

Currant Creek

Generation Facility



PACIFICORP

Rocky Mountain Power
Pacific Power
PacifiCorp Energy



Currant Creek Plant blends modern technology with environmental stewardship on a 160-acre site in an area of the same name near Mona, Utah. Our twin combined-cycle gas turbines and steam turbine are capable of generating 550 megawatts of electricity and the plant is 30 to 48 percent more efficient than a comparable coal-fueled steam plant.

Owned and operated by PacifiCorp, it was the first generating station we had built in nearly 20 years when it was commissioned in 2005.

Natural gas is supplied by Questar in a dedicated pipeline pressurized at about 1,075 pounds per square inch and capable of delivering 90,000 million British thermal units per day. The natural gas serves as fuel for two gas turbines.

The “combined” in combined-cycle generation refers to the heat recovery steam generators connected to those turbines. The heat recovery steam generators take the 1,125-degree Fahrenheit exhaust gas from the turbines and heat water into steam and pass it through a conventional steam turbine at 1,951 PSI. In addition, each heat recovery boiler has the ability for “duct firing,” burning natural gas to supplement the exhaust gas energy which produces additional steam to the steam turbine.

The exhaust steam from the turbines is passed through an air-cooled condenser and transformed back to water for re-use in the heat recovery steam generators. Almost as large as a football field, our air-cooled condenser works on the same principle as a car radiator. Thirty large motor-driven fans blow air across the radiator tubes to condense the steam into water.

The air-cooled condensation process requires only 10 percent of the water needed by most of our conventional, water-cooled steam electric plants. The water for our Currant Creek operations comes from two deep bore wells on the outskirts of Mona.

The plant's location near a major intersection of high-voltage power lines is ideal for beginning the journey from power plant to customer.

The combined-cycle process is credited for increasing efficiency at Currant Creek from the 36 percent efficiency that conventional gas turbines offer to 55 percent. A significant benefit of lower fuel consumption is low emissions.

Compared to burning coal, natural gas in this process produces half as much carbon dioxide per unit of electricity, one-quarter the nitrous oxide, negligible sulfur dioxide and no ash or dust. In fact, the plant is nearly a zero-emission site with boilers equipped with nitrogen oxide emission controls, selective catalytic reduction and a carbon monoxide catalyzer.

Because the plant can begin a "cold start" and reach full output within 120 minutes, the combined-cycle design offers us considerable flexibility to match real-time requirements of our customers and the wholesale markets.

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. We operate as Rocky Mountain Power in Utah, Wyoming and Idaho, and as Pacific Power in Oregon, Washington and California. Our electric generation, commercial and energy trading, and mining functions are operated as PacifiCorp Energy.

We are serious about our commitment to the communities in which we do business. So are our 22 Currant Creek Plant employees. They are active in their communities and – as a group – contribute to the health of those communities through local initiatives and through our Community Giving Campaign, which includes the United Way and other human services organizations.

