

PRODUCING BIOENERGY AT A NEW YORK DAIRY AND NEIGHBORING LANDFILL



Energy Co-Opportunity (ECO), with support from NYSERDA, is currently conducting a feasibility study in Perry (Wyoming County), where two bioenergy candidates, the Old Acres Dairy Farm, and the Formso Landfill, are located side-by-side. The goal of the study is to demonstrate that two objectives – addressing environmental and waste disposal problems, and producing valuable energy from renewable sources – can be accomplished by the introduction of bioenergy collection and generation technologies at both sites.

Old Acres is planning to expand its current operation of 1,000 milking cows annually, producing 3.5 million gallons of milk. However, the farm already has complaints from neighbors about the odor from the manure it spreads on its fields, as well as concerns that the field dressings of manure may release pathogens into local water supplies. In addition, the energy bill at Old Acres currently exceeds \$100,000 a year.

The closed Formso Landfill currently vents approximately 13 million cubic feet of greenhouse biogas into the atmosphere (about half of which is methane). The landfill also produces close to a million gallons of leachate annually, which must be collected and disposed of at a cost of about \$100,000.

ECO is analyzing the best methods and equipment to cost-effectively produce bioenergy at each site. At Old Acres, the manure will be deposited into an anaerobic digester, which will produce a steady supply of methane gas. At Formso, a gas capture system will be installed. ECO will study the power generation options, including generating power and produce usable heat with separate, stand-alone power systems, or through a central system fed by the gas collected at each site.

Benefits of these neighboring bioenergy projects will include:

- reduction of manure labor costs at Old Acres;
- a source of on-site energy at Old Acres;
- a source of income from power sales to offset expenses at both Old Acres and Formso ;
- significant environmental improvements at both sites.

“The bioenergy plant can help us meet our mission of producing large volumes of quality milk with low input costs, while maintaining an environmentally friendly operation.”

– David Smithgall,
Old Acres Inc.

