

BEFORE THE
SURFACE TRANSPORTATION BOARD

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TONGUE RIVER RAILROAD COMPANY, INC. – RAIL CONSTRUCTION
AND OPERATION – IN CUSTER, POWDER RIVER
AND ROSEBUD COUNTIES, MT

TONGUE RIVER RAILROAD COMPANY, INC.'S REPLY TO
NORTHERN PLAINS RESOURCE COUNCIL AND ROCKER SIX CATTLE CO.'S
SURREPLY

Betty Jo Christian
David H. Coburn
Linda S. Stein
STEPTOE & JOHNSON LLP
1330 Connecticut Avenue, NW
Washington, DC 20036
(202) 429-3000

Attorneys for Applicant
Tongue River Railroad Company, Inc.

Dated: August 9, 2013

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SURREPLY**

On July 2, 2013, Northern Plains Resource Council Inc. and Clint and Wally McRae, dba Rocker Six Cattle Company, Inc. (jointly, “NPRC”) filed a surreply to Tongue River Railroad Company, Inc.’s (“TRRC”) June 7, 2013 Reply Comments (“Reply”) in support of TRRC’s December 17, 2012 Supplemental Application (“Application”) to construct a rail line in Montana to be operated by one of TRRC’s owners, BNSF Railway Company (“BNSF”). The Surreply was supported by a new verified statement from NPRC’s expert Thomas Michael Power (hereafter “Power Surreply VS”). NPRC previously submitted a November 2012 report prepared by Mr. Power in support of its April 2013 comments.

NPRC’s Surreply is just another in a series of unauthorized, strident filings by NPRC in opposition to TRRC’s rail construction project. Several of the arguments made in NPRC’s Surreply were new arguments that could have been made in NPRC’s comments filed on April 2, 2013. Other arguments merely repeat claims made in NPRC’s April 2 Comments. As shown below, NPRC has not presented any arguments or evidence in its Surreply that rebut TRRC’s

showing that its Application meets the Section 10901 public convenience and necessity standard and, as a result, should be authorized.

Below, TRRC will show that contrary to NPRC's claims, TRRC's June 7 Reply was not a "supplemental" application. In that Reply, TRRC properly responded to the arguments raised by NPRC and others in their in comments on the TRRC Application. Moreover, that Application is not incomplete, as NPRC claims, but rather provides ample information to meet the requirements of the Board's regulations and to demonstrate that the TRRC proposal satisfies the public convenience and necessity standard. TRRC will also demonstrate below that the discovery NPRC seeks is not warranted and that the latest analysis of the coal market presented by NPRC and its expert is flawed.

I. Contrary to NPRC's Claims, TRRC's Application Is Not Incomplete

Relying on some new arguments that could have been made in its initial comments, NPRC erroneously argues in its Surreply that TRRC's Application is incomplete. NPRC's principal argument is that the projected net income statement in TRRC's Application is purportedly incomplete because it is not "based on traffic projections" and thus does not meet the requirements of the Board's regulations at 49 CFR section 1150.6(d). *See* NPRC Surreply at 4-6. As explained in the separately filed TRRC Reply to NPRC's Motion for Leave to File Surreply, NPRC's argument is untimely as it could have been raised in NPRC's April 2 Comments but was not.¹ TRRC's projected net income statement has remained the same since TRRC's Application was filed on December 17, 2012, and since the Board accepted TRRC's Application by decision served January 8, 2013.

¹ *See* Tongue River Railroad Company's Reply to Northern Plains Resource Council and Rocker Six Cattle Co.'s Motion for Leave to File a Surreply at 2-3 (hereafter "TRRC Reply to Motion for Leave").

NPRC's argument is also without substantive merit. The projected net income statement included as Exhibit G in TRRC's Application reflects the net income that TRRC estimates it will obtain in the first two years following the construction of the rail line. As shown in Exhibit G to the Application, TRRC's income is expected to consist of payments that it will receive from the proposed operator of the TRRC rail line, BNSF, and is not dependent on the amount of traffic moving over the rail line. As explained in the notes to Exhibit G, that income is expected to be sufficient to cover the \$416 million investment necessary to construct the TRRC rail line.² Since TRRC's expected net income following construction will not depend upon the amount of traffic projected to move over the rail line, the projected net income statement provided with TRRC's Application was necessarily not based on traffic projections.

The three cases cited by NPRC in support of its argument are not on point. In at least two of those cases,³ unlike here, the applicant(s) do not appear to have provided *any* projected net income statement to the agency. In the third case cited, it is unclear whether the applicant

² See Exhibit G, notes 3, 4. NPRC also complains that TRRC does not explain the \$20 million reduction in revenue between its October 2012 Application (projected \$80 million in annual revenue) and its December 2012 Application (projected \$60 million in annual revenue). See NPRC Surreply at 6. That difference resulted from the reduction in the estimated construction costs from \$490 million in the October 2012 Application to \$416 million in the December 2012 Application. The reduced construction costs flow from TRRC's decision to change its preferred alignment from the Miles City alignment (October 2012 Application) to the shorter Colstrip alignment (December 2012 Application). When the construction costs declined from \$490 million to \$416 million, the income TRRC needed to cover the investment necessary to construct the TRRC rail line dropped from \$80 million to \$60 million.

³ See *Ozark Mountain Railroad—Construction Exemption*, Finance Docket 32204, 1994 WL 698676 at *4 (ICC served Dec. 15, 1994); *James Riffin & Eric Strohmeyer—Acquisition & Op. Exemption—In Rio Grande & Mineral Counties, Colo.*, Finance Docket 35705, 2013 WL 160335 at *2 (STB served Jan. 11, 2013).

provided any projected net income statement to the Interstate Commerce Commission (“ICC”), and that case was not decided under the current statute or regulations.⁴

Nevertheless, to eliminate any doubt that the TRRC proposal is supported by an adequate financial projection, TRRC is including with this response another projected net income statement that estimates the amount of net income that BNSF, the proposed operator of the TRRC rail line, is expected to receive in the first two years of operation following construction. *See* Rebuttal Exhibit G (BNSF) attached hereto.⁵ Unlike TRRC’s net income as the party constructing the line, BNSF’s net income as the operator of the line will depend on the volume of coal traffic that is projected to be transported over the rail line and, therefore, is based on traffic projections. Specifically, consistent with Mr. Rowlands’ expectations that the Otter Creek mine will produce 12 million tons of coal in the first year of production and 16 million tons in the second year of production,⁶ the projected net income statement for BNSF assumes traffic volumes of 12 million tons in year one of operation and 16 million tons in year 2 following construction.⁷ The accompanying rebuttal verified statement of Scott Long (hereafter “Long VS”) explains the assumptions and methodology used to generate the BNSF projected net

⁴ *See New Mexico Navajo Ranchers Association v. ICC*, 702 F.2d 227 (D.C. 1983).

⁵ This Exhibit does not supersede the Exhibit G submitted with the December 17 Application. As explained in the separately filed TRRC Reply to Motion for Leave at 3-4, it is permissible for an applicant to supplement the record with additional evidence to rebut the evidence provided by opponents.

⁶ *See* Verified Statement of William M. Rowlands, President of Otter Creek Coal LLC at 3 (dated Dec. 13, 2012) (hereafter “Rowlands VS”) which is included with TRRC’s Application.

⁷ NPRC erroneously claims that TRRC’s Application “lacks a traffic projection.” *See* NPRC Surreply at 5. To the contrary, Mr. Rowlands provided a projection of the amount of traffic that is expected to move annually over the TRRC rail line. *See* Rowlands VS at 3. In essence, NPRC’s allegation is nothing more than another attempt to argue that there is no public demand for the Otter Creek coal. However, TRRC’s Application and other filings demonstrate otherwise.

income statement. Since some of the information used to generate the projected net income statement is confidential, proprietary BNSF information, the Exhibit has been designated Highly Confidential pursuant to a motion for protective order being filed simultaneously with this Reply. The attached Rebuttal Exhibit G (BNSF) shows that BNSF is expected to generate positive net income based upon the volumes of Otter Creek coal that are projected to be transported eastbound and westbound over the TRRC rail line and BNSF's own lines during the first two years following construction.⁸

NPRC also argues that TRRC's Application is incomplete because there is no evidence of commitments by TRRC's owners to finance the construction of the rail line or of BNSF's commitment to be the operator of the rail line. *See* NPRC Surreply at 8-9. Again this is an untimely argument that NPRC could have raised it in its opening comments; NPRC cites to supposedly equivocal statements made in TRRC's December 17 Application as the basis for its argument.

Moreover, NPRC's argument is again wrong. Mr. Stevan Bobb, the President of TRRC and Executive Vice President and Chief Marketing Officer for BNSF, affirmed in his verified statement included with TRRC's Application that "TRRC will finance the construction of the line through equity contributions by some or all of the members of its parent company, Tongue River Holding Company, LLC, or through long-term debt guaranteed by some or all of those members, or through some combination thereof."⁹ Mr. Bobb also confirmed that BNSF will be

⁸ Public versions of the Rebuttal Exhibit G and Exhibit 1 to the Long VS, from which confidential information has been redacted, are being served with this submission.

⁹ Verified Statement of Stevan B. Bobb at 8 (dated December 14, 2012) (hereafter "Bobb VS").

the operator of the TRRC rail line.¹⁰ NPRC offers no reason to believe that TRRC's owners would engage in a charade of seeking permission to build a rail line to serve a mine that one of those owners is simultaneously seeking permission to develop only to then abandon the project. Its claims defy logic.

Next, NPRC erroneously argues that TRRC has overstated the Board's presumption favoring approval of rail construction applications. NPRC Surreply at 9. NPRC's arguments on this issue amount to nothing more than straw-man arguments that rebut positions that TRRC has not taken. Specifically, NPRC claims that TRRC has assumed that the presumption favoring approval of applications is "so strong as to eliminate the applicant's burden of production." *Id.* at 9. TRRC has made no such assumption. To the contrary, TRRC's Application included supporting evidence, and TRRC's June 2013 Reply responded in detail to NPRC's allegations and those of other opponents, demonstrating that they have failed to overcome the presumption favoring grant of the Application. *See* TRRC June 2013 Reply at 11-28. Thus, as explained in TRRC's June 2013 Reply at 9, NPRC's reliance on *Dakota, Minnesota and Eastern Railroad Corporation—Construction into the Powder River Basin*, Finance Docket No. 33407, 1998 WL 398189 (STB served July 16, 1998) ("*DME I*"), is misplaced because TRRC's evidence in this proceeding goes well beyond the "general statements of support" that the Board criticized in *DME I*. *See id.* at *3.

¹⁰ Bobb VS at 8 ("our projections show that, based on payments made to it by the operator (BNSF) . . ."). NPRC also incorrectly claims that "TRRC essentially asks the Board to ignore the financial fitness test in this proceeding . . ." *See* NPRC Surreply at 6-7. To the contrary, in its reply to NPRC's comments, TRRC explained that it had provided financial information showing that it is financially fit and addressed every argument presented by NPRC that attempted to undercut TRRC's financial fitness showing. *See* Tongue River Railroad Company's Reply Comments in Support of Its Supplemental Application for Construction and Operation Authority at 23-28 (dated June 7, 2013) (hereafter "TRRC June 2013 Reply").

NPRC also erroneously states that “TRRC improperly assumes the presumption for public interest also means there is a presumption of public demand or need.” NPRC Surreply at 10. This is also a straw-man argument. TRRC has not assumed that the Board presumes public demand or need for a rail construction project. Instead, TRRC has submitted evidence in its Application and Reply that show beyond any doubt that there is a strong and demonstrated public need for the TRRC rail line. *See* Application at 6-7, 17-22; TRRC June 2013 Reply at 11-23.

NPRC also claims that the Board must require a complete record here because TRRC could take property under eminent domain laws “even if it never actually operates the railroad.” NPRC Surreply at 1. While negotiation with landowners for property rights is always favored, in the absence of a successful negotiation the possibility of the use of eminent domain under state law to take an easement that may be needed for a new rail right-of-way is present here, as it is in every rail construction proceeding. That fact, however, is not a license for NPRC to make unsupported claims (such as that TRRC would build a railroad but never use it) in one pleading after another. The record on the merits side of this proceeding is more than sufficient to allow for a decision once the environmental impact statement process comes to an end.

II. NPRC’s Supplemental Argument in Support of Discovery is Without Merit

On June 5, 2013, months after the procedural schedule in this proceeding was announced, NPRC filed a Petition seeking amendment to the procedural schedule to allow for a six month discovery period. That June 5 Petition was focused on the proposition that NPRC should be allowed to seek discovery from TRRC’s rebuttal expert witness, Seth Schwartz, whose then-forthcoming testimony rebutted NPRC’s contention that there is no market for the coal that the

TRRC line would transport.¹¹ As articulated in TRRC's June 25, 2013 Reply to the NPRC procedural schedule petition, NPRC's Petition should be denied because NPRC, which submitted a long and detailed set of Comments on April 2 in response to TRRC's December 17, 2012 Application, obviously needed no discovery to prepare that response and, further, had ample opportunity to timely seek discovery on the TRRC Application before it filed those April 2 Comments. Its pending request for an extended procedural schedule so that it can pursue discovery from TRRC's coal marketing expert is simply another delaying tactic.¹²

Now, in its unauthorized Surreply, NPRC purports to seek even broader discovery than was described in its June 5 Petition. NPRC Surreply at 13-14. Tellingly, all of the potential topics for discovery it identifies in its Surreply relate to the December 17 Application – *i.e.*, issues pertaining to the financing of the project; BNSF's commitment to the TRRC line; and Arch's coal use projections. NPRC offers no reason why it failed to seek discovery on these issues in the months between the filing of the TRRC Application and the submission of its April 2 Comments. Plainly, there is no good reason. Nor is it appropriate for NPRC to broaden the scope of its pending Petition at this stage.

The STB should not allow NPRC seriatim bites at the apple. NPRC was too late in seeking discovery when it filed its June 5 Petition. It is certainly too late now for it to supplement that Petition by seeking to open the discovery door even wider. Discovery is not normally conducted at all in construction application proceedings. Here, NPRC has failed to

¹¹ Thus, NPRC argued in its June 5 Petition that, "TRR's new expert reports will create contested issues of fact that lie at the heart of the dispute over whether the construction of this railroad is truly in the public interest. Discovery constitutes the most appropriate means to test the credibility of TRR's experts." NPRC June 5, 2013 Petition at 5.

¹² TRRC also demonstrated that the testimony of TRRC's expert on which the June 5 Petition was largely predicated on public data, and that discovery therefore would not yield any additional evidence. TRRC June 25, 2013 Reply to NPRC Petition at 2-3.

show that the discovery it seeks will lead to admissible evidence, that further prolongation of these proceedings is warranted, or that it should be entitled to yet another filing (as it will no doubt seek) were discovery allowed. At some point, filings in the merits phase of this proceeding must come to an end.

III. NPRC Mischaracterizes TRRC's Evidence Regarding the Demand for Otter Creek Coal

Often misstating the evidence presented by TRRC's expert, Seth Schwartz, NPRC continues to assert that there is no domestic or export market for Otter Creek coal. NPRC's arguments are baseless. They are also contradicted by recent opinions expressed by its expert, Thomas Power, in other proceedings.

A. NPRC's Claims Regarding the Domestic Market for Otter Creek Coal are Baseless

NPRC asserts that Mr. Schwartz improperly conflated the market for Otter Creek coal with the combined market for Montana and Wyoming coal in an effort to show that there is a domestic market for Otter Creek coal. *See* NPRC Surreply at 14. NPRC's claims are not well-founded. Mr. Schwartz showed in his statement accompanying TRRC's June 2013 Reply (hereafter "Initial Schwartz Statement") that the potential market for Montana PRB coal is about 118 million tons per year, almost six times the size of the projected annual Otter Creek production at full capacity.¹³ Mr. Schwartz's estimate of the size of the Montana PRB market was reasonable; it is comprised of plants that currently or historically have used Montana PRB coal and other plants that have cyclone boilers that prefer high-sodium coal, like Otter Creek

¹³ Initial Schwartz Statement at 16-17.

coal. *Id.* Mr. Schwartz also showed that Montana PRB coal is becoming more competitive with Wyoming PRB coal as the costs of Wyoming PRB coal have risen due to reserve depletion.¹⁴

NPRC's efforts to undercut Mr. Schwartz's showing that a domestic market for Montana PRB coal exists now even though the coal was not developed in 1986 when a Tongue River rail line was first approved by the ICC are similarly without merit. *See* NPRC Surreply at 15. Mr. Schwartz showed that the overall market for PRB coal is much larger now (450 million tons per year) than it was in 1986 (151 million tons).¹⁵ Mr. Schwartz further shows in a rebuttal statement attached here that the market is expected to expand to 540.7 million tons by 2030.¹⁶ Mr. Schwartz also showed in his initial statement that Otter Creek coal is much more competitive with Wyoming PRB coal today than it was in 1986 because Wyoming PRB coal costs have risen due to higher stripping ratios resulting from the depletion of Wyoming coal reserves and, as a result, Montana PRB coal is more likely to be developed today than it was in 1986.¹⁷ In recent testimony presented in another proceeding before a state public service commission, NPRC's witness Power acknowledged that Wyoming PRB coal prices are expected to increase due to rising costs, including reserve depletion.¹⁸ NPRC's claim at page 15 of its Surreply that the higher stripping ratios for Wyoming PRB coal will not justify the development of the new Otter

¹⁴ Initial Schwartz Statement at 33-41.

