

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO

DOCKET NO. 11A-869E

IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF
COLORADO FOR APPROVAL OF ITS 2011 ELECTRIC RESOURCE PLAN

STATEMENT OF POSITION

OF

LESLIE GLUSTROM

NOVEMBER 26, 2012

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I. INTRODUCTION AND SUMMARY

Leslie Glustrom, a party to this proceeding files this Statement of Position in accordance with Decision C12-0882-I in this 11A-869E docket related to Xcel's 2011 Electric Resource Plan. This Statement of Position focuses on coal cost and supply issues.

The electricity produced on Xcel's current Colorado system is about 60% coal,¹ and is expected to remain 45-60% coal through the Resource Acquisition Period ("RAP") and above 35% through 2030.² As a result, understanding coal cost and supply issues is critical for the Commission and for ratepayers who ultimately pay the bills for the decisions made by the Commission. While Xcel's "Boyd" coal study represents a significant improvement over earlier efforts, it still fails to understand the geologic and economic stresses facing the U.S. coal industry, as discussed in the body of this Statement of Position.

To ensure that the Commission makes the most cost-effective decisions for ratepayers and is not caught off guard by future coal cost increases and supply constraints, the Commission is respectfully requested to give careful consideration to Xcel's coal cost projections and take actions to ensure that future ratepayers are not left paying for unexpected increases in coal costs or facing coal supply constraints for Xcel's coal plants.

¹ For Xcel's 2011 Colorado Fuel Mix, see Hearing Exhibit 105 showing 60.25% coal and 24.29% natural gas in 2011.

² For Xcel's projected fuel mix, see Hearing Exhibit 113 under the Energy Mix tab.

II. THE PUC SHOULD NOT ACCEPT XCEL'S COAL COST PROJECTIONS

Xcel has projected its coal costs as rising about 1.5% per year for the 40 year planning period. This is highly unlikely to be an accurate projection and the Commission should reject Xcel's coal cost projections. Coal costs have been increasing about 8% per year since 2004 and are likely to continue increasing at a rate that is much higher than Xcel's projected 1.5% per year.

As noted in Hearing Exhibit 148, when asked in 2006 and 2008 for "all analyses" of future coal supplies, Xcel responded "No such analyses have been conducted," (2006) and "No such analysis conducted by PSCo exists." (2008). That is, until recently, Xcel was not able to provide any analyses conducted of its future coal supplies—a serious oversight for a company that was building an expensive new coal plant (Comanche 3 in Pueblo) and which typically depends on coal for over 50% of its electricity.

A. Xcel Has Repeatedly and Significantly Underestimated Future Coal Costs

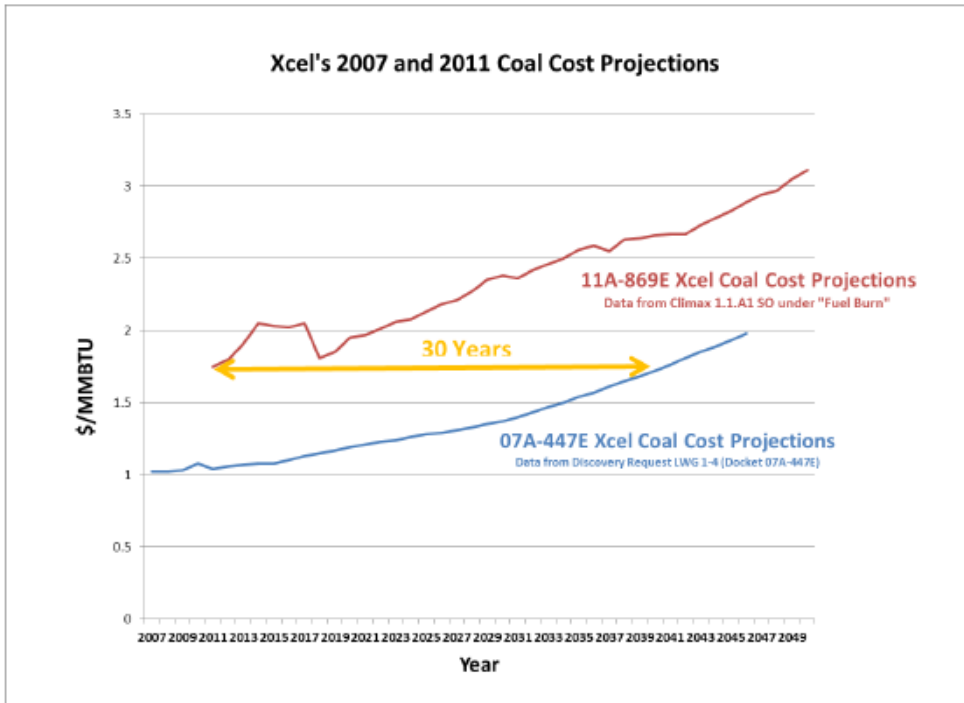
Like the weatherman who always says the weather is "beautiful" no matter how hard it is raining outside, Xcel repeatedly projects that its coal costs will rise under 2% per year—despite the fact that in recent years, coal costs have been rising 9% or more per year.

