LEC PARTNERS

Case Study

Client
Renewable Fuel Producer

Project Number
20044

Team Members
Glenn Farris

Resource Assessment of Agricultural Biomass

Summary of Client and Challenge They Faced

A renewable fuel producer was using woody biomass from their own managed forests as feedstock for boiler fuel. The company was interested in expanding their footprint of usable feedstock for their fuel production and felt that additional pressure on their forest operations was not sustainable. They were exploring the use of agricultural residues as suitable feedstock; however, they had no experience evaluating these resources as potential feedstock, nor any experience handling and processing them.

The fuel producer required a resource assessment of the bio-based feedstock including a comprehensive study on best management practices for the handling and transportation of the feedstock, as well as further due diligence on the harvesting, collection, and delivery to their processing facilities.

Our Approach to the Solution

LEC Partners (LEC) was engaged to conduct a resource assessment of the available agricultural biomass within the fuel producer's geographic

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footprint. An LEC expert met with the company to determine the area for the study as well as the minimum amounts of feedstock necessary to meet their production requirements. The objective was to provide a complete inventory and economic resource assessment, identifying available biomass and the associated supply chain costs.

Information on crop yields for various crops and agricultural processing facilities were collected from verified sources including USDA NASS (National Agricultural Statistics Service) surveys conducted and published annually; local USDA and state department of agriculture representatives and sources; state and county level data for counties in the footprint identified; state and county extension service personnel; crop associations; and national laboratories. Based on this comprehensive evaluation, LEC provided an accurate resource assessment of the available agricultural biomass that met the fuel producer's requirements in their geographic footprint.

Utilizing our extensive network of industry contacts, the LEC team determined the logistics systems necessary to harvest, collect and transport these feedstocks to their processing facilities. This supply chain analysis provided additional due diligence for the biomass fuel producer, including the cost to operate and manage these systems.

Client Results and Benefits

The LEC resource assessment revealed sufficient agricultural biomass in the

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fuel producer's geographic footprint to supplement the woody biomass harvested from their managed forests. The total cost for the feedstock including transportation and logistics was deemed acceptable by the fuel producer. With a complete picture of available biomass sources and supply chain costs, the fuel producer elected to move ahead with the next phase of their project – selecting a specific resource and building a more detailed business case for using the alternative feedstock.