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April 5, 2004

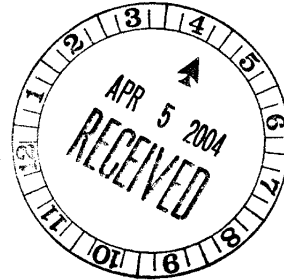
Via Hand Delivery

The Honorable Vernon A. Williams
Secretary
Surface Transportation Board
1925 K St. N.W.
Washington, D.C. 20423

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RE: STB Docket No. 42057, *Public Service Company of Colorado d/b/a Xcel Energy v. The Burlington Northern and Santa Fe Railway Company*

Dear Secretary Williams:

Please find enclosed for filing the original and fifteen (15) copies of (1) Complainant's Post-Argument Brief; (2) a Petition for Leave to File Attachments to Complainant's Post-Argument Brief; and (3) Attachments to Complainant's Post-Argument Brief (Public Version) in the above referenced proceeding. Also enclosed are three (3) diskettes containing the electronic versions of the Brief, Petition and Attachments.

Please note that the original and the copies of Attachments 3 and 5 contain COLOR IMAGES.

Extra copies of these filings are enclosed for stamping and return to our offices.

Should you have any questions regarding the foregoing, please do not hesitate to contact the undersigned.

Sincerely,

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cc: Counsel for Defendant

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BEFORE THE
SURFACE TRANSPORTATION BOARD

PUBLIC SERVICE COMPANY OF COLORADO
D/B/A XCEL ENERGY,

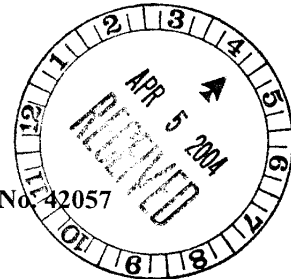
Complainant,

v.

THE BURLINGTON NORTHERN AND
SANTA FE RAILWAY COMPANY,

Defendant.

Docket No. 42057



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COMPLAINANT'S POST-ARGUMENT BRIEF

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April 5, 2004

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GLOSSARY OF ABBREVIATIONS

AEO	Annual Energy Outlook
BNSF	The Burlington Northern and Santa Fe Railway Company
DCF	Discounted Cash Flow Analysis
DRI-WEFA	Financial Forecasting Company now known as Global Insight
EIA	Energy Information Administration
JEC	Jeffrey Energy Center
PAF	Productivity Adjustment Factor
Pawnee Station	The Pawnee Steam Electric Generating Station
PRB	Powder River Basin
RCAF-A	Rail Cost Adjustment Factor - Adjusted for productivity
RCAF-U	Rail Cost Adjustment Factor - Unadjusted for productivity
RTC	Rail Traffic Controller simulation model
SAC	Stand-Alone Cost
SARR	Stand-Alone Railroad
UP	Union Pacific Railroad Company
URCS	Uniform Rail Costing System
WCC	Wyoming Colorado Coal Railroad
WRPI	Western Railroad Properties, Inc.

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Complainant,

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SANTA FE RAILWAY COMPANY,**

Defendant.

Docket No. 42057

COMPLAINANT’S POST-ARGUMENT BRIEF

In response to the Board’s March 18, 2004 decision in this proceeding, complainant Public Service Company of Colorado d/b/a Xcel Energy (“Xcel”) hereby submits its Post-Argument Brief. This brief responds to the three specific requests for additional information set out in the decision.

- I. “Based on the existing record, if the Board should decide to use an operating plan that is predicated on a traffic group that is different in size from the traffic group used by the Board, what adjustments the Board should make to the corresponding operating expenses and road property investment”

There is a differential of 22.1 million tons of coal traffic between the operating plan proposed by Xcel for the WCC and BNSF’s alternative operating plan for the WCC. The operating plan proposed by each party is based on its calculation of the tonnages that would be moved by the WCC during a peak operating period within the 2001-2020 time frame used for the DCF analysis. Specifically, Xcel has based its operating plan on peak period tonnages of 133.6 million tons, a level that would be reached in 2020. In contrast, BNSF has based its operating plan for the WCC on peak

period tons of 111.5 million tons, which would be moved by its alternative version of the WCC in 2003. The primary causes for the tonnage differences in the parties' respective peak year analyses are (1) the exclusion by BNSF of coal volumes to be transported by the WCC for interchange with the UP for final delivery to Western Resources, Inc.'s Jeffrey Energy Center for the entire DCF period; (2) the exclusion of other tonnages in the WCC traffic group by BNSF during certain years of the DCF period; and (3) the means by which the parties forecast coal tonnages to be moved by the WCC over the entire period.

Depending on the Board's resolution of the parties' disputes over the size of the WCC's traffic group, the operating plan for the WCC that is used to complete the SAC analysis could be based on a number of possible combinations of movement characteristics and operating parameters. Thus, the primary issues raised by the Board's first inquiry are (1) the specific tons by year which create the peak period; (2) the general operating parameters of the WCC operating plan; (3) determining whether adding or deleting individual movements requires the reduction or addition, respectively, of WCC track infrastructure and facilities; and (4) determining the operating statistics (trains, locomotives, crew, etc.) associated with individual movements added to or deleted from the parties' traffic groups. Once the operating plan inputs, needed investment and operating statistics are determined for the traffic group, the Board can then apply the unit operating and investment costs to arrive at the overall costs associated with the movement of the traffic group's coal volumes to be compared with the revenues for purposes of completing the SAC analysis.