Figure LWG SOP-1, below, shows Xcel's 2007 and 2011 coal cost projections with both rates of escalation being about 2% per year.

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Figure LWG SOP-1
Comparison of Xcel's 2007 and 2011 Coal Cost Projections

Figure LWG-1
Comparison of Xcel's Colorado Coal Cost Projections in 2007 and 2011
See text for references⁶



From Figure LWG SOP-1, the following can be observed:

- The distance between the blue line and the red line is significant. This is how much the 2007 coal cost projection was adjusted in 2011.
- Both lines slope at about the same rate—or about 2% increase per year.

Xcel has noted that the coal cost projections provided in the 07A-447E docket were only for the Pawnee coal plant and do not form a proper basis of comparison to the 2011 projected costs.³ There are two problems with that:

1) It is now clear that in the 2007 Resource Plan (Docket 07A-447E), Xcel did not provide the Commission with a full view of its coal costs since it only provided a projection that was based on the Pawnee coal plant which has the lowest cost coal on Xcel's Colorado system. At the very least this was not providing the Commission with a full disclosure of Xcel's coal costs.

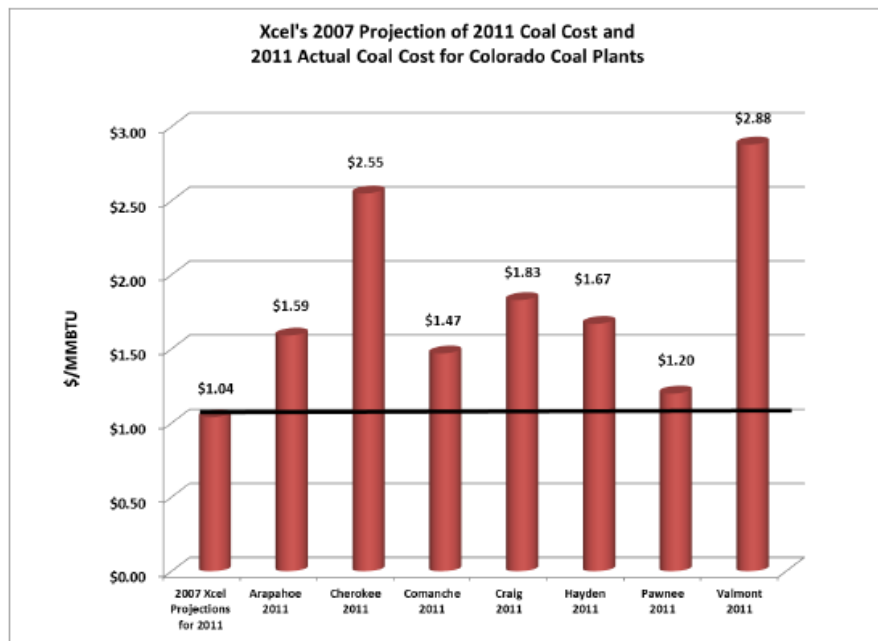
2) Even considering that Xcel's 2007 coal cost projections were only for the Pawnee coal plant, their estimate was still low as shown in the following graph of actual 2011 coal costs by plant (taken from page 15 of Ms. Glustrom's Answer Testimony, Hearing Exhibit 78.)

