

PUC Reauthorization Testimony
Colorado Senate Transportation and Energy Committee

March 12, 2019

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(I have had the flu for several days so I have decided to mostly do this testimony in bullet point format.
I am happy to provide further details or information to anyone that is interested.)

Summary

Colorado PUC is not achieving optimal results; Xcel's profits are soaring; Progress is too slow. Black Hills has been allowed to raise rates and charge fees that are not "just and reasonable." City of Boulder's RFIP has demonstrated high level of renewable energy (89%) at significant savings over expected Xcel price. This is a strong indication of what is possible for most communities served by Xcel.

Colorado PUC Has Made Very Serious Mistakes in the Last 15 Years—A billion dollar coal plant that was unneeded (Comanche 3), about \$400 million on old coal plants that should now be retired (Clean Air Clean Jobs"), Saint Vrain turbines (5 and 6) not needed, Rush Creek Wind Farm at \$29/MWh when a bidding process would likely have gotten it for under \$15/MWh, rate increases almost every year even though system size has remained about constant, soaring profits for Xcel (up 11% in 2018 to \$551 million from Colorado), significant excess capacity on top of a generous 16% reserve margin, failure to reduce peak demand with demand response, Smart Grid City now largely defunct, Black Hills and Xcel both ended up with rate increases and excess capacity after Xcel dropped Black Hills wholesale contract (serious mismanagement of Colorado's natural gas capacity)

Need to Change the Culture—The "Settlement Agreement" Culture Should be Changed.

The Legislature Has an Important Role Through Holding Oversight Hearings (e.g. compliance with C.R.S. §§ 40-3-101, 40-3-102, 40-2-123 etc)

- 1) What has happened to rates compared to system size and sales?
- 2) Have all projects gone out to bid
- 3) Has the PVRR (Present Value Revenue Requirement) been minimized?

- 5) How has the PUC given the “fullest possible” consideration to clean energy technologies (both supply and demand side options, including demand response) as called for in CRS §40-2-123(1).

Key Statutory Changes:

- 1) Intervention:** Amend CRS 40-6-109(1) to ensure that utility customers have full rights of intervention at the PUC to ensure their voices are heard on the nature and cost of their utility service.
- 2) Existing Facilities:** Specify that the PUC shall consider existing facilities in Resource Planning in order to obtain the lowest cost, lowest emission options.
- 3) Lower the Discount Rate:** The current discount rate used to determine the cost of various options (known as the Present Value Revenue Requirement or “PVRR”) of about 7% makes future fuel costs appear to be a small fraction of what they are likely to be. This leads the PUC to make erroneous choices because they aren’t “seeing” the true cost of fossil fuel investments.
- 4) Ensure that “PVRR” is Minimized:** The PUC determines the cost of various options through the determination of the Present Value Revenue Requirement. The PVRR should be minimized—not just lowered somewhat as is presently done in comparing various portfolios.
- 5) Specify that It is OK to Reduce the Capacity Factor on Fossil Fuel Plants:** Direct the PUC to develop plans that minimize reliance on fossil fuel plants by reducing their capacity factor (e.g. % of the year that they are used.) This will save on fuel costs and very likely lower costs to utility customers.
- 6) Create a Third Party Administrator for Solar and Demand Side Programs:** Specify that solar and demand side programs will be administered by a third party with no business connection to Xcel. Under the current system, Xcel is allowed to administer solar and demand side programs while keeping a “choke hold” on these programs.
- 7) No Bidding Exemptions:** Specify that there are no exceptions to bidding requirements unless there is a clear showing that it is essential for reasons of reliability. Xcel has failed to put most of its largest projects out to bid over the last 15 years.
- 8) Rebuttable Presumption Against Fossil Fuel Acquisition:** Specify that after the effective date of the bill, there is a rebuttable presumption against the prudence of acquiring fossil fuel assets unless they can be shown to be essential for reliability. Fossil fuel assets are very unlikely to be the lowest cost resource going forward unless absolutely needed for reliability.
- 9) Community Choice/Competition/RTO Stakeholder Process:** Set up a stakeholder process for the last half of 2019 to determine how Colorado can unleash more competition and innovation and how enable more microgrids and how communities can have more choice in their electrical supply and whether we should form a Regional Transmission Organization in the Interior West etc.

