

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO**

**DOCKET NO. 21A-0141E**

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IN THE MATTER OF THE APPLICATION OF PUBLIC SERVICE COMPANY OF COLORADO  
FOR APPROVAL OF ITS 2021 ELECTRIC RESOURCE PLAN AND CLEAN ENERGY PLAN

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MOTION TO INTERVENE OF LESLIE GLUSTROM

April 30, 2021

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Leslie Glustrom, a Public Service Company of Colorado (“PSCo” or “Xcel”) customer and stockholder and long-time Colorado Public Utilities Commission (“PUC”) intervenor and participant hereby files for intervention in the above captioned docket related to the 2021 Electric Resource Plan (“ERP”) for PSCO.

**LEGAL BACKGROUND**

**A. Colorado Statutes Allow For Intervenors Who Are “Interested in Or Affected By”  
Commission Orders to Intervene and to Represent Themselves**

1) The statutory standard for intervention, C.R.S. § 40-6-109 (1), is reproduced below with the key statutory standard for intervention rendered in bold. This standard is found in the phrase after the second “and” which is underlined. Colorado law also makes clear that interested parties are entitled to be heard at the PUC “in person or by attorney,”

**C.R.S. § 40-6-109 (1)** At the time fixed for any hearing before the commission, any commissioner, or an administrative law judge, or, at the time to which the same may have been continued, the applicant, petitioner, complainant, the person, firm, or corporation complained of, and such persons, firms, or corporations as the commission may allow to

**intervene and such persons, firms, or corporations as will be interested in or affected by any order that may be made by the commission in such proceeding and who shall have become parties to the proceeding shall be entitled to be heard, examine and cross-examine witnesses, and introduce evidence.** A full and complete record of all proceedings had before the commission, any commissioner, or an administrative law judge in any formal hearing and all testimony shall be taken down by any reporter appointed by the commission or, as deemed appropriate by the commission, a commissioner, or an administrative law judge, as applicable, recorded electronically. **All parties in interest shall be entitled to be heard in person or by attorney.** [Underlining and emphasis added]

## **B. Under Colorado Law, the Participation of the Office of Consumer Counsel in PUC**

### **Proceedings Can Not Be Used to Limit the Right of Others to Intervene**

2) Colorado Statutes CRS 40-6.5-104 (2) is copied below and makes it clear that the participation of the Office of the Consumer Counsel (“OCC”) in PUC proceedings can not “limit the right of any person, firm or corporation to petition or make complaint to the commission or otherwise intervene in proceedings or other matters before the commission.”

**CRS § 40-6.5-104(2)** In exercising his discretion whether or not to appear in a proceeding, the consumer counsel shall consider the importance and the extent of the public interest involved. In evaluating the public interest, the consumer counsel shall give due consideration to the short- and long-term impact of the proceedings upon various classes of consumers, so as not to jeopardize the interest of one class in an action by another. If the consumer counsel determines that there may be inconsistent interests among the various classes of the consumers he represents in a particular matter, he may choose to represent one of the interests or to represent no interest. **Nothing in this section shall be construed to limit the right of any person, firm, or corporation to petition or make complaint to the commission or otherwise intervene in proceedings or other matters before the commission.**

### **C. PUC Rule 1401 (c) Provides the Commission's Standards for Permissive Intervention**

3) PUC Rule 1401 (c), is reproduced below and sets the Commission's standards for permissive intervention including:

- a) Stating the specific interest that justifies intervention
- b) Demonstrating why the filer is positioned to represent the interest in a manner that will advance the just resolution of the proceeding
- c) Demonstrating that the proceeding may substantially affect the pecuniary or tangible interests of the movant (or those it may represent)
- d) Demonstrating why the interests of the intervener would not otherwise be adequately represented.
- e) Discussing why the intervener's interest is not adequately represented by the OCC

Ms. Glustrom will address these requirements below.

#### **4 CCR 723-1 Rule 1401 (c)**

- (c) A motion to permissively intervene shall state the specific grounds relied upon for intervention; the claim or defense within the scope of the Commission's jurisdiction on which the requested intervention is based, including the specific interest that justifies intervention; and why the filer is positioned to represent that interest in a manner that will advance the just resolution of the proceeding. The motion must demonstrate that the subject proceeding may substantially affect the pecuniary or tangible interests of the movant (or those it may represent) and that the movant's interests would not otherwise be adequately represented. If a motion to permissively intervene is filed in a natural gas or electric proceeding by a residential consumer, agricultural consumer, or small business consumer, the motion must discuss whether the distinct interest of the consumer is either not adequately represented by the OCC or inconsistent with other classes of consumers represented by the OCC. The Commission will consider these factors in determining whether permissive intervention should be granted. Subjective, policy, or academic interest in a proceeding is not a sufficient basis to intervene. Anyone desiring to respond to the motion for permissive intervention shall have seven days after service of the motion, or such lesser or greater time as the Commission may allow, in which to file a response. The Commission may decide motions to intervene by permission prior to expiration of the notice period.

#### **D. Under Existing Law, Ms. Glustrom Has Been Granted Intervention in Over 15 Colorado PUC Proceedings**

4) Under existing statutory law, Ms. Glustrom has previously been granted intervention in the following dockets at the Colorado PUC:

05A-072E Comanche-Daniels Park Transmission  
07A-107E/07A-196E 2013 Contingency Plan/Tri-State Gas Contracts  
07A-421E Pawnee Smoky Hill Transmission  
07A-521E Interruptible Service Option Credit  
07A-447E Xcel 2007 Resource Plan  
07A-469E Fort St. Vrain Turbines  
08S-520E Xcel 2009 Rate Increase  
09AL-299E Xcel 2010 Rate Increase  
09A-772E Xcel 2010 Renewable Energy Compliance Plan and Windsource  
10A-124E Xcel Smart Grid CPCN  
10A-377E Xcel Amendment to 2007 Resource Plan  
10M-245E Clean Air Clean Jobs  
11A-135E Xcel Solar Rebate Program Restart  
11A-325E Xcel Pawnee Emissions Control Plan  
11A-418E Xcel 2012 Renewable Energy Standard Compliance Plan  
11A-869E Xcel 2011 Resource Plan  
11A-917E Xcel Hayden Pollution Control Plan  
11A-1001E Smart Grid City Cost Recovery  
19AL-0268E PSCo 2019 Rate Case

5) While Colorado law related to PUC intervention hasn't changed anytime in this century, former PUC Chairman Josh Epel decided in 2012 (after Ms. Glustrom's interventions

had contributed to Xcel losing many tens of millions of dollars of cost recovery in 2010 and 2011)<sup>1</sup> to deny Petitions to Intervene from Ms. Glustrom. Since then certain PUC Staff have spent many hours writing opinions designed to keep Ms. Glustrom from intervening in PUC proceedings.