The issues summarized above pertaining to the addition or reduction of movements to or from a parties' traffic group are separate and apart from the parties' disputes over the level of operating expenses and investment costs that the Board should apply in this case. As explained more fully in

the evidentiary record, Xcel takes great issue with many of the operating expenses and investment costs BNSF would have the Board apply to the WCC.

A. STB Resolution of Operating Plan Differences Generally

The Board and its predecessor have been called upon to resolve differences between complainants and defendants regarding their respective SARR operating plans in every stand-alone cost rate case. In every case the complainant's effort to posit a hypothetical, optimally efficient replacement to the defendant is countered by the defendant's efforts to (1) reduce the SARR's tons and revenues; (2) increase the costs of the SARR by making it run slower, require more track and other infrastructure; and (3) otherwise have the SARR conduct rail operations in a less than optimally efficient manner and more like the defendant. In this proceeding, while BNSF does not dispute the basic feasibility of the WCC and the fact that it would be a simpler, more efficient version of BNSF's operations in the PRB, BNSF has nevertheless predictably raised arguments covering all of the aforementioned areas which increase stand-alone costs and reduce stand-alone revenues.

Under the Guidelines, the complainant carries the burden that its SAC model is feasible and could satisfy the needs of its traffic group.¹ If the complainant fails to meet this burden by proposing an operating plan that is "fatally flawed," the defendant's alternative plan is used as the basis for completing the stand-alone cost analysis.² However, even if the defendant's operating plan is accepted, the Board still determines the operating expenses for the SARR based on the evidence of record, and therefore uses complainant's evidence for some costs and the defendant's evidence for

¹ See, e.g. Duke/CSX at 28.

² Id. (discussing how the complainants' operating plans in that case, WTU, McCarty Farms, and FMC were "fatally flawed," prompting use of the defendant's operating plan to compete the SAC analysis).

others.³ Moreover, the Board in Duke/CSX used the railroad's operating plan but completed its SAC analysis using the Board's restated increased figures from its traffic group in determining number of locomotives and other operating statistics for the revised SARR.⁴ In cases where the complainant's operating plan is not "fatally flawed," the Board still has examined the evidence submitted by the parties on individual operating parameters and investment in order to complete the SAC analysis.⁵

B. The Board Has the Means to Devise an Operating Plan Covering Any Traffic Group it Determines is Appropriate in this Case

1. Determination of Operating Plan Parameters

This case is similar to TMPA in that like the complainant in that case Xcel has proposed an operating plan for the WCC that is feasible. The WCC is modeled after, and compares very favorably to WRPI, which conducted similar PRB coal operations. Indeed, Mr. Richard McDonald, the person in charge of designing and developing WRPI, assisted Xcel in designing the WCC. Nevertheless, the record in this case contains a number of areas of dispute over general operating parameters that must be resolved before an operating plan to complete the SAC analysis can be selected. The primary differences between the parties concerning operating parameters and investment are centered on the size, location and use of the main rail yards that would be utilized by the WCC. BNSF's erroneous view of the WCC's rail yards as places to hold empty trains for long periods of time, and the excessive time BNSF claims for certain functions to be performed result in a less efficient railroad that

³ Id.

⁴ Id. at 53.

⁵ See TMPA at 73, Appendix C.

requires more infrastructure and equipment to service the WCC traffic group. The STB's adoption of an operating plan to complete its analysis must be preceded by the resolution of the parties' disputes over individual operating parameters.⁶

2. Application of Operating Plan Parameters to Traffic Group

a. Traffic Group Operating Characteristics

The evidence submitted by Xcel in this case contains all of the relevant operating characteristics of the individual movements that make up the differences between the parties' respective traffic groups.⁷ These characteristics include (1) annual volumes; (2) whether the rail cars are shipper or carrier supplied; (3) type of rail cars; (4) average annual train sizes; and (5) other movement characteristics.

b. Use of Xcel's Operating Plan as a Basis for Adjustments

The Board can and should use the operating plan proposed by Xcel for the WCC as the basis for conducting the SAC analysis in the case, as it is feasible and serves the needs of Xcel's traffic group. Xcel has also demonstrated that there is no reason to reduce the traffic group it has assembled for the WCC. However, in response to the Board's first inquiry, Xcel notes that it has provided the Board with the means to make any adjustments it deems necessary to Xcel's operating plan, traffic group, and road property investment. As explained in its Opening and Rebuttal evidence, and more recently in a March 12, 2004 tutorial with STB staff, the STB may verify the feasibility of the WCC's operating plan, and generate operating statistics for the calculation of WCC operating costs, utilizing

⁶ Duke/CSX at 28; TPMA at 73.

