Jim Bridger Plant is named for the renowned explorer and mountain man, John “Jim” Bridger. His pioneering spirit is alive today in the way this power facility has responded to its role as a low-cost energy producer, resource manager and environmental steward.

Energy, a natural resource
A massive amount of energy is held by nature beneath the rugged, beautiful face of Wyoming: oil, gas, uranium, coal.

That geologic legacy is the foundation of what today is one of the largest electric generating complexes in the Rocky Mountain area: the coal-fueled Jim Bridger steam-electric plant.

Sub-bituminous coal stretches out for miles just beneath the surface of southwestern Wyoming; the product of forests and swamps changed by time into vast coal seams. It is the energy locked in that coal that enables this facility to produce up to 2,119,000 kilowatts of electricity per hour from four generating units. That electricity serves people throughout the West. To get the job done requires the talents of nearly 350 skilled and dedicated Wyoming residents.

People, power and production
Converting coal into electric energy available at the flip of a switch can be described in just a few words: coal is burned to produce high-pressure steam that spins large turbine-generators, which produce electricity. In practice, this process requires a complex blending of systems.

Four operating units, each with a 2,800-degree furnace, produce 1,000-degree steam, which turn turbines. At full load, the four turbines generate enough electricity to light three cities the size of Salt Lake City. To accomplish this task takes a well-trained workforce operating as a team 24-hours a day.

Coal, the starting point
The production process begins with the extraction of coal from mines located just a few miles from the plant. The coal is crushed and transported by a four-mile-long conveyor belt from the Bridger Mine to the plant and by train from the Black Butte Mine. Here, fuel handlers mix and blend coal from different seams to gain optimum blend for a clean, efficient fuel.

Once blended, the coal is conveyed inside the plant. There, pulverizers grind the coal to a talcum powder consistency. This mixture fuels the boiler. At full load, all four units will consume 1,100 tons of coal per hour.

The boiler heats water to produce steam that is superheated and conducted to the turbine, driving the electric generator. Electricity produced leaves the plant on 345,000-volt transmission lines to enter the regional power grid.

Spent steam is condensed back into water using cooling towers (from which billow large clouds of white water vapor, giving the plant one of its most distinctive hallmarks). The cooled water then returns to the boiler to start the process all over again. Water for the plant comes from the Green River through a 50-mile-long pipeline.

Engineered for the environment
At every step of production, the Jim Bridger Plant exemplifies an emphasis on environmental stewardship. On the mining side, the surface mines near the plant are subject to rigorous reclamation. What was grazing land before, returns to grazing land. The land is restored to original or better condition. Nesting platforms are installed for hawks. Natural grass and shrub seed is planted for cattle and wildlife grazing.
How electricity is made at Jim Bridger Plant

The power production process meets Wyoming's tough air and water quality standards.

A by-product of coal burning is fine fly ash, which is removed from the stream of hot gasses by use of electrostatic precipitators. These precipitators trap 99.3 percent of the fly ash, much of which is marketed to the concrete industry.

Jim Bridger coal is low in sulfur content. Sulfur dioxide, another by-product of combustion, is removed by scrubbers from all four units.

In addition, Jim Bridger is constantly improving the containment of airborne dust through such actions as paving roads and sealing coal stockpiles. There is also strong emphasis placed on recycling of materials and seeking new ways to constructively deal with environmental issues as they arise.


**Jim Bridger at a glance**

**Sponsoring companies:**
PacifiCorp Energy, Idaho Power Company

**Generating capacity:**
2,119,000 kilowatts per hour in four units

**Fuel:**
Sub-bituminous coal is delivered to the plant by an overland conveyor from the Bridger Mine. Coal is also transported by unit train from the Black Butte Mine.

**Coal reserves:**
The Jim Bridger field has usable reserves of 140 million tons of low-sulfur coal.

**Plant operating personnel:**
350 people are employed at the Jim Bridger Plant.

**Chimneys:**
Each of the generating units has a chimney 500 feet high.

**Water supply:**
The water supply necessary to operate the plant is delivered from the Green River through a 50-mile steel pipeline to a reservoir at the plant site.

**Boilers:**
Each of the four boilers is designed to produce 3,980,000 pounds of steam per hour at a throttle pressure of 2,400 PSI. Each consumes 275 tons of coal per hour. Per year, on average 8 million tons of coal are used. The boilers are 240 feet tall.

**Turbine-generators:**
Each of the turbine-generators has a nameplate rating of 555,100 gross kilowatts. The units are 131 feet long and weigh approximately 1 million pounds each.

**Completion dates:**
Unit 1: November 1974, capacity currently 535,000 net kilowatts
Unit 2: December 1975, capacity currently 527,000 net kilowatts
Unit 3: September 1976, capacity currently 527,000 net kilowatts
Unit 4: December 1979, capacity currently 530,000 net kilowatts
PacifiCorp is one of the lowest-cost electricity producers in the United States, providing approximately 1.7 million customers in the West with reliable, efficient energy. PacifiCorp operates as Rocky Mountain Power in Utah, Wyoming and Idaho, and as Pacific Power in Oregon, Washington and California. PacifiCorp’s electric generation, commercial and energy trading, and mining functions are operated as PacifiCorp Energy.

For more company information, please visit pacificorp.com and idahopower.com.

Recreation on the Jim Bridger Reservoir

Generating recreation opportunities with the same resources we use to generate power is one additional way we provide for the community.

The recreation opportunities along the Jim Bridger Reservoir are open year round for day use. Located approximately 35 miles east of Rock Springs, Wyoming, our facilities provide river and reservoir fishing, picnicking and hiking opportunities.

Visit pacificorp.com/recreation for details about recreation amenities – and any fees – at our recreation areas.