

TORC TORC TORC TORC TORC

TORC Energy Forum 2007
RENEWABLE ENERGY
Exploring Ownership Options
for Farmers, Rural Landowners
and Rural Communities



Wednesday, November 7, 2007
8:15am to 3:45pm
The Stratford Rotary Complex,
Stratford, Ontario

TORC ENERGY FORUM 2007:
**Exploring Ownership Options for
Farmers,
Rural Landowners
and Rural Communities**
A Discussion Paper on Renewable Energy in Rural Ontario





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RENEWABLE ENERGY

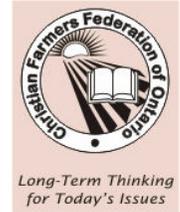
Exploring Ownership Options for Farmers, Rural Landowners and Rural Communities



TORC gratefully acknowledges the support of the following in presenting the TORC Energy Forum 2007:



- Agriculture and Agri-Food Canada
- Agricultural Adaptation Council - CanAdvance Program
- AgEnergy Co-operative
- "Building Bridges to Better Business Program", Ontario Ministry of Small Business and Entrepreneurship (SBE)
- Bruce Grey Huron Perth Georgian Triangle Training Board
- Christian Farmers Federation of Ontario (CFFO)
- Conestoga-Rovers & Associates (CRA)
- EPCOR
- Green Breeze Inc.
- Hydro One
- Ontario Federation of Agriculture (OFA)
- Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)
- Ontario Ministry of Energy
- Ontario Ministry of Natural Resources (MNR)
- Ontario Sustainable Energy Association (OSEA)
- Ontario Co-operative Association (On Co-op)
- Perth Community Futures (CFDC)
- Stratford/Perth Centre for Business
- Stratford/Perth Small Business Enterprise Centre



CONESTOGA-ROVERS & ASSOCIATES



hydroOne



Agriculture and Agri-Food Canada

Agriculture et Agroalimentaire Canada



About The Ontario Rural Council (TORC)

As a forum for all rural voices, The Ontario Rural Council (TORC) offers a vital venue for rural engagement in the form of dialogue, collaboration, action and advocacy. As a member-driven, multi-sector, provincial organization, TORC strives to foster communication that informs and ultimately helps shape and influence policy, programs and research development affecting today's rural Ontario.

Members share a commitment to strong, healthy, vibrant rural communities, businesses and organizations. Through Public Issue Forums and our Rural Development Conference, TORC provides the only venue dedicated to drawing together the collective rural voice, working to break down the silos between sectors and encourage effective partnerships for progress.

TORC Members represent non-profit organizations, private sector organizations, the public sector, and individuals with specialized expertise and resources in rural matters. In our role as convenor, TORC brings together these diverse interests and perspectives and offers valuable networking opportunities to link people, information and activities in support of rural community development and capacity building.

The TORC Mission:

- To act as a catalyst for rural dialogue, collaboration, action and advocacy

TORC Aims To:

- Foster communications that inform – with the aim to influence and shape – policies, program and research development affecting rural Ontario
- Enhance the understanding of rural realities
- Act as a broker and clearinghouse of news, stories and research – linking local, regional, provincial and global thinking
- Build innovative rural networks that stimulate the formation of province-wide collaboration
- Be an outcomes-focused learning organization

TORC and Renewable Energy

TORC, in collaboration with our membership and rural stakeholders, works to identify emerging rural issues and opportunities and facilitates stakeholder discussions related to the issue. Within this framework, renewable energy was

THE TORC REPORT on Renewable Energy: *Exploring Renewable Energy Ownership Options for Farmers, Rural Landowners and Rural Communities (November, 2007)*

identified by the TORC Environmental Working Group in early 2007 as an issue taking on an increasingly significant profile in our Ontario rural landscape. Interest grew and a partnership planning committee was quickly cultivated from those partners keen to work with TORC in producing a one-day learning Forum on Renewable Energy. The focus was to identify a full scope of recommended actions to be undertaken to enhance the development of renewable energy in Ontario.

Rural Ontario is seen to have the potential of playing a key role in the “greening of Ontario”. The generation of energy from a range of renewable energy sources has real and significant benefits to the environment, as well as our rural and provincial economies. To that end, The Ontario Rural Council joined a host of partners in presenting the **TORC Forum on Renewable Energy: *Exploring Ownership Options for Farmers, Rural Landowners and Rural Communities*** in Stratford (ON) in early November, 2007. It was deemed an ideal measure to ensure stakeholders work collectively to help inform provincial policy, program and research development around desired renewable energy objectives moving forward.

