



Agrienergy Producers' Association of Ontario

Agrienergy News

January-February 2012

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Support Biogas in Ontario, Become an APAO Member!



Agrienergy Producers' Association of Ontario



HH Angus has recently formed **Angus Power**, a division focusing exclusively on the design and build of biogas and other renewable plants. John Hawkes, CEO of Angus Power, believes there is excellent potential for biogas in small to medium sized farm operations, but these smaller plants have to be designed and built very cost effectively.

Angus Power has developed an audit program that will assist Canada's 16,000 dairy farms to determine whether a biogas plant is feasible for their operation and if so, in what configuration. Some of these biogas systems would not rely on subsidized energy costs, such as the FIT program. They would instead generate power to be used directly on site, providing the farm operation with all of its energy needs and solving its manure management issues.

"While there is no one size fits all solution, each biogas project has common challenges: managing the interfaces between fuel source, gas producer, gas utilization, and the external offtaker; security of consistent substrates; and monetizing every input and output," adds Hawkes.

A microFIT biogas program would greatly change things, Hawkes says, since connecting to the grid is a major expense and often acts as a deterrent for farmers.

"A perfect biogas system for these smaller operations is one with few soft costs. And even though no two farming operations are the same, a modular approach that combines favourable economics and intelligent design is key. To have biotechnology adopted wholesale by the market, we have to do three things: reduce cost by simplifying the technology; improve reliability with better engineering; and reduce system variance by incorporating rugged control systems. Just the kind of approach Angus has been using for 90 years!" said Hawkes.

Angus Power was formed in 2011 primarily in response to Ontario's Feed-In Tariff Program, as they saw this provincial initiative as an opportunity to make progress in the green energy sector. The company also identified a need for a specialized and localized approach to the engineering, procurement, and construction (EPC) of renewable energy plants, including solar and biogas. In the past few years, HH Angus has provided electrical engineering design and interconnection for a number of biogas plants in Ontario, including Delft Blue Veal Farms, Clovermead and Harvest Power.

Angus Power is also a founding member of the ZooShare Biogas Project. This group is currently seeking funding to develop a 500 kW community-owned biogas-powered plant. As feedstock, the power plant will process manure collected at the Zoo, together with organic waste from a local grocery chain. The ZooShare Biogas Project will be the first of its kind, with community ownership of the plant. Initial engineering work has been completed and the group is waiting for a contract offer from the OPA.

Angus Power parent, HH Angus and Associates Consulting Engineers, was founded in 1919 and has had a significant and active role in Ontario's power and energy business; including sustainable energy systems, as early work was concentrated on decentralized utility plants.



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APAO News

Biogas Education – Webinars

APAO hosted two webinars in January introducing biogas, recent developments and opportunities. The webinars provided the opportunity for individuals in a cross-section of sectors to learn about the benefits of biogas and how this energy source could be integrated into their own work or research. Funding for the webinars was provided by the OPA's Community Energy Partnerships Program.

APAO's Annual General Meeting

APAO's Annual General Meeting of Members will be held on March 6th from 4:30-8:00pm in London, Ontario after the Growing the Margins and Canadian Farm and Food Biogas Conferences and Exhibition. Members and non-members are welcome. Guest speaker Norma McDonald of the American Biogas Council, will be presenting the opportunities and challenges for biogas as experienced in the United States and how it applies to Ontario. Attendees will also have the opportunity to network with biogas stakeholders, and gain insight into APAO's plans for 2012.

Innovation Forum

The Innovation Forum is scheduled for March 7, 2012. It is an invitation-only stakeholder workshop designed to explore new markets for biogas, and will examine opportunities for biogas for injection into the natural gas grid, as a transportation fuel, and for stationary heating. Funding is provided by OMAFRA.

APAO Nominations for Board of Directors

Do you want to help grow the biogas industry in Ontario? APAO wants to hear from you! We are currently taking nominations for new Board members for the 2012 Board of Directors. We rely on the input and advice of our Board for evaluating and setting priorities, reaching out to new members, and meeting with governments and agencies to ensure our voice is heard. If you have an interest, or know of someone in the biogas industry that will add value to our leadership team, please forward nominations to exec_coord@apao.ca

Growing the Margins and Biogas Conference

The APAO staff is actively engaged in the conference development and look forward to another year of interesting topics, excellent speakers and great networking. Mark your calendar for March 5, 6.