¹⁵ Initial Schwartz Statement at 34. In claiming that projected demand for Otter Creek coal is much lower today than it was in the mid-1980s, NPRC's expert, Mr. Power, improperly relies on the projected percentage change in annual growth rather than the actual size of the market in tons. *See* attached Rebuttal Verified Statement of Seth Schwartz at 2 (dated August 9, 2013) (hereafter "Rebuttal Schwartz Statement").

¹⁶ Rebuttal Schwartz Statement at 6.

¹⁷ Initial Schwartz Statement at 33-41; *see also* Rebuttal Schwartz Statement at 3-4; 11-18.

¹⁸ Rebuttal Schwartz Statement at 16 (quoting from Testimony of Thomas Power Ph.D., on behalf of the Sierra Club and Coosa River Basin Initiative, before the Georgia Public Service Commission, Docket Number 36498 (dated May 10, 2013)).

Creek mine derives from its erroneous assertion (addressed below) that there is no domestic market for Otter Creek coal due to its high sodium content and geographic location.

NPRC also claims that “several” exhibits presented by Mr. Schwartz “directly contradict or undermine” Mr. Schwartz’s opinions, but NPRC only cites to one in which the author states “the only way for PRB producers to sell more tons, or even to sustain current tonnages is to expand into other markets . . .” *See* NPRC Surreply at 15-16.¹⁹ This author’s statement is not only inconsistent with the United States Energy Information Administration’s (“EIA”) forecast of rising demand for PRB coal (*see* Initial Schwartz Statement at 7), it is inconsistent with a recent statement by NPRC’s expert, Mr. Power. In a May 2013 report, Mr. Power wrote that “If new ports are not built, PRB coal will likely continue to be limited to serving *existing U.S. markets* which, while projected by EIA to be relatively flat in the aggregate, *are likely to support significant additional PRB production.*”²⁰

Finally, relying on a new verified statement from Mr. Power, NPRC claims that Mr. Schwartz’s opinion regarding the marketability of high-sodium Otter Creek coal was flawed.²¹ NPRC’s claim is not well-taken. Mr. Schwartz recognized that the high-sodium content of Otter Creek coal limits to some extent its marketability. He consequently identified the domestic

¹⁹ NPRC later claims this same exhibit “casts serious doubts” on Mr. Schwartz’s opinion that there is an export market for Otter Creek coal. *See* NPRC Surreply at 21. The opinion expressed in the exhibit is inconsistent with the opinion of NPRC’s own expert, Mr. Power, who, as shown below, recently recognized that PRB coal may be exported to Asia through Canadian ports.

²⁰ *See* Thomas Michael and Donovan S. Power, “The Impact of Powder River Basin Coal Exports on Global Greenhouse Gas Emissions” at 22 (May 2013) (emphasis added) (hereafter “May 2013 Power Report”) at http://www.powereconconsulting.com/WP/assets/GHG-Impact-PRB-Coal-Export-Power-Consulting-May-2013_Final.pdf.

²¹ *See* NPRC Surreply at 16; Power Surreply VS at 13-17.

market for Otter Creek coal as being limited to plants that have used Montana PRB coal or potentially could use such coal based upon the type of boiler at the plant.²² Thus, Mr. Schwartz properly took the sodium content of Otter Creek coal into account in analyzing the domestic market for the coal. NPRC's new claim at page 16 of its Surreply that a group at the University of Montana is studying how to reduce the sodium content of Montana coal is beside the point. The domestic market that Mr. Schwartz has identified for Otter Creek coal contains only plants that currently can use high sodium coal, like Otter Creek coal. If the University of Montana organization is able to develop a process for reducing the sodium content of coal, it will only expand the market for Otter Creek coal beyond that identified by Mr. Schwartz.²³

B. NPRC's Claims Regarding the Export Market for Otter Creek Coal are Baseless

NPRC's attacks on Schwartz's opinions regarding exportability of Otter Creek coal are also without merit. Notably relying on public documents rather than the testimony of its own expert, NPRC argues that: (1) Mr. Schwartz fails to identify a viable Pacific Northwest export route for Otter Creek coal because the Canadian ports identified by Mr. Schwartz purportedly will not have the capacity to ship Otter Creek coal; and (2) Otter Creek coal is not marketable in Europe. *See* NPRC Surreply at 16-21.

²² Initial Schwartz Statement at 16-17; Rebuttal Schwartz Statement at 8-9.

²³ Mr. Power also claims that Mr. Schwartz has failed to take adequate account of the geographic disadvantage Montana PRB coal faces in the domestic coal market. *See* Power Surreply VS at 18-23. Addressing each of Mr. Power's arguments, Mr. Schwartz shows that they are without merit. *See* Rebuttal Schwartz Statement at 9-11; 17-18. For example, Mr. Schwartz shows that Montana PRB coal can and does compete successfully in domestic markets where it has a transportation disadvantage compared to Wyoming PRB coal. *Id.* at 9-11. In response to Mr. Power's criticism that Mr. Schwartz failed to consider that Otter Creek coal would have to compete with *new* Wyoming mines (in addition to existing Wyoming PRB mines) and those new mines will not have high strip ratios, Mr. Schwartz points out that there are no proposed new Federal coal leases to support a new Wyoming PRB mine. *Id.* at 17-18.

Mr. Schwartz shows that NPRC's claim that the Canadian ports will not have the capacity to ship Otter Creek coal is not correct.²⁴ Mr. Schwartz has prepared an exhibit showing Canadian port capacity, by Canadian terminal, in 2012 and its expected future capacity growth.²⁵ Mr. Schwartz shows that these Canadian ports plan to expand their capacity so they will be able to ship an additional 19 million tonnes by 2017, and that Otter Creek coal would be competitive to ship through these Canadian export terminals. *Id.* at 18-26.

Indeed, statements made by Mr. Power, NPRC's expert on the domestic market for Otter Creek coal, in a recent report are inconsistent with NPRC's claims that the Canadian ports are unlikely to have capacity for Otter Creek coal. In a May 2013 report, Mr. Power recognizes that PRB coal could be exported to Asia through the expanded Canadian ports of Westshore Terminals and Port Ridley, two of the Canadian ports that Mr. Schwartz identified for Otter Creek coal exports. Specifically, Mr. Power stated in the report:

A major additional expansion of PRB coal sales beyond US domestic markets through exports to Asia largely hinges on the ability of the U.S. to ship PRB coal out of new or expanded ports on the west coast of North America. The proposed coal shipping ports of Longview and Cherry Point together represent some 130 million tons of additional coal shipping capacity. *The Westshore Terminals in Vancouver, BC, plans to expand its export capacity from 24 to 33 million tons and the Port Ridley in northern British Columbia plans an expansion of from 12 to 24 million tons. . . .* Considering only those facilities that have developed detailed plans, the combined new export capacity on the west coast of North America has the potential to exceed 150 million tons of coal per year in the near future. In the analysis below we have assumed

²⁴ Rebuttal Schwartz Statement at 18-26.

²⁵ Rebuttal Schwartz Statement at 20.

that 140 million tons per year of PRB coal will be exported from west coast ports to Asia by 2025.²⁶

In short, NPRC's own expert contradicts NPRC's argument about coal export opportunities. In addition, NPRC presents in its Surreply a new basis for its unsupported claim that Europe will not be a market for Otter Creek coal. Specifically, NPRC claims Europe will not be a market because in first quarter 2013 Arch was not shipping contracted thermal coal volumes through MERC terminal to Europe. *See* NPRC Surreply at 20-21. TRRC has identified Europe as a secondary market for only a portion of Otter Creek coal. *See* TRRC June 2013 Reply at 22. In any event, Arch's first quarter 2013 experience does not prove that Europe will not be a secondary market for this coal several years from now when Otter Creek coal begins to be available. Nor does it negate the fact that Europe has been a market for some Montana coal in the recent past.²⁷ Moreover, NPRC could have raised its argument in its April 2 Comments.

IV. TRRC Did Not Misstate NPRC's Position Regarding the Need for an EIS

NPRC wrongly claims that TRRC mischaracterized its arguments by asserting that NPRC "does not want an Environmental Impact Statement conducted." *See* NPRC Surreply at 22. To the contrary, TRRC correctly described NPRC's argument. Quoting from NPRC's own Comments, TRRC explained that NPRC argued that the Board may and should "deny an application before completing its environmental review when existing evidence sufficiently

²⁶ May 2013 Power Report at 22 (emphasis added) at http://www.powereconconsulting.com/WP/assets/GHG-Impact-PRB-Coal-Export-Power-Consulting-May-2013_Final.pdf.

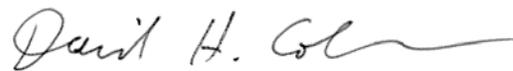
²⁷ TRRC June 2013 Reply at 22; Initial Schwartz Statement at 26.

demonstrates that the project is not in the public interest.”²⁸ TRRC explained that such a position is inconsistent with the governing law.²⁹

CONCLUSION

For the above reasons, and those set forth in TRRC’s prior submissions, the Board should grant TRRC’s Application.

Respectfully submitted,



Betty Jo Christian
David H. Coburn
Linda S. Stein
STEPTOE & JOHNSON LLP
1330 Connecticut Avenue, NW
Washington, DC 20036
(202) 429-3000

Attorneys for Applicant
Tongue River Railroad Company, Inc.

August 9, 2013

²⁸ TRRC June 2013 Reply at 29 (quoting NPRC April 2, 2013 Comments at 44).

²⁹ TRRC June 2013 Reply at 29.

REBUTTAL LONG VERIFIED STATEMENT

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

Finance Docket No. 30186

**TONGUE RIVER RAILROAD COMPANY, INC. – RAIL CONSTRUCTION
AND OPERATION – IN CUSTER, POWDER RIVER AND
ROSEBUD COUNTIES, MT**

**REBUTTAL VERIFIED STATEMENT OF
SCOTT T. LONG**

My name is Scott T. Long. Since 2009, I have held the position of Senior Manager Regulatory Cost for BNSF Railway Company (“BNSF”). Much of my work in this position involves financial analyses that utilize the Surface Transportation Board’s Uniform Railroad Costing System (URCS). I joined BNSF in 1992 and have been employed continuously by the railroad since that date. I received a Master of Business Administration degree from the University of Georgia in 1992.

I prepared a projected net income statement that estimates the amount of income that BNSF, the proposed operator of the Tongue River Railroad Company, Inc. (“TRRC”) rail line, is expected to receive in the first two years following the construction of the TRRC rail line based on the projections of the level of traffic that will be moving over the TRRC rail line. *See* attached Rebuttal Exhibit G (BNSF). The projections shown on Rebuttal Exhibit G (BNSF) show a positive net income from the TRRC line when judged based on (a) movements of coal traffic over only that line and (b) traffic moving on the TRRC line and BNSF destined to points served by BNSF, both east and west of the TRRC line. My understanding is that all or the vast

majority of the TRRC traffic is expected to be transported beyond the geographic area served by TRRC via rail lines over which BNSF provides service. The projected net income statement for BNSF was derived based upon the following assumptions:

1. BNSF will be marketing the transportation of the coal moving over the TRRC rail line and will receive 100% of the revenues paid by the shippers for coal transported over that line.

2. There will be 12 million tons of coal transported over the TRRC rail line in the first year following construction and 16 million tons of coal transported over the rail line in the second year following construction. This assumption is based upon the volume expectations provided by William M. Rowlands, President of Otter Creek Coal LLC in a verified statement dated December 13, 2012 that was included with TRRC's December 17, 2012 Application.

3. The TRRC line will be built along the Colstrip Alignment and will connect with the BNSF Colstrip Subdivision. However, were the line built along one of the other alternative alignments under consideration by the STB, the resulting BNSF projected net income statement will still project positive net income for BNSF in the first two years following construction.

4. Since TRRC has explained that it is unable at this time to predict what percentage of its coal traffic will head west versus east, the projected income statement set forth in the Rebuttal Exhibit G (BNSF) assumes that fifty percent of the coal will move west to Roberts Bank, British Columbia, and fifty percent of the coal will move east to Superior, Wisconsin. Roberts Bank was used as a proxy for coal movements to the west because it is a major destination for export coal and Superior, Wisconsin, was used as a proxy for coal movements to the east because several utilities that might use coal transported by the TRRC line can be accessed from that area.

5. I believe that if the actual percentage of coal moving west versus east differs from the 50% west/50% east assumption used to calculate the attached BNSF projected income statement,

the resulting BNSF projected income statement would still show positive net income because I have modeled the income statement using a 100% west assumption and a 100% east assumption and in both cases the resulting BNSF projected net income was positive. Thus, in my judgment the financial projections would still show positive net income for BNSF in the first two years following construction if a greater percentage of the coal were to move west than east, or vice versa. Similarly, I believe that if the coal is moved to other destinations in the Pacific Northwest or the upper Midwest as identified in TRRC's application, the resulting BNSF projected net income statement will still project positive net income for BNSF in the first two years following construction.

6. The revenue per unit for each movement is calculated using the projected miles per unit for eastbound and westbound traffic, BNSF's system-average revenue per unit for coal traffic (as reported in BNSF's 2012 10-K report) and BNSF's system average miles per unit for coal traffic (based upon BNSF's analysis of its 2012 internal data for BNSF coal traffic).

7. Operating cost is derived using 2011 URCS costs for the eastbound and westbound movements. A spreadsheet showing the calculation of URCS variable costs is attached as Exhibit 1. Total operating expense is calculated by deducting the return on investment (ROI) component from URCS variable cost and then marking-up the remaining variable costs to incorporate fixed costs using the Constant Cost Mark-Up Ratio from URCS. ROI cost is excluded because ROI cost as defined in URCS is not an expense item used in the calculation of net income. Variable cost is marked-up to include fixed cost because both variable and fixed costs are used in the calculation of net income.

8. Total revenue is allocated to the TRRC line segment and BNSF line segment based on the share of total operating expenses on each segment as derived from URCS. The revenue is

allocated separately for eastbound and westbound traffic for each year of the two-year income statement period.

9. Revenues and operating expenses are projected to 2017 and 2018 (the first two years that the TRRC rail line potentially could be operational following permitting and construction) using a recent Global Insights forecast of RCAF-U. The level of net income would not be significantly different were operation to be delayed by a year or two.

10. Interest expense is calculated based on the ratio of interest expense to operating expense as reported in BNSF's 2012 R-1 report.

11. Income taxes are assumed to be 38% based on a federal corporate income tax rate of 35% and an estimated weighted-average state income tax rate of 3%.

Rebuttal Exhibit G (BNSF) contains the detailed calculations showing how the projections of BNSF's revenues, expenses and net income for traffic moving over the TRRC rail line only, and over a combination of TRRC-BNSF rail lines, were generated for each of the first two years following construction of the rail line. For the TRRC-only projection, the Exhibit shows a positive net income of \$1.8 million for the first year following construction and \$2.5 million for second year. BNSF's total net income for TRRC traffic that moves over BNSF lines is projected to be \$28.6 million in the first year following construction and \$39.3 million in the second year following construction.

VERIFICATION

I, Scott T. Long, hereby verify under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.