Acknowledgments

TORC would like to acknowledge the work of **York Sustainable Enterprise Consultants** in the recording and preparation of this report.

Executive Summary

It is clear the converging threats of climate change and high and volatile energy prices will prove daunting for Ontario's rural communities and agricultural sector. However, it is equally clear that the agricultural community is one of the most resilient and resourceful in coping with hardship. Many proven solutions for energy independence and mitigating environmental harm exist and are in use in agricultural communities around the world. Renewable energy projects are foremost among these solutions and present economic, environmental and social benefits for the communities they serve.

Renewable energy projects can significantly reduce energy costs, as well as provide new income streams, from on-farm systems to individuals and co-operatives in rural areas. This increase in revenue can help to hedge against uncertain fossil fuel prices. By capturing the energy from agricultural by-products, in the case of biogas, or natural energy flows, in the case of wind and water, communities can make more efficient and sustainable use of their natural resources.

Renewable energy operations typically produce little or no greenhouse gas emissions and are therefore critical in mitigating the effects of climate change. Biogas systems provide the added benefit of converting methane, a highly potent greenhouse gas, into less harmful carbon dioxide. These projects also produce energy with no resulting toxic wastes or smog-causing particulate emissions.

These projects will improve power system reliability by decentralizing energy production through a greater number of smaller facilities. For our rural communities, this translates into more jobs as it pertains to the construction, operation and maintenance of these facilities. The risk of power outages is reduced because power production is spread across a greater number of facilities. Also, due to the smaller scale of these projects, local ownership is much more feasible, meaning that far more of the revenue from these projects cycles back through the community.

Governments around the world are interested and actively engaged in developing and implementing policies and programs to support renewable energy. The Province of Ontario has taken steps to provide a policy environment whereby the private sector, co-operatives, individuals, communities and municipalities can be actively engaged in this sector.

Within this framework, The Ontario Rural Council (TORC), in partnership with a host of organizations, presented a one-day Renewable Energy Forum in Stratford (ON) in November, 2007 with the intentions of exploring the challenges of renewable energy development in Ontario and the potential actions needed to capitalize on this emerging opportunity.

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The TORC Forum on Renewable Energy: *Exploring Ownership Options for Farmers, Rural Landowners and Rural Communities* provided a valuable dialogue among speakers and participants from which emanated a list of distinct themes and recommendations in addressing renewable energy issues in Ontario.

Emerging Themes:

- Grid access and connectivity costs
- Methodology for RESOP rate design
- Unified voice for policy advocacy
- Education of financial services institutions
- Benefits of local ownership: job creation, local investment and the local economic multiplier effect

A full exploration of the Emerging Themes begins on Page Seven (7) and forms the bulk of this TORC Report. Forum participants also identified a number of recommendations intended to address the existing issues and challenges in realizing the renewable energy potential in Ontario. The Recommendations for Action can be found on Page Eleven (11) of this Report.

Currently there are a number of political, regulatory, infrastructure and financing barriers to the establishment of small-scale renewable energy projects in Ontario. These can be overcome, and the consensus of most rural interests is that they must be overcome through the following **recommended policy actions**:

- A formal commitment by the Government of Ontario to distributed power and renewable energy
- A RESOP pricing program differentiated by technology, project size and resource intensity, along with a suite of complementary financial incentives
- Investment in grid infrastructure and lower connectivity costs for small renewable energy generators
- Investment in research, education and training in renewable energy technology and project development

Rural Ontario can play a key role in ensuring a reliable and sustainable supply of renewable energy for the benefit of all Ontarians. Rural stakeholders must provide a clear direction to policymakers by recommending these actions with a unified voice.

Introduction

Global Context

The TORC Renewable Energy Forum was set against a backdrop of converging global issues directly related to our current energy use patterns. The booming economies of some countries in the developing world (e.g. China, India, Brazil) have significantly increased the demand for fossil energy worldwide and this trend shows few signs of slowing. The result of this, as cheaper fossil resources are depleted, will be increasing and more volatile energy prices. The commodity market's recent flirt with \$100/barrel crude oil is a telling sign. At the same time, consumption of fossil energy over the last century has led to a buildup of heat-trapping greenhouse gases in the atmosphere, now understood to be the principal driver of increasingly rapid climate change. Almost any measure to address climate change will, out of necessity, involve further increases in the price of fossil fuels. The inescapable reality for the global agricultural community, which is most directly affected by weather patterns and for which high energy prices can erase slim profit margins, is high vulnerability in the face of these converging threats. It was clear from the attendance at the Renewable Energy Forum, that these global issues are having direct impacts here in Ontario.