6) As seen above, the PUC once again granted Ms. Glustrom full intervention in the Xcel 2019 Rate Case (19AL-0268E) and that did not lead to any disruption of the PUC proceeding but did provide additional information and perspective for the Commission to consider.

7) Intervention is critical in order to fully understand the options before the Commission and ensuring information and assertions are accurate through asking discovery questions and through submitting testimony that will go through the adjudicated process and cross examination and be entered into the formal record.

#### **ARGUMENT RELATED TO ISSUES MS. GLUSTROM INTENDS TO ADDRESS**

8) Ms. Glustrom will provide information related to the five requirements of PUC Rule 1401(c) as summarized below.

- a) Stating the specific interest that justifies intervention
- b) Demonstrating why the filer is positioned to represent the interest in a manner that will advance the just resolution of the proceeding
- c) Demonstrating that the proceeding may substantially affect the pecuniary or tangible interests of the movant (or those it may represent)
- d) Demonstrating why the interests of the intervener would not otherwise be adequately represented.
- e) Discussing why the intervener's interest is not adequately represented by the OCC

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<sup>1</sup> See particularly Colorado PUC Proceedings 09AL-299E (Cost Recovery for Pueblo Unit 3) and 11A-1001E (Smart Grid Cost Recovery).

**A. Ms. Glustrom is Positioned to Advance Her Specific Interests in a Manner That Will Advance the Just Resolution of This Proceeding While Other Intervenors Have Not Previously Provided Significant Testimony on These Interests at the Colorado PUC**

9) The intervention stage is early in a proceeding and it isn't possible at this point to determine all of the issues that Ms. Glustrom will address during the consideration of Xcel's 2021 Electric Resource Plan, but there are two issues that have received almost no attention previously from other PUC parties but for which Ms. Glustrom has repeatedly brought detailed information before the Colorado PUC. Those two issues are:

- a) coal cost and supply issues and
- b) discount rate.

These issues will be discussed below in a way that will indicate why Ms. Glustrom "is positioned to represent the interest in a manner that will advance the just resolution of the proceeding." (Rule 1401 (c))

**1. Coal—Information Provided by Xcel's Coal Expert is Missing and Misleading**

10) The disposition of Xcel's remaining Colorado coal plants is clearly at issue in this 2021 Xcel Electric Resource Plan as shown in Table AKJ-D-2 copied below from page 33 in Xcel witness Alice Jackson's Direct Testimony, Hearing Exhibit 101.

**Table AKJ-D-2**

Portfolio	SCC 1	SCC 2	SCC 3	SCC 4	SCC 5	SCC 6	SCC 7	SCC 8
<b>Resource Need:</b>	ERP	CEP	CEP	CEP	CEP	CEP	CEP Preferred	CEP
<b>Pawnee Action:</b>	Retire EOY 2041	Retire EOY 2028	Retire EOY 2028	Convert Nat Gas EOY 2027	Convert Nat Gas EOY 2027	Convert Nat Gas EOY 2027	Convert Nat Gas EOY 2027	Convert Nat Gas EOY 2024
<b>Comanche 3 Action:</b>	Retire EOY 2069	Retire EOY 2029	Retire EOY 2039 Red Ops	Convert Nat Gas EOY 2027	Retire EOY 2029	Retire EOY 2039	Retire EOY 2039 Red Ops	Retire EOY 2039 Red Ops
<b>Average Annual Rate Impact</b>								
1 2024-2030 (%)	2.1%	3.1%	2.8%	2.8%	2.9%	2.4%	2.6%	2.5%
2 2024-2040 (%)	1.5%	1.5%	1.6%	1.5%	1.5%	1.6%	1.5%	1.6%
3 2024-2055 (%)	1.7%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%

11) In the table above it can be seen that the eight Social Cost of Carbon (“SCC”) portfolios are largely determined by the options for the disposition of Xcel’s last two and largest coal plants—the 505 MW Brush coal plant which Xcel calls “Pawnee,” and the 750 MW<sup>2</sup> Unit 3 coal plant in Pueblo which Xcel calls “Comanche 3.”

12) It is axiomatic that to function as a coal plant, the plant needs a supply of coal. Yet, all too often, Xcel assumes that if they want to burn coal (e.g. to the end of 2039), then they can assume the coal will show up for as long as they want it to. As discussed further below, this is not a good assumption given that coal is a non-renewable resource, the US coal industry is almost certainly in structural decline, mines are playing out and are highly unlikely to be expanded or replaced in the coming 10 years. As a result, coal supplies to 2040 are highly questionable and even 2030 (and 2025) are uncertain.

13) Ms. Glustrom has many times provided detailed information on coal cost and supply issues to the Colorado PUC.<sup>3</sup> Below is a discussion of the kind of information on coal supply that she will bring to the PUC as part of this proceeding—information that, to the best of Ms.

<sup>2</sup> Capacity of coal plants is “dependable capacity” from page 123 in AKJ-2(Hearing Exhibit 101)

<sup>3</sup> For examples of coal cost and supply information submitted by Ms. Glustrom to the Colorado PUC see Ms. Glustrom’s testimony and statements of position in proceedings 07A-447E, 10M-245E, 11A-325E, 11A-869E, 11A-917E and 16A-0396E.

Glustrom’s knowledge, no other intervener has ever provided in the past or has the knowledge and experience to do so in this proceeding.

14) From Table AKJ-D-2 reproduced above, it is clear that Xcel’s preferred “Colorado Energy Plan (“CEP”) using a Social Cost of Carbon (“SCC”) is Portfolio SCC 7 which would continue to burn coal at Pueblo Unit 3 until the end of 2039 (with reduced operations during the 2030s). Cutting the expected life span of Pueblo Unit 3 in half (from 2070 to 2039) is a step in the right direction in light of Colorado’s carbon reduction goals, but Xcel’s assumption that there will be a reasonably priced supply of coal available until the end of 2039 is not a good assumption.

