

NEWS



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EPRI HONORS SUNFLOWER ELECTRIC FOR LEADERSHIP IN MERCURY EMISSION CONTROL TECHNOLOGY

SAN DIEGO—The Electric Power Research Institute (EPRI) presented its 2005 Technology Achievement Award to Sunflower Electric Power Corporation (Sunflower) at the annual meeting of the National Rural Electric Cooperative Association (NRECA) in San Diego. The award honors electric cooperatives that have demonstrated leadership in the development, technology transfer, application, and use of EPRI products and services. Steve Specker, EPRI's president and CEO, presented the award to L. Earl Watkins Jr., president and CEO of Sunflower Electric, at the Cooperative Research Network Breakfast.

Sunflower completed full-scale tests on three different technologies, each of which could significantly reduce mercury emissions from western coal-fired power plants. Before these tests, which were conducted at its 360 MW Holcomb Station near Garden City, Kansas, the technical community had believed it would be difficult to reduce mercury emissions at plants firing the widely-used Wyoming Powder River Basin (PRB) coal.

In presenting the award, EPRI's Specker praised Sunflower's leadership in advancing the science of mercury emissions control. "With Federal regulation pending, full-scale testing at the power plant is a critical step in the development of potential technologies. We cannot simulate these conditions in the laboratory and need to determine whether performance in the field will be sustained over a period of time without interfering with the plant's operation.

"The pollution control equipment at Sunflower's Holcomb Station is typical of many power plants in the west. It has exactly the same configuration as most of the new plants being planned that will burn PRB coal," added Specker. "This makes the results particularly significant." The Holcomb plant burns PRB coal and is equipped with a dry scrubber and a high efficiency fabric filter.

The three technologies tested were:

- Injection of a new chemically enhanced sorbent. Over the 4-week test period, mercury removal averaged slightly over 90 percent at a relatively low injection rate. Without injection of this sorbent, the existing air pollution controls for particulates and SO₂ captured about 20% of the mercury.

- Blending a modest amount of a western bituminous coal with the primary PRB coal. In these short-term tests, mercury emissions decreased by as much as 80 percent without the need for sorbent injection.
- Combining activated carbon injection and a proprietary additive. Short-term tests of this approach resulted in much higher mercury removal rates than when activated carbon was used alone.

Sunflower's Watkins said "We are very appreciative of this recognition from EPRI. The successful outcome of this project was only possible because of the financial support and the cooperative spirit among all project participants. Sunflower's Board of Directors has always been committed to the highest levels of environmental stewardship. This project reflects their commitment and these results convince me Sunflower will be able to comply with future regulatory requirements."

A second Technology Achievement Award was presented to Wayne Penrod, Senior Manager, Environment and Production Planning at Sunflower and, according to EPRI technical staff, the project manager whose "innovation, enthusiasm, and resourcefulness made this all come together."

Penrod said "From the perspective of a power producer, this has been a very important test program and we are quite pleased with the results. We were able to determine that there are perhaps three methods from which we can choose how Sunflower will comply with future mercury reduction requirements."

All three approaches will be further evaluated at additional sites using different coals and coal blends.

This test program was conducted as part of an \$8.8 million contract with the U.S. Department of Energy's National Energy Technology Laboratory (DOE/NETL) to perform longer term mercury control technology testing for coal-fired power plants. Funding for the program at Holcomb and three other sites includes \$2.8 million in cost share support from EPRI, Sunflower Electric, ADA-ES, Arch Coal, and 15 other power companies.

About Sunflower—

Sunflower Electric Power Corporation is a regional wholesale power supplier that owns and operates a 595 MW system of gas and coal-fired generating plants and a 1,200-mile transmission system for the needs of its six member cooperatives who serve 118,000 people spread throughout a 21,000 square mile area in western Kansas. Sunflower also provides power to regional utilities in western Kansas and in ten states. Visit Sunflower's website at <http://www.sunflower.net>

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About EPRI—

The Electric Power Research Institute (EPRI), with major locations in Palo Alto, Calif., and Charlotte, N.C., was established in 1973 as an independent, non-profit center for public interest energy and environmental research. EPRI brings together member organizations, the Institute's scientists and engineers and other leading experts to work collaboratively on solutions to the challenges of electric power. These solutions span nearly every area of power generation, delivery and use, including health,

safety and environment. EPRI's members represent over 90% of the electricity generated in the United States. International participation represents over 10% of EPRI's total R&D program. Visit EPRI's web site at <http://www.epri.com>.

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