allocated to the SARR.

**C. RATE REDUCTIONS MUST BE
BASED ON THE SARR's MARGINAL
COSTS, NOT THE INCUMBENT'S**

In a similar line of logic he used in describing the need to use an incumbent railroad's through rate in any rate reduction approach, Willig also asserts that, as an economic matter, it is the incumbent's marginal costs that should be used in the rate reduction process and not a SARR's marginal costs.¹² The use of the incumbent's marginal cost is required, according to Willig, because the underlying aim of the SAC test is to improve economic performance of the real world railroad with respect to real world prices and demand. To not incorporate or use the incumbent's real world costs in the rate reduction methodology would lead to distorted pricing and economic inefficiency. Thus, given the real world economics of railroads, Willig concludes that even if the SAC tests shows that the SARR's revenues exceed SAC, no rate reduction would be warranted if the incumbent's

¹¹See, e.g., Burlington Northern, – Merger – Santa Fe Pacific, 10 I.C.C. 2d 661, 747-48 (1995).

¹²See Willig RVS at 10 and 17.

forward looking marginal cost of service for the issue move is shown to exceed the challenged issue rate. Finally, Klick contends that the use of an incumbent's marginal cost of service should not be a burden because the incumbent's forward looking marginal costs can be easily determined with data commonly available from the SAC presentation.

Willig's logic for this stance can be chalked-up to not being able to see the forest for the trees, for he is effectively arguing for the elimination of the SAC test as a regulatory tool. In addition, his assertion is effectively the same as the long discredited claim that a railroad's revenue inadequacy is a defense for unreasonable rates. Moreover, if Kalt's, Willig's and Klick's arguments about the extreme difficulty in estimating forward marginal costs on SARR movements are to be believed, then Klick's claim that calculating the incumbent's marginal costs being easily determined must also be dismissed as I explain below.

1. Willig Would Eliminate The SAC Test

The antecedent to Willig's argument in this proceeding is that the SAC test, as enshrined in Guidelines, is just an entry test to ascertain truly economically efficient railroad pricing. Willig states:

... the SAC test is merely a starting point for determining how to modify real world rates to eliminate distortions caused by barriers to entry and exit, and to be more economically and socially efficient in the long-run(it is obviously not efficient to encourage expanded use of facilities that are operating at or above capacity). Traffic that utilizes congested facilities experience very high marginal costs – costs that include a *pro rata* share of the full, forward-looking costs of expanding the network capacity to eliminate the congestion that these movements help to cause. In Ramsey Pricing terms, these very high marginal costs result in relatively small (or negative) margins on the traffic moving over congested facilities, which in turn suggests that while facilities used by the issue traffic remain congested, minimal or no rate reductions would be warranted, *even if revenues seem to exceed SAC*.¹³

What Willig is essentially arguing for is the complete elimination of the SAC tests for regulating rail rates. Specifically, Willig would judge a shipper's rail rate against the costs the incumbent incurs in the real world. The SAC test however is not defined by the incumbent's real world costs, but the costs of a hypothetical SARR. As explained in Guidelines,

“ If the current carrier is fully efficient and realizes economies of scale, scope and density, its existing configuration will yield the lowest overall cost of service. If not, a captive shipper can have its rates based on the lower costs of an alternate, [hypothetical] stand-alone system in which the plant size and traffic base are designed to maximize the efficiencies and production economies.”¹⁴

As further explained in Guidelines, the SAC test is used to compute the rate a competitor in the marketplace would need to charge to service a captive shipper or group of shippers who benefit from sharing joint and common costs. A rate level determined by the SAC methodology represents the theoretical maximum rate that a railroad could levy on shippers without substantial diversions of

¹³See Willig RVS at 17 (emphasis in original).

¹⁴See Guidelines at 542.

traffic to a hypothetical competing service.¹⁵ This hypothetical competing service is represented in most SAC cases by a SARR.¹⁶ The SARR, by its very nature and definition, has its own operating plan and cost structure that are different from the incumbent's. While shippers in most SAC cases look at the incumbent carrier for the sources of operating and construction unit costs, the total operating and construction costs of the SARR are its own, and distinct from those of the incumbent carrier. The ultimate goal of the SAC test is to determine if the revenue generated by the SARR traffic group is greater than the SAC for the hypothetical SARR. The incumbent's actual marginal cost of service has no place in this CMP regulatory arena.

2. Willig Seeks To Inject Revenue Adequacy Into The SAC Test

One of Willig's stated reasons for utilizing the incumbent carrier's forward-looking marginal costs in lieu of the SARR's SAC is that traffic that utilizes congested facilities should pay the costs of expanding the network capacity to eliminate the congestion that these movements help to cause.¹⁷ Stated differently, Willig argues that if the incumbent carrier is not earning adequate revenues with its existing rates to expand its network, then the incumbent's rates are not unreasonable.

Willig's line of reasoning, that a railroad's revenue inadequacy justifies unreasonable rates, has repeatedly been rejected by the ICC, the STB and the courts. The ICC originally addressed revenue adequacy and rate reasonableness in Guidelines, where it stated: "Finally, it should be noted that a

¹⁵See Guidelines at 528.

¹⁶Guidelines points out that the competing service does not necessarily have to be another railroad, but could be any transportation service as long as the revenue, cost and operating data is verifiable and supportable. See Guidelines at 543.

¹⁷See Willig RVS at 17.

rate may be unreasonable even if the carrier is far short of revenue adequacy.”¹⁸ Since the implementation of the Guidelines, the ICC and the STB have consistently held that an incumbent’s revenue inadequacy is not a defense against unreasonable rates.¹⁹ These holdings have been upheld on judicial review, most recently in BNSF’s appeal of the STB’s decision in 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 7, 2004 (“Xcel”).²⁰ Simply stated, there is no basis in economics, as encompassed in CMP principles, or in the law, to state that a carrier’s revenue needs justify a legally unreasonable rate.

3. Klick’s Claims Regarding The Ease Of Calculating The Incumbent’s Marginal Costs Are Contradictory

Klick claims that adjusting rate reduction methodologies that are based on Ramsey pricing principles to reflect an incumbent’s marginal costs can be easily done with data customarily presented in SAC presentations.²¹ Specifically, Klick states: “This overage can then be eliminated by applying an equal percentage reduction to the mark-ups over marginal costs developed for the *through* movements of each movement in the stand-alone traffic group, including each cross-over traffic movement (information that is easily developed from data routinely available in SAC

¹⁸See Guidelines at 536.

¹⁹See, e.g., Nevada Power, 6 I.C.C.2d 1, 9 (1989) and Xcel II (Docket No. 42057, Decision served January 19, 2005) at 6.

²⁰See BNSF Railway Co. v. Surface Transportation Board, No. 05-1030 (United States Court of Appeals for the District of Columbia Circuit, June 16, 2006, Slip op. at 5 (“Regardless whether BNSF as a system is revenue-adequate, ... revenue adequacy is not a basis upon which a carrier may defend an unreasonable rate ...”).

²¹See Klick RVS at 7.

cases).”²²

Klick’s claim however is contradicted by the claim made by Kalt, Willig and even Klick himself that determination of forward-looking marginal costs is not a routine effort, but requires extensive data and analysis. All three of BNSF’s witnesses go into a great deal of detail to claim that a SARR’s forward looking marginal costs used in several of the shipper’s proposed rate reduction methodologies cannot be accurately inferred from accounting-based URCS costs due to URCS costs’ failure to encompass such forward-looking marginal costs.²³ For example, Kalt, Klick and Willig refer to the extensive present congestion occurring in the Powder River Basin (“PRB”), and the additional expense this congestion adds to a movement’s forward-looking marginal costs.²⁴ This additional cost due to congestion must, according Kalt, Willig and Klick, be calculated and added to other marginal costs if it is to be used in a rate reduction approach that claims to adhere strictly to Ramsey Pricing principles. Kalt, Willig and Klick go on to enumerate other movement-specific costs that also must be included, such as costs associated with delivery guarantees and equipment supply. Overall, Kalt, Willig and Klick effectively deduce that estimating a SARR’s marginal costs is an extremely daunting, if not impossible, task.

This begs the questions, however. If it is so difficult to develop a SARR’s forward-looking marginal costs, why would Klick believe that estimating an incumbent railroad’s forward-looking marginal costs should be any easier? The answer is it cannot be any easier if Kalt’s, Willig’s and

²²See Klick RVS at 7 (emphasis original).

²³See, for example, Klick RVS at 9, Kalt RVS at 14 and Willig RVS at 13.

²⁴I explain below why BNSF’s witnesses’ contentions about current PRB congestion is irrelevant in a SAC presentation.

Klick's assertions about the difficulty of developing a SARR's marginal costs are to be believed. In truth, any shipper even attempting to develop the forward-looking marginal costs for a railroad's through movement as part of a maximum rate case would most assuredly have its efforts negated by the railroads' well-known proclivity for withholding critical discovery data (or claiming it does not exist). To truly develop the marginal costs for all through movements included in a typical SARR traffic group in a SAC case would require detailed cost information for a vast majority, if not all, of the incumbent railroad's network - including future expansions. Given that the railroads already fight tooth and nail to avoid providing detailed information about the issue movement's route, it is highly unlikely that they would agree to provide such detailed information for nearly their entire systems.

III. RAM IS AN APPROPRIATE RATE REDUCTION METHODOLOGY

In the Coal Shippers' Opening Comments in this proceeding, and in WFA/Basin's Additional Opening Comments in this proceeding, both explained that there are alternative rate reduction methodologies that are superior to the MMM and MCM methodologies proposed by the STB in terms of consistency with the core principles of Ramsey pricing. One of these alternative approaches is the RAM approach, which WFA/Basin summarized at page 13 and described in detail in Exhibit 1A of its Additional Opening Comments. As described by WFA/Basin, under RAM, all shippers pay their variable costs of service as calculated using a SARR-specific URCS. RAM then allocates unattributable costs, defined as the difference in aggregate SARR variable costs and SAC, to the SARR's captive shippers, on a pro rata basis. RAM is an appropriate procedure for allocating SAC

relief where discrete groups of shippers have similar elasticities of demand.

In his Reply to the Coal Shippers and WFA/Basin, Kalt argues that RAM is inconsistent with the Guidelines and economic theory. Specifically, Kalt claims that RAM's approach of distributing joint and common costs on the basis of captive shipper ton-miles is arbitrary, and therefore inconsistent with differential pricing and Ramsey principles. He also contends that RAM's assumption that all captive coal shippers have the same elasticities of demand and all competitive coal shippers have the same elasticities of demand is faulty, and that RAM's non-allocation of fixed costs to competitive coal shippers is contrary to economic theory.

As I explain below, Kalt's criticisms are invalid because they are contrary to the spirit, intent and application of the Guidelines, and because they are rooted in Kalt's misunderstanding of URCS costing procedures.

**A. RAM'S ALLOCATION OF FIXED COSTS
IS CONSISTENT WITH THE GUIDELINES
AND OTHER ICC/STB PRECEDENT**

Kalt believes that RAM is an inappropriate tool for allocating SAC because ton-miles are an arbitrary mechanism for allocating joint and common costs to individual movements, and because it does not recognize that demand elasticities vary across shippers, including across shippers that RAM designate as "captive." For this reason, Kalt argues the RAM approach is contradictory to the Guidelines, and that the ICC and STB have correctly rejected allocating costs on the basis of ton-miles in a number of prior rulings.²⁵ In actuality, and contrary to Kalt's claim, RAM complies with

²⁵See Kalt RVS at 24.

the Guidelines, and the ICC/STB have not dispositively rejected allocations such as those made by RAM.

The fundamental RAM allocation principle is that captive shippers with reasonably similar demand elasticities can pay a pro rata share of a SARR's unattributable costs. This basic RAM principle was championed by the western railroads in the mid-1980s; was adopted by the ICC in the Guidelines; and was applied by the ICC in the first two major coal rate cases the ICC decided after it promulgated the Guidelines.

Kalt's truncated reading of the Guidelines cannot overcome what the Guidelines say and how the ICC applied them after they were issued. The antecedent of Kalt's argument is that the Guidelines permit a pro rata distribution of unattributable costs among SARR shippers only if those shippers have "identical demand characteristics" and "equal elasticities" of demand. Kalt's reading of the Guidelines is clearly wrong – the Guidelines expressly permit, and encourage, complainant shippers to allocate unattributable costs on a pro rata basis among SARR traffic group members with "similar demand elasticit[ies]."²⁶ They say nothing about "identical" demand elasticities.

In developing the methods used in the Guidelines, the ICC ruled that shippers could evenly allocate unattributable SARR costs to SARR traffic group members that shared similar demand elasticities. The ICC also held that shippers could present practical, qualitative evidence to demonstrate these similar demand elasticities.²⁷ The ICC's solution found support in the filings made by a large group of western railroads ("Western Railroads") that included BNSF's corporate

²⁶Guidelines at 533.

²⁷Guidelines at 527.

predecessors.²⁸

The ICC proceeded to apply these elasticity principles in its landmark Omaha Public Powder District (“OPPD”)²⁹ and Arkansas Power & Light (“APL”)³⁰ decisions. Each of those cases involved a shipper challenge to railroad coal rates from the PRB to its utility plant. In each case the shipper designed a SARR to provide PRB-to-plant service. The ICC found in each case that SARR revenue exceeded SARR costs, and also adopted the shippers’ proposed method to determine SARR-specific SAC rates. That method called for each SARR shipper to pay its variable costs. The remaining unattributable SARR costs were distributed on a pro rata ton-mile basis among the SARR’s coal shippers – all of whom were captive shippers.

The ICC found in each case that this distribution of unattributable costs was permissible because the Guidelines permitted shippers to allocate these costs among traffic group members “with reasonably comparable elasticities of demand.” As stated by the ICC in OPPD:

²⁸Comments of Western Railroads, ICC Ex Parte No. 347 (Sub. No. 1) filed July 28, 1983 at 75 (emphasis in the original), excerpted in WFA/Basin Op. Workpapers in Docket No. 42088, Vol. 11, pp. 6447-6451.

²⁹Omaha Public Power District v Burlington Northern Railroad Company, 3 I.C.C. 2d 123 (1986).

³⁰Arkansas Power & Light v Burlington Northern Railroad Company, 3 I.C.C. 2d 757 (1987).

As noted, Omaha Power distributed all unattributable costs of [the SARR] system uniformly over all unit-train coal shipments, the hypothesis being that the strength of demand for each coal shipper is sufficiently similar to recover an average contribution. The qualitative evidence for OPPD's methodological short-cut is derived principally from the fact of similarity among members of the group. The grouping consists of the same commodity, shipped from the same general origin, with similar unit-train service characteristics, destined for the same end use (consumption in domestic electric utility plants).

* * *

In deciding this issue ... we do not withdraw from the principle that allocation of unattributable costs among captive shippers is based ideally on relative demand elasticities. Indeed, complainant has not asked for repudiation of this principle. In complainant's view,

* * * the issue comes down to the extent to which it is feasible, *given the facts in each contested proceeding*, to make groupings of shipments with reasonably comparable elasticities of demand

* * * without jeopardizing the ability of the railroad to recover its aggregate stand-alone costs.

We agree with this formulation....³¹

Similarly, the ICC held in APL:

We find that in this case [Arkansas Power & Light's] assumption regarding the like elasticity for its group is reasonable and we accept it. As in *Omaha*, the non-issue traffic consists of the same commodity (coal), with similar service characteristics (unit-train service), destined for the same end use (consumption in electric utility plants), and shipped from the same general origin (Powder River Basin). On this record, we are satisfied that any degree of variation in the demand elasticities of the non-issue shippers is not significant and therefore each shipper can reasonably be assigned an equal portion of the non-attributable costs of the stand-alone system.³²

³¹OPPD at 139 (emphasis in original).

³²APL at 744.

Thus, Kalt clearly misinterprets the Guidelines. The Guidelines do not limit pro rata sharing of SARR unattributable costs to situations where SARR traffic group members have “identical” demand elasticities. Instead, the Guidelines, as authoritatively and contemporaneously construed and applied by the ICC in OPPD and APL, permit shippers to make pro rata allocations of SARR unattributable costs to SARR shippers that “face similar market conditions and therefore have similar demand elasticity.”³³

Moreover, Kalt’s claim that the ICC and STB have already rejected allocations like those used in RAM is simply not correct. The RAM procedure is modeled on the methodology that the ICC used and approved in OPPD and APL to set SARR-specific SAC rates. In those cases, all SARR shippers paid their variable costs and captive coal shippers paid the unattributable costs on a pro rata ton-mile basis. The ICC approved the pro rata distribution of unattributable costs because the complainant shipper demonstrated that the group of captive PRB coal shippers had similar elasticities of demand.

In cases presented and decided since OPPD and APL, complainant shippers have not asked the ICC or STB to apply a procedure whereby each SARR shipper pays its variable costs and unattributable SAC costs are distributed among a class of shippers with similar demand elasticities. Thus, the agency has not rejected the methodology used in OPPD and APL – and the methodology RAM is based upon – because it has not been presented in subsequent cases.

³³Guidelines at 533.

Kalt is simply wrong in saying that RAM has been rejected in prior cases. The RAM approach – having all stand-alone shippers pay their variable costs, and allocating SARR unattributable costs only to the captive traffic – was utilized in OPPD and APL. No subsequent complainant shipper has asked the ICC or the Board to employ this accepted methodology. Nor did the ICC or STB reject similar cost allocation methodologies in Coal Trading,³⁴ WTU,³⁵ APS,³⁶ and CPL,³⁷ the rate reduction proposals in those cases did not specifically differentiate shippers by elasticities of demand, as does RAM. Therefore, RAM addresses and corrects the problems the ICC and the STB identified with the other methodologies used in those cases.

**B. RAM's SEPARATION OF SHIPPERS IS
CONSISTENT WITH THE GUIDELINES**

Kalt further assaults the RAM approach because RAM allegedly assumes that the elasticity of demand for captive PRB coal shippers is the same, and assumes the elasticity of demand for all competitive coal shippers is the same as well.³⁸ According to Kalt, this assumption that shippers can be segregated into two traffic groups, each with the same demand elasticities, is false due to the impact of modal, product and geographic competition on each movement's elasticity of demand.

As I described above, the ICC has never held that a SAC complainant must demonstrate that the shippers in its SARR traffic group have the *exact same* elasticities of demand to be assigned to

³⁴Coal Trading Corp. et. al. v. B&O Railroad Company, et. al., 6 ICC 2d, 361.

³⁵West Texas Utilities v. Burlington Northern Railroad Company, 1 S.T.B. at 716.

³⁶Arizona Public Service v. Burlington Northern Railroad Company, 2 S.T.B. 367 (1997).

³⁷Carolina Power & Light v. Norfolk Southern Railway, STB Docket No. 42072 (STB served Dec. 23, 2003).

³⁸See Kalt RVS at 25.

specific groupings based on relative demand elasticity. Instead, shippers could be assigned to groupings where they shared *similar* demand elasticities. The Guidelines provide:

We will consider evidence that particular [SARR] shippers face similar market conditions and therefore have similar demand elasticity.³⁹

The ICC also held that shippers could present practical, qualitative evidence to demonstrate these similar demand elasticities:

[w]here information on demand elasticity is required ... we will consider qualitative (rather than necessarily quantitative) evidence on the relative demand elasticity of specific movements and/or commodities.⁴⁰

The ICC's solution found support in the filings made by the Western Railroads during the development of the Guidelines. In their comments, the Western Railroads urged the ICC to set shipper specific SAC rates by allocating a "pro-rata sharing of costs" to "movements of the same commodity – or at the very most, commodities the transportation of which (if not identical) is characterized by similar elasticity of demand."⁴¹

The ICC and the STB have always sought precision in shippers' and railroads' application of the Guidelines. However, the STB and its predecessor routinely have tempered complex precision

³⁹See Guidelines at 533 (emphasis added).

⁴⁰See Guidelines at 527.

⁴¹Comments of Western Railroads, ICC Ex Parte No. 347 (Sub. No. 1)(filed July 28, 1983) at 75 (emphasis in the original), excerpted in WFA/Basin's Docket No. 42088 Op. Workpapers Vol. 11, pp. 6447-6451.

with practicality in the interests of developing a workable regulatory formula.⁴² The question is not whether groupings are perfect; it is whether a revenue allocation approach that reflects differing demand elasticities is preferable to one which does not. As WFA/Basin showed in their evidence in STB Docket No. 42088, their division of the SARR's shippers (all of whom ship coal from the PRB to power plants) into two groups was reasonable because the two groups displayed similar (if not identical) demand elasticities.

**C. RAM DOES NOT ASSUME
INFINITE ELASTICITIES OF DEMAND**

Kalt asserts that if RAM is to truly reflect Ramsey-type attributes, then RAM's assumption that all competitive traffic has infinitely elastic demand must underlie RAM's allocation of no-markup over variable costs. Yet, if the competitive traffic in the RAM model makes no contribution to joint and common costs, there is no rational reason to include it in the SARR's traffic group. This breakdown in assumptions, according to Kalt, shows that RAM is patently unrealistic and inappropriate for use.⁴³

Kalt's criticism that competitive shippers pay no contribution to fixed costs exhibits a fundamental misunderstanding of URCS costs, on which the RAM approach rests. As I indicated above, RAM uses SARR-specific URCS-based costs to develop the variable costs used in the RAM process. Anyone familiar with URCS-based costs knows that when URCS uses the term "variable," it is describing costs that change over the medium to long term as changes in output occur. As

⁴²See Guidelines at 544.

⁴³See Kalt RVS at 26.

BNSF's witness Klick clearly explained in his RVS in this proceeding:

[the] "percent variable," in URCS parlance, is calculated as the ratio of total variable expenses (output coefficients multiplied by total units of output) divided by the total variable costs *plus* total "fixed costs" (in which "fixed costs" are calculated by multiplying the capacity coefficient by total units of capacity). Because URCS itself calculates a cost per unit of capacity (*e.g.*, each mile of road), it is obvious that total capacity costs will increase as the size of railroad increases, but that does not change the fact that these are fixed costs for a certain plant size across *all* levels of output.⁴⁴

URCS-based variable costs used in the RAM approach include some coverage of the SARR's fixed costs. The fact that the competitive traffic included in the RAM process has no unattributable costs allocated to it does not mean that it is not making a contribution.

IV. COST INPUTS INTO GRPM ARE APPROPRIATE AND ADEQUATE

In their Opening Comments in this proceeding, the Coal Shippers and AEP Texas agreed that the alternative methodologies proposed by the STB, *i.e.*, MMM and MCM, are far superior to PRM as methods for allocating SAC rate relief to the members of the SARR traffic group. Both the Coal Shippers and AEP Texas also indicated that an alternative rate reduction method that is superior still to MMM and MCM is the GPRM method.

As described by AEP Texas at Page 10 of its Opening Comments, GPRM is a generalization of the PRM methodology currently employed by the STB; GPRM modifies PRM to make it more

⁴⁴See Klick VS at 20 (emphasis original).

consistent with Ramsey pricing principles. Specifically, GPRM allocates rate relief based on the maintenance of the ratios of price markups over marginal cost. The total reduction in rates under GPRM is approximately equal to the overall percentage reduction by which SARR revenues exceed SAC. Unlike PRM, however, GPRM requires that the individual reductions vary from shipper to shipper in a manner in which the most inelastic shippers receive the greatest percent reduction. This feature conforms to Ramsey pricing principles, as these are the same shippers that are expected to absorb the highest markups when revenues are inadequate to fully cover costs.

In their Reply statements, BNSF's witnesses Kalt, Willig and Klick level several criticisms at GPRM. UP's Reply witness Dr. Kevin Neels ("Neels") also makes many of the same criticisms of GPRM. Specifically, BNSF's and UP's witnesses, either individually or collectively, have three broad criticisms of GPRM. These criticisms include: (1) GPRM's use of marginal costs for cross-over traffic is invalid because elasticities of demand are only defined for through movements and not "partial" movements; (2) GPRM's inference of the constancy of relative elasticities of demand as prices change is incorrect; and (3) GPRM's use of accounting-based URCS costs as a proxy for forward-looking economic marginal costs is invalid for a broad number of reasons.

As I explain below, Kalt, Willig, Klick and Neels overstate their criticisms of the GPRM model, and consistently misinterpret and misapply the Guidelines and ICC/STB precedents.

**A. GPRM UTILIZES CONSISTENT
ELASTICITIES OF DEMAND**

GPRM allocates rate relief based on the maintenance of the ratios of SARR price markups over SARR marginal costs. The estimated markups over marginal costs are then used to infer the relative

elasticities of demand for each movement on the SARR system.⁴⁵ This then leads to GPRM's target of reducing all SARR rates in a manner that leaves relative markups equal to original relative demand elasticities.

Kalt agrees with the basic theoretical premise of GPRM,⁴⁶ but asserts that for GPRM to be meaningful, any attempt to infer relative demand elasticities among SARR shippers can only be made with respect to prices and elasticities of through movements. Kalt believes this is due to the fact that neither prices nor elasticities are defined over sub-portions of a through movement, such as are used by a SARR's cross-over traffic.

Kalt does not offer any support for his notion that demand elasticities differ on different segments of a single movement. In fact, the contrary is true as discussed above. Demand elasticity is movement-specific in the sense that a shipper's dependency on a particular carrier is the same over the entirety of the movement.⁴⁷ Likewise, the rate set for the shipper's traffic reflects the demand elasticity of the entire movement, not its individual segments. Since the market-based methodologies used by the STB and ICC in the past allocate revenue relatively smoothly⁴⁸ over the through movement, the demand elasticity reflected in the through rate apportioned by MSP likewise is carried through to the portion allocated to the SARR.

⁴⁵See Exhibit A to AEP Texas's Opening Comments in this proceeding for a complete description of the GPRM process and the derivation of the inferred elasticities of demand.

⁴⁶See Kalt RVS at 11.