15) Information on fuel supplies, including coal deliveries, to most US power plants can be found in what is called the EIA 923 database found at [www.eia.gov/electricity/data/eia923/](http://www.eia.gov/electricity/data/eia923/), in Sheet 5. At the time of writing this Motion to Intervene, the most recent data available in the EIA 923 database was for February 2021. Referencing that data for the Pueblo coal plants, February 2021 coal deliveries to the Pueblo (“Comanche”) coal plants were as follows:

**February 2021—Pueblo Coal Deliveries to Pueblo “Comanche” Plants**

Black Thunder Coal Mine (Arch Resources)	147,741 tons
Belle Ayr Coal Mine (Eagle Specialty Materials) <sup>4</sup>	82,295 tons <sup>5</sup>

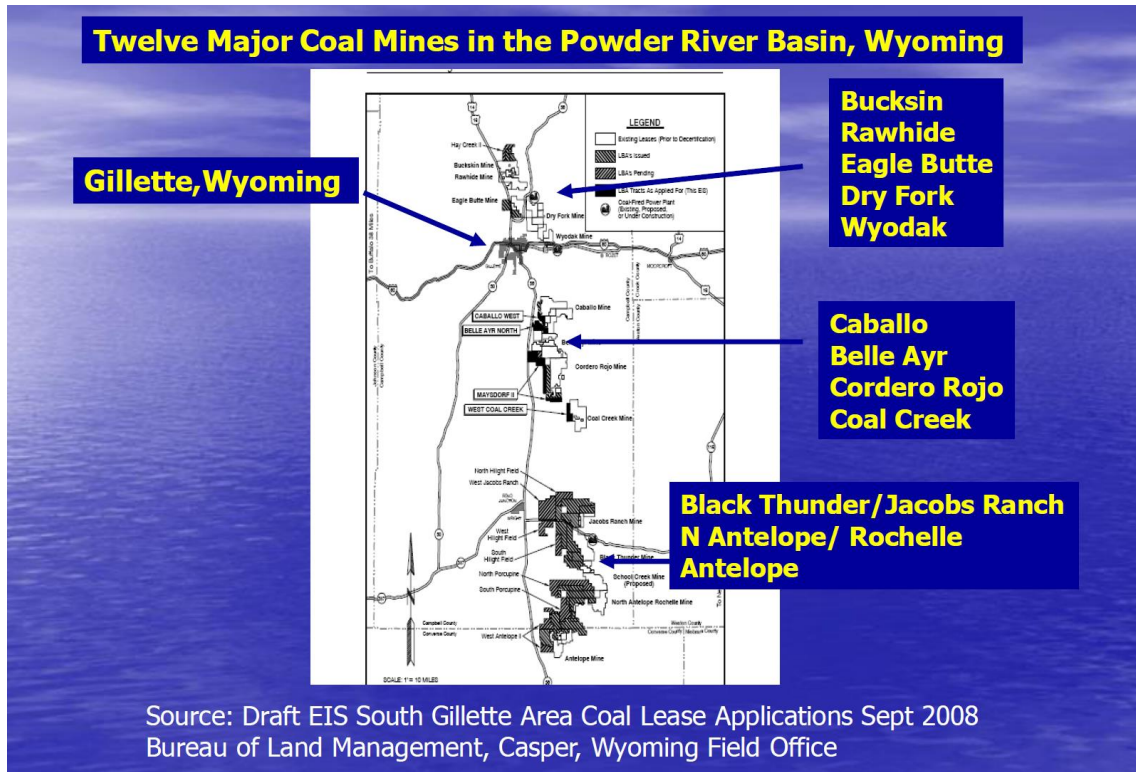
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<sup>4</sup> For Eagle Specialty Materials taking over the Belle Ayr and Eagle Butte mines in October 2019 see [https://www.gillette newsrecord.com/news/article\\_621f8de5-6a7f-5023-a4f7-481685120b0f.html](https://www.gillette newsrecord.com/news/article_621f8de5-6a7f-5023-a4f7-481685120b0f.html) . Note that the previous owner, Contura, paid ESM \$90 million to take over the two mines. Yes—the “seller” paid the “buyer” to take the mines—because the mines carry a reclamation obligation of over \$200 million. Contura took the mines back from the previous owner Black Jewel after Black Jewel filed for bankruptcy in 2019. Contura took the mines originally from Alpha Natural Resources which filed for bankruptcy in 2015, then Contura transferred the mines to Black Jewel in 2017. So the sequence was Alpha Natural to Contura (2016) to Black Jewel (2017) to Contura (2019) to Eagle Specialty Materials (2019). Multiple changing of hands for the Belle Ayr coal mine is yet another indication of structural decline in the US thermal coal industry as reclamation obligations exceed profit potential.

<sup>5</sup> Coal delivery data from February 2021 EIA 923 preliminary data for “Comanche” plants, plant number 470, is found at <https://www.eia.gov/electricity/data/eia923/> (See Sheet 5)



16) There are twelve mines in the Powder River Basin (until the Coal Creek mine closes in 2022).<sup>6</sup> A PPT slide with a map showing these mines is below.



17) Xcel has filed a coal supply analysis as “AKJ-2, Technical Appendix, Attachment F.” The cover page of the coal analysis is copied below showing a date of March 2021—yet, as described below, the analysis fails to report very important developments that occurred prior to March 2021. As a result, the coal supply analysis presented by Xcel to the PUC is incomplete and very misleading.

<sup>6</sup> See <https://www.wyofile.com/another-blow-to-coal-arch-to-close-coal-creek-mine-in-2022/>

**Coal Resource Study for the Colorado Public  
Utilities Commission**

For

**Public Service Company of Colorado**

March 2021

**Colorado PUC E-Filings System**

Prepared by  
Burnham Coal, LLC  
Denver, Colorado

18) There are numerous omissions and misleading statements in the Burnham Coal Study (Appendix F to AKJ-2, hereafter “Burnham Coal Report.”) A few will be described below as examples of the “interests” and evidence that Ms. Glustrom will bring before the Commission in this proceeding—information that to the best of her knowledge, no other party has brought before the Commission in the over 15 years that Ms. Glustrom has been involved at the Colorado PUC.

19) As explained above, a key provider of coal to the Pueblo coal plants is the Black Thunder mine owned by Arch Resources. The full description from the Burnham coal report of the financial assessment of Arch Resources is reproduced below for reference.

## Financial Assessment of PSCO's Primary Coal Suppliers

### Arch Resources

Arch is the US's second largest coal producer, selling 63 MT of coal in 2020. Coal is produced at eight mines in four of the country's coal producing regions: Appalachia, Illinois Basin, Powder River Basin and the Western Bituminous region.