⁷ See Xcel Rebuttal electronic workpapers "WCC Traffic_Xcel Rebuttal.xls" and "PEAKTRAINSREB.123."

the computer model Xcel used for such purposes and which Xcel has supplied to the Board for its use, along with sufficient documentation on the program's operation. As Xcel's experts explained in the March 12 tutorial session, the simulation program uses five (5) primary input files: (1) a Train File containing specific data on each train modeled, including each train's SARR origin and destination, railcar count, rail car ownership, off-SARR hours; (2) a Route File containing data on SARR configuration, system speed limits and dwell times, and mainline and helper locomotive requirements along each section of the WCC route; (3) a Grades File containing topographical data along the stand-alone route; (4) an On-SARR Junction File listing the WCC's origins and on-SARR interchange locations; and (5) an Off-SARR Junction File containing the WCC's destinations and off-SARR interchange points. The STB can modify Xcel's operating plan and track configuration, and it could model its changes in Xcel's program by adjusting one or more of the program's five input files or by adjusting the program's algorithms.⁸

The STB can change the traffic group of the WCC and adjust the characteristics of WCC trains by making adjustments to the Train File. For example, if the Board wished to base the WCC operating plan on less than the full traffic group proposed by Xcel, it could remove a certain movement from the model by removing each train to that destination from the Train File. Such removal would result in a decrease in the WCC's operating statistics, and, therefore, a decrease in the operating costs. The remaining traffic moving over the WCC would then be analyzed to determine whether reductions in the system's trackage would be required. If the STB wished to shift the SARR destination for a single train, or a group of trains, it could adjust the "SACDEST" and

⁸ BNSF accepted Xcel's WCC origins, interchange locations and destination (Pawnee Station) therefore, there should be no need to adjust the On-SARR Junction File and the Off-SARR Junction File.

“SACOFF” fields for these trains in the Train File to reflect different WCC destinations. Similarly, changes to the amount of time trains spend off the WCC would also be changed in the Train File by modifying the “OFFLINE” data field, which contains the expected hours each train will spend off-line.

Changes to the Route File would modify the WCC’s amount of track, yard dwell times, and number of locomotives used on WCC trains. The number of passing sidings or change in the amount of double tracked territory on the WCC can be increased or decreased by modifying the “side” field or the mileposts where sidings begin and end in the Route File, which controls the amount and placement of track along the WCC route. Similarly, the Board can adjust yard dwell time for loaded and empty coal trains by adjusting the “crew” and “mtcrew” fields in the Route File, respectively. Adjusting the “locos” field in the Route File would change the number of locomotives used on the WCC’s trains, while changing the “hlocos” field in the same file would alter the number of helper locomotives required and where they are needed on the WCC system.

As indicated above, the Grades File contains topographical data about the WCC’s route, including track grade and curve information. The STB could adjust the percent grade between stations along the WCC’s route if it deemed necessary by modifying the “Grade” field in the Grades File. In the same vein, if the Board found it necessary to change the degree of curvature along a particular section of the WCC’s route, it can change the “Curve” field in the Grade File. As Xcel’s experts explained during the tutorial, all the files and data necessary to adjust the inputs to Xcel’s string model program are included in Xcel’s evidence.

c. Use of BNSF’s Operating Plan as Basis for Adjustments

The alternative operating plan proposed by BNSF for the WCC posits an extremely inefficient, very costly railroad that BNSF erroneously asserts would exist as a competitor to BNSF and UP in

the PRB, not a highly efficient hypothetical replacement, as the Guidelines require. The serious flaws in BNSF's alternative operating plan and the computer program BNSF used to develop it are documented in Xcel's evidence in this case. Use of BNSF's proposed operating plan without any modifications would be highly objectionable and contrary to SAC principles. Nevertheless, if the Board were to complete its SAC analysis using Xcel's traffic group but some version of BNSF's operating plan, it would be necessary to (1) determine the operating statistics of adding the individual movements BNSF excluded from the WCC traffic group; and (2) whether the additional traffic would require any additional road property investment.

(1) Operating Statistics for Additional Traffic

BNSF calculated the operating statistics of its reduced version of the WCC using spreadsheets and the average transit times generated by BNSF's use of the RTC model. Those spreadsheets and the underlying inputs and worksheets can be modified to recognize the bigger traffic group, forecasts in tonnage that change the peak year, and the inputs that are required to calculate the operating statistics utilized to determine operating expenses. In fact, BNSF's spreadsheets already identify the traffic it chose to exclude. These spreadsheets simply "zero out" the traffic excluded, meaning BNSF excluded the formula or "look-up" for cells containing the excluded traffic so that the result is a zero or a blank. For example, as part of the level "ProjTonRev" in BNSF's Reply workpapers "WCC Traffic_BNSFReply.xls," BNSF includes a line for the JEC traffic, but has excluded the formulae to calculate the tons for the JEC traffic. The spreadsheet can be modified to add the JEC traffic by copying the formulae from the prior line into the line that identifies the JEC traffic. Any other traffic changes to the stand-alone system (additions or deletions) can also be made to this spreadsheet.