⁴⁷This is the essence of the "one lump" theory consistently applied by the Board in assessing the competitive impacts of railroad mergers. See, e.g., Burlington Northern – Merger – Santa Fe Pacific, 10 I.C.C. 2d 661, 747-48 (1995).

⁴⁸One exception is in the case of the 100-mile blocks for origin and termination service used in the STB's MSP approach for determining revenue divisions for cross-over traffic.

B. KALT’S ARGUMENT THAT RELATIVE DEMAND ELASTICITIES WILL CHANGE BASED ON RATE REDUCTIONS IS INCONSISTENT WITH PRECEDENT

As I indicted above, the underlying premise of the GPRM approach is that the ratio of demand elasticities can be inferred from the ratios of relative mark-ups over SARR costs. It is these relative ratios that allow GRPM to produce a Ramsey-like pricing structure. Kalt asserts that GPRM’s allocation of rate reductions across all issue and non-issue traffic in a manner which preserves pre-rate reduction ratios of relative markups is unsupportable because there is no basis for asserting that relative elasticities of demand will remain constant with the new lower rates.⁴⁹ Kalt contends that, as a general economic rule, volumes will increase as prices decline, except in the rare case of completely inelastic demand. In addition, the magnitude of the data and level of analysis required to sufficiently develop the elasticities of demand with certainty would be “overwhelming.”⁵⁰ Therefore, Kalt contends that because elasticities of demand cannot be developed with sufficient certainty or stability across the application of GPRM, GRPM does not meet the Guidelines standard of exactitude for employing actual Ramsey principles in ordering rate reductions.

There are two primary problems with Kalt’s argument. First, Kalt’s assertion that GPRM does not reflect shipper responses to rate reductions is inconsistent with Board precedent. In Nevada Power II,⁵¹ the defendant argued that changes in the market resulting from the SARR’s hypothetical

⁴⁹See Kalt RVS at 12.

⁵⁰See Kalt RVS at 14.

⁵¹ICC Docket No. 37038, Bituminous Coal - Hiawatha, Utah to Moapa, Nevada, 10 ICC 2d 259 (1994).

entry as an optimally efficient railroad transporting coal at rates equal to or lower than the incumbent's should be taken into account in forecasting the revenues available to the SARR. The ICC rejected this argument, holding that consideration of post-entry market changes would distort the SAC analysis.⁵² The same principle supports the current rule (reflected in GPRM) that future traffic volumes for a SARR are forecast without regard to the impact that rate reductions by the SARR might have on the demand for service.⁵³

Second, Kalt either misinterprets or purposely ignores the ICC's findings about the amount of data and level of analysis required in implementing Ramsey-like rate reduction methods. Kalt states:

It is why the Guidelines are correct in concluding that credibly quantifying and employing demand elasticities to justify rates would required an "overwhelming" "amount of data and degree of analysis." This conclusion of Guidelines applies with equal force to claims that GPRM is an implementation of Ramsey pricing or can be concluded to be consistent with the Ramsey pricing formula.⁵⁴

As the Guidelines indicate, however, the ICC never envisioned or required exact determinations of elasticities of demand. In fact the ICC stated the opposite:

⁵²See Nevada Power II at 266.

⁵³See, for example, Xcel at 53 (re-affirming the use of the EIA coal volume forecast, which has no component to account for regulatory rate reductions).

⁵⁴See Kalt RVS at 14 (internal cite omitted).

Thus, the amount of data and degree of analysis required seemed overwhelming. We concluded that while formal Ramsey pricing is useful as a theoretical guideline, it is too difficult and burdensome for universal application.

As an alternative to pure Ramsey pricing, we proposed Constrained Market Pricing. Under CMP, the carriers are expected to use the market demand which they observed as the basis for their pricing, but they need not calculate the precise elasticity of demand for every movement.... We are satisfied that the constraints and incentives of CMP contains(sic.) should lead to rates approximating Ramsey prices.⁵⁵

Under the ICC's application of CMP, as expressed in Guidelines, a shipper need not develop the highly exact elasticities of demand that Kalt claims, but rather only produce data and analysis with enough certainty to produce rates that "approximate" Ramsey prices.

**C. URCS COSTS ARE A REASONABLE
PROXY FOR MARGINAL COSTS**

The application of GPRM requires the approximation of the marginal costs for each movement included in the SARR's traffic group. As AEP Texas explained in its Opening Comments in this proceeding, as a practical matter, maximum reasonable rate proceedings do not readily permit the specific calculation of marginal service costs for each member of the SARR traffic group. Instead, the average marginal cost for each movement can be estimated by using publicly available Phase III URCS data for the defendant railroad. The SARR revenue per ton attributable to each member of

⁵⁵See Guidelines at 527.

the traffic group then can be compared to the appropriate marginal cost figure to arrive at the relative markup.

BNSF's witnesses Kalt, Willig and Klick and UP's witness Neels take exception to GPRM's use of URCS costs as a proxy for the marginal costs used in true Ramsey pricing. They assert, either individually or collectively, that URCS based costs do not reflect the forward-looking, movement-specific nature of true economic marginal costs required in a Ramsey price analysis. Specifically, they claim that historic-based accounting costs do not reflect the true economic costs of future congestion on the incumbent's railroads or reflect the movement-specific costs that lead to differentiated prices between shippers. They also claim, through supposed realistic examples, that under-estimation of the marginal costs by use of URCS costs can lead to egregiously incorrect rate reduction schemes. Finally, they claim that AEP Texas' assertion that URCS-based costs are an appropriate proxy for forward-looking marginal costs because it is only the relative relationship of the costs that matters, not the absolute relationship, is incorrect, and that the absolute magnitude of costs relationships is a key factor in a Ramsey price analysis. I explain below why Kalt's, Willig's, Klick's and Neels' critiques are incorrect.

**1. URCS Based Costs
Are Sufficiently Accurate**

According to Kalt, Willig, Klick and Neels, GPRM's use of URCS-based costs as proxies for true economic marginal costs is invalid because accounting costs like URCS costs are developed from historic system average costs, and do not reflect the forward-looking and movement-specific nature of true economic marginal costs. Therefore, any rate reduction methodology that depends on

URCS-based costs as proxies for economic marginal costs cannot claim that its resultant rate reduction is consistent with Ramsey pricing.⁵⁶

BNSF's and UP's witnesses' claims are a fine example of allowing the perfect to be the enemy of the good. Obviously, it is impractical to allocate stand-alone revenue reductions using a method that requires a precise, movement-specific calculation of the marginal cost of each movement in the SARR traffic group. However, the STB and its predecessor routinely temper complex precision with practicality in the interests of developing a workable regulatory formula.⁵⁷ The question is not whether the average marginal cost approach is perfect; it is whether a revenue allocation approach that reflects differing demand elasticities is preferable to one which does not.

Kalt, Willig, Klick and Neels do not challenge the tenet that the method of allocating the excess of stand-alone revenues over SAC should reflect Ramsey principles, the same principles that are presumed to have guided the establishment of the incumbent's rates for the members of a SARR's traffic group. Nor do they challenge the premise that under Ramsey principles, price increases over marginal (i.e., economic) costs to satisfy increased overall revenue needs will reflect the demand elasticities of the customers experiencing the price increases. The ICC/STB have acknowledged that a practical approach using URCS system-average costs, such as that followed by AEP Texas, is useful "as a rough indicator of economic costs."⁵⁸ In the absence of another, more precise (and equally practical) approach, GPRM should be deemed superior to a formula that ignores altogether

⁵⁶See Kalt RVS at 14, Willig RVS at 13, Klick RVS at 6 and 8, and Neels RVS at 16.

⁵⁷See, e.g., Xcel at 16 and Guidelines at 544.

⁵⁸See Guidelines at 532, n.31

the relationship between price and marginal cost.

In addition, the BNSF and UP witnesses miss (or ignore) the point of GPRM with their claim that as implemented, the model yields rates that are not equivalent to Ramsey prices. GPRM is not designed or intended to calculate Ramsey prices per se. Rather, GPRM's purpose is to provide a workable model which reduces individual rates as overall revenue needs decline, in a manner proportionate to the way in which they are presumed to have been increased when revenues needed to be raised. The individual mark-ups over average marginal costs (which faithfully reflect Ramsey principles) are used to accomplish this.

Finally, Kalt, Willig, Klick and Neels ignore STB and ICC precedent as it applies to approximating marginal costs. As stated by the Board, "[b]ecause the marginal costs associated with handling particular rail traffic are not readily measurable, we rely on the variable costs produced by the URCS formula as proxy for LRMC [long run marginal costs]."⁵⁹ The simple fact that the ICC has already investigated and approved the use of URCS costs as an appropriate surrogate for marginal costs is completely ignored by the railroad witnesses.

2. The Railroads Confuse The Hypothetical World Of The SARR With Real World Operations

Kalt, Willig and Klick all assert that accounting-based costs like URCS costs understate forward-looking economic costs. To support their claim, all three point to the example of the high

⁵⁹Rate Guidelines – Non-Coal Proceedings, 1 S.T.B. 1004, 1027 (1996).

economic costs the railroads incur due to congestion on their systems.⁶⁰ According to BNSF's three witnesses, there is an extremely high forward-looking marginal cost associated with congestion due to the need for carriers to incur costs to relive the congestion. These high costs not only include the incrementally higher operating costs due to congested operations, but also the costs to provide additional capacity that will come on-line in the future and the costs associated with having to "bump" certain customers off the system or to end the service queue. These costs of congestion are especially acute in the PRB, where ever increasing demand for low-sulfur coal creates especially high forward-looking economic costs for coal shippers. These costs are manifested in higher rates, which Kalt asserts are essential in regulating demand and allocating constrained resources. Overall, according to BNSF's witnesses, it is impossible to capture all of these economic costs with a simple application of URCS costs.

While Kalt, Klick and Willig spin a good yarn about the high costs of railroading in the real world, this is irrelevant to the hypothetical world of the SARR. BNSF's witnesses' entire argument relies upon the incorrect assumption that it is the incumbent carrier's marginal costs that are important in developing rate reductions in a Ramsey-like manner. As explained earlier, in testing a railroad's rate under the SAC constraint, it is the costs of the hypothetical SARR that are the determining factor in the rate reduction process, and not the costs of the incumbent carrier. GPRM may look to the incumbent carrier's unit costs as indicia of the hypothetical SARR's unit costs, but this does not eliminate the fact that the ultimate arbiter of the rate reduction is the SARR's SAC.

⁶⁰See Kalt RVS at 16, Willig RVS at 14, and Klick RVS at 9.

Moreover, the majority, if not all, of the real world congestion costs the railroad witnesses describe do not occur in the hypothetical world of the SARR for several reasons. First, the SARR is specifically built to accommodate the traffic requirements for the stand-alone traffic group, including the needs for future traffic expansion. The forward-looking economic costs of future capacity expansion simply are not relevant to a SARR. Second, since most shippers build the SARR to meet the peak period traffic needs, for almost all of its life the SARR is at less than its maximum operating levels. Stated differently, the SARR has plenty of capacity on its system to eliminate many of the costs associated with congestion, the bumping of traffic, etc. Third, because the SARR is more efficient than the incumbent it is replacing, it does not incur the service guarantee costs that the incumbent occurs due to its built in inefficiencies. Simply stated, many of the costs that Kalt, Willig and Klick ascribe to the SARR are not going to occur in the SARR's hypothetical world.

3. The Railroads' Examples Of The Disparities Between URCS Costs And Economic Costs Are Unsupported

To support their assertions that the use of URCS costs in lieu of true economic marginal costs in the GPRM model⁶¹ can lead to erroneous rate reduction results, Kalt and Neels each provide an illustrative example inferring that the costs shown are reflective of the true difference between URCS-based costs and economic marginal costs.⁶² Kalt's hypothetical example assumes a two-

⁶¹One can presume that Kalt and Neels would not limit their discourse about the inapplicability of URCS based costs as a surrogate for marginal costs solely to application of the GPRM, but would extend their argument to any rate reduction methodology in which a shipper proposes using URCS costs as a proxy for marginal costs.

⁶²See Kalt RVS at 19 and Neels RVS at 17.

shipper SARR in which the complainant's URCS-based marginal cost equals \$5 per ton and the non-issue shipper's URCS-based marginal cost equals \$3 per ton. However, in Kalt's hypothetical, the true economic marginal cost for the shipper is actually \$10 per ton with the non-issue shipper's cost holding steady at \$3 per ton.⁶³ In other words, in Kalt's example, the issue traffic's estimate of marginal costs is off by 100 percent.⁶⁴ Neels also uses a two-shipper SARR in which each shipper's true marginal cost equals \$1,200 per unit, but Shipper No. 1's URCS-based cost equals \$1,500 per unit and Shipper No. 2's URCS-based cost equals \$900 per unit, for a percentage difference of 25 percent and -25 percent, respectively. Based on these examples, both Kalt and Neels conclude that the use of URCS as a proxy for economic marginal costs is inappropriate in a rate reduction methodology.

The problems with both Kalt's and Neels's examples are that neither Kalt nor Neels provides any support for his inference that URCS-based costs will vary from a SARR's true marginal cost of service as much as they hypothesize.⁶⁵ Neels's example employs cost differences of plus or minus 25 percent, calling these variances relatively "small" in terms of actual marginal costs.⁶⁶ Kalt goes

⁶³Kalt also miscalculates the aggregate SARR revenues in his example. In his example, Kalt states that SAC equals \$150, pre-reduction aggregate revenue equals \$225, and the total overpayment equals \$75. See Kalt RVS at 19. Tables 1 and 2 of Kalt's example, however, show the complainant with an original rate of \$12 per ton, the non-issue shipper with a rate of \$10 per ton and both the complainant and the non-issue shipper transporting 10 tons. These rates and quantities lead to a pre-reduction aggregate SARR revenue of \$220 [(\$12/ton x 10 tons) + (\$10/ton x 10 ton) = \$220], not the \$225 Kalt indicates. The \$70 SAC overpayment (\$220 in SARR revenue - \$150 in SAC) is consistent with the calculations included in Tables 1 and 2.

⁶⁴ $(\$10 \text{ per ton economic costs} \div \$5 \text{ per ton URCS costs}) - 1 = 100\% \text{ difference.}$

⁶⁵As discussed above, contrary to their arguments, it is the SARR's marginal costs that are relevant in a SAC presentation - not the incumbent railroad's marginal costs.

⁶⁶See Neels RVS at 17.

even further, hypothesizing a 100 percent difference in cost estimates for the complainant's movements' marginal costs. Neither Kalt nor Neels, however, provides one piece of evidence that the costs differences between URCS estimates and actual marginal costs would vary by the extreme amounts they hypothesize.

Assuming, for argument's sake, that an incumbent's marginal costs are the correct cost basis to use in a rate reduction effort, real world data shows the magnitudes of Kalt's and Neels's hyperbole. Playing off Kalt's proposition that congestion in the PRB will cause extremely high forward-looking economic costs, I estimated the marginal cost per ton for the recently announced expansion of BNSF's and UP's Southern PRB Joint Line. UP recently announced that it and BNSF will be expending approximately \$100 million to add more than 40 miles of third and fourth main track on the Joint Line.⁶⁷ Assuming the Southern PRB produces 300 million tons per year of coal that will be transported by rail – a conservative estimate considering PRB coal's forecasted expansion – and the additional main tracks have a 10-year useful life (another extremely conservative estimate), the total additional costs for this expansion is approximately \$0.033 per ton.⁶⁸ Relative to Kalt, who spends the most time espousing the high costs of PRB rail congestion, this would represent a difference of approximately 0.66 percent in his example, not the 100 percent he hypothesizes.⁶⁹

One could argue that congestion costs are not the only economic costs that need to be addressed

⁶⁷See June 20, 2006's Platt's *Coal Trader* at page 4.

⁶⁸ $\$100 \text{ million in expansion costs} \div (300 \text{ million tons} \times 10 \text{ years of production}) = \0.033 incremental cost per ton transported.

⁶⁹ $(\$5.033/\text{ton economic costs} \div \$5/\text{ton URCS cost estimate}) - 1 = 0.66 \text{ percent}$

when developing marginal costs estimates. But assuming that the 0.66 percent cost difference described above is representative of the difference between individual economic cost elements and URCS-based costs, one can easily see that the true variance across all costs lies in the low single-digit range, not in the 25 percent to 100 percent range suggested by Neels and Kalt.

4. The Railroads Overstate The Differences In Costs Between Similar Shippers

As AEP Texas explained in its Opening Comments, while the use of URCS costs as a proxy for forward looking marginal costs may introduce some minimal error in the rate reduction process, the variance will impact all of the shippers in the stand-alone traffic group, thus mitigating any impact of the variance.⁷⁰ Kalt and Neels both disagree with this equal impact assumption, arguing that there is no basis to claim that an incumbent carrier's marginal costs, the key cost according to the railroads, will move in proportional lock step among shippers or that a complainant will face the same costs as other shippers in the traffic group.⁷¹ They also argue that because URCS costs are based on incumbent railroads' system average data, there is no guarantee that the URCS proxy costs will reflect the significant cost differences in the SARR traffic group.

There are two problems with Kalt's and Neels's arguments. First, as explained above, the assumption that rate reductions should be based on the incumbent's marginal cost of service is completely contrary to the SAC test. Second, both Kalt and Neels disregard previous ICC and STB findings that shippers in stand-alone traffic groups, especially SARRs that carry predominantly or

⁷⁰See AEP Texas Opening Comments at 11.

⁷¹See Kalt RVS at 21 and Neels RVS at 17.

exclusively unit-train coal traffic, have extremely similar operating costs.

The majority of SAC cases in recent years have involved coal-only SARRs, which move trains in unit-train service.⁷² The few SARRs that did include commodities other than coal transported the non-coal traffic in strictly overhead service that required no intra- or inter-train switching, and effectively reduced the non-coal traffic to the equivalent of unit train service.⁷³ It is inarguable that the non-car related and line-haul costs for the trains in these stand-alone costs cases is virtually the same.⁷⁴ As the ICC inferred in its OPPD decision:

The qualitative evidence for OPPD's methodological short-cut is derived principally from the fact of similarity among members of the group. The grouping consists of the same commodity, shipped from the same general origin, with similar unit-train service characteristics, destined for the same end use (consumption in domestic electric utility plants).⁷⁵

The STB's recent Xcel I decision confirms that the unit coal train service exhibits the same cost characteristics. As the STB explained, it adopted the BNSF's operating plan, but instead of BNSF's traffic group, it adopted Xcel's traffic group. Because BNSF's operating plan excluded traffic moving to the Jeffrey Energy Center ("JEC"), but Xcel's traffic group included the JEC traffic, the STB had to adjust the SAC for the JEC's unit coal train traffic. As the STB explained in making

⁷²See, the WPL, TMPA, Xcel, PPL Montana and WFA/Basin SARRs.

⁷³See the AEPCO, the Otter Tail and the AEP Texas SARRs.

⁷⁴In AEP Texas' application of the GPRM, car costs and whether the trains were local or operated in interchange service were accounted for in the determination of the marginal costs.

⁷⁵See OPPD at 139.

cost adjustments for the JEC traffic:

It was not necessary to perform a regression analysis of prior cases for operating expenses, however, as the discounted cash flow model used already calibrates certain future operating expense to reflect higher traffic levels. As tons increase (or decrease) in future years, the DCF model automatically increases (or decreases) specific operating expenses - such as the expenses associated with train crews, locomotives, and railcars - in proportion to the percentage change in tonnage.⁷⁶

The STB's decision to add the JEC traffic without making any adjustments to its costs beyond those attributable to increases in coal volumes shows that from a SAC perspective, operating costs for unit coal train traffic are essentially homogenous. The simple fact is that shippers expressly group traffic with similar operating characteristics in SAC cases to maintain cost conformity. To suggest otherwise is to ignore the obvious.⁷⁷

**5. It Is Relative Costs That Matter In
Almost All Cases, Not Absolute Costs**

AEP Texas correctly stated in its Opening Comments in this proceeding that available information in coal rate cases does not readily permit the specific calculation of marginal costs of

⁷⁶See Xcel I at 31.

⁷⁷The same can be said of Kalt's argument at page 21 of his RVS that there is no foundation for asserting that a SAC complainant moving PRB coal is subject to the same congestion as all other shippers in a SARR's traffic group. UP and BNSF do not maintain an "Express Check-Out" lane on the Joint Line for shippers involved in maximum reasonable rate cases. Kalt's argument that complainant's traffic somehow is exempt from operating issues on the Joint Line shows his complete misunderstanding of railroad operations and costing.

service for each member of the SARR traffic group. But this limitation does not materially impact the GPRM approach because the goal of GPRM is to measure the markup of the rate over a determined cost level relative to comparable markups over rates for other traffic group members.⁷⁸ Willig, parroted by Klick, takes exception to AEP Texas's position that it is the relative relationships between costs that matter in the GPRM in two respects.⁷⁹ First, Willig and Klick contend that URCS based costs are not sensitive to a host of factors that can change relative costs, such as diverse contract terms and incumbent railroad congestion. Second, Willig and Klick assert that if costs are overstated, on average, even if the relative levels of costs were accurate, then a different pattern of rate reductions would occur across the SARR traffic group than if lower, more accurate economic costs were used.

As I have explained several times earlier, Willig's and Klick's first argument, that URCS based costs are not sensitive enough to other costs factors, rests on the erroneous assumption that it is the incumbent carrier's costs that are important in the rate reduction process and not the SAC. As for their second argument, that a different rate reduction pattern will occur if costs are overstated, this is very unlikely to occur in almost all SAC cases.

For example, in Table 1 below, I have reconstructed the GPRM example included in Table 1 of Kalt's RVS, including an assumption of \$220 in SARR revenue, \$150 in SAC, and an overpayment of \$70.⁸⁰ Lines 1 and 2 of Table 1 below contain the same parameters included by Kalt

⁷⁸See AEP Texas Opening Comments at 11.

⁷⁹See Willig RVS at 15 and Klick RVS at 11.

⁸⁰I have corrected my example for Kalt's error in the SARR's revenue, discussed earlier.

in his Table 1. Lines 3 and 4 of Table 1 below reflect the situation of an overstatement in the marginal costs, while Lines 5 and 6 of Table 1 below reflect the situation of an understatement in the marginal costs. As is clearly evident, the SAC rate produced by the GPRM is insensitive to uniform changes in the estimated costs, and it is the relative change in costs that matter, not the absolute change.⁸¹

Table 1 <u>Illustrative Example Of The GPRM With Different Cost Estimates</u>						
<u>Shipper</u> (1)	Rate (P) (2)	Marginal Cost (MC) (3)	Tons (Q) (4)	Contribution (P-MC) x Q (5)	Share of Contribution ^{1/} (6)	GPRM SAC Rate ^{2/} (7)
<u>Actual Costs</u>						
1. Complainant	\$12	\$5	10	\$70	.5	\$8.50
2. Other Shipper	\$10	\$3	10	\$70	.5	\$8.50
<u>Overstated URCS Costs</u>						
3. Complainant	\$12	\$10	10	\$20	.5	\$8.50
4. Other Shipper	\$10	\$8	10	\$20	.5	\$8.50
<u>Understated URCS Costs</u>						
5. Complainant	\$12	\$3	10	\$90	.5	\$8.50
6. Other Shipper	\$10	\$1	10	\$90	.5	\$8.50
^{1/} Each row of Column (5) divided by the sum of Column (5) for each scenario. ^{2/} Column (2) - [Column (6) x \$70 Overpayment ÷ Column (4)].						

⁸¹The uniform change in unit costs is also consistent with the STB's cost ruling in Xcel, referenced above.

The one exception to this conclusion, as Willig observes in note 12 of his RVS, is when the marginal costs estimate meets or exceeds the SAC rate. However, this particular situation will not arise very often, if at all, in a typical SAC case involving unit-train coal traffic. This can be safely surmised through the commonly known fact that railroads have been increasing rates on all unit coal train traffic, captive or competitive. It is all but certain that the rates of coal shippers included in a SARR traffic group will be well above a SARR's marginal costs.

V. THEORY AND PRECEDENT CALL FOR MARKET-BASED DIVISIONS

In their Opening Comments, the Coal Shippers explained why allocating revenues on cross-over traffic based on actual real world market divisions is the most fair and consistent method available for application of the SAC constraint and is consistent with ICC/STB precedent and CMP theory.⁸²

In their Reply Comments, UP and BNSF, and their respective witnesses, attack the Coal Shippers' arguments regarding the appropriateness of market divisions. Specifically, the railroads assert that: (1) "market rates" as construed from the perspective of CMP theory are not equivalent to "real world rates"; (2) rail rates set in a truly contestable marketplace will default to the lower of the most efficient SARR's cost or the incumbent's costs and therefore have no relationship to real world rates; (3) an incumbent carrier or another SARR competing with the complainant's SARR is not a barrier to entry, but just a fact of contestable markets; and (4) the use of market rates is just a

⁸²See Coal Shippers' Opening Comments at 26.

ploy for a complainant to manipulate the SAC test.

As I explain below, the railroads' arguments are based on a series of circular logic applications that serve no other purpose than drawing and quartering the SAC test to make it unusable as a regulatory tool.

**A. THE SAC TEST IS DESIGNED TO TEST REAL
WORLD, NOT HYPOTHETICAL, RAIL RATES**

In their Opening Comments the Coal Shippers detailed the logic behind the Nevada Power II decision in which the ICC correctly confirmed the basic principles underlying the Guidelines' SAC test. First, the SARR is an independent replacement for the incumbent carrier over the involved route. Second, the SARR is not required to replicate off-SARR lines in order to handle the traffic of its shipper group. Third, the SARR would negotiate market-based divisions with the residual incumbent.⁸³ After Nevada Power II and through the Duke/NS decision,⁸⁴ the ICC and STB consistently found that it was appropriate to establish market based divisions on cross-over traffic.⁸⁵

Kalt, Klick and Neels assert that the Coal Shippers have been misinterpreting the ICC's and STB's decisions for these many years. The railroads' witnesses contend that shippers incorrectly

⁸³See Coal Shippers' Opening Comments at 27.