Scott T. Long

Dated this 6th day of August, 2013

REBUTTAL EXHIBIT G

Exhibit G (BNSF)**BNSF Projected Income Statement for Traffic Moving Over Tongue River Rail Line**

\$ in Millions

Year	Item	TRRC Segment	BNSF Segment	Total	Line	Source / Formula
2017	Revenue	Redacted - Highly Confidential			1	Line 23 of page 2
	Operating Expense	Redacted - Highly Confidential			2	Line 36 of page 2
	Operating Income				3	L1 - L2
	Interest Expense				4	L3 x L17
	Income Before Taxes				5	L3 - L4
	Income Taxes				6	L5 x 38%
	Net Income	\$1.8	\$26.7	\$28.6	7	L5 - L6
2018	Revenue	Redacted - Highly Confidential			8	Line 23 of page 3
	Operating Expense	Redacted - Highly Confidential			9	Line 36 of page 3
	Operating Income				10	L8 - L9
	Interest Expense				11	L10 x L17
	Income Before Taxes				12	L10 - L11
	Income Taxes				13	L12 x 38%
	Net Income	\$2.5	\$36.8	\$39.3	14	L12 - L13

Other Inputs

Item	Amount	Line	Source / Formula
Operating Expense	Redacted - Highly Confidential	15	BNSF 2012 R-1 Sched 210 Line 14b ÷ 1,000
Interest Expense		16	BNSF 2012 R-1 Sched 210 Line 38b ÷ 1,000
Interest Expense Ratio		17	L15 ÷ L16
RCAF-U 2011 Index	96.75	18	Global Insights 7/11/13 (2012Q4 = 100.0)
RCAF-U 2012 Index	97.80	19	Global Insights 7/11/13 (2012Q4 = 100.0)
RCAF-U 2017 Index Forecast	107.70	20	Global Insights 7/11/13 (2012Q4 = 100.0)
RCAF-U 2018 Index Forecast	111.20	21	Global Insights 7/11/13 (2012Q4 = 100.0)
Growth from 2011 to 2017	11.3%	22	(L20 - L18) ÷ L18
Growth from 2011 to 2018	14.9%	23	(L21 - L18) ÷ L18
Growth from 2012 to 2017	10.1%	24	(L20 - L19) ÷ L19
Growth from 2012 to 2018	13.7%	25	(L21 - L19) ÷ L19

Exhibit G (BNSF)

BNSF Projected Revenue & Expense for Traffic Moving Over Tongue River Rail Line - 2017

Item	Traffic	Detail	TRRC Segment	BNSF Segment	Total	Line	Source / Formula
Revenue	Westbound	Tons Handled			6,000,000	1	Assumed
		Tons/Unit	Redacted - Highly Confidential			2	Assumed
		Units Handled	Redacted - Highly Confidential			3	L1 ÷ L2
		BNSF Coal Average Revenue/Unit				4	2012 BNSF Railway 10-K Report, page 8
		BNSF Coal Average Miles/Unit				5	BNSF 2012 internal data
		BNSF Coal Average Revenue/Mile				6	L4 ÷ L5
		Miles/Unit				7	Assumed
		Revenue/Unit				8	L6 x L7
		Units Handled				9	L3
		Total Revenue (\$M)				10	L8 x L9 ÷ 1,000,000; Total allocated to segments based on Expense (line 28)
	Eastbound	Tons Handled			6,000,000	11	Assumed
		Tons/Unit	Redacted - Highly Confidential			12	Assumed
		Units Handled	Redacted - Highly Confidential			13	L11 ÷ L12
		BNSF Coal Average Revenue/Unit				14	2012 BNSF Railway 10-K Report, page 8
		BNSF Coal Average Miles/Unit				15	BNSF 2012 internal data
		BNSF Coal Average Revenue/Mile				16	L14 ÷ L15
		Miles/Unit				17	Assumed
		Revenue/Unit				18	L16 x L17
		Units Handled				19	L13
		Total Revenue (\$M)				20	L18 x L19 ÷ 1,000,000; Total allocated to segments based on Expense (line 33)
Total		Total Revenue in 2012 (\$M)				21	L10 + L20
		Growth from 2012 to 2017				22	Line 24 of page 1
		Total Revenue in 2017 (\$M)				23	L21 x (1 + L22)
Expense	Westbound	URCS Variable Cost/Unit less ROI				24	BNSF 2011 URCS Phase 3
		Units Handled				25	L3
		Total Variable Cost less ROI (\$M)				26	L24 x L25
		Constant Cost Markup Ratio				27	BNSF 2011 URCS D8 Line 617
	Total Operating Expense (\$M)				28	L26 x L27	
	Eastbound	URCS Variable Cost/Unit less ROI				29	BNSF 2011 URCS Phase 3
		Units Handled				30	L13
		Total Variable Cost less ROI (\$M)				31	L29 x L30
Constant Cost Markup Ratio					32	BNSF 2011 URCS D8 Line 617	
Total Operating Expense (\$M)				33	L31 x L32		
Total		Total Expense in 2011 (\$M)				34	L28 + L33
		Growth from 2011 to 2017				35	Line 22 of page 1
		Total Expense in 2017 (\$M)				36	L34 x (1 + L35)

Exhibit G (BNSF)

BNSF Projected Revenue & Expense for Traffic Moving Over Tongue River Rail Line - 2018

Item	Traffic	Detail	TRRC Segment	BNSF Segment	Total	Line	Source / Formula	
Revenue	Westbound	Tons Handled			8,000,000	1	Assumed	
		Tons/Unit		Redacted - Highly Confidential		2	Assumed	
		Units Handled				3	L1 ÷ L2	
		BNSF Coal Average Revenue/Unit				4	2012 BNSF Railway 10-K Report, page 8	
		BNSF Coal Average Miles/Unit				5	BNSF 2012 internal data	
		BNSF Coal Average Revenue/Mile				6	L4 ÷ L5	
		Miles/Unit				7	Assumed	
		Revenue/Unit				8	L6 x L7	
		Units Handled				9	L3	
		Total Revenue (\$M)				10	L8 x L9 ÷ 1,000,000; Total allocated to segments based on Expense (line 28)	
	Eastbound	Tons Handled			8,000,000	11	Assumed	
		Tons/Unit		Redacted - Highly Confidential		12	Assumed	
		Units Handled				13	L11 ÷ L12	
		BNSF Coal Average Revenue/Unit				14	2012 BNSF Railway 10-K Report, page 8	
		BNSF Coal Average Miles/Unit				15	BNSF 2012 internal data	
		BNSF Coal Average Revenue/Mile				16	L14 ÷ L15	
		Miles/Unit				17	Assumed	
		Revenue/Unit				18	L16 x L17	
		Units Handled				19	L13	
		Total Revenue (\$M)				20	L18 x L19 ÷ 1,000,000; Total allocated to segments based on Expense (line 33)	
Total		Total Revenue in 2012 (\$M)				21	L10 + L20	
		Growth from 2012 to 2018				22	Line 25 of page 1	
		Total Revenue in 2018 (\$M)				23	L21 x (1 + L22)	
Expense	Westbound	URCS Variable Cost/Unit less ROI				24	BNSF 2011 URCS Phase 3	
		Units Handled				25	L3	
		Total Variable Cost less ROI (\$M)				26	L24 x L25	
		Constant Cost Markup Ratio				27	BNSF 2011 URCS D8 Line 617	
	Total Operating Expense (\$M)				28	L26 x L27		
	Eastbound	URCS Variable Cost/Unit less ROI					29	BNSF 2011 URCS Phase 3
		Units Handled					30	L13
		Total Variable Cost less ROI (\$M)					31	L29 x L30
Constant Cost Markup Ratio						32	BNSF 2011 URCS D8 Line 617	
Total Operating Expense (\$M)					33	L31 x L32		
Total		Total Expense in 2011 (\$M)				34	L28 + L33	
		Growth from 2011 to 2018				35	Line 23 of page 1	
		Total Expense in 2018 (\$M)				36	L34 x (1 + L35)	

REBUTTAL EXHIBIT 1

Exhibit 1

URCS Cost of Traffic on Tongue River Rail Line

-- Westbound Traffic --

-- Eastbound Traffic --

Group	Line	Item	TRRC	BNSF	TRRC	BNSF
			Segment	Segment	Segment	Segment
Inputs	1	Railroad	WEST	BNSF	WEST	BNSF
	2	Miles	35	1,455	35	822
	3	Segment Type	OD	RT	OD	RT
	4	Car Count	Redacted - Highly Confidential			
	5	Car Type				
	6	Car Ownership				
	7	Tons per Car				
	8	Commodity				
	9	Shipment Size				

Outputs	207	VC-CM-OPR
	221	VC - GTM - OPR
	244	VC-LUM-OPR
	256	VC-CM CLR-OPR
	258	VC-clot CLR-OPR
	260	VC-hand CLR-OPR
	262	VC-clot-other-OPR
	264	VC-hand-other-OPR
	281	VC-TM-crew OPR-unit train
	282	VC-TM-crew OPR-way train
	283	VC-TM-crew OPR-through train
	286	VC-TM-other-OPR
	316	VC-SEM-OPR
	329	VC-intra-SEM-OPR
	332	VC-inter-SEM-OPR
	405	VC-CM-Rental
	409	VC-CM-Total
	411	VC-CM(R)-OPR
	427	VC-CM(Y)-OPR
	434	VC-CD-Total
	438	VC-CD(R)-OPR
	453	VC-CD(Y)-OPR
	459	VC-CM(R)-OPR
	465	VC-CM(Y)-OPR
	471	VC-CD(R)-OPR
	477	VC-CD(Y)-OPR
	486	VC-intra-CM(Y)-OPR
	489	VC-inter-CM(Y)-OPR
	498	VC-intra-CD(Y)-OPR
	499B	VC-inter-CD(Y)-OPR
	503	VC-ton mile-OPR
	510	VC-OPR
	517	VC-OPR
	524	VC-OPR
	531	VC-MVU L&UL
	534	VC-ref-protect
	543	VC-TCU-L&UL-OPR
	554	VC ref TCU-OPR
	560	VC ref TCU-protect-OPR
	562	VC TCU-nr-OPR
	572	VC-TCU P&D
	209	VC-CM-DRL
223	VC - GTM - DRL	
246	VC-LUM-DRL	
266	VC-hand-other-DRL	
288	VC-TM-other-DRL	
318	VC-SEM-DRL	
330	VC-intra-SEM-DRL	
333	VC-inter-SEM-DRL	
413	VC-CM(R)-DRL	

Exhibit 1

URCS Cost of Traffic on Tongue River Rail Line

-- Westbound Traffic --

-- Eastbound Traffic --

Group	Line	Item	TRRC	BNSF	TRRC	BNSF
			Rail Line	Rail Line	Rail Line	Rail Line
Outputs	429	VC-CM(Y)-DRL	Redacted - Highly Confidential			
	440	VC-CD(R)-DRL				
	455	VC-CD(Y)-DRL				
	461	VC-CM(R)-DRL				
	467	VC-CM(Y)-DRL				
	473	VC-CD(R)-DRL				
	479	VC-CD(Y)-DRL				
	487	VC-intra-CM(Y)-DRL				
	490	VC-inter-CM(Y)-DRL				
	499	VC-intra-CD(Y)-DRL				
	499C	VC-inter-CD(Y)-DRL				
	505	VC-ton mile-DRL				
	512	VC-DRL				
	519	VC-DRL				
	526	VC-DRL				
	545	VC-TCU, L/UL-DRL				
	556	VC ref TCU-DRL				
	564	VC TCU-nr-DRL				
	211	VC-CM-ROI				
	225	VC - GTM - ROI				
	248	VC-LUM-ROI				
	268	VC-hand-other-ROI				
	290	VC-TM-other-ROI				
	320	VC-SEM-ROI				
	331	VC-intra-SEM-ROI				
	334	VC-inter-SEM-ROI				
	415	VC-CM(R)-ROI				
	431	VC-CM(Y)-ROI				
	442	VC-CD(R)-ROI				
	457	VC-CD(Y)-ROI				
	463	VC-CM(R)-ROI				
	469	VC-CM(Y)-ROI				
	475	VC-CD(R)-ROI				
	481	VC-CD(Y)-ROI				
	488	VC-intra-CM(Y)-ROI				
	491	VC-inter-CM(Y)-ROI				
	499A	VC-intra-CD(Y)-ROI				
	499D	VC-inter-CD(Y)-ROI				
	507	VC-ton mile-ROI				
	514	VC-ROI				
	521	VC-ROI				
	528	VC-ROI				
	547	VC TCU, L/UL-ROI				
	558	VC ref TCU-ROI				
	566	VC TCU-nr-ROI				
	537	Loss & Damage Claim Expense				
	587	Total Jurisdictional Add-On				
	700	Total Variable Cost				

Exhibit 1

URCS Cost of Traffic on Tongue River Rail Line

-- Westbound Traffic --

-- Eastbound Traffic --

Group	Item	Detail	-- Westbound Traffic --		-- Eastbound Traffic --	
			TRRC Rail Line	BNSF Rail Line	TRRC Rail Line	BNSF Rail Line
Totals	Variable Cost	Operating	Redacted - Highly Confidential			
		Depreciation/Rents/Leases				
		Return on Investment (ROI)				
		Loss & Damage				
		Make-Whole Adjustment				
		<u>Total</u>				
	Variable Cost/Unit	Operating	Redacted - Highly Confidential			
		Depreciation/Rents/Leases				
		Return on Investment (ROI)				
		Loss & Damage				
		Make-Whole Adjustment				
		<u>Total</u>				
		<u>Total less ROI</u>				

**REBUTTAL SCHWARTZ
VERIFIED STATEMENT**

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

STB FINANCE DOCKET NO. 30186

**TONGUE RIVER RAILROAD COMPANY, INC. – RAIL CONSTRUCTION
AND OPERATION – IN CUSTER, POWDER RIVER AND
ROSEBUD COUNTIES, MT**

**REBUTTAL VERIFIED STATEMENT OF SETH SCHWARTZ
IN SUPPORT OF
TONGUE RIVER RAILROAD COMPANY’S REPLY TO
NORTHERN PLAINS RESOURCE COUNCIL AND
ROCKER SIX CATTLE CO.’S
SURREPLY**

My name is Seth Schwartz. I am President of Energy Ventures Analysis, Inc. (“EVA”). My business address is 1901 North Moore Street, Suite 1200, Arlington, VA 22209. I have been a principal at EVA since it was founded in 1981. Since that time, most of my work has been consulting for the energy industry regarding coal markets and economics of coal operations and coal procurement. My clients include coal producers, coal consumers, coal transporters, and investors in coal operations and coal-fired power plants, as well as regulatory agencies and industry associations. I have testified in person or by affidavit numerous times regarding coal markets in Federal courts (district court, bankruptcy court and the U.S. Supreme Court), State courts, arbitration hearings and regulatory agencies, including the Surface Transportation Board, the Federal Energy Regulatory Commission, the Environmental Protection Agency, and state public utility commissions. I have previously filed a statement in this proceeding on behalf of the TRRC.

I am providing this rebuttal verified statement in response to the July 2, 2013 Surreply to Tongue River Railroad Company's ("TRRC") June 7, 2013 Reply to Comments submitted by Northern Plains Resource Council and Rocker Six Cattle Company (jointly, "NPRC"), as well as the verified statement in support of NPRC by Thomas Michael Power ("Power Surreply").

My opinions are summarized as follows:

- The Power Surreply cites the fact that EIA has a lower growth rate in its forecasted demand for PRB coal in its latest forecast than it did in the past. The Power Surreply tries to draw the inference from this that the market for PRB coal is less favorable than it was in the past, therefore there is less need for the Tongue River Railroad now than there was previously. However, it is not the rate of growth that matters; it is the total size of the market that would be served by the new mine relative to the size of the mine. On this basis, the market is far larger today than it was in the past and there is a greater need for the Tongue River Railroad than ever.
- The Power Surreply challenges the importance of EIA's forecast of a higher growth rate in domestic demand for Montana low-sulfur PRB coal than other US coal regions by asserting that EIA's forecasted growth of domestic demand does not increase by 20 million tons annually (the expected Otter Creek full production level) over 2011 until 2035 (implying that the mine would not be needed until then). This is not true. EIA forecasts growth in domestic demand of 20 million tons over 2011 by 2030 (not 2035) and an increase of 10 million tons by 2019.¹ This amount is just the projected increase in domestic demand for Montana PRB coal and the Otter Creek mine is expected to serve export markets also. The new production will also serve to replace depletion of production from existing mines and will mine at lower costs because of better economics.
- The Power Surreply incorrectly asserts that I testified that the market for Montana PRB coal is not limited by its sodium content and transportation costs. In my previous statement, I performed a study defining the size of the market which can

¹ See EIA Annual Energy Outlook, at <http://www.eia.gov/oiaf/aeo/tablebrowser/#release=AEO2013&subject=7-AEO2013&table=95-AEO2013®ion=0-0&cases=ref2013-d102312a>

use PRB coal with high sodium content and to which Montana PRB coal already has proven to be competitive. While the market in which Montana PRB coal can and does compete is not unlimited, it is much larger than needed for the Otter Creek mine to increase domestic sales up to its full planned capacity.