Ontario Context

This is a critical time for Ontario's electricity sector. According to the Ontario Power Authority (OPA), due to aging infrastructure and increasing demand, Ontario will build almost as much generating capacity over the next 20 years as exists in the province today.¹ The Provincial Government only plans for 5% of electricity to be supplied by renewable sources by 2007 and 10% by 2010.² This is an overly modest amount of new renewable generation given the experience of other countries that have rapidly deployed large amounts of renewable energy generating capacity.³

Some of these new renewable energy projects will come online as a result of Ontario's groundbreaking Renewable Energy Standard Offer Program (RESOP). The existing policies that inspired RESOP have proven successful in countries such as Germany and Spain. The program is a constructive first step toward a suite of policies that will support the installation of new renewable generating

¹ Integrated Power System Plan Quick Facts, Ontario Power Authority:

http://www.powerauthority.on.ca/IPSP/Storage/50/4578_Quick_facts_on_IPSP_FINAL.pdf

² Ontario Ministry of Energy, Renewable Energy page:

<http://www.energy.gov.on.ca/index.cfm?fuseaction=english.renewable>

³ See slide #16 of Henning Holst's presentation: http://www.torc.on.ca/HenningHolst_000.pdf.pdf

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capacity. It is significant in that it provides the opportunity for small generators in agricultural communities to feed their renewable power into distribution infrastructure. This provides an additional revenue stream to help hedge against energy price volatility while reducing emissions of greenhouse gases. The vast potential of the renewable energy flows in Ontario presents an important opportunity to address issues of rural economic development, climate change and the resilience of the province's energy system. It must become a top priority for government, farmers and rural communities.

This forum was inspired by the need to supply a greater amount of Ontario's power from renewable energy resources and the opportunity for rural stakeholders to take up this challenge through net-metering and RESOP mechanisms.

Key Issues for Building the Renewable Energy Capacity of Farmers, Rural Landowners and Rural Communities

▪ *Grid Access and Connectivity Costs*

One of the greatest barriers facing renewable energy generators in Ontario is the difficulty and cost involved in connecting to the power distribution infrastructure. All RESOP generators and net-metering customers are required to pay for the network upgrades and extensions necessary to interconnect their projects. This is a significant cost that does not exist for centralized generators who are able to pass on such infrastructure costs to Ontario ratepayers. In other jurisdictions such as Germany, there is a legal obligation to connect renewable generation to the grid and infrastructure costs for renewable generators holding feed-in tariff contracts are built into the rate base.⁴ In the German context where these contracts are much more prevalent, it is estimated that these charges to rate-paying customers amount to an insignificant \$3 CAD/month. This small incremental cost also finances the price premium guaranteed to renewable generators in their contracts.

Another significant grid interconnection barrier exists for a major expanse of prime farmland stretching from Owen Sound in the north to Orangeville in the east, and all along Lake Huron down to the Longwood transformer station just west of London. In this transmission constraint zone or 'orange zone,' grid capacity is set aside so that the distribution lines can accommodate additional nuclear generation expected in the future from the Bruce Power plant.⁵

Another grid issue in Ontario is the fact that prospective renewable energy developers can in effect "reserve" grid space up to two years before construction, often shutting out small generators who already have building permits to construct their projects. Grid access is one of the most significant barriers facing prospective renewable power generators in Ontario.

⁴ See slide #4 of Henning Holst's presentation: http://www.torc.on.ca/HenningHolst_000.pdf.pdf
Also see the main features of the German Act on granting priority to renewable energy sources: http://www.bmu.de/files/english/renewable_energy/downloads/application/pdf/eeg_gesetz_merkmale_en.pdf

⁵ Ontario Power Authority, Questions and Answers on Bruce Transmission: <http://www.powerauthority.on.ca/Page.asp?PageID=122&ContentID=6408&SiteNodeID=120>

- ***Methodology for RESOP Rate Design***

Another key issue is the OPA's concept of "value to ratepayers" used to determine the RESOP rate per kilowatt-hour (kWh) offered to generators. Electricity feed-in rates need to account for differences in a project's technology, size, application and resource intensity. For example, Graeme Millen of Genesys Biogas noted that under current rates, on-farm biogas projects command the same price (11¢/kWh) as wind power projects despite major differences in these technologies and their application. Moreover, many participants noted that the current RESOP rate of 11¢/KWh for biogas projects is too low to provide a reasonable return on investment, especially for smaller operators. It was concluded that the RESOP rate of 11¢/kWh cents is insufficient and needs to be re-structured based on the actual cost of generating electricity from biogas operations.

