

Contract No. R-016-026
“Renewable Energy Commodity Trading Education Program”
 Submitted by North Dakota State University
 Principal Investigator: William Wilson

PARTICIPANTS

Sponsor	Cost Share
ADM	\$250,000 (cash)
Gavilon	\$200,000 (cash)
ND Corn Council	<u>\$ 50,000</u> (cash)
Subtotal Cash Cost Share	\$500,000 (cash)
North Dakota Industrial Commission	<u>\$500,000</u> (cash)
Total Project Cost	\$1,000,000

Project Schedule – 69 months*	Project Deliverables:
Contract Date – August 26, 2013	Status Reports 1-3: September 1, 2013 ✓
Start Date – July 1, 2013	Status Report 4: November 1, 2013 ✓
Completion Date – March 31, 2019*	Status Report 5: January 1, 2014 ✓
	Status Report: October 1, 2015* ✓
	Final Report: March 1, 2016* ✓
	Status Report: March 31, 2018* ✓
	Status Report: May 31, 2018* ✓
	Status Report: August 1, 2018* ✓
	Final Report: October 31, 2019*^+ ✓

OBJECTIVE/STATEMENT OF WORK:

Funding from this project will be used to develop a world class renewable energy commodity trading educational program targeted to students, feedstock suppliers, and industry personnel. A major challenge to the renewable energy sector is the amount of risk that firms are exposed to in terms of investments, as well as on-going business operations. Margin volatility impacts not only firms but feedstock suppliers, rural communities and consumers. In a subsequent amendment to this project, the scope of work was expanded to include additional research and educational activities relating to contracting, including: renewable energy and feedstocks, contracts between growers and processors, and contracts between energy processors and end-users (consumers). The amended scope of work includes three major tasks. The first involves reviewing contracting practices in other industries and identifying biofuel sector specific issues and practices. Second, they will develop analytical models on contracts and contract strategy including risk and duration. Finally, they will deliver initial educational programs.

The expected results of this project are improved and innovative risk management strategies in the renewable energy sector due to better trained employees. The initial emphasis of the program will focus on biofuels. However, as the program progresses, it is anticipated that the scope will be extended to cellulosic feedstocks, wind, and biomass-power. This project will provide an educational program that is critical to the industry and give a North Dakota university a competitive advantage in recruiting students.

STATUS:

This project was submitted in two parts and combined into one contract. The contract has been signed and work is underway.

The contract calls for a number of reporting documents over the period of this project.

September 1, 2013: Initial detailed work plan outlining key performance benchmarks and timeline received. See Report 1 posted on website.

January 2014: State of Practice - Ethanol Trading and Risk Management - Final Report. See Report 2 posted on website.

January 2014: Curriculum Alternatives Activities & Dataset Development. See Report 3 posted on website

January 2014: Interim reports for teaching models and simulation modeling and infrastructure/technology installation activities. See Report 4 posted on website

March 2014: Final Reports for Dataset Development, Curriculum Alternatives, Teaching Models, Simulations Modeling and Infrastructure/Technology Installation Activities. See Report 5 posted on website.

A no-cost extension was requested for this contract and has been granted.

November 2015: Interim Report on Program Delivery Activity. See Report 6 posted on website.

March 2016: Final Report on all Exhibit A Activities. See Report 7 posted on website.

A no-cost extension was requested for this contract and has been granted.

March 2018: Contracting Interface Activity. See Report 8 posted on website.

July 2018: Development of Models Activity. See Report 9 posted on website. More information about the models is available by contacting Dr. Wilson. For more information, contact the Industrial Commission.

November 2018: Draft syllabus/curriculum for initial semester long upper-class/graduate course dedicated to renewable energy trading on the NDSU campus as well as an online to other North Dakota University System campuses interested in receiving the course. Full details in Report 10 posted on website.

February 2018: A no-cost extension has been requested and granted. The new project end date is August 31, 2019.

August 2019: A syllabus has been developed, for complete details see Report 11 posted on the website. It has been determined that there are no competing bioenergy trading courses exist. The cost of teaching the course would be \$10,000 per semester, assuming 1 semester per year. These would cover the cost of hiring a professor to teach this on an overload basis.

The course would be available to students within the NDUS system. Most likely targeted universities would be UND and Dickinson State. In addition, each of Minot State, Mayville State, and Valley City State have business programs and might have the occasional student who would be interested in the class. BSC may not be a target as it would be taught at a 400 (Jr/Sr) level.

The applicant has requested and been granted an extension through October 31, 2019 to address a budget modification request.

7/30/2019