- While in this Surreply, Mr. Power challenges my contention that the Otter Creek mine will be able to compete with the Wyoming PRB mines because of the rising costs of Wyoming PRB coal, in contemporaneous testimony from another proceeding, Mr. Power argued that Wyoming PRB coal prices would increase significantly for all of the same reasons which I cited in my testimony.
- While the NPRC contends that PRB coal is not competitive in Asia, its expert Mr. Power asserts in a contemporaneous report that “PRB coal will be highly competitive in southeastern coastal Chinese markets”.² Mr. Power wrote that an additional 140 million tons of PRB coal (including Wyoming and Montana) exports to China “can be delivered at a much lower cost than either domestic Chinese coal or the current major sea-borne exporters of coal to that market, Indonesia and Australia.”³
- The NPRC Surreply contends that the coal export terminals in Canada will not be available to ship Otter Creek coal to export markets in Asia because they are committed to Canadian coals. However, the “analysis” by NPRC’s attorneys fails to calculate the available capacity from the Canadian port expansions, which will still be substantial. Even Mr. Power found that PRB coal could be exported economically to China “from the proposed new and expanded coal ports on the U.S. and British Columbian west coast”,⁴ including the expansions at Westshore Terminals and Ridley.⁵
- The Power Surreply contends that I “ignore(s) the history of the actual development of Montana and Wyoming PRB coal markets” and do not explain

² Power, Thomas Michael and Donovan S. Power, “The Impact of Powder River Basin Coal Exports on Global Greenhouse Gas Emissions”, May 2013, p. 4 (hereafter “May 2013 Power Report”) at http://www.powereconconsulting.com/WP/assets/GHG-Impact-PRB-Coal-Export-Power-Consulting-May-2013_Final.pdf . Cited excerpts of the May 2013 Power Report are attached as Rebuttal Exhibit SS-1.

³ Ibid.

⁴ Ibid.

⁵ Id at 22.

why Wyoming PRB production has developed much faster than Montana PRB since 1983. This is not correct. As discussed in my earlier statement submitted with TRRC's June 7, 2013 Reply Comments ("Initial Schwartz Statement"), the explanation for the prior rapid growth of Wyoming PRB relative to Montana PRB is a combination of:

- The initial development and early mining of the Wyoming PRB mines was low-cost because the strip ratios were very low. Wyoming PRB coal costs and prices were so low that new mine development in the Montana PRB could not compete economically with the expansion of the existing Wyoming PRB mines to supply the growing market for PRB coal.
- The development of rail access to the Wyoming PRB in the early 1970's⁶ allowed these mines to be developed and operating before 1986, when the Tongue River Railroad was first approved. Once developed these existing mines had an economic advantage compared to new mines in the Montana PRB because the rail transportation facilities were already in place as well as lower operating costs due to lower strip ratios. The growth in Wyoming PRB coal production since 1986 has been from the expansion of the already-developed mines, not from the construction of new mines, as would be required in the Ashland area of the Montana PRB that would be served by the Tongue River Railroad.
- In the May 2013 report, Mr. Power agreed that the undeveloped Montana PRB coal reserves would have an economic advantage over Wyoming PRB coal to serve as exports to Asia, writing:

“In addition, much of the PRB coal supply that in the northern part of the Powder River Basin in Montana has not faced significant development pressure over the last forty years because it was at a transportation cost disadvantage relative to Wyoming coal in reaching the fastest growing American markets. As a result, Wyoming produces ten times as much coal as Montana even though Montana has the larger economic reserves. For exports to Asia from the west coast of North America, Montana coal resources are likely to have the cost advantage.”⁷

⁶ See <http://www.wyohistory.org/essays/burlington-route-wyomings-second-transcontinental-railroad>

⁷ May 2013 Power Report at 13.

I. The Ability of a New Mine on the Tongue River Railroad to Compete in the Domestic Market

The Power Surreply largely repeats the opinions offered in the November 2012 Power Statement submitted with NPRC's April 2, 2013 Comments ("Power Original Statement"). Those opinions were that:

- The future growth in the domestic market for PRB coal is expected to be much slower than it has been in the past;
- The domestic market for Otter Creek coal is severely limited by its sodium content and a geographic disadvantage;
- Prior growth in the market for PRB coal has been served principally by mines in Wyoming, not Montana; and,
- The fact that the Tongue River Railroad has not been developed since it was approved in 1986 proves that these market limitations will prevent its development in the future.

I address each of these assertions below.

A. The Size and Future Growth of the Domestic Market for Powder River Basin Coal

The Power Surreply (relying on forecasts from the Energy Information Administration, "EIA") emphasizes that the projected growth rate for PRB coal in the domestic market is a much slower rate of growth (in annual percentage) than it was in the past, including when the Tongue River Railroad first received approval in 1986. While it is true that the rate of growth has slowed, the potential domestic market for the new Otter Creek mine is measured by the size of the market, not the rate of growth. In 1986, the total market for PRB coal (measured by its production) was 144.7 million tons, including 29.3 million tons from Montana,⁸ of which all but

⁸ EIA Coal Production 1986 pp. 19 – 23, Powder River Basin coal production includes Big Horn and Rosebud counties in Montana plus Campbell, Converse and Sheridan counties in Wyoming. Referenced excerpts are attached as Rebuttal Exhibit SS-2.

0.7 million tons were sold in the domestic market.⁹ In 2011, total PRB production was 462.6 million tons, including 36.5 million tons from Montana, of which exports were less than 10 million tons.¹⁰ This was a historical growth rate of 4.8% annually over the 25-year period from 1986 to 2011. While the rate of growth projected by EIA for period for the period 2011 – 2030 is much lower at 0.8%, the total market is still projected to expand to 540.7 million tons by 2030.¹¹ The total size of the market for PRB coal in 2011 was 3.2 times what it was in 1986 and it is projected by EIA to increase by 78 million tons by 2030. The projected growth is almost 4 times greater than the expected production from Otter Creek and the total projected market is 27 times the size of the Otter Creek mine's expected annual production at full capacity.¹²

The Power Surreply challenges the importance of EIA's forecast of a higher growth rate in domestic demand for Montana low-sulfur PRB coal than other US coal regions. It asserts that EIA's forecasted growth of domestic demand does not increase by 20 million tons over 2011 (the expected annual Otter Creek production at full capacity) until 2035 (implying that the mine would not be needed until then). This is not true. EIA forecasts growth in domestic demand of 20 million tons over 2011 by 2030 (not 2035) and an increase of 10 million tons in domestic

⁹ EIA Coal Distribution January – December 1986, p. 43, foreign coal distribution reported for Bureau of Mines Districts 22 and 23 are exports of Montana coal. Referenced excerpts are attached as Rebuttal Exhibit SS-3.

¹⁰ EIA Annual Coal Report 2011 p. 3 <http://www.eia.gov/coal/annual/pdf/acr.pdf> . EIA does not collect or estimate data on PRB coal exports; I have estimated 2011 PRB exports to be 7.1 million tons based on reported steam coal exports reported by the Bureau of Census, including exports to Asia reported at the Seattle customs district plus exports to Canada reported at the Detroit customs district plus about 0.5 million tons blended into exports reported at the New Orleans custom district; see EIA Quarterly Coal Report, October – December 2011 Table 14 at <http://www.eia.gov/coal/production/quarterly/pdf/0121114q.pdf>.

¹¹ See EIA Annual Energy Outlook 2013, at <http://www.eia.gov/oiaf/aeo/tablebrowser/#release=AEO2013&subject=7-AEO2013&table=95-AEO2013®ion=0-0&cases=ref2013-d102312a>

¹² I recognize that the TRRC rail line would serve other mines in the Ashland area as well as the Otter Creek mine. However, there are no known mine development projects other than the Otter Creek mine project in the Ashland area at present. As a result of the uncertainties regarding the timing of future development of other Ashland area mines and the volumes that may be produced from those mines in the future when they may be developed, I have not taken tonnage that may be produced from other Ashland area mines into account in my analyses.

demand by 2019.¹³ Importantly, this is just the projected increase in domestic demand for Montana PRB coal. A significant share of the new development of Otter Creek mine coal is likely to be shipped to the growing export market as well.

What the Power Surreply does not rebut is the showing in my earlier statement¹⁴ that the contention in the Power Original Statement regarding the supposed “shrinking market for Montana PRB Coal” is not supported by EIA’s forecast of future markets. It is indisputable that in EIA’s latest forecast, the growth rate for Montana PRB coal is the highest growth rate of any coal region in the country.¹⁵ This is not a shrinking market.

At the same time Mr. Power was contending in the Power Surreply that the domestic market for Montana PRB coal is “limited”,¹⁶ he wrote in a May 2013 report that the domestic market for PRB coal, which he defined as including Wyoming and Montana coal,¹⁷ would grow significantly:

“If new ports are not built, PRB coal will likely continue to be limited to serving existing U.S. markets which, while projected by EIA to be relatively flat in the aggregate, are likely to support significant additional PRB production.”¹⁸

In a footnote, Mr. Power went on to state that:

“EIA projects that in order to meet tightening EPA air quality standards and offset declines in central Appalachian coal production due to rising costs of production, the demand for PRB coal within the US will expand between 2010 and 2035 at a rate of about 10 million tons per year, raising PRB coal production from about 500 million tons per year in 2010 to about 700 million tons in 2035 despite static aggregate coal consumptions levels in the United States.”¹⁹

¹³ Ibid.

¹⁴ Initial Schwartz Statement at 4.

¹⁵ EIA Annual Energy Outlook 2013, at <http://www.eia.gov/oiaf/aeo/tablebrowser/#release=AEO2013&subject=7-AEO2013&table=95-AEO2013®ion=0-0&cases=ref2013-d102312a>

¹⁶ Power Surreply at 13.

¹⁷ May 2013 Power Report, p. 14 http://www.powereconconsulting.com/WP/assets/GHG-Impact-PRB-Coal-Export-Power-Consulting-May-2013_Final.pdf

¹⁸ May 2013 Power Report, p. 22 http://www.powereconconsulting.com/WP/assets/GHG-Impact-PRB-Coal-Export-Power-Consulting-May-2013_Final.pdf

¹⁹ Ibid.

B. The Limits on the Domestic Market for Otter Creek Coal Due to its Sodium Content

The Power Surreply misstates my opinion regarding the impact of sodium content on the domestic market for Otter Creek coal and then rebuts the misstatement. Contrary to Mt. Power's claim, I did not say that "the American market for this type of coal is not limited by its high sodium content".²⁰ I stated that "the Montana PRB domestic market is not severely limited by the sodium content ... to just a few power plants as NPRC claims" and that "there are many power plants that have used and will use higher-sodium coals".²¹ My prior testimony acknowledged that the high sodium content of the Otter Creek coal will cause a problem for some power plants and identified those problems.²² I performed a the market study to identify which power plants have already demonstrated their ability to use high-sodium Montana PRB coal, because they have burned this coal in the past, and which power plants have a boiler design that is capable of using Montana PRB coal. My market study included a list of each power plant that was capable of using Montana PRB coal. My study showed that the total size of the domestic market capable of using Montana PRB coal was 139.7 million tons in 2011, which was 31.3% of the total market for PRB coal in that year. Rather than claiming that the domestic market for Otter Creek coal was not limited by the sodium content, my testimony explained that the market was limited and quantified the size of the market that could be served by Montana PRB coal to be far in excess of the projected production from the Otter Creek mine. In my earlier statement, I quantified the capacity at the much larger number of power plants that can and do use high-sodium coals.

²⁰ Power Surreply at 4.

²¹ Initial Schwartz Statement at 10 – 11.

²² Initial Schwartz Statement at 11 – 12.

The Power Surreply presents a new fact -- that the University of Montana is researching sodium removal – as support for its opinion that the high sodium content limits the domestic market for Otter Creek coal. However, this new fact does not prove anything other than what Mr. Power and I have already agreed on: the high sodium content of Montana PRB coal causes problems for some power plants, but not all power plants. I have not dismissed the problems associated with the high-sodium content of Otter Creek coal; I quantified the domestic market for such coal and found that the market that can and has used this coal is much larger than needed to support the development of the Otter Creek mine.

C. The Domestic Geographic Transportation Advantages and Disadvantages of Montana PRB Coal

There is no substantive disagreement between my opinion and the opinion expressed in the Power Surreply that, because of its geographic location, Montana PRB coal has a transportation cost difference when competing with Wyoming PRB coal to power plants located across the U.S. Montana PRB coal has a transportation advantage over Wyoming PRB coal in some locations, *i.e.*, to the “northern tier” states of Washington, Oregon, Montana, North Dakota, Minnesota, and the Great Lakes (Michigan, Wisconsin and points farther East). Montana PRB coal has a transportation disadvantage compared to Wyoming PRB mines to customers located farther south. Where we appear to disagree, however, is whether Montana PRB coal’s geographic transportation advantages and disadvantages limit the market for the proposed Otter Creek mine so much that such coal is not likely to be developed.

Even in the northern tier states, where it has an acknowledged transportation advantage, Montana PRB historically has had a smaller share of the market than Wyoming PRB coal. As shown on Exhibit 1, in 2010 the total amount of PRB coal distributed to the northern tier states was 91.0 million tons. Montana PRB constituted 34.1 million tons of coal deliveries to these

states (37.5% of the PRB demand), while Wyoming PRB coal constituted 56.9 million tons of the deliveries.

Exhibit 1: Coal Distribution to the Northern Tier States 2010 (1000 tons)

State	PRB Coal		Lignite	Western Bituminous	Illinois Basin	Appalachia	Total
	Montana	Wyoming					
Washington	2,495	2,451					4,946
Oregon	152	1,939		76			2,167
Montana	10,714	646	310	7			11,677
North Dakota	1,281	371	28,640				30,292
South Dakota		2,376				8	2,384
Minnesota	9,068	8,391		15	16	121	17,611
Wisconsin	539	21,788		707	784	1,071	24,889
Michigan	9,831	18,952		518	187	8,526	38,014
Total	34,080	56,914	28,950	1,323	987	9,726	131,980

Source: EIA Annual Coal Distribution Report 2010

The share of the market captured by Montana PRB coal (vs. Wyoming PRB) has been limited by the lack of supply of low-cost Montana PRB coal, even in the northern tier states where such coal has a transportation advantage. There are only 5 Montana PRB mines that have developed rail access²³ and those mines have had significant depletion of their reserves: Big Sky mine is closed, Decker mine is barely operating and Rosebud mine has closed the areas A and B which produced coal for the rail market (areas C and D are still operating and produce coal for the adjacent Colstrip power plant). Access to the low-cost Ashland area Montana PRB coal has been prevented by the lack of rail transportation infrastructure. If the low-cost Ashland area Montana PRB coal (like the Otter Creek mine) had rail access to the Tongue River Railroad, it would be highly competitive with Wyoming PRB coal to serve the plants in the northern tier states where Montana PRB coal has a transportation advantage.

²³ Spring Creek, Absaloka, Decker, Rosebud and Big Sky mines.

Further, Montana PRB coal still can and does compete successfully in domestic markets where it has a transportation disadvantage compared to Wyoming PRB coal. Since 1986, Montana PRB domestic coal deliveries to states outside of the northern tier have totaled 120 million tons, compared to 884 million tons of Montana PRB coal delivered to the 8 northern tier states.²⁴ In this period, Montana PRB deliveries have exceeded 1.0 million tons annually to each of 9 states outside the northern tier, as geographically widespread as the Southwest (Arizona and Texas), the Plains (Kansas and Nebraska), the Midwest (Illinois and Indiana), the Northeast (Ohio and Pennsylvania) and even the Southeast (Mississippi). A relative freight disadvantage does not preclude the coal from being sold in a particular location, it simply means that the mine price must be lower or there must be other factors which attract the customer. Montana PRB coal has been priced higher than Wyoming PRB in the past, because of the limited coal supply.

