



» Natural Resources and Parks

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News Release

Senator Cantwell aids King County in breaking ground for innovative energy project

King County broke ground today for construction of the world's largest fuel cell power plant operating on methane gas generated by sewage from a wastewater treatment plant.

At the county's South Treatment Plant in Renton, County Executive Ron Sims and U.S. Sen. Maria Cantwell joined other project partners to launch the innovative demonstration project.

Working with the U.S. Environmental Protection Agency and FuelCell Energy Inc. of Danbury, Conn., King County will build, install and operate a unique fuel cell that uses gas produced during sewage treatment as fuel. Using that biogas, the fuel cell will produce up to 1 megawatt (MW) of electricity -- or enough to serve 1,000 households -- to meet some power needs at the treatment plant.

"Senator Cantwell's support is essential as we work to turn wastes into resources and ensure stable power rates for our treatment system," Sims said. "She is helping King County be proactive in finding new, innovative ways to provide electricity for its treatment plants. As a result, county residents and businesses will get the double benefit of stabilized energy costs and improved regulation of air emissions."

Fuel cell technology has the potential for improving the efficiency of recovering energy from digester gas, Sims said. It could generate more electric power from less fuel than traditional methods using combustion. And it should contribute to improved air quality by cutting carbon dioxide air emissions -- including greenhouse gases -- from our plants.



Senator Maria Cantwell with King County Executive, Ron Sims and Renton City Councilmember, Kathy Keolker-Wheeler



Stephen Torres, Western Region Vice President, FuelCell Energy Inc.; Kathy Keolker-Wheeler, Renton City Councilmember; Ron Sims, King County Executive; Maria Cantwell, United States Senator; Don Theiler, King County's Wastewater Treatment Division Director

Senator Cantwell said: "We are building the world's largest fuel cell power plant using gas from wastewater treatment right here in King County. The fuel cell plant is win-win. Consumers get 1,000 watts of much needed electricity. We reduce air emissions, and construction of the plant is good for the economy."

King County and FuelCell Energy, manufacturer of the Direct FuelCell, are sharing costs of the project with the EPA. The EPA is providing an estimated \$12.5 million in federal funding to King County through annual cooperative agreements. The total value of the project is \$22 million.

"Thanks to support from and visionary thinking by federal and King County governments, citizens are getting a clean, reliable source of electric power from a renewable fuel while removing methane -- a greenhouse gas -- from the atmosphere," said Jerry D. Leitman, chairman and chief executive officer of FuelCell Energy. "This project builds on the successes of our submegawatt power plants and is another example of how fuel cells are available today to help us meet our growing demand for electric power without harming the environment."

Also taking part in the groundbreaking were representatives of the EPA, the host City of Renton, and project consultants CH2M Hill and Brown and Caldwell.

King County treats wastewater to protect public health and water quality. The county already scrubs biogas from the South Treatment Plant digesters to produce pure natural gas and sells it to Puget Sound Energy. The plant's biogas supply can generate about 4 MW of electricity. The fuel cell should enable more efficient use of the biogas.

The fuel cell will be delivered this summer. After installation, it is scheduled to operate for two years in a demonstration of the feasibility for using fuel cell technology at wastewater treatment facilities. The project will also verify the claims of high-energy conversion efficiencies and low air emissions for fuel cells.

If the demonstration project is successful, full-scale fuel cells could be cost-effective for providing an ongoing portion of the electricity used at the South Treatment Plant and other municipal wastewater treatment systems. In the United States, 400 treatment plants generate enough digester gas to supply stationary fuel cell power plants producing at least 1 MW.

What is a fuel cell?

Fuel cells efficiently generate clean electricity at locations near the customer, including hospitals, schools, universities, hotels, and other commercial and industrial facilities.

Fuel cells are like large continuously operating batteries that generate electricity as long as fuel, such as natural gas, is supplied. Since the fuel is not burned, there is no pollution commonly associated with the combustion of fossil fuels. Because hydrogen is generated directly within the fuel cell module from readily available fuels such as natural gas and wastewater treatment gas, the power plants are ready today and do not require the creation of a hydrogen infrastructure.

The county's Wastewater Treatment Division protects regional public health and water quality by serving 18 cities, 15 sewer districts and more than 1.4 million residents in King, Snohomish and Pierce counties.

Related Information

[Wastewater Treatment Division](#)

[Facts at a glance about our wastewater system](#)

[King County's fuel cell Web site](#) A live Web cam there will show construction progress.

[FuelCell Energy](#)

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