

Contract No. R001-002
**“Abundant Energy: A Proposal for Wind Power
Development and Technical Education”**

Submitted by Lake Region State College
Principal Investigator: Douglas Darling

PARTICIPANTS

Sponsor	Cost Share
Lake Region State College	\$2,299,900
Workforce Enhancement Fund Grant (WEF)	\$ 368,715
WEF Matching Funds	\$ 370,200
Native Energy	\$ 250,000
Cavalier County JDA	\$ 20,000
Nordik Fiberglas	\$ 29,500
Outland Energy, FPL, Vestas, etc	\$ 3,300
eCollege	\$ 10,000
Florida Power and Light (In-kind)	\$ 187,200
North Dakota Industrial Commission	<u>\$ 500,000</u>
Total Project Cost	\$4,038,815

Project Schedule – 42 months	Project Deliverables:
Contract Date – December 24, 2008	Status Report: January 31, 2009
Start Date – November 1, 2008	Interim Technical Program Summary Report - September 15, 2009 ✓
	Interim Project Summary Report – June 30, 2010
Completion Date – December 31, 2011	Final Report– December 31, 2011

OBJECTIVE/STATEMENT OF WORK:

To site and erect an operating 1.65 MW wind turbine and to design and implement a wind turbine technician training program. In addition Lake Region State College proposes to replace their existing natural gas-fired boilers with electric boilers and to utilize the wind turbine to provide most of the electricity required by the campus. This project significantly augments Lake Region State College’s current effort to “go green” and to develop the only wind turbine technician training program authorized by the North Dakota State Board of Higher Education.

STATUS

Contract Executed.

September, 2010

The Wind Energy Technician Program Interim Project Report was received in September. The Report includes the following information:

Lake Region State college completed development of the Wind Energy Technician Program certificate in July 2009. The curriculum was reviewed and approved by the program advisory committee. Based on experiences during the first year of operation, the program advisory committee approved curriculum changes/additions for the 2010-2011 program year. (A fact sheet on the program is available in the Commission files.)

In July 2009, 18 students were accepted into the first class of the Wind Energy Technician Program. The students completed a climbing safety course and had to successfully complete a climb. Nextera Energy provided access to a wind turbine for the training/climb test and Nextera wind techs to accompany the students on the climb. Nextera Energy provided access as needed through the year culminating with the students spending 10 days in April/May 2010 performing scheduled maintenance with Nextera technicians at the Ashtabula Wind Farm. This hands-on experience was invaluable for the students in their program. The prospective students for fall semester 2010 and the instructors utilized Nextera Energy turbines at the Langdon Wind Farm to complete their climbing training/test for program admission.

The first students completed the certificate program in May 2010. Students then have the option of continuing in the program to receive an Associate in Arts degree or seeking employment. During fall semester of 2010, the program will begin to serve the first cohort of AAS degree seeking students. Lake Region State College is continuing to recruit for the program. There are already 20 students accepted for the fall 2010 with an additional 30+ student applications received. Lake Region State College is seeking additional funding from federal and state sources to expand the program and accept 40 students per year to meet industry demand and student interest.

Lake Region State College has begun delivering workforce training for companies operating wind farms in North Dakota.

Lake Region State College was also authorized 2.6 million dollars from the ND Legislature for the construction of a wind turbine and the connection to the campus. The Legislature required that Lake Region State College first apply for ARRA Stimulus funds prior to accessing the state appropriation. LRSC has applied for the specified funds and has been denied funding on some of its applications. One application is still pending.

Lake Region State College was denied approval by the FAA for its initial turbine site due to an extension of the secondary runway at the Devils Lake Regional Airport. Lake Region State College has secured an alternate site and has secured FAA approval with a finding of "no hazard" from the FAA and is currently negotiating a lease for the turbine site. LRSC is in negotiations with manufacturers for the purchase and erection of a turbine on this secondary site, but cannot proceed until the appropriated funds can be released from OMB. Discussions are ongoing regarding the College being able to access the appropriated funds.

The initial application to the Renewable Energy Council for funding showed a project budget of 3.3 million dollars. This was based on costs put together in 2006 for the 2007 Legislative Assembly. The project was approved, but not funded by the Legislative Assembly. As the project was developed

through the NDUS budgeting process and submitted to the Legislative Assembly in 2009, the total cost of the Turbine portion of the project was increased to 6.3 million dollars. The increase in total cost was due to several factors: 1) increased costs of turbine components and construction costs; 2) the need to enter into an energy performance management contract to pay the costs of the purchase and installation of the turbine that exceeded the appropriation; 3) costs to convert LRSC's boiler system to electric operation to increase energy savings in order to make the energy performance contract cash flow; 4)inclusion of an existing energy performance contract.

Interim Finance Report – Wind Energy Technician Program

Lake Region State College continues to move forward with its renewable energy project on multiple fronts. The program accepted 18 students in July of 2009 and 16 of the 18 students enrolled in August 2009. Twelve of these students completed the first year of the program in May 2010. Twenty students were accepted for Fall 2010 with 30+ students on a waiting list.

The financing for the project has been enhanced with the receipt of a Workforce Enhancement Grant of \$368,715 utilized to purchase additional equipment for the program. Lake Region State College has also been authorized 2.6 million dollars from the ND Legislature for the construction of a wind turbine (but currently unable to access these funds) and the connection the campus. The remainder of the project will be funded with an energy performance contract utilizing the energy generated by the turbine.

This project has fallen behind schedule and discussions are ongoing regarding amendments to reflect a more current schedule for the project.

11/22/10