D. The History of Development of PRB Coal Supply in Wyoming and Montana

The Power Surreply repeats its earlier claim that “Montana and Wyoming PRB coals have not faced the same domestic market opportunities”, as though the large historical growth of Wyoming PRB coal compared to Montana PRB coal means that there is no market for Montana PRB coal. The much greater growth in Wyoming PRB coal production does not mean that Montana PRB coal could not have served the same market; it means that Wyoming PRB coal was lower-cost coal (either at the mine or due to rail transportation costs) or had rail access.

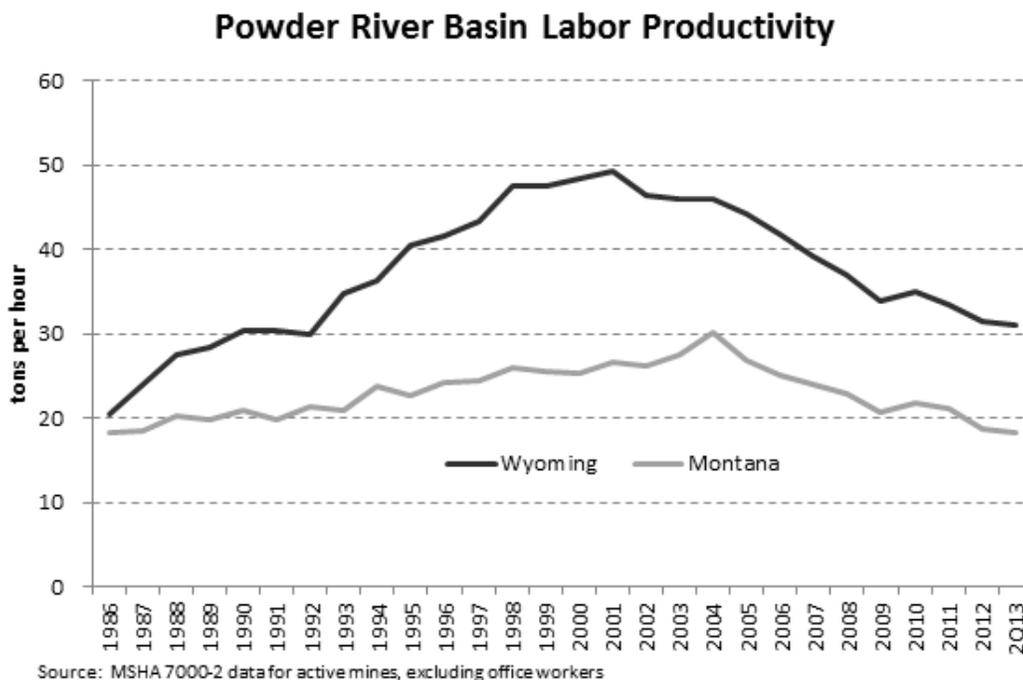
In fact, Wyoming PRB coal was lower-cost to produce and, as a result, sold at significantly lower mine prices than Montana PRB coal through much of the historical period since 1986 as shown on Exhibit 3. The Wyoming PRB coal mines were developed starting at the burn line (where the coal was so close to the surface that it burned from oxidation), with strip

²⁴ EIA Annual Coal Distribution Report from 1986 to 2011 <http://www.eia.gov/coal/distribution/annual/archive.cfm>

ratios of less than 2.0:1 (2 cubic yards of overburden per ton of coal mined).²⁵ In contrast, the Montana PRB coal reserves had higher strip ratios and thus higher costs to produce.

A good measure of the cost of coal production is labor productivity, which is the tons produced divided by the hours worked. The Wyoming PRB coal mines have had the highest labor productivity of any mines in the United States,²⁶ due to the very low strip ratios and very large equipment that has been employed to mine this. As shown in Exhibit 2 below, as the Wyoming PRB coal mines were developed, labor productivity improved from 1986 to 2001 as the mines expanded and employed ever larger equipment. However, labor productivity growth peaked in 2001 and has been declining sharply since then. As the coal mines have progressed into mining higher strip ratios and deeper cover, Wyoming PRB labor productivity has fallen from 49.3 tons per hour (“tph”) worked in 2001 to 31.1 tph in 2013. See Exhibit 2.

Exhibit 2: Powder River Basin Labor Productivity 1986 – 2013 (tons per hour worked)

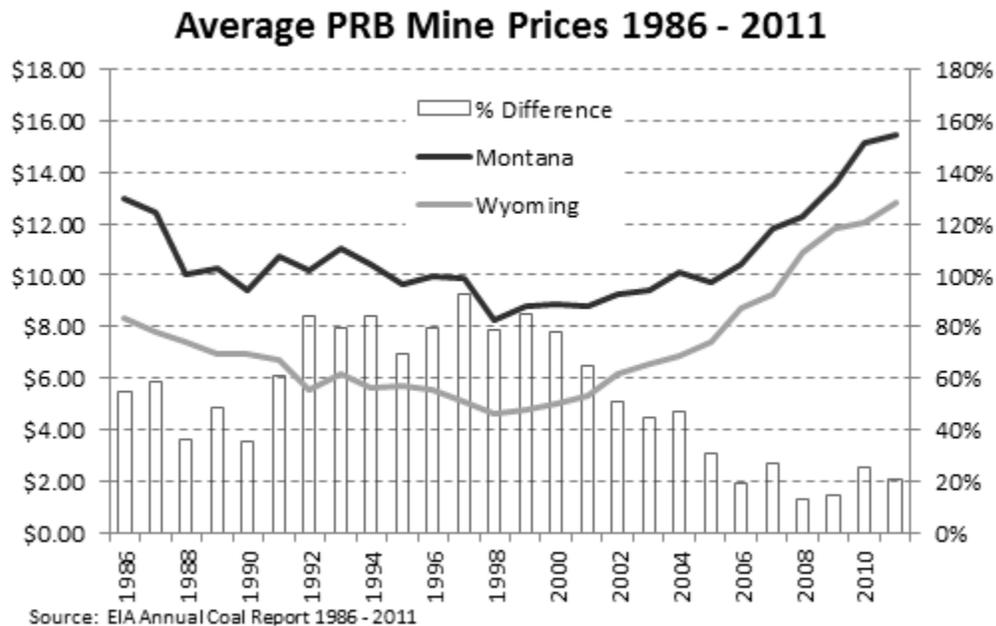


²⁵ See USGS Assessment of Coal Geology, Resources, and Reserves in the Gillette Coalfield, Powder River Basin, Wyoming p. 101 <http://pubs.usgs.gov/of/2008/1202/pdf/ofr2008-1202.pdf>

²⁶ EIA Annual Coal Report 2011 p. 32 at <http://www.eia.gov/coal/annual/>

Labor productivity at the Wyoming PRB mines has been significantly higher than that at the Montana PRB mines historically, which is a cost advantage that has translated into lower mine prices for Wyoming PRB coal than for Montana PRB coal. *See Exhibit 3.* The lower mine price is a major reason why the production of Wyoming PRB coal has increased to supply the growing coal demand, while the production of Montana PRB coal has stagnated.

Exhibit 3: Historical Average Mine Prices for PRB Coal (\$/ton)



As shown in Exhibit 3, the average mine sales price for Montana PRB coal was over 35% higher than Wyoming PRB coal for the period 1986 through 2004, reflecting the fact that this coal had higher production costs than Wyoming PRB coal. However, average mine prices for Wyoming PRB coal have been escalating more rapidly than those for Montana PRB coal in recent years because the huge production rate of Wyoming PRB coal has driven these mines into much higher strip ratios with higher production costs as a result. The average mine price for Montana PRB coal has been less than 25% higher than that for Wyoming PRB coal for the last 4 years. The undeveloped Montana PRB coal reserves in the Ashland area (like the Otter Creek

mine) have strip ratios that are significantly lower than today's strip ratios at the Wyoming PRB mines, and they would have lower operating costs as a result. The lower operating cost for the Otter Creek mine would allow it to compete with the Wyoming PRB mines and capture sales to customers which have previously purchased Wyoming PRB coal.

E. The Change in the Competitive Position of Wyoming PRB Mines Compared to the Otter Creek Mine

As I explained in my previous testimony, the major change in the competitive position of the Otter Creek mine project (and other mines that might be developed in the Ashland area) has been the steady depletion of other PRB coal mines. While some mines have closed (Big Sky and Big Horn) and others have had their remaining reserves merged into larger mines (Clovis Point, Caballo Rojo, North Antelope, Jacobs Ranch and North Rochelle),²⁷ all of the mines have mined out their lowest cost coal and are experiencing steadily increasing production costs. The Wyoming PRB coal mines have been steadily mining away from the coal outcrop into deeper overburden and higher strip ratios. The map of Federal coal leases²⁸ in the Wyoming PRB prepared by the Bureau of Land Management ("BLM")²⁹ in Appendix 1 shows the large extent of mining on the eastern edge of the Wyoming PRB. The map from the United States Geological Service on Appendix 2 shows the strip ratios for the Wyoming PRB reserves and how mining has steadily progressed to the west into higher cover.³⁰

As I explained in my previous testimony, the increase in strip ratios in the Wyoming PRB can be seen from the reports issued by the BLM on the new federal coal leases through the lease-by-application ("LBA") process. The Wyoming PRB mines first began mining on leases which

²⁷ Initial Schwartz Statement at 36.

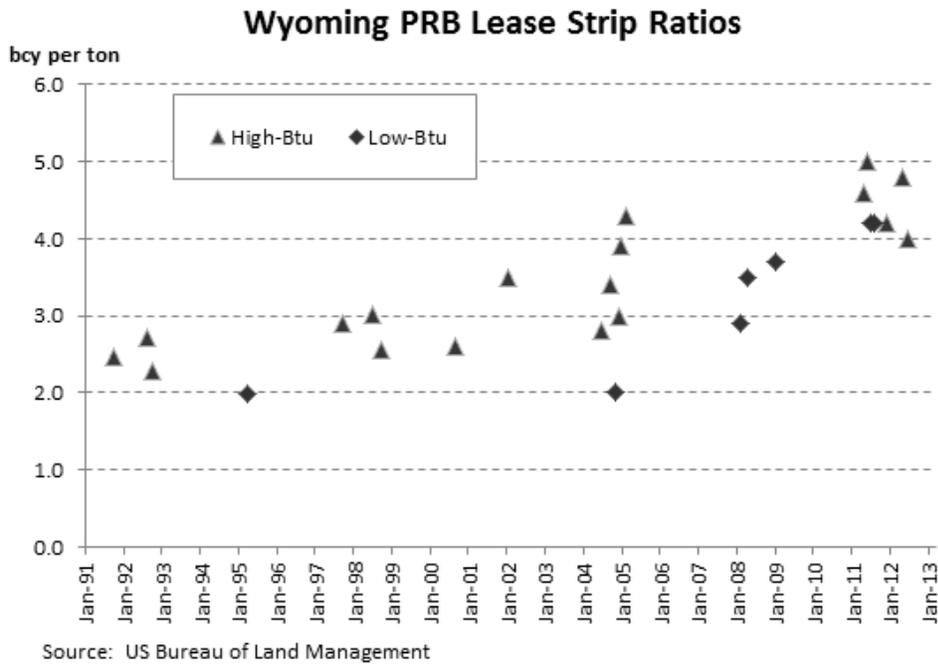
²⁸ Virtually all of the coal mined in the Wyoming PRB is on Federal coal leases.

²⁹ U.S. Department of Interior, Bureau of Land Management at http://www.blm.gov/wy/st/en/programs/energy/Coal_Resources/PRB_Coal/prb_maps.html

³⁰ USGS Assessment of Coal Geology, Resources, and Reserves in the Gillette Coalfield, Powder River Basin, Wyoming p. 101 <http://pubs.usgs.gov/of/2008/1202/pdf/ofr2008-1202.pdf>

were obtained on lease sales by the BLM in the 1960's and 1970's. These mines began operations in coal reserves that had strip ratios less than 2.0:1. They had very low costs and expanded rapidly to supply the growing market. As the reserves on the initial leases were mined out, these mines have acquired new federal leases through LBAs in order to continue operations. As shown on Exhibit 4,³¹ the strip ratios in the LBAs issued in the 1990's were 2.0:1 – 2.7:1, which were still lower ratio than the average projected Otter Creek strip ratios of 3.0:1.³² Thus, had Otter Creek been developed in 1986, it would have been at an economic disadvantage. Since 2005, all of the LBAs have had strip ratios over 4.0:1 and are approaching 5.0:1 which is now above the average projected Otter Creek strip ratios. See Exhibit 4. Thus, the cost to mine coal in the Wyoming PRB has been increasing and will continue to grow in the future. This is the major reason why Otter Creek can be economic to develop today.

Exhibit 4: Strip Ratios for New Wyoming PRB LBAs



³¹ U.S. Department of Interior, Bureau of Land Management at http://www.blm.gov/wy/st/en/programs/energy/Coal_Resources/PRB_Coal/lba_title.html

³² Norwest Corporation, Otter Creek Property Summary Report, July 12, 2006, Table 2.2 (attached as Exhibit SS-18 to Initial Schwartz Statement).

Mr. Power agreed with my opinion that Wyoming PRB coal prices will increase in real terms (that is, above the rate of inflation) in testimony that he recently filed in May 2013 on behalf of the Sierra Club in opposition to Georgia Power's plan to convert its McIntosh power plant to use PRB coal, as quoted below:

"The real price increase in my projected Wyoming PRB mine-mouth price is associated with several economic forces:

- Declining labor productivity in the PRB mines as those mines have to go deeper and deeper to obtain that coal and then haul the extracted coal further for processing and loading.
- Projected increased costs as the mines expand or relocate requiring the movement of roads and, potentially, rail lines.
- Rising labor, fuel, explosives and machinery costs.
- Increasing competition among PRB mining companies to obtain the most attractive additional coal tracts onto which to expand or build a new mine. This has led the upfront bonus bids paid to the owner of the coal, which is mainly the Federal Government, which can run to hundreds of millions of dollars, to rise dramatically in recent years.
- The continuing demand for PRB coal in the southeastern U.S. as is evidenced, for instance, by Georgia Power's proposal to use PRB coal to fuel McIntosh 1.
- The new demand for PRB coal in export markets *if* port and rail infrastructure are available to facilitate those exports.
- That demand for PRB coal allows the market price to follow the cost of producing the coal."³³

Mr. Power's testimony in the Georgia case is consistent with my opinion in all salient points: rising demand (both domestic and export) for PRB coal, increasing cost of production for Wyoming PRB coal, and increasing real prices for Wyoming PRB coal. All of these factors

³³ Georgia Public Service Commission, Docket Number 36498, Testimony and Exhibits of Thomas Power Ph.D., on behalf of the Sierra Club and Coosa River Basin Initiative, May 10, 2013 <http://www.psc.state.ga.us/factsv2/Document.aspx?documentNumber=147826>. Cited excerpts of this testimony are attached as Rebuttal Exhibit SS-4.

support my opinion that there is domestic demand for coal from the Otter Creek mine and this mine can compete for the market with Wyoming PRB coal.

The best evidence that there is a market for Otter Creek coal is the fact that a major mining company, Arch Coal, has made a large investment to acquire the coal reserves. Arch Coal purchased the mining rights under 2 coal leases:

- On November 12, 2009, Arch paid \$73.1 million to Great Northern Properties for the lease of its coal reserves at Otter Creek; and,
- On March 18, 2010, Arch was awarded a state coal lease for the Otter Creek tracts for a price of \$85.8 million.³⁴

By purchasing the mining rights to these properties, which divide the reserves in a “checkerboard” manner, Arch created the ability to economically mine the Otter Creek tract as a contiguous property. The fact that a major producer of Wyoming PRB coal would invest in the right to mine Otter Creek shows that the marketplace believes that there is demand for this coal and it can be economically competitive with the Wyoming PRB.

The Power Surreply also asserts that the Otter Creek mine would have to compete with *new* Wyoming PRB mines (in addition to the existing Wyoming PRB mines), which would not have higher strip ratios due to previous mining.³⁵ However, there are no proposed new mines in the Gillette area of the Wyoming PRB as shown on the BLM map at Appendix 1. All of the coal reserves near the outcrop have been leased and mined. The reserves in this area have been fully controlled by the existing mines as they have expanded and the mine borders touch each other. There are no proposed new Federal coal leases to support a new Wyoming PRB mine; all of the proposed leases are to support continued operations of existing Wyoming PRB mines in higher

³⁴ Arch Coal, SEC Form 10-K 2011, p. F-14 <http://investor.archcoal.com/phoenix.zhtml?c=107109&p=irol-sec>

³⁵ Power Surreply at 21 – 22.

strip ratios as discussed above. The only other proposed new mine in the PRB is the Youngs Creek mine, which is in the Northern PRB on the Montana – Wyoming border near the Spring Creek mine. Cloud Peak purchased this coal reserve from Chevron and Consol Energy in 2012 for \$300 million.³⁶ This potential new mine development is in a similar area to Otter Creek and is further evidence that established mining companies (like Cloud Peak and Arch) in the PRB believe that new mines in the Montana PRB can be economically competitive with the Wyoming PRB.