Arch's strategic plan is to "pivot" from its "legacy" thermal assets towards its steel and metallurgical assets. As part of this plan Arch has contributed its share of the Viper mine, in Illinois, to Knight Hawk coal shedding mine closure liabilities totaling \$21 million. Arch's remaining thermal assets are its PRB mines and the West Elk mine in Colorado. Arch's plan to reduce its operational footprint in the PRB is to accelerate the closure and final reclamation of the Coal Creek mine. The mine will ship on its existing contracts in 2021 before beginning final closure of the mine's active pit in 2022. To accomplish this, 40 employees plus equipment have been transferred from the Black Thunder mine to Coal Creek to accelerate ongoing reclamation. Black Thunder will continue to operate with cash flow being directed toward funding final reclamation of the mine. No plans for the West Elk mine have been announced. As this is being done, Arch is exploring strategic alternatives for these assets.

In June 2019, Arch and Peabody entered into an agreement to combine their PRB and Colorado assets in a joint venture. The joint venture was to be 66.5% owned by Peabody and 33.5% owned by Arch. Peabody was to be the operating partner. In September 2020, a US District Court upheld a Federal Trade Commission decision to block the joint venture.

In July 2015, Arch tried to restructure their highly leveraged balance sheet with an exchange offer. Arch was saddled with debt since its 2011 acquisition of International Coal Group and was suffering from a sharp drop in coal prices, stricter pollution controls, falling demand from China and increasing competition from natural gas. In January 2016, Arch filed for Chapter 11 bankruptcy protection with a plan to cut \$4.5 billion in debt from its balance sheet during a prolonged downturn in the coal industry.

During its bankruptcy, Arch continued to operate and supply coal to its customers.

Arch exited bankruptcy in October 2016 and reported a profit of \$238.5 million and an Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) of \$417.8 million in 2017. Arch reported a profit of \$233.8 million with an EBITDA of \$363.2 million. In 2020, the net profit dropped to -\$344.6 million with an EBITDA of \$23.7 million.

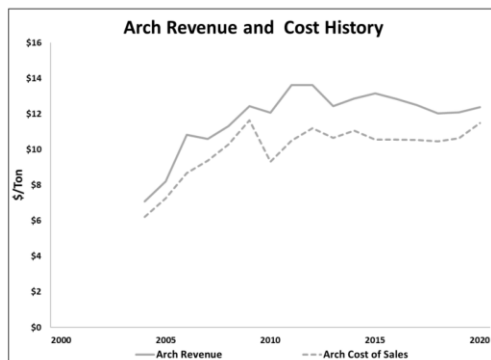
Prior to its bankruptcy, reclamation bonds at Arch's Wyoming mines were self-bonded. These bonds are now covered by surety bonds.

Arch is a long-time producer in the PRB, having purchased the Black Thunder and Coal Creek mines, along with other coal assets held by ARCO, for \$1.14 billion, in 1998. At the time of the acquisition, annual production from the Black Thunder and Coal Creek mines was 42.7 and 7.0 MTY, respectively. In August 2004, Arch purchased Triton's North Rochelle and Buckskin mines for \$364 million and production increased from 72.2 MT in 2004 to 87.6 MT in 2005. (The Buckskin mine was spun off to Kiewit Mining for \$72.9 million.) In 2009, Arch bought Rio Tinto Energy America's Jacobs Ranch mine for \$764 million and production increased from 81.1 MT in 2009 to 116.2 MT in 2010, making Black Thunder the largest coal mine in the world. When combined with the Coal Creek mine, Arch's total PRB production was 127.6 MT in 2010.

Arch's revenue and cost data by mining region has been collected from their annual reports from 2004 to 2020. Since Arch started reporting revenue and cost data on their PRB mines, revenues have increased from \$7.07/ton in 2004 to \$13.15 in 2015 before sliding back to \$12.49/ton in 2017. At the same time, their production costs have increased from \$6.21/ton in 2004 to \$10.53 in 2017. The resulting operating margin has increased from \$0.86/ton to \$1.96/ton or from 12% to 16% of revenue.

In 2020, revenue was \$12.38/ton and production costs were \$11.48/ton resulting in an operating margin of \$0.90/ton. See Figure 9.

Figure 9 – Arch Revenue and Cost History



20) Despite the Burnham Coal Report carrying a date of March 2021, it fails to discuss the October 2020 announcement from Arch Resources that it intends to pull out of the Powder River Basin—an announcement that rocked the PRB and made national news.<sup>7</sup> This is an almost unbelievable omission for a report that purports to present the PUC with an assessment of future coal production for Xcel’s Colorado coal plants. While there are other mines in the PRB, they are all facing similar conditions of difficult geology and poor financial prospects. While there is still coal left in the ground, most of it is buried too deeply to be mined at a profit.<sup>8</sup> In addition, the coal is owned by the federal government with strong uncertainties regarding the willingness of the federal government to lease carbon-intensive fuels going forward. It is truly stunning that the

<sup>7</sup> See <https://www.wyofile.com/arch-exit-signals-next-phase-of-decline-for-wyo-coal/> and <https://www.forbes.com/sites/scottcarpenter/2020/10/22/arch-resources-will-cut-coal-output-at-prolific-western-mines-by-50/?sh=213ae7406a1b> (\$\$)

<sup>8</sup> For a detailed assessment of the geology of coal in the Powder River Basin, see <https://pubs.usgs.gov/of/2008/1202/>

Burnham Coal Report failed to discuss this very important development affecting a key source of coal for Xcel’s Pueblo coal plants.<sup>9</sup>

21) The Burnham Coal Report also did not discuss the February 2021 announcement that Arch intends to permanently close the Coal Creek mine in 2022.<sup>10</sup> While Xcel does not typically source coal from the Coal Creek mine, it is another important development that points to the structural decline of coal mining in the Powder River Basin which is the source of coal for the Pueblo coal plants—with no apparent cost effective replacement for PRB coal as the Powder River Basin was the last “cache” of US coal after Appalachian and Illinois coal was largely depleted.

22) The Burnham Coal Report also did not discuss the implications of Arch Resources loss of \$386 million in 2020 as shown in the excerpt below from Arch Resources 2020 10-K,<sup>11</sup> dated February 2021.<sup>12</sup>

Arch Resources, Inc. and Subsidiaries Consolidated Statements of Comprehensive Income (Loss) (in thousands)			
	Year Ended December 31, 2020	Year Ended December 31, 2019	Year Ended December 31, 2018
<b>Net income (loss)</b>	\$ (344,615)	\$ 233,799	\$ 312,577
<b>Derivative instruments</b>			
Comprehensive income (loss) before tax	(1,328)	(5,892)	2,681
Income tax benefit (provision)	—	—	—
	(1,328)	(5,892)	2,681
<b>Pension, postretirement and other post-employment benefits</b>			
Comprehensive income (loss) before tax	(39,732)	(32,038)	20,591
Income tax benefit (provision)	—	—	—
	(39,732)	(32,038)	20,591
<b>Available-for-sale securities</b>			
Comprehensive income (loss) before tax	(330)	323	(343)
Income tax benefit (provision)	—	—	—
	(330)	323	(343)
Total other comprehensive income (loss)	(41,390)	(37,607)	22,929
<b>Total comprehensive income (loss)</b>	<b>\$ (386,005)</b>	<b>\$ 196,192</b>	<b>\$ 335,506</b>

The accompanying notes are an integral part of the consolidated financial statements.