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³³ See Rebuttal Testimony of Xcel witness Mark Roberts (Hearing Exhibit 48), page 11, line 20 through page 12 line 9.

Figure LWG SOP-2
Xcel's Actual 2011 Coal Costs by Plant
Compared to Xcel's 2007 Projected Cost

Figure LWG-2
Xcel's 2007 Projected Coal Cost for 2011 v
Actual 2011 Coal Costs for Colorado Coal Plants
 2007 Projections from Discovery Response LWG 1-4, Docket 07A-447E (Exhibit LWG-1)
 2011 Actual Coal Costs from Discovery Response LWG 1-6, Docket 11A-869E



From Figure LWG SOP-2 it can be seen that even the cost of coal at the Pawnee coal plant in 2011 (\$1.20/MMBTU)⁴ was substantially above the \$1.04 predicted in the 2007 Resource Plan.⁵ Xcel's actual coal cost for Pawnee in 2011 (\$1.20/MMBTU) was 15% above the \$1.04/MMBTU 2007 projected cost. All of Xcel's other coal plants also

⁴ For Xcel's 2011 coal costs by coal plant, see Hearing Exhibit 132.

⁵ For Xcel's 2007 coal cost projections, see Exhibit LWG-1, attached to Ms. Glustrom's Answer Testimony, Hearing Exhibit 78.

had significantly higher coal costs than the \$1.04 projected in the 2007 Resource Plan as shown in Figure LWG SOP-2 above.

Therefore—even acknowledging that Xcel’s 2007 coal cost projection was only for the Pawnee coal plant—a fact that was not made at all clear in the Resource Plan Volume where the coal cost projection was provided⁶--Xcel’s coal cost projection for the Pawnee coal plant for 2011 was still low—and low by 15%.

B. In this Docket, Xcel Has Projected Future Coal Costs Escalating at Only About 1.5% Per Year

In this 2011 Resource Plan docket, Xcel’s coal cost projections were provided in response to Discovery Request Climax 1-1.A1 SO under the Fuel Burn tab.⁷ (See Exhibit LWG-2 or Hearing Exhibit 113.) They begin with a 2011 coal price of \$1.75/MMBTU and end in 2050 with a coal price of \$3.11/MMBTU. This is a compound annual increase of 1.45%/year⁸ or likely less than the rate of inflation. As discussed below, Xcel’s actual coal costs have been going up over 9% since the 2004-2005 time period when many of Xcel’s long term coal contracts began expiring.

In general, U.S. coal costs have been going up between 8-9% /year on average as detailed for every state that uses coal in Exhibit LWG-3 attached to Ms. Glustrom’s Answer Testimony, Hearing Exhibit 78.

⁶ For further discussion of Xcel’s 2007 coal cost projections, see the Answer Testimony of Leslie Glustrom, Hearing Exhibit 78, page 9, especially Footnote 2.

⁷ All parties to the 11A-869E docket have received copies of Climax 1-1.A1 SO. It is a complex spreadsheet with many tabs that would be difficult to reproduce if it were attached to testimony. Anyone wishing to see a copy of the spreadsheet may contact Ms. Glustrom and she will provide an electronic copy of the spreadsheet.

⁸ Compound annual increase = $100 \times [(\$3.11/\$1.75^{(1/40)}) - 1] = 1.45\%$ (The ^ is a sign for exponentiation or taking the ratio of new/old coal costs to an exponent that equals 1/number of years.)

C. Xcel's Actual Coal Costs Have Been Increasing Over 9% Per Year Since 2004

As explained previously, many of Xcel's long term coal contracts began expiring in 2004 and as this occurred, Xcel's Colorado coal costs began rising steadily with the results summarized for Xcel's Colorado System and its Colorado coal plants in Figure LWG SOP-3, below.

Figure LWG SOP-3 **Xcel's 2004 and 2011 Coal Costs** **Colorado System and by Coal Plant**

Xcel's 2004 Coal Costs by Plant in Hearing Exhibit 106.