⁸⁴Docket No. 42069, Duke Energy Corporation v. Norfolk Southern Railway Company, STB served November 6, 2003.

⁸⁵As explained by the Coal Shippers in their Opening Comments, the ICC and STB use the modified mileage block prorate method ("MMP") as its market-based method to develop divisions in its waybill sample and to develop cross-over revenues in SAC cases.

view the terms “market principles” and “market rates,” as used by the ICC and STB through the Duke/NS decision, as synonymous with “actual market” or “real world” pricing. Such a view, according to the railroads’ witnesses, is not reflective of contestable markets.⁸⁶ According to Kalt, Klick and Neels, by definition a SARR operates in a contestable market, e.g. a world with frictionless and priceless market entry and exit, where carriers have completely symmetric bargaining positions. A real world railroad, on the other hand, does not operate in a contestable market due to significant barriers to exit and entry, and therefore can set rates based on bilateral bargaining power. Because the SARR operates in a contestable world and its “market rates” are defined by symmetric bargaining positions, which drive prices down to the level of the most efficient firm’s break even position, there is no reason to even look at “real word rates,” which are defined by bilateral bargaining power and barriers to entry.

The railroad witnesses’ assertions boil down to the circular argument that to test a real world rate for reasonableness, one must first completely divorce the incumbent’s rates from real world realities, which help make the rates unreasonable. Then, once divorced from the real world, if the rates pass the test of the adjusted revenue being greater than SAC, then one can adjust the rates a second time to a contestable market cost level. This line of argument truly turns rate regulation on its head. As the ICC and the STB have consistently held in applying SAC, the “SAC constraint is meant to serve as a practical tool, not a mere exercise in contestable market theory divorced from

⁸⁶See Kalt RVS at 30 and 34, Klick RVS at 16 and Neels RVS at 8.

its purpose of judging the reasonableness of the defendant carrier's pricing."⁸⁷ Similarly, the Board has observed that all SAC assumptions "must be ... consistent with the underling realities of real-world railroading."⁸⁸

Kalt, Klick and Neels lose sight of the purpose of the SAC test, which is to determine if the issue traffic is improperly cross-subsidizing the incumbent railroad's other traffic. To perform this examination, the complainant compares the incumbent railroad's "real world" rates against the alternative rates that would be established in a contestable market. Kalt, Klick and Neels argue that the establishment of contestable market rates comes at the beginning of the SAC test. This is a misinterpretation of the intent of rate regulation. It is only after the comparison of the incumbent's rates against costs that would be set in a contestable market, which is represented by SAC, that the traffic group's rates are adjusted to contestable market levels. The railroads' witnesses would instead adjust the traffic group's rates to contestable market levels before application of the SAC test, and then, if the SARR revenue is greater than the SAC, adjust the rates a second time. There can be no meaningful examination of a railroad's pre-entry rates if the first step in the process is to adjust the rates to contestable market levels.

Moreover, Neels asserts that the SAC test was designed as a tool to help identify market outcomes that would be obtained in complex markets, and to set a price ceiling that would hold in a competitive, contestable market. In other words, insights into markets are an outcome of the SAC

⁸⁷See AEPCO (STB served Aug. 19, 2002) at 6-7.

⁸⁸See Xcel II at 12.

test, not an input into the test. Therefore, according to Neels, shippers' assertions that market rates should be an input to the SAC test are incorrect.⁸⁹

There are two errors in Neels's argument. First, as described above, the purpose of the SAC test is to examine an incumbent's real world rates against the costs of a railroad operating in a contestable market. As a matter of simple test construction, the only way to test an incumbent's real world rates is to input them into the testing device, which, in this case is the SAC test.

Second, the Guidelines explicitly allow for an incumbent carrier's current market rates to be included as an input into the SAC test. As the ICC stated in Guidelines, "... we think it reasonable and practical to assume that the revenue contribution of other (i.e. non-complaining) shippers *will be at the level of their current rates.*"⁹⁰ It is obvious that the ICC fully understood that an incumbent carrier's rates were a fair proxy for the rates that a SARR would achieve in a contestable market, and directly sanctioned their use as a direct input into the SAC test.

B. POST-ENTRY COMPETITION AND PRICING RESPONSES ARE BARRIERS TO ENTRY

It has been a well established fact since the ICC's decision in Nevada Power II that the SARR is a replacement for the incumbent railroad, and not a competitor.⁹¹ It is also a well established fact that SAC principles require the exclusion of costs and risks not faced by the incumbent railroad, so as to remove any advantages which the existing railroad has over a hypothetical stand-alone

⁸⁹See Neels RVS at 6.

⁹⁰See Guidelines at 544 (emphasis added).

⁹¹See Nevada Power II at 266.

railroad.⁹² The Coal Shippers correctly explained in their Opening Comments that it is these facts that allow a SARR to truly test an incumbent's rates by basing SARR traffic on real world market divisions.

Kalt and Neels would completely ignore these well understood facts, claiming that they have no grounding in economic theory, and that shippers only employ them to make the complainant's SARR a monopolist.⁹³ Instead, Kalt and Neels would replace these truths with complete and unfettered competition between a complainant's SARR, the incumbent railroad, and other competing SARRs. Kalt and Neels argue that such competition is perfectly acceptable in a contestable market due to the complainant SARR's freedom to enter and exit the market as it pleases, and as long as the competing railroads, including the incumbent, do not price below SAC.⁹⁴ Kalt's and Neels's arguments clearly violate the purpose and intent of the SAC constraint and must be dismissed.

1. Consideration of Railroad Competitive Responses Undermines The SAC Test

Kalt and Neels argue that shippers possess the allegedly improper belief that a complainant's SARR can be a monopolist that can price at levels up to those of the incumbent carrier and faces no competition, from either other SARRs or the incumbent railroad. According to the railroads' witnesses, this belief turns the theory of contestable markets on its head. Both Kalt and Neels indicate that the rates a SARR would receive in a contestable market are truly market rates, as set

⁹²See Guidelines at 529.

⁹³See Kalt RVS at 4 and Neels RVS at 8.

⁹⁴See Kalt RVS at 36 and Neels RVS at 10.

in a market with no barriers to exit or entry. Therefore, an incoming complainant's SARR could not achieve monopoly rates because it would be replaced by another SARR or by the incumbent. This means that true market rates can only be at the SAC level, not at an incumbent's real world pricing level.

With regard to competitive responses, Kalt and Neels turn contestability theory upside down. Contestability theory is predicated upon potential entrants evaluating "the profitability of entry at the incumbent firms' pre-entry prices" without "fear of retaliatory price alterations" by the incumbent.

the potential entrants evaluate the profitability of entry at the incumbent firms' pre-entry prices. That is, although the potential entrants recognize that an expansion of industry outputs leads to lower prices – in accord with the market demand curves – the entrants nevertheless assume that if they undercut incumbents' prices they can sell as much of the corresponding good as the quantity demanded by the market at their own prices.⁹⁵

Similarly, as noted by another scholar:

⁹⁵See Bailey & Baumol, Deregulation and the Theory of Contestable Markets, 1 Yale J. on Reg. 111, 114 (1984).

The results of contestability theory require not only that rapid entry and exit be possible, but that potential entrants make their decisions taking the market price as given. This definition defines sustain-ability in terms of entrant profitability given the number of incumbents, their output, and the price at which that output clears the market. Under this definition of sustain-ability, the entrant is not permitted to take account of the price reduction that its own output will produce when it assesses the profitability of entry. The entrant is not permitted to take account of possible reactions of incumbents.⁹⁶

Thus, under basic principles of contestability theory, the new entrant is not a competitor of the incumbent for the business it solicits – it replaces the incumbent for that business. Otherwise, the new entrant could not evaluate the profitability of entry at the incumbent firm's pre-entry prices. And the new entrant would not set its own prices without fear of retaliation by the incumbent.

Moreover, as discussed above, reducing the complainant SARR's revenues based on the assumption that it would face competition from other SARRs reduces the SAC test to a theoretical exercise that does not make any test of the incumbent's rates. At the commencement of the SAC test, the complainant compares the incumbent railroad's "real world" rates against the alternative rates that would be established in a contestable market. It is only after the comparison of the incumbent's rates against those that would be set in a contestable market, which is represented by the SAC, that the traffic group's rates are adjusted to contestable market levels. Assuming that

⁹⁶See S. Martin, The Theory of Contestable Markets at 10 (July 2000) (footnote omitted).

competing SARRs would drive down the incumbent's pre-entry rates to SAC levels completely subverts the intent of the SAC test.

2. Pricing Responses Are A Classic Barrier To Entry

Kalt and Neels assert that shippers misunderstand the economic concept of barriers to entry as proved by the shippers' argument that any price response by the incumbent railroad to a SARR's entry is impermissible price retaliation and a barrier to entry.⁹⁷ However, according to Kalt, only pricing below the incumbent's full SAC costs is retaliatory pricing. Pricing at the incumbent's full cost level is merely a competitive response in a contestable market, and not retaliatory in any way. Moreover, according to Neels, in a contestable world, the incumbent would have no incentive to retaliate, because if the SARR was driven out of the market, the SARR could always re-enter the market. Retaliation would always impose losses on the party attempting retaliation. Both Kalt and Neels are incorrect as I illustrate below.

The STB has correctly defined a barrier to entry as any costs or risks not faced by the incumbent railroad that would limit entry into or exit from the marketplace.⁹⁸ These risks include the risk of competition from the incumbent railroad or another SARR entering the market. As the STB explained in WPL:⁹⁹

⁹⁷See Kalt RVS at 35 and Neels RVS at 10.

⁹⁸See Guidelines at 529.

⁹⁹STB Docket No. 42051, Wisconsin Power and Light Company v. Union Pacific Railroad Company, Decision served September 13, 2001

But as we have often explained, SAC principles require the exclusion of costs and risks not faced by the incumbent railroad, so as to remove any advantages which the existing railroad has over a hypothetical stand-alone railroad. See Coal Rate Guidelines, 1 I.C.C.2d at 529; Burlington N., 114 F.3d at 214; West Texas, 1 S.T.B. at 668-73; Arizona, 2 S.T.B. at 385-87. Here, UP has acknowledged, as it must, that UP does not operate in a contestable market, which means the risk UP's proposed adjustment is designed to take into account—that a rise in projected returns above a certain level will result in the carrier being replaced immediately and entirely by a new entrant—is not faced by UP itself. As we stated in FMC (at 179), we do not allow an existing railroad to charge captive shippers a rate designed to compensate for risks that the incumbent carrier's investors do not face.¹⁰⁰

In the real world, a defendant carrier in a maximum reasonable rate case does not face price competition from multiple potential SARR's entering the marketplace. As the STB correctly indicated, Kalt's and Neels's hypothesis that a SARR would face such instantaneous intramodal competition (a risk not incurred by the incumbent) is by definition, a barrier to entry.

In addition, the fact that an incumbent does not set its retaliatory prices below its costs does not mean that a barrier to entry does not exist. Constraining a SARR's divisions on cross-over traffic based on the residual carrier's costs can – and does – impose entry constraints that the residual carrier did not incur. For example, when BNSF was making decisions to enter the PRB market, or to expand its PRB market capabilities, it was not required (and certainly did not) project revenue divisions based upon the cost structure of its connecting carriers. Instead, it evaluated its market

¹⁰⁰See WPL at 32; internal footnote omitted.

position, and leverage, vis-a-vis its connections, i.e. based on the current market rates. The same was true of Western Railroad Properties, Inc. (“WRPI”) when it later entered the PRB market.

Finally, the railroads’ argument that the incumbent would have no incentive to retaliate because the SARR could always re-enter the market if the SARR were driven-out ignores the real world construction constraints placed on the SARR. While the ICC and the STB have held the SARR can enter and exit the market without penalty, they have never held that entry would be instantaneous. The ICC made this perfectly clear in Nevada Power II: “we do not let a SARR costlessly and instantaneously adjust the size of its plant year by year by adding and subtracting plant.”¹⁰¹ In a similar vein, the ICC and STB have required the complainant’s SARRs to be constructed over a two to three year time period, reflecting the critical path nature of railroad construction. An incumbent would have every incentive to retaliate if it knew that it could lower its rates for a short period to drive-out a competing SARR, knowing that would have a two to three year period, depending on construction schedules, to price at any level it wishes. Until such time as the STB relaxes its construction timing requirement and allows instantaneous entry, Neels’s argument is meritless.

3. Kalt’s Arguments Ignore The Rules Of SAC Presentations

The Coal Shippers explained in their Opening Comments that pricing retaliation from any competing railroad, whether it is the incumbent or a prospective new SARR, would not allow the complainant’s SARR to recoup its costs and would force the complainant’s SARR to shun entry into

¹⁰¹See Nevada Power II at 267, n. 18.

the market. Such a move would be contrary to basic SAC rules.¹⁰² Kalt takes exception to the Coal Shippers' position, stating that by definition the complainant's SARR is the most efficient SARR and an entering SARR would not rationally price below the prices and rate divisions the complainant's SARR needs to recoup its costs. Moreover, Kalt states that because, under contestability, the complainant's SARR is free of barriers to entry and exit, such a SARR does not need time to recoup its costs.¹⁰³ Unfortunately, both of Kalt's arguments are contrary to the application of SAC cases as administered by the STB.

a. STB Precedent Precludes The Construction Of Efficient SARRs

First, Kalt argues that the SARR is the most efficient railroad available, and no other SARR can come along and "under cut" the complainant's SARR prices based on greater efficiencies. However, the STB's requirements for shippers' SAC presentations ensures that the complainant's SARR is not the most efficient, at least in the early portions of the study period. The STB requires a shipper to prove the feasibility of its operating plan to meet the needs of the shippers in the SARR's traffic group.¹⁰⁴ To make this showing of feasibility, parties are required to use computer simulation models to prove the operational practicability of the SARR system. Anyone who has followed SAC cases over the last half-decade knows that the deployment and implementation of these computer simulation models have been highly contested, and have greatly expanded the time and costs to

¹⁰²See Coal Shippers' Opening Comments at 45.

¹⁰³See Kalt RVS at 36.

¹⁰⁴See e.g. Xcel I at 23: "The operating plan must be able to meet the transportation needs of the traffic the SARR proposes to serve."

perform a SAC analysis. Given the time and expense to test and model the SARR systems, shippers have constructed their hypothetical railroads to possess the capacity at the beginning of the SARR's operation to meet the peak traffic period's capacity requirements.¹⁰⁵ In other words, the SARRs are built with excess capacity at the start of their operating life.

Moreover, if the STB were ever to agree with the railroads' completely incorrect and invalid argument that a SARR is not entitled to any productivity in the SARR's early operating years, then the SARR would most assuredly not be the most efficient railroad. For example, BNSF's witness Michael R. Baranowski ("Baranowski") purported to explain in his Opening VS ("OVS") why a SARR would not experience any productivity in its early operating years. According to Baranowski, SARRs are built from the very beginning at their most efficient, and will not become more efficient until many years into the future.¹⁰⁶ As Baranowski explained regarding a complainant SARR's inability to obtain additional productivity from the deployment of new, more efficient locomotives that may come available in the future:

¹⁰⁵The alternative would be to have just enough capacity to meet the traffic levels in each year, and to add incremental infrastructure in each year to handle the increase in traffic. This arguably would produce the most efficient SARR since capacity is always matched to traffic levels. The financial modeling could be performed in a relatively straightforward (although expensive) manner, e.g, if the parties use a 20 year study period, then they would also produce 20 DCF models, one developing the initial investment and 19 more developing the capital recovery of the incremental investment. However, to meet the STB's imposed feasibility test would require 20 different operational simulations, one for each year with a new traffic base. Given that it takes a majority of the complainant's evidentiary preparation time to produce one functioning operational simulation, to produce 20 simulations for one SAC case is beyond the pale of expectation.

¹⁰⁶See Baranowski OVS at 4.

One claimed source of future productivity gains is the replacement of locomotives with yet to be developed units boasting higher horsepower and grater fuel efficiency *and* lower maintenance costs. Even if such locomotives were to become available, the typical SARR has locked in its locomotives under a long term lease, thus any productivity gains related to the deployment of more advanced units could not be realized until many years into the future.¹⁰⁷

Assuming that these new, more efficient locomotives become available soon in the future, say two or three years after the commencement of the complainant's SARR's operations, the complainant's SARR would be precluded, according to Baranowski, from using them.¹⁰⁸

Both of these examples lead to a situation where the complainant's SARR, which by STB procedure and application has too much capacity at its start or is using outdated, inefficient locomotives, is competing against more efficient SARRs that enter the market later.¹⁰⁹ Holding all else constant, these competing SARRs would have a lower cost structure than the complainant's SARR due to a more efficient infrastructure, and would undercut the complaint SARR's prices. Given the STB mandated inefficiencies, the complainant's SARR would not enter the market, and would be precluded from recouping its costs.

¹⁰⁷See Baranowski OVS at 7.

¹⁰⁸Baranowski's observations concerning SARR productivity are refuted by other witnesses who have submitted rebuttal verified statements on behalf of the Coal Shippers.

¹⁰⁹Given Kalt's argument of costless market entry and exit, these additional SARRs could enter the market for only a very short time, exit and still deploy their assets elsewhere the following year, at no loss economic loss to themselves.

b. Freedom of Entry and Exit
Does Not Guarantee Cost Recovery

Kalt's second assertion against protecting the complainant's SARR from post entry retaliation, that under contestability the complainant's SARR is free of barriers to entry and exit, and, therefore, does not need time to recoup its costs, is completely contradictory to the STB's application of contestable market theory.

While pure application of contestability theory allows instantaneous entry and exit, the ICC and the STB have held this is not the case for purposes of SAC presentations. As I mentioned above, the ICC's decision in Nevada Power II, which was issued relatively early in the development of SAC procedures, indicated that the complaining shipper was not entitled to instantaneous market entry and exit: "...we do not let a SARR costlessly and instantaneously adjust the size of its plant year by year by adding and subtracting plant."¹¹⁰ The STB reaffirmed this lack of instant access in its Ashley Creek decision:

Contestable market theory would allow instantaneous exit and reentry. However, our SAC constraint does not assume such immediate exit and reentry activity for the SAC carrier. Rather, it judges the financial decision to enter the market by the final outcome at the end of the forecasted SAC period (in this case, 20 years). The purpose of this hypothetical exercise is to determine if the SAC carrier could provide the service over the course of the forecasted SAC period at rates below those charged by the defendants.¹¹¹

¹¹⁰See Nevada Power II at 267, n. 18.

¹¹¹Ashley Creek Phosphate Co. v. Chevron Pipe Line Co., STB No. 40131 (Sub-No. 1) (STB Issued Oct. 30, 1996) at 1996 WL 625471, *20 n.36.

Moreover, the ICC's draft Dayton Power & Light (DP&L) decision stated that instantaneous entry and exit is inconsistent with the long run investment required to provide rail services and the need to achieve a return, which, over the life of the assets, will permit their replacement. As the ICC stated in the draft DP&L decision:

Although conceptually the SAC test measures contestability on a continuum, i.e., the entry/exit decision can be made at any point in time, such an approach is impractical given the long lives of most rail assets. In Nevada Power, we rejected the same notion of "perfect contestability" if (sic) favor of "workable contestability" because the former ignored the impact of the business cycle on a railroad's ability to achieve revenue adequacy.¹¹²

Both prongs of Kalt's argument fail to disprove the Coal Shippers' demonstration that price retaliation from any source is impermissible under the STB's application of the SAC constraint.

**C. THE USE OF REAL WORLD RATES IS
NOT MANIPULATION OF THE SAC TEST**

In their Opening Comments in this proceeding the Coal Shippers laid out a cogent argument as to why the use of real world market rates is not only consistent with over a decade of ICC and STB precedent, but also consistent with CMP.¹¹³

In response to the Coal Shippers' reasoned argument as to why real world market divisions are appropriate, Klick responded with a denunciation of the Coal Shippers efforts as nothing more than

¹¹²See DP&L Draft Decision at 98.

¹¹³See Coal Shippers' Opening Comments at 43.

shippers' continued effort to manipulate the SAC process. As proof for his denouncement, Klick cites Otter Tail¹¹⁴ and infers that the STB rejected Otter Tail's use of market based divisions due to the STB's acceptance of Kalt's avoidable costs theory and due to poor analysis by the shipper. He then cites to a portion of my Opening VS in this proceeding as further proof that shipper's are just intent on "gaming" SARR traffic with short-haul movements. Neither of Klick's claims are close to being true as I explain below.

**1. The STB Did Not Reject Otter Tail's Revenues
Due To "Manipulation" Or Poor Analysis**

Klick asserts that evidence based on BNSF's real world market divisions filed by the shipper in Otter Tail was submitted only with the intent to show that real world BNSF divisions would provide extremely large divisions even if the SARR provided minimal or no line-haul service. According to Klick, the reason Otter Tail filed this evidence was to give itself and future shippers the opportunity to manipulate the SARR revenue process. Klick alleges that had the STB accepted Otter Tail's evidence, it would have only led to more manipulation by shippers in future cases. According to Klick, it was only through the diligent work of BNSF's consultants, pointing out the many statistical irregularities in Otter Tail's analysis and the wisdom of the STB, that Otter Tail's attempted manipulation was stopped.¹¹⁵

¹¹⁴STB Docket No. 42071, Otter Tail Power Company v. BNSF Railway Company, Decision served January 27, 2006.

¹¹⁵See Klick RVS at 16, n. 17.

Contrary to Klick's exaggerated rhetoric, the STB did not reject Otter Tail's market based analysis due to poor statistical analysis or to support BNSF's claim that CMP requires the use of avoidable costs in real world divisions. As it explained in its rate case evidence, Otter Tail relied upon actual BNSF division data provided in discovery to develop market-based division algorithms. Otter Tail asserted that its division algorithms allowed it to use actual BNSF's market divisions in a stand alone context.¹¹⁶ The STB rejected Otter Tail's argument – wrongly as pointed out by the Coal Shippers in their Opening Comments in this proceeding – on the misapplied belief that cross-over revenue is just a short-cut to the development of a full SAC analysis.¹¹⁷ Moreover, the STB did not even address BNSF's critique of Otter Tail's market based divisions analysis, stating "there is no reason to address the technical concerns raised by BNSF."¹¹⁸

2. Shippers' Opposition To Re-Filing SAC Evidence Is Not Proof of Manipulation

In my Opening VS beginning at Page 8, I explained the four macro reasons why the ATC revenue division approach proposed by the STB in this proceeding is inappropriate and should not be adapted for use in existing or future SAC cases. My reasons for rejecting the ATC method included: (1) the allocation of fixed costs as proposed by the ATC is arbitrary; (2) ATC does not

¹¹⁶See Otter Tail's Opening Evidence at III-A-17. Redacted, public versions of Otter Tail's Opening and Rebuttal filings are available on the STB's website.

¹¹⁷See Otter Tail at 15.

¹¹⁸See Otter Tail at 15. While the STB did not address Otter Tail's statistical analysis, it is almost assured that the STB would have rejected the BNSF's misguided claims. As Otter Tail pointed out in its rebuttal evidence in the rate case, BNSF's critique was extremely elementary, and showed a substantial lack of basic statistical knowledge such as the basic tenants of the Central Limit Theorem.

truly reflect movement specific economies of scope, scale and density; (3) the MSP approach is better at reflecting the tapering effect of mileages on rates; and (4) in those cases where individual shippers have already filed SAC evidence, adoption of ATC may force the shipper to file new evidence.¹¹⁹

Klick, in his RVS, latches on to a portion of my fourth reason for rejecting ATC, and manipulates it in an attempt to prove that shippers' only reason for not accepting the STB's "Full SARR" argument is that it will not allow them to game the SAC process.¹²⁰ Klick's argument is false for several reasons.

First, as my Opening VS clearly indicated, there is no certainty that shippers would have to realign their SARR traffic groups if the STB does adopt the ATC division approach. As I stated, "...as a practical matter, if the ATC approach to determining revenues on cross-over traffic is accepted, and ordered to be used in proceedings where evidence has already been filed, the *complainant may* be placed in a position of having to redo the traffic group due to ATC."¹²¹ There may be also cases where the switch to ATC has no appreciable impact on the SARR's revenue and no change in the traffic group is warranted.¹²²

¹¹⁹See my Opening VS at 8.

¹²⁰See Klick RVS at 17.

¹²¹See my Opening VS at 10 (emphasis added).

¹²²I take adherence to the STB's Protective Orders very seriously, and am therefore unable to provide any direct insight into the effects of a change to ATC divisions on any rate cases that are now pending before the STB.

Second, and directly to the point of Klick's assertion, the Guidelines directly instruct the parties to design a SARR that will minimize construction and operating costs, while maximizing the carriage of profitable traffic.¹²³ The ICC observed that there will be no one correct SARR, and that operating, construction and revenue factors will depend on the particular circumstances of the case:

The factors to be considered depend upon individual circumstances. Hence, the optimal size and placement of the physical plant must be determined on a case by case basis ... We see no need for any restrictions on the traffic that may be potentially be included in a stand-alone traffic group.¹²⁴

Because each SARR's physical structure and operating plan is tailored to the specifics of the composition of its traffic group, including traffic group revenues, any change in one SARR component may necessitate a change in any number of other SARR components. Contrary to Klick's assertion, the sentiment expressed in my Opening VS was not remorse about losing the ability to "manipulate" the SAC system, but to point out that to stay within the Guidelines' admonishment to design the most profitable SARR possible, any change in one component of the SAC test may require changes in other components.¹²⁵

¹²³See Guidelines at 543.

¹²⁴See Guidelines at 544.

¹²⁵Moreover, as a threshold matter, no amount of "gaming" or manipulation by a shipper will guarantee a shipper a positive outcome in a SAC case. One need look no further than Otter Tail, where, in its evidence, the BNSF went on *ad nauseam* about Otter Tail's manipulation of the traffic group and cross-over revenues. Yet at the end of the day, the STB found BNSF's rates not to be unreasonable. Contrast this with a railroad's ability to affect the SAC outcome by setting its rates at such a high level as to guarantee itself a positive outcome under PRM.

