

Coal Retirements in Montana

July 27, 2022

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Colstrip power station ownership details

The Colstrip units one and two are owned by Talen Energy (50%) and the Washington state energy utility, Puget Sound Energy (PSE, 50%).

Unit three is owned by Talen Energy (30%), PSE (25%), Avista Corporation (15%), Portland General Electric (PGE, 20%), and PacifiCorp (10%).

Talen Energy doesn't have any ownership interest in the Colstrip unit four, which is owned by the South Dakota-based utility NorthWestern Energy (30%), PSE (25%), PGE (20%), Avista (15%), and PacifiCorp (10%).

The total generating capacity shares held by the six co-owners of the facility are PSE (32%, 677MW), Talen Energy (25.2%, 529MW), PGE (14%, 296MW), Avista (10.6%, 222MW), NorthWestern Energy (10.6%, 222MW), and PacifiCorp (7%, 148MW).

NorthWestern Energy announced that it plans to buy an additional 25% stake in Colstrip unit four from PSE in December 2019. Its total generating capacity at the facility will be increased to 862MW after the acquisition.



PacifiCorp Coal Plant Retirements

Thermal Plants

Table 6.2 lists PacifiCorp's existing coal-fueled plants and Table 6.3 lists existing natural-gas-fueled plants. The "Retirement Year" reflects the year a resource retires or converts to natural gas reflected in the preferred portfolio.

See page 137 table 6.2

Source: PacifiCorp IRP September 2021

2021 Integrated Resource Plan | PacifiCorp



PGE Accelerates Depreciation Schedule, Eyes 2025 Exit From Colstrip

• Aug 6, 2021

"They initially offered a 2027 date, so clearly there was a change in how they view Colstrip," Bob Jenks, executive director of CUB, told Clearing Up. "Clearly, this is pretty significant change."

Moving the depreciation schedule to 2025 was also reflected in PGE's Colstrip Enabling Study conducted in 2020 at the request of OPUC. The study concluded that the **removal of Colstrip from PGE's portfolio by Dec. 31, 2025,** provides PGE's customers with the greatest reduction of cost and risk in the integrated resource plan portfolio metrics, Houlihan said.

Source: Subscription Trade Journal, Clearing Up, August 6 2021

https://www.newsdata.com/clearing_up/supply_and_demand/pge-accelerates-depreciation-schedule-eyes-2025-exit-from-colstrip/article_1a41e6e-f6f7-11eb-a47b-7fa26fd2dc1a.html



Montana Colstrip Unit Closures

The Colstrip coal-fired power plant is one of the largest coal plants west of the Mississippi River and each year it is among the leader greenhouse gas emissions sources in the nation. The plant consists of two remaining units. Two units were closed in early 2020 because of economics (an agreement MEIC struck with the plant owners in 2016 required closure of those units by mid-2022). The two larger units have no closure date, but most of the owners will be financially ready to close the plant by 2025. Four of the six owners are utilities in Washington and Oregon. NorthWestern Energy is Montana's only electric utility that has an ownership interest in the plant. NorthWestern owns 30% of unit 4. Leaking coal ash ponds present another challenge.

Source: Montana Environmental Website, no date on page

https://meic.org/our-work/climate-energy/



Colstrip Retirement - NW Energy

IRP July ETAC Meeting Agenda

July 13, 2022

Pgs. 14-17 Colstrip Retirement Data

Source: Northwestern Energy

https://www.northwesternenergy.com/about-us/gas-electric/electric-supply-resource-procurement-plan

