

5 October 2006

Submission to the Ontario Power Authority in Response to the Renewable Energy Standard Offer Programme (RESOP) Draft Rules

As representatives of the Ontario biogas industry, we congratulate the Ontario Government and the Ontario Power Authority for its Renewable Energy Standard Offer Programme (RESOP).

Biogas Energy: A New and Emerging Ontario Industry:

Biogas energy is a new and emerging industry in Ontario that has the potential to not only provide clean, renewable electricity for Ontarians, but that also has significant rural economic development potential and the ability to deal with many of Ontario's waste management and groundwater quality issues in an environmentally responsible manner.

In Germany, a world leader in biogas energy production, over 2,700 biogas facilities (anaerobic digesters – ADs) were in operation at the end of 2005, with a combined renewable energy generation capacity of 660 Mega Watts (MW). A majority of these facilities are farm-based. Approximately 700 of these operations were constructed during 2005. Since 2006, an additional 1,000 facilities have come into operation or are about to come into operation, adding a further 250 MW of renewable energy capacity.

Projections from the German Renewable Energy Federation indicate that by 2015, the growth potential for anaerobic digesters could top 20,000 facilities generating 4,000 MW of renewable energy. By 2020, capacity could reach 8,500 MW of renewable energy production, representing 42,000 facilities and approximately 17% of Germany's total electricity generation capacity.

Noting that 51% of Ontario's electricity production comes from nuclear power, that the average nuclear reactor creates approximately 500MW of energy capacity and that a nuclear power plant takes approximately 20 years to construct, the German renewable energy experience from farm-based anaerobic digester technology is more than impressive – it's mind boggling!

RESOP Draft Rule Concerns:

As members of the Ontario biogas industry, we are concerned that various aspects of the proposed RESOP rules conflict with the Government's and the OPA's commitment to develop renewable energy sources and creates a number of disincentives toward the sustainable development of the biogas industry in Ontario.

It appears that the draft RESOP rules are modeled around wind, water and solar sourced power and reflect a lack of understanding of biogas-sourced renewable energy from farm-based anaerobic digester facilities. This is reflected in the *one-price-fits-all-technologies (except for photo voltaic)* rate structure, established in the RESOP draft rules. No other jurisdiction employs a single rate structure for renewable energy production, recognizing the inherent capital, maintenance and operation cost differences for various renewable energy technologies.

The *Ontario Power Authority – Ontario Energy Board Joint Recommendations Report to the Minister of Energy: Recommendations on a Standard Offer Program for Small Generators Connected to the Distribution System* (17 March 2006) states: "The program should reflect the

costs and benefits of renewable energy as well as the Government's stated objectives with respect to renewable energy". The Report also states: "The terms of the standard offer may differ for different circumstances, for example offering different prices for different kinds of resources, but they do not differ for potential projects which have the same characteristics"

The proposed RESOP rules fail to recognize that farm-based anaerobic digesters employ unique resources, exhibiting quantifiable costs and benefits that are distinguishable from other renewable energy sources.

This being said, in reviewing the proposed RESOP rules we have the following concerns:

One-Price-Fits-All-Technologies Base Rate (11 cents/kW):

Many of the bioenergy projects currently being developed in Ontario are farm-based, anaerobic digesters (ADs) which have additional capital, maintenance and operational costs in comparison to other forms of renewable energy. The RESOP draft rules fail to take this point into account. However at the same time, the draft rules recognize the *necessity of favourable bias* for photo voltaic (solar) projects through a higher programme Base Rate (of 42cents/kW), based upon the OPA's perceived responsibility for the sustainability of the solar industry, a principle noted in the OPA/OEB Joint Report to the Minister of Energy (17 March 2006).

What is the rationale for *favourable bias* not also being applied to anaerobic digester sourced energy?

The RESOP draft rules fail to recognize the sustainability of the biogas industry, the added benefit of significant rural economic development potential and the ability to deal with many of Ontario's waste management and groundwater quality issues in an environmentally responsible manner. These benefits have clearly been demonstrated successfully in other jurisdictions that have embraced AD sourced, renewable energy production.

Another related concern is the *On-Peak Performance Incentive Payment* of an additional 3.5 cents/kW (also noted in Section 5.2). It must be noted that even with the On-Peak Rate of 3.5 cents/kW, anaerobic digesters operating 24/7 will only average a combined Base and On-Peak Rate of 11.7 cents/kW, over a 24 hour period.