The Ontario Power Authority (OPA) does not account for the value of the beneficial environmental attributes of biogas development in its current RESOP rates beyond greenhouse gas mitigation from the replacement of fossil fuels as the energy source. These environmental attributes include reduced pathogens in digested manure leading to higher rural water quality, waste diversion from landfills, and methane capture.

Finally, gaining ownership of the carbon credits associated with renewable energy production was another improvement to RESOP that participants are seeking. At present, the OPA claims all such credits if/when they become available.

- ***A Unified Voice for Policy Advocacy***

It was clear at the forum that a number of different voices, NGOs, community organizations, and co-operatives, share similar views and goals related to renewable energy. As indicated by Kristopher Stevens from OSEA, the collective political clout of all these organizations is formidable and reaching consensus on these issues through dialogue, especially at events like this forum, is necessary to more effectively promote the recommendations offered in this report. It is clear, when it comes to renewable energy generation, that no single technology is superior in all circumstances; that each has its strengths and weaknesses that complement one another. This gives greater weight to the argument that proponents of renewable energy, regardless of specific technology, can and must align their efforts to advocate for critical issues that they have in common.

- ***Education of Financial Services Institutions***

Substantial grid-connected, renewable energy projects are relatively new to Ontario and are a novel concept for many financial and insurance professionals. Due to uncertainty surrounding these new technologies, both of these sectors are likely to overestimate the risks associated with renewable energy projects.

Many of the forum participants observed that raising funds for the initial stages of a community-owned renewable energy project can be quite challenging. It is precisely at this initial stage that a project's risks are highest due to significant uncertainty associated with planning, obtaining approvals for, and commissioning a renewable energy installation. For these reasons, private sources of funding, especially from financial institutions, are often difficult to obtain.

Significant education of financial and regulatory institutions as well as insurance companies is needed to simplify financing of community-based renewable energy projects.

- ***Benefits of Local Ownership: Job Creation, Local Investment and the Local Economic Multiplier Effect***

The development of locally-owned renewable energy projects can bring many social and economic benefits. Local ownership and control was suggested and promoted by many forum speakers as the key to maximizing these benefits. According to Patrick Côté of Val-Éco Co-opérative in Québec, when these projects are developed privately, local communities often miss out on associated social and economic benefits. Local control over the project tends to reduce any potential conflict and strengthens support for the project. Local involvement in the development process often results in better knowledge of the project, ultimately leading to better decisions. Investment in locally-owned projects tends to provide at least three times the local economic benefit compared to those owned by absentee shareholders.⁶

The potential benefits for the community from renewable energy projects can be classified as follows:

⁶ The Iowa Policy Project, *Small Packages, Big Benefits – Economic Advantages of Local Wind Projects*: <http://www.iowapolicyproject.org/2005docs/050405-wind.pdf>
Institute for Local Self-Reliance, *Wind and Ethanol – Economies and Diseconomies of Scale*: <http://www.newrules.org/de/scalereport.pdf>
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Social Benefits:

- Offers a socially responsible investment for the community
- Increases local acceptance: Local ownership, community involvement and member education encourages acceptance
- Promotes the acquisition of new skills for community members

Economic Benefits:

- Stimulates local economic development by promoting local employment, creating new short- and long-term jobs in manufacturing, project development, operation and maintenance, insurance, accounting and legal services, etc
- Promotes new investments throughout the community
- Strengthens rural communities by generating a new source of income for farmers and rural landowners
- Increases tax revenue for municipalities these new revenues could be reinvested in the community
- Saves energy and money: Generating energy closer to where it is used reduces “line losses” and reduces the need for and cost of transmission and distribution infrastructure
- Educates and raises awareness among community members about the link between energy production and consumption

The German experience gave participants an example of how local economies have benefited greatly from investment in their own renewable energy resources. Since the introduction of the feed-in tariff legislation in Germany, the wind power sector alone has created 74,000 new jobs in manufacturing, project development, operation and maintenance, insurance, accounting and legal services, etc. Much of this employment is locally or regionally-based.⁷

⁷ See slide #12 of Henning Holst's presentation: http://www.torc.on.ca/HenningHolst_000.pdf.pdf
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Recommendations for Action