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OEB Intervenor Status – Renewable Natural Gas (RNG) Application

The APAO is currently preparing questions to ask the natural gas utilities to better understand their application to the Ontario Energy Board to enable them to purchase renewable natural gas, and what this means to farmer producers. In the coming months, we will update members on progress in opening up this new opportunity to the biogas community and what it means to you.

APAO is on Twitter, Facebook and LinkedIn! Participate with the biogas community online!



Twitter - Connect with us on Twitter and follow up-to-date news and views from the Ontario biogas industry and beyond!



Facebook - Join the APAO Facebook community to connect with other members and stay informed about upcoming events.



LinkedIn - Join the APAO LinkedIn group to connect with other members and participate in relevant industry discussions. Please feel free to use this group to ask questions and express concerns related to the Ontario Biogas industry.



Agrienergy Producers' Association of Ontario

Government and Biogas Reports

Improving Property Tax System for Green Energy

Government of Ontario – January 4, 2012

Improved property tax assessment policies (Ontario Regulation 282/98), which took effect as of January 1, 2012, will support property owners who install renewable energy technologies, through **new categories**, which will be based on the size and location of energy generation. AD facilities that are located on a farm and are operated by the farmer will be taxed at the farm rate. Ground-based generation facilities that are operated by entities whose primary business is the generation, transmission or distribution of electricity will continue to be taxed at the industrial rate. [More...](#)

Beneficial Management Practices for Greenhouse Gas Mitigation from Agroecosystems, with Emphasis on Cow-Calf Non-confinement Production Systems in Western Canada

The National Centre for Livestock and the Environment – January 2012

New funding from the Agricultural Greenhouse Gas Program (AGGP) by Agriculture and Agri-Food Canada of \$3M to support the full project budget of \$4.3M will go towards scientific research in understand net-greenhouse gas emissions with attention on beef cow-calf operations in non-confinement production systems. The whole-system research analyses of crop and livestock operations will serve to inform policy. [More...](#)

Electricity Production from Anaerobic Digestion of Household Organic Waste in Ontario: Techno-Economic and GHG Emission Analyses

Environmental Science and Technology Journal

The study examines AD within the Ontario Feed-in-Tariff (FIT) context. Findings of the life cycle and cost analyses suggest that AD may provide substantial greenhouse gas mitigation in a cost-effective manner compared to other technologies (e.g., solar photovoltaic), while offering unique additional benefits (e.g., waste diversion). Large-scale centralized AD facilities may be cost-competitive alternatives to landfills. The study demonstrates that refocusing of the FIT program and waste policies are needed to support the adoption of AD of household organic waste, which has not yet been developed in Ontario, while more costly technologies (e.g., photovoltaic) have been deployed.

To access the article, please create a free American Chemical Society (ACS) account (you will be redirected by the webpage) and register with this account through this link <http://pubs.acs.org/doi/abs/10.1021/es2016268> Please contact APAO should you require assistance.



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“Energy-Smart” Food for People and Climate Issue Paper

The Food and Agriculture Organization of the United Nations - November 29, 2011

The FAO released a report on how renewable energy and energy efficiency can be derived from organic in diverse worldwide conditions and for every stage of agricultural production and distribution, respectively. The paper also provides figures and benefits of biogas in certain parts of the world. [More...](#)

Harvest Clean Energy 2011 Boise, Idaho Conference Presentations

There are three interesting presentations on anaerobic digestion available from the Harvesting Clean Energy conference website:

[Dairy Industry Sustainability: Contributions to energy innovation, industry strategy and rural economic development.](#) The presentation is by Don Schriver of Dairy Management Inc. for the Innovation Center for U.S. Dairy.

[Vander Haak Dairy: A Success story for on-farm anaerobic digestion.](#) The presentation is by Darryl Vander Haak, owner of Vander Haak Dairy Farm.

[Innovative Ways to Accelerate Biodigester Development.](#) Presentation is by Sheldon Zakreski, Climate Trust.