10) Reduce the "Return on Equity" for Fossil Fuel or Low Capacity Factor Facilities: Ramp down the ROE on fossil fuels from the existing 9.8% for Xcel to the cost of debt over a 5-10 year period. This could also be done by reducing the ROE on facilities used less than 20% of the time. **Why are utilities making their full level of profits on facilities that are destabilizing the climate of the only planet that supports life?** (or that are being used less than 20% of the time?) This could be balanced with the full ROE on renewable generation (but make sure they go out to bid before utility ownership is allowed.)

A Note About Coal Jobs—and Ultimately Natural Gas Jobs....

-Jobs involving the extraction of non-renewable fuels are, by definition, not sustainable

-Colorado's coal industry is way past peak (2018 production down about 60% from the peak...14.2 million tons in 2018,

-We need transition planning and assistance for coal workers and coal-dependent communities now—not 5-10 years from now.

-A 0.5% fee on Xcel bills for transition assistance would provide about \$15 million a year. Set such a fee for the next 8-10 years and then sunset it.

-These same principles are true for natural gas jobs. Non-renewable resources don't renew—and there is a need for transition planning and assistance

SUPPORTING DATA FOLLOWS:

Colorado’s PUC is Not Achieving Optimal Results

While the Colorado PUC now has three very good Commissioners and progress is being made, our state’s regulatory system is a long way from achieving optimal results.

Colorado has abundant wind, solar and storage options that are very cost effective and there is abundant evidence that adding more wind and solar to our regulated utilities systems would reduce our emissions—and our costs.

The most recent evidence showing the ability to have a much lower carbon—and a much lower cost—system comes from the City of Boulder’s 2018 Request for Indicative Pricing (“RFIP”). The City’s RFIP asked suppliers what level of “firmed” renewable energy they could provide the City and at what price. The results were, in a word, **stunning!**

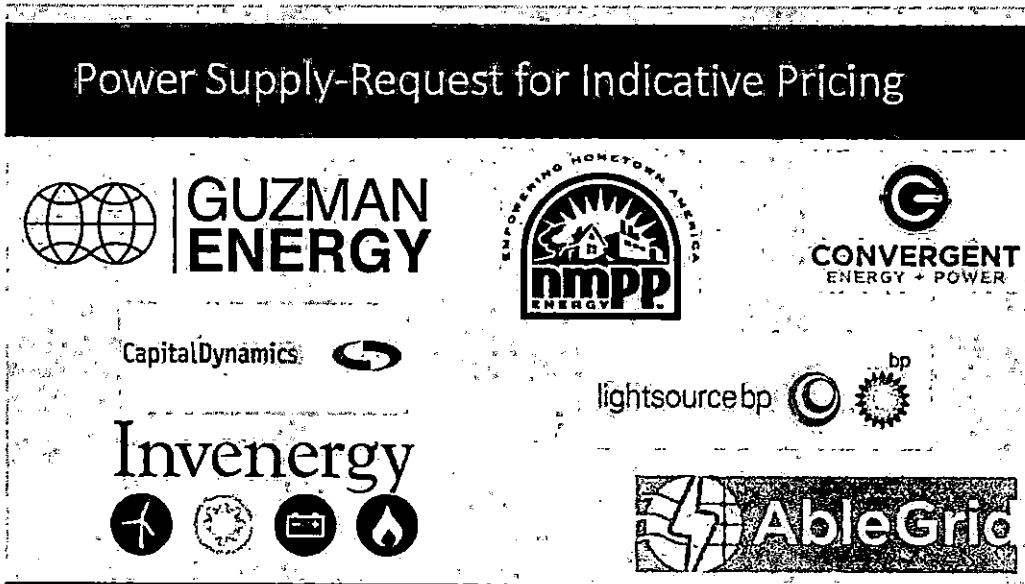
As shown in the table and figure below, there are a number of suppliers ready to bring the City of Boulder—and presumably any Colorado community high levels of firmed renewable energy (e.g. 89%) at a cost that is significantly below