**VI. FULL SARR ANALYSES ARE
CONTRARY TO CMP AND SAC PRINCIPLES**

The Coal Shippers demonstrated in their Opening Comments that inclusion of cross-over traffic in a SARR's traffic group is not a simplification of a "Full SARR"¹²⁶ analysis, but rather is a proper implementation of CMP as described in the Guidelines.¹²⁷ Neels indicates that the Coal Shippers' view is incorrect and that the ICC always intended for a SARR to be a truly "stand-alone" entity without any connections to the incumbent carrier. In addition, Neels contends that it is not a barrier to entry to force a shipper to make either an explicit or implicit full SARR analysis. Both contentions are incorrect as explained below.

**A. THE GUIDELINES DO NOT CALL
FOR A FULL SAC ANALYSIS**

Neels asserts that the STB is correct in viewing cross-over traffic as a short-cut to a full SARR analysis, and not as an end to itself.¹²⁸ In Neels's view, the SAC test as expressed in Guidelines was designed to apply to a stand-alone entity, where the stand-alone entity provides by itself all of the services required by its customers, sharing neither costs nor revenues with the incumbent. Because

¹²⁶A "Full SARR" is defined as a SARR that replicates all of the incumbent carrier's line segments over which the SARR's traffic moves in the real world. A Full SARR analysis would therefore provide complete origin to destination service for traffic that is local to the incumbent's system, complete origin to interchange service for traffic that is originated on the system and transported to interchange by the incumbent, and complete interchange to destination service for a movement that was received in interchange by the incumbent and terminated on the incumbent's system.

¹²⁷See Coal Shippers' Opening Comments at 30.

¹²⁸See Neels RVS at 5.

of this, no interaction would take place between the SARR and the incumbent, and there would neither be a market nor market prices.

Neels's apparent belief that the Guidelines call for a Full SARR presentation is completely off-base. The Guidelines do not call for a specific form of replacement entity for the incumbent carrier. In fact, the Guidelines state just the opposite:

The railroads argue that a SAC presentation should be limited to the cost of constructing a competing railroad. But the concept of stand-alone cost – the cost of obtaining service from another source – is not so limited. Under the theory of contestability, a captive shipper's rate can be no higher than the level at which the shipper would discontinue using the incumbent railroad and utilize alternatives. Those alternatives could take various forms, since our application of SAC assumes that the alternatives are instantaneously available and that no barriers to entry or exit exist. Thus, we will not limit parties in the manner suggested by the railroads.¹²⁹

The Guidelines only require that the stand-alone entity must provide origin to destination service for the issue traffic, but how the complainant in the case chooses to provide this service is completely independent of the structure of the incumbent. As the ICC ruled, the shipper could propose the use of a coal slurry pipeline as the alternative stand-alone entity, and would be in perfect alignment with CMP in doing so.¹³⁰

¹²⁹See Guidelines at 543 (footnote omitted).

¹³⁰See Guidelines at 543, n. 60.

Moreover, it is the antithesis of CMP to argue that a SARR cannot share revenues and costs with the incumbent. CMP, as it is expressed in the SAC constraint, searches for the most efficient replacement method of providing transportation services for the issue traffic. If the most efficient method for such service is the construction a SARR that interchanges other non-issue traffic with the incumbent, then this is what would happen in a contestable market. As the ICC distinctly stated, “The theory of contestability would be undermined by any arbitrary limitation on the efficient alternatives to the existing system.”¹³¹

**B. IMPLICITLY OR EXPLICITLY FORCING
THE CONSTRUCTION OF A FULL
SARR IMPOSES A BARRIER TO ENTRY**

Coal Shippers detailed in their Opening Comments why the imposition of a cost-based division approach that allegedly approximates the impact of a Full SARR analysis is an impermissible barrier to entry.¹³² Specifically, the Coal Shippers explained why such an imposition places construction, pricing and productive technique barriers on the SARR that are not imposed upon the incumbent carrier.

Neels disagrees with the Coal Shippers’ argument, stating that it is contrary to the facts and irrelevant to the treatment of cross-over traffic. As Neels views the situation, the problem of cross-over traffic allocation arises precisely in those situations where the defendant carrier is already providing end-to-end service, and has already incurred the costs to do so. Therefore, according to

¹³¹See Guidelines at 543, n. 61.

¹³²See Coal Shippers’ Opening Comments at 39.

Neels, it is impossible to argue that a Full SARR analysis requires the complainant to do something the incumbent has already done. Moreover, Neels contends not doing a Full SARR analysis does not ensure that the members of the traffic group can actually cover the full costs of the facilities required to serve them.¹³³

Neels's argument misses the point for several reasons. First, the forced expansion of a SARR to eliminate cross-over traffic directly conflicts with basic SAC principles. The Guidelines give a shipper broad traffic grouping rights. These broad grouping rights include the right to design a SARR that utilizes the same "production technique[s]" that are available to the incumbent carrier.¹³⁴ These production techniques include the right of a SARR to construct its own facilities to provide its customers with origin-to-destination service or to construct a portion of the origin-to-destination facilities and enter into interline arrangements with connecting carriers to complete the service. Whether the incumbent is currently providing end-to-end service or not is irrelevant. The issue is whether limiting the rights of the complainant to the same productive techniques, in this case contracting out final delivery, is a barrier to entry. Clearly it is.

Second, the fact that the incumbent "already had incurred all of the costs required" to provide end-to-end service is also irrelevant. The SAC test looks explicitly for the "least cost" alternative for providing transportation for the issue traffic, not for all traffic in the SARR's traffic group.¹³⁵

¹³³See Neels RVS at 7.

¹³⁴See Guidelines at 528.

¹³⁵See Guidelines at 542.

The least cost alternative may explicitly employ the incumbent carrier as a means of serving the SARR's traffic group since the use of the incumbent may be the least cost alternative. For example, if the SARR were required to provide full end-to-end service, it would be required to complete the construction of the required lines at the cost of acquiring assets today.¹³⁶ The incumbent's line segments which the SARR would be replacing usually were constructed many years ago, at a cost far less than the cost of constructing the SARR. In that situation, the least cost alternative available would be to use the incumbent for delivery because of the incumbent's lower costs. To force the complainant to use a less efficient alternative approach that is available to the incumbent is a barrier to entry, whether or not the incumbent has "incurred the costs."

Finally, Neels's contention that not doing a Full SARR analysis does not ensure that the members of the traffic group can actually cover the full costs of the facilities required to serve them is a non-starter. The ICC and the STB have continuously held that the market (and cost)-based revenue divisions methodologies used in every SAC rate case since Nevada Power II, MMP and MSP, cover the off-line attributable costs.¹³⁷

VII. THE ATC DIVISION METHOD IS ARBITRARY AND INCONSISTENT

As the Coal Shippers indicted in their Opening Comments, the STB's proposed ATC methodology for allocating cross-over revenues is deficient for several reasons. First, the ATC

¹³⁶See Guidelines at 544 and 545.

¹³⁷See, for example Xcel I at 17.

method does not comport with the governing STB precedent for cost-based revenue allocation.¹³⁸ Second, the ATC approach does not truly solve the problem of assuming the same fixed cost per mile.¹³⁹ Third, ATC does not address the long-held, fundamental principle that fixed costs cannot be rationally allocated to particular customers on a cost of service basis. In support of the Coal Shippers' position, Dr. George Borts and I submitted verified statements detailing the rationale for the Coal Shippers three arguments.¹⁴⁰

In response to the Coal Shippers' Opening Comments, including Dr. Borts's Opening VS and my Opening VS, BNSF presented the Klick RVS. Klick contends that Dr. Borts and I, in our support of the Coal Shippers' position, made several errors in our interpretation and assessment of the ATC approach. First, Klick asserts that Dr. Borts was incorrect in stating that there was no difference between the STB's ATC approach and the BNSF's discredited Density Adjusted Revenue Allocation ("DARA") approach. Second, Klick alleges that Dr. Borts' misunderstanding of URCS costs led to Dr. Borts' misstated claim that there is no rationale for allocating fixed costs on a route mile basis. Third, Klick contends that my comment that ATC does not truly reflect economies of density is incorrect. And fourth, Klick asserts, contrary to Dr. Borts's and my comments, that it is perfectly acceptable to allocate fixed costs when setting revenue divisions.

¹³⁸See Coal Shippers' Opening Comments at 49.

¹³⁹See Coal Shippers' Opening Comments at 51.

¹⁴⁰See my Opening VS at 8 and Borts Opening VS at 17.

Dr. Borts presents his response to Klick's argument in his Rebuttal Verified Statement. My response is presented below. Klick is incorrect in three of his arguments, and his fourth argument is irrelevant to the application of the ATC method.

**A. DR. BORTS' STATEMENTS
ON ATC ARE CORRECT**

Klick alleges that Dr. Borts suggests that there is no mathematical difference between BNSF's discredited DARA approach to revenue allocation and the STB's proposed ATC division methodology. To support his claim, Klick included in his RVS at Table 1 a purported demonstration that DARA and ACT would produce different answers. Therefore, according to Klick, the DARA and ACT methods are clearly not mathematically the same.

There are several problems with Klick's allegation. First, as a practical matter, Dr. Borts never said that "... there is no mathematical difference in the way DARA and ATC work" as Klick alleges. He stated that ATC suffers from the same defects of DARA, namely that high density rail lines have the same cost as low density line and that it does not factor in economies of density:

The Board in Duke/NS rejected the DARA approach because it contains the critical assumption that light-density lines have the same fixed costs per mile as the heavy density lines. The Board also found in Xcel that the DARA formula did not actually factor in economies of density. ATC suffers from the same defects.¹⁴¹

Nowhere does Dr. Borts make any claim of mathematical equivalence.

¹⁴¹See Dr. Borts Opening VS at 19.

Second, regardless of whether the ACT approach produces different results than the DARA approach, it still displays some of the same shortcomings of the latter approach. As Dr. Borts explained in his Opening VS, neither the ATC nor the DARA approach is accurate in measuring the effect of density on average total cost due to both approaches' reliance upon linear URCS total cost functions, which are incapable of demonstrating rising marginal costs. While the ATC and the DARA methodologies use different heuristics and produce different results, they both suffer from the fatal faults of their common inputs.

**B. THE ATC METHODOLOGY DOES NOT ACCURATELY
RECOGNIZE ECONOMIES OF DENSITY ON
MOVEMENT-SPECIFIC REVENUE ALLOCATIONS**

At Page 8 of my Opening VS, I explained why, if the STB were to reject the MSP revenue allocation approach because it fails to take into account economies of scale, scope or density, it must similarly reject the ATC approach because it too would fail to recognize economies of scale, scope and density due to the ATC method's reliance on system average costs. In response to my observation, Klick stated that he did not understand my point, but that Table 1 to his RVS clearly shows that ATC does reflect economies of density.¹⁴²

I do not believe my original statement was unclear. In any event, I will demonstrate, using a variation of Klick's Table 1, why the ATC's approach of using system average URCS costs, instead of actual investment costs, incorrectly reflects the economies of density on movement-specific rates.

¹⁴²See Klick RVS at 20, n. 19.

Columns 2 and 3 of Table 2 below recreate the first hypothetical contained in Klick's RVS Table 1. This includes URCS variable costs of \$5.00 per ton, system-average fixed costs per route mile of \$160,000 based on URCS total fixed costs and total railroad miles, a through rate of \$20.00 per ton, 500 segment miles for each segment, a density of 50 million tons on the SARR segment and 20 million tons on the residual incumbent segment. Based on these inputs the ATC method would calculate revenue division percentages of 46.8 percent for the SARR and 55.4 percent for the residual incumbent.

The limitation of the ACT approach is clearly shown in Columns 4 and 5 of Table 2 below. Because ACT relies upon the incumbent's system average fixed costs per route mile, it fails to take into consideration the higher fixed costs of high density lines. For example, assume that the true fixed cost per route mile, based on actual railroad investment, was \$250,000 per route mile on the SARR portion of the movement and \$70,000 on the residual incumbent portion of the movement. The use of the actual investment values shifts the revenue divisions allocation percentages nearly 10 percentage points in favor of the SARR and 10 percentage points to the disadvantage of the residual incumbent. It is perfectly clear from my example in Table 2 below that the use of URCS average costs will not provide the precision regarding economies of density that the STB seeks in its proposed ATC methodology.

Table 2
Demonstration of the ATC Approach's
Imprecision on Movement Specific Revenue Allocations

<u>Item</u> (1)	<u>URCS Average Costs</u>		<u>Line Specific Costs</u>	
	<u>SARR</u> (2)	<u>Residual Incumbent</u> (3)	<u>SARR</u> (4)	<u>Residual Incumbent</u> (5)
1. Mileage	500	500	500	500
B. Variable Cost Per Ton	\$5.00	\$5.00	\$5.00	\$5.00
C. Fixed Cost Per Mile	\$160,000	\$160,000	\$250,000	\$70,000
D. End-to-End Rate	\$20.00	\$20.00	\$20.00	\$20.00
E. Density	50	25	50	25
F. Fixed Costs Per Ton-Mile	\$0.0032	\$0.0064	\$0.0050	\$0.0028
G. Fixed Costs Per Ton	\$1.60	\$3.20	\$2.50	\$1.40
H. Variable Costs Per Ton	\$5.00	\$5.00	\$5.00	\$5.00
I. Total Cost Per Ton	\$6.60	\$8.20	\$7.50	\$6.40
J. Division Percentages	44.6%	55.4%	54.0%	46.0%

**C. KLINK'S COMMENTS REGARDING URCS
REGRESSION FACTORS ARE IRRELEVANT**

In his Opening VS, Dr. Borts made the correct economic observation that it is rational to allocate the variable cost of a particular movement on a route mile basis because variable costs increase with the length of haul among other indicia of output, but there is no rationale for allocating fixed costs on the same basis.¹⁴³ In reply to Dr. Borts' observation, Klick responds with the charge

¹⁴³See Dr. Borts Opening VS at 19.

that Dr. Borts has a fundamental misunderstanding of URCS.¹⁴⁴ According to Klick, URCS employs measures of both output and capacity as independent variables in its regressions. Because URCS itself calculates a cost per unit of capacity, it is obvious, according to Klick, that the total capacity costs will increase as the size of the railroad increases, but this does not change the fact that these costs are fixed for a given plant size across all output levels.

While this may be correct, it is irrelevant to the issue of fixed cost allocation. Klick's observation that variable cost regressions include a capacity factor says nothing regarding any economic rationale for allocating fixed costs. It just points to the fact that to obtain a good fit with its regression equations, the STB uses capacity as an independent variable.

Moreover, Klick's statement that "...total capacity costs will increase as the size of the railroad increases..." is nothing but a red herring. It is only by implication that Klick claims that this alleged relationship between capacity cost and railroad size provides the rationale justifying the allocation of fixed costs. It does not. Just as Dr. Borts stated, if there were the relationship that Klick implies, those costs would be variable, not fixed costs, and would be handled as variable costs. Overall, Klick's observation provides no greater justification for the STB's attempt to allocate fixed costs.

**D. THERE IS NO DIFFERENCE
BETWEEN USING ALLOCATED COSTS IN
SETTING RATES AND SETTING REVENUES**

Both Dr. Borts and I explained in our Opening Statements why the ATC approach is dead on

¹⁴⁴See Klick RVS at 20.

arrival due to its economically unjustifiable allocation of fixed costs on a route mile basis.¹⁴⁵ Klick fully agrees that fully-allocated costs are not an appropriate basis for setting prices, for all of the reasons articulated in Guidelines.¹⁴⁶ However, Klick argues that fixed cost allocation is perfectly acceptable for use in the ATC approach because it is not used to directly set rates, but only to allocate revenues on cross-over traffic to an extent that reflects the incumbent carrier's cost of providing service over the involved line segments. Therefore, according to Klick, it is acceptable to arbitrarily allocate fixed costs because significant differences in the utilization of fixed plant between the on-SARR and off-SARR reflect relative average costs.

The simple fact of the matter, which Klick seems to ignore, is that SARR revenues (and revenue allocation by extension) and SAC are the two key components in most of the rate establishment methodologies advocated in this proceeding.¹⁴⁷ The way in which a SARR's cross-over revenues are allocated has a direct and significant impact on the ultimate prescribed rate. Klick cannot simply divorce himself from this fact by hiding the fixed cost allocation in one part of the process, and pretending it does not occur.

Moreover, Klick's claim that it is justifiable to allocate fixed costs to reflect the "significant differences" in plant utilization on the different line segments that impact relative average costs is simply wrong. As I demonstrated above, any method which assumes system-average costs, no

¹⁴⁵See Dr. Borts Opening VS at 19 and my Opening VS at 8.

¹⁴⁶See Klick RVS at 21.

¹⁴⁷ The one exception to this statement is the RAM approach first advocated by WFA/Basin.

matter if it is adjusted for relative densities, will lead to unrepresentative revenue allocations as the lighter density line will absorb a greater portion of the revenues than justified.

VIII. DEBT AMORTIZATION SCHEDULE

The Coal Shippers explained in their Opening Comments that they were not opposed to the STB's suggested switch from a 20 year DCF model period to a 10 year period, as long as three conditions were met. First, the debt amortization schedule contained in Table E of the STB's standard DCF model should be properly modified so as to not amortize the SARR's debt over a 10 year period. Second, the 10 year DCF model should not be applied to pending SAC cases. And third, the STB should ensure that a rate prescription can extend beyond the 10 year DCF period.¹⁴⁸

With regard to the first issue discussed by the Coal Shippers, involving the DCF model's debt amortization schedule, I explained at Page 13 of my Opening VS that the 20 year DCF model used by the STB in its previous decisions amortized debt for the financing of the SARR's original investment over the life of the DCF model, i.e., 20 years, rather than the life of the asset. I further explained that amortizing interest payments over the life of the assets acquired is consistent with actual rail industry practice, as rail carriers do not base their financial decisions on a particular arbitrary time period, but rather on the accepted useful life of the acquired assets.

¹⁴⁸See Coal Shippers' Opening Comments at 102.

In response to my Opening VS, BNSF's witness Baranowski alleges that my reasons for adjusting the DCF model's Table E debt amortization are invalid, and that no adjustment is in fact required. Baranowski provides three basic arguments for his claim. First, Baranowski claims that it is just a coincidence that the debt amortization schedule and the DCF model period are the same, and that there is no direct link between the two time periods. Second, Baranowski asserts that the 20 year debt amortization schedule allegedly mandated by the STB was instituted to mimic a SARR issuing 20 year fixed rate bonds, and changing the amortization without reflecting the higher interest rates in longer term bonds would understate the SARR's cost of capital. Third, Baranowski disputes my testimony that the only way to equate the amortization over a 10 year and 20 year DCF models is to amortize the debt over the life of the assets.

As I explain below, all of Baranowski's reasons and comments are invalid, and the STB should amortize debt over the life of the assets if it does switch from a 20 year to a 10 year DCF model.

**A. THE STB AND ICC HAVE ALWAYS
LINKED THE DCF MODEL'S PERIOD
AND DEBT AMORTIZATION SCHEDULE**

Baranowski contends that my starting premise, that the debt amortization period is the same as the DCF period, is incorrect, and that is just a coincidence that the amortization and DCF model time periods are the same.¹⁴⁹ Baranowski's contention is in fact incorrect and the debt amortization schedule is not divorced from the DCF period. This occurrence is not a coincidence and is

¹⁴⁹See Baranowski RVS at 14.

confirmed by ICC and STB decisions and Baranowski's own sponsored testimony in AEP Texas.

For the most part, SAC presentations to the ICC and the STB have used a 20 year DCF model, but this was not always the case. In Nevada Power II, one of the first cases to use the DCF model, the ICC relied upon a 25 year DCF model to determine SAC. See Nevada Power II at 275. The Nevada Power II DCF model, like the current model used by the STB, calculated the SARR's interest expense as a component of the SARR's annual tax expense, and calculated this interest expense over the model's 25 year life, not the 20 years claimed by Baranowski.

More recently, the SAC presentation made by AEP Texas also diverged from the common 20 year DCF model. AEP Texas explained in its Opening Evidence in its rate case that because of the timing of the rate established by the BNSF, it was required to develop a DCF model that extended beyond the standard 20 years.¹⁵⁰ BNSF subsequently accepted AEP Texas's longer DCF model period in its Reply Evidence.¹⁵¹ However, in accepting AEP Texas's longer DCF period, BNSF, in testimony sponsored by Baranowski, did not accept AEP Texas's longer debt amortization schedule, and instead relied upon a debt amortization period equal to the DCF model period.¹⁵² As stated by BNSF, "In its Reply, BNSF amortizes TNR debt over the DCF period, *consistent with the Board's prior practices*."¹⁵³

¹⁵⁰See AEP Texas Opening at II-H-4.

¹⁵¹See BNSF's Reply Evidence (Public Version) in AEP Texas at III.G-22.

¹⁵²AEP Texas correctly amortized the SARR's debt over the average life of the assets instead of the DCF period.

¹⁵³See BNSF's Reply Evidence (Public Version) in AEP Texas at III.G-23 (emphasis added).

Based on precedent, and as confirmed by BNSF's own witness in this proceeding, the STB has consistently amortized debt over the same time period as the DCF model. Therefore, if the STB were to switch from a 20 year to a much shorter 10 year model, it must adjust its debt amortization schedule or penalize the complainant with higher interest payments than economically justifiable.

**B. THE STB MISMATCHES DEBT RATES
AND AMORTIZATION SCHEDULES**

Baranowski next asserts that the 20 year debt amortization schedule was not just an arbitrary time period picked by the ICC (that was coincidentally the same as the DCF model period), but was chosen to reflect actual railroad financing and the debt's implicit risk premium.¹⁵⁴ For support, Baranowski cites to the ICC's draft decision in the DP&L case. In DP&L, the complainant shipper argued that it should be able to "lock-in" its debt rate over the 20 year life of the DCF model, but amortize its debt over the average life of the assets. While the ICC agreed that it was consistent with CMP to lock-in the SARR's debt rate for 20 years, it was not consistent with financial theory to amortize debt over the life of the assets. The ICC believed that amortizing debt over the life of the assets would infer longer debt maturities which normally carry higher interest rates.¹⁵⁵ Because the debt rate inferred a 20 year bond rate, it was appropriate to amortize the debt over the 20 years.

The ICC was correct that the longer term instruments, holding all else constant, will normally have higher interest rates. However, Baranowski is not correct to state that 20 year amortization

¹⁵⁴See Baranowski RVS at 16.

¹⁵⁵The ICC failed to consider that there are periods where longer term securities have lower interest rates, commonly known as inverted yield curves.

period still must be used. This is because the railroad industry average cost of debt used in SAC cases reflects debt instruments with maturities well past 20 years. In its March 31, 2006 submission in Ex Parte No. 558 (Sub No. 9) Railroad Cost of Capital - 2005, the Association of American Railroads (“AAR”) included its estimates for the 2005 railroad industries average cost of debt, including its cost of debt workpapers listing of the debt securities underlying its calculations. A review of the AAR’s workpapers shows that the maturities of the railroad’s debt instruments are extremely long, with some extending out over 100 years.¹⁵⁶ Overall, over half (54 percent) of the railroads’ publicly traded debt securities have maturities of greater than 20 years, and almost 40 percent have maturities greater than 30 years.

The practical implications is that the cost of debt assigned to SARRs in SAC cases does not reflect a 20-year bond with a fixed coupon. Consistent with this, the debt amortization schedule should not amortize debt over 20 years, but over longer periods that are more consistent with the average asset life of the SARR.¹⁵⁷

¹⁵⁶Both BNSF and Norfolk Southern have publicly traded debt with maturities at their date of issuance exceeding 100 years in length.

¹⁵⁷Baranowski opines that any changes to the debt amortization schedule would require the evaluation of substantial evidence relating to railroad debt financing practices, the appropriate interest rate assumption, and the relevance of the STB’s cost of capital determinations in SAC cases. See Baranowski RVS at 16. This is absurd. Correcting a mistake in the STB’s DCF model to reflect the proper amortization period does not require another rulemaking, as Baranowski implies. Moreover, all parties are familiar with railroad financing practices through the STB’s annual railroad industry cost of capital determination. It is somewhat ironic that a witness for BNSF would argue that a change to long standing practice needs to be intensely studied when the BNSF is ready to jettison long standing ICC and STB precedent over the use of market rates in a heartbeat.

C. DEBT AMORTIZATION
SCHEDULES MUST BE CONSISTENT

Baranowski claims that I must have inadvertently mis-spoken in my Opening VS when I stated that in order for the STB's 10 year DCF model to produce the same answer the current 20 year DCF model produces, the STB has to amortize the Table E debt over the life of the assets and not the life of the model.¹⁵⁸ Baranowski claims in the alternative that the only way for the 10 year model to produce the same answer as the 20 year model (for the first 10 years) is for the debt to continue to be amortized over 20 years.

Contrary to Baranowski's claim, my Opening VS is correct. If, as the STB has done in the past and Baranowski advocated in AEP Texas, the debt amortization period is made equal to the DCF period, then a 10 year model will not produce the same answer as a 20 year model. This is a simple fact, i.e., a 10 year model will have a different interest stream than a 20 year model if debt is amortized over the DCF model period. Baranowski's claim that a 20 year amortization can be used in either a 10 year or 20 year model is technically correct, but ignores the mismatch in yield and years to maturity I discussed above. The simplest, and economically most justifiable solution, as I suggested, is to amortize the debt over the life of the assets.

¹⁵⁸See Baranowski RVS at 16.

IX. DEMAND ELASTICITIES

In his May 1, 2006 opening verified statement (“OVS”), BNSF witness Darius W. Gaskins, Jr. (“Gaskins”) alleges to have calculated maximum rail transportation rates for moving coal from the Powder River Basin to six electric utility destinations¹⁵⁹ based on Ramsey Pricing Principles. The maximum rail rates presented by Gaskins are based on the highest rate that would not displace the generating plant in question from being dispatched based on its costs.

