

CASE STUDY:

West Central Research and Outreach Center and Morris: A Real-life Demonstration Project

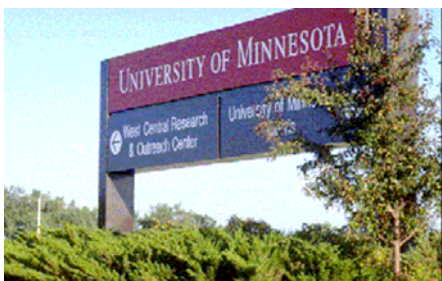
By Margaret Broeren, The Minnesota Project



The West Central Research and Outreach Center in Morris, Minnesota, is an excellent model of a community-scale project incorporating research and demonstration of renewable energy.

On Nov. 10, people gathered at the center to break ground for the new large-scale wind turbine. The turbine, which is expected to generate enough electricity for more than half of the university's electricity needs, is the Midwest's first large-scale wind installation at a public university.

Michael Reese, renewable energy coordinator



for the center, who has been involved in the CERTS teams from the start as a member of the West Central team's steering committee, says the center hopes the turbine will be producing electricity by March or April of this year.

Project Snapshot:

Technology:

- Large-scale wind turbine
- Hybrid wind and biodiesel energy system
- Biomass district heating and cooling system
- Scale-up biorefinery
- "Energy Smart" Solar Building

Benefits:

- Site of renewable energy research
- Collaboration between the University and Community partners (including DENCO Ethanol plant).

The Research and Outreach Center has put together a proposal to develop an integrated, community scale, research, demonstration and production Renewable Energy Center in close partnership with the University of Minnesota-Morris and other community and renewable energy collaborators. This will be a true community-wide effort involving many different components from installing renewable energy technologies, to researching technologies for conventional and cellulytic production of biofuels, to tying industry in with a community district heating system.

Many community institutions are already interested in getting on board. The Renewable

Energy Center hopes to conduct more research on biofuels and install a series of wind towers. The University of Morris is also interested in becoming a “Green University” by using a biofuel or biomass generator to meet its energy needs.

“They are looking to use resources in this area, and biomass came to the forefront,” Reese said.

DENCO, a producer/farmer owned corn ethanol plant located in Morris, is also pursuing opportunities to join the mix. They are evaluating the feasibility of installing a thermal oxidizer to reduce the facility’s odors that would also produce steam heat that could be sold for use in a district heating system. By selling some of the excess steam, they could recoup some of the oxidizer installation costs while contributing to a community-based renewable energy system.

The Research and Outreach Center is serving as the catalyst and facilitator of community efforts to incorporate renewable energy, but area institutions and businesses would own and operate the systems. A true community program like this would be a unique demonstration that could give people around Minnesota and across the nation a working model of a truly integrated renewable energy program.

To get the program moving, the Research and Outreach Center hosted a Renewable Energy

Workshop, attended by over 200 people from a variety of backgrounds. A twenty-six member Community Steering Committee was seated after the conference. The steering committee is providing a citizen’s voice throughout project development and plays a crucial role in ensuring public participation.

Currently there are renewable energy research and demonstration systems in development at the Renewable Energy Center including: a hybrid wind and biodiesel energy system at the West Central Research and Outreach Center; a biomass district heating and cooling system including the University of Minnesota Morris and Morris Public Schools; a community anaerobic digester system; A diversified energy (DENCO) ethanol plant, a scale-up biorefinery at the West Central Research and Outreach Center; and an Energy “Smart” Solar Building addition to the West Central Research and Outreach Center Office Complex.

While this case study presents a somewhat different model for community-wide planning, it demonstrates another option. Community energy planning can follow many models with different community members and organizations playing a leadership role and moving towns in the “right” direction.

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