Result of the City of Boulder’s 2018 Request for Indicative Pricing¹

Power Supply Scenario	10-year Average Energy Capacity Cost (\$/MWh)	% Renewables (Year)	Average Annual Cost for Power Supply
100% Xcel Energy	\$68.28	53% (2024)	\$123.6M
3-year Xcel then High Renewables	\$51.40	53% (2024)	\$94.1M
Day 1 High Renewables	\$45.54	89% (2024)	\$83.9M
100% Renewable Electricity	\$51.00	100% (2030)	\$93.3M

¹ https://www-static.bouldercolorado.gov/docs/12.13.18_Quarterly_Update_Updater-1-201901291557.pdf?_ga=2.108578250.994846025.1552960746-764780265.1548701400 (Slide 18)

Power Suppliers Prepared to Bring High Levels of Renewable Energy at Low Cost to Colorado Communities²



The Colorado PUC Has Made Very Costly Mistakes in the Last 15 Years

Comanche 3—A billion dollar coal plant that was excess capacity on top of a 1000 MW reserve margin leading to several back-to-back rate increases (Dockets 04A-214E, 06S-234EG, 08S-520E, 09AL-299E)

Clean Air Clean Jobs--CACJ—About \$400 million on old coal plants that now should be retired (Docket 10M-245E)

St Vrain Turbines 5 and 6—Not needed, added to excess capacity, raised revenue requirement (Docket 07A-469E)

Excess Capacity On Top of the Reserve Margin—Most years several hundred MW of excess capacity on top of about a 1000 MW reserve margin on top of planning for the peak hour of the year—Very wasteful and expensive.

Black Hills—Expensive capacity build out, high fees to customers, slow progress on low-cost renewable energy

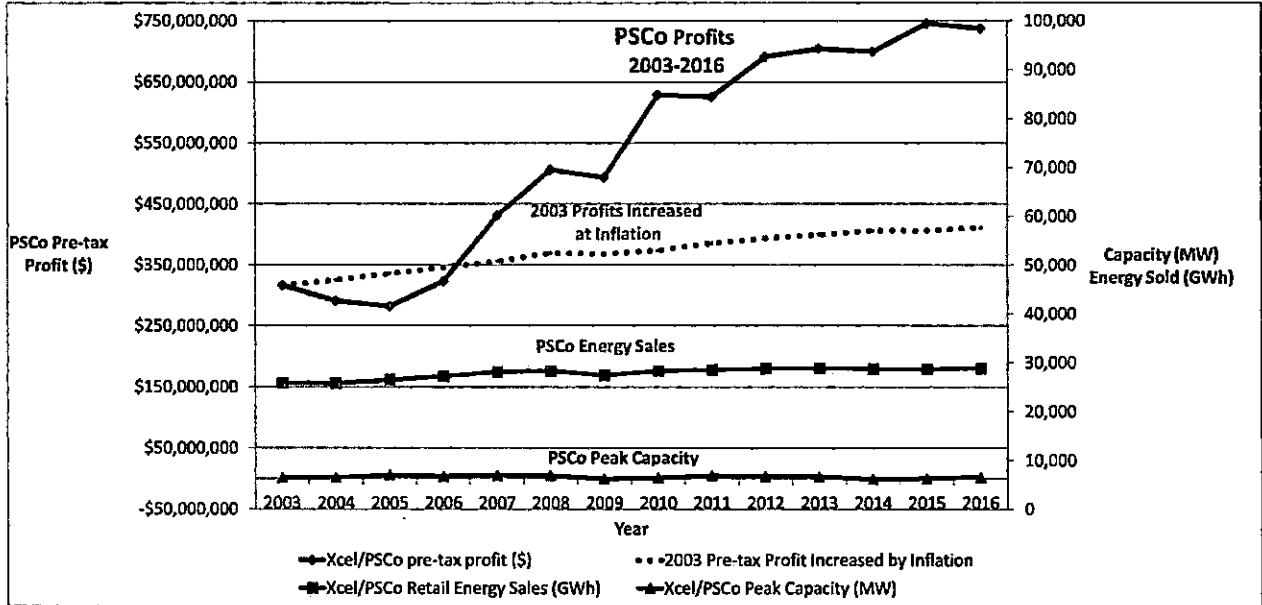
Smart Grid City—About \$29 million charged to all ratepayers for a failed project

Rush Creek Wind Farm—About \$29/MWh (wasn't put out to bid). If it had gone out to bid, likely could have been obtained for less than \$15/MWh