Xcel's 2011 Coal Costs by Plant in Hearing Exhibit 132.

Xcel's System Wide Coal Costs in 2004 in Exhibit LWG-1 attached to Hearing Exhibit 78.

Xcel's System Wide Coal Costs in 2011 in Hearing Exhibit 131.

Entity	2004 Coal Cost	2011 Coal Cost	% Increase Per Year⁹
Xcel's Colorado System	\$0.92/MMBTU	\$1.75/MMBTU	9.6% Per Year
Arapahoe	\$0.94/MMBTU	\$1.59/MMBTU	7.8% Per Year
Cherokee	\$1.01/MMBTU	\$2.55/MMBTU	14% Per Year
Comanche	\$0.71/MMBTU	\$1.47/MMBTU	11% Per Year
Hayden	\$1.01/MMBTU	\$1.67/MMBTU	7.5% Per Year
Pawnee	\$0.96/MMBTU	\$1.20/MMBTU	3.2% Per Year
Valmont	\$1.20/MMBTU	\$2.88/MMBTU	13% Per Year

As can be seen in Figure LWG SOP-3, Xcel's coal costs in Colorado have been going up over 9% per year with several plants going up substantially more than that and even the Pawnee plant's coal costs have been going up 3.2% per year—or substantially

⁹ Compound escalation rate calculated using the following formula $100 \times [((2011 \text{ Coal Price}/2004 \text{ Coal Price})^{1/7}) - 1]$ where ^ is the exponentiation function with the exponent being 1/Number of Years of Escalation.)

more than the 1.45% /year coal cost escalation rate that Xcel included in their Strategist Modeling (as found in Hearing Exhibit 113 under the Fuel Mix Tab.)

While no one expects Xcel to build a new coal plant any time soon (or likely not ever again), projecting coal costs accurately is important for several reasons:

- All alternatives are compared to the baseline case which involves significant reliance on coal throughout the coming decades. If coal costs are unrealistically low, it will make the renewable energy alternatives look more expensive than they might otherwise be and it will reduce the fuel cost savings associated with building additional renewable energy.
- Unless the Commission dictates otherwise, the practice in future dockets (e.g Renewable Energy Compliance Plans, energy efficiency dockets, “opportunistic” acquisition of renewable energy etc.) has been to use the fuel cost projections approved in the most recent Resource Plan. Therefore, getting coal cost projections wrong in a Resource Plan can unduly bias many future dockets
- As coal costs mount significantly, it is imperative that the Commission use realistic coal cost estimates so that it can avoid making unwise investments in coal plants that are justified by unrealistically low projections of future coal costs.
- In general, Xcel’s modeling fails in significant ways to comply with the Legislature’s clear direction to give “the fullest possible consideration” to clean energy and energy efficient technologies. By doing the following, Xcel significantly biases its modeling results to favor investments in fossil fuel resources—just the opposite of what the Legislature has directed:

- Failing to account for the undisputable external costs of fossil fuels except in “sensitivity” runs.
- Escalating coal costs at a very low rate that doesn’t match recent experience
- Discounting future fuel costs aggressively by using Xcel’s Weighted Average Cost of Capital (e.g. 7.069%)¹⁰ and greatly diminishing the very significant fuel cost savings that come from making investments in renewable energy.

The significant increases in Xcel’s coal costs since its long term coal contracts began expiring in 2004 is shown below in graphic form in Figure LWG SOP-4.