Government of Ontario

- The Government should formally commit to and invest in distributed power and renewable energy.
- The Government should offer a suite of complementary financial incentives to encourage investment in locally-owned renewable power such as low- or zero-interest loans, provincially-sponsored bonds for renewable power development.
- Property tax classification and assessment for on-farm renewable energy systems should be consistent across all renewable energy types (wind, biogas, etc.) and not serve as disincentives to investment in on-farm renewable energy projects.
- There should be financial support to universities, community colleges and other post-secondary educational institutions to conduct research in and implement training programs on renewable energy technologies and renewable energy project development.
- Co-op legislation should recognize the indirect nature of energy transactions since renewable energy co-ops must sell their energy to the grid before it can be purchased by members.

Ontario Power Authority (OPA)

- RESOP prices paid to renewable energy generators should be differentiated by technology, application, project size and resource intensity in order to accurately reflect the true cost a particular installation and provide a reasonable rate of return to the generator.
- Biogas generators should be rewarded for the additional environmental benefits resulting from their operations such as the capture of methane gas, pathogen reduction improving rural water quality and waste diversion from landfills.
- Generators, not the OPA, should retain carbon credits associated with renewable power production.
- Until the transmission constraint zone (“orange zone”) can be removed through increased investment in grid infrastructure the orange zone should be made more flexible to allow small renewable generation to come online

in this important agricultural area with abundant wind and biomass resources.

- The approval processes at HydroOne and other LDCs, the Ontario Energy Board and the OPA should be significantly streamlined with respect to both time and cost.

Hydro One and other Local Distribution Companies

- HydroOne and LDCs should develop a culture of distributed renewable power.
- HydroOne and LDCs should establish vigorous training and customer service programs to rapidly connect new generators to their networks.
- Hydro One should undertake major “smart grid” revitalization and an overhaul of the power transmission and distribution system such that small-scale, distributed energy projects can more easily be accommodated.
- Net-Metering should be a clear and simple process offering generators transparent access to all information and the ability to monitor their own installation.

NGO Sector

- NGOs should coordinate advocacy efforts with elected representatives and with senior officials in the Ontario Government to seek sound policies and better energy prices and conditions from energy agencies.
- NGOs should educate financial, regulatory and insurance institutions about renewable energy technologies, their risks and benefits in order to reduce uncertainty and eliminate any misconceptions that may persist.

Commercial Sector

- The commercial sector should actively cultivate business partnerships with local stakeholders to achieve a greater degree of local ownership and control over renewable energy projects. This has been demonstrated elsewhere to be good business practice and a source of competitive advantage for renewable energy developers.

Appendix 1 – Glossary of Terms and Abbreviations

Organizations

CEC: Countryside Energy Cooperative.

CFA: Canadian Federation of Agriculture, a national umbrella organization representing provincial farm organizations and commodity groups.

CFFO: Christian Farmers Association of Ontario.

FSCO: Financial Services Commission of Ontario, the body that regulates cooperatives, trust companies, credit unions, insurance brokers and pensions in Ontario.

HONI: Hydro One Networks Inc., formerly part of Ontario Hydro. Hydro One is responsible for the transmission system, as well as the distribution system in much of rural and northern Ontario.

OEB: Ontario Energy Board, regulators of Ontario's electricity and natural gas sectors.

OFA: Ontario Federation of Agriculture.

OMAFRA: Ontario Ministry of Agriculture, Food and Rural Affairs, responsible for legislation and policy for Ontario's agri-food industries and rural communities.

Ontario Ministry of Energy: Responsible for legislation and policy for the electricity industry in Ontario. It governs and oversees the OEB, IESO, Hydro One, etc.

OPA: Ontario Power Authority.

OSEA: Ontario Sustainable Energy Association.

OWA: Ontario Waterpower Association.

Terms

Biogas: A renewable biofuel comprised mainly of methane and carbon dioxide. It is the product of the the anaerobic digestion or fermentation of biomass such as manure or sewage, municipal waste, and energy crops.

CIA: Connection Impact Assessment, an assessment completed by the LDC to determine if upgrades to the distribution system are necessary prior to project connection. Voltage impacts, loading, currents, etc., are considered.

Community Power: Community Power is a class of sustainable energy projects that are owned, developed and controlled in full or in part by residents of the community in which the project is

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located. In order to meet OSEA's definition of Community Power, projects must meet the following five-fold criteria:

1. More than 50% ownership control is retained by primary and secondary CP investors at all times.
2. A minimum of 5% ownership control is retained by primary CP investors at all times.
3. More than 50% of all gross revenues over the first 20 years of a project accrue to primary and secondary CP investors.
4. Contractual details (land lease, share offering, etc.) are transparent and public.
5. All local residents have the ability to participate financially.