² https://www-static.bouldercolorado.gov/docs/12.13.18_Quarterly_Update_Updater-1-201901291557.pdf?_ga=2.108578250.994846025.1552960746-764780265.1548701400 (Slide 16)

Xcel's Profits Have Soared While Their System Capacity Has Remained Flat

(Data from Public Service Company of Colorado 10-K Reports)



Public Service Company of Colorado 2018 10-K, page 22 (Revenue and Net Income etc)³

PUBLIC SERVICE CO. OF COLORADO AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME
(amounts in millions)

	Year Ended Dec. 31		
	2018	2017	2016
Operating revenues			
Electric	\$ 3,031.2	\$ 3,003.8	\$ 3,049.4
Natural gas	1,014.6	995.2	957.7
Steam and other	40.4	43.5	40.7
Total operating revenues	4,086.2	4,042.5	4,047.8
Operating expenses			
Electric fuel and purchased power	1,157.2	1,126.7	1,196.4
Cost of natural gas sold and transported	428.4	458.7	425.4
Cost of sales — steam and other	15.3	16.1	15.9
Operating and maintenance expenses	787.5	760.8	759.7
Demand side management program expenses	142.2	125.0	118.2
Depreciation and amortization	561.1	471.5	443.6
Taxes (other than income taxes)	201.9	185.7	196.3
Total operating expenses	3,293.6	3,154.5	3,155.5
Operating income	792.6	888.0	892.3
Other income, net	2.1	7.8	1.1
Allowance for funds used during construction — equity	56.4	29.8	18.6
Interest charges and financing costs			
Interest charges — includes other financing costs of \$6.5, \$6.3 and \$6.3, respectively	207.9	190.7	181.6
Allowance for funds used during construction — debt	(22.2)	(11.4)	(7.0)
Total interest charges and financing costs	185.7	179.3	174.6
Income before income taxes	665.4	746.3	737.4
Income taxes	113.7	252.2	273.9
Net income	\$ 551.7	\$ 494.1	\$ 463.5

See Notes to Consolidated Financial Statements

³ <http://investors.xcelenergy.com/Cache/1001248959.PDF?O=PDF&T=&Y=&D=&FID=1001248959&iid=4025308>

Regarding Jobs

Jobs Dependent on Non-Renewable Resources Are Not Sustainable

Colorado is well past peak coal as are the US and Western US

We need coal worker and community transition planning and assistance now—not 5-10 years from now. The coal companies aren't doing it.

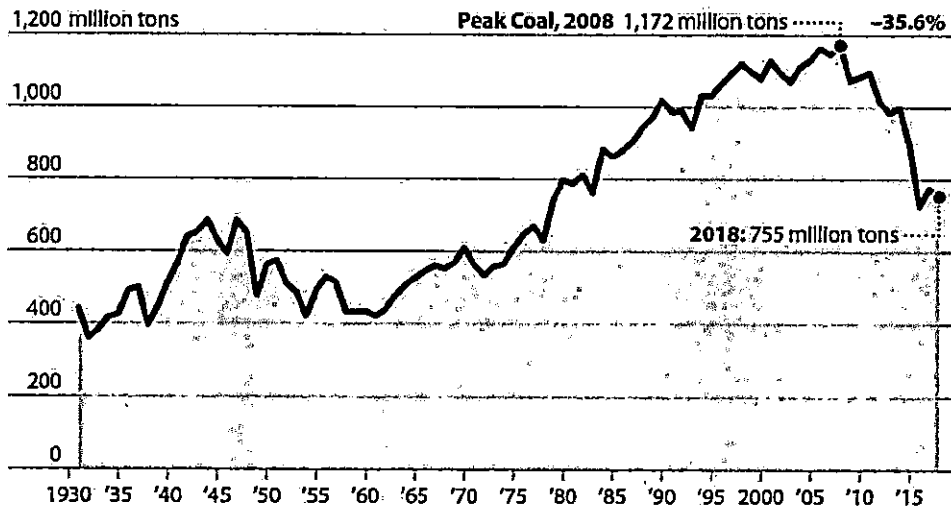
A 0.5% fee (50 cents on \$100) on Xcel bills for coal worker and community transition will provide about \$15 million per year. Could run it for 10 years and then sunset it.