II. The Availability of Port Capacity at the Canadian Terminals for the Export Market

The NPRC Surreply claims that my testimony that there would be 22 million tonnes³⁷ per year of increased capacity available for increased U.S. coal exports from expansions at Canadian ports was not accurate.³⁸ The NPRC Surreply based this claim on the following assertions:

- The Neptune terminal deals solely in metallurgical coal and is controlled by Teck, so its capacity would not be available to ship Otter Creek coal;
- There is no reason to believe that any of the proposed capacity at the Fraser Surrey Docks would be allotted to U.S. suppliers;
- Other companies have contracts for a large share of the Westshore Terminal capacity; and,
- All of the capacity from the expansion at the Ridley Terminal is already secured by other competitors.

While NPRC's assertions, which are based on a collection of press releases, are either wrong or exaggerated, NPRC misses the entire point. My testimony is that there is ample capacity for increased U.S. coal exports through the expansions of the Canadian terminals to

³⁶ See Cloud Peak Energy 2012 SEC Form 10-K, p. 8 <http://cloudpeakenergy.com/investor-relations/sec-filings/>

³⁷ A tonne is a metric ton, which equals 1.10231 short tons.

³⁸ NPRC Surreply at 17.

absorb the increased production transported by the Tongue River Railroad which might be exported through the West Coast. While it is true that other producers may want to increase coal exports also, that will always be a possibility. However, a reasonable analysis of current shipments and planned capacity shows that the capacity will be available. If Otter Creek coal is economically competitive with other coals, this terminal capacity will be available for it.

First, the TRRC has not claimed that all of the proposed 20 million tons per year of expected production from the Otter Creek mine is likely to be shipped to export markets through the West Coast, or that even half of the production would be shipped through these terminals. TRRC's filings project that a majority of the expected production is likely to be sold in the domestic market; so perhaps as much as 10 million tons per year might be exported.

Second, the coal that will be exported through the Canadian ports is not rigidly tied to one particular port. The coal can be shipped where the capacity is available and economic. Thus, while NPRC claims that Otter Creek coal could not use excess capacity at one or more ports because it would not be available to Arch, it ignores the fact that coal shipments can change among ports and it is the total available capacity which is relevant to the analysis.

I have prepared a summary of the 2012 capacity reported by the Canadian ports, the planned capacity expansions, and the actual shipments of coal in 2012 by source on Exhibit 5.

Exhibit 5: Canadian Port Capacity and Actual 2012 Shipments (million metric tons)

	Vancouver Terminals				Canada	
	Westshore	Neptune	Fraser	Total	Ridley	Total
Existing Capacity	28.0	8.5	0.0	36.5	12.0	48.5
2012 Shipments						
Canada	18.5	6.4	0.0	24.9	9.6	34.5
US	7.6	0.0	0.0	7.6	1.9	9.5
Total	26.1	6.4	0.0	32.5	11.5	44.0
Expanded Capacity						
2013	33.0	12.5	0.0	45.5	12.0	57.5
2014	33.0	12.5	4.0	49.5	18.0	67.5
2017	33.0	18.5	4.0	55.5	24.0	79.5
Available Capacity over 2012						
Metric tons per year	6.9	12.1	4.0	23.0	12.5	35.5
Short tons per year	7.6	13.3	4.4	25.4	13.8	39.1
2012 Shipments						
Canada						
Teck	14.9	6.4	0.0	21.3	1.0	22.3
Coal Valley	2.2			2.2	1.3	3.5
Grande Cache	1.1			1.1		1.1
Walter				0.0	4.5	4.5
Peace River				0.0	1.4	1.4
Petroleum coke	0.3			0.3	1.4	1.7
	18.5	6.4	0.0	24.9	9.6	34.5
US						
Cloud Peak	3.6			3.6	0.4	4.0
Signal Peak	4.0			4.0		4.0
Arch Coal				0.0	1.5	1.5
	7.6	0.0	0.0	7.6	1.9	9.5

Sources:

2012 shipments calculated from annual reports filed by Westshore and Ridley Terminals
Capacity expansion plans referenced in Schwartz June 2013 Statement at 18 - 23

The existing capacity at the Vancouver-area ports was 36.5 million tonnes per year in 2012. The port capacity was highly-utilized in 2012, with 32.5 million tonnes actually shipped.

These ports plan to expand capacity to 55.5 million tonnes per year by 2017. Of this additional 19 million tonnes, 9 million tonnes is now in place in 2013.

NPRC asserts that there is no reason to assume that any of the 4 million tonnes per year capacity at the proposed Fraser Surrey Docks terminal would be allotted to U.S. suppliers.³⁹ Actually, there is a very good reason to assume that all of the capacity will be allotted to U.S. suppliers: the president of Fraser Surrey Docks says so. As stated in the press:

“Concerns have been raised about the transfer of coal from mines in Montana and Wyoming, through the Lower Mainland, to the dock in Surrey, and down the Fraser River, from where it would cross the Pacific Ocean to markets in Asia. Fraser Surrey Docks president and CEO Jeff Scott outlined a long list of safety, health and environmental precautions that would work toward ensuring the clean transport of that coal.... Sitting by his side was Courtney Wallace, northwest regional director of public affairs for BNSF Railway, the company owned by Warren Buffett that will, if the project is approved, transport the coal from U.S. mines to the Surrey port.”⁴⁰

There is a very good reason why the coal which would be exported by Fraser Surrey Docks would be U.S. coal from Montana and Wyoming: the dock is served by the BNSF Railway, which serves the mines in the U.S. but not the mines in Canada.

NPRC makes another flawed assertion when it claims that the Neptune Terminal deals solely in metallurgical coal.⁴¹ NPRC implies that Neptune can only handle metallurgical coal, as though somehow the terminal could not ship thermal coal also. It is true that the Neptune Terminal is owned by Teck Resources Limited and at the present time only ships coal produced by Teck. However, it is not true that all of Teck’s coal is metallurgical coal, as Teck states:

“Lesser quality PCI and thermal coal products accounted for approximately 10% of our annual sales volume in 2012.”⁴²

³⁹ NPRC Surreply at 19.

⁴⁰ See <http://www.straight.com/news/384911/fraser-surrey-docks-outlines-coal-transfer-precautions-opposition-continues>, May 22, 2013

⁴¹ NPRC Surreply at 17.

⁴² Teck Resources Limited, 2012 Annual Information Form, p. 15
<http://www.teck.com/Generic.aspx?PAGE=Teck+Site%2fInvestors+Pages%2fFinancial+Reporting&portalName=tc>

Further, any terminal that ships metallurgical coal can also ship thermal coal. While Teck owns the Neptune terminal, they are expanding it to handle more coal, either more of Teck's own coal or coal for third parties. If, as NPRC claims, Neptune will only handle Teck's own coal, then Teck would ship less of its coal through the Westshore Terminal making more capacity available there for other shippers, like Arch Coal. There are many ports owned or controlled by coal companies that allow third-parties to ship coal through those ports (for example, the CNX Terminal in Baltimore, owned by Consol Energy⁴³ and the DTA Terminal in Newport News (owned by 3 coal companies)⁴⁴ both allow coal from third parties to be shipped through the terminals). Teck will either ship more of its own coal or third-party coal through the Neptune expansion; it will not sit idle after Teck has spent \$40 million⁴⁵ on the expansion to achieve 12.5 million tonnes per year capacity. Teck has further completed the feasibility study to increase capacity to 18.5 million tonnes per year⁴⁶ and detailed engineering work for this expansion is underway.⁴⁷

The largest coal terminal in Vancouver is the Westshore Terminal. It has just completed the expansion from capacity of 28 million tonnes per year to 33 million tonnes per year.⁴⁸ It is true that Westshore ships significant volumes of Canadian coal, about 18.5 million tons in 2012. It is also true that Westshore has long-term contracts with its 3 Canadian shippers: Teck, Coal

⁴³ <http://www.consolenergy.com/other-services/marine-terminal.aspx>

⁴⁴ <http://www.dominionterminal.com/Facility%20Description.htm>

⁴⁵ Teck Resources Limited, 2013 Second Quarter News Release, p. 26
<http://www.teck.com/Generic.aspx?PAGE=Teck+Site%2fMedia+Pages%2fMedia+Detail&releaseNumber=13-24-TR&portalName=tc>

⁴⁶ Teck Resources Limited, 2012 Fourth Quarter News Release, p. 19
<http://www.teck.com/Generic.aspx?PAGE=Teck+Site%2fMedia+Pages%2fMedia+Detail&releaseNumber=13-4-TR&portalName=tc>

⁴⁷ Teck Resources Limited, 2013 Second Quarter News Release, p. 18
<http://www.teck.com/Generic.aspx?PAGE=Teck+Site%2fMedia+Pages%2fMedia+Detail&releaseNumber=13-24-TR&portalName=tc>

⁴⁸ Westshore Terminals 2012 Annual Information Form, p. 2 <http://www.westshore.com/pdf/finance/2012/aif.pdf>

Valley and Grand Cache.⁴⁹ However, these contracts leave ample space for Westshore to expand its shipments of U.S. coal. The Teck contract commits Teck to ship not less than 16 million tonnes per year and up to 19 million tonnes per year.⁵⁰ Excluding its plan to reopen the Quintette mine (which would ship through Ridley Terminal)⁵¹, Teck is targeting an expansion from its existing mines of just 3 million tonnes, from 24.7 million tonnes in 2012⁵² to 28 million tonnes per year.⁵³ As Teck ships 1 million tonnes of this coal from Cardinal River mine to Ridley and 2 million tonnes eastbound to the Great Lakes,⁵⁴ that means that Teck's exports through the Vancouver ports could grow by 3 million tonnes to 25 million tonnes per year. These exports will be split between Neptune, which Teck owns and has capacity of 12.5 million tonnes per year (possibly growing to 18.5 million), and Westshore.⁵⁵ With the capacity expansion at Neptune more than adequate to handle all of Teck's planned production, it is clear that Teck will not be increasing its exports through Westshore.

The second-largest shipper is Sherritt International (Coal Valley Resources), which produces thermal coal from 2 mines.⁵⁶ Coal Valley has suspended operations at its Obed mine and projects that its production will decline from 4.4 million tonnes in 2011 to just 3.2 million

⁴⁹ Westshore Terminals 2012 Annual Information Form, p. 6 <http://www.westshore.com/pdf/finance/2012/aif.pdf>

⁵⁰ Ibid.

⁵¹ Teck Resources Limited Annual Information Form, p. 23

<http://www.teck.com/Generic.aspx?PAGE=Teck+Site%2fInvestors+Pages%2fFinancial+Reporting&portalName=tc>

⁵² Teck Q4 2012 Conference call presentation, p. 6

<http://www.teck.com/Generic.aspx?PAGE=Teck+Site%2fInvestors+Pages%2fPresentations+and+Webcasts&portalName=tc>

⁵³ Teck presentation to BMO Global Metals & Mining Conference, February 2013, p. 14

<http://www.teck.com/Generic.aspx?PAGE=Teck+Site%2fInvestors+Pages%2fPresentations+and+Webcasts&portalName=tc>

⁵⁴ Teck Investor Day Coal Business Unit presentation November 2012, p. 21

<http://www.teck.com/Generic.aspx?PAGE=Teck+Site%2fInvestors+Pages%2fPresentations+and+Webcasts&portalName=tc>

⁵⁵ Id at p. 23.

⁵⁶ Sherritt International Corporation Annual Information Form 2012, p. 42 <http://www.sherritt.com/Investor-Relations/Financial-Reports/AIFS-Proxies>

tonnes in 2013.⁵⁷ Coal Valley shipped 2.2 million tonnes through Westshore in 2012 (Coal Valley also exports through Ridley), down from 2.7 million tonnes in 2011. Coal Valley is a high-cost thermal coal producer, reporting cash costs of \$89.97 per tonne in 2013 against a sales price of \$89.74 per tonne.⁵⁸ While Coal Valley has a contract to ship *up to* 3 million tonnes per year, not only is Coal Valley not expanding its exports, it reports that it has just 17.4 million tonnes, or 5 years of life at its existing mine and just 2.6 million tonnes of reserves at the Obed mine.⁵⁹

The third Canadian shipper is Grande Cache, which was acquired by a joint venture of Winsway Coking Coal Holdings Limited (60%), based in Hong Kong, and Marubeni (40%) in March 2012.⁶⁰ Winsway has represented that it plans to expand production from Grande Cache from 1.7 to 3.5 million tonnes per year, but that it will split this capacity between Westshore and Ridley terminals, not ship exclusively through Westshore.⁶¹ As a result, the maximum expansion potential through Westshore would be 1.8 million tonnes per year. Given Winsway large operating losses at Grande Cache⁶² and the lack of any progress in expansion so far, it is not likely that any expansion will actually occur.

Thus, with no increase from Coal Valley, no increase from Teck (any increase would go to Neptune), and no more than a 1.8 million tons increase from Grande Cache (which is highly unlikely), the expansion of capacity at Westshore would be almost totally available to ship U.S. origin coals. As shown on Exhibit 5, the expanded capacity of the terminals in Vancouver will

⁵⁷ Sherritt Q2 2013 Quarterly Report, p. 11 <http://www.sherritt.com/Investor-Relations/Financial-Reports/Quarterly-Reports>

⁵⁸ Sherritt Q1 2013 Quarterly Report, p. 7 <http://www.sherritt.com/Investor-Relations/Financial-Reports/Quarterly-Reports>

⁵⁹ Sherritt International Corporation, 2012 Annual Information Form, pp. 42 - 50 http://www.winsway.com/html/ir_presentations.php

⁶⁰ Winsway Coking Coal Holdings Limited 2012 Annual Report, p. 118 http://www.winsway.com/html/ir_reports.php

⁶¹ Winsway 2012 Results Presentation, pp. 14 - 19 http://www.winsway.com/html/ir_presentations.php

⁶² Winsway 2012 Annual Report, p. 118 http://www.winsway.com/html/ir_reports.php

add the capability to increase total coal shipments over the actual 2012 level by 17 million tonnes per year in 2014 (from 32.5 million tonnes actually shipped in 2012 to capacity of 49.5 million tonnes) and another 6 million tonnes per year with the next expansion of Neptune by 2017. The increased production from the Canadian producers may be up to 5 million tonnes between Teck and Grande Cache (even assuming that Coal Valley does not continue to decline as it has been doing for the last 2 years). That means that at least 12 million tonnes of additional port capacity would be available for increased U.S. coal exports by 2017 and possibly over 20 million tonnes per year if Neptune expands further and Coal Valley declines.

U.S. coal exports already accounted for 7.6 million tonnes through Westshore in 2012, split between Cloud Peak and Signal Peak. While these producers may compete with Arch to expand exports through the Vancouver ports, there is no reason to believe that Arch would not be competitive in this market, given the transportation advantage and the low operating cost of a mine at Otter Creek.

While the NPRC discounts the potential for PRB coal to ship to Asia from the expanded ports in British Columbia, its expert Mr. Power does not agree. In a recent report prepared for the Energy Foundation by Thomas Michael Power and Donovan S. Power, they wrote:

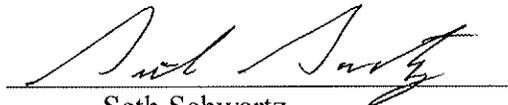
“A major additional expansion of PRB coal sales beyond US domestic markets through exports to Asia largely hinges on the ability of the U.S. to ship PRB coal out of new or expanded ports on the west coast of North America. The proposed coal shipping ports of Longview and Cherry Point together represent some 130 million tons of additional coal shipping capacity. **The Westshore Terminals in Vancouver, BC, plans to expand its export capacity from 24 to 33 million tons and the Port Ridley in northern British Columbia plans an expansion of from 12 to 24 million tons** (*emphasis added*). In addition, Ambre Energy and Kinder Morgan Terminals have proposed a coal export project at the Port of St. Helens upstream from Longview on the Oregon side of the Columbia and an undisclosed company has proposed developing a coal port at Coos Bay, Oregon. Considering only those facilities that have developed detailed plans, the combined new export capacity on the west coast of North America has the potential to exceed 150 million tons of coal per year in the near future. In the analysis below we have

assumed that 140 million tons per year of PRB coal will be exported from west coast ports to Asia by 2025.”⁶³

⁶³ May 2013 Power Report, p. 22 http://www.powereconconsulting.com/WP/assets/GHG-Impact-PRB-Coal-Export-Power-Consulting-May-2013_Final.pdf

VERIFICATION

I, Seth Schwartz, hereby verify under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.