(2) Transit Times and Capacity

i. Transit Times

In BNSF's operating plan analysis, the inputs for the average transit time by segment are developed from the RTC and summarized in the spreadsheet titled "transit time by segment.xls," which is based on hard-coded values shown in "transit time summary.xls." These transit times, by segment, include the yard times posited by the BNSF. If the Board were to agree with Xcel that BNSF's yard times are overstated, the "transit time summary.xls" spreadsheet could be manually adjusted to exclude any overstatement. This change would then flow through to the operating statistics.

ii. No Need for Additional Mainline or Yard Capacity

BNSF attempted to validate its operating plan and WCC track and yard design by the use of the RTC model. Xcel maintains that the RTC model is not adequate to test the capacity requirements of a SARR because the model is inherently biased toward adding capacity instead of assisting the user of the model to design a least cost, optimally efficient railroad. In particular, the model has no ability to mimic real-life dispatching of trains, a fundamental flaw that drives the model to produce results that are directly contrary to SAC principles. Indeed, Xcel explains below that the addition of all of the movements excluded by BNSF to the traffic group upon which BNSF's operating plan is based would not result in the need for any new mainline or yard capacity to be constructed on BNSF's version of the WCC.

Nevertheless, if the STB chooses to use the BNSF's RTC model in combination with Xcel's complete traffic group to test a version of the BNSF's operating plan, it would have to add the trains for the excluded movements through the "Add a train" function of the "Train" Input Menu option.

The total number of trains encompassed by the excluded traffic equal 84 trains during the study period and the train data is located in Xcel's Rebuttal electronic workpaper "PEAKTRAINSREB.123." The "Train" Input Menu is also used to adjust the dwell and crew change times seeded for each train.

(a) Running Track

Because the BNSF's version of the WCC is significantly overbuilt, it is highly unlikely that addition of the excluded movements to BNSF's version of the WCC would require additional mainline and yard trackage to be constructed. For running track, theoretical capacity for a line segment can be defined as the maximum number of trains that can run over a given line segment. For a railroad consisting of single line and double track segments, the theoretical capacity of any segment will be constrained by the capacity of the longest single track area in that segment.⁹

The formula to determine the theoretical capacity equals:

$$N = 1440 / (E + W + V) \times 2\text{Eff}, \text{ where}$$

N	= Theoretical number of trains per day
1440	= The minutes in a day, i.e., 24 hours x 60 minutes per hour
E	= Eastbound transit time (in minutes)
W	= Westbound transit time (in minutes)
V	= Minutes to accelerate or decelerate
Eff	= The system efficiency (80 percent for CTC lines like the WCC)

Based on the factors described above, the impact on capacity from adding the trains excluded by BNSF can be calculated. This calculation is illustrated in Attachment No. 1 to this Brief. First, the WCC can be divided into four segments where logical traffic breaks occur: 1) Eagle Butte - Bill; 2) Bill - Wendover; 3) Wendover - Northport, and; 4) Northport - Pawnee. The longest stretch of

⁹ See, for example, Harald Krueger, "Parametric Modeling in Rail Capacity Planning," Proceedings of the 1999 Winter Simulation Conference, pages 1195-1196.

single track in each segment was determined from BNSF's stick diagrams shown in its Exhibit III-F-4. Next, transit time was determined based on BNSF's determination that the WCC speed limits equal 50 MPH in the loaded (or Eastbound) direction and 60 MPH in the empty (or Westbound) direction.¹⁰ Finally, 5 minutes were added to transit time per train for acceleration or deceleration.

Attachment No. 1, column (8) demonstrates that, during the peak period for BNSF's trains the WCC has substantial unused theoretical capacity (ranging from 29% to 71%). If all traffic excluded by BNSF were added, the WCC's peak day would increase by only 4 loaded trains and 4 empty trains. The addition of a maximum of 8 trains per day causes utilized capacity to increase to a range of 32 percent to 80 percent, still showing substantial flexibility available to the operations of the WCC. This demonstrates (1) the degree to which the BNSF's version of the WCC was overbuilt for BNSF's reduced traffic group, and (2) that the excluded traffic could be added to BNSF's traffic group without requiring any additional mainline capacity to be constructed.

(b) Yard Tracks

As stated previously, in determining yard capacity, BNSF has overstated the required time the WCC needs to spend at Guernsey, Wendover, Northport and Pawnee Junction. The excessive dwell times create the excess track requirements in BNSF's analysis, as well as adding to congestion on the main line.

At Guernsey, BNSF has proposed 8 tracks for loaded trains and 15 tracks for empty trains versus Xcel's yard design which allows for 9 tracks for loaded trains and 6 tracks for empty trains. Based on BNSF's dwell time of 1.5 hours for loaded trains and 6 hours for empty trains, the daily

¹⁰ See BNSF Reply at III-B-63.

capacity, in BNSF's analysis, equals 188 trains per day.¹¹ In Xcel's operating plan, the daily capacity at the Guernsey yard, based on a dwell time of 45 minutes for loaded trains and 2 hours for empty trains, equals 360 trains per day.¹² Using BNSF's reduced version of the WCC traffic group, the maximum trains per day through the Guernsey yard equals 64 trains, ranging between 18% and 34% of the yard capacity depending on the dwell times and number of tracks considered. The addition of the 8 trains representing the excluded tonnages will only increase the capacity utilized by 2% to 4%.