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<sup>9</sup> Arch’s announcement of pulling out of the Powder River Basin is also not discussed in the discussion of the Black Thunder mine on page 25 of the Burnham Coal Report (Appendix F to AKJ-2).

<sup>10</sup> <https://www.wyofile.com/another-blow-to-coal-arch-to-close-coal-creek-mine-in-2022/> (February 9, 2021)

<sup>11</sup> <https://investor.archrsc.com/static-files/984b2a2a-aefb-4181-9a4a-5428b9ba3b4d> (Page F-8, page 96 of 230)

<sup>12</sup> <https://investor.archrsc.com/news-releases/news-release-details/arch-resources-reports-fourth-quarter-2020-results>

23) The large losses by Arch in 2020 are yet another indication of the very likely structural decline of the US thermal coal industry—a very important development that the Colorado PUC should be fully informed of as it discusses the disposition of the remaining coal plants on Xcel’s Colorado system. In particular, there are very serious questions related to Xcel’s proposal to keep burning coal at Pueblo Unit 3 until the end of 2039.<sup>13</sup>

24) There are many other omissions and misleading statements in the Burnham Coal Report (Appendix F to AKJ-2). Ms. Glustrom is uniquely situated to help the Colorado PUC understand these omissions and misleading statements given her long history of tracking the US thermal coal industry and the extensive testimony she has repeatedly submitted to the Colorado PUC in previous proceedings. As far as Ms. Glustrom knows, no other intervenor has ever submitted even a fraction of the information on coal cost and supply issues that Ms. Glustrom has and, as a result, the information she will bring to the PUC will contribute to a more just resolution of the issues.

25) As discussed further below, Ms. Glustrom has many pecuniary and tangible interests that will be affected by this docket—including not paying for yet another Xcel coal supply report that fails to fully represent or understand what is going on in the US coal industry. It is not just and reasonable to keep charging all ratepayers for these very incomplete and misleading coal reports.

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<sup>13</sup> Ms. Glustrom is prepared to discuss all of the mines and coal companies in the Burnham Coal Report (Appendix F to AKJ-02) as well as the general geology and financial situation of all the mines in the Powder River Basin of northeastern Wyoming.

## **2. Discount Rate—Xcel Failed to Run Sensitivity Runs with Lower Discount Rates**

26) As explained further below, the choice of discount rate can be expected to have a large impact on the results of any Net Present Value (“NPV”) calculation used to compare resource portfolios.

27) Despite extensive briefing and discussion and a Commission decision calling for discount rate sensitivity runs in Xcel’s 2016 Resource Plan (Decision C17-0316, ¶ 94), Xcel did all of their NPV calculations for this 2021 Resource Plan using only their Weighted Average Cost of Capital (“WACC”) as a discount rate; they failed to conduct sensitivity runs with lower discount rates which, as shown in the 2016 Resource Plan, better reflect the large future cost savings (largely in fuel) for portfolios that increase investments in fuel-free renewable generation.

28) The fact that Xcel used only their WACC as the discount rate is found buried in “AKJ-2,” the Technical Appendix for their 2021 Resource Plan. It is not clear, however, which rate was used—an issue that will need to be explored with discovery questions.

29) On page 162 in AKJ-2, the Technical Appendix in discussing the benchmarking analysis, Xcel states the following:

The Company’s current discount rate of 7.04% was used for all NPV calculations, and the period included from 2020 to the unit’s Summer Expiration Year. Thermal resources (baseload and intermediate) were given a static capacity factor to level the evaluation since numerous inputs control how often these units run. Renewable resources (solar and wind) used a historical average to determine the capacity factors, given how often these units are run is dependent on location and weather.

) On page 279 of AKJ-2, the Company’s WACC is presented as follows:

**Capital Structure and Discount Rate**

The rates shown in Table 2.14-1 are used to calculate the capital revenue requirements of generic resources. The after-tax WACC of 6.53% is also used as the discount rate to determine levelized cost calculations and the present value of modeled costs.

**Table 2.14-1 Capital Structure**

Discount Rate and Capital Structure				
	Capital Structure	Allowed Return	Before Tax Electric WACC	After Tax Electric WACC
Long-Term Debt	42.72%	4.09%	1.75%	1.32%
Common Equity	55.61%	9.30%	5.17%	5.17%
Short-Term Debt	1.67%	3.33%	0.06%	0.04%
<b>Total</b>			<b>6.97%</b>	<b>6.53%</b>

It is unclear whether Xcel used 7.04%, 6.97% or 6.53% as the discount rate in the NPV calculations, but it appears the discount rate was in the range of 7%.

30) As explained below, a discount rate in the range of 7% will make future fuel costs appear to be much smaller than they really are. The rule of 70<sup>14</sup> indicates that for every decade a future cost is discounted at a rate of 7%, those fuel costs will be made to look like approximately one-half of what they are likely to be. Over 3 decades, discounting future fuel costs at a discount rate of 7% will make those future fuel costs look like approximately (½ x ½ x ½) or one-eighth of what they are likely to be.