Seth Schwartz

Dated this 9th day of August, 2013

Appendix 2: Strip Ratios of the Wyoming PRB Coal Reserves

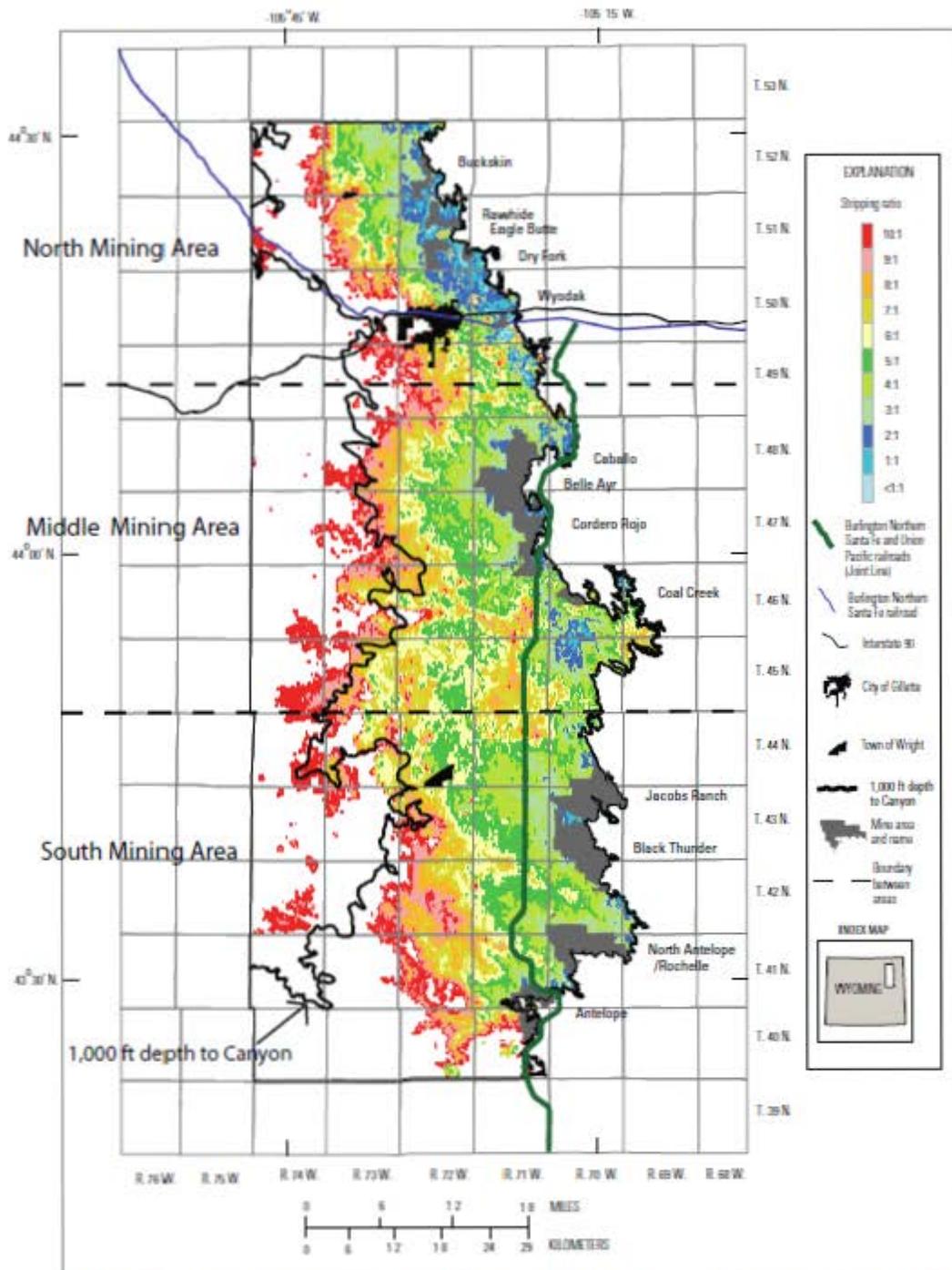


Figure 62. Map showing the stripping ratio for the six coal beds for which reserves were calculated. Waste rock includes the volume of overburden above the uppermost coal bed, volume of rock between coal beds, and volume of partings within the coal bed. Coal includes all coal from the top of the Roland coal bed to the bottom of the Canyon coal bed.

REBUTTAL SS-1

The Impact of Powder River Basin Coal Exports on Global Greenhouse Gas Emissions

A report prepared for

The Energy Foundation

San Francisco, CA

www.ef.org

by

Thomas Michael Power, Ph.D.

Research Professor and Professor Emeritus
Economics Department, The University of Montana

Donovan S. Power, M.S.

Power Consulting, Inc.

920 Evans

Missoula, MT 59801

www.powereconconsulting.com

May 2013

expected to rise by 98 million tons. That is, about 70 percent of the PRB coal exports would represent net additional coal consumption and GHG emissions. Only 30 percent of the PRB exports displace other sources of coal. The 98 million ton increase in annual coal consumption will release about 183 million tons of CO₂. That is the equivalent of the coal consumption and GHG emissions of 14 electric generating plants the size of the Centralia plant in Washington. The Centralia plant has been scheduled for retirement by the Washington state government to reduce GHG emissions.

4. PRB Coal Will Be Highly Competitive in Southeastern Coastal Chinese Markets, Pushing Coal Costs There Downward

Our analysis of the cost of mining an additional 140 million tons of coal in the PRB and shipping it by rail and ship from the proposed new and expanded coal ports on the U.S. and British Columbian west coast found that PRB coal can be delivered at a much lower cost than either domestic Chinese coal or the current major sea-borne exporters of coal to that market, Indonesia and Australia. Using conservative assumptions, PRB coal could, if it had to, undersell current suppliers to the south coast of China by as much as 40 percent.

Given the expected ongoing rapid growth in coal consumption in this coastal market, this means that PRB coal could ultimately export much more coal than the 140 million tons we have considered and drive the cost of coal to this part of the Chinese market much lower than the 12 percent we have calculated. That would increase coal consumption and GHG emissions even more.

We analyzed the incremental costs associated with expanded PRB mining and found that due to the geologic and economic characteristics of that coal (large quantities, thick seams, close to the surface, etc.) annual production can increase with only modest impacts on the cost of production. Substantial increases in PRB coal production can take place without driving the PRB mine mouth coal costs significantly upward. Other studies have confirmed this. Just as important, past coal production in the PRB supports the same conclusion: While PRB coal production has increased many fold over the last four decades, the real mine mouth coal price declined for most of that period and remains the lowest in the country today.

5. Increases in PRB Mine Mouth Coal Prices Will Not Cause a Shift from Coal to Natural Gas in Generating American Electricity because PRB Mine Mouth Coal Prices Represent a Small Part of the Total Cost of Using PRB Coal.

The cost of transporting PRB coal to distant electric generators in the eastern U.S. largely determines the delivered cost of that coal, not the mine mouth price back in Wyoming and Montana. As much as two-thirds of the delivered costs are transportation costs. In addition, increasingly stringent air emission standards being imposed on coal-fired electric generators represent substantial costs that have discouraged the building

The other primary assumption on which the environmental optimism about the impact of coal exports to China is based is that exports to China will drive up coal costs in the United States. Of course, if the supply of coal in the U.S. were fixed and Chinese demand for that coal was not limited by the high cost of most of that coal, Chinese competition to buy that coal would certainly drive up the cost of coal to American customers, possibly to very high levels. But the cost of production for much of America's thermal coal supply does not make it an attractive source to Asia, especially if coal ports on the west coast provide more direct Chinese access to PRB coal. In addition, the coal supply in the United States is *not* fixed. PRB coal companies want to *expand* their coal production in order to export coal to China and other U.S. domestic coal mines that over the last several decades have had to cut back production due to competition from PRB coal would also like to expand production if they could be competitive in Asian or other world markets.

In that setting, how much coal prices would rise in the U.S. as a result of such PRB coal exports would depend on how much more costly it will be to expand production at existing mines and to open up new mines. This is an empirical question that we will explore in detail in this report. Here we will just point out that the PRB contains a very large and very low cost coal resource that has been able to respond to increased demand for its coal by expanding its scale of production many fold over the last several decades while also reducing the real mine mouth price of that coal. In addition, much of the PRB coal supply that in the northern part of the Powder River Basin in Montana has not faced significant development pressure over the last forty years because it was at a transportation cost disadvantage relative to Wyoming coal in reaching the fastest growing American markets. As a result, Wyoming produces ten times as much coal as Montana even though Montana has the larger economic reserves. For exports to Asia from the west coast of North America, Montana coal resources are likely to have the cost advantage.

Another important assumption in the environmentally optimistic view of the impact of PRB exports to China is that it is primarily the mine mouth cost of coal that determines whether coal or natural gas is burned by U.S. electric generators. This too is an empirical question that we will explore in some detail. What we will conclude is that the shift from coal-fired to natural gas-fired electric generation has been underway for many years in the United States despite the relatively low cost of coal and, until recently, the relatively high cost of natural gas as a fuel for electric generation. Changes in the mine mouth cost of the PRB within the range expected due to PRB coal exports will have little or no impact on the fuel choices being made by American electric generators. It is other costs, transportation, capital, environmental, and regulatory, that are driving a shift towards natural gas as the fuel for electric generation that is already well underway.

II. Powder River Basin Coal Exports to China: Resource, Cost, and Competitiveness on the South China Coast

1. The Powder River Basin Coal Resource

The Powder River Basin (PRB) is one of the world's largest deposits of coal. The PRB runs from northeastern Wyoming to southeastern Montana and holds the thickest beds of coal in the United States.¹⁶ The PRB is primarily composed of sub-bituminous coal noted for some of the lowest sulfur content in the country (an average value of 0.48 percent).¹⁷ Although the heat content average (8,800 Btu) is not high, the relative abundance of the coal deposits near or at the surface allow for some of the cheapest mine mouth prices for coal in the entire world. Because the coal deposits are so abundant with relatively small overburdens, surface mining is dominant across the PRB. The PRB has steadily increased its share of the coal market in the United States since it began producing coal in the 1970s. Coal production from the PRB represents about half of all US production (on a Btu basis) and is projected by the Energy Information Administration (EIA) to continue to expand its share of U.S. coal production through 2035.¹⁸

The PRB is estimated by the EIA to have “recoverable reserves” of 162 billion tons.¹⁹ At current mining levels of approximately 500 million tons per year, this coal resource would last more than three centuries.²⁰ With essentially flat coal consumption predicted by the EIA through 2035 for the United States, and energy use per capita predicted to decline, it is not surprising that the major coal producers in the PRB are anxious to secure new customers, including overseas customers, for their coal.²¹

The relatively flat projection of U.S. coal consumption (0.2 percent annual growth) can be juxtaposed to China's coal consumption for electricity that is estimated by the EIA to grow at 3 percent annually through 2035.²² Other sources have China's growth rate for thermal coal consumption as high as 8 percent per year.²³ At a 3 percent growth rate China would double its coal consumption in 24 years and an 8 percent growth rate would double its coal consumption in less than 10 years.

¹⁶ <http://pubs.usgs.gov/pp/p1625a/Chapters/PQ.pdf> and http://www.epa.gov/ogwdw/uic/pdfs/cbmstudy_attach_uic_attach05_powder.pdf

¹⁷ <http://pubs.usgs.gov/pp/p1625a/ES/ESpt2.html>

¹⁸ Annual Energy Outlook 2011 page 85.

¹⁹ David Scott and James Luppens. “Assessment of Coal Geology, Resources, and Reserve Base in the Powder River Basin, Wyoming and Montana.” U.S. Department of the Interior and U.S. Geologic Survey, February 2013.

²⁰ EIA and USGS define “recoverable reserve” and “recoverable resource” differently. In general these measures of available coal take into account restrictions on mining coal deposits, coal mining losses, and represent coal that could be mine if coal prices were high enough and/or technological change reduced the cost of that mining.

²¹ Annual Energy Outlook 2011 page 62 and 63. This comparison is coal use in the electricity sector.

²² <http://www.eia.gov/forecasts/ieo/pdf/0484percent282011percent29.pdf> page 71

²³ <http://resourceinvestingnews.com/21056-chinese-coal-imports-surge.html>

exporting countries. Changes in the relative value of US and Chinese currencies could affect PRB competitiveness. Chinese and other coal suppliers, in response to competition, could improve the efficiency with which they produce their coal. However, given what we know now, it seems highly likely that PRB will be a highly competitive new source of coal to the industrial and population centers on the southeast coast of China.

Many other coal and investment analysts have made calculations that are similar to those presented here, also emphasizing that shipping PRB coal to the southern coast of China could be a very lucrative business.⁴⁹ More tangible evidence of the potential profit that can be made from exporting North American coal to Asia from the west coast is provided by the PRB coal that the U.S. is currently shipping to China. Although Prince Rupert, BC, is 1,900 miles and the Westshore Terminal in Vancouver, B.C. is 1,600 miles from the Spring Creek Mine in Montana, Cloud Peak Energy shipped 4.5 million tons of coal from the PRB to Asia through these west coast ports in 2011.⁵⁰ This very long overland transportation path bypasses the entire west coast of the United States due to the current lack of coal ports there.

The coal ports of Virginia Beach, Virginia, experienced massive delays in 2011 because the port was trying to operate well over capacity, partially to take advantage of the weather-related disruptions in international coal exports from Indonesia and Australia that shifted demand to the United States and other countries.⁵¹ Spurred by over-used port capacity at U.S. ports up and down the eastern seaboard, the major US coal companies began scrambling to ship coal in large volumes out ports on the Gulf of Mexico. “Despite taking more than 45 days to reach Asia, coal shipments from the U.S. have surged into Asia. But with huge queues off the busy East coast ports of Newport News and Baltimore, shippers and producers are developing new capacity out of the Gulf of Mexico.”⁵² By contrast it would take less than half that time (approximately 21 days) to ship coal from the coast of Washington to southeastern China.⁵³

Although the US is shipping coal to China through many different ports right now, and although we can show that it is a lucrative proposition for the coal companies to send PRB coal to China, there currently is no large scale American west coast coal port that allows the relatively close proximity of PRB coal to the west coast and the travel distance advantage of reaching China from the west coast. The existing North American west coast ports in Canada are too crowded and their shipping capacity is too small to accommodate a significant increase in coal exports. If significant volumes of coal from

⁴⁹ <http://www.wusa9.com/news/local/story.aspx?storyid=124286> and <http://daily.sightline.org/2010/12/10/cooooooal-train/> and <http://seekingalpha.com/article/225244-thermal-coal-as-u-s-export-industry>

⁵⁰ Cloud Peak Energy Investor Presentation November 2011.

⁵¹ <http://hamptonroads.com/2011/02/coal-ships-create-sight-hampton-roads-waters>

⁵² <http://www.coalage.com/index.php/features/1087-coal-producers-a-shippers-work-to-increase-export-capacity.html>

⁵³ It takes approximately 20 days to ship coal from the Ridley Terminal in Prince Rupert, BC and come back. It is approximately one day farther from Vancouver, B.C. which we use as a proxy for the Bellingham area than from the Ridley Terminal.

<http://www.ecoalchina.com/english/news/gnmtxw/957746.shtml> Also see: <http://www.cn.ca/en/shipping-china-asia-north-america-coal.htm> .

the PRB are going to move out of North America, new ports will have to be built. If new ports are not built, PRB coal will likely continue to be limited to serving existing U.S. markets which, while projected by EIA to be relatively flat in the aggregate, are likely to support significant additional PRB production.⁵⁴ A major additional expansion of PRB coal sales beyond US domestic markets through exports to Asia largely hinges on the ability of the U.S. to ship PRB coal out of new or expanded ports on the west coast of North America.