For more on-farm energy presentations, please view the list available on the [Harvest Clean Energy website](#).



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Biogas News

All eyes on German renewable energy efforts

Canadian Business/ Associated Press – December 29, 2011

By Juergen Baetz

Baetz hones in on Feldheim, a small German village with a population of 145, which has created a revolution, with zero unemployment as most residents work in the town's biogas plant, or maintain the solar and wind parks which provide the electricity needs for the village. While renewable energy remains expensive, it is setting the course for a greater renewable energy market, creating approximately 370,000 jobs in the renewable sector, Baetz reports. Baetz goes on to describe how different cities and companies have embarked.

[More...](#)

Local Biogas Initiatives Open Virtuous Circle

The Bioenergy Site – December 30, 2011

Fundacion Proteger (Protect Foundation) offers biogas production courses, which have been attended by more than 650 people including municipal authorities and technical personnel, professionals, farmers, students and educators from Argentina, Bolivia, Chile, Paraguay, Peru, Uruguay and Spain. The municipality hosting the course has a population of 3,000 and is currently constructing its third AD. [More...](#)

University makes electricity from fake cow stomach

CBC News – January 5, 2012

The University of Guelph Ridgetown Campus' anaerobic digester is featured in this article, providing specific on how the AD works. While the AD cost \$2.5 M to build, it will generate \$280,000 in electricity sales each year, says CBC news. [More...](#) For additional information you may also consult APAO's [September 2011 newsletter](#).

Cattle Feedlot Commission Biogas CHP System

Elite Energy Systems– January 9, 2012

Gardiner Farms cattle feedlot in Ontario is producing electricity and thermal energy, offsetting the prior purchase of energy produced using fossil fuels. Gardiner Farms commissioned Elite Energy Systems for its biogas CHP system. The farm is using manure, former waste streams and organic waste to generate biogas providing most heating and electricity requirements for the farm. Surplus electricity will be sold back to the grid. The farm's CHP system is powered by two Caterpillar low-BTU biogas-powered engines. [More...](#)



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WEB 2.0 (online social media)– Share, Learn and Meet!

Dear APAO newsletter readers,

Did you know you can connect with others in the world of biogas and AD through groups dedicated to discussing this topic? Not only does APAO have its own [Facebook](#), [Twitter](#) and [LinkedIn](#) groups, but there are other groups out there, such as (for example):

[LinkedIn Anaerobic Digestion Group](#)

[LinkedIn Bioenergy Expert Group](#)

[LinkedIn Biogas Group](#)

Join in these forums! Set up an account and gain access interesting topics while linking to new contacts.

Environmentalists Urge State to Push Cow Power

Capital Public Radio – January 11, 2012

A number of environmentalists are urging the California Public Utilities Commission to set up a pricing mechanism that would make biogas competitive with other clean technologies. [More...](#)

What Do Falling Natural Gas Prices Mean for Renewables?

ThinkProgress.org blog – January 13, 2012

By Stephen Lacey

Given that natural gas prices are the second-lowest price (U.S.) average since 2002, Lacey examines the impact on the renewable energy industry through two reports by the U.S. Energy Information Administration (EIA) and the Massachusetts Institute of Technology. However, the EIA and an IDC Energy Insights Analyst forecast this will change in 2013, Lacey reports. [More...](#)

Small cogeneration energy plants rejected

Toronto Star – January 15, 2012

By Patty Winsa

The OPA has rejected proposals to build three cogeneration plants in the GTA, Winsa reports, given that they did not meet the necessary criteria. Aging power infrastructure is the main cause for the rejection. The Ashbridge biogas cogeneration project, which could generate 10 MW of electricity is stalled until 2013 as they wait for transmission upgrades. Winsa also points to the city's feasibility study of community energy systems generating less than 10 MW, the report is due in June. [More...](#)



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New USDA energy website launched

US Department of Agriculture – January 18, 2012

The USDA launched a new website to provide information on renewable energy and energy efficiency. Through its different tools, it provides information on the USDA's efforts and programs, an energy investment map, information on USDA funding, research and development and a tool to discover new opportunities in bioenergy. [More...](#)