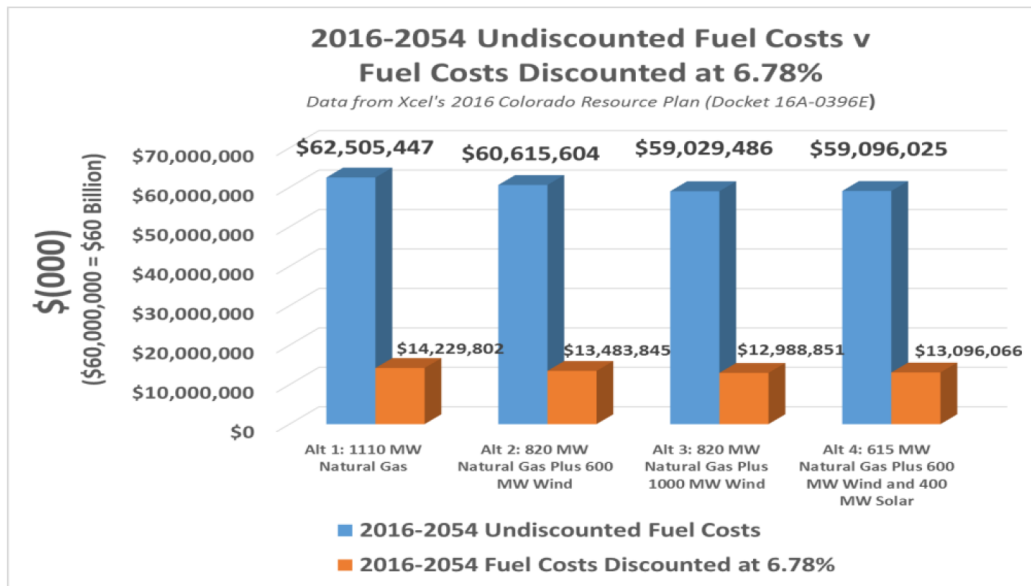
31) The effect of a discount rate of 6.78% on Xcel’s fuel costs in the Phase I portfolios from Xcel’s 2016 Resource Plan is shown in the graph below.<sup>15</sup> The orange bars show how the size of the full fuel costs (in blue) shrink after discounting at 6.78%. Discounting makes future fuel costs look like a small fraction of what they are expected to actually be and also shrinks the

<sup>14</sup> See for example <https://www.investopedia.com/terms/r/rule-of-70.asp#:~:text=The%20rule%20of%2070%20is%20a%20calculation%20to,70%20is%20also%20referred%20to%20as%20doubling%20time>. Discount rate is like the reverse of interest rate.

<sup>15</sup> Graph taken from Leslie Glustrom’s Statement of Position in Xcel’s Colorado 2016 Resource Plan, Proceeding 16A-0396E filed February 24, 2017 at the Colorado Public Utilities Commission.

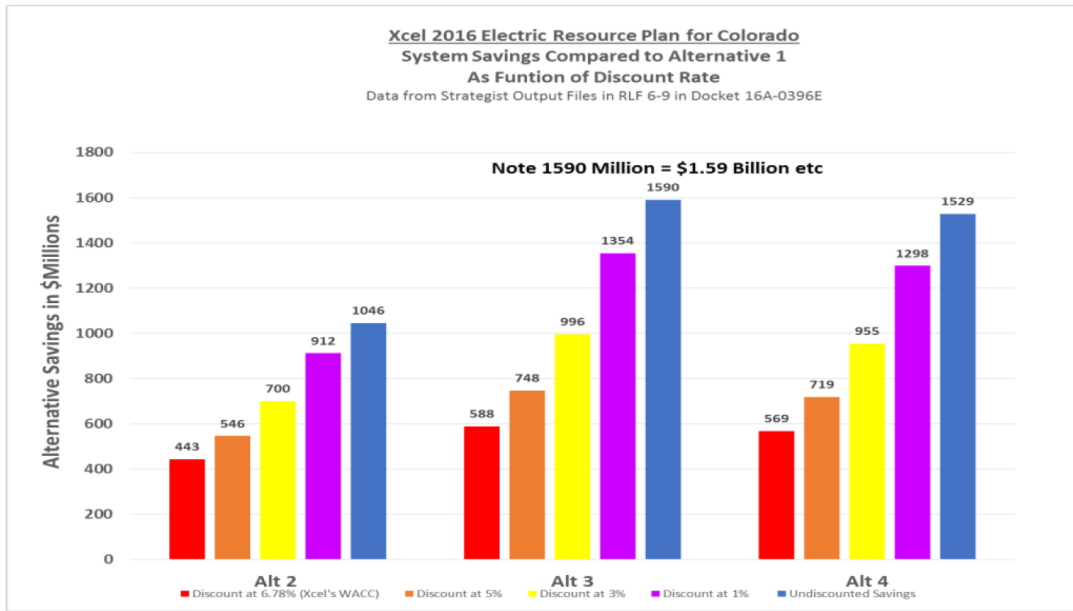


differences between more heavily dependent fossil fuel scenarios (like Alt 1) and alternatives with more renewable energy (Alts 2-4). Not only are the fuel costs dramatically shrunken, the savings from investing in more fuel-free renewable resources are also greatly reduced.



32) The graph below<sup>16</sup> shows how the economic benefits of fuel-free renewable generation get larger as the discount rate is lower. The blue bars with a discount rate of zero reflect much bigger savings from renewable generation than the red bars which reflect much smaller savings when using a discount rate of 6.78%.

<sup>16</sup> Graph taken from Leslie Glustrom's Statement of Position in Xcel's Colorado 2016 Resource Plan, Proceeding 16A-0396E dated February 24, 2017 and submitted to the Colorado Public Utilities Commission.



33) The fact that choosing a lower discount rate will reflect greater savings from fuel-free renewable electric generation was confirmed by Xcel with the 0% and 3% sensitivity runs mandated by the Commission in Proceeding 16A-0396E.<sup>17</sup> The result of these lower discount rate sensitivity runs are shown in what is known as “Appendix E to the 120 Day Report in 16A-0396E” with a key part of that Appendix E copied below.

<sup>17</sup> See 16A-0396E Decision C17-0316, ¶94. The decision refers to testimony from the Colorado Solar Energy Industries Association (“CoSEIA”) on discount rate. Ms. Glustrom worked very closely with the CoSEIA witness and provided the attachments and analysis described in the testimony of the CoSEIA discount rate witness in proceeding 16A-0396E.