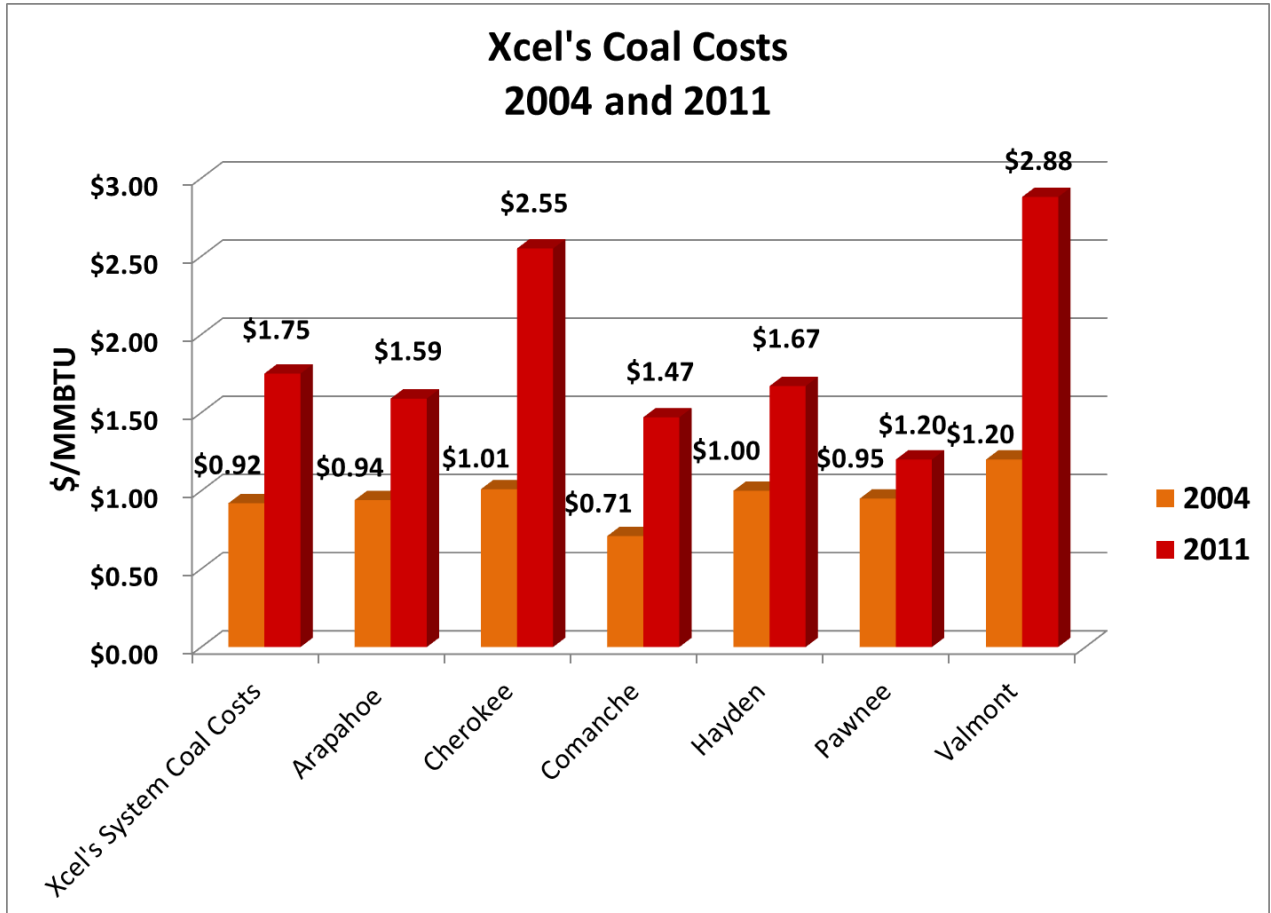
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¹⁰ The practice of discounting future fuel costs is discussed at length in the Statement of Position of Ratepayers United of Colorado .

Figure LWG SOP-4

Xcel's Coal Costs 2004 and 2011

(Data from Hearing Exhibits 78, 106, 131 and 132)¹¹



D. 2012 Coal Prices So Far for Xcel's Colorado Coal Plants Are Significantly Higher Than 2011 Prices

Xcel's 2012 coal costs through July (the most recent month available at the time of the hearing in this docket) can be found in Hearing Exhibit 133, in the "Fuel Cost" column in cents/MMBTU. It can be seen that 2012 coal costs for Xcel's Colorado plants

