

August 2011

Rock River Valley Section

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Event

Sense

The Institute of Electrical and Electronic Engineers, Inc.

RRVS, Computer/Control Systems, IAS & PELS Chapter Meeting

SERVING IEEE MEMBERS OF NORTH CENTRAL ILLINOIS AND EXTREME SOUTH CENTRAL WISCONSIN

Tour of Freedom Field Renewable Energy

When Thursday, August 25, 2011

Where

Rock River Valley Reclamation District Campus, 3333 Kishwaukee Street, Rockford, IL 61109.

Agenda

6:00 PM	Social/ Refreshments
6:30 PM	Tour
8:00 PM	End

Tour

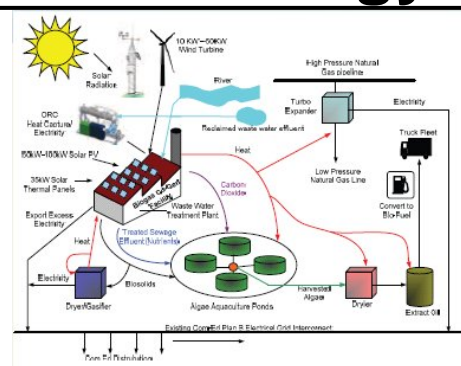
Freedom Field Renewable Energy (FFRE) is a unique facility located in Rockford, IL, designed as a demonstration of the integration of multiple renewable energy technologies into a system that comprehensively heats, cools, and powers a 8,500 square foot high bay facility with off the shelf renewable technologies. On a net basis FFRE exports electrical power and also provides supplemental heat for RRWRD's innovative anaerobic digestion system used to generate methane to power its electrical needs as well as peak power production exported to the grid.

Though primarily a demonstration facility, with a purpose of providing leadership, outreach, and education, it is also providing operational data from which process improvements and economic sup-

port information for decision makers can further the general acceptance and commercialization of these technologies.

FFRE is also rapidly becoming the local nexus of information about renewable energy and "CleanTech" opportunities for the Business Community in the region. It has hosted 17 events in its first full year of operations with approximately 2,000 visitors, most who had their first personal experience with solar, wind, and bio-energy close up. FFRE also has hosted 13 Community College interns, and expects a regular rotation for training as it develops local and regional attention as the place to see **"How Renewables Work"**. You will see in use:

- 12.3 KW of locally manufactured Photovoltaic Panels
- 200,000 BTU of advanced solar thermal tubes used for heating and cooling (3rd application in the US)
- 10 KW traditional horizontal wind turbine
- 1.2 KW Vertical roof mounted wind turbine
- 200,000 BTU 2 stage biogasification system
- Dual waste heat capture system with 2,500 gallons of hot water storage



A schematic illustration of alternative energy project concepts.

A PLC based SCADA control used for the integration of these technologies in to a complete system, as well as a data store that can be used for analytical and benchmarking purposes.

Meeting Reservation

Refreshments will be provided at no cost. Please make **meeting reservations online (preferred)** at http://meetings.vtools.ieee.org/meeting_view/list_meeting/7935 or by **emailing Ginger at ginger.spinasanta@hs.utc.com**) by **Wednesday, August 24, at noon**. Please include the following information: name, phone number, email address, and IEEE member number.

Note

The meeting is open to the general public. You need not be an IEEE member. Guests are welcome.