**Table 1 –Sensitivity Results – Replacement Method**

**Portfolio PVRR - Replacement Method**

Port #	Family	Port Name	Base	Low Gas Price	High Gas Price	GPVM	Low CO2	High CO2	SCC	0% Disc Rate	3% Disc Rate	4B Tail	Accel Depr	Owned Wind Deg
2	ERP 450	LCP	34,887	33,054	37,619	35,308	37,072	39,275	42,633	118,637	63,831	36,073	34,887	34,887
3	ERP 450	Preferred	34,901	33,043	37,664	35,326	37,101	39,321	42,708	118,737	63,874	36,076	34,901	34,901
4	ERP 450	All Thermal	35,410	33,290	38,540	35,895	37,820	40,278	44,068	120,541	64,884	36,425	35,410	35,410
5	CEP 1110	LCP	34,573	32,679	37,384	34,975	36,582	38,581	41,668	116,852	63,022	35,692	34,683	34,573
6	CEP 1110	Preferred	34,687	32,828	37,453	35,079	36,660	38,612	41,630	117,339	63,267	35,841	34,798	34,727
7	CEP 1110	Full Replacement	34,704	32,845	37,470	35,097	36,678	38,632	41,653	117,369	63,291	35,858	34,815	34,744
8	CEP 1110	MLEP	34,836	32,961	37,621	35,234	36,829	38,810	41,866	117,670	63,503	35,974	34,946	34,891
9	CEP 775	LCP	34,608	32,740	37,392	35,001	36,723	38,815	42,044	117,142	63,138	35,743	34,662	34,608
10	CEP 775	500 Owned	34,794	32,945	37,553	35,180	36,881	38,939	42,117	117,848	63,513	35,958	34,848	34,834
11	CEP 775	MLEP	34,785	32,898	37,594	35,182	36,914	39,021	42,277	117,826	63,504	35,908	34,838	34,828

**Portfolio PVRR Delta from Preferred ERP - Replacement Method**

Port #	Family	Port Name	Base	Low Gas Price	High Gas Price	GPVM	Low CO2	High CO2	SCC	0% Disc Rate	3% Disc Rate	4B Tail	Accel Depr	Owned Wind Deg
2	ERP 450	LCP	(14)	11	(45)	(18)	(30)	(46)	(75)	(100)	(43)	(3)	(14)	(14)
3	ERP 450	Preferred	-	-	-	-	-	-	-	-	-	-	-	-
4	ERP 450	All Thermal	510	246	876	570	719	958	1,360	1,804	1,009	349	510	510
5	CEP 1110	LCP	(328)	(364)	(279)	(351)	(519)	(740)	(1,040)	(1,884)	(853)	(384)	(218)	(328)
6	CEP 1110	Preferred	(213)	(216)	(211)	(247)	(442)	(708)	(1,078)	(1,398)	(607)	(235)	(103)	(174)
7	CEP 1110	Full Replacement	(196)	(199)	(194)	(229)	(423)	(688)	(1,055)	(1,368)	(584)	(218)	(86)	(157)
8	CEP 1110	MLEP	(65)	(83)	(42)	(91)	(273)	(511)	(841)	(1,067)	(371)	(102)	45	(10)
9	CEP 775	LCP	(293)	(304)	(272)	(325)	(379)	(506)	(664)	(1,595)	(736)	(333)	(239)	(293)
10	CEP 775	500 Owned	(106)	(98)	(111)	(146)	(220)	(382)	(591)	(889)	(361)	(118)	(52)	(67)
11	CEP 775	MLEP	(116)	(146)	(69)	(144)	(188)	(300)	(431)	(911)	(370)	(168)	(62)	(72)

**Portfolio Rank - Replacement Method**

Port #	Family	Port Name	Base	Low Gas Price	High Gas Price	GPVM	Low CO2	High CO2	SCC	0% Disc Rate	3% Disc Rate	4B Tail	Accel Depr	Owned Wind Deg
2	ERP 450	LCP	8	9	7	8	8	8	8	8	8	8	7	7
3	ERP 450	Preferred	9	8	9	9	9	9	9	9	9	9	8	9
4	ERP 450	All Thermal	10	10	10	10	10	10	10	10	10	10	10	10
5	CEP 1110	LCP	1	1	1	1	1	1	3	1	1	1	2	1
6	CEP 1110	Preferred	3	3	3	3	2	2	1	3	3	3	3	3
7	CEP 1110	Full Replacement	4	4	4	4	3	3	2	4	4	4	4	4
8	CEP 1110	MLEP	7	7	8	7	5	4	4	5	5	7	9	8
9	CEP 775	LCP	2	2	2	2	4	5	5	2	2	2	1	2
10	CEP 775	500 Owned	6	6	5	5	6	6	6	7	7	6	6	6
11	CEP 775	MLEP	5	5	6	6	7	7	7	6	6	5	5	5

34) In the middle part of the table above from the Phase II 120 Day Report of Xcel’s 2016 Electric Resource Plan (16A-0396E), the “PVRR Delta” shows that the savings in parentheses for the 0% and 3% sensitivity runs are much larger than those shown in the base case for portfolios with more renewable generation (Portfolios 5-11.)

35) Recognizing that a lower discount rate will almost certainly reflect greater savings from renewable resources is important because PUC Rule 3601 (copied below) states that a primary goal of resource planning is to minimize the Present Value Revenue Requirement (“PVRR”). A lower discount rate will better reflect the future savings from fossil fuel costs and will help the PUC find portfolios that will truly *minimize* the PVRR. Higher savings likely mean

that there is more “head room” for adding more renewable energy to the system (up to any true reliability limit) which will lead to greater fuel cost savings in the future.

### **Colorado PUC Rules for Electric Utilities, 4 CCR 723-3, Rule 3601**

#### **3601. Overview and Purpose.**

The purpose of these rules is to establish a process to determine the need for additional electric resources by electric utilities subject to the Commission’s jurisdiction and to develop cost-effective resource portfolios to meet such need reliably. It is the policy of the state of Colorado that a primary goal of electric utility resource planning is to minimize the net present value of revenue requirements. It is also the policy of the state of Colorado that the Commission gives the fullest possible consideration to the cost-effective implementation of new clean energy and energy-efficient technologies.

36) To the best of her knowledge, no other party has independently done the discount rate analyses that Ms. Glustrom has done (and which were verified in Xcel’s 0% and 3% sensitivity runs shown above from Appendix E of the 120 Day Report for Xcel’s 2016 Resource Plan, Proceeding 16A-0396E.) As a result there doesn’t appear to be another party that is prepared to present the issues related to the importance of which discount rate is used to the Colorado PUC. Therefore, Ms. Glustrom’s presentation of discount rate issues will help advance the just resolution of the proceeding.

37) Ms. Glustrom has many other interests in this proceeding, but it is too early to tell which of these interests will be addressed by other parties.

### **B. Xcel’s 2021 Electric Resource Plan Will Substantially Affect the Pecuniary and Tangible Interests of Ms. Glustrom**

38) Rule 1401 (c) asks the entity requesting intervention to demonstrate how the proceeding will substantially affect their pecuniary or tangible interests. This proceeding will affect both Ms. Glustrom’s pecuniary and tangible interests as described below.