(OSEA defines primary investors as geographically local citizens and CP groups and secondary investors as non-local citizens and CP groups).

Constraint Zone: Due to distribution and transmission line congestion there are certain restricted zones where no or limited contracts will be offered under the Standard Offer Program.

Hydropower: The force or energy of moving water, sometimes called *hydraulic power*. It may be captured for electric power generation.

IESO: Independent Electricity System Operator, the body that balances the flow of electricity throughout Ontario.

KW: Kilowatt, a measure of electricity consumption or production equal to one thousand watts.

KWh: Kilowatt-hour, a measure of electricity consumed by a continuous load or produced by the continuous generation of one kilowatt over one hour.

LDC: Local Distribution Company, the utility that supplies electricity to customers in a municipality or region.

MW: Megawatt, a measure of electricity production or consumption equal to one million watts.

MWh: Megawatt-hour, a measure of electricity consumed by a continuous load or produced by the continuous generation of one megawatt over one hour, equivalent to one thousand kWh.

Net Metering: A program for small renewable energy generators (generating 500kW or less) allowing them to offset the costs of their own energy use with the amount of energy that they are producing.

NIMBY or NIMBYism: Not In My Backyard; a term often used to characterize local opposition toward capital projects.

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NGO: Non-governmental organization, a broad term used to indicate an organization that is not a government entity, though the term typically denotes an organization that is not a for-profit organization.

Orange Zone: See Constraint Zone.

PPA: Power purchase agreement, a contract between a producer and consumer to sell and purchase electricity over time.

PST: Provincial Sales Tax, or Retail Sales Tax.

RESOP: Ontario's Renewable Energy Standard Offer Program, whereby higher than market rates are paid to generators of power from renewable energy sources.

SOC: Standard offer contract, Ontario's program offering a standardized rate for electricity produced by small or community-based renewable power projects.

Appendix 2 - TORC Forum AGENDA

TORC PRESENTS:

Renewable Energy:

Exploring Ownership Options for Farmers, Rural Landowners and Rural Communities

Wednesday, November 7, 2007

The Stratford Rotary Complex • 353 McCarthy Road West • Stratford, ON

8:15 – 8:45 a.m.

Registration

8:45 – 9:00 a.m.

Welcome and Opening Remarks

- Harold Flaming, Executive Director, TORC
- John Kikkert, President, CFFO

9:00 - 10:30 a.m.

Local Renewable Energy: Opportunities, Benefits & Risks

- Moderator: Kris Stevens, Policy and Communications, Ontario Sustainable Energy Association (OSEA)
- Speakers:
 - *The German Experience*: Henning Holst, Wind Energy Consultant to farmers
 - *The Biogas Experience*: Laurie Stanton / Garry Fortune, Stanton Bros. Ltd., Ilderton
 - *The Wind Co-op Experience*: Lloyd Crawford, Co-op Development Manager, Countryside Energy Co-operative Inc.

Q + A (20 mins)

10:30 a.m. – 10:45 a.m.

Refreshment Break

10:45 a.m. – 12:00 p.m.

Market Options for Small Projects (< 10 megawatts)

- Moderator: Ted Cowan, Research/Policy Development, Ontario Federation of Agriculture (OFA)
- Speakers:
 - *Renewable Energy Standard Offer Program (RESOP) + Net Metering – Biogas*: Benjamin Strehler, Genesys Biogas
 - *Renewable Energy Standard Offer Program (RESOP) + Net Metering – Wind*: Cornell Feenstra, Feenstra Electric Ltd.
 - *Renewable Energy Standard Offer Program (RESOP) Barriers*: Jon Kieran, Coordinator, Distributed Energy, Ontario Ministry of Energy

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Q + A (20 mins)

12:00 – 1:15 p.m.

Lunch

- Speakers:
 - Dan Mathieson, Mayor of Stratford

1:15 – 3:00 p.m.

Ownership Options for Farmers, Rural Landowners and Rural Communities

- Moderator: Deborah Doncaster, Executive Director, Ontario Community Power Fund
- Speakers:
 - *Net-metering for Individual Development – Wind:* Carol Leeming, Leeming Farms Ltd., Seaforth (ON)
 - *Co-operative Model:* Jen Heneberry, Co-op Development Officer, Ontario Co-operative Association
 - *Collaborative Model:* Henning Holst, Wind Energy Consultant to farmers
 - *Val-Éo Co-operative Model:* Patrick Côté, Val-Éo, Saint Bruno, Quebec

Q + A (20 mins)

3:00 - 3:15 p.m.

