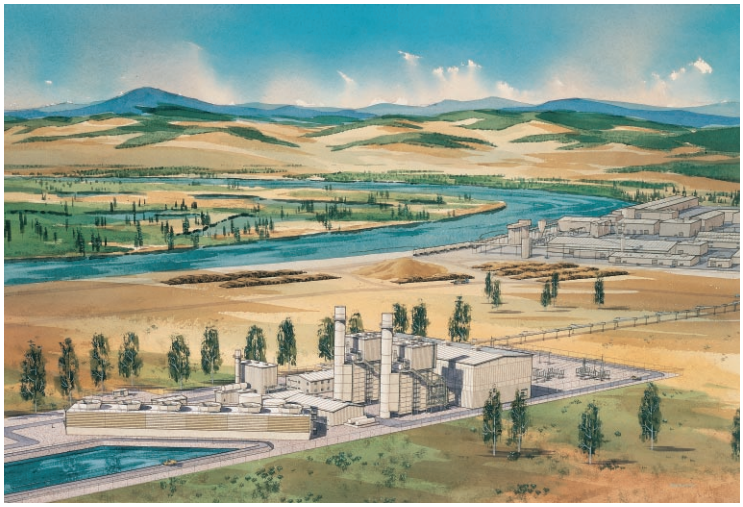

Tapping the Power of Cogeneration

In Southern Oregon, PacifiCorp Power Marketing and the City of Klamath Falls are creating the country's cleanest fossil-fuel power plant ever constructed in the U.S. in terms of greenhouse gas emissions. It's also one of the most energy-efficient electric plants in the nation.

The Klamath Cogeneration Project will soon provide dependable, environmentally sound electricity to the Pacific Northwest and Northern California while supplying low-cost steam to local industry.

The $300 million state-of-the-art facility will turn clean natural gas into 500 megawatts of electricity, enough to power 400,000 homes.

It's the winner!

In 1996, Oregon put on a competition to build the cleanest energy facility. The Klamath Cogeneration Project won for several reasons. It had the lowest carbon dioxide emissions (the gas formed by combustion of materials such as natural gas, coal or wood) per megawatt. It reuses city wastewater. It's cogeneration. In this case, steam produced in the creation of electricity goes over the fence to a neighboring wood products company to run the plant so Collins Products can shut down its boilers.

And it's a model

Then, Oregon's legislature used the best-of-batch experience to fashion a new law. Now, all new fossil-fuel power plants sited in Oregon must reduce their greenhouse gas emissions. In the past, the developers had to begin the permitting process by demonstrating that the plant was needed for power generation. With a new energy marketplace emerging, where plant output is not tied to specific or local customers, the concept of need is difficult to demonstrate. Oregon's new standard takes the emphasis off need and puts it on environmental performance.

So the Klamath Cogeneration Project set the bar that is now the standard for reducing CO_2 emissions for all new fossil-fuel power plants in Oregon.

Facts about Klamath Cogeneration Project

Owner: The City of Klamath Falls

Manager and Operator: PacifiCorp Power Marketing, Inc., a non-regulated subsidiary of PacifiCorp

Construction: Black & Veatch.

Project Cost: $300 million

Size of Project: 500 megawatts

Location: Klamath Falls, Ore.

Fuel: Natural gas

Generation: Advanced gas turbine combined-cycle

Groundbreaking: June 3, 1999

Expected Commercial Operation: July 2001

Jobs: 250 construction jobs, 20 permanent jobs

How it works

The overall efficiency of the Klamath Cogeneration Project is 62 percent. A typical utility thermal power plant operates at about 35 percent efficiency. So what makes this one hum?

Cogeneration means two useful forms of energy are produced from one fuel source. In this case, the starting fuel is natural gas from the abundant gas fields of western Canada. Natural gas fuels large combustion turbines which turn generators to produce electricity. Heat produced in the process is captured to produce more electricity and steam for industrial use. The Klamath Cogeneration Project will use state-of-the-art technology to produce fewer air emissions than other fossil-fueled plants.

The cogeneration process itself is a huge CO_2 benefit. It's the highly efficient use of fuel that's at the core of the Klamath Cogeneration Project's low greenhouse gas emissions.

Cogeneration also supplies steam to local industry at a lower cost than conventional steam boilers. Low-cost energy helps those businesses survive and thrive.

In addition, the project will use recycled, treated wastewater from the City of Klamath Falls for plant cooling. This benefits the community and the environment by reducing discharges to the Klamath River.

Setting the standard on the environment

Remember the contest? Best-of-batch? The Oregon Energy Facility Siting Council's competition to build a power plant with the least environmental impact? The competition itself — the first of its kind in the nation — won recognition from Vice President Al Gore for its collaborative and innovative approach.

At the end of the contest, the Klamath Cogeneration Project emerged with the most aggressive environmental mitigation program of any proposed project in the nation. Its environmental benefits go beyond its super-efficient advanced combustion technology in combination with cogeneration. In addition, the Klamath Project's environmental profile includes reforesting more than 6,000 acres of underproducing lands in Oregon, converting waste methane to electricity, funding solar energy projects in developing countries, expanding the Klamath Falls geothermal district heating system and providing more than $1 million to the Oregon Climate Trust for the state's carbon dioxide offset programs.

All told, the Klamath Cogeneration Project will offset its carbon dioxide emissions by about 30 percent — the lowest ever seen for a fossil-fueled electric plant. It sets a new target for environmentally responsible power generation not only for Oregon but also for the nation.

PacifiCorp has several renewable energy resources. In 1998, PacifiCorp and its partners completed construction of a 41.4-megawatt wind plant. It also has a 24-megawatt geothermal plant in Utah and low-impact hydro projects throughout the West. It has invested $1.3 million in its share of Solar II, the world's largest solar energy plant, located in the Mojave Desert. PacifiCorp also has solar energy projects in Oregon, Wyoming and Utah. As part of PacifiCorp's merger with ScottishPower, the companies committed to develop an additional 50 megawatts of new renewable resources within five years. The company's support of renewable energy demonstrates its commitment to providing reliable, economical and environmentally friendly power to its customers.

For more information, contact Corporate Communications, (503) 813-7292.