Energy Vision Hails Surrey's Move Toward Sustainable Future

NGV Global – January 20, 2012

Surrey, the second largest city in B.C. expects to have its refuse and recycling fleet powered by biomethane produced by the city's waste, by 2014. In its [Waste Management Plan](#) (by Energy Vision), the municipality is the first to require the use of natural gas trucks as a condition of its Request for Proposal. [More...](#)

USDA Invites Applications for Renewable Energy and Energy Efficiency Projects

US Department of Agriculture – January 20, 2012

The USDA will be accepting a new round of applications to assist farmers and rural small businesses in their renewable energy and energy efficiency projects. Through their Rural Energy for America Program (REAP) it has \$25.4 M budget for REAP activities, which will support at least \$12.5 M in grants and approximately \$48.5 M in a guaranteed loan program awards. [More...](#)

Digestate Utilization in the U.S.

BioCycle Magazine –

By Ron Alexander

Alexander details the basics and market applications of digestate in the U.S. His article is based on his company's findings for the Innovation Center for US Dairy project, which examines the benefits, procedures and comparative costs of digestate to other materials. [More...](#)

South Korean company orders biogas upgrading plant from Xebec Adsorption

Canadian Business/Canadian Press – January 25, 2012

Xebec will supply a biogas upgrading plant to upgrade biogas from organic waste to produce compressed natural gas for municipal vehicle fuel. [More...](#)



Agrienergy Producers' Association of Ontario

Integrating Anaerobic Digestion Into Our Culture Part 1: Language, Visuals and Values

Renewable Energy News – January 26, 2012

By Meredith Sorensen

This first commentary of two, Sorensen examines the ways waste, energy and agricultural industries are integrating AD technology into our culture. Sorensen discusses the different approaches in which biogas has made headlines; exciting ways biogas can be visualized; and how programs associations and companies have the great potential to create excitement and passion for those who are, or those who have the prospect of being involved in agriculture, waste and energy. [More...](#)

Integrating Anaerobic Digestion Into Our Culture Part 2: Stats, Reality and the Future

Renewable Energy News – January 31, 2012

By Meredith Sorensen

The second commentary of a two-part series, Sorensen outlines the importance of using facts when promoting biogas in any way, such as the biology of the process that happens inside the AD, economic indicators – real and projected. Through Harvest Power's experience and knowledge in the composting and biogas industry, Sorensen reveals that the biggest barriers to permitting and developing projects and the importance of grass roots. [More...](#)

Biogas Purification System for Hamilton's Woodward Avenue Wastewater Treatment Plant

WEAO Newsletter – Winter 2012

By Sean Mezei

The City of Hamilton's Woodward Avenue Wastewater Treatment Plant is being upgraded to include a biogas purification system to produce Ontario's first source of renewable natural gas (RNG), Mezei reports. A water scrubbing process supplied by Greenlane Biogas will be used to purify the biogas to pipeline grade of 98% methane. The RNG will be fed into Union Gas' natural gas pipeline. (See page 56 of the WEAO's Influent Newsletter) [More...](#)

New upgrades to the B.C. Environmental Farm Plan (EFP) and Beneficial Management Practices (BMP) Programs for 2012

BC Agricultural Research & Development Corporation – January, 2012

The B.C. Ministry of Agriculture announced significant new upgrades to the EFP and [BMP for the 2012 funding year](#). As of January 1, 2012, B.C. farmers and ranchers will be able to: submit EFP or BMP applications to ARDCorp for projects ending by December 31, 2012; access to an increased amount of funding; share efforts with neighbouring producers in submitting the applications without having to share the funding. [More...](#)



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Anaerobic digesters promoted

Farm Credit Canada – February 3, 2012

By David Schmidt

The British Columbia Agriculture Council is asking B.C. power consumers and businesses to use Cowpower, Schmidt reports. The Cowpower program wants AD to be widely adopted in B.C. although this has been difficult given B.C.'s low electricity rates. Schmidt provides additional details of the program, launched in February. [More...](#)

BC Bioenergy Network Invests \$1.5 M in Fraser Richmond Soil and Fibre “Energy Garden” –an Innovative Organic Waste to Energy Demonstration