Gaskins draws two conclusions from his calculations. First, he claims that because the maximum coal rates to each of these six destinations based on Ramsey Pricing Principles are higher than the actual challenged rates, it is clear that BNSF is not “gaming” the PRM and instead is setting rates based on sound business decisions.¹⁶⁰ Gaskins concludes that because there are substantial differences in the Ramsey rail rates per ton/mile, the demand elasticity for coal transportation for each of these destinations varies significantly even though each of the movements is captive.

In its Reply Comments, BNSF draws three additional conclusions from Gaskins’s calculations of maximum rail rates based on Ramsey Pricing Principles. BNSF states that Gaskins’s calculations demonstrate that demand varies widely even among shippers that would be considered captive under the RAM methodology proposed by WFA/Basin Electric in the Western Fuels case. BNSF also

¹⁵⁹These customers and their destinations include: AEP Texas North – Oklaunion; Basin Electric – Laramie River; Otter Tail – Big Stone; PPL Montana – Corette; TMPA – Gibbons Creek; and Xcel – Pawnee. Each of these rates have been the subject of recent coal rate litigation before the STB.

¹⁶⁰See Gaskins OVS at 5.

concludes that setting rates for captive traffic in a SARR traffic group based on an average rate per ton-mile is completely inconsistent with what would occur if Ramsey principles were applied. Finally, BNSF concludes that the PRM methodology is preferable to RAM because it maintains the existing pricing structure, which is assumed to be based on perceived differences in demand elasticities among the shippers included in the SARR traffic group.¹⁶¹

BNSF's argument is supported by Kalt, who asserts in his RVS that RAM must be rejected because it assumes that price elasticities are identical within each group of shippers, and that allocating all joint and common costs on a ton-mile basis to captive shippers in the traffic group precludes meaningful Ramsey-consistent demand-based differential pricing.¹⁶²

In the remaining portion of this section of my rebuttal statement, I will respond to the above conclusions and arguments.

**A. BNSF's CONCLUSIONS CANNOT
BE ACCEPTED BECAUSE GASKINS'S
RAMSEY PRICES ARE NOT RELIABLE**

Based on his own evidence, the maximum rail rates Gaskins calculated using Ramsey Pricing Principles are not reliable for numerous reasons. First, Gaskins's analysis can only be evaluated for a single point in time. If any of a number of volatile factors, such as the price of natural gas or the cost of mining coal, were to change, the maximum rates he calculated would change.¹⁶³ Second,

¹⁶¹See BNSF Reply Argument at 14-15.

¹⁶²See Kalt RVS at 23.

¹⁶³See Gaskins OVS at 5.

Gaskins indicates that the wholesale market for electricity is becoming more competitive as various regulatory bodies restructure their regulation of electric generation and transmission. Gaskins concludes that a more competitive market for wholesale electricity could threaten the dispatch sequence as generating units sell into a broader regional market. This conclusion again underlines the volatile nature of his calculated Ramsey Prices.

It has been long recognized by the STB and ICC that it is very difficult to make a meaningful calculation of rail rates based on Ramsey pricing principles. The two reasons noted by Gaskins above reflect the difficulty of reliably calculating Ramsey rail rates. As stated by the ICC in Guidelines:

We did not consider it to be practical to impose pure Ramsey pricing as a regulatory requirement for across-the-board application in all cases. Ramsey pricing is based on a mathematical formula which requires both the marginal cost and the elasticity of demand to be quantified for every movement in the carrier's system. Thus, the amount of data and degree of analysis required seemed overwhelming. We concluded that while formal Ramsey pricing is useful as a theoretical guideline, it is too difficult and burdensome for universal application.¹⁶⁴

An even more compelling reason why Gaskins's Ramsey rail rates are not reliable is that, by his own admission, he failed to consider other factors that would limit the maximum rate that could be charged. For example, Gaskins identified that both AEP Texas North and TMPA may have economically viable build-out options at rail rates that are below the Ramsey rates that he calculated.

¹⁶⁴See Guidelines at 527.

Assuming that this is the case, Gaskins has failed to accurately recognize the demand elasticities for rail transportation to these two destinations.

The only conclusion about Gaskin's analyses that can be reached is that we do not know what the maximum reasonable rail rates are for these six unit coal train movements using his application of Ramsey Pricing Principles, much less those for all shippers in a SARR traffic group.

**B. DEMAND ELASTICITIES SPECIFIC TO EACH SARR
TRAFFIC GROUP PARTICIPANT ARE NOT REQUIRED
WHEN DETERMINING MAXIMUM REASONABLE RATES**

As stated above, BNSF argues allocating all joint and common costs on a ton-mile basis to captive shippers is inconsistent with application of Ramsey Pricing Principles and use of the PRM is preferable because it maintains the existing pricing structure, which is assumed to be based on perceived differences in demand elasticities among the captive shippers included in a SARR traffic group.

BNSF's arguments are inconsistent with the Guidelines for several reasons. First, the ICC addressed and resolved the issue of allocating joint and common costs on a ton-mile basis to captive shippers in a SARR traffic group by using a practical solution, i.e. joint and common costs can be allocated evenly to SARR traffic group members that shared "similar demand elasticities." Specifically, the Guidelines state:

We will consider evidence that particular [SARR] shippers face similar market conditions and therefore have similar demand elasticity.¹⁶⁵

¹⁶⁵See Guidelines at 533.

The ICC also held that shippers could present practical, qualitative evidence to demonstrate these similar demand elasticities:

[w]here information on demand elasticity is required ... we will consider qualitative (rather than necessarily quantitative) evidence on the relative demand elasticity of specific movements and/or commodities.¹⁶⁶

The ICC applied these elasticity principles in OPPD. OPPD was the first coal rate case decided under the new Guidelines. In OPPD, the complainant shipper devised a SARR that extended from the Wyoming PRB to OPPD's coal-fired generating plant in Arbor, Nebraska. The "vast preponderance" of OPPD's SARR traffic was coal traffic.¹⁶⁷

In OPPD, the ICC found that SARR revenues exceeded SARR costs. As a consequence, the ICC calculated a SARR-specific maximum rate for OPPD. The ICC's calculations required all SARR traffic group members to pay their variable costs. The remaining unattributable costs (total SARR cost minus traffic variable costs) "were divided among unit-train coal shippers, pro rata, on the basis of usage."¹⁶⁸

The ICC found this approach entirely consistent with its recently issued Guidelines. The ICC first observed that the Guidelines expressly permitted the use of qualitative evidence to determine SARR group members demand elasticities. The decision in OPPD stated:

¹⁶⁶See Guidelines at 527.

¹⁶⁷See OPPD at 136 n.21.

¹⁶⁸See OPPD at 136.

In the Final Guidelines, we indicated that, ideally, unattributable cost should be divided among the members of the stand-alone group on the basis of demand. We added, however, that the issue was best left to a case-by-case evaluation because there are practical problems surrounding the estimation of elasticities. Because of the potential difficulty of precise quantification of demand elasticities, Final Guidelines indicated that “qualitative” evidence of relative demand would be sufficient.¹⁶⁹

The ICC next found that the OPPD SARR coal shippers shared similar demand elasticities. The ICC rested this conclusion on qualitative facts – each SARR coal shipper tendered the same commodity (bituminous coal), from the same general origin area (the PRB), in similar transportation service (unit trains), to similar destinations (utility coal-fired electric generating plants). Specifically, the ICC stated:

As noted, Omaha Power distributed all unattributable costs of [the SARR] system uniformly over all unit-train coal shipments, the hypothesis being that the strength of demand for each coal shipper is sufficiently similar to recover an average contribution. The qualitative evidence for OPPD’s methodological short-cut is derived principally from the fact of similarity among members of the group. The grouping consists of the same commodity, shipped from the same general origin, with similar unit-train service characteristics, destined for the same end use (consumption in domestic electric utility plants).¹⁷⁰

Finally, the ICC emphasized that its pro-rata distribution of unattributable costs to the SARR coal shippers fully complied with the Guidelines:

¹⁶⁹See OPPD at 139 (footnotes omitted).

¹⁷⁰See OPPD at 139-40.

In deciding this issue ... we do not withdraw from the principle that allocation of unattributable costs among captive shippers is based ideally on relative demand elasticities. Indeed, complainant has not asked for repudiation of this principle. In complainant's view,

* * * the issue comes down to the extent to which it is feasible, *given the facts in each contested proceeding*, to make groupings of shipments with reasonably comparable elasticities of demand * * * without jeopardizing the ability of the railroad to recover its aggregate stand-alone costs. We agree with this formulation....¹⁷¹

BNSF concludes that PRM is preferable because it produces a closer result to Ramsey pricing principles by maintaining the existing pricing structure, which is assumed to be based on perceived differences in demand elasticity among the shippers included in the SARR traffic group. This conclusion is not correct because Ramsey pricing principles assume that the existing rate structure maximizes contribution from all shipments wherever possible. In contrast, PRM *reduces* prices on all traffic, including competitive traffic, and in doing so reduces the already low contribution from competitive traffic when that traffic is willing to pay more as is apparent from its existing rates. In fact there is no restriction in PRM to prevent rates on competitive traffic that contributes only marginally to unattributable costs from being reduced to less than compensatory levels, thereby permitting the traffic to move at rates that do not cover variable costs. In doing so, PRM distorts the existing pricing structure and fails to adhere to Ramsey pricing principles which seek to maximize rates.

¹⁷¹See OPPD at 140 (emphasis in original).

VERIFICATION

COMMONWEALTH OF VIRGINIA)
)
CITY OF ALEXANDRIA)

I, THOMAS D. CROWLEY, verify under penalty of perjury that I have read the foregoing Verified Statement of Thomas D. Crowley, 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 statement.


Thomas D. Crowley

Sworn to and subscribed
before me this day of June, 29, 2006.


Anthony V. Evanshaw III
Notary Public for the State of Virginia

My Commission expires: September 30, 2007

REBUTTAL VERIFIED STATEMENT OF

CURTIS M. GRIMM, Ph. D

INTRODUCTION

My name is Curtis M. Grimm. I am an economist and Dean's Professor of Supply Chain and Strategy at the University of Maryland. A copy of my *curriculum vitae* was provided as an attachment to my Opening Verified Statement in this proceeding. I have been asked by the following shipper groups -- Western Coal Traffic League, Concerned Captive Coal Shippers, Western Fuels Association, Inc., the Edison Electric Institute, the National Rural Electric Cooperative Association, and the American Public Power Association (collectively the "Coal Shippers") -- to address statements made by Robert D. Willig and John C. Klick in their Reply Verified Statements filed on behalf of BNSF in this proceeding.

The focus of my statement is the introduction of a "cross-subsidy" test for segments of the hypothetical Stand Alone Railroads (SARRs) that are designed and evaluated under the Stand-Alone Cost (SAC) constraint of CMP. While not listed specifically as an issue to be addressed in the notice of proposed rulemaking, the cross-subsidy test, which was first promulgated in the *PPL* case¹ and further extended (though not applied) in the 2006 *Otter Tail* decision,² has emerged as an important issue in STB rate cases. The nascent state of the issue within these cases, the complexity and

¹ *PPL Montana, LLC v. Burlington Northern and Santa Fe Ry.*, STB Docket No. 42054 (STB served Aug. 20, 2002).

² *Otter Tail Power Co. v. BNSF Railway Co.*, STB Docket No. 42071 (STB served Jan. 27, 2006).

uncertainty surrounding the application of this new cross-subsidy test, and the paramount importance of this issue in shaping outcomes of rate cases, all point to the value of discussing the issue in the instant proceeding. The dialogue was raised in the Coal Shippers' Opening Comments (including my opening statement), enjoined by Dr. Willig and Mr. Klick in their reply statements, and is continued herein. It provides useful insight and direction for the Board in handling the issue in subsequent rate cases. In this statement I will address the reply comments of Dr. Willig and Mr. Klick on the cross-subsidy issue. I also address one issue raised by Dr. Kalt in his discussion of SARR divisions issues.

I. IMPORTANT CONTEXTUAL FACTORS SUGGEST THAT THE STB SHOULD NOT INTRODUCE OR EXTEND THE NEW CROSS-SUBSIDY TEST

Importantly, two critical problems I noted with the STB's new cross-subsidy test were not addressed by Dr. Willig. First, developments in the U.S. railroad industry argue for more shipper protection, not for an alteration of procedures introducing an additional hurdle for shippers in rate cases. Since 1985 there has been a dramatic reduction in the degree of rail competition, particularly due to merger activity in the mid-1990's, which has led to an ever-increasing level of rail market power over coal transportation. At the same time, railroad revenues and financial performance have steadily increased, so that railroads are now very healthy by most common metrics of financial performance. Consistent with these two developments, the STB should be increasingly vigilant in extending regulatory protections to shippers who lack meaningful competitive transportation alternatives.

Second, since 1985 the adjudication of cases under CMP has become ever more complex, time-consuming and expensive for shippers seeking rate relief. Cases now routinely take several years to resolve at a cost of several millions of dollars. Many observers have called for the STB to streamline and simplify the CMP process. The STB itself recently has reaffirmed its oft stated goal of maximizing the predictability of case outcomes under the *Coal Rate Guidelines* to encourage settlement and private negotiation. However, the initiation of internal cross-subsidy tests within the CMP procedures promises to add cost, complexity and unpredictability to the process. Shippers are now faced with a significant new hurdle in seeking rate relief at a time when the STB should be facilitating and augmenting protection for captive shippers.

II. DR. WILLIG'S DEFENSE OF THE CROSS-SUBSIDY TEST IS BASED ON AN ASSUMPTION OF A PARTICULAR SARR CONFIGURATION

Dr. Willig downplays the concern raised in my initial statement that the cross-subsidy test will substantially complicate the SAC process and create a significant additional barrier for shippers to successfully challenge a rail rate. However, Dr. Willig bases his arguments on a simplistic view of railroad network and traffic configurations in SAC cases. He states: "The Board's cross-subsidy test, initially applied in PPL, and discussed more fully in Otter Tail, comes into play when the proponent of a given stand-alone railroad ("SARR") seeks to make it appear that the issue traffic rates are too high by designing a system that is composed of two essentially separate parts that do not extensively overlap – a lighter-density segment (or group of segments) that is utilized by the issue traffic and certain other non-issue traffic, and a heavier-density segment (or

group of segments) that is used relatively little or not at all by the issue traffic (and, therefore, is used extensively, or primarily, by non-issue traffic).” (Willig R.V.S. p. 4)

An important element of Willig’s argument is based on the configuration described above, which mirrors the cross-subsidy determination in a past case but in no way is preordained for future cases. This is an important factor in his conclusion that the test will be easy for shippers to implement. Of course, a fundamental flaw in his argument is the fact that in future SAC cases many configurations are possible for SARR traffic patterns, railroad networks, and the relationship of issue to non-issue traffic.

It would be quite natural for a SARR based on coal traffic to entail a high density segments in conjunction with coal origins such as the Powder River Basin, and also to entail relatively low density segments where traffic is delivered to utility customers. Moreover, within this general tendency there are many possibilities for traffic densities along the SARR at different locations, and there could be many, complex patterns of traffic overlap between different segments of a SARR network. As with actual railroad networks, it is commonplace to have complex layers of interdependence between segments of the network, which indeed would greatly elevate the complexity and indeterminacy of the internal cross subsidy requirement. Willig’s argument based on a specific, simplistic SARR configuration is indeed useful in focusing attention that the Board should give pause in adopting and extending the cross subsidy requirement as standard practice without considering the challenge of implementation in a variety of complex network configurations.

III. THE GROUNDING OF AND RATIONALE FOR THE STB'S "INTERNAL CROSS-SUBSIDY" CONCEPT REMAINS UNSATISFACTORY

My opening verified statement reviewed the origins and general application of cross-subsidy theory. When a firm has market power with respect to some customers but faces competition for others, it is inappropriate to use that market power and the resulting ability to draw excess profits to sustain prices lower than marginal costs for the competitive products or services. Such a predatory pricing strategy is proscribed because it would facilitate elimination of competitors or an enhancement of present and/or future market share by the dominant firm. In the STB's internal cross-subsidy application, the concern is that shippers in the issue traffic group might be "cross-subsidized" by other traffic in the group. There is no information or variance in the degree of competition between or within the traffic groups for this hypothetical scenario.

The situation is far removed from the context where prohibition of cross subsidy is warranted. I further noted in my initial statement that the Board had relied on a "sustainability" criterion to defend the cross subsidy policy, in that if a portion of the SARR did not cover its costs, one could then create an alternative, streamlined SARR which would be more profitable than the one offered by the complainant and therefore render the initial SARR unsustainable. I refer back to my initial statement where I explain how a sustainability requirement is inconsistent with contestability theory.

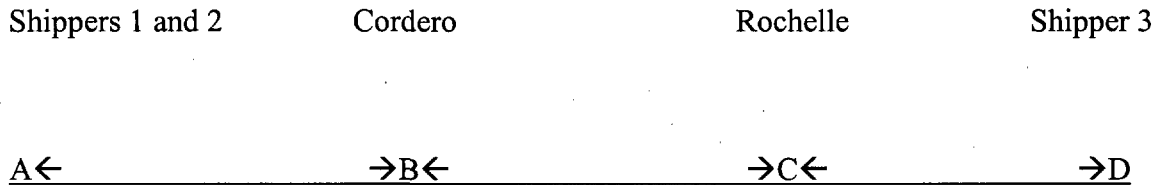
Dr. Willig argues for a defense of the internal cross-subsidy based on the Court of Appeals decision affirming the outcome in *PPL*: "Therefore, just as a captive shipper should not bear the costs of any facilities or services from which it derives no benefit, it was not unreasonable for the Board to require the captive shipper in this case to

hypothesize its SARR in accordance with the same standard...it is difficult to steal from a penniless Peter to pay Paul.” (Willig R.V.S. p. 7). In effect, Willig is arguing that the fundamental purpose of the CMP test is to determine whether the captive issue traffic is “improperly subsidizing other traffic.” (*Id.*). The basic CMP test is portrayed as a cross subsidy determination, providing a basis for labeling the internal cross subsidy test as consistent and necessary. The flaw in this logic is that the comparison of revenues to costs for the SARR is not a cross subsidy test – it is simply a determination of whether the facilities used by the issue traffic at the rates charged by the railroad, along with revenues derived from other traffic that benefits from these facilities, is generating excess profits. According to contestability theory, if excess profits are being earned, and we posit free entry by rivals, rates would have to be lowered in the face of this potential entry. When we clarify that the basic CMP test is not a cross subsidy test, this removes the linkage and justification of an internal cross subsidy test on the SARR. In the end, the internal cross subsidy test is far removed from the origins and appropriate proscription of cross subsidy, and no satisfactory alternative rationale for the test in this context has been offered.

IV. MR. KLICK’S REPLY REGARDING THE *OTTER TAIL* SCHEMATIC CORROBORATES THE FLAWS IN THE CROSS SUBSIDY TEST

In my initial statement I referred to the discussion by Professor Borts of the stylized model of a stand-alone railroad that is presented in the *Otter Tail* decision on pages 8 – 11, and noted that this reveals many of the problems inherent in the internal cross-subsidy analysis. As simplified below, it depicts a three-segment SARR in which the complainant (Shipper 1) moves coal from B to A; a nearby utility (Shipper 2) moves

coal from C to A via B; and a third SARR customer (Shipper 3) moves coal from B to D via C.



The critical numbers from the Board's decision are as follows: the stand-alone cost of serving the three shippers is \$110; the total revenue contribution from Shippers 1 and 2 is \$110; the contribution from Shipper 3 is \$20; and the costs attributed to Shippers 1 and 2 total \$100. The Board proceeds to conduct an internal cross-subsidy analysis of Shipper 1 and Shipper 2's traffic, which focuses on the A-C line. In my initial statement I explained why an analysis such as the STB describes is extraordinarily complex and ambiguous, even in a simplified setting, and would be virtually impossible to conduct in the real world, where each railroad's entire system is a maze of interdependent traffic groupings. I also noted my concurrence with Professor Borts' observation that the Board's conclusion that a cross-subsidy existed based on this schematic was not warranted.

Mr. Klick's statement attempts to justify the Board's conclusion that there is indeed a cross-subsidy. He argues that if one interprets the \$30 costs of the BC segment as only the operating costs, excluding the right-of-way costs, a cross-subsidy conclusion can be obtained. (Klick R.V.S. at 22-23). However, even a cursory examination of the STB presentation of this schematic makes clear that the Board intended the costs as

stand-alone costs, including both operating and capital costs: “Using the illustration above, assume that the total capital and operating costs attributable to serving Shippers 1 and 2 is \$100, while the total SAC cost of serving all three shippers is \$110.” *Otter Tail* at 10. This contradiction further underscores the complexity and ambiguity surrounding the internal cross subsidy determination, even in a simplified scenario; these flaws will of course be magnified in the complex range of traffic patterns potentially occurring in future SAC cases.

Mr. Klick also attempts to justify the validity of the cross subsidy conclusion by referencing the actual segment lengths that were observed in *Otter Tail*. This thesis suffers from the same problem as Dr. Willig’s defense of the procedure based on the facts of the initial cases where the internal cross subsidy was promulgated: the traffic and rail network configuration must fit a particular pattern to even attempt a justification of the cross subsidy analysis. The fact that the Board’s proposed test only seems to “work” with a SARR that meets certain, rather extreme parameters further warrants its reconsideration as a procedure which could be applied in all future cases, with myriad potential network and traffic configurations.

V. DR. KALT’S VIEWS ON THE NATURE OF THE SAC TEST ARE MISTAKEN

In our opening statements, Dr. Borts and I discussed some basic principles concerning the SAC test and contestability theory. Dr. Kalt, on behalf of BNSF, claims our analysis “reflect[s] a notable lack of basic economic understanding.” (Kalt R.V.S. p. 35). Dr. Kalt’s strident attack is wrong.

As the Board knows, the SAC test calls for the calculation of SARR revenues and SARR stand-alone costs. If SARR revenues exceed SARR SAC over the life of the discounted cash flow model period, a complainant shipper is entitled to rate relief. These basic concepts appear to be lost on Dr. Kalt. For example, he deems it “incredible” that SARR revenues can exceed SARR SAC. (*Id.* at p. 33). However “incredible” this may be to Dr. Kalt, it is the cornerstone of the Board’s SAC analysis.

As Dr. Borts explains in detail in his Rebuttal V.S., Dr. Kalt consistently confuses the SARR revenue calculations and SARR SAC calculations. The Board’s SARR revenue calculation procedure is intended to replicate the entry rates the SARR needs to beat to be sustainable in the market. These rates are routinely referred to as “the total revenues that would be available to the SARR over the [DCF period].” *Duke/NS* at 13. Consistent with basic precepts of contestability theory, the SARR evaluates its entry into the market by identifying these rates and divisions as they exist pre-entry, assuming no price retaliation by the incumbent or new entry by third parties. On the other hand, the Board’s calculation of SAC reflects the maximum rate the SARR would charge in a simulated competitive environment. These rates are constructed to cover the SARR’s service costs, including its capital costs, over the DCF period.

Contestable market theory also posits that a new entrant will enter a market, undercut the incumbent’s prices, and earn profits until the incumbent institutes countermeasures, at which time the new entrant is expected to leave the market:

“[a] contestable market works most effectively if, in response to a profit-making opportunity, new firms can enter quickly, earn profits at least temporarily (before incumbent can constitute countermeasures) and then leave without any loss of

investment or sunk capital.

Bailey & Baumol, *Deregulation and the Theory of Contestable Markets*, 1 Yale J. of Reg. 111, 114 (1984). This exercise is sequentially repeated in theory until there is no excess economic profit.

The Board's SAC procedures necessarily eliminate this entry/re-entry process.

As explained by the STB:

Contestable market theory would allow instantaneous exit and reentry. However, our SAC constraint does not assume such immediate exit and reentry activity for the SAC carrier. Rather, it judges the financial decision to enter the market and the final outcome at the end of the forecasted SAC period (in this case, 20 years). The purpose of this hypothetical exercise is to determine if the SAC carrier could provide the service over the course of the forecasted SAC period at rates below those charged by the defendants.

Ashley Coal Phosphate Co. v. Chevron Pipe Line Co., STB Docket No. 40131 (Sub. No. 1) (STB served Oct. 30, 1996).

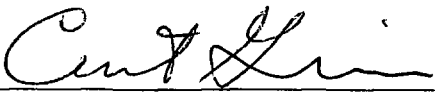
Thus, as Dr. Borts and I have explained, the Board's SAC procedure simply uses the starting point (the estimated market rates during the DCF period) and the end point (the SAC for the SARR). Dr. Kalt attempts to blur the start and end points in a transparent effort to lower the starting point rates (e.g., by using avoidable costs to set SARR divisions) and, as a result, prevent SARR revenues from ever exceeding the SARR's SAC.

CONCLUSION

In the instant proceeding, the Board is assessing the policy direction on a number of critical issues within the CMP framework. There is no question that the CMP framework is complex, intricate, and amorphous; this framework presents the STB with a continuing multitude of issues to resolve. In its current pause from a case by case process to examination of a broader set of issues, the Board needs to be mindful of assessing the appropriate overall end result of the procedures in terms of the degree to which railroad market power is constrained as well as the overall cost, complexity and time invested by shippers in bringing a case to the Board. It is manifest that the cross subsidy issue must be considered in this current assessment; that the external context of increased concentration and increased rail performance argues for additional constraint on rail pricing; that the CMP procedures have become ever more complex and are clearly in need of streamlining and simplification; and that establishment and extension of the cross subsidy test is totally inconsistent with the imperatives to provide greater protection to shippers and to simplify the CMP analysis. Given the above, the Board should eliminate the test, or most certainly not extend it further to the rate relief stage of a case, as suggested in *Otter Tail*.