At the Northport yard, both Xcel and BNSF allow for a dwell time of 1 hour per train in the loaded and empty directions. However, BNSF's proposed yard increases the size of the yard to hold an additional two trains (7 trains for BNSF versus 5 trains using Xcel's yard configuration). As shown in Xcel's rebuttal evidence, the extra yard space is not required, even with the larger annual volumes in Xcel's analysis. BNSF's yard capacity equals 168 trains per day while Xcel's yard capacity equals 120 trains per day.¹³ Under BNSF's operating plan, the maximum trains per day through the Northport yard equals 59 trains. This translates to a yard capacity utilization factor of 35% based on BNSF's track configuration and 49% based on Xcel's track configuration. An increase of 8 trains per day to incorporate the traffic excluded by BNSF would result in only an increase in yard capacity utilization of 5% to 7%.

¹¹ (8 loaded tracks x 24 hours / 1.5 hours per train) + (15 empty tracks x 24 hours / 6 hours per train).

¹² (9 loaded tracks x 24 hours / .75 hours per train) + (6 empty tracks x 24 hours / 2 hours per train).

¹³ For BNSF, 7 tracks x 24 hours / 1 hour per train. For Xcel, 5 tracks x 24 hours / 1 hour per train.

To eliminate extra yard trackage (and passing sidings as well) from BNSF's operating plan, the STB can adjust the beginning and ending node at each passing or yard track it wishes to eliminate by changing the switch characteristics at these nodes in the RTC program to the "Block Switch" alternative. These modifications to the nodes will cause the RTC model to disallow any trains from entering the siding or yard track, and effectively eliminate the designated track from the simulation.

iii. Interchange with UP at Northport

Use of a version of BNSF's operating plan with Xcel's traffic group would only require the construction of the turnout at Northport associated with the movement of JEC tonnages by the WCC from the Eagle Butte and Bell Ayr mines to Northport for interchange with UP. These costs are un rebutted and included in Xcel's land, grading and other construction costs for the Northport yard.

d. Adjustments to Operating Expenses and Road Property Investment

The previous discussion describes how the STB can modify either Xcel's or BNSF's operating plan for the WCC to (1) resolve the parties' disputes over individual operating parameters; and (2) to generate SARR train operating statistics if (in the case of Xcel's operating plan) the traffic group volumes are reduced, and (in the case of BNSF's operating plan) the traffic group volumes are increased. In the case of road property investment, Xcel has demonstrated how mainline track and siding can be added or deleted from its SARR, and that it is highly unlikely that using Xcel's full traffic group with BNSF's alternative version of the WCC will require any new road property investment apart from the construction of the interchange connection with UP at Northport.

In terms of the adjustment to operating expenses and road property investment costs, there is no dispute that the structure and operations of the WCC are substantially simpler than the BNSF or any other large-scale, general commodity rail carrier. As such, the operating costs posited by

BNSF for the WCC, which are based on costs that BNSF and other Class I carriers would incur, are not a reliable indicator of the costs that would be incurred by the WCC.¹⁴ Moreover, the operating costs developed by Xcel are based on the WCC conducting operations for the entire traffic group proposed by Xcel. Consequently, whatever operating plan the Board determines should be the basis for completing its SAC analysis, the Board should determine the operating costs for the WCC using the operating cost evidence submitted by Xcel.¹⁵

Using a smaller traffic group in conjunction with Xcel's operating plan would result in a reduction in the investment required for the WCC, and Xcel has demonstrated above how the Board can make such adjustments. Because using the full Xcel traffic group with BNSF's operating plan would have only a minimal effect on the capacity utilization of BNSF's overbuilt WCC system, Xcel maintains that the Board would not be required to make any additions to the mainline and yard track requirements of BNSF's WCC. Rather, the Board should reduce the mainline and yard track BNSF has proposed to reflect the WCC's more efficient operation and SAC principles. In any event, the Board would have to account for the costs of the aforementioned trackage associated with the JEC movement.

¹⁴ TMPA at 77-78.

¹⁵ See also Xcel Post-Evidentiary Brief at 27-30.

II. “In determining the future operating costs of the stand-alone railroad, whether there is an alternative to the RCAF-A or RCAF-U indexes that the Board should consider”

The Board has recognized that a SARR will enjoy productivity gains over the 20 year DCF model.¹⁶ However, the Board has been reluctant to adjust the operating expenses of SARRs over the 20-year DCF period using the RCAF-A absent a showing of specific productivity improvements.¹⁷ In this case, Xcel has demonstrated that the RCAF-A is clearly appropriate to adjust the operating expenses of the WCC over the DCF period because the WCC will enjoy significant productivity gains. Chief among these productivity gains is the fact that while all of the capital investment for the WCC will be made prior to the base year 2001, the traffic density over the railroad will increase a substantial 26% over the DCF period. Other productivity gains would include efficiencies and lower costs due to upgrades in computers and software; decreased locomotive operating costs as new units are brought into service that are more efficient than their predecessors; and improvements in maintenance of way practices and track materials.¹⁸ This evidence of specific productivity gains for the WCC's unit coal train operations justifies the use of the RCAF-A in this case to adjust the WCC's operating expenses.