Refreshment Break

3:15 – 3:45 p.m.

Renewable Energy Technology 101 *(Choose 1 of the 3 breakout sessions)*

Biogas

- Moderator: Benjamin Strehler, Genesys Biogas
- Speakers: Jake DeBruyn and Don Hilborn, Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)

Wind

- Moderator: Deborah Doncaster, Community Power Fund
- Speakers: Cornell Feenstra (small wind projects) and Henning Holst (large wind projects)

Water

- Moderator: Kevin Edwards, Ontario Ministry of Natural Resources (MNR)
- Speakers: Paul Norris, President, Ontario Waterpower Association

3:45 – 4:00 p.m.

Wrap up

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Appendix 3 – TORC Energy Forum SPEAKERS

- **Henning Holst**

Mr. Holst is what many of us would consider a pioneer. After 10 years working in both the private and public sector on construction projects, Mr. Holst transitioned into the role of wind energy developer, working with local citizens on projects of varying scales. During the last 17+ years, he has achieved a great deal of success along the road to becoming Germany's foremost wind energy consultant to the farm community, gaining invaluable insight on best practices and lessons learned. More recently, Mr. Holst has concluded work on one of Germany's first 're-powering projects', where old turbines were replaced by newer technology with higher performance characteristics. The project, located on an island in the Baltic Sea, is owned by 150 resident families, representing 100% local ownership.

- **Laurie Stanton / Garry Fortune**

- **Lloyd Crawford**

A graduate of both Ridgetown Agricultural College and a four-year Canadian Institute of Management program from the University of Waterloo, Mr. Crawford has worked in the agricultural co-operative system in southwestern Ontario for 35 years, holding various positions from sales to branch management to regional manager for United Co-operatives of Ontario (1968-1992). Mr. Crawford managed the merger of Stratford and Mitchell Co-op to form Perth County Co-operative in 1995, and expanded the business to \$65 million in sales with branches throughout Perth operating feed, crops, stores, petroleum and grain marketing business. He retired as general manager in April, 2003, but continues to provide business consulting services. He has been instrumental in the developmental stages of setting up Countryside Energy Co-operative as a community-owned and –operated energy co-operative.

- **Benjamin Strehler**

Mr. Strehler graduated in 1997 from the Federal Institute of Technology in Zurich (Switzerland) in Environmental Engineering. Prior to moving to Canada in 2003, Mr. Strehler held the position of Chief Engineer for international renewable energy project development in Zurich at a private sector company. His current position as Vice President at Genesys Biogas Inc. involves the development and implementation of biogas systems in Ontario and Canada.

- **Cornell Feenstra**

The owner of Cornell Feenstra Electric Ltd. since 1982, Mr. Feenstra is a Registered Master Electrician and Electrical Contractor who provides project resource services for a community-based wind co-op. Among his many accomplishments and designations, he holds several skills certification endorsements from the Ontario Ministry of Skills Development for electronic controls,

THE TORC REPORT on Renewable Energy: Exploring Renewable Energy Ownership Options for Farmers, Rural Landowners and Rural Communities (November, 2007)

is recognized by the Electrical Utilities Safety Association of Ontario for training in safety and proficiency in hydraulic aerial equipment, is a certified heating and cooling load consultant through the Ontario Electrical League, and holds several service training certificates for industrial generators and controls, transfer switches and marine generators and controls. Mr. Feenstra is a member of several professional organizations and is actively involved in the Ontario Youth Apprenticeship Program.

- **Jon Kieran**

Mr. Kieran manages distributed energy policy for the Ministry of Energy, having joined the Ministry in February, 2007. From 2002-06, Mr. Kieran operated a consulting company in the field of renewable energy commercialization. His key assignment was to act as European Director of Sales for a large American renewable energy technology firm. Prior to 2002, Mr Kieran spent several years at Ontario Hydro and Hydro One, as a manager in the international sales subsidiary and corporate development division. He has an extensive background in marketing, corporate relations and M&A due diligence. Mr. Kieran earned his MSc. in economics from LSE (University of London).

