



Agrienergy Producers' Association of Ontario

benefits, applications, challenges and
opportunities for

ⁿ
biOgas ^{ntario}

We are a non-profit, membership based organization driven to support Ontario's Biogas industry through:

- guiding regulatory developments in the clean energy sector
- acting as an information and education resource
- providing advocacy for agricultural, environment, energy and economic benefits of the Anaerobic Digester process

Biogas is:

- Renewable Natural Gas (RNG)
RNG is Sustainability, Bankability and Reliability for the Agricultural and Municipal communities

Biogas happens here:

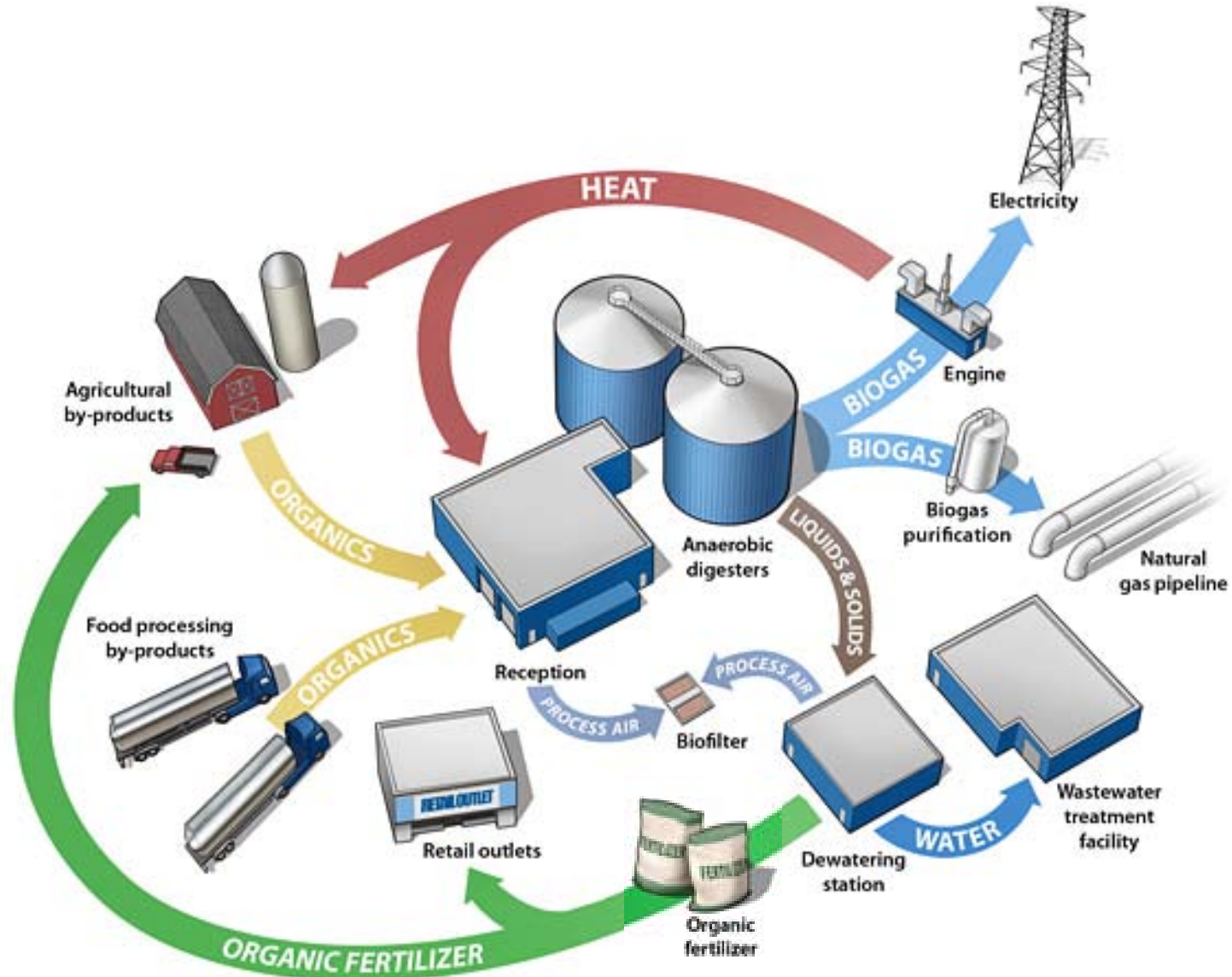


Farm power: manure and house waste + anaerobic bacteria =
electricity + digestate + recoverable heat