The appropriateness of using the RCAF-A in this case can be tested in at least two ways, which are set forth below. These two methods estimate the productivity of a coal-only SARR using (1) the established methodology the Board uses to calculate railroad productivity, and/or (2) the productivity component of the EIA coal transportation rate forecasts. In the alternative, either of

¹⁶ WPL at 106; CP&L at 27; Duke/CSX at 30

¹⁷ TMPA at 161.

¹⁸ See Xcel Post Evidentiary Brief at 32-33 and record citations cited therein

these methods could be used instead of the RCAF-A or RCAF-U to forecast future operating expenses for the WCC or any other coal-only SARR.

A. Application of the STB's Productivity Adjustment Using WCC-Specific Inputs and Outputs

The Board adjusts the quarterly RCAF for the long-run changes in railroad productivity using the Railroad Cost Recovery Procedures established in Ex Parte No. 290 (Sub-No. 4). Under these procedures, the annual rate of productivity change is calculated by dividing an output index by an input index to develop total factor productivity. The input index uses constant dollar-adjusted expenses as obtained from railroad Annual Report (Form R-1) data. The inputs in this index - freight expenses, fixed charges (depreciation and interest, and contingent interest) - are stated in constant dollars using the most recent year as the base, and updating the annual charges by the Series RCR Index. The STB develops the output index from its costed waybill sample. The output index is a composite of year-to-year changes in ton-miles for each of 189 mileage, car type, weight and shipment size segments, weighted by each segment's base-year share of total revenues. The long-run change in productivity is calculated by dividing the output index by the input index for each of the last five years, and then taking the geometric average of these annual changes. The RCAF productivity adjustment factor is then updated by multiplying the previous period's PAF by the long-run change in productivity. Dividing the RCAF-U by the updated PAF provides the RCAF-A.

Using data in the evidentiary record, the Board can apply these established procedures and develop a WCC-specific PAF and apply this PAF to historic and forecasted RCAF-U values to develop WCC-specific historic and forecasted RCAF-A indexes. As illustration, Page 1 of Attachment No. 2, develops the input index for each year of the DCF period using annual operating expenses,

annual depreciation charges and annual interest charges from Xcel's Rebuttal DCF model, and places those monies in constant 2001 dollar terms by using the DRI-WEFA forecast of the RCAF-U as a surrogate for the Series RCR index.¹⁹ The output index shown on Page 2 of Attachment No. 2 was developed from Xcel's Rebuttal traffic and revenue forecast by calculating the forecasted change in net-ton miles for each year of the DCF period.²⁰ Dividing each year's output index by the input index developed the annual productivity change for each year of the DCF model as shown on Page 3 of Attachment No. 2. For the first five (5) years of the DCF period (2001 to 2006), the geometric average annual change between each year and 2001 was calculated, and used to develop the multi-year productivity change. For the years 2007 to 2020, a five-year rolling geometric average was used, consistent with STB procedures, to develop the productivity change. The WCC-specific RCAF-A was developed on Pages 4 and 5 of Attachment No. 2. The fourth root of each year's change in productivity was applied to the previous quarter's WCC PAF to develop the current quarter's WCC PAF. Each quarter's WCC PAF was then applied to historic or DRI-WEFA forecasted RCAF-U values to develop the WCC-specific RCAF-A shown in Column (7) on Pages 4 and 5 of Attachment No. 2. Attachment No. 3 contains a graph that compares the cumulative change in the WCC specific RCAF-A to the cumulative changes in the DRI-WEFA forecasts of the RCAF-A and RCAF-U, and the cumulative change in the WCC's average rate per ton over the 20-year DCF period.

¹⁹ The WCC does not incur any contingent interest expenses.

²⁰ Because the WCC ships one commodity, coal, in relatively uniform shipment sizes and distances, and in similar car types, all shipments were placed into one category.

B. Application of the EIA's Forecast of Coal Transportation Productivity

A second alternative to the RCAF-A and RCAF-U entails data generated by EIA on future coal transportation rates. The EIA, as part of its AEO, forecasts energy supply, demand and prices extending 25 years into the future. Forecasted coal transportation rates are a key factor in the EIA forecasts, and are determined annually by the EIA using a statistical regression model to relate changes in historic coal transportation rates to changes in historic railroad wages, fuel prices, and equipment rents.²¹ EIA also includes in the regression model a time series trend factor reflecting the historic trend in coal transportation productivity. For its 2001 to 2003 AEO forecasts, the EIA used a historic productivity factor of 2.15 percent.²² In its 2004 AEO, the EIA updated the coefficients used in its regression equation and used a historic productivity factor of 2.08 percent.

Using the coefficients derived from its regression model, EIA uses forecasts of railroad wages, fuel prices and equipment rents, and expectations of future coal transportation productivity to develop a forecast of future coal transportation prices. The expectation of future coal transportation productivity used in the forecast is derived by utilizing the historic productivity factor and adjusting it by the standard error of the historic productivity factor multiplied by an EIA-defined productivity parameter ("k-parameter"). For the 2001 and 2002 AEO, the EIA determined that the standard error of its 2.15 percent historic productivity factor equaled 0.35 percent, and used a k-parameter of negative two (-2), leading to an estimate of future coal transportation productivity of 1.46 percent.²³ For its 2003 AEO, the EIA used the same historic productivity factor and standard error, but utilized

²¹ See Watkins, J., "Forecasting *Annual Energy Outlook* Coal Transportation Rates," Issues in Midterm Analysis and Forecasting - 1997, Energy Information Administration.

