

November 10, 2010

Alberta to house a Canadian renewable energy first

Unique commercial-scale solar thermal power project set for Medicine Hat

Medicine Hat... The Alberta government is investing \$3 million to help establish a pilot project in Medicine Hat that will demonstrate the potential of using solar energy to produce the steam needed to generate electricity, instead of using fossil fuels.

The Medicine Hat Concentrating Solar Thermal Energy Demonstration Project will be the first in Canada to add a solar-powered steam generation system to an existing power plant, allowing the plant's turbines to generate a portion of its electricity from a renewable energy source.

"Alberta has once again set a benchmark for developing energy efficiency technology that will help secure a clean energy future," said Rob Renner, Minister of Alberta Environment and MLA for Medicine Hat. "This is another step forward in our efforts to reduce greenhouse gases at the source here in Alberta."

The Medicine Hat power plant generates electricity for customers within the City of Medicine Hat, Redcliff, Dunmore, Veinerville and outlying rural areas adjacent to the city. The project is expected to be completed by fall 2012.

"Medicine Hat is proud to house such an important project in the continued exploration of renewable energy sources," said Medicine Hat Mayor Norm Boucher.

The project will cost \$9 million in total. The Climate Change Emissions Management Corporation, which administers Alberta's Climate Change and Emissions Management Fund, is directing \$3 million towards the clean energy project and the City of Medicine Hat is also providing \$3 million. The Government of Alberta's \$3 million comes from its portion of the Canada ecoTrust program.

"The Medicine Hat Concentrating Solar Thermal project will help us understand how this innovative commercial technology might be applied in northern climates," said Eric Newell, Chair of the Climate Change and Emissions Management Corporation. "Funding projects like this is one way we can support efforts to develop clean technology and help achieve Alberta's climate change targets."

Backgrounder: Project details

Media inquiries may be directed to:

Ogho Ikhalo
Communications
Alberta Environment
780-427-6267
To call toll free within
Alberta dial 310-0000.

Wilbur McLean
Communications
City of Medicine Hat
403-525-8887

Celia Sollows
Communications
CCEMC
780-239-4150

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Medicine Hat Solar Concentrating Thermal Energy Demonstration Project

The solar thermal energy demonstration project will be Canada's first commercial-scale demonstration facility using concentrated solar thermal energy.

Solar thermal energy is a carbon-free, renewable alternative to the power generated with fossil fuels like coal and gas. To generate energy, lenses or mirrors are used to focus a large area of sunlight into a small beam. The concentrated heat is then used as an energy source. The technology combines the benefits of solar thermal energy (zero carbon footprint) with the flexibility of a fossil-fueled power plant. The result will yield a hybrid fossil-solar system capable of producing energy with reduced carbon intensities.

This pilot project will provide a starting point to evaluate the potential use of solar energy in applications beyond power generation with the ultimate aim of reducing greenhouse gases in Alberta and Canada. Once completed, the project will house scientists and technicians with a strong background in solar thermal technology, which is currently very limited in Canada.

ecoTrust Program

This is the sixth ecoTrust project announced by the Alberta government. The most recent was a \$25-million investment into Carbon Management Canada, a University of Calgary-anchored, nation-wide research network which brings together more than 100 experts to advance clean energy development in Canada.

Enbridge's CO2 Slurry Pipeline Project received \$1 million to explore ways to compress captured CO2 into a liquid, pump it through a pipeline to efficiently transport materials over large distances, and then store it underground.

A unique international partnership between the University of Alberta and the Helmholtz Association of German Research Centres received \$25 million in provincial support to drive innovation towards cleaner energy production, with particular focus on the province's oil sands.

The Otoka Energy Corporation also received \$20 million to develop a first-of-its-kind waste-to-energy production facility in the Town of Drayton Valley. The project will turn waste from the forestry sector into sellable electricity. The City of Edmonton was awarded \$7.45 million for a renewable energy project that will transfer residual energy from a biofuels facility to heat a neighborhood in Strathcona County.

The Canadian government established the Canada ecoTrust for Clean Air and Climate Change in 2007 by distributing \$1.5 billion among all the provinces and territories to assist with clean air and climate change initiatives. Alberta's share of the ecoTrust is \$155.9 million. To date, \$81.5 million has been invested into clean energy research and waste-to-energy projects.

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