



Energy and Economic Impacts of Coal in Interior Alaska

Usibelli Coal Mine (UCM), located 115 miles south of Fairbanks in Healy, is Alaska's only operating coal mine. In operation since 1943, today the mine annually produces an average of 2 million tons of coal.



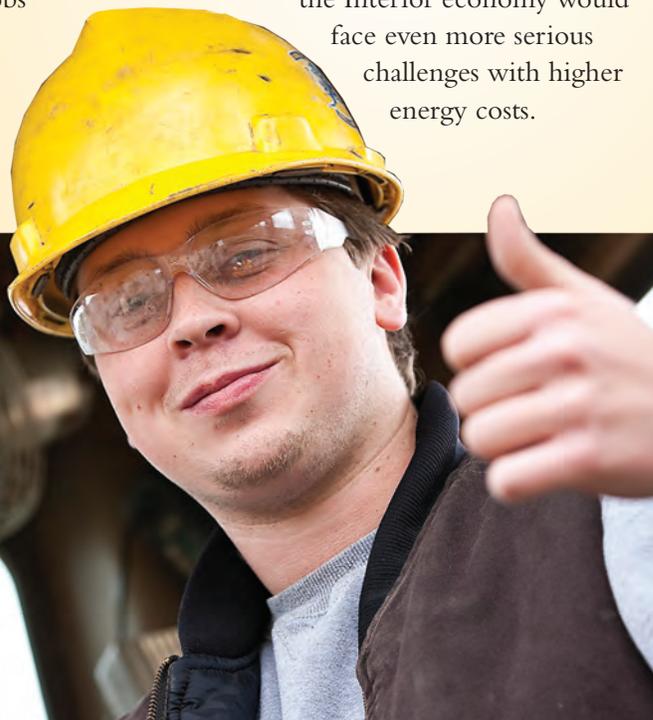
Half of that coal is used in Interior Alaska for heat and electricity generation and the remainder is exported to overseas markets from a port facility in Seward. UCM

supplies 100% of the coal used to generate electricity and heat in the Interior.

In addition to generating jobs and income for hundreds of Alaskans, UCM plays an important role in keeping Interior Alaska energy costs well below what

they would be in the absence of coal. Furthermore, because energy costs are an important cost of doing business, the Fairbanks economy would be smaller if not for the low-cost energy provided by coal.

The high cost of energy in Interior Alaska will continue to act as a constraint on economic development. Without the reliable and low-cost energy made possible by UCM, the Interior economy would face even more serious challenges with higher energy costs.



Coal's Benefits



The economic benefits associated with utilizing Interior Alaska's coal resources are substantial.

UCM coal is a reliable, abundant, and low-cost source of energy...

- ▶ Coal accounts for nearly one-third of Interior Alaska's electrical energy generation.
- ▶ Coal is Interior Alaska's lowest-cost source of energy, at half the cost of natural gas, one-third the cost of naphtha, and one-sixth the cost of diesel, on a per BTU basis.
- ▶ Energy costs in Interior Alaska would be much higher without Usibelli coal, perhaps \$200 million annually higher than they are today.
- ▶ Currently there is no natural gas available for energy use by the military bases in the Interior. However, if the military switched from coal to natural gas, their heat and electricity costs would rise 250% assuming the lowest cost near-term delivery option.

UCM coal is an important source of economic activity...

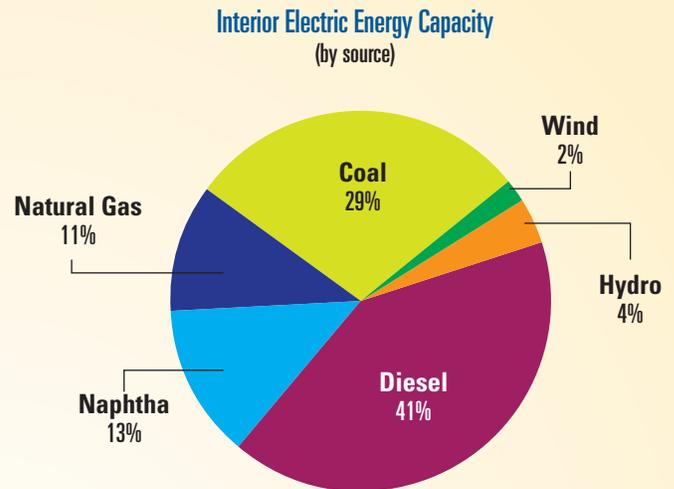
- ▶ In 2012, UCM spent \$72 million in Alaska with 400 different suppliers, service-providers, and organizations.
- ▶ A total of 577 Interior Alaska jobs and \$44 million in annual payroll are connected with mining, distribution, and consumption of Usibelli coal. Statewide, the impact is 692 jobs and \$52 million in payroll.

A Critical Source of Interior Alaska Energy



Interior Alaska relies on a complex blend of fuel sources. The majority of electricity comes from diesel, naphtha, and coal, while heating is provided primarily from coal and heating oil.

Coal now accounts for 29% of the electric power capacity in Interior Alaska. Six coal-fired plants have a combined capacity of 136 megawatts (MW). Five of the region's six coal-fired plants are cogeneration plants that produce space heat and electricity.