¹¹ Historical Xcel system coal cost from Answer Testimony of Leslie Glustrom, Exhibit LWG-1 (Hearing Exhibit 78. Historical coal cost by power plant from Hearing Exhibit 106. 2011 Xcel system coal cost from Hearing Exhibit 131. 2011 coal cost by plant from Hearing Exhibit 132. For those that care, 2009 and 2010 coal cost by plant (except Comanche) is in Hearing Exhibit 150. 2008 coal cost data is not in the record in this docket but can be found in Docket 10M-245E for those that want a complete record.

are generally running significantly higher than the 2011 coal costs by plant found in Hearing Exhibit 132. If coal costs were only going up about 1.5% per year as projected by Xcel, then coal costs should only increase about 1.5 cents per year for every dollar of coal costs (e.g. generally less than 3-4 cents/year/MMBTU since Xcel's 2011 coal costs were in the \$1-\$3/MMBTU range.)

A review of Hearing Exhibit 133 shows coal cost increases that are generally much more than 3-4 cents/MMBTU. This is especially true for Xcel's largest coal plants—the Pawnee coal plant in Brush and the Comanche plants in Pueblo.

While final 2012 coal costs cannot be calculated until the end of the year, it seems unlikely that the steep increases in coal costs seen since 2004 will terminate in 2012.

As discussed in the Answer Testimonies of Ms. Glustrom, Mr. Sanzillo and Dr. Selvans, (Hearing Exhibits 78, 79 and 80) there are many reasons for the increased costs of coal in recent years, including increased production costs, increased transportation costs and increased export pressure.

While the costs of fossil fuels are always the result of complex forces of supply and demand and no one can be certain of what the future holds, there is good reason to believe that coal costs will increase by more than the 1.45%/year that Xcel has projected in this docket.

E. Xcel Has Not Presented the Commission With Updated Information on the Status of Key US Coal Companies, Including Coal Companies Providing Coal to Xcel's Colorado Coal Plants

Many U.S. coal companies are experiencing serious financial distress caused in part by increasing production costs, declining profit margins and inability to refinance

their debt—even at rates above 9%. Bankruptcy is a very real threat for several coal companies in the next 5-10 years—including for coal companies that are key suppliers of Xcel.

Xcel failed to inform the Commission of these recent changes in the U.S. coal industry—a significant oversight given Xcel’s heavy reliance on coal. While Xcel could change coal suppliers, all the companies are subject to similar geologic and financial considerations that are or could very likely greatly weaken the financial condition of these companies.

As the financial condition of coal companies weakens either they could go bankrupt—calling into question future supplies of coal for coal plants around the country, including Xcel’s Colorado coal plants or the coal companies could significantly increase the price of coal—which of course will drive up costs to ratepayers who currently pay all fuel costs for Xcel’s Colorado system.

Examples of the financial challenges facing the US coal industry can be found in the following Hearing Exhibits:

- **Hearing Exhibit 78, Exhibit LWG-4:** Patriot coal was teetering on the edge of bankruptcy because it could not obtain financing to meet its 2013 debt maturities.
- **Hearing Exhibit 134:** Alpha Natural Resources, a key supplier to Xcel’s Pawnee and Comanche plants,¹² declared \$2.2 billion in losses in the second quarter of 2012.
- **Hearing Exhibit 135:** On September 18, 2012, Alpha Natural Resources announced a “Strategic Repositioning” plan that involved cut backs in production

¹² See Hearing Exhibit 133 for current coal suppliers to Xcel’s Colorado coal plants.

(including from Alpha Natural Resources Eagle Butte and Belle Ayr mines in the Powder River Basin that supply significant amounts of coal to the Pawnee and Comanche coal plants) and the reduction of approximately 1,200 positions in the company, or about 9% of Alpha Natural's workforce.

- **Hearing Exhibit 136:** Alpha Natural attempted to refinance 2015 debt notes that were outstanding at 3.25% to senior notes at 9.75% that would be due in 2018 but only 18.6% of the 2015 notes were exchanged for the 9.75% 2018 notes. This is likely a sign that the market—despite the opportunity to earn 9.75%-- lacks confidence that Alpha Natural will be able to repay the 2018 notes
- **Hearing Exhibit 147:** Arch Coal (owner of the Black Thunder mine in Wyoming and a supplier to the Arapahoe coal plant) reported its third quarter results which included \$388 million in losses in the first nine months of 2012 and margins on its Powder River Basin coal mines (including the country's largest coal mine, the Black Thunder) of about \$1.28 per ton. Profit margins on Arch's Powder River Basin mines in the second quarter of 2012 were less than \$1/ton. When profit margins become negative (as they have for Alpha Natural's eastern coal mines)¹³ then the company is in serious financial trouble.