VERIFICATION

I, Curtis M. Grimm, declare under penalty of perjury that the foregoing
Rebuttal Verified Statement is true and correct. Further, I certify that I am
qualified and authorized to file this statement.


Curtis M. Grimm

Executed on: June 26th, 2006

This certificate is attached to a 1 page document dealing with/entitled Verification and dated 6/26/06
of pages

ACKNOWLEDGMENT CERTIFICATE

State of Maryland

County of Howard

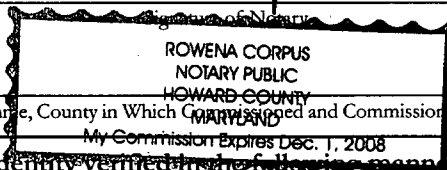
On this 26th day of June,

2006, Curtis M. Grimm
Year Printed Name of Signer

personally appeared before me as the signer(s) of the attached instrument, and he/she/they acknowledged that he/she/they signed the instrument voluntarily for the purpose expressed in it.

Witness my hand and official seal.

Rowena Corpus



Print Notary's Name, County in Which Commission Issued and Commission Expiration Date

Signer's identity verified in the following manner:

- ☒ Personally known
☐ Produced identification

Type and # of ID: _____

REBUTTAL JOINT VERIFIED STATEMENT OF
DOUGLAS W. CAVES, Ph.D, B. KELLY EAKIN, Ph.D,
MARK E. MEITZEN, Ph.D, AND PHILIP E. SCHOECH, Ph.D

Introduction

We are Drs. Douglas W. Caves, B. Kelly Eakin, Mark E. Meitzen, and Philip E. Schoech. We have previously filed a joint Verified Statement (VS) in the current Rulemaking¹ on behalf of the Coal Shippers² regarding the forecasting of future operating expenses for a stand-alone railroad (SARR) that would reflect anticipated future productivity gains.

The purpose of this Rebuttal Verified Statement is to address issues brought up by various parties, notably Class I railroads (the “railroads”) and their experts, in response to our original VS. In particular, BNSF has asked Dr. Martin Baily to critique our analysis.³ Dr. Baily’s Reply Verified Statement is primarily devoted to responding to our original VS. Our response addresses the limited points raised by Dr. Baily as well those raised by various other parties. However, before addressing these points, we first document our comments that have gone uncontested by the railroads and, thus, can be considered undisputed facts. Next, we summarize the comments made by the railroads in response to our original VS. We then demonstrate why the comments of the railroads, including Dr. Baily, do not cause us to alter our original conclusions.

¹ Joint Verified Statement of Douglas W. Caves, Ph.D., B. Kelly Eakin, Ph.D., Mark E. Meitzen, Ph.D., and Philip E. Schoech, Ph.D., STB Ex Parte No. 657 (Sub-No. 1), et. al., May 1, 2006 (“Caves, et. al.”, or “original VS”).

² Western Coal Traffic League, the Concerned Captive Coal Shippers, Western Fuels Association, Inc.; the Edison Electric Institute, the National Rural Electric Cooperative Association, and the American Public Power Association.

³ Reply Verified Statement of Martin N. Baily, May 26, 2006 (“Baily”).

Uncontested Comments

In our original VS we stated that we agree with the Board that a SARR will enjoy some productivity gains even though it enters as an efficient firm. We also stated that we agree with the Board that differences in productivity gains between today's entering SARR and today's incumbent railroads will diminish over time. Consequently, we agree with the functional structure of the Board's proposal for phasing in RCAF-A as an offset to future operating expenses (i.e., phasing out the productivity gain differential), but differ with the Board on the functional parameterization.

Specifically, we differ from the Board's proposal with respect to two key parameters. First, we believe the initial fraction of industry productivity gains shared by the SARR is greater than zero. Second, we believe the phase-in period is shorter than the twenty-year period in the Board's proposal. We concluded in our original VS that the Coals Shippers' proposal, which initially attributes half of the RCAF-A productivity gains to the SARR and phases in the full RCAF-A productivity gains over a 10-year period, is more reflective of the process of productivity gain and technical progress.

Our conclusion is founded in large part on four undisputed facts. First, some productivity gains are neither asset-specific nor industry-specific. Second, the extraordinary productivity gains from industry deregulation exhibited in the 1980s and 1990s were substantial, but the industry now has productivity gains more similar to the overall economy. Third, the phase-in time for embodied productivity gains is related to the economic life of the asset. And fourth, the more short-lived the mix of assets and the more the embodied productivity gains are in short-lived assets, the shorter the phase-in period.

These fundamental observations are uncontested. The first provides a rock-solid rationale for the SARR to immediately experience some share of the industry productivity gain. The second establishes the irrelevance of prior assertions (which may or may not have been true 10-20 years ago) that deregulation was a reason for a large differential between the productivity gains of real-world railroads and the SARR. This also justifies the conclusion that the SARR enjoys a larger initial share of the industry productivity gains. The third and fourth provide the foundation for a phase-in period much shorter than twenty years.

Accepting these undisputed facts, the railroads' mantra of "no SARR productivity gains for at least ten years" rings hollow and does not represent a reasoned progression of a meaningful policy debate. The debate is not whether or not the SARR experiences productivity gains, but by how much those SARR productivity gains differ from the gains of the rest of the industry and the rate at which any difference dissipates over time. That is what the Board has asked for in the current Rulemaking and that is what we have addressed.

Summary of Railroads' Comments

There are two major themes in the comments made in reply to our original VS. The first theme is that the SARR is optimally designed from the start and there are no possible additional efficiency gains available to it (or only "minimal" gains) over the DCF period.⁴ Moreover, it is asserted that since there has been no evidence produced to

⁴ For example, see Joint Reply Comments of Norfolk Southern Railway Company and CSX Transportation, Inc., June 1, 2006 ("NS/CSX"), p. 14; Reply Comments of Canadian Pacific Railway Company, June 1, 2006 ("CP"), p. 2; Reply Submission of Union Pacific Railroad Company, May 31, 2006 ("UP"), pp. 25-32; Reply Comments of BNSF Railway Company ("BNSF"), p. 37.

the contrary, if the DCF period is shortened to 10 years, there is no need for a productivity adjustment to operating expenses.⁵ The second theme is the evidentiary standard of proof advocated by the railroads to overturn their stated presumption that there are no future productivity gains available for the SARR. Namely, the railroads assert that the sources and amounts of any proposed gains for the SARR must be specified, the timing of implementation must be specified, and the costs of achieving these gains must be included in the SAC calculations.⁶ As a corollary to this theme, the railroads assert that the Board's (and the Coal Shippers') proposals to apply some portion of RCAF-A to operating expenses is arbitrary; there is no demonstrated relationship between the RCAF-A and likely SARR productivity gains.⁷

We respond to these criticisms below. As we demonstrate, despite a SARR's "optimal" design, productivity gains are available to the SARR, and the railroads' proposed evidentiary standards to overturn their presumption of no SARR productivity gains are burdensome and may be impossible to fulfill. We also demonstrate that Dr. Baily has not provided any convincing arguments or evidence in his criticisms of our original VS. We strongly disagree with Dr. Baily's assertion that our conclusion does not follow from our analysis.

Despite its "Optimal" Design, Productivity Gains are Available to the SARR

The first thing one must do when evaluating the railroads' comments regarding the proposed productivity adjustment to operating expenses is to cut through the

⁵ For example, see NS/CSX, p. 17; CP, p. 4; BNSF, p. 40.

⁶ For example, see NS/CSX, pp. 14-16; UP, pp. 33-37; BNSF, p. 40.

⁷ For example, see NS/CSX, p. 16; CP, pp. 2-4.

hyperbole used by the railroads to describe SARRs. For example, SARRs have been described by the railroads as:

- Possessing “hyper-efficiency,” with the operating efficiency and productivity attributed to it being so great as to “border on the fantastic.”⁸
- Being designed to operate at “impossibly high levels of efficiency from the outset.”⁹
- Possessing an “enormous efficiency advantage.”¹⁰
- Having a skeleton force of cross-trained workers that accomplishes tasks with almost “superhuman efficiency.”¹¹
- Being created with maximum efficiency, and “the nature of a SARR in itself limits prospects for productivity gains.”¹²

Exaggerated language such as this obfuscates the real issues in this case. In short, these are throw-away comments that do nothing to advance the discussion on the appropriate productivity adjustment to SARR operating expenses. The more substantive comments of other parties can be addressed by the following:

- SARRs have opportunities for productivity growth.
- There are many sources of productivity growth for SARRs that are not asset- or industry-specific.
- Costs of achieving productivity improvements are accounted for in the indexing process.
- Information technology is an important and continuing source of productivity growth for SARRs.

⁸ NS/CSX, p. 14.

⁹ UP, p. 25.

¹⁰ CP, p. 2.

¹¹ UP, p. 26.

¹² UP, p. 35.

Opportunities for SARR Productivity Growth

As described above, the railroads generally assert that the “optimal SARR” has little or no opportunities for efficiency gains. However, there are a number of reasons why this unsupported assertion has no merit.

First, we noted in our original VS that the Board recognizes that SARRs will achieve future productivity gains.¹³ For example, in the current Rulemaking, the Board states:

We believe, however, that the index used to project the SARR’s operating expenses should reflect some anticipated productivity improvements for the SARR. Even a SARR designed to take advantage of all of the most recent technologies should experience some productivity improvements over an extended time frame. All companies “learn by doing,” achieving incremental productivity improvements. And the SARR would be able to take advantage of future technological improvements as they occur, just as existing railroads will.¹⁴

To merely repeat the discredited mantra of “no SARR productivity gain” rejects the Board’s request for direction in this Rulemaking as to what is a reasonable measure of the true SARR productivity adjustment.

Second, the assertion that the SARR’s productivity frontier will not move or that best practices will not change over the DCF period, whether it is 10 years or 20 years, is stated as a truism and is not supported by any evidence. For example, NS/CSX assert that “[i]f the SARR already has the most efficient and most productive operations possible, then, by definition, no further productivity gains are immediately available to it.”¹⁵ This conclusion assumes that there is no possibility of movement in the frontier or improvements in best practices over at least a 10-year period. There is simply no basis

¹³ Caves, et. al, p. 4.

¹⁴ STB Ex Parte No. 657 (Sub-No. 1), et.al., February 27, 2006, pp. 20-21.

¹⁵ NS/CSX, p. 14 (emphasis added).

for this heroic assumption which flies in the face of economic theory and the vast literature on productivity change and technological progress. Moreover, as discussed below, the assertion that the “hyper-efficient” SARR is on the outermost cusp of productive efficiency, and real railroads are playing “catch-up,” is belied by the Board’s SAC procedures, which constrain the SARR largely to operating practices of actual railroads.

Although BNSF and its expert, Dr. Baily, cite a Federal Railroad Administration (“FRA”) study¹⁶ to support the view that it will take a number of years for current research and development programs to reach fruition and enhance railroad productivity,¹⁷ the study he cites only represents a snapshot at a point in time. This study was published in March 2002 and says nothing about what other things were in the “pipeline” that preceded this study and innovations that may have been closer to implementation. Furthermore, progress has presumably been made on the items covered in the study, as well as prior and subsequent R&D efforts.

Dr. Baily also asserts that we ignore a “considerable body of research ... that demonstrates how unlikely it is that the SARR would achieve significant productivity gains in the early years of its life.” This criticism is completely undocumented, as nowhere does Dr. Baily cite this “considerable body of research” that specifically “demonstrates how unlikely it is that the SARR would achieve significant productivity

¹⁶ Five-Year Strategic Plan for Railroad Research, Development, and Demonstrations, U.S. Department of Transportation, Federal Railroad Administration, March 2002.

¹⁷ Baily, pp. 6-7, BNSF, p. 37.

gains in the early years of its life.”¹⁸ Dr. Baily also criticizes us for not considering circumstances in which the SARR would benefit less from any productivity improvement.¹⁹ However, our analysis does not assume that any particular improvement would benefit a SARR more or less than the industry.

Third, it is not a given that the SARR is even on the theoretical productivity frontier. Thus, the SARR has many of the same opportunities for productivity growth as real railroads do. As we discussed in our original VS, the calibration of the SARR is largely based on actual data and operating plans of real railroads (particularly for cross-over traffic, for which the SARR must tailor most of its operations to those of the incumbent railroad), not some unconstrained theoretical ideal. Therefore, the SARR has the ability to benefit from improvements just as real railroads benefit.²⁰

The notion that that an “optimal” SARR is not necessarily a theoretically most efficient railroad that resides on the boundary of the industry’s productive frontier is clear when the Board’s SAC procedures are compared with the Federal Communications Commission’s (“FCC”) approach for determining the “forward-looking” costs of a telecommunications carrier for the purposes of determining prices of interconnection and unbundled network elements. The FCC procedures also provide a framework that state regulatory commissions are to follow in state proceedings. As with the Board’s SAC procedures, the FCC procedures are based on a hypothetical firm that constructs a new

¹⁸ Baily, p. 5. The two studies Baily does cite are of the auto manufacturing industry and the retail trade industry, with no clear applicability to the railroad industry. In particular, the conclusions he draws from these studies shed no light on a SARR’s potential for productivity gains. Furthermore, we are aware of no body of research that concludes that a new railroad would not achieve “significant productivity gains in the early years of its life.” In fact, as Mr. Weishaar notes in his Rebuttal Verified Statement on behalf of the Coal Shippers, the relevant evidence is to the contrary.

¹⁹ Baily, p. 3.

²⁰ Caves, et. al, pp. 10-11.

network using the “most-efficient” technologies.²¹ Additionally, the FCC procedures prohibit the use of embedded or historical accounting costs in determining these forward-looking costs.²² Forward-looking costs for hypothetical telecommunications firms are typically determined by reducing actual costs and/or applying a productivity factor to these costs. For example, the costing procedures adopted in Wisconsin for Ameritech require an efficiency adjustment to joint and common costs of 3 percent per year to account for productivity.²³ Wisconsin also required maintenance expenses for switching to be reduced by 4 percent.²⁴ These requirements are typical of the procedures adopted in many states, which require the forward-looking costs of the hypothetical efficient firm to be based on costs that are less than those of an existing firm, and which continue to be reduced in the future.

In countering our statement, Dr. Baily says he does not grasp the relevance of the convergence over time of the productivity growth rates of the rail industry and the overall economy. In fact this convergence is relevant precisely because railroads have in the past argued deregulation was a reason for the rail industry productivity growth to exceed that of the SARR. The railroad logic was that deregulation unleashed a boom in railroad productivity growth (which did in fact exceed that of the overall economy by as much as a factor of 5). According to the railroads’ arguments, this exceedingly high rate of growth was a result of deregulation and would not be available to the SARR, which

²¹ For example, see Federal Communications Commission, In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, FCC 96-325, August 8, 1996, pp. 333-334.

²² For example, see Federal Communications Commission, In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, FCC 96-325, August 8, 1996, p. 343.

²³ Public Service Commission of Wisconsin, Investigation Into Ameritech Wisconsin’s Unbundled Network Elements, Docket No. 6720-TI-161, March 22, 2002, p. 36.

²⁴ Public Service Commission of Wisconsin, Investigation Into Ameritech Wisconsin’s Unbundled Network Elements, Docket No. 6720-TI-161, March 22, 2002, p. 77.

would instead encapsulate the productivity improvement in its initial configuration. The railroad's assertions related to this point were not entirely logical, but they nonetheless did carry an air of plausibility due to the observed extraordinary rate of productivity growth for the rail industry. But, that is now past us as is evidenced by the convergence of the rates of growth of the railroad industry and the economy. Hence, consistency dictates that the railroads no longer look to deregulation, and its impact on productivity, as grounds for the existence of a productivity growth differential between the railroad industry and the SARR.

In summary, SARRs will have opportunities for productivity growth. It is a very extreme position to assert that the SARR would never benefit from industry improvements, or that any gains available to the SARR would come only after an arbitrary 10-year period.

There are many sources of productivity growth that are not asset- or industry-specific

As we noted in our original VS, productivity growth can come from a number of sources that are not asset- or industry-specific and, therefore, even a technically efficient firm (as the SARR is hypothesized to be) will begin to experience productivity gains immediately.²⁵ Other sources of productivity growth include output growth (when economies of density or scale are present), improved managerial techniques, less restrictive work rules, process innovations, new technologies, and improved communications infrastructure (such as the development of the World Wide Web).

To tie expected productivity gains to a limited set of technologies or research and development programs misses an important source of productivity gains. As BNSF's

²⁵ Caves, et. al, p. 5.

own witness Dr. Baily and his associates (Baily et al) put it in a recent *McKinsey Quarterly* article on U.S. productivity performance, the most important driver of productivity is “business process innovation spurred by good old-fashioned competitive pressure.” They note that in the last few years companies have looked for “new ways to outperform competitors by cutting costs, using information technology (“IT”) more effectively, and in general, producing more for less.” Finally, Baily et al conclude that most sectors of the U.S. economy will have plenty of room to do more in these areas over the next few years.²⁶ We agree with this assessment of Baily et al. It is consistent with the view that competitive pressures in the railroad industry will force every railroad to continually look for ways of cutting cost, using IT more effectively, and that producing more for less and these improvements will be available to the optimally configured SARR.

The findings of Baily et al, described above, are much more in line with the view that productivity gain is an immediate and ongoing process. And notably, Baily et al seem to be at odds with Dr. Baily’s testimony on behalf of BNSF in this proceeding that “it is unlikely that that (*sic*) the SARR would experience *any* productivity improvement in the early years of its existence.”²⁷ BNSF witness Baily seems to further contradict Baily et al when he states that “it would be appropriate to assume that the SARR experiences no productivity improvement during its first 10 year *unless* such improvements can be tied to a specific source of productivity increase that can be identified and evaluated on the evidence.”²⁸

²⁶ Martin Neil Baily, Diana Farrell, and Jaana Remes, “Where U.S. Productivity is Growing,” *The McKinsey Quarterly*, 2006 (http://www.mckinseyquarterly.com/article_page.aspx?ar=1771&L2=7).

²⁷ Baily, p.3 (emphasis in original).

²⁸ Baily, p.3 (emphasis in original).

We noted in our original VS that the Board's predecessor, the Interstate Commerce Commission ("ICC"), recognized that productivity gains emanate from multiple sources. In its decision to implement a productivity adjustment for the RCAF, the ICC rejected the AAR's proposal that only "pure" productivity gains due to technological change be used for the RCAF productivity adjustment.²⁹

Regarding multiple sources of productivity growth, we also noted in our original VS:

- The SARR is on equal ground with the rest of the industry in terms of productivity gains arising through human capital. To the extent SARR employees work with more modern equipment than the rest of the industry, they may be even more successful in realizing productivity gains from those innovations and management techniques than industry employees who are handicapped by older technologies.³⁰
- The Board has recognized that, at least for some asset types like information technology, there should be no difference between the SARR and incumbent railroads.³¹
- Generally, SARR's may not suffer much of a lag in asset-related productivity growth because an economically rational firm, including a SARR, will replace assets when it is beneficial to do so—i.e., the gain in efficiency outweighs the cost of doing so—regardless of the age of the asset.³²
- In various cases before the Board, complaining shippers have noted that there are many sources of productivity growth that do not depend on the newest assets or newest technologies.³³

Costs of Any Investments Required to Achieve Productivity Growth are accounted for in the Productivity Index

The railroads assert that if productivity enhancements are, indeed, possible for a SARR (despite their "proof" that there are none), the costs of these enhancements—

²⁹ Caves, et. al, p. 6.

³⁰ Caves, et. al, pp. 9-10.

³¹ Caves, et. al, p. 8.

³² Caves, et. al, p. 9.

³³ Caves, et. al, p. 8.

whether it be, for example, the acquisition of new assets, the early termination of old leases, or research and development activity—must explicitly be accounted for in the computation of SAC.³⁴ Not only does this seem to imply that most if not all productivity gains are asset-based, but, as discussed below, it requires that all future sources of productivity growth, and the timing and the costs of their implementation over the DCF period must be known. These requirements defeat the purpose of using the indexing approach in SAC proceedings to reduce burdensome calculations. Also, as discussed below, productivity growth is a “net” concept, representing the difference between output growth and input growth. Thus, any costs of achieving this growth have already been netted out.

Information Technology is a Continuing and Important Source of Productivity Growth

BNSF witness Baranowski argues that IT will have a minute impact on productivity growth because of its relatively small share of annual SARR cost.³⁵ But the impact of IT on productivity growth is much larger than what is reflected in its costs. Erik Brynjolfsson and Lorin Hitt conducted a careful study of IT investment on total factor productivity growth and found that the cost savings from IT investment can be as much as five times the cost of the IT equipment.³⁶ These cost savings are realized over time as firms incorporate changes in business processes, organizational structures, and innovations in customer and supplier relations.

One would expect that the SARR will have opportunities even in the first few years of its life to leverage its initial IT investments into productivity gains through these

³⁴ For example, see NS/CSX, pp. 14-16; UP, pp. 33-36.

³⁵ Reply Verified Statement of Michael R. Baranowski, May 30, 2006, p. 30.

³⁶ Erik Brynjolfsson and Lorin M. Hitt, “Computing Productivity: Firm-Level Evidence,” *Review of Economics and Statistics*, Vol. 85, No. 4 (November 2003), pp. 793-808.

types of innovations.³⁷ Furthermore, investment in new IT is not necessarily required to achieve productivity gains. Current IT can also be expected to produce productivity gains over time—i.e., all gains do not occur at once.

Proposed Evidentiary Standards are Burdensome and May be Impossible to Meet

The Board has typically endorsed the use of appropriate approximations to ease computational burdens and make the SAC test accessible to all potential complainants. As the Board has frequently stated, “the best should not be the enemy of the good.”³⁸ This philosophy applies to the forecasting of future operating costs using inflation indexes -- a standard method used in constructing SAC tests. The use of inflation indexes represents a reasonable approximation to a detailed, period-by-period projection of costs. Consistent with this philosophy, forecasts of productivity growth that offset operating cost inflation should be reasonable approximations without requiring an inordinate amount of complexity to calculate (or without introducing substantial uncertainty). The railroads’ proposals in the current Rulemaking should be judged with the Board’s philosophy in mind.

However, in contradiction to the Board’s policy, the railroads call for extremely burdensome procedures that complainants must follow if they are to overturn the unsubstantiated assertion that the SARR is unable to achieve productivity gains during the DCF period (and that any such SARR productivity gains are unrelated to industry

³⁷ Baily asserts (p. 6) that in a relatively simple SARR network, “the effect of IT investments on productivity improvement is likely to be negligible, even over the longer run.” He provides absolutely no evidence to support this assertion. However, it is inconceivable to us that a SARR would receive only “negligible” productivity gains from IT investment. In fact, as we noted above, the Board has recognized the role of IT in generating productivity gains for a SARR.

³⁸ Rate Guidelines—Non-Coal Proceedings, 1 S.T.B. 1004, 1024 n.53 (1996).

gains reflected in RCAF-A). Typical of these evidentiary standards is Union Pacific's (UP) proposal.³⁹ First, UP begins with the unsupported presumption that the SARR is not capable of achieving any productivity gains over the DCF period:⁴⁰

- Because the SARR is created with maximum efficiency and because the nature of a SARR in itself limits prospects for gains, the Board should not assume a blanket increase in productivity over time based on a percentage of the RCAF-A.
- Given unique circumstances of the SARR, there is no reason to presume that there will be any further gain after start-up, whether the analysis period is 10 or 20 years.
- Nor is there any reason to presume any gain should be measured by the RCAF-A.

Second, in order to make a case for recognizing productivity gains from the implementation of new technology, the UP proposal requires the complainant to show:⁴¹

- New technology would become available at a particular stage during the DCF period.
- It would be reasonable to expect the SARR to gain a particular level of productivity as a result of new technology.
- The particular categories of operating expenses that would be affected.
- Any costs of acquiring new technology have been included in SAC.
- Any ancillary costs of adopting new technology have been included in SAC.

Even if it were possible to forecast future technologies, when they will be implemented, and what their benefits and costs will be, these are extremely burdensome requirements that contradict the fundamental premise of indexing future operating expenses—i.e., to reduce the computational burden of performing SAC calculations. It is

³⁹ Others, including BNSF's witness Baily, also subscribe to these extreme standards. Baily, p. 5.

⁴⁰ UP, p. 35-36.

⁴¹ UP, p. 37. As we have noted, the SARR can achieve productivity gains from numerous sources other than the implementation of new technologies.

unlikely that any potential complainants in SAC cases could undertake the effort and cost of complying with these requirements.

Accepting these requirements would effectively be a rejection of the indexing approach to estimating future operating expenses. The implication is that operating expenses should be calculated “bottom-up” for each year of the DCF period and indexing should be done away with. This clearly is at odds with the desire by the Board and its predecessor for a simplified, cost-effective SAC analysis based on reasonable proxies that is accessible to complainants.

Moreover, the requirement to include the costs of any new technology that is implemented to improve efficiency exposes the weakness of the railroads’ position as it reveals a fundamental misunderstanding of productivity measurement. Productivity growth is a net concept, as its measurement incorporates any cost impacts, representing the difference between output growth and input growth. Thus, any costs of achieving this growth have already been netted out—a productivity index, such as that represented by RCAF-A, nets costs from the benefits. Furthermore, it is not logical to call something a source of productivity growth if it costs more than it saves.

Ultimately, these proposed evidentiary standards are likely to be impossible to meet, particularly to the satisfaction of those proposing the standards. It would require the prediction of future technology/innovations over a 10- to 20-year period, when they will be implemented, what their precise efficiency impact will be over time, and what their exact costs will be. Again, this amounts to a complete repudiation of the indexing approach to estimating future operating expenses (and revenues).