Business Wire – February 3, 2012

The BC Bioenergy Network announced funding of \$1.5 M to Fraser Richmond Soil and Fibre, a Harvest Power company, which will establish a municipal green food and yard waste to energy demonstration and a pilot scale mobile High Solids Anaerobic Digestion (HSAD) plant, diverting 27,000 tonnes of organics from landfills. [More...](#)

Energy Minister Tours Sault College

Northern Ontario Business – February 3, 2012

Ontario Energy Minister Chris Bentley toured [Sault College](#) for an introduction to the college's Renewable Energy and Green Construction Techniques. While the tour focused on the program and solar PV, what is of interest is that Sault College students are being trained in feasibility assessments, renewable energy system installations, and green construction and renovation. The program is also linked to Sault College's electrical engineering technology, and its electrical engineering technician programs. Sault College is one of 13 colleges and three universities that offer programs related to clean energy. [More...](#)

Chevrolet Volt Gets Greener With Bullfrog Power Edition

Marketwire – February 6, 2012

Bullfrog Power and Chevrolet Canada have entered an interesting partnership in which each sale of one of their electric vehicles will support the injection of renewable electricity into the grid. [More...](#)



Agrienergy Producers' Association of Ontario

Update on FIT Program review from Deputy Minister Fareed Amin

Ontario Power Authority – February 7, 2012

By Deputy Minister Fareed Amin

Deputy Minister Fareed Amin released a brief announcement that he along with the Ministry of Energy and the OPA worked on the FIT review and are currently developing recommendations to protect the interests of ratepayers while encouraging investment in clean energy. Once the recommendations are accepted, it is expected they will be implemented shortly thereafter. During the consultation period approximately 2,900 online surveys were completed, over 150 written submissions were received, and the province met with more than 80 stakeholders. [More...](#)

Green Innovation Awards for 'zoo poo' energy and urban 'mini-farms' culminate ClimateSpark Social Venture Challenge

CNW – February 8, 2012

ZooShare Biogas Co-operative Inc. and Young Urban Farmers Community Shared Agriculture are this year's winners of the Toronto Community Foundation's Green Innovation Awards! The two initiatives will share the \$50,000 prize. [More...](#)

Three Hershey Plants Achieve 'Zero Waste to Landfill'

Business Wire – February 9, 2012

Three Hershey plants will be producing biogas from their onsite wastewater treatment facilities and convert into usable energy for the plants. [More...](#)

26 biogas projects on Ontario farms

Eastern Ontario Farmers Forum, section B2 of print - February, 2012

The article provides a list of the 26 farm biogas projects across Ontario and different sources of funding available for biogas projects (see next newsletter for more details).

Boost for the bottom line

Eastern Ontario Farmers Forum, section B3 of print - February, 2012

By Brandy Harrison

Ferme Geranik and its biogas system are featured in this article. Harrison asks Gerald Benoit why the family decided to install a biogas plant, and how it has brought different benefits for the farm with the same amount of land. Harrison goes on to discuss the progress Ontario has made through the FIT program, and the expected return a farm may get by sending power to the grid, and that the whole process from planning to connection may take up to two years.



Agrienergy Producers' Association of Ontario

Programs, Events and Funding

Eastern Ontario Development Program

Federal Economic Development Agency for Southern Ontario

Eligible applicants may apply for funding through their local Community Futures Development Corporations for projects in business development to further growth in rural areas, innovation, and collaborative projects. Eligible applicants include non-profits, municipalities and cooperative. [More...](#)

CEPP Funding Available for Biogas Projects

The Community Energy Partnerships Program is continuing to accept applications for grants available for biogas/biomass/landfill gas projects, offering either \$75,000 or \$200,000 for 10.1-500 kW and 501-10,000 kW projects, respectively. An exception exists for applicants who fall under the “corporate co-operatives” category, who may apply for up to \$500,000 of project soft costs associated with the development of renewable energy projects over 10 MW. For more information on the grant’s overview, eligibility, funded activities, rules and application, please [click here](#).

