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Project Summary/Abstract

Project Title: Biogas to RTO (Corn Plant)			
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NEO ADV RENEW. PROJECT SUMMARY/ABSTRACT

This project consists of the design and installation of a branch line from the anaerobic digester biogas exhaust to the regenerative thermal oxidizer (RTO). The project includes the controls which are interfaced with the existing control system. The branch line will allow biogas to displace natural gas input to the RTO and prevent exhaust from the existing flare system. The advantages are reduced use of commercial resources of natural gas and propane, the use of an otherwise wasted renewable fuel and a reduction of green house gas emissions to the atmosphere.

The project eliminates the use of propane for the anaerobic digester flare and reduces the amount of natural gas used at the RTO by a total of 45,588 MMBTU per year. The majority of the reduction (45,360 MMBTU per year) is due to use of the renewable fuel resource (methane) generated in the anaerobic digester. In addition, the greenhouse gas emissions are reduced by 2,655 Tons per year.

The project will be executed by procurement of the pump, knockout pot, and environmental stack testing by AGP Corn Processing Inc. The remainder of the material and all installation will be provided under two separate contracts. One will be issued to the general design/construction firm and the other to the electrical design construction firm. The firms under contract will create or retain (1) engineer, (1) project manager, (1) IT technician, (3) pipefitters, and (2) electricians, totaling eight jobs for 2-3 months.

Grant Objectives Attained

1) The project outlined increases the renewable energy generation in Nebraska by diverting a currently wasted renewable energy source to a useful renewable energy source. 2) Although, the technology is not new, the project demonstrates an efficient method of capturing this waste stream for ethanol plants and the project is unique in respect to the using the by-product of one pollution control device to offset the energy requirement of another pollution control device. 3) This project does not deploy cutting edge renewable energy technologies in the state. 4) The project generates energy from renewable resources by May 31, 2010. 5) The project avoids 2,655 Tons/year of greenhouse gas emissions. 6) The funds for the project will be leveraged by allowing the capital displaced by the grant to be allocated to productivity gains. 7) As detailed above, the project will create or retain 8 jobs in various skills for a duration of 2-3 months.