The impossibility of meeting these proposed evidentiary standards is apparent when the inherent logical contradiction in these standards is noted: requiring empirical “proof” of future efficiency gains (including the timing, benefits and costs) for a hypothetical entity. This begs the question of what empirical “proof” exists, or is acceptable in the view of the railroads, for future events of a hypothetical entity. There is simply no “real-world” evidence that possibly exists to satisfy these requirements, putting proponents of these requirements in a position of being able to reject any and all attempts of complainants to satisfy them. Moreover, “proof” would presumably also be required that any SARR productivity gains are, indeed, correlated with the productivity gains of the RCAF-A. As we noted in our original VS, it is not always possible to determine sources of historical productivity growth, let alone future productivity growth, nor is it necessary to identify such sources when predicting future productivity growth.⁴²

Conclusion

As we have demonstrated, the mantra of “no SARR productivity gains for at least ten years” rings hollow and does not advance the policy debate in a meaningful manner. The debate is not whether or not the SARR experiences productivity gains, but by how much those SARR productivity gains differ from the gains of the rest of the industry and the rate at which any difference dissipates over time. That is what we have attempted to address.

In our original VS, we concluded that the Coal Shippers’ proposal to start the SARR with half of the industry’s expected productivity gains and phase-in the remainder over a 10-year period was preferable to the Board’s proposal:

⁴² Caves, et. al., p. 7.

[T]here are compelling reasons to expect the SARR to have significant productivity growth in the first year. These reasons relate to the fact that productivity growth comes from a variety of sources, many of which are not constrained by investment in new assets. In addition, productivity gains related to deregulation of the railroads appear to have been largely exhausted. This fact eliminates one of the key differences between an efficient SARR and incumbent railroads. Consequently, recent and future productivity gains in the railroad industry will be increasingly related to events affecting the entire economy, such as the continuing computer and communications revolution. ...The SARR will be able to realize these productivity gains, just as will the railroad industry. The Coal Shippers' proposal conservatively assumes a phase-in period of ten years, ... we believe that the Coal Shippers' proposal more accurately represents expected future productivity gains for the SARR.⁴³

Dr. Bailly mischaracterizes our analysis by asserting that we have concluded that the SARR level of productivity improvement would match that of the industry and the U.S. economy "from day 1."⁴⁴ Nowhere do we draw that conclusion. We have clearly stated that the proposal we support starts at only half of the industry's gains and gradually increases over time, although at a rate that is still less than the industry rate of productivity growth. Moreover, nowhere do we advocate that the SARR be attributed productivity gains equal to those of the overall economy. Contrary to Dr. Bailly's contention, our conclusion follows directly and logically from our analysis. Not only has Dr. Bailly mischaracterized our conclusion, but he has not provided any convincing arguments or evidence in support of his assertions.

⁴³ Caves, et. al., pp. 14-15.

⁴⁴ Bailly, p. 9; BNSF, p. 39.

VERIFICATION

I, DOUGLAS W. CAVES, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Executed on June 30, 2006.



DOUGLAS W. CAVES

VERIFICATION

I, KELLY EAKIN, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Executed on June 30, 2006.

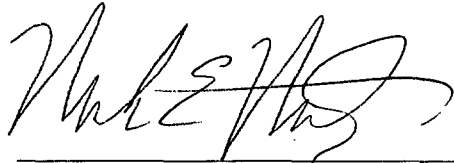
A handwritten signature in black ink, appearing to read "Kelly Eakin", written over a horizontal line.

KELLY EAKIN

VERIFICATION

I, MARK E. MEITZEN, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Executed on June 30, 2006.



MARK E. MEITZEN

VERIFICATION

I, PHILIP E. SCHOECH, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Executed on June 30, 2006.


PHILIP E. SCHOECH

Before the Surface Transportation Board

Ex Parte 657 (Sub-No. 1) Major Issues in Rail Rate Cases

**Rebuttal Comments of
William J. Brennan, Ph.D.
Managing Director
Transportation Economics, Inc.**

Introduction

I am Dr. William J. Brennan. I am an economist and a Managing Director of Transportation Economics, a consulting group that assists electric utilities and other firms understand how transportation and regulatory issues affect their businesses. I have acted in this capacity for 18 months; before that I worked for the Surface Transportation Board as an economist. Earlier in my career, I worked as an economist for the U.S. Department of Agriculture and the Association of American Railroads. Altogether, I have specialized in the economics of railroading for 14 years.

I submitted testimony in the opening phase of this proceeding on behalf of the Western Coal Traffic League, the Concerned Captive Coal Shippers, Western Fuels Association, Inc., the Edison Electric Institute, the National Rural Electric Cooperatives Association and the American Public Power Association (collectively, "Coal Shippers"). The Coal Shippers have now asked me to review and respond to the reply testimony of the carriers on productivity and the indexing of SARR operating expenses.

My Opening Statement and Railroad Replies

In my opening statement, I testified that the Board's proposal to phase-in productivity improvements over time is a step in the right direction, but too small a step. While the Board's proposal ends in the right place (relying on the RCAF-A), it takes too long to reach that point and starts from the wrong point (the RCAF-U). In addition, I argued that the Board's approach was consistent with its preference that forecasts, to the maximum extent possible, should come from the same source.

I also testified that the ultimate source of productivity is the human mind. As a result, I stated that it was inappropriate for the Board to assume that because a SARR commences operations with new equipment, it will not be able to capture productivity improvements immediately. I cited a series of papers that have explored the learning-by-doing phenomenon, demonstrating that the effect of learning-by-doing is large and pervasive.

Finally, I showed that even when one uses an expansive definition of capital expenses, less than half of all railway operating expenses can be attributed to capital spending. This finding suggests the Coal Shippers' proposal to start the phasing-in of productivity not at the RCAF-U, but at a rate halfway between the RCAF-A and RCAF-U, is a reasonable one.

Explicitly or implicitly, each of the rail carriers that submitted reply comments in this proceeding responded to the points that I made in my opening statement. Nearly all of the railroad responses can be grouped in four general categories. First, the railroads argue that SARRs differ significantly from "real-world" carriers and that, as a result, the Board should not apply the RCAF-A. Second, the railroads argue that SARRs are

optimally efficient and so not likely to benefit from further increases in productivity.

Third, the carriers argue that my assertion that operating expenses and revenues should escalate at the same rate is mistaken. Fourth, the railroads argue that the burden of proof requires that complainants identify with specificity the sources of future productivity and explicitly account for the resulting cost savings. I will address each of these criticisms in turn. I will then respond to criticisms of the learning-by-doing and other knowledge-based points I made on opening.

The False Distinction Between SARRs and “Real-World” Carriers

The carriers attempt to draw a distinction between SARRs and “real-world” carriers. There is, of course, a difference between the two. “Real-world” railroads actually exist, whereas a SARR is a hypothetical construct employed by the Board to determine whether the rates charged a captive shipper are too high. Beyond that, however, a SARR is just as much a “real-world carrier” as the railroad it replaces.

The Board should not be distracted by the rhetoric carriers employ to suggest that complainants design “hyper-efficient” SARRs.¹ It is not true that complainants “design” SARRs to be “hyper-efficient.” Rather, complainants and defendants both use the Board’s adversarial process to identify those costs that a railroad designed to handle the traffic of a particular captive shipper could be expected to bear. This is precisely what the *Coal Rate Guidelines* intended.

¹ See, for example, *Reply Submission of Union Pacific Railroad Company*, p. 26 or *Joint Reply Comments of Norfolk Southern Railway Company and CSX Transportation, Inc.*, p. 14. Although I have every confidence that the Board and its staff can see through these rhetorical smoke-screens, the Board may be interested to know that, in recent years, economists have focused considerable attention on their use – and abuse – of rhetoric. In particular, I would refer the Board to the works of Deirdre McCloskey, including *If You’re So Smart: The Narrative of Economic Expertise*.

Moreover, as the Coal Shippers detailed in their Reply Comments, in many cases the SARR ultimately adopted by the Board was far *less* efficient than the existing operations of an incumbent carrier.² This result arose because the Board explicitly rejected evidence presented in those cases as infeasible. Since then, the Board's staff has, in a variety of forums, urged all parties to make feasible and realistic assumptions while designing their SARRs, or face the consequences. Given the willingness of the Board to reject improperly designed SARRs, there should be no presumption that SARRs are inherently "hyper-efficient."

Nor is there any reason to suggest that because the SARR begins operations with a "head-start," its ability to capture further increases in productivity must wait until the real-world railroads "catch up." A SARR is not some ideal towards which an incumbent carrier evolves over time, it is a carrier that uses similar technology and techniques to the carrier it replaces. I agree with the Board that, just as existing carriers routinely find ways to improve their operations, so too would a SARR. However, the Board's approach fails to recognize the many ways in which a SARR could (and would) reduce its operating expenses over time.

The False Argument that Efficient SARRs Cannot Reduce Costs Further

From the false premise that SARRs are hyper-efficient, the railroads conclude that SARRs cannot reduce costs further. Yet, the carriers fail to make the important distinction between *levels* and *rates*. A "real-world" railroad carrying loaded coal trains downhill would be more productive than one carrying coal uphill (a level), but both might expect to reduce costs over time (a rate) by adopting new techniques and tech-

² See *Joint Reply Comments of Western Coal Traffic League et al.*, p. 34-40.

nology. Similarly, the fact that a SARR *might*, initially, enjoy operating efficiencies that are superior to those of the incumbent it replaces (a level) would not prevent that SARR from capturing future gains in productivity (a rate).

The distinction between *rates* and *levels* (similar to the distinction drawn between *stocks* and *flows*) is a critical one. The failure to make this distinction invalidates any argument that suggests the efficiency or “optimality” of a SARR would eliminate the prospect of future productivity gains. Thus, permitting a SARR to capture productivity improvements is not “double-dipping,” as UP alleges.³

Railroad Operating Expenses and Revenues Should Grow at the Same Rate

The proper question, then, is not whether a SARR should be able to obtain increases in productivity over time. Rather, the question is what rate of productivity growth a SARR should capture. On opening, I argued that operating expenses and revenues should, on average and over time, grow at the same rate.

Michael Baranowski, a witness for BNSF who is an accountant, disputes this point. He argues, “[A]ny perceived link between the index used to predict SARR revenues and the index used to inflate stand-alone operating expenses is merely a made-for-litigation figment of the shippers’ imagination.”⁴ But it is the Board itself, not shippers, that has perceived this link – and the Board is correct to link them. Mr. Baranowski further argues that “because the inflation indexes are designed to forecast different elements that are in no way related, Dr. Brennan is wrong in asserting they

³ *Joint Reply Comments of Western Coal Traffic League et al.*, p 34-40.

⁴ *Reply Verified Statement of Michael R. Baranowski*, p. 4

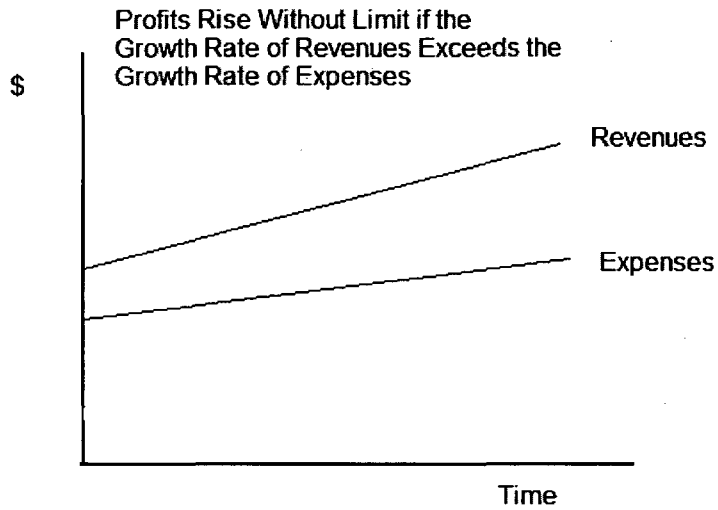
should be linked.”⁵ While it is true that the indexes are designed to forecast different elements, basic economic logic requires that we recognize that a relationship does exist between the growth of revenues and operating expenses over time.

In my opening testimony, I noted that the Board has recognized that it must maintain consistency between its forecasts of tonnages and prices. Prices and quantities are simultaneously determined in a marketplace and it would be inappropriate to match the tons from a “high-ton, low-price” forecast with the price from a “low-ton, high-price” forecast, or vice versa. A similar logic is at work in the Board’s proposal to phase-in the RCAF-A over time.

Suppose, for example, that in its first year of operations a SARR’s revenues exceeded its operating expenses (hardly a radical assumption). Now suppose that revenues consistently grew by 5 percent per year and operating expenses by 3 percent per year. As Figure 1 suggests, the profits of this firm would grow without limit and eventually, one supposes, the shareholders of this firm would own the entire world. This violates a cardinal tenet of economics, Stein’s Law, which states: “If something cannot go on forever, it will stop.”

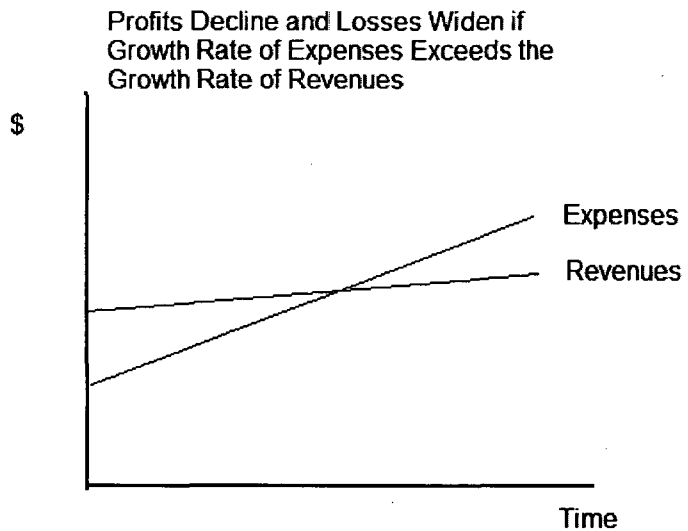
⁵ *Reply Verified Statement of Michael Baranowski*, p. 5

Figure 1



Similarly, if revenues consistently grew by 3 percent per year and operating expenses by 5 percent per year, the firm would eventually fail. The logic here is simple and inexorable, as Figure 2 demonstrates.

Figure 2



Heretofore, a key failing in the Board's implementation of the *Coal Rate Guidelines* has been its use of the best available revenue forecast without considering whether this forecast was consistent with its projections of operating expenses. As the Board knows very well, on average and over time, railroad revenues have grown at a rate *far below* the RCAF-U. As the Board's Office of Economics reported in 2000, until recently, both real and nominal railroad rates have fallen over time because nearly all the benefits of railroad *productivity* were passed along to consumers in the form of lower rates.⁶ This is exactly what we would expect in a competitive marketplace. While it seems likely that railroad pricing power and rates have increased in the last few years, eventually (and inevitably) revenues and expenses must grow apace.

Unfortunately, the Board's customary forecast for expenses (the RCAF-U) grows at a rate that is considerably higher than its forecasts for revenues. The difference between these two rates is, implicitly, a forecast of future productivity growth. To deny a SARR the benefits of this productivity growth consigns it to slow and painful death. In many of the Board's decisions, such as *TMPA v. BNSF*, the SARR's profit stream looks suspiciously like Figure 2; the surpluses of early years are eventually replaced by ever-widening losses. This result arises because of the Board's failure to match its projections of revenues and expenses and is a ready demonstration of the power of compound interest. Reducing the DCF-period to 10 years rather than 20 years mitigates, but does not eliminate this problem.

⁶ See "Rail Rates Continue Multi-Year Decline," U.S. Surface Transportation Board, Office of Economics, December 2000. The Board maintains a copy of this report at <http://www.stb.dot.gov/stb/docs/RI.pdf>. In the interest of full-disclosure, while not credited, the late Michael Redisch, the Board's Chief Economist, and I co-authored this report.

I have already disputed Mr. Baranowski's second point, that "because a SARR is more efficient than the residual incumbent, it has already captured all the productivity that it will take the incumbent years to achieve and pass along to the shippers." Mr. Baranowski, like other railroad witnesses, fails to distinguish between rates and levels and assumes that a SARR cannot capture further increases in productivity until the incumbent carrier catches up. Thus, Mr. Baranowski is mistaken to suggest that "the SARR receives as a revenue windfall, the difference between the productivity reflected in its base year operations and the productivity that the incumbent carriers have yet to achieve and pass along to their customers through reduced rates."⁷

Carriers Ask the Impossible: Identifying Future Sources of Productivity

The final general criticism of the Board's proposal – that to meet their burden of proof, shippers must specifically identify the source of future productivity improvement and explain how such improvements will be paid for – places an impossible burden on shippers.

The future cannot be known with certainty. Thus, it is wholly inappropriate to demand of complainants answers to questions that the carriers themselves cannot answer. There is no "real world" carrier that can identify (with specificity) what the sources of its future productivity will be, when advances will occur, and how they will be paid for.

What we do know is this: Year after year carriers have experienced productivity improvements and there is every expectation that such improvements will continue into the foreseeable future. As I stated in my opening evidence, which anticipated these railroad arguments:

⁷ *Reply Verified Statement of Michael R. Baranowski*, p. 5.

Although some areas of productivity growth for a SARR may be obvious (e.g., positive train control), to a significant extent it is inherently unknowable what specific productivity advances railroads will capture next year, two years from now, or ten years from now. Those outcomes lie in the future and will depend on the relative prices and technological opportunities that prevail in the future. Still, even if we cannot determine which specific developments will generate future productivity gains for the railroad industry, or in what measure or proportion, we can be confident that railroads (both real and hypothetical) will be significantly more productive in future than they are at present. In the future, entrepreneurs will offer new products and services to the carriers, and railroad managers and employees will discover and apply new, more efficient techniques.⁸

If shippers cannot know which *specific* technological advances will drive future productivity gains, they cannot be asked *specifically* to account for the expense of developing and deploying such improvements. But, from the base level of a SARR's expenses, it is reasonable to assume that relying on the RCAF-A will capture both the costs and benefits of these new investments and processes.

SARRs Can Capture Productivity Improvement From the Beginning

The Board proposes to phase-in productivity growth over time. Under its proposal, initially a SARR would not enjoy any productivity growth, but over a long period of time (20 years) it would transition towards the RCAF-A. As noted above, the carriers assert that no such transition is warranted or – a distinction without a difference – no improvements in productivity can be expected for at least 10 years. If the Board limits its DCF period to 10 years (a proposal that both railroads and shippers favor), then deferring productivity improvements for 10 years is the same as denying these benefits altogether.

While I agree that the RCAF-A should ultimately be used to index railroad operating expenses, I think the Board's transition period begins at the wrong place. The Board implies that all productivity gains must await new technologies that will be

⁸ See *Opening Comments of William J. Brennan, PhD*, p. 12-13.

deployed over time. Yet, firms – even firms with new equipment – can and do improve productivity.⁹ Certainly, the existing carriers manage to squeeze out incremental productivity improvements that have nothing to do with additional capital or technological advances. Indeed, railroad executives routinely extol the virtues of these productivity programs to Wall Street and shippers alike.

A powerful example of such claims can be found in a recent article written by Thomas Kraemer, Group Vice President – Coal Business Unit, Burlington Northern Santa Fe, in the Spring 2006 issue of *Coal Power Magazine*.¹⁰ One section of that article, under the heading “Getting the Most of Assets Owned,” mentioned that coal dust emissions could be reduced by 40-70 percent simply by eliminating the crown of coal at the top of a car. “Today the height of coal is limited to no more than 26 inches above the car. The new profile looks more like a loaf of bread. This will benefit the riding pattern of each car and reduce premature failure of cars.”¹¹ This is precisely the sort of on-going productivity improvement that a SARR could also be expected to make and one that does not depend on the arrival of new technologies.

Mr. Kraemer mentions that by spraying a dusting agent on the coal and “grooming” the new loading profile, “a reduction of 95 percent in coal dust can be achieved.” One suspects reducing coal dust by 95 percent would drive significant reductions in maintenance expenses, a productivity improvement that would benefit the rail carriers immediately and over time. Mr. Kraemer notes that railroads and utilities are

⁹ In this regard, see the Rebuttal Verified Statement of David Weishaar concerning WRPI productivity improvements, which also accompanies the Coal Shippers’ Rebuttal Comments.

¹⁰ Mr. Kraemer retired from BNSF in April, 2006.

¹¹ Thomas Kraemer, “Increasing the Capacity of PRB Coal Delivered to Power Plants is a Priority,” *Coal Power Magazine*, Spring 2006, p.7.

working together to review maintenance standards for coal cars. Improvements in utility-owned coal cars would drive increases in railroad productivity, but they do not factor anywhere into the Board's DCF model. No doubt these reductions in operating costs are eventually passed along to utilities in the form of lower rates, but a comparable adjustment to SARR's operating expenses, both by raising its ability to capture productivity initially and over time should also be made.

Mr. Kraemer highlights new forms of "high capacity rail maintenance equipment" that are improving BNSF's rail operations, as well as on-going efforts via "Rapid Response Teams," to correct problems resulting from either track or equipment failures. Such total-quality management practices are a standard feature of all well-managed firms and would also permit a SARR to make on-going improvements to its productivity from the very beginning of its operations.

Union Pacific suggests that because a SARR cannot benefit from improvements in switching or conversion of traffic to unit-train service, it has limited opportunities to capture productivity gains.¹² Yet Mr. Kraemer notes that BNSF is engaged in activities designed to improve the efficiency of its transportation of PRB coal traffic, traffic which is already moving in unit train service. Mr. Kraemer writes:

A service design initiative is under way to reduce as many work events on trains as possible. The approach capitalizes on 1,500 mile inspection opportunities versus 1,000 mile inspections to bypass congested parts of the network. Eliminating 10 inspection opportunities per day equates to approximately a three percent cycle point improvement based on current dwell times. An emphasis will continue on determining where trains are being delayed during the transportation of PRB coal and at interchanges.

BNSF feels so strongly about improving velocity to meet customers' ever-increasing needs that it has changed its compensation program goals to reflect this

¹² Reply Submission of Union Pacific, p. 27.

focus. In the future a significant portion of compensation will be tied to improvements in velocity.¹³

This emphasis on improving on-going unit-train operations is an emphasis that a SARR would share. And just as railroads improve the efficiency of on-going operations, so too would the SARR. In fact, as “real-world” rail carriers improve their operations, e.g. by extending sidings, acquiring more powerful and efficient locomotives, increasing train lengths, or otherwise improving the fluidity of their operations, some of these benefits would “spill over” and help boost productivity on the SARR. As the capability of the off-SARR network grows, so does the capability of the on-SARR network particularly insofar as cross-over traffic is included in the SARR traffic group.

In my opening testimony, I noted that SARRs could improve productivity from the beginning because the ultimate source of productivity is the human mind. Many of the specific points raised by Mr. Kraemer echo my argument that the expansion of useful knowledge can increase productivity *without* requiring new capital expenditures.¹⁴ It is this increase in knowledge that permits BNSF and would permit a SARR “to get the most of assets owned.” The Board should reconsider its decision to deny a SARR any meaningful opportunity to capture productivity improvements in the early years of a SARR’s operations. This position is not consistent with the balancing act the Board must maintain when implementing the National Rail Transportation Policy.

¹³ Thomas Kraemer, “Increasing the Capacity of PRB Coal Delivered to Power Plants is a Priority,” *Coal Power Magazine*, Spring 2006, p.7.

¹⁴ In its reply statement, Union Pacific repeats a point it made on opening suggesting that because a SARR has a simple operating plan based on unit-train operations, it does not engage in many of the activities that provide the most opportunity for productivity gains (UP Reply, p. 27). Yet, Mr. Kraemer notes that that BNSF is engaging in a service design initiative that will “capitalize on 1,500 mile inspection opportunities versus 1,000 mile inspections to bypass congested parts of the network. Eliminating 10 inspection events per day equates to approximately a 3 percent improvement based on current dwell times.”

Rebutting Dr. Baily's Criticisms of Learning-by-Doing

In my opening testimony, I stated at pp. 12-13: "I think it is inarguable that the source of productivity is the human mind." Although the railroads did not specifically argue with that point, they did raise criticisms to my learning-by-doing arguments. I have already dealt with most of these criticisms in one form or another, but the remarks of Dr. Bailey merit particular attention.

Dr. Baily claims that "learning by doing" seems to be the central point of my statement.¹⁵ Certainly I devoted considerable attention to the phenomenon of learning-by-doing (it was explicitly referenced by the Board in its NPR), but I think a better reading of my statement would suggest that its basic point was that the growth of useful knowledge is the key driver of both productivity improvements and economic growth.

My views are generally consistent with those of David Warsh. Warsh is the former economics correspondent for the *Boston Globe* and has recently published an excellent (and highly accessible) book, *Knowledge and the Wealth of Nations*. Warsh argues that, until recently, economics could not adequately explain the process of economic growth. Although we can see the results of improved living standards all around us, the framework economists used to explain growth remained remarkably unchanged since the days of David Ricardo. Yet, according to Warsh, in the past 20 years, economists have come to see: "The fundamental categories of economic analysis ceased to be, as they had been for over 200 years, land, labor, and capital. This most elementary classification was supplanted with people, ideas, and things."¹⁶

¹⁵ See *Reply Verified Statement of Martin N. Baily*, p.8.

¹⁶ Warsh, David (2006), *Knowledge and the Wealth of Nations*, W.W. Norton and Company, p. xxii.

As my Opening evidence suggests, I agree with that assessment. Warsh argues that economists had long been aware of the limits of their analysis and that, like an underground river, the idea of knowledge-based growth would pop up from time to time, only to be forgotten once more. Indeed, Warsh implies that the learning by doing literature and the Solow growth model were appearances of this underground river.