FCM’s Green Municipal Fund

Federation of Canadian Municipalities

New funding applications are now being accepted for capital projects in the energy, transportation, waste and water sectors, as well as for plans, feasibility studies and field tests. [More...](#)

BioGasWorld 2012

February 21-25, 2012
Berlin, Germany

The bi-annual international trade fair BioGasWorld will take place at the Exhibition Grounds, and will focus on German and Eastern European countries. [More...](#)



Agrienergy Producers' Association of Ontario

Growing the Margins & Canadian Farm and Food Biogas Conferences and Exhibitions

March 5-6, 2012

London, Ontario



Building on last year's success, the **GTM/Food Biogas** Conferences and Exhibition will be delivering once again an excellent panel of speakers including Don Harfield, Alberta Innovates Technology Futures; Norma McDonald, American Biogas Council; and Arthur Wellinger, European Biogas Association. The GTM will explore new technological, operating, policy, regulatory, financial and other challenges and opportunities facing farms and related industries while the Biogas Conference will provide information on new research and technologies, projects and programs including opportunities to use off-farm source organics. If you would like to reach rural green energy stakeholders, there are some exhibit booths available. [More...](#)

APAO's Annual General Meeting

March 6, 2012

London, Ontario

Save the date for APAO's annual meeting to be held on March 6, 2012 in London, Ontario (coincident with GTM/Biogas conferences). This event will present a great opportunity to network, see our growth potential and profile your business through sponsorship of your member association. See page [four of this newsletter](#) for further details.

Seventh AgSTAR National Conference: Got manure? Enhancing Environmental and Economical Sustainability

March 27-29, 2012

Syracuse, New York

Registration is now open for the U.S. Environmental Protection Agency's AgSTAR annual conference, which will take place in Syracuse, NY. AgSTAR is pleased to be co-hosting this year's conference with Cornell's PRO-DAIRY Program, the New York State Energy Research and Development Authority, and the U.S. Department of Agriculture - Natural Resources Conservation Service. The event will be held in conjunction with a trade show organized by PRO-DAIRY at the Holiday Inn Syracuse-Liverpool, New York, on March 27-28, 2012. The conference will include technical presentations on a variety of topics related to anaerobic digestion and expanded networking events. Also planned is a tour of local anaerobic digestion systems that will take place on Thursday, March 29. [More...](#)



Agrienergy Producers' Association of Ontario

Ontario Feed-In Tariff Forum

April 3-4, 2012
Toronto, Ontario



The third annual **Ontario Feed-In Tariff Forum**, which will take place this April 3-4, at the Metro Toronto Convention Centre. APAO is supporting this important industry event and members are eligible for an additional 20% discount by entering “apao20” when registering online.

Following two sold-out events, the forum has been established as the leading event for networking with the most influential industry leaders and policy administrators in Ontario. This year's forum convenes in the wake of the FIT program's two-year review and will cover the critical aspects of the review's outcomes as well as look at the necessary steps for elevating the status of bioenergy in Ontario. Day one of the forum offers the latest updates on the FIT program including review outcomes, grid connection plans, project approvals and financing while the second day focuses on issues specific to the biogas and biomass industries with a full day stream on bioenergy. The bioenergy stream will feature leading biogas and biomass developers, FIT policy administrators, government representatives and project finance experts. Highlights will include the OPA presenting on pricing for biogas and biomass projects under FIT. Please visit www.ontariofitforum.com for full details or contact: adrienne.baker@canadianclean.com or 819 459 1462

NABEC-CSBE/SCGAB Annual General Meeting and Technical Conference

July 15-18, 2012
Lakehead University, Orillia, Ontario

The Northeast Agricultural and Biological Conference (NABEC) and the Canadian Society for Bioengineering (CSBE/SCGAB) will be holding a joint Ecological Engineering Conference and AGM on July 15. As part of the conference, half-day professional development workshops geared toward practicing professionals, government and industry representatives and students will be able to receive Professional Development credit from their engineering associations. Components of the workshops include: Biogas – Technical Approaches to Farm-Based Systems; Composting Facilities – Design Challenges and Solutions; Energy Crop Production; and Nanotechnology – Practical Solutions in Agriculture, Food and Biological Systems.

[More...](#)