

**Exh. DCG-10  
Docket UE-200115  
Witness: David C. Gomez**

**BEFORE THE WASHINGTON  
UTILITIES AND TRANSPORTATION COMMISSION**

**In the Matter of the Application of**

**DOCKET UE-200115**

**PUGET SOUND ENERGY**

**For an Order Authorizing the Sale of All  
of Puget Sound Energy's Interests in  
Colstrip Unit 4 and Certain of Puget  
Sound Energy's Interests in the Colstrip  
Transmission System**

**EXHIBIT TO  
TESTIMONY OF**

**David C. Gomez**

**STAFF OF  
WASHINGTON UTILITIES AND  
TRANSPORTATION COMMISSION**

*Coal in Montana, Final Report to the 66th Montana Legislature*

**October 2, 2020**

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Docket UE-200115  
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Environmental Quality Council  
Sonja Nowakowski

## **FINAL REPORT TO THE 66<sup>TH</sup> MONTANA LEGISLATURE**

# **SJ 5: COAL IN MONTANA CHANGING TIMES CHALLENGING TIMES**



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**Environmental Quality Council  
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**This report is a summary of the work of the Environmental Quality Council (EQC)** specific to the council's 2017-2018 work pertaining to Montana's coal economy as outlined in the EQC's 2017-18 work plan and Senate Joint Resolution No. 5 (2017). Members received additional information and public testimony on the subject, and this report is an effort to highlight key information and the processes followed by the EQC in reaching its conclusions. To review additional information, including audio minutes and exhibits, visit the EQC website: [www.leg.mt.gov/eqc](http://www.leg.mt.gov/eqc).

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# COAL IN MONTANA: CHANGING TIMES

## Coal-Fired Power Plants

### Colstrip Generating Station

Colstrip has a combined peak output of 2,094 megawatts and is the second-largest coal-fired generating facility west of the Mississippi. Colstrip includes four separate coal-fired generating units, collectively owned by Puget Sound Energy (PSE), Talen Energy, Portland General Electric (PGE), Avista Corporation, PacifiCorp, and NorthWestern Energy. The facility is adjacent to the Rosebud coalmine, which supplies the coal.

- ❖ (2017) Full-time Employees = 360

### Hardin Generating Station

The Hardin Generating Station north of Hardin has 116 megawatts of net generating capacity. Rocky Mountain Power, a subsidiary of Centennial Power, owns it. Colorado Energy Management operates the plant. Heorot Power Holdings, a subsidiary of Beowulf Energy, owns Colorado Energy. The plant opened in 2006. The Absaloka Mine near Hardin supplies the coal. At one time, electricity from the Hardin plant was sold to Powerex Corp. of Canada. Rocky Mountain Power recently announced it might close the facility unless purchased by another company.

- ❖ (2017) Full-time Employees = 30

### Lewis and Clark Station

Montana-Dakota Utilities operates the Lewis and Clark Station consisting of a coal-fired boiler capable of burning coal or natural gas and associated equipment for electricity. It has 44 megawatts of net generating capacity and is located near Sidney. Lewis and Clark Station annually consumes more than 300,000 tons of lignite supplied from the nearby Savage Mine.

- ❖ (2017) Full-time Employees = 34

### Rosebud Power Plant

Colstrip Energy Limited Partnership is a 38-megawatt waste coal-fired power project located in Rosebud County north of Colstrip. The plant began commercial operation in 1990. Energy produced is sold to NorthWestern Energy under a Power Purchase Agreement that expires in June 2025 (sold by former Montana Power Company). CELP is licensed as a qualifying small power production facility under the Public Utility Regulatory Policy Act. Fuel for the plant is primarily waste coal from the nearby Rosebud Mine.

- ❖ (2017) Full-time Employees = 30

## THE COLSTRIP QUESTION

The four-unit Colstrip Generating Station is the second largest coal-fired generating facility west of the Mississippi River. It sits in the crosshairs of growing efforts in the Northwest to reduce carbon dioxide emissions. Although the plant is located in Rosebud County, Montana, about 75 percent of the electricity

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generated there travels across power lines to Washington and Oregon. Folks in the Northwest aren't sure they want to keep using that power.

Colstrip's complex ownership scheme—with six different utilities owning part of the facility—means that Montana has very little control over the fate of a facility that has been hailed as a powerhouse by some and scorned as a source of environmental pollution by others. Most of the power generated at Colstrip travels west to Townsend, over two 500-kilovolt transmission lines. From there, Colstrip power moves across the Bonneville Power Administration's transmission system and reaches utilities' individual transmission grids in Washington and

Oregon. Ownership is outlined in **Figure 1**.