Upgraded Plant at UAF

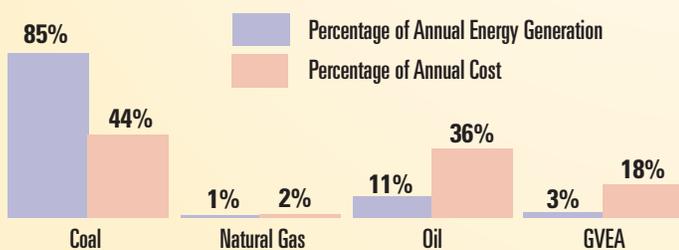
The University of Alaska Fairbanks (UAF) examined 13 different design options to replace their existing power plant. Coal emerged as the best balance, considering issues of cost, reliability, and emissions.

Within the current portfolio of energy sources that UAF can choose from, burning diesel costs 6 to 7 times the cost of coal while natural gas is 4 to 5 times higher. UAF consumes an average of \$3.6 million worth of coal

annually. Providing an equivalent amount of energy using natural gas or diesel would cost roughly \$17 million and \$25 million, respectively.

By continuing to use coal, UAF will save \$13 million to \$21 million annually over alternative sources, while at the same time providing a cleaner source of energy relative to the existing plant.

Energy Generation Versus Cost for UAF (2012)

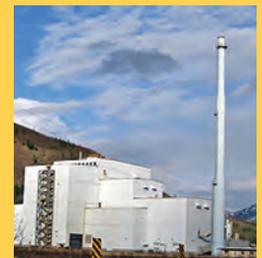


Source: UAF

Healy Unit 2

Healy Unit 2 (formally known as the Healy Clean Coal Project) is expected to start generating electricity in 2015.

The 50 MW plant is located adjacent to the Healy Unit 1 coal plant in Healy. Coal-fired electrical generation capacity within the Interior will rise from 136 MW to 185 MW when the plant is brought on-line. Coal will then account for 36% of Interior Alaska's electricity generation capacity.



The Lowest-Cost Source of Energy Produced in the Interior



Among the fuel sources used to generate electricity, coal is the lowest cost source, by a wide margin — especially given the large government subsidies required to make certain forms of energy,

such as wind and hydroelectric power, economically viable. Based on Golden Valley Electric Association (GVEA) data, coal-generated electricity is one-sixth the cost of diesel and half the cost of natural gas-fired electricity transported over the Intertie from Southcentral Alaska.

If coal use was discontinued, electricity costs would rise an estimated 25% in Interior Alaska, depending on the alternative fuel sources available. Including GVEA, UAF, and the military bases, the absence of coal as a fuel source would have a cost of \$200 million or more annually.



Increasing the use of coal to generate electricity will reduce the region's dependence on expensive and price-volatile petroleum products. Though the effect on consumer rates of bringing the coal-fired Healy Unit 2 Plant on-line has not been determined, the project will at least stabilize rates in the near term and provide for lower costs in the future than would otherwise be the case in the absence of Healy Unit 2.

Coal is an important, low-cost source of heat for the University of Alaska Fairbanks (UAF), the region's military bases, and most of the large buildings in downtown Fairbanks near the Aurora Energy, LLC cogeneration plant. Heat generated at five of the coal-fired cogeneration plants in Interior Alaska is the lowest cost heat in the region.



The Economic Impact of Usibelli Coal Mine



UCM is an important source of economic activity in the Interior Alaska economy. Spending in support of mine operations, jobs at the mine and in the support sector, and jobs at power plants that utilize coal

together represent a significant economic engine.

Spending in support of operations

In 2012, UCM spent \$72 million in Alaska in support of mine operations, including \$51 million in spending for supplies and services.

In 2012, 400 Alaska businesses and organizations were in UCM's service and supply chain, including 195 in the Fairbanks area, 105 in Anchorage, 28 in the Mat-Su Borough, and 27 in the Denali Borough (primarily in Healy). The remaining 45 businesses and organizations are scattered elsewhere in Alaska.

Jobs and income related to UCM

In 2012, UCM directly employed an average of 140 workers, including equipment operators and maintenance personnel, and a wide variety of professional, technical, and administrative staff. All UCM employees are Alaska residents.

UCM jobs are very important in Healy, a community of approximately 1,100 residents. UCM directly accounts for 30% of all Healy employment.

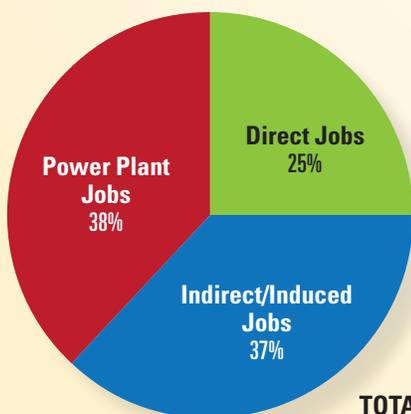
Additional jobs are created throughout the economy as the mine purchases supplies and services in support of its operations, and mine employees spend their payroll dollars.



The number of Interior Alaska jobs connected to coal totaled 577 in 2012 (with \$44 million in annual payroll).

The statewide totals rise to 692 jobs and \$52 million in payroll.

UCM-Related Jobs in Interior Alaska



TOTAL JOBS = 577



Want to know more?

Visit us at www.usibelli.com or call us in Healy at 907.683.2226