Reference: ETAC Presentation 2022.07.13 Update



Ownership (1986 figure are owners as of 2022) FIGURE 1: PROVIDED BY PSE

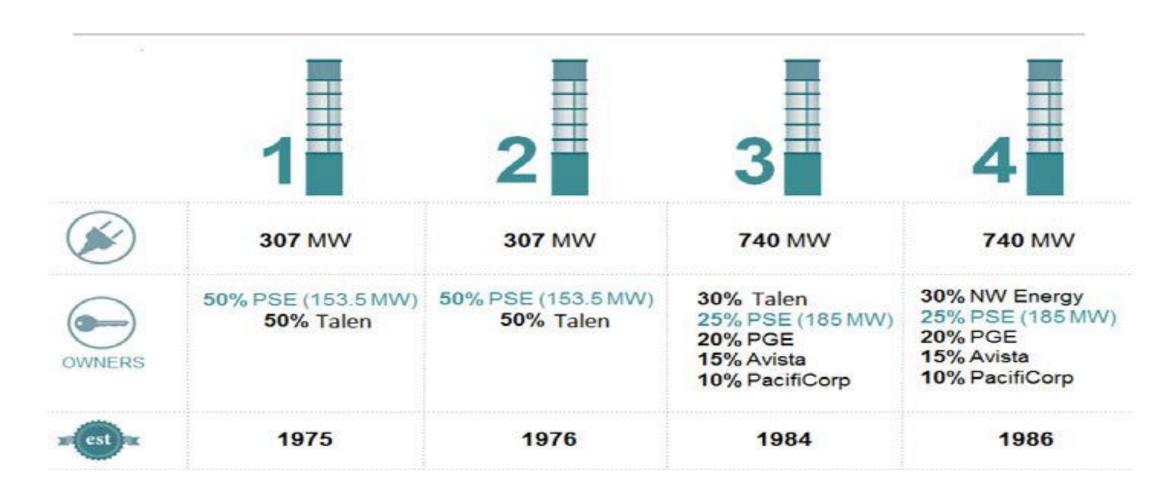
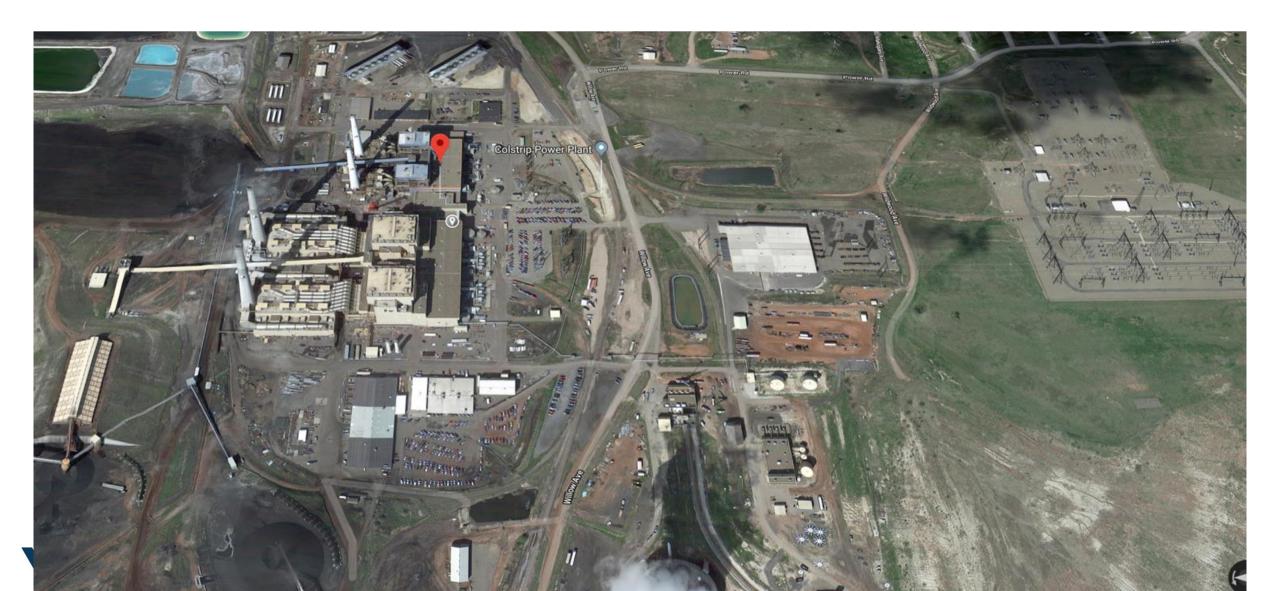




Image of Colstrip 45.884123, -106.612981 https://goo.gl/maps/TX4W8iPa1gbBdpkQA



Bitcoin Miner Using Hardin Electricity

Bitcoin miner Marathon signs for coal-fired electricity in Montana

Beowulf Energy hopes a joint venture can keep its struggling coal plant burning

October 16, 2020

Bitcoin mining company Marathon Patent Group has announced plans to build a specialized Bitcoin data center in Montana. The facility will use cheap coal-fired electricity, backed by utility Beowulf Energy, which will take a stake in Marathon.

In the joint venture, Beowulf gets part-ownership of Marathon, but Marathon keeps the Bitcoin output from a data center that will use an estimated 37MW of power from Beowulf's <u>119MW Hardin Generating Station</u> in Big Horn County, Montana. Marathon will pay \$0.028/kWh for the energy, which is about a quarter of the average US domestic rate of around \$0.11/kWh.

Source: Industry News, Data Center Dynamics, dated October 16, 2020

https://www.datacenterdynamics.com/en/news/bitcoin-miner-marathon-signs-coal-fired-electricity-montana/



Montana Info on Hardin Plant Possible Closure

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.

Source: Montana Gov. website, pdf dated September 2018

https://leg.mt.gov/content/Committees/Interim/2017-2018/Energy-and-Telecommunications/Meetings/Sept-2018/FinalReportSJ5USE.pdf

Crypto Miner exiting Hardin 2022

- Crypto miner plans to exit Hardin coal-fired power plant
 - TOM LUTEY tlutey@billingsgazette.com
 - o Apr 6, 2022 Updated Apr 6, 2022

Cryptocurrency miner Marathon Holdings is cutting the cord with Hardin Generating Station, citing a need to be carbon neutral by year's end. The announcement follows several high-profile, national articles about how Marathon breathed new life into the coal-fired power plant, which hadn't operated consistently for several years. Marathon expects to exit Hardin within six months.

Source: Longview News Journal, dated April 6, 2022 https://www.news-journal.com/crypto-miner-plans-to-exit-hardin-coal-fired-power-plant/article_d7bcdc1b-9369-58a4-b2ba-e2dbb4e1cc49.html

Reference: Marathon Digital Holdings, dated April 5, 2022

https://ir.marathondh.com/news-events/press-releases/detail/1282/marathon-digital-holdings-announces-intent-to-transition>



Image of Hardin 45.764238, -107.599240 https://goo.gl/maps/bPcZRHFPLVb3zbqc7





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