The proposed coal shipping ports of Longview and Cherry point together represent some 130 million tons of additional coal shipping capacity.⁵⁵ The Westshore Terminals in Vancouver, BC, plans to expand its export capacity from 24 to 33 million tons and the Port Ridley in northern British Columbia plans an expansion of from 12 to 24 million tons.⁵⁶ In addition, Ambre Energy and Kinder Morgan Terminals have proposed a coal export project at the Port of St. Helens upstream from Longview on the Oregon side of the Columbia and an undisclosed company has proposed developing a coal port at Coos Bay, Oregon. Considering only those facilities that have developed detailed plans, the combined new export capacity on the west coast of North America has the potential to exceed 150 million tons of coal per year in the near future. In the analysis below we have assumed that 140 million tons per year of PRB coal will be exported from west coast ports to Asia by 2025. Stanford University's Program on Energy and Sustainable Development has modeled the market for PRB coal at current ocean shipping costs and concluded that 163 million tons of PRB coal would have been competitive in Asian markets in 2009 if there were no port or other constraints on shipping coal from the west coast.⁵⁷

⁵⁴ EIA projects that in order to meet tightening EPA air quality standards and offset declines in central Appalachian coal production due to rising costs of production, the demand for PRB coal within the US will expand between 2010 and 2035 at a rate of about 10 million tons per year, raising PRB coal production from about 500 million tons per year in 2010 to about 700 million tons in 2035 despite static aggregate coal consumptions levels in the United States.

⁵⁵ The Bellingham Herald reports that the Gateway Pacific terminal could ship 50 million tons at maximum capacity. The Seattle PI reported in internal emails from Ambre (Millennium's corporate parent) revealed that they planned to ship 80 million tons from the proposed port facility.
<http://www.bellinghamherald.com/2011/08/11/2137016/cherry-point-cargo-terminal-could.html> and <http://blog.seattlepi.com/seattlepolitics/2011/03/15/strategic-withdrawal-for-longview-coal-exporter/>

⁵⁶ Slide 15 of Cloud Peak Energy's Annual Stockholder Meeting from 2011 shows that these expansions are underway.

⁵⁷ Asia's Changing Landscape. Richard Morse and Lars Schernikau. World Coal. October 2011.
http://hms-ag.com/fileadmin/user_upload/pdf/2011-10b_WorldCoal_LS_Article_Asian_Coal.pdf. Also see, "US Coal: A Stranded Asset Ready for Export?", presentation at IEA Outlook for Coal Industry and Markets, Richard Morse, April 14, 2011, Beijing. Dated 12/04/2011,
http://www.iea.org/work/2011/WEO_Coal/03_02_MORSE.pdf.

REBUTTAL SS-2



Coal Production 1986

Energy Information Administration
Office of Coal, Nuclear, Electric
and Alternate Fuels
U.S. Department of Energy
Washington DC 20585

This report was prepared by the Energy Information Administration, the independent statistical and analytical agency within the Department of Energy. The information contained herein should not be construed as advocating or necessarily reflecting any policy position of the Department of Energy or any other organization.

Table 6. U.S. Coal Production¹ and Number of Coal Mines by Coal-Producing State and County and Type of Mining, 1986 (Continued)
(Thousand Short Tons)

Coal-Producing State and County	Type of Mining				Total	
	Underground		Surface		Number of Mines	Production
	Number of Mines	Production	Number of Mines	Production		
Missouri (Continued)						
Flandolph	-	-	2	2,676	2	2,676
Vernon	-	-	1	142	1	142
Montana	-	-	8	33,978	8	33,978
Big Horn	-	-	4	18,820	4	18,820
Musselshell	-	-	1	24	1	24
Pichland	-	-	1	237	1	237
Rosebud	-	-	2	14,897	2	14,897
New Mexico	2	753	9	20,743	11	21,496
Colfax	2	753	1	921	3	1,674
McKinley	-	-	3	6,737	3	6,737
San Juan	-	-	5	13,084	5	13,084
North Dakota	-	-	13	25,640	13	25,640
Bowman	-	-	1	1,936	1	1,936
Burke	-	-	1	21	1	21
McLean	-	-	1	5,449	1	5,449
Mercer	-	-	4	11,867	4	11,867
Oliver	-	-	3	6,073	3	6,073
Stark	-	-	1	217	1	217
Ward	-	-	1	63	1	63
Williams	-	-	1	14	1	14
Ohio	13	14,352	160	21,858	173	36,209
Athens	-	-	4	72	4	72
Belmont	2	1,796	10	3,825	12	5,621
Carroll	-	-	7	464	7	464
Columbiana	-	-	21	1,025	21	1,025
Coshocton	-	-	5	1,751	5	1,751
Gallia	1	35	3	466	4	501
Guernsey	-	-	4	219	4	219
Harrison	3	2,199	8	1,269	11	3,467
Hocking	-	-	5	166	5	166
Holmes	-	-	4	453	4	453
Jackson	1	132	9	1,186	10	1,318
Jefferson	-	-	17	2,124	17	2,124
Lawrence	-	-	3	290	3	290
Mahoning	-	-	5	384	5	384
Meigs	2	3,777	-	-	2	3,777
Monroe	1	3,562	-	-	1	3,562
Muskingum	-	-	7	1,341	7	1,341
Noble	-	-	4	3,252	4	3,252
Perry	1	1,750	7	462	8	2,212
Stark	-	-	8	516	8	516
Tuscarawas	-	-	20	1,712	20	1,712
Vinton	2	1,100	7	714	9	1,814
Washington	-	-	1	141	1	141
Wayne	-	-	1	28	1	28
Oklahoma	-	-	18	3,036	18	3,036
Craig	-	-	5	692	5	692
Haskell	-	-	5	541	5	541
Latimer	-	-	1	217	1	217
Le Flore	-	-	1	216	1	216
Pittsburg	-	-	1	134	1	134
Rogers	-	-	4	1,074	4	1,074
Wagoner	-	-	1	161	1	161
Pennsylvania	96	37,167	367	33,398	463	70,564
Allegheny	5	996	2	495	7	1,491
Armstrong	10	3,099	21	1,184	31	4,283
Beaver	-	-	2	169	2	169
Bedford	1	19	2	99	3	118
Blair	-	-	2	403	2	403
Butler	2	393	14	1,972	16	2,365
Cambria	3	1,805	18	2,546	21	4,351
Carbon	-	-	2	141	2	141
Centre	1	676	8	1,031	9	1,707
Clarion	-	-	13	2,692	13	2,692
Clearfield	3	117	56	6,604	59	6,721
Clinton	-	-	4	360	4	360
Columbia	-	-	3	52	3	52

See Footnotes at end of table.

Table 6. U.S. Coal Production¹ and Number of Coal Mines by Coal-Producing State and County and Type of Mining, 1986 (Continued)
(Thousand Short Tons)

Coal-Producing State and County	Type of Mining				Total	
	Underground		Surface		Number of Mines	Production
	Number of Mines	Production	Number of Mines	Production		
West Virginia (Continued)						
Brooke	1	1,024	3	508	4	1,532
Clay	1	27	3	280	4	308
Fayette	5	277	8	1,162	13	1,439
Gilmer	2	263	-	-	2	263
Grant	4	2,229	3	456	7	2,686
Greenbrier	9	590	4	334	13	925
Harrison	6	2,915	14	801	20	3,716
Kanawha	10	3,329	11	2,061	21	5,390
Lewis	2	75	5	208	7	283
Logan	61	7,022	13	3,465	74	10,487
Marion	3	4,685	2	52	5	4,738
Marshall	2	4,184	-	-	2	4,184
Mason	-	-	1	241	1	241
McDowell	58	6,104	6	181	64	6,285
Mineral	2	413	9	371	11	783
Mingo	30	7,750	9	2,418	39	10,169
Monongalia	16	15,181	16	993	32	16,174
Nicholas	29	3,963	22	3,462	51	7,425
Ohio	-	-	2	185	2	185
Preston	12	2,060	26	1,846	38	3,906
Raleigh	22	7,039	4	186	26	7,225
Randolph	13	1,660	2	111	15	1,771
Taylor	-	-	1	30	1	30
Tucker	-	-	2	189	2	189
Upshur	4	1,346	4	417	8	1,763
Webster	6	868	5	960	11	1,828
Wyoming	46	8,913	4	273	50	9,186
Wyoming	1	164	26	136,656	27	136,820
Campbell	-	-	15	111,638	15	111,638
Carbon	1	164	2	1,923	3	2,087
Converse	-	-	2	4,761	2	4,761
Hot Springs	-	-	1	27	1	27
Lincoln	-	-	2	4,034	2	4,034
Sheridan	-	-	1	1,359	1	1,359
Sweetwater	-	-	3	12,914	3	12,914
U.S. Total	1,640	358,949	1,535	526,932	3,175	885,880

¹ Excludes silt, culm, refuse bank, slurry dam, and dredge production except for Pennsylvania anthracite. Excludes mines producing less than 10,000 short tons of coal during the year.

Note: Total may not equal sum of components because of independent rounding.

Source: Energy Information Administration, Form EIA-7A, "Coal Production Report."

REBUTTAL SS-3



DOE/EIA-0125(86/4Q)
Distribution Category UC-98

Coal Distribution January-December 1986

Energy Information Administration
Office of Coal, Nuclear, Electric
and Alternate Fuels
U.S. Department of Energy
Washington, DC 20585

This report was prepared by the Energy Information Administration, the independent statistical and analytical agency within the Department of Energy. The information contained herein should not be construed as advocating or necessarily reflecting any policy position of the Department of Energy or any other organization.

Table 16. Distribution of U.S. Coal by Origin, Destination, and Method of Transportation: January-December 1986
(Thousand Short Tons)

Coal-Producing Region and District of Origin	U.S. DISTRIBUTION								
	Railroad	Water				Truck	Tramway, Conveyor, and Slurry Pipeline	Unknown or Not Revealeable	Total
		River	Great Lakes	Tidewater	Total				
Appalachian Total	193,189	60,032	6,888	7,504	74,423	49,359	27,226	2,732	346,928
District 1	19,225	102	691	100	893	10,183	12,349	452	43,102
District 2	9,282	7,475	746	-	8,221	4,378	-	159	22,041
Districts 3 and 6 ¹	15,293	12,497	618	1,684	14,799	3,721	4,864	86	38,763
District 4	6,920	10,371	59	-	10,430	10,664	7,890	20	35,924
District 7	4,488	1,526	802	218	2,547	153	895	93	8,176
District 8	130,311	24,113	3,971	5,502	33,587	9,231	-	1,739	174,869
District 13	7,327	3,940	-	-	3,940	9,145	1,228	112	21,751
District 24 ²	342	8	-	-	8	1,883	-	70	2,303
Interior Total	93,228	45,359	380	1,015	46,754	34,136	20,608	279	195,005
District 9	13,453	19,133	148	1,015	20,296	4,940	1,843	54	40,586
District 10	34,422	18,934	31	-	18,965	5,103	2,732	70	61,291
District 11	18,210	7,025	201	-	7,227	7,055	120	126	32,738
District 12	13	-	-	-	-	484	-	3	500
District 14	352	-	-	-	-	234	-	24	611
District 15	26,778	267	-	-	267	16,319	15,913	2	59,279
Western Total	171,577	9,316	6,521	-	15,837	19,800	54,147	1,058	262,420
Districts 16 and 17 ¹	11,804	-	-	-	-	4,384	-	193	16,381
District 18	13,414	-	-	-	-	6	18,035	1	31,456
District 19	117,433	8,695	-	-	8,695	7,377	3,372	18	136,895
District 20	6,470	-	-	-	-	4,263	1,982	16	12,731
District 21	3,712	-	-	-	-	3,483	18,660	2	25,857
Districts 22 and 23 ¹	18,744	622	6,521	-	7,143	287	12,098	827	39,099
Districts 1-23² Total	457,652	114,699	13,789	8,519	137,007	101,412	101,981	3,999	802,050
U.S. Total	457,994	114,707	13,789	8,519	137,015	103,295	101,981	4,069	804,353

	FOREIGN DISTRIBUTION						Overseas ³	Total	
	Canada					Truck			Total
	Railroad	Water			Total				
	Great Lakes	Tidewater	Total						
Appalachian Total	401	13,925	289	14,214	28	14,644	67,882	82,526	
District 1	33	127	-	127	14	173	4,624	4,797	
District 2	-	3,820	51	3,870	12	3,882	2,103	5,985	
Districts 3 and 6 ¹	36	3,799	-	3,799	-	3,835	4,348	8,183	
District 4	-	1	-	1	-	1	98	99	
District 7	78	749	7	756	-	835	10,263	11,098	
District 8	13	5,421	41	5,461	-	5,475	38,863	44,338	
District 13	-	-	-	-	-	-	6,734	6,734	
District 24 ²	241	9	190	199	3	443	850	1,293	
Interior Total	-	73	-	73	(*)	73	1,102	1,175	
District 9	-	63	-	63	-	63	392	455	
District 10	-	7	-	7	-	7	195	202	
District 11	-	3	-	3	-	3	261	264	
District 14	-	-	-	-	-	-	251	251	
District 15	-	-	-	-	(*)	(*)	3	3	
Western Total	-	-	-	-	-	-	1,710	1,710	
Districts 16 and 17 ¹	-	-	-	-	-	-	436	436	
District 20	-	-	-	-	-	-	551	551	
Districts 22 and 23 ¹	-	-	-	-	-	-	723	723	
Districts 1-23² Total	161	13,989	99	14,088	25	14,274	69,844	84,118	
U.S. Total	401	13,998	289	14,287	28	14,717	70,694	85,411	

¹ Combined to avoid disclosure of individual company data.

² District 24 is the anthracite-producing district in Pennsylvania. Districts 1-23 represent the total U.S. production of bituminous, subbituminous coal and lignite. See Appendix A for more information.

³ Also includes Mexico.

(*) Quantity is less than 500 short tons.

Note: Total may not equal sum of components because of independent rounding.

Source: Energy Information Administration, Form EIA-6, "Coal Distribution Report."

REBUTTAL SS-4

**BEFORE THE
GEORGIA PUBLIC SERVICE COMMISSION**

IN RE:)
GEORGIA POWER COMPANY'S 2013)
INTEGRATED RESOURCE PLAN AND)
APPLICATION FOR DECERTIFICATION)
OF PLANT BRANCH UNITS 3 AND 4,) **DOCKET NUMBER 36498**
PLANT MCMANUS UNITS 1 AND 2, PLANT)
KRAFT UNITS 1-4, PLANT YATES UNITS)
1-5, PLANT BOULEVARD UNITS 2 & 3,)
AND PLANT BOWEN UNIT 6)

PUBLIC DISCLOSURE

<p>TESTIMONY</p> <p>AND EXHIBITS</p> <p>OF</p> <p>THOMAS POWER, Ph.D.</p>

On Behalf of the

Sierra Club
and
Coosa River Basin Initiative

May 10, 2013

1 **Q. WHAT ECONOMIC FORCES ARE DRIVING THE MINE-MOUTH PRICE OF**
2 **PRB COAL UPWARD AT THAT RATE?**

3 **A.** It is important to point out that my projected Wyoming PRB coal price for 2042
4 and 2052 are 36 and 39 percent below the Wyoming PRB prices implicit in EIA's Annual
5 Energy Outlook 2013 trend line. EIA's PRB real price trajectory implies a mine mouth
6 price of \$30.67 in 2042 and \$36.33 in 2052.

7 The real price increase in my projected Wyoming PRB mine-mouth price is
8 associated with several economic forces:

- 9 • Declining labor productivity in the PRB mines as those mines have to go deeper
10 and deeper to obtain that coal and then haul the extracted coal further for
11 processing and loading.
- 12 • Projected increased costs as the mines expand or relocate requiring the movement
13 of roads and, potentially, railroad lines.
- 14 • Rising labor, fuel, explosives and machinery costs.
- 15 • Increasing competition among PRB mining companies to obtain the most
16 attractive additional coal tracts onto to which to expand or build a new mine. This
17 has led the upfront bonus bids paid to the owner of the coal, which is mainly the
18 Federal Government, which can run to hundreds of millions of dollars, to rise
19 dramatically in recent years.
- 20 • The continuing demand for PRB coal in the southeastern U.S. as is evidenced, for
21 instance, by Georgia Power's proposal to use PRB coal to fuel McIntosh 1.
- 22 • The new demand for PRB coal in export markets *if* port and rail infrastructure are
23 available to facilitate those exports.
- 24 • That demand for PRB coal allows the market price to follow the cost of producing
25 the coal.