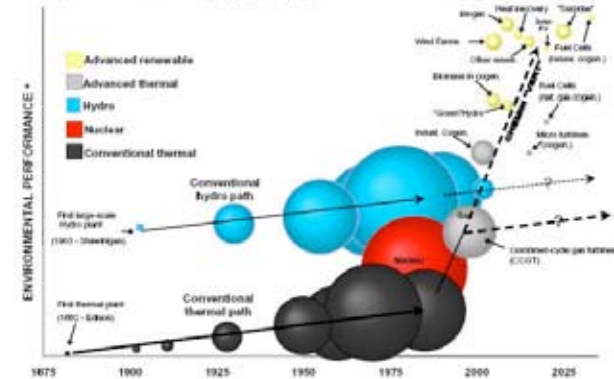
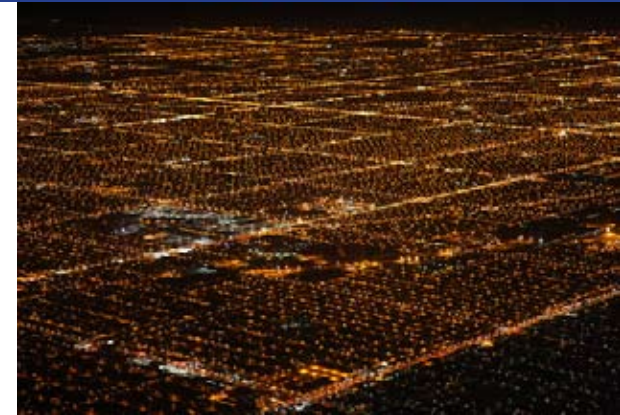
Municipal power: Municipal organic wastes + anaerobic bacteria =
power for homes and businesses

The Biogas Process:



Biogas is Energy

- Biogas is a reliable, flexible and renewable energy source
- Biogas currently runs as a 24/7, 365 days a year energy source
- Biogas can be generated as a Renewable Natural Gas (RNG)
- Biogas is a private investment in decentralized energy



Biogas is Agriculture

Biogas is Agrienergy

- Agrienergy is the management of Carbon and Nitrogen
- Biogas provides a stronger nutrient management tool
- Biogas is self-sustaining with life-cycle opportunities
- Biogas diversifies farm operations and income
- Biogas enables succession; opportunities for family farms into the 21st century
- Biogas provides the “Green” image farmers need to stay competitive in the global food supply chain



Biogas is the Environment

Biogas is:

- Waste reutilization/diversion of organics from landfills
- Capture of GHG from livestock (specifically CH_4 is 20 times more damaging than CO_2)
- Recycle nutrients for energy balance in foods to crops
- Provides source water protection (from contamination i.e. the Walkerton Fiasco in May of 2000)
- Fossil fuel alternative
- Odour reduction
- A tool to achieve climate change goals

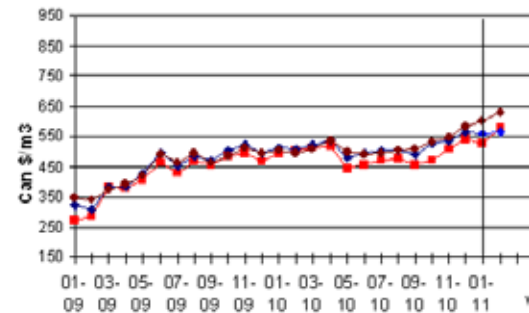


Biogas is Economics

Biogas makes solid economic sense.

