

# Going Green: A Look At Some of the Region's Renewable Power Projects

*Public utilities have a history of developing clean energy projects, with many on line and others pending*

*By Pam Blair*

Tapping into renewable power is nothing new for public utilities in the region, their industry partners and customers.

The legacy of green power started in the early 1900s with construction of Minidoka Dam in Idaho by the federal government and Nisqually-LaGrande Dam in Washington by the city of Tacoma.

Soon, the region's hydroelectric network extended into Oregon and Nevada, with federal construction of Bonneville and Hoover dams.

Today, 55 major hydroelectric projects are located on the Columbia River and its tributaries, and 52 operate in Alaska.

"Hydropower is the most efficient, most renewable resource there is," said Jim Su'euga, manager of marketing and member services for



*Municipal solid waste at the Roosevelt Regional Landfill awaits use as an energy source for Klickitat PUD, based in Goldendale, Washington.*

Columbia Rural Electric Association, based in Dayton, Washington.

The initiative passed by Washington voters in November requiring development of renewable resources excludes hydropower from the list of renewables.

"It's not rational to leave hydropower out," said Scott Corwin, vice president of marketing and public affairs for PNGC Power, which represents 15 rural electric co-ops.

However, projects universally deemed renewable already have been developed in public power service areas, and more are pending.

Here are descriptions of a few:

## **Harvesting Wasted Gas**

Since 1995, methane gas produced by decomposing garbage at the Coffin Butte Landfill near Corvallis, Oregon, has generated electricity for a group of rural electric utilities through the Power Resources Cooperative.

The output is enough to serve an estimated 2,000 households. That is expected to double this year.

In 1999, Washington's Klickitat County Public Utility District (PUD) installed a 10-megawatt (mw) gas-to-energy facility at the Roosevelt Regional Landfill.

An additional 10 mw is expected to be on line in 2008, with the potential of up to 60 mw.

The Tillamook Biogas Facility and Hooley Digester began in 1988 as a project between the Port of Tillamook, the Tillamook People's Utility District and the Tillamook County Soil and Water Conservation District.

Initially called the Methane Energy and Agricultural Development project, it became operational in November 2003, processing manure from 4,000 of the county's 30,000 cows into biogases.

The methane generated during the breakdown of the manure fuels a power generation plant, while the leftovers are sold as potting soil.

## **Capturing the Wind**

Motivated by a desire to reduce its reliance on diesel generators, Alaska's Kotzebue Electric Association began investing in wind turbines in 1997, and has offset up to 40 percent of its load with wind power.

Building on Kotzebue's success, several other Alaska cooperatives are developing wind projects, as is California's Plumas-Sierra Rural Electric Cooperative (PSREC).

Through Northwest Sustainable

## **Web Site Offers Guide To Clean Energy Projects**

Interested in finding out what it takes to pursue a clean energy project in the region?

The Northwest Community Energy Web site focuses on the reasons and methods for pursuing community energy projects, which includes renewable energy, conservation and efficiency projects.

To explore the Web site, log onto [nwcommunity.org](http://nwcommunity.org). ■



*Workers at the Tillamook Biogas Facility in Tillamook, Oregon, check the Hooley Digester, which processes dairy manure and turns it into electricity and compost fiber. Photo by Dorene White, Tillamook PUD.*

Energy for Economic Development, 10 small wind projects have been completed in the Northwest.

The first utility-scale project of the Last Mile Electric Cooperative—the 200-mw White Creek Wind Project in south-central Washington—is permitted. Turbine delivery will start in June, with operations scheduled to begin by December 15, 2007.

Members include four publicly owned utilities in Washington: Tanner Electric Cooperative, Lakeview Light and Power, Cowlitz County PUD and Klickitat County PUD.

#### **Let the Sun Shine In**

Since the 1990s, PSREC has marketed photovoltaic systems to its customers, allowing them to cap-

ture power from the sun.

Solar power also is being developed on a large scale in Nevada.

Later this year, Nevada Solar One will begin producing 64 mw—enough to power 40,000 homes—from a 300-acre solar power plant in the desert south of Las Vegas.

#### **Digging Deep Into the Earth**

The potential to generate electricity from geothermal energy—the heat contained below the surface of the earth—is highest in Alaska and the western United States.

Nevada's first geothermal power plant was developed in 1984. Within the next five years, Nevada expects to meet about one-quarter of its power needs with geothermal.

Chena Hot Springs is home to

the first geothermal power plant in Alaska. Brought on line in July, it is the lowest-temperature geothermal resource to be used for commercial power production in the world.

#### **Catch a Wave**

Just a fraction of the energy in the seas could light up the entire planet, if only it could be captured.

Researchers at Oregon State University and the Electric Power Research Institute (EPRI) are working on ways to create energy from the motion of the ocean.

PNGC Power is working with a developer on a 2-mw project off the Oregon coast. EPRI test sites include Alaska's Cook Inlet, Puget Sound's Tacoma Narrows and San Francisco's Golden Gate Passage. ■