Colstrip consists of four separate coal-fired generating units, collectively owned by PSE, Talen Energy, PGE, Avista Corporation, PacifiCorp, and NorthWestern Energy.

Units 1 and 2 were

built in the mid-1970s and have 307 MW each of net generating capacity. Units 3 and 4, built in the mid-1980s, have 740 MW each of net capacity. PSE has the largest ownership interest in Colstrip, owning 50 percent of Units 1 and 2 and 25 percent of Units 3 and 4. Colstrip also represents about 30 percent of Montana's total electric generation capacity.

In 2016, the Oregon Legislature approved [SB 1547](#). The bill moves Oregon away from coal-fired generation and for Portland General Electric (PGE) and Pacific Power, doubles Oregon's renewable energy generation under the Renewable Portfolio Standard to 50 percent. Under the legislation, electricity provided to customers of Pacific Power and PGE would be coal-free by 2030, with the exception of a small amount from PGE's ownership of Colstrip, which would be out of the Oregon mix no later than 2035.

In 2016, the Washington Legislature approved [Senate Bill No. 6248](#). The bill authorized PSE to create a fund to pay for the closure of Colstrip Units 1 and 2. In general, if PSE closes Units 1 and 2 after December 31, 2022, the company can fund remediation and decommissioning using a regulatory liabilities account. PSE has a "liabilities account" from federal Treasury grants from hydro upgrade projects and from the federal renewable energy production tax credits earned from PSE wind projects. PSE, rather than credit these benefits back to Washington customers, would use the credits to pay for remediation costs related to Colstrip Units 1 and 2.

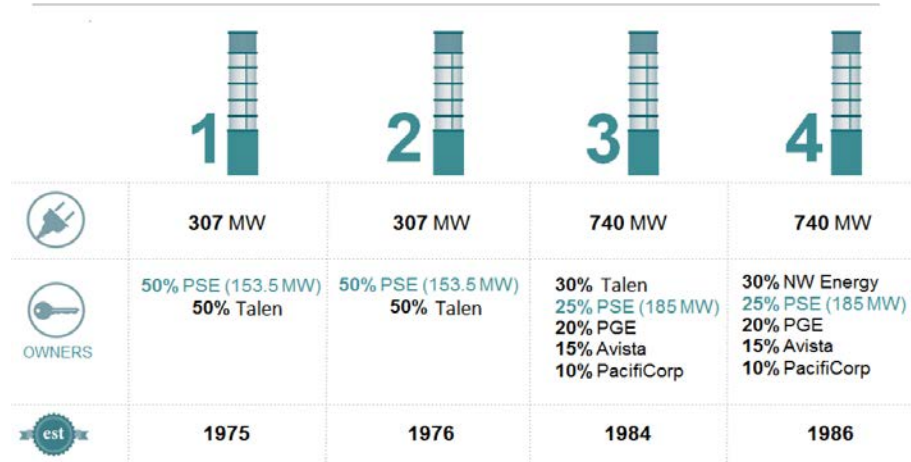


FIGURE 1: PROVIDED BY PSE



# COAL IN MONTANA: CHANGING TIMES

More recently in Washington, a coalition of environmental, community and labor groups have filed a proposed citizens' initiative to tax carbon emissions. The initiative would significantly increase costs at Colstrip. Additional information about the initiative is provided later in this report.

## Colstrip Closure and Depreciation

In 2016, the pending closure of Units 1 and 2 became a reality when PSE and Talen (the owners of 1 and 2) agreed to close the units no later than July 2022 to settle a lawsuit alleging clean-air violations at the facilities. The Montana Environmental Information Center and the Sierra Club sued the plant owners in federal court in 2013. Those entities and the Colstrip owners agreed to the settlement, including the closure date.

Following up on that agreement, a PSE rate case before the Washington Utility and Transportation Commission, the equivalent of the Montana Public Service Commission, raised more questions about PSE's use of electricity generated at Colstrip. A rate case is the formal regulatory process by which public utilities set the prices they charge consumers. The outcome of that rate case, which came out in late 2017, is that PSE customers who use electric energy will pay a 1 percent increase or about \$1.25 more a month per customer. The funds go toward decommissioning and remediation costs at Colstrip.