- **Carol Leeming**

Leeming Farms was founded in 1987 when proprietors Carol and Bob Leeming purchased a 100-acre farm in Tuckersmith Township near Seaforth, Huron County. The main farm products are Corn, Soybeans, Wheat, Eggs and, more recently, Wind. Ms. Leeming graduated from the University of Guelph with a Bachelor of Arts (1987) and Masters of Science (1995). In 2005, she graduated from Class 10 of the Advanced Agricultural Leadership Program (AALP) where she had the opportunity to study renewable energy on the farm. Ms. Leeming is currently a Board member of the Centre for Applied Renewable Energy in Brussels (ON) and a member of the Countryside Energy Co-operative—which has a renewable energy focus including community-owned wind. In Spring 2006, Leeming Farms erected an 80kw wind turbine and began producing electricity out to the electrical grid through a Net Metering agreement with Hydro One.

- **Jen Heneberry**

Ms. Heneberry is the Co-operative Development Co-ordinator with the Ontario Co-operative Association (On Co-op). Her primary areas of responsibility include assisting in the development of co-operatives by matching them with the technical assistance and required coaching, and by connecting them with other co-ops offering support and resources. Ms. Heneberry has been involved with a number of community initiatives in the Hamilton area since 1999, including the City of Hamilton's VISION 2020 and Air Quality initiatives, as well as the myHamilton project (formerly Connect Hamilton). She also spent more than two years working with the Positive Power Co-operative as General Manager, helping to develop both community-owned renewable energy projects in the Bay Area and the renewable energy co-op sector. Ms. Heneberry has degrees in Chemistry and Environmental Sciences from McMaster University, and a Volunteer Management Certificate from Mohawk College. She is also a graduate of the Hamilton-Burlington Bay Area Leadership program and a member of the Bay Area Leadership Curriculum Committee. Currently, Ms. Heneberry is the 2007-08 Chair of the Board of Directors of the Conserver Society of Hamilton and District, and a member of the Hamilton Eco-Network Steering Committee.

- **Patrick Côté**

Mr. Côté is a founder and general manager of Co-op Val-Éo and Val-Éo limited partnership which was formed in 2005 to address the issues of community involvement in the wind project located in the Lac-Saint-Jean Area. The business structure he created has allowed landowners to fully control and manage the wind resource and Mr. Côté now provides coaching and tools for wind energy projects in Quebec, Ontario and Manitoba. Equipped with a strong background in local economic development, entrepreneurship and leadership training, Mr. Côté has also worked in the community surrounding the projected wind farm as an economic development counselor with public and private organizations. This experience has given him a deeper understanding of the important issues that affect the wind farm area, as well as how best to maximize social acceptability of the process.. He holds a Bachelor degree in business administration from École des Hautes Études Commerciales de Montréal.

- **Jake DeBruyn**

Mr. DeBruyn is the New Technology Integration Engineer for the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA). He is based in the Guelph office and covers Halton and Peel Regions for environmental and farm nuisance issues under the Farming and Food Production Protection Act. Mr. DeBruyn's work over the last few years at the Ministry has spanned from Nutrient Management to odour to washwater, and most recently to energy opportunities. He is currently active in encouraging the deployment of an agri-food biogas sector in the province.

- **Don Hilborn**

Mr. Hilborn, M.Sc. (Eng.), P. Eng., is the Byproduct/Manure Management Engineer with the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA). He has conducted courses on Agricultural Pollution Control, Concrete Manure Storages, Custom Manure Application and Nutrient Management. During the last 12 years, a major portion of his work has been focused on linking manure management systems with cropping processes. Mr. Hilborn has been in the forefront with the Ministry's effort to develop user-friendly, yet environmentally acceptable nutrient management information. He has also helped develop and support nutrient management regulations both on a municipal and provincial basis. Recently, Mr. Hilborn has been exploring renewable energy production via treatment of manure, energy crops and other organic materials using an Anaerobic Digestion (AD) system. He has viewed systems in Europe and is currently involved in research/feasibility studies on several Agricultural AD systems in Ontario.

- **Paul Norris**

Mr. Norris is the founding President of the Ontario Waterpower Association (OWA), a non-government organization established in May, 2001 to represent the collective interests of the province's waterpower industry. Mr. Norris joined the OWA following a career with the Ontario Public Service that included senior policy and management positions in public lands, water resources, fisheries, wildlife and communications. He has represented waterpower interests on the Minister of Energy's Electricity Conservation and Supply Task Force, was appointed to the Minister of the Environment's Clean Energy Panel on Environmental Assessment and is co-chair of the province's Renewable Energy Task Team.