I think this is a highly suggestive argument. And it explains, for example, why multi-factor productivity in the railroad industry advanced from 1958 to 1989, the time period covered by the BLS study cited by Dr. Baily. Certainly, railroad output did not rise because of additions to labor or capital during that time period; the 1970s and 1980s saw dramatic reductions in railroad labor forces, locomotive fleets, miles of track operated, etc. Nor does it seem likely that the elimination of wasteful expenditures alone can account for these significant improvements in multi-factor productivity. Rather, railroads found new ways, new methods to move freight more efficiently. And despite decades of productivity advances, railroads continue to find new ways to generate productivity improvements including improvements to coal unit-train operations and facilities. So would a SARR.

I do not disagree with Dr. Baily's assessment that learning by doing "has not been found to be an important source of *sustained* productivity improvement." (Emphasis added). In the long-run, learning by doing effects will be swamped by the general growth of knowledge and development and deployment of new techniques and technologies. However, as I detailed in my opening statement, numerous studies have found that during the early years of a plant's existence (even a brand-new, capital-intensive, state-of-the-art

facility), a firm can expect to capture learning-by-doing gains. This does not in any way imply that operations are initially inefficient. Rather, it suggests that holding their existing equipment and workforce fixed, firms can generate improved productivity. Over time, of course, firms will adopt new technologies and whatever “diminishing” returns may characterize the learning by doing phenomenon are replaced with the “increasing” returns available from new ideas and technologies. Even so, the learning by doing effect strongly suggests that the Board is mistaken to set deny the SARR the opportunity to capture productivity improvements in the early years of its operation.

Finally, I wish to respond to the argument of Mr. Baranowski that I leaped from an erroneous start to a “bizarre conclusion” by suggesting that railroad operating expenses can be separated between those associated with its capital base and those not associated with a railroad’s capital base.¹⁷ The start was in no way erroneous; a SARR can capture productivity improvements from the very beginning. Nevertheless, I conceded that if a SARR was endowed with brand-new equipment (something not required by the Coal Rate Guidelines) it was not unreasonable for the Board to limit the initial starting point from which it phased-in productivity growth. I am well aware that railroad industry is a particularly capital-intense industry, but I was able to demonstrate that even using an expansive definition of capital costs, these costs range from slightly more than one-third to slightly less than one-half of all railway expenses. The purpose of that demonstration was simply to place before the Board the facts of railroad operating expenses and to suggest that the Coal Shippers’ proposal to set the initial level of productivity half-way between the RCAF-A and RCAF-U is reasonable.

¹⁷ See *Reply Verified Statement of Michael R. Baranowski*, p. 14.

I am, of course, aware that capital and labor work together – a locomotive needs an engineer – but no one has ever suggested that a railroad production function is a Leontief technology that requires that labor and capital be used in fixed and unvarying proportion. Even in the short run, railroads can substitute labor for capital, and vice versa. Such freedom only increases over time, a point which further supports the Board’s decision to phase-in the RCAF-A. It is untenable to suggest that because a SARR starts out with brand-new equipment, no labor productivity can be gained by a SARR, even in the first year of its existence. Indeed, taken to its logical conclusion, Mr. Baranowski’s argument would deny that any improvements in labor productivity are possible at all.

The Board faces a difficult task in setting the appropriate initial productivity level from which to start. Nevertheless, as Justice Brennan made clear, an agency has a duty “to weigh alternatives and make its choice according to its judgment how best to achieve and advance the goals of the National Transportation Policy” (*Balt. & Ohio R.R. v. United States*, 386 U.S. 372, 430 (1967), Brennan, J., concurring).¹⁸ Denying a SARR the benefits of any initial rate of productivity is not the appropriate way to advance the goals of the National Transportation Policy. Denying the benefits of any productivity improvements is an impermissible entry barrier.

Conclusion

The Board’s proposal to phase-in productivity over time applies proper economic logic; in the long run, we can expect the growth rate of operating expenses and the growth rate of revenues to grow at the same rate. There are, however, reasons to believe that Board’s proposal to set the initial level of productivity by using the RCAF-U is

¹⁸ Cited by Chief Judge Ginsberg in *BNSF Railway Company v. STB*, decided June 16, 2006.

unreasonable. I believe the initial rate should be set half-way between the RCAF-A and RCAF-U. I also believe that the proper period to phase-in productivity should be 10 not 20 years.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on June 22, 2006



William J. Brennan

**REBUTTAL VERIFIED STATEMENT
OF
DAVID G. WEISHAAR**

My name is David G. Weishaar. I am an independent rail marketing consultant. My address is 6204 – 140th Avenue, Holland, MI 49423. I have over 30 years' experience in the pricing and marketing of rail transportation services, primarily with the Chicago and North Western Railway Company ("CNW").

I joined CNW in 1969, and held various pricing, sales and marketing positions involving coal, iron and steel, scrap iron, iron ore and automobiles. From 1979 through the spring of 1995, I served in various positions of increasing responsibility related to energy (coal) marketing, including General Market Manager-Energy, Assistant Vice President Sales & Marketing-Energy (from 1984 to 1987), and Vice President Sales & Marketing-Energy (from 1987 to 1995). The latter two positions involved both CNW and Western Railroad Properties, Inc. ("WRPI"). WRPI was a CNW subsidiary that originated PRB coal from mid-1984 until 1995, when it and CNW were acquired by and merged into the Union Pacific Railroad Company ("UP"). I retired from CNW shortly before the UP/CNW/WRPI merger was consummated in 1995, and started my consulting practice.

I was intimately involved with all phases of the CNW/WRPI project in the early 1980's to construct more than 100 miles of new railroad to access the Wyoming Powder River Basin ("PRB"), and with both WRPI's operations and the marketing of its

PRB coal transportation services during the nearly 11 years when it operated as a separate entity. I had responsibility for the overall marketing, planning and development of WRPI coal traffic, and co-led the effort to market WRPI/UP's PRB coal transportation services in competition with the Burlington Northern Railroad (now BNSF). I interacted on a daily basis with the CNW personnel responsible for operating WRPI, and helped plan the development and refinement of WRPI's facilities and equipment during the 1985-1994 period of expansion of the market for PRB coal.

The Coal Shippers¹ have asked me to respond to the statements in the Reply Verified Statement of John H. Rebensdorf ("Rebensdorf RVS"), included with the Reply Submission of Union Pacific Railroad Company in this proceeding, pertaining to WRPI productivity. Mr. Rebensdorf addresses WRPI productivity on page 11 of his testimony.

I first note that Western Fuels Association and Basin Electric Power Cooperative ("WFA/Basin" FA/Basin") submitted substantial evidence on stand-alone railroad ("SARR") productivity, using WRPI as an example, in their opening and reply evidence in STB Docket No. 42088. I co-sponsored WFA/Basin's evidence on WRPI productivity gains. WRPI was a real-world railroad that was very similar to WFA/Basin's proposed SARR, the Laramie River Railroad or LRR. WRPI was similar in length to the LRR, and was constructed for the sole purpose of originating PRB coal traffic and

¹ Western Coal Traffic League, Concerned Captive Coal Shippers, the Edison Electric Institute, the National Rural Electric Cooperatives Association, and the American Public Power Association.

interchanging it to another carrier (UP) for movement to destination. WRPI began operations in 1984. Like the LRR and other SPRB coal-originating SARRs, it was a state-of-the-art railroad that hauled a single commodity (coal) exclusively in unit trains, and it was constructed and operated with the latest technology available at the time. However, WRPI experienced very substantial productivity gains during the first ten years of its existence, before it was merged into UP in 1995.²

Mr. Rebendsorf asserts at page 11 of his RVS that “WRPI had very little in common with a typical SARR, and its experience offers little hope for productivity gains by current and future SARRs.” I think the opposite is true. WRPI started operations as an optimally efficient railroad, yet it experienced enormous productivity gains during its brief existence. There is no reason to believe a coal-hauling SARR that starts operations as a state-of-the-art railroad, but that is limited by the need to accommodate the train sizes, car types and lading weights, and locomotives of its connecting carriers and customers, would not also continue to experience substantial productivity gains.

Mr. Rebensdorf asserts that WRPI was not an optimally efficient railroad when it began operations in 1984 because “it was a low-density railroad with almost unlimited room for improvement.” Id. It is true that WRPI started operations with low

² I understand that WFA/Basin's WRPI productivity evidence in Docket No. 42088 was incorporated into the record in this proceeding by its inclusion as an exhibit to WFA/Basin's separate opening comments. The WRPI productivity gains included reducing train crew size, switching to more powerful locomotives that reduced the size of the locomotive consists on unit coal trains, increasing train size, and increasing in the number of tons per car.

traffic density (about two trains per day), but as UP acknowledges at page 31 of its Reply Submission, WRPI was initially configured for a considerably larger traffic volume and added little additional track for more than five years. I understand that most SARRs are configured for their peak traffic volume in the last year of their SAC existence – they are not configured for traffic volumes during the early years of operations with the expectation of adding facilities to accommodate increasing traffic. Thus, like WRPI, SARRs start out with considerably lower volumes and “room for improvement.”

Mr. Rebensdorf states elsewhere in his testimony that it is unlikely that there will be significant future gains in terms of the length of unit coal trains and the net carrying capacity of coal cars. Rebendorf RVS at 3-5. However, Mr. Rebensdorf acknowledges the possibility that UP may operate 150-car PRB coal trains in the near future (*id.* at 4 n.2). Just as with the past increases in train size from 110 to 115, then 125 and now 135 car trains, track infrastructure has to be improved and sidings and unloading loops lengthened to accommodate longer trains and heavier cars. As the PRB railroads and their customers make such adjustments, which is inevitable, they will benefit from the resulting productivity improvements. So will SARRs, whose train sizes and weights are limited by those of their connecting carriers given the large volumes of coal traffic they interchange with them.

Finally, Mr. Rebensdorf notes that WRPI benefited from changes in labor agreements in place when it began operations³ and that many inefficient work rules have now disappeared. Mr. Rebensdorf further asserts that “since a SARR is not bound by union work rules that UP agreement personnel have bargained for, it cannot share in any productivity gains that UP or other railroads may realize by eliminating work rules in the future.” Id. at 11. However, while a PRB coal-hauling SAAR starts out with the same crew sizes that UP (or BNSF) presently uses for PRB coal trains, my understanding is that in recent PRB coal rate cases the Board has held that such SARRs must pay the same level of wages that the incumbents pay their train crews, including the constructive allowances that result from union work-rules. Because the SARR starts out with the same crew wages and constructive allowances as the incumbent, it will realize the same productivity gains the incumbent realizes “by eliminating work rules in the future.”

Mr. Rebensdorf’s attempt to denigrate the likelihood that a PRB coal SARR would experience substantial productivity gains during its first ten years of existence is very similar to the kinds of things the western railroads said 20 years ago. I can attest that the representatives of the PRB coal-hauling railroads then (as now) took the position that coal unit-train operations were their most efficient operations and would not experience significant productivity gains in the future (particularly compared with their other

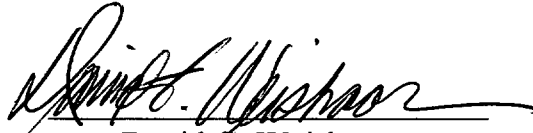
³ WRPI contracted with CNW for operating and maintenance functions, so its train crews (for example) were subject to CNW’s labor agreements.

traffic).⁴ The WRPI experience confirms that this was not true then, and it is not true today. While the exact nature and timing of further productivity improvements cannot be known with certainty, there is every reason to believe that all well-managed, profit-maximizing railroads – including a SARR that occupies today relatively the same position that WRPI occupied in 1984 – will continue to realize substantial productivity gains in the future.

⁴ These statements were used to justify the position in coal transportation contract negotiations that it was inappropriate to include a productivity factor in the rate adjustment methodology. The results of these negotiations varied; in some cases the railroads agreed to include a productivity factor in the rate-adjustment methodology, and in others they did not.

VERIFICATION

I, David G. Weishaar, verify under penalty of perjury that I have read the foregoing Rebuttal Verified Statement and know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.


David G. Weishaar

Executed on: June 23, 2006.

REBUTTAL VERIFIED STATEMENT OF
JOSEPH J. PLAISTOW

A. INTRODUCTION

My name is Joseph J. Plaistow. I am the same Joseph J. Plaistow who filed a May 1, 2006 Opening Verified Statement regarding variable costs in this proceeding on behalf of the Western Coal Traffic League, the Concerned Captive Coal Shippers, Western Fuels Association, Inc., the Edison Electric Institute, the National Rural Electric Cooperative Association and the American Public Power Association (collectively, "Coal Shippers").

I have been asked by the Coal Shippers to respond to certain criticisms by the railroads of my Opening Statement (see especially BNSF Reply Comments ("BNSF Reply"), pp. 46-48 and UP Reply Submission ("UP Reply"), pp. 42-47).

While the Board proposes to do away with movement-specific adjustments to system average variable costs, Coal Shippers and CP¹ advocate retaining those adjustments (either upward or downward) whenever a party can demonstrate the superiority of its estimate over the system average estimate. CP states that implementing the Board's proposal "...would compromise the accuracy of variable cost calculations..."² See CP Reply Comments ("CP Reply"), p. 5.

¹ See Coal Shippers' Opening Comments pp. 89-101 and Reply Comments pp. 46-59, and CP Opening Comments pp. 6-9 and CP Reply pp. 5-9.

² For calculating variable costs, the *ICC Termination Act of 1995* ("TCCTA"), Section 10101 encourages the use of accurate costs: "In regulating the railroad industry, it is the policy of the United States Government - ...(13) to ensure the availability of accurate cost information in regulatory proceedings..." BNSF's Opening Comments p. 61

The railroads also recommend modifications to the Board's proposal to do away with movement-specific adjustments to variable costs. At page 38 of its Reply UP states:

"Almost all of the parties that commented on the Board's proposal to simplify the variable costing portion of rate cases have argued that the Board should continue to permit at least some movement-specific variable cost adjustments to produce more accurate results."

The railroads recommend retention of movement-specific adjustments whenever the adjustment would increase the cost estimate above system average costs.³ The largest of the movement-specific adjustments, that for Road Property Return and Depreciation Costs (which I advocate specifically in my Opening

and UP's Opening Submission pp. 38, 39, 40 and 43 also call for accurate variable costs. System average variable costs are not accurate variable costs for coal unit-train movements since they average the cost of providing all a railroad's services and do not properly reflect the efficiencies inherent in unit train service with its elimination of origin and destination switching, its dedicated equipment, its elimination of inter-train switching, and its reduction in billing costs.

³ CSX/NS, BNSF and UP ask the Board to allow adjustments that increase system average costs related to fuel costs, equipment ownership, crew wages, mine loading times, car mileage allowances and payments to third parties (e.g., payment to short lines, payments for trackage and haulage, payments to mines, payments for coal conveyor belts). See CSX/NS Reply p. 22; UP Reply pp. 35, 37-40 and BNSF Reply pp. 60, 64. Curiously, even though the railroads claim that variability factors must be modified whenever movement-specific adjustments are recommended, the railroads never suggest that such a requirement would apply to their recommended movement-specific adjustments. Furthermore, the railroads decline to request variations from system averages for Loop Track Loading, Loop Track Unloading, Joint Facility Expenses, Maintenance of Way, and Depreciation of and Return on Road Property Investments because the railroads recognize that Board and Commission rulings have often found these cost categories to be below, and sometimes significantly below, system average costs. Loop Track Loading and Unloading Costs are far below the alternative, system average origin and destination switching costs and are routinely accepted by the Board with very little controversy and very little discovery required.

Statement and in this Rebuttal Statement), would decrease the cost estimate below system average costs, but the railroads want that adjustment eliminated. The Railroads' one-sided position is illogical and inequitable for a common carrier charged with serving the public.

Since the development of the PRB began, coal tonnage has increased dramatically becoming a larger and larger portion of the railroads' overall tonnage and revenues.⁴ With increasing coal tonnage came reduced system average costs per ton-mile, proving that the average variable costs of handling coal unit trains are less than the average variable costs of handling "system average" or manifest trains.⁵ The railroads' self-serving attempt to prevent reflection of cost components below system average would destroy the accuracy of any cost submission.

The Board's proposal to eliminate movement-specific adjustments and the Board's newly adopted position rejecting the application of an average variability factor to Road Property Return and Depreciation movement-specific costs rely heavily on BNSF's and the Board's *Xcel* Variability Example (see Decision, page 25). The Board's new position ignores precedent in which the Board and the ICC generally accepted shippers' reductions to system average Road Property Return

⁴ See BNSF Reply, pp. 43-44.

⁵ The basis for this statement is my experience as Burlington Northern's ("BN's") Director of Costs and Financial Analysis. I was instrumental in the development of BN's "Blacktrack", coal-specific, costing model as well as the development of BN's general merchandise traffic costing model which demonstrated that coal unit train costs were substantially below system average costs per ton-mile.

and Depreciation costs and the application of the average variability factor.⁶ My Opening Statement, at pp. 3-7, showed that the Board had, in the past, uniformly rejected the Variability Example relationship as lacking “empirical foundation.” Now the Board advocates accepting the Variability Example relationship even though neither the railroads nor the Board has presented any “empirical foundation” whatsoever in support of the Variability Example. In fact, the railroads’ reply comments provide evidence refuting the foundation for the Variability Example.

B. Coal Shippers’ Opening Position
Regarding the Variability Example

In my Opening Statement, at p. 6, I showed that *in Adoption of URCS*, the ICC applied rigorous economic criteria in evaluating regression analyses. Using these rigorous criteria, the ICC adopted the linear functional form under which the average variability would apply across all levels of density (see my Opening Statement, p. 4). In its Decision, the Board dispenses with the need to adopt any criteria whatsoever and instead simply states that applying *Adoption of URCS*’s average variability across all levels of density “...is improper, as the variability parameter will increase when traffic increases on a network” (see Decision, page 24). The Board’s newly adopted position is based on nothing more than a

⁶ See, for example, *Xcel* at pages 136 and 137 and *TMPA* at pages 56 and 57.

hypothetical graph (i.e., the Variability Example), and is unsupported by any evidence concerning real-world operating expenses.

The foundation for the Variability Example graph is that fixed costs remain fixed across the entire range of traffic densities. See Decision, p. 25. That foundation is refuted by the railroads' own statements. It is well known that Road Property Return and Depreciation Costs are step functions in which the fixed portion of those costs do not remain fixed across the entire range of densities. "Once these costs are incurred, the road property is typically capable of handling large traffic volume increases before the next capacity-expanding road property investments need to be made" (See my Opening Statement, p. 9). Just as the fixed portion of costs associated with a two lane country dirt road are far different than the fixed portion of costs associated with a super highway, the fixed portion of Road Property Return and Depreciation Cost for a branch line is very different than the fixed portion of those costs for Powder River Basin ("PRB") tracks. Likewise, the fixed portion of those costs in the early years of PRB operations was far less than the fixed portion of those costs for PRB operations today.

Confirming this step function relationship, at page 46 of its Reply UP states:

"First, UP's road property investments are closely tied to increases in traffic levels. As volume increases, line capacity is added by extending sidings until it becomes double track. This point was most recently illustrated in one of the presentations UP made during the Board's recent site visit to the PRB."

Thus, UP acknowledges that Road Property fixed costs increase as a step function of volume increases.

We see that even on a theoretical basis, the Board's Variability Example cannot withstand scrutiny. Coupling that with the fact that the Variability Example is not based on any actual data or railroad operating results, one must conclude that the Board has no basis for its variability factor change and, thus, the variability factor change cannot be used to support elimination of movement-specific adjustments to system average URCS.

C. BNSF's and UP's Unsupported Criticisms of My Opening Statement

1. BNSF Criticisms

At pp. 46-48 of its Reply, BNSF recites the same criticisms of my Variability Example position that BNSF has unsuccessfully claimed in past maximum rate proceedings.⁷ The Board took the unsupported Variability Example from BNSF's submission in *Xcel*. In *Xcel*, I showed that BNSF's

⁷ BNSF's footnote 58 on page 47 compiles references to arguments BNSF made in *AEP Texas* and *Otter Tail*. On the whole, those arguments have been considered by the Board and rejected in a number of maximum-rate proceedings. Certain arguments referenced in footnote 58 refer to rebuttal filings by BNSF in *AEP Texas*. In that proceeding, BNSF waited until rebuttal to file that material, so the shipper did not have an opportunity to challenge and rebut BNSF's positions. That material was filed under seal in *AEP Texas* and it is not a part of the instant record, so, once again, the Coal Shippers do not have a chance to challenge it. The Board must not base its findings in the instant proceeding upon material that has not been submitted in this proceeding, nor been exposed to the rebuttal of the shipper in the rate case in which it was presented.

Variability Example was baseless. At pages 136 and 137 of *Xcel*, the Board restated BNSF's unsupported arguments as follows:

“Although URCS assumes that 50% of total ROI and depreciation expenses on a carrier's system are variable, BNSF contends that on higher density lines, a greater proportion of those costs are actually variable. BNSF argues that this greater variability, when multiplied by the lower-than-system-average investment per GTM on high-density lines, does not necessarily result in lower-than-system-average unit costs as suggested by Xcel.”

The Board in *Xcel* rejected BNSF's arguments and concluded:

“Accordingly, Xcel's adjustments for ROI and depreciation expenses are used here...”

Since the Board rejected BNSF's arguments in *Xcel*, the Board must not accept those same unfounded arguments in this rulemaking proceeding.⁸

BNSF's criticism of my position regarding Road Property Depreciation Costs at page 47 of its reply demonstrates that it did not comprehend the point that was being made. BNSF fails to recognize that it is proposing to increase the Road Property variability factor as density increases, but is making no allowance for the

⁸ UP's Reply at page 40 makes false claims regarding the Board's treatment of Road Property Return and Depreciation Costs by distorting the Board's decision in *Wisconsin* (STB Docket No. 42051). In *Wisconsin*, the Board did not reject all movement-specific adjustments to road property investment and depreciation expenses, as UP claims. Instead, both parties adjusted Road Property Return and Depreciation Costs and both parties used the 50% variability factor. See *Wisconsin*, Decision served Sept. 13, 2001, page 53. The Board rejected both parties' adjustments. In rejecting the shipper's Road Property Return and Depreciation Costs, the Board stated that Wisconsin Power & Light (“WPL”) did not take account of a small portion of road property investment that had not been assigned to particular line segments, but had been shown to be needed to provide service to WPL. See *Wisconsin*, page 54.

fact that the Board has adopted depreciation rates for road property that are already higher for higher-density lines.⁹ In effect, BNSF claims that Road Property Costs increase with traffic density and that it would account for those increasing costs by double-counting the claimed increase first in higher depreciation rates and a second time by applying a higher variability factor.

2. UP Criticisms

In *Wisconsin*, UP applied a movement-specific adjustment to system average Road Property Return and Depreciation Costs and applied the 50% variability factor to its adjusted costs. See *Wisconsin*, page 53. In the instant rulemaking proceeding, UP's Reply at p. 43 retreats from its application of the 50% variability factor in *Wisconsin* and now claims that the Board is correct in arbitrarily reversing its own ruling in *Adoption of URCS* that average variability would apply across all levels of density.

Throughout UP's Reply comments on the Board's proposal to eliminate movement-specific adjustments, UP confuses the ICC's *Adoption of URCS* theoretical discussions with the ICC's practical decisions regarding the adoption of cost procedures.¹⁰ At page 43, UP attributes to the ICC a finding that variability ratios should be applied on a line-specific basis: "In fact, the ICC recognized when it adopted URCS that variability ratios would be above system-average

⁹ UP's Reply at p. 46 recognizes this point when it states, "Second, UP's road property depreciation costs are also closely linked to traffic levels."

¹⁰ See UP Reply, pp. 43-47.

levels on high density lines.” Of course, the ICC never made such a finding; variabilities have never been adjusted to reflect line-specific levels of density; and UP was unable to cite any instance in which line-specific density adjustments have been made either before or after *Adoption of URCS*. What the ICC’s expert Dr. Westbrook did say was that “...the effect of density will be captured directly in the calculation of the variability ratio in [the] linear model.” See *Adoption of URCS*, page 921. However, the variability ratio, which already reflects the effect of density, has always been applied on a system wide basis across all levels of density.

At page 45 of its Reply, UP distorts and misstates my position regarding the 50% variability factor and then goes on to criticize its own misstatement. The ICC calculated valid regressions for over 75% of total expenses, but had to resort to default variabilities for the other 25% of total expenses. The default variability adopted for Road Property Return and Depreciation Costs was 50%. See *Adoption of URCS*, pages 919 and 920. UP neglects to recognize that each of the adopted variabilities, whether based on regressions or defaults, has always been applied to the cost category across all levels of density.

At page 46 of its Reply, UP states: “...the 50% variability ratio was developed during a period in which traffic volumes were lower, railroads expensed much of their maintenance-of-way spending, and excess capacity existed over the observed range of densities.” *Adoption of URCS*, which selected 50% as the default variability for Road Property Return and Depreciation Costs, was issued in

1989, six years after depreciation accounting was adopted. Depreciation accounting eliminated much of the expensing of maintenance-of-way spending. Furthermore, by 1989 much of the excess capacity that had existed in the railroad industry in the 1970's had been eliminated through abandonments and traffic volume increases.

3. Conclusion

The Board and the railroads rely heavily on BNSF's and the Board's *Xcel* Variability Example graph as support for eliminating movement-specific adjustments to variable costs and the claim that variability factors must be adjusted whenever shippers develop movement-specific adjustments to system average variable cost components. There is no economic foundation for the Variability Example graph, nor any empirical evidence supporting it. Therefore, the Board cannot not rely on that graph to support its proposal to eliminate movement-specific adjustments to system average variable costs or its claim that variability factors must be density-adjusted whenever movement-specific adjustments are submitted.

COMMONWEALTH OF VIRGINIA)
)
CITY OF ALEXANDRIA)

I, Joseph J. Plaistow, verify under penalty of perjury that I have read the foregoing Verified Statement of Joseph J. Plaistow, 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 statement.

Joseph J. Plaistow

Sworn to and subscribed
before me this day of June 27, 2006.


Anthony V. Evanshaw III
Notary Public for the State of Virginia

My Commission expires: September 30, 2007