39) Ms. Glustrom is both an Xcel customer and an Xcel shareholder. When Xcel makes imprudent decisions to invest in coal generation as it has done several times this century, it affects both Ms. Glustrom's bills and her confidence in the shares of Xcel stock that she owns. Starting in 2007,<sup>18</sup> Ms. Glustrom has been forced to pay for a coal generation including the new Pueblo Unit 3 that is both morally reprehensible to her given its contribution to carbon dioxide and mercury in the atmosphere and the unnecessary consumption of water. Moreover, it is now clear—a mere one-sixth of the way through Pueblo Unit 3's originally projected life, that it has been an economic mistake also. While Xcel fails to acknowledge their mistake, they are proposing to shutter the coal plant when it is only half-way through its expected life (and even then there are very serious questions about the ability or wisdom of operating the coal plant until the end of 2039). This proposal is a very powerful statement that the decisions made earlier were mistakes—decisions that Ms. Glustrom has been paying for—and for which the Office of Consumer Counsel has not (until recently) shown any indication that they would defend customers' interests with respect to.

40) Also, when Xcel makes imprudent decisions with respect to coal, it can harm the long term prospects of the company and therefore of the shares of Xcel stock<sup>19</sup> that Ms. Glustrom and her husband own. As more and more entities become aware of Xcel's mistaken expenditures on coal generation, the more the trust in the company will erode, and this will likely have a substantial affect on Ms. Glustrom's pecuniary interests.

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<sup>18</sup> See Proceeding 06S-234EG, Xcel's 2006 Rate Case that began charging Xcel customers for the Pueblo Unit 3 coal plant.

<sup>19</sup> Ms. Glustrom and her husband own several thousand dollars worth of Xcel stock which represents one of the biggest components of their retirement savings.

41) Xcel is clearly not able to represent Ms. Glustrom's interests as a shareholder as Xcel has made repeated and expensive mistakes with respect to coal and discount rate analysis in this century and they continue to perpetuate these mistakes as discussed above and which will be explained in further detail in this proceeding.

42) The requirement to identify pecuniary or tangible interests is not part of Colorado statutes and Ms. Glustrom is unaware of any definition of "tangible" as it relates to PUC Rule 1401 (c). The lack of a definition of tangible as it relates to PUC Rule 1401 (c) makes any attempt to enforce this requirement very likely to be arbitrary and capricious. Nonetheless here are some of Ms. Glustrom's "tangible" interests that will be substantially, and indeed profoundly, affected by this proceeding:

a) Our planet is most definitely "tangible." The functioning of the planet as we know it is clearly threatened by emissions of carbon dioxide, methane and other global warming gases as well as other air and water pollution.

b) The mountains, forests, streams and wildlife of Colorado are most definitely "tangible." Ms. Glustrom spends as much time as possible in these places with so many of them already being profoundly affected by climate change, drought, increased temperature and huge fires.

c) Ms. Glustrom's children and grandchildren are most definitely "tangible." The lives of Ms. Glustrom's children and grandchildren will be profoundly affected by the livability of the planet during their lifetimes as well as the lifetimes of their children and grandchildren (and on down). It is now (finally) understood that our decisions about how much carbon dioxide and

methane to add to the atmosphere (as well as other pollution like mercury from coal fired power plants) will profoundly affect the livability of the planet for future generations.

d) The people of Pueblo are most definitely “tangible.” Ms. Glustrom has many connections in Pueblo and a strong interest in not giving the residents of Pueblo false hope that somehow the coal will continue to show up in Pueblo until the end of 2039 just because Xcel thinks it would be convenient for their cost recovery desires with respect to Pueblo Unit 3. False hope is cruel and will greatly hamper Pueblo residents and community leaders as they plan for a post-fossil fuel era. Allowing Xcel to ply the Pueblo community with false hope will substantially affect Ms. Glustrom’s tangible interests and her connections in the Pueblo community.

**C. Ms. Glustrom’s Interests Would Not Otherwise Be Adequately Represented by Other Parties or the OCC**

43) Ms. Glustrom has provided an extensive discussion above of why her interests will not otherwise be adequately represented and why the Office of Consumer Counsel will not adequately represent her. In addition, Colorado law at CRS 40-6.5-104 (2) makes it clear that the participation of the OCC can not be used to limit the intervention of other parties.

**CONCLUSION**

44) In conclusion, Ms. Glustrom has specific interests (including coal supply and discount rate issues) that will not be represented by other parties and she is positioned to represent these interests in a manner that will advance the just resolution of the proceeding.

45) Colorado law is clear that parties of interest are entitled to be “heard in person.” (CRS 40-6-109 (1))

46) Colorado law is also clear that the presence of the OCC can not be used to limit the intervention of other parties. (CRS 40-6.5-104 (2))

47) Ms. Glustrom has numerous pecuniary and tangible interests that will be significantly affected by the outcome of this proceeding.

48) There are numerous questions related to Ms. Glustrom's interests that can only be resolved effectively through intervention and an ability to participate in the discovery process.

49) Ms. Glustrom will work with the other parties to ensure the proceeding is conducted in an efficient and equitable manner.

50) In closing it is worth noting that if Xcel and certain PUC Staff had not spent so much time trying to figure out how to keep Ms. Glustrom out of proceedings (i.e. trying to "shoot the messenger") and had instead spent more time trying to understand what "the messenger" was trying to tell the Commission, then perhaps Colorado would not have made so many serious and expensive mistakes related to coal expenditures and cost the customers of Xcel (and IREA<sup>20</sup> and Holy Cross Energy) so much money—and emitted so much unnecessary carbon dioxide and methane.

51) It is also worth noting that the efforts of certain PUC staff to narrow the grounds for intervention in the name of "efficiency," has had the opposite effect of making proceedings less efficient. Motions to Intervene have grown substantially longer costing parties significantly more money and consuming more time from PUC Staff to read and digest these lengthier interventions, while not advancing the just resolution of proceedings. Hopefully the new

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<sup>20</sup> IREA is Intermountain Rural Electric Association, a co-owner of the Pueblo Unit 3 coal plant.



members of the Commission will help the PUC Staff who have been so dedicated to limiting intervention in the name of efficiency understand that they are having the opposite effect.

WHEREFORE, for all the reasons stated above, Ms. Glustrom respectfully requests that this Motion to Intervene be granted.

Respectfully submitted this 30<sup>th</sup> Day of April 2021

*/s/ Leslie Glustrom*

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**CERTIFICATE OF SERVICE**

I hereby certify that on this 30<sup>th</sup> day of April 2021, I caused the foregoing MOTION TO INTERVENE OF LESLIE GLUSTROM to be filed and served through the Colorado Public Utilities Commission E-Filings System in Proceeding No. 21A-0141E.

*/s/ Leslie Glustrom*