²² Historic productivity factor information is publicly available from EIA.

²³ See Attachment No. 4, Page 1, lines 1 and 2.

a k-parameter of negative three (-3), indicating a slowing of expected future productivity to 1.11 percent.²⁴ For its 2004 AEO, the EIA used its updated historic productivity factor of 2.08 percent and an updated standard error of 0.33 percent, but also reverted to a k-parameter of negative two (-2). This provides a forecasted rate of future coal transportation productivity of 1.42 percent per year.²⁵

Using these EIA forecasts of expected coal transportation productivity, a rail cost adjustment factor ("RCAF") adjusted specifically for future coal transportation productivity can be developed. Columns (2), (3) and (4) of Attachment No. 4, Pages 2 and 3, show the historic and DRI-WEFA's forecast of the RCAF-U, the STB's PAF, and RCAF-A, respectively. The RCAF-A is developed by dividing the RCAF-U (Column (2)) by the PAF (Column (3)). A RCAF adjusted for the EIA's expectations of future coal transportation productivity ("EIA RCAF-A") can be created by substituting the PAF for a productivity adjustment factor incorporating EIA expectations of future coal transportation productivity ("EIA PAF"). Column (5) shows the fourth root of the EIA's annual forecasted change in coal transportation productivity developed on Page 1 of Attachment No. 4. Column (6) converts the quarterly forecasted change in Column (5) into an EIA PAF. Each quarter's EIA PAF is then applied to historic or DRI-WEFA forecasted RCAF-U values to develop the EIA RCAF-A shown in Column (7).

Attachment No. 5 contains a graph that compares the cumulative change in the EIA RCAF-A to the cumulative changes in the DRI-WEFA forecasts of the RCAF-A and RCAF-U, and the

²⁴ Id. at line 3.

²⁵ Id. at lines 4 to 20.

cumulative change in the WCC's average rate per ton over the DCF period, based on Xcel's Rebuttal evidence.

III. "If the Board should find that the total revenues generated by the traffic group exceed the total revenue requirements of the stand-alone railroad, how the Board should compute the maximum reasonable rate for the Xcel traffic at issue in this case."

A. The Percent Reduction Method and the STB's Discretion to Afford Relief and Promote Proper Pricing

The Guidelines reflect the broad discretion given to the Board by Congress to set the appropriate level of rail transportation rates in particular circumstances. Specifically, the Guidelines state:

If we determine that a rate has been set at an unreasonably high level, we will take whatever action is appropriate, based on the nature and extent of the violation shown, to afford relief to the complaining shipper and to promote proper pricing by the carrier. In considering rate prescription and/or reparations, we will attempt to provide an effective remedy for the complaining shipper, but in a manner that would not introduce further distortions into the carrier's pricing structure.²⁶

This passage clearly contemplates that the Guidelines anticipated railroads would establish common carrier rates within an existing pricing structure that reflected relative demand elasticities, and that the Board has the expertise and broad discretion to determine whether a challenged rate is outside the defendant's pricing structure and fashion the appropriate relief under the circumstances.

Beginning with the Coal Trading in 1990, the ICC and the Board have preferred the percent reduction method²⁷ to prescribe maximum reasonable rates when the SAC analysis results in the

²⁶ Guidelines at 548 (emphasis added).

²⁷ This method determines the percentage difference between total stand-alone revenue and total SAC in each quarter or year of the DCF period, and applies that percentage reduction to the rates of all shippers in the stand-alone group.

revenues of the SARR exceeding its costs. The principle behind the percent reduction method is that it preserves the differential pricing of the pre-reduction rate structure, thereby reflecting the demand elasticities of the traffic group.²⁸ However, the Board has recognized in recent cases that the percent reduction method can be manipulated by the defendant railroad “by setting a challenged rate at an artificially high level to limit the impact of a SARR over-recovery . . .”²⁹ In this case, Xcel has demonstrated that the rates BNSF established for coal transportation from the PRB to Xcel’s Pawnee Station are almost twice the average rate for the WCC’s captive customers on a mills/ton mile basis in 2001. Xcel has also demonstrated that the rate structure for WCC issue and non-issue captive coal traffic is clearly not in line with market demand elasticities and Ramsey pricing principles.³⁰ Moreover, BNSF has tried to justify even higher prescribed rate levels by aggressively seeking to change established SAC rules and by grossly inflating the operating costs and road property investment of the SARR. BNSF clearly established the rates at extraordinarily high levels in order to ensure that application of the SAC principles in effect at the commencement of this case would produce, at a minimum, very profitable rates for BNSF if the Board used only the percent reduction method to set prescribed rate levels for the Pawnee Station traffic.

Under the circumstances of this case, straight application of the percent reduction method would result in a windfall to BNSF and a prescribed rate that is clearly a distortion of BNSF’s pricing structure. Accordingly, the Board should only utilize the percent reduction method to establish the maximum reasonable rates for the Pawnee movement if it also exercises its discretion to fashion an

²⁸ Coal Trading at 380.

