



## Ridgewood Green RME Wins Biogas Project of the Year

April 10, 2014

HILLSBOROUGH and ISELIN, N.J., April 10, 2014 (GLOBE NEWSWIRE) -- The American Biogas Council today awarded Ridgewood Green RME the "Biogas Project of the Year Award" for a renewable energy project implemented at the wastewater treatment plant owned by the Village of Ridgewood, NJ.

The American Biogas Council selected the project in the Municipal category because of its excellence in all of its criteria: Innovation, Technology, Collaboration and Complexity. The goal of the project was to enhance anaerobic digestion at a municipal wastewater treatment plant so that enough biogas is produced through the Combined Heat & Power (CHP), meeting almost the entire plant's energy needs to run the plant. A 50KW solar array was included to meet the goal along with a 240KW engine/generator.

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The overall objective is to improve affordability, resiliency and sustainability of wastewater treatment operations for the Village of Ridgewood, New Jersey.

### Ridgewood Village Project

A biogas production system was designed to optimize the production of electricity from methane, and was constructed through a retrofit at the existing Water Pollution Control facility. Ridgewood Green RME, an entity comprised of Natural Systems Utilities (NSU), Middlesex Water Company (MWC), and American Refining and Biochemical (ARB), through a 20-year public-private partnership with the Village of Ridgewood, made the up-front capital investment to retrofit the new equipment to optimize the anaerobic digestion process and convert methane gas to electricity. Bio-Organic Catalyst, Inc. (partner with NSU) also assisted in the development of the project and continues to provide an enzyme product that increases biogas production. In addition, the production of electricity is enhanced through co-digestion with food wastes such as brown grease to increase biogas production. The heat required for anaerobic digestion is also generated by heat recovery off the engine, further increasing plant efficiency and reducing emission of greenhouse gases. In turn this biogas conversion facility now eliminates the need to flare the methane to the atmosphere, as previously required.

"Our public-private partnership among NSU, Middlesex and ARB makes Ridgewood a national leader in sustainable municipal wastewater treatment," said Village of Ridgewood Mayor Paul Aronsohn. "Producing energy at our facilities reduces cost while powering the facility with approximately 100% renewable energy, and provides environmental benefits for the community. To be able to accomplish this at no capital cost to the taxpayer, while realizing substantial environmental benefits for the Village, is something we can all take pride in," added Aronsohn.

A total of four solar generation facilities were constructed on several properties throughout the Village of Ridgewood to provide renewable energy. Installations at Village Hall, the Fire Department, the EMS Building and the Water Pollution Control Facility, have been producing electricity since February 2013. The biogas engine, the workhorse of the project, has undergone energy optimization testing and has since been successfully integrated into the wastewater treatment process. The facilities are being operated by Village employees in concert with Ridgewood Green RME.

In addition to cost savings from the utility bill, additional income is generated by selling all the renewable energy certificates (RECs) to [3Degrees](#), a leader in the renewable energy marketplace. RECs produced by the biogas technology at Ridgewood and the related solar projects have a relatively high value because of their unique characteristics, compared to other Green-e Certified National RECs. [3Degrees](#) is purchasing Ridgewood's premium RECs and, in turn, supplying Ridgewood water pollution control plant with lower cost [Green-e](#) Certified National RECs, equivalent to almost the entire plant's energy needs, thereby ensuring the plant is powered with renewable energy, while maximizing the return on investment in the project. The sale of these RECs is part of the overall economic package that allows for the supply of lower cost electricity, ultimately benefiting Ridgewood utility customers.

"Many municipalities are struggling with aging infrastructure, underperforming utility facilities and severely constrained municipal budgets. This project demonstrates how partnerships with municipal and industrial leaders can achieve a lower carbon footprint while converting wastes to valuable resources for use in the local community. By repurposing an existing facility in this way, everyone benefits — the environment, the Village residents and our renewable energy investors," said Chuck Gordon, CEO

## Natural Systems Utilities.

"Optimizing energy production in this manner demonstrates the unique relationship between water, wastewater and renewable energy where the integration of these commodities has resulted in environmental and economic benefit for all parties," said Dennis Doll, Middlesex Water President and CEO. "In addition to helping the Village realize cost savings, the project is improving air quality and lowering energy costs, truly helping the Village to become more sustainable," added Doll.

NSU, MWC and ARB worked with several key partners on various components of the project including Bio-Organic Catalyst, Inc., HDR-HydroQual Engineers and Advanced Solar Products. Bio-Organic Catalyst, Inc., (partner with NSU) provides optimization of the anaerobic digestion process with addition of an enzyme product which increases biogas production. HDR-HydroQual Engineers provided engineering design services and construction assistance for the project. Advanced Solar Products provided turn-key installation of the solar panels at the four Village locations.

### **About Natural Systems Utilities**

Natural Systems Utilities is a market leader in providing higher value, lower impact water and energy solutions for communities and industries. NSU is a full-service development and finance platform, rapidly mainstreaming the benefits of distributed systems as a widespread alternative to, and effective hybrid retrofit of traditional, less efficient centralized infrastructure.

NSU is a B-Corp Certified company, maintaining very high standards on how they treat their employees, impact the environment, and benefit the community in which their business operates. B Corps are certified by a nonprofit organization, B Lab, by completing the B Impact Assessment, which measures social and environmental impact, and changing their governing documents to note that they are going to consider the impact of their business decisions on all stakeholders (employees, suppliers and people in the community).

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For more information about Natural Systems Utilities, see [www.naturalsystemsutilities.com](http://www.naturalsystemsutilities.com).

### **About Middlesex Water Company**

Middlesex Water Company (Nasdaq:MSEX), organized in 1897, provides regulated and unregulated water and wastewater utility services primarily in New Jersey and Delaware through various subsidiary companies. For information about Middlesex Water Company, visit [www.middlesexwater.com](http://www.middlesexwater.com).

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Source: Middlesex Water Company; Natural Systems Utilities