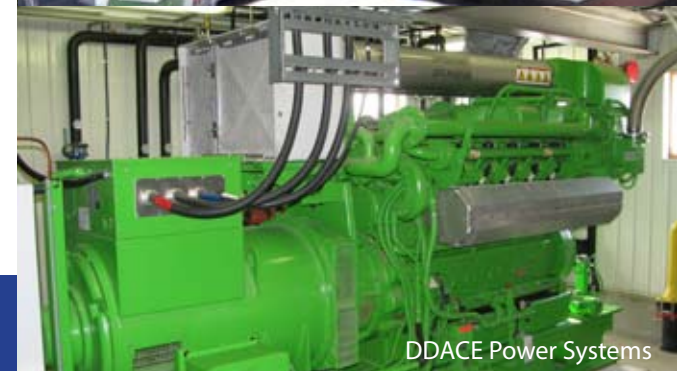
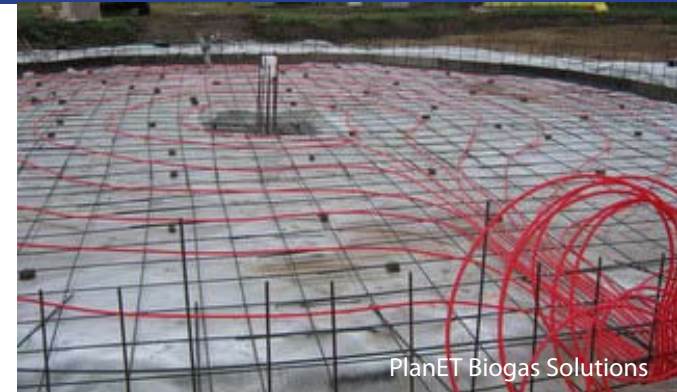
Biogas is:

- Sustainability
- Reliability
- Bankability
- Stability
- Creation of jobs and supports innovation
- Biogas can be used for Combined Heat and Power (CHP) systems



Biogas is Innovation

- Biogas provides a new tool for committed enviro-conscious farmers to manage carbon - nitrogen
- Creation of biodegradable products
- Research base for new on-farm product development
- Re-using heat for processes and products



Challenges for Ontario

Feed-In Tarriff

- A Biogas amendment to the FIT program is needed
- FIT application process
- Future Contract Related Products (FCRP) clauses need to be removed
- Consumer Price Indexing (CPI) rate should accurately reflect true operating costs for Biogas

Connection to the Grid

- Red-tape regulation present challenges and delays
- Escalated costs
- Accountability to timelines and the Green Energy Act
- Costs changes and overruns



Renewable Energy Approval (REA) Fees present barrier due to:

- Limited knowledge of Biogas and anaerobic digestion within the Ministry of Environment
- Duplication of requirements between different applications
- Applicability of REA for Biogas projects

Awareness and Additional Incentives

- Biogas is currently known for its energy benefits
- Immediate action is needed to maintain industry sustainability
- Additional incentive consideration to develop Biogas for small to medium sized farms of all live stock groups, and cash crop types

Opportunities for Ontario continued



Agrienergy Producers'
Association of Ontario

Environment:

- Uses organic waste destined for landfills
- Produces nutrients without negatively impacting food supply/costs
- Provides a tool for Water Protection and Management
- Reduces millions of tonnes of GHG emissions



The Future is Biogas. The time is now.

Biogas in Ontario is at a turning point, while leading technology continues to stumble on certain blocks it prevents biogas from moving forward. Biogas is now in the shadow of wind and solar energy, even though it offers essential environmental benefits to Ontario.

Change needs to happen NOW!

All farms can embrace and adopt this technology once the appropriate foundations exist:

- **Incentives for the Biogas producer beyond the energy production are required to stimulate biogas to its full potential, this includes opportunities for all farm sizes and types**
- **A political advocate - a champion of change, to ensure Biogas is recognized for its benefits across the various Ministries in which it directly impacts**
- **The FIT program clauses that do not accurately reflect Biogas need to be addressed immediately to propel Biogas forward**
- **Accountability to timelines and commitments is required by all the various agencies**
- **Positive impacts of Biogas to the various utilities need to be understood**

The APAO wants Ontario to reap the benefits it deserves through the amazing fuel source produced by anaerobic digesters.

The APAO will continue to support the Biogas industry in Ontario. It is our future and yours.



Thank You!
apao.ca