US, Western and Colorado Coal Production All Well Past Peak

US Coal Production 1931-2018⁴

U.S. Coal Production, 1931-2018

Overall coal production fell by about 20 million tons in 2018 compared to 2017, resuming its precipitous slide from 'peak coal' in 2008, and despite an increase in exports of about 19 million tons.



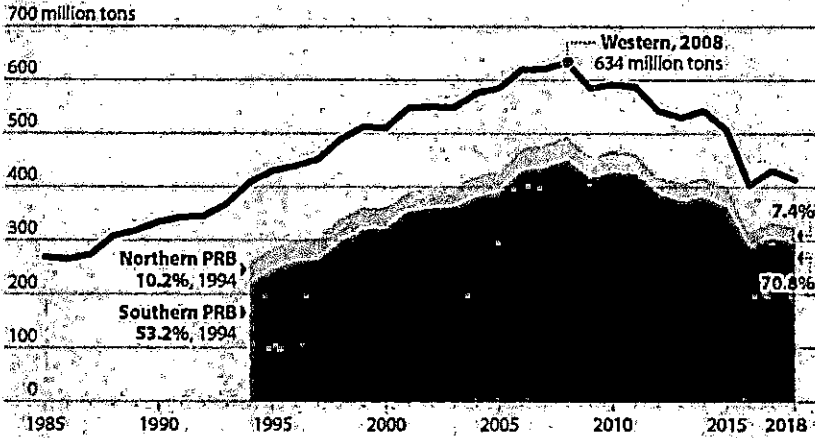
Source: Energy Information Administration

⁴ http://ieefa.org/wp-content/uploads/2019/03/Powder-River-Basin-Coal-Industry-Is-in-Long-Term-Decline_March-2019.pdf

Western Region Coal Production 1985-2017⁵

U.S. Western Region Coal Production, 1985-2017

The vast majority of Western U.S. coal production — 71 percent in 2018 — still comes from the Southern Powder River Basin, because production across other areas of the West has also been falling.



Source: Energy Information Administration

Colorado Coal Production 2004 = 39.8 million tons⁶

Colorado Coal Production 2018 = 14.28 million tons⁷



Colorado Division of Reclamation, Mining and Safety Monthly Coal Summary Report Period 1/2018 through 12/2018

#	Mine Name	Operator	County	Twn	Rng	Mine Type	Data from Last Month in Period			Total for 1/2018 thru 12/2018			Most Recent Record	
							Mine Status	# Miners	Days Worked	Production (tons)	Production (tons)	Injuries		Fatalities
171	Colowyo Coal Mine	Colowyo Coal Company, L.P.	Moffat	3N	93W	Surface	Producing	187	31	160,710	1,470,896	0	0	12/2018
187	Deserado	Blue Mountain Energy	Rio Blanco	2N	101W	Underground	Producing	148	31	224,978	2,362,251	2	0	12/2018
214	Foidel Creek Mine	Twenty Mile Coal Company	Routt	5N	86W	Underground	Producing	266	31	327,525	3,049,509	5	0	12/2018
1046	King II Mine	National King Coal LLC	La Plata	35N	12W	Underground	Producing	91	18	33,336	614,714	3	0	12/2018
1048	New Elk Mine	New Elk Coal Co.	Las Animas	33S	68W	Underground	Idle	2	19	0	0	0	0	12/2018
172	Trapper Strip	Trapper Mining, Inc.	Moffat	6N	91W	Surface	Producing	172	29	134,334	2,141,890	4	0	12/2018
197	West Elk Mine	Mountain Coal Company	Gunnison	13S	90W	Underground	Producing	294	29	107,923	4,643,374	1	0	12/2018
GRAND TOTALS :								1,160	188	988,806	14,282,634	15	0	

We Need Transition Planning for Colorado Coal Dependent Workers and Communities Now—Not 5-10 Years From Now

⁵ http://ieefa.org/wp-content/uploads/2019/03/Powder-River-Basin-Coal-Industry-Is-in-Long-Term-Decline_March-2019.pdf

⁶ <https://mining.state.co.us/SiteCollectionDocuments/2004%20Detail.pdf>

⁷ <https://mining.state.co.us/SiteCollectionDocuments/12Summary18.pdf>