²⁹ CP&L at 32.

³⁰ Xcel Reply Narrative at II-A-145 to 146.

appropriate remedy that results in rates that are lower than the rates produced by the straight application of the percent reduction method.

B. The “Rate Mark-up” Alternative to the Percent Reduction Method

A prerequisite to correcting instances where a defendant railroad attempts to manipulate the percent reduction method is a finding by the Board that such manipulation has occurred. Xcel believes that such “gaming” by BNSF is present in this case. However, Xcel offers for the Board’s consideration a method for computing the maximum reasonable rate in this case which does not require the Board to first determine that “gaming” is present. Specifically, the Guidelines state that “the comparative revenue contributions of the shippers in the traffic group should be based on Ramsey pricing principles.”³¹ Ramsey pricing sets prices differentially across markets which allows additional revenue recovery while minimizing inefficient pricing above marginal cost, i.e., the ratio of the rate to marginal cost (mark-up) is inversely related to demand elasticity. This results in fixed cost being recovered by all users of the market, with less demand elastic traffic absorbing a greater share of the fixed costs. Therefore, when stand-alone revenues exceed stand-alone costs, the traffic that was responsible for making the largest contribution receives the greatest rate relief.

Ramsey pricing principles support a methodology that maintains rate mark-up ratios across the issue market. Following this approach, rates are reduced based on the rate to marginal cost relationships of the traffic in the issue market e.g., movements that are highly inelastic will receive the largest change. This “rate mark-up” approach is more precise than the percent reduction method.

³¹ Guidelines at 546.

The rate mark-up approach can be applied by the Board using data included in the record in this proceeding, plus the Board's publically available URCS Phase III costing program. The URCS Phase III costing program provides an accepted, uniform costing methodology for all the traffic in the issue market. Once calculated, the resulting costs are compared to the movement rate levels and the mark-up ratios are developed. The mark-up ratios, which reflect demand elasticities, are then used to allocate the excess between stand-alone revenues and stand-alone costs to the stand-alone traffic group. Under this method, because shippers with the highest mark-ups receive the largest relief, defendant railroads derive no benefit from establishing extraordinarily high common carrier rates that are not reflective of the demand elasticities of their customers and which are not reflective of their existing pricing structure.

The specific steps associated with implementing the rate mark-up approach are summarized below. Each of these steps would be applied to each movement in the stand-alone traffic group in each quarter of each year at issue in the proceeding:

<u>Step</u>	<u>Description</u>
1.	Identify the universe of the stand-alone movements, ³² i.e., each origin to destination move and each origin to interchange move;
2.	For each Step 1 movement, identify the stand-alone railroad's rate per ton; ³³

³² Xcel Rebuttal electronic file "WCC Traffic_XcelRebuttal.xls".

³³ Id.

3. For each Step 1 movement, identify the traffic and operating factors³⁴ e.g. SARR miles, cars per train, tons per car, car owner, for use in URCS Phase III costing program;
4. Calculate the marginal cost for each movement using the URCS Phase III costing program based on BNSF annual inputs for each Step 1 movement in each quarter in the study time period;
5. For each Step 1 movement, develop the mark-up ratio, i.e., stand-alone rate (Step 2) divided by marginal cost (Step 4);
6. Rank the universe of movements from highest to lowest based on the mark-up ratios (Step 5);
7. Beginning with the movement with the highest mark-up ratio, calculate the rate that would result if the next highest mark-up ratio were used. The difference in these two rates is then multiplied by the tons that moved under that rate resulting in aggregate revenues. These aggregate revenues are subtracted from the total overpayment (SAC revenues minus SAC costs) and the process continues until the total overpayment is exhausted; and
8. Once the total overpayment is accounted for, the maximum reasonable rate for the issue traffic can readily be identified from the final Step 7 calculations i.e., the maximum rate equals the rates for each movement to Xcel's Pawnee Station in the final Step 7 calculations.

IV. Conclusion

In summary, the Board has the record evidence, tools, and expertise to resolve the parties' differences in this case over the operating plan and traffic group that should be used by the Board to complete its SAC analysis. Xcel has also provided two alternatives to using the RCAF-U and RCAF-A to adjust the WCC's operating expenses over the DCF period, although Xcel maintains that there is sufficient justification on the record in this case to use the RCAF-A for this purpose. Finally,

³⁴ Source: Xcel Rebuttal electronic files "WCC Traffic_XcelRebuttal.xls," and "PEAKTRAINSREB.123".

Xcel has supplied the Board with alternatives to a straight application of the percent reduction method to establish the maximum reasonable rates for the transportation at issue, one of which is an alternative to the percent reduction method that would resolve the practical flaw in the percent reduction method that the Board has identified in recent cases.

Respectfully submitted,



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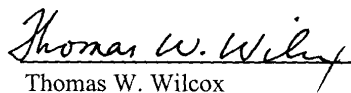
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April 5, 2004

CERTIFICATE OF SERVICE

I hereby certify that on this 5th day of April, 2004, I served a copy of the Complainant's Post-Argument Brief by hand delivery to counsel for Defendant at the following address:

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