That rate case set depreciation schedules—just for PSE—for all four Colstrip units of the power plant, meaning PSE will pay down all of its debts on Colstrip by 2027, instead of its initial 2045 projection. In 2018, Avista also agreed to December 2027 for depreciation planning purposes. Hydro One of Ontario, Canada, planned to acquire Avista. To complete the acquisition, regulators in each state where Avista operates weigh in on the sale. Environmental groups in Washington agreed to settle claims over the proposed sale before the Washington Utility and Transportation Commission (WUTC) in exchange for the 2027 date. At the time of publication of this report, Montana's Public Service Commission [approved](#) the merger. However, in July, Hydro One's CEO and board of directors exited the company. The management change prompted the WUTC and others to request more information on the proposed sale.

There has been much discussion about what depreciation schedules mean in terms of an actual closure date for Units 3 and 4. The owners must agree to a closure date, according to operating agreements for the facility.

In Montana, the original cost of NorthWestern Energy's ownership interest in Colstrip Unit 4 was \$416 million and won't fully depreciate until 2042 per the original depreciation schedule, unless that changes in future NorthWestern rate cases. NorthWestern Energy's rate case, the first since the purchase of Unit 4, will be before the Montana PSC before the end of 2018.

Settlements and rate case outcomes discussed above also have included some financial contributions to Colstrip. PSE has agreed to contribute \$10 million for transition planning. Gov. Steve Bullock and Attorney General Tim Fox have appointed a [Colstrip Community Impact Advisory Group](#) to work with Colstrip in developing a plan to spend that money. Meeting materials and announcements are available above..

In late March 2018, Avista also committed \$3 million to help Colstrip with transition planning. In May 2018, the company committed another \$1.5 million to Colstrip. It is unknown if the change in Hydro One management will impact the financial commitment by Avista.

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Montana also is the recipient of federal POWER grant money to assist Colstrip with workforce planning and worker training. The money also is for other communities in Eastern Montana affected by coal-related layoffs. The Montana Department of Labor and Industry applied for the grant through the U.S. Department of Labor's Dislocated Worker program. In August 2017, Governor Bullock announced the state secured \$2 million through the POWER grant for planning efforts and for workforce training in the area. A total of \$4.6 million could be made available to Montana through the grants.<sup>5</sup>

## CARBON CAPTURE, UTILIZATION, AND SEQUESTRATION (CCUS)

In July 2018, the EQC accepted [public comment](#) on this report. Cloud Peak Energy provided comments concerning the future of coal and requesting that carbon capture utilization and storage (CCUS) be considered part of the discussion. Cloud Peak commented, "A serious federal investment in CCUS technology should be a policy position acceptable as a way to not only protect the critical revenue stream and good paying jobs resulting from responsible coal development, but also make meaningful reductions in CO2 emissions globally." The EQC at its September 2018 meeting will host a panel on carbon sequestration. Members will hear from Cloud Peak Energy and Montana's Big Sky Carbon Sequestration Partnership. Carbon Engineering, a Canadian-based clean energy company working on the commercialization of technology that captures CO2 directly from the atmosphere, will discuss direct air capture technologies.

CCUS is a process that captures carbon dioxide emissions from sources like coal-fired power plants and either reuses it or stores it so it does not enter the atmosphere. Carbon dioxide storage in geologic formations includes oil and gas reservoirs, unmineable coal seams and deep saline reservoirs -- structures that have stored crude oil, natural gas, brine and carbon dioxide over millions of years, according to the U.S. Department of Energy. In Montana, storage capacity and potential storage locations are being studied by the [Big Sky Carbon Sequestration Partnership](#). It has examined areas of Montana where geological sequestration is likely. The Big Sky Carbon Sequestration Partnership, led by Montana State University, is one of the U.S. Department of Energy's seven regional partnerships. Researchers are developing a framework to address carbon dioxide emissions and are working with stakeholders to create a "vision for a new, sustainable energy future."

Direct Air Capture (DAC) is a technology that processes atmospheric air, removes CO2 and purifies it. According to the Center for Carbon Removal, "DAC systems can be thought of as artificial trees. Where trees extract CO2 from the air using photosynthesis, DAC systems extract CO2 from the air using chemicals that bind to CO2 but not to other atmospheric chemicals (such as nitrogen and oxygen). As air passes over the chemicals used in DAC systems, CO2 "sticks" to these chemicals. When energy is added to the system, the purified CO2 'unsticks' from the chemicals, and the chemicals can then be redeployed to capture more CO2 from the air."

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<sup>5</sup> <http://governor.mt.gov/Newsroom/governor-bullock-announces-opportunities-for-colstrip-and-regional-coal-impacted-workers>