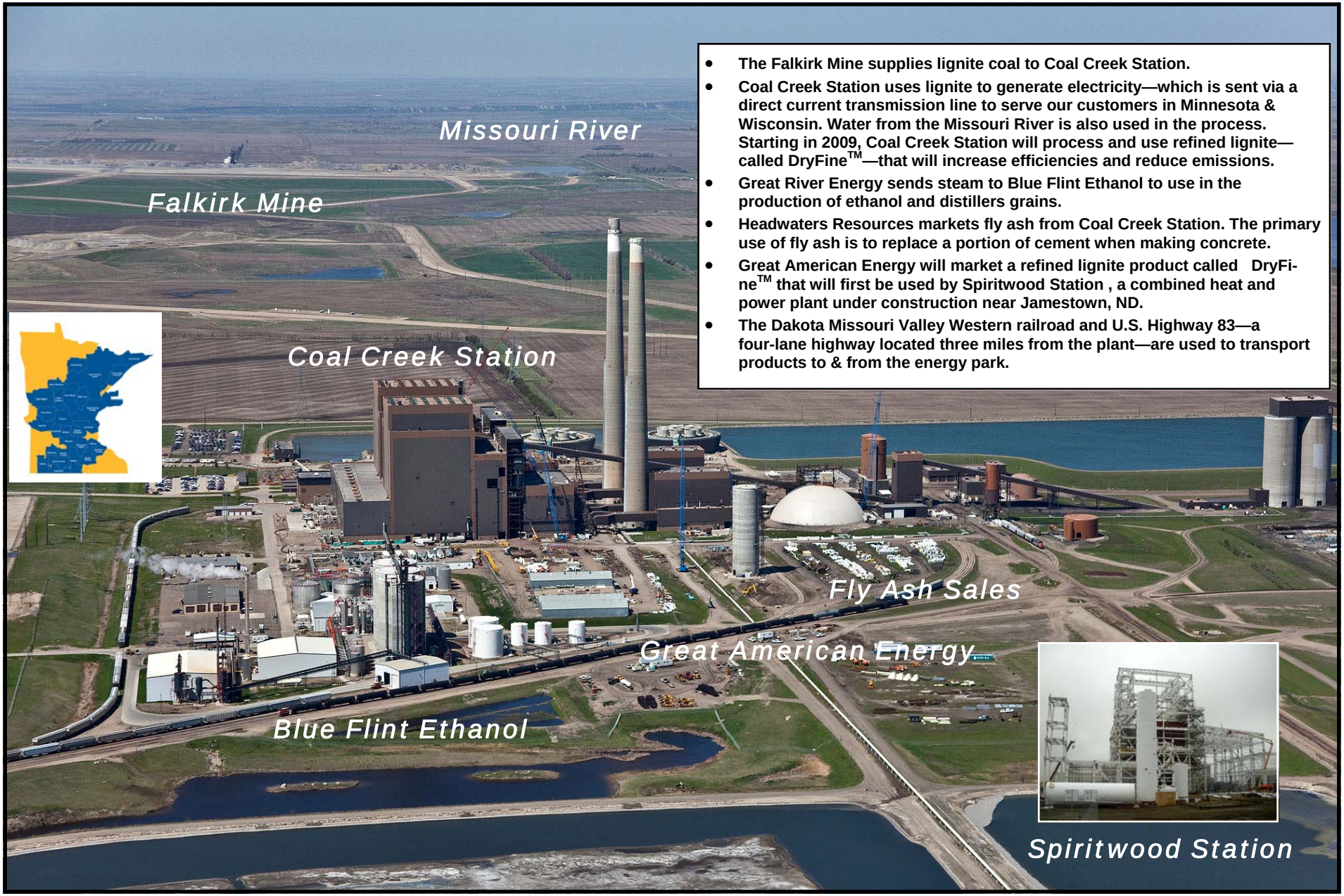
Coal Creek Station—Energy Park



- The Falkirk Mine supplies lignite coal to Coal Creek Station.
- Coal Creek Station uses lignite to generate electricity—which is sent via a direct current transmission line to serve our customers in Minnesota & Wisconsin. Water from the Missouri River is also used in the process. Starting in 2009, Coal Creek Station will process and use refined lignite—called DryFine™—that will increase efficiencies and reduce emissions.
- Great River Energy sends steam to Blue Flint Ethanol to use in the production of ethanol and distillers grains.
- Headwaters Resources markets fly ash from Coal Creek Station. The primary use of fly ash is to replace a portion of cement when making concrete.
- Great American Energy will market a refined lignite product called DryFine™ that will first be used by Spiritwood Station , a combined heat and power plant under construction near Jamestown, ND.
- The Dakota Missouri Valley Western railroad and U.S. Highway 83—a four-lane highway located three miles from the plant—are used to transport products to & from the energy park.

Photo taken on May 18, 2009

Coal Creek Station – North Dakota's largest power plant – features two units with a total generation capacity of over **1,100 megawatts**.

Ground was broken for Coal Creek Station in the fall of 1974. The plant started **generating electricity** from Unit 1 in 1979 and from Unit 2 in 1980.

From the beginning, Coal Creek Station has been a top performer in several national rankings of power plants as it is **one of the most reliable and cost-efficient in the country.**

The fuel source for the plant is **lignite coal**, supplied by the adjoining **Falkirk Mine**.

Coal Creek Station uses about **22,000 tons of lignite per day**, or about 7.5 to 8.0 million tons per year, to generate electricity for Great River Energy's customers. Electricity is delivered to those customers over a high voltage direct current (HVDC) transmission system that runs a distance of 436 miles.

Coal Creek Station has more than **220 employees**, making it one of the largest employers in McLean County.

How the Plant Works

High pressure steam drives the advanced multi-state turbines to power the generators. Water is turned into steam as it flows through tubes that form the walls of the plant's massive furnaces (205 feet tall). The steam is superheated to a temperature higher than 1,000 degrees Fahrenheit and then it is released as high-pressure steam into the turbines.

With most of its energy spent powering the turbines, lower pressure steam is recaptured, cooled, condensed and sent back to the boiler. A sophisticated control center, staffed around the clock, monitors the plant's every function.

WASHTO Energy Production Tour —July 13, 2010

12:00 p.m.	Depart Bismarck
1:00 p.m.	Tour Coal Creek Station, the largest power plant in North Dakota. Learn why this power plant is vitally important to Great River Energy's generation needs. Remodeled control room features observation room with generation process DVD. Dryfining technology now in operation.
2:15 p.m.	Travel to Blue Flint Ethanol
2:20 p.m.	Drive through tour of Blue Flint Ethanol. Learn how this plant uses a mix of primary and waste steam from Coal Creek Station to produce ethanol, making it one of the lowest-cost facilities in the nation.
2:45 p.m.	Travel to Falkirk Mine
3:00 p.m.	Tour Falkirk Mine. See the gigantic equipment that is used to help supply up to 8 million tons of lignite coal each year to Coal Creek Station. The group tours the mine aboard the Falkirk Mine bus. The tour will also overview the Coal Lake mitigation site.
4:30	Travel back to Bismarck. Arrive at hotel by 5:30 p.m.