¹³ For a discussion of Alpha Natural's production costs and thinning and disappearing profit margins, see the Answer Testimony of Leslie Glustrom (Hearing Exhibit 78) and the Exhibits attached to that Testimony, particularly LWG-5 and LWG-6. For example on page 69 of LWG-5 we can see that for Alpha Natural's eastern coal operations, it cost approximately \$80/ton to mine the coal in 2011, but (from page 67 of LWG-5) Alpha Natural was only able to sell the coal for about \$67 per ton—or a loss of about \$13 on every ton of coal mined. Similar negative margins can be seen for Alpha Natural's eastern coal on pages 41 and 42 of LWG-6.

F. Financial Results of US Coal Companies Should Carry More Weight Than Consultant Projections

Xcel's "Boyd" study on coal costs (Exhibit MWR-1, Hearing Exhibit 48) is done by a consulting firm that does not actually mine coal. Projections by a consulting company that depends on fees from the mining companies and utilities should be given less weight than the actual financial results reported by mining companies that provide coal to Xcel as discussed above.

G. Boyd Projections of Costs Are Already Questionable

On page 4-13 of Xcel's Boyd Study (Exhibit MWR-1), the Boyd company predicts that production costs at the Eagle Butte mine will be \$10.86 in 2015 while the owner of the Eagle Butte mine, Alpha Natural Resources projects (see Hearing Exhibit 134, page 5) that production costs for its western mines (including the Eagle Butte mine) will range from \$10.50-\$11.50 in 2012. Thus it appears that already the projections made in the Boyd study are suspect for key mines (Eagle Butte and Belle Ayr) that provide coal to Xcel's Pawnee and Comanche coal plants.

III. RECOMMENDATIONS

Given the importance of coal to Xcel's Colorado system and to Xcel's analysis of future costs and alternative investments, the Commission is respectfully requested to do the following:

- Reject Xcel’s coal cost projections as unrealistically low and instead require Xcel to run modeling runs with coal cost sensitivities of 5% and 10% per year increases.

- Require Xcel to file Annual Reports from on coal cost and supply issues including the following:
 - Coal costs by plant and for Xcel’s Colorado system

 - Annual increase (or decrease) in coal cost by plant and for Xcel’s Colorado system.

 - A list of coal suppliers by plant

 - A discussion of the financial condition of the suppliers to Xcel’s Colorado coal plants

 - A discussion of any coal cost or supply issues faced by Xcel during the previous year

 - A discussion of the projected coal cost and supply issues for the coming year

 - Any other issues that Xcel believes the Commission should know about or that the Commission requests information on.

- As discussed in the Statement of Position of Ratepayers United of Colorado, the Commission should undertake a review of the practice of discounting future fuel costs at Xcel's Weighted Average Cost of Capital when Xcel does not ultimately pay fuel costs—ratepayers do.

SUMMARY

Xcel has projected its coal costs as rising about 1.45% per year for the 40 year planning period. This is highly unlikely to be an accurate projection. The Commission should reject Xcel's coal cost projections and require, at the very least, sensitivity runs that involve coal escalating 5-10% per year. In addition, the Commission should begin more careful oversight of coal cost and supply issues to ensure that Xcel and its ratepayers are not caught off guard by the changes that are occurring in the U.S. coal industry.

Respectfully submitted this 26th day of November 2012,

/s/Leslie Glustrom

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CERTIFICATE OF SERVICE

I, Leslie Glustrom, do hereby certify that a copy of this **STATEMENT OF POSITION** was filed through the Colorado PUC E-Filing system for the 11A-869E docket and a courtesy copy was provided to the parties by e-mail on this 26th day of November 2012 by Leslie Glustrom.

/s/ Leslie Glustrom

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