Recommendation:

The RESOP *one-price-fits-all-technologies* rate structure must be reviewed and consideration must be taken into account for the true capital, maintenance and operational costs of the various renewable energy technologies and the sustainability, growth potential and *non-electricity* benefits in the greater public good of each technology employed.

Even the OPA/OEB recognizes in its Joint Report to the Minister of Energy (17 March 2006) that the standard offer must differentiate individual technologies by "offering different prices for different kinds of resources". Farm-based anaerobic digesters clearly employ unique resources exhibiting quantifiable costs and benefits that are distinguishable from other renewable energy sources.

Inter-Connection Costs:

Also of concern are the substantial costs associated with the existing Hydro One Capital Cost Recovery Agreement (CCRA) requirements for load (3-phase power) and generation back to the grid. These costs are a major disincentive to the development of the farm-based biogas industry in Ontario.

The costs attributed to the Hydro One CCRA requirements are in effect because of outdated Ontario Energy Board regulations that conflict with the Government's and the OPA's commitment to develop renewable energy sources from smaller generators through the RESOP.

Recommendation:

Farm-based biogas sourced renewal energy projects should be exempt from Hydro One CCRA requirements.

Section 2.2(a) (Re: Contract Facility):

It is not clear whether the Contract is with the facility, gross nameplate capacity, or the specific genset.

Unlike wind, small hydro or solar renewable energy technologies, ADs can readily acquire the capability to expand generation capacity by adding to the farm's livestock or crop biomass availability, subsequent to achieving Commercial Operation under an initial contract.

Accordingly, it is our concern that subsequent, incremental generation capacity added to a Contract Facility be subject to the pricing terms offered by the RESOP at the time of achieving *Commercial Operation* of the incremental generation and not be treated as an extension of the initial contract pricing term.

Section 3.1(e) (Re: Business Plan Review):

This additional reporting requirement creates unnecessary, added costs and calls into question intended liability and who the accredited professional is potentially liable to.

In addition, the two examples of accredited professional (Chartered Accountant or Engineer) are from strikingly different disciplines. Would either be satisfactory to the OPA or does the cross-discipline, implied by the examples, make one professional potentially less satisfactory than the other?

What does 'complete and reasonable' mean?

What does 'support the efficacy' mean?

What standard is required for a project to be 'reasonably achievable'?

All of these issues are fodder for dispute and require clarity and specification if this element of the rules is sustained.

Section 5 (Re: Contract Pricing):

Our concern here is related to our comments in the above section **Re: One-Price-Fits-All-Technologies Base Rate (11 cents/kW)**

Recommendation 3.1 of the OPA/OEB Joint Report to the Minister of Energy (17 March 2006) calls for a market-based pricing structure, substantiated by the rationalization that the results of the earlier staged competitive Request for Proposal (RFP) processes for renewables, provided insight into a “market-based value for renewable generation in Ontario”. The principle applied here is that those RFP prices are representative of “the prices at which sellers are willing to offer supply from the renewable resources in Ontario”. Those market-related base prices could be adjusted for economies of scale by add-on credits.

However, it is our understanding that no farm-based AD renewable generation projects participated in the RFP market-based pricing process. Therefore, it appears the OPA/OEB lacks sufficient insight regarding market-based pricing for farm-based AD renewable generation in Ontario and the application of this principle should be called into question with regard to AD technology.

Recommendation:

Again we stress, the RESOP *one-price-fits-all-technologies* rate structure must be reviewed and consideration needs to be taken into account for the true capital, maintenance and operational costs of the various technological sources of renewable energy and the sustainability and growth potential of each technology. Farm-based anaerobic digesters clearly employ unique resources exhibiting quantifiable costs and benefits that are distinguishable from other renewable energy sources.

Section 5.2 (Re: On-Peak Performance Incentive Payment):

First, it should be noted that this incentive payment has an inconsistent effect on the various types of renewables.

It must be noted that even with the On-Peak Rate of 3.5 cents/kW, anaerobic digesters operating 24/7 will only average a combined Base and On-Peak rate of 11.7 cents/kW over a 24 hour period.

Secondly, this provision only accounts for two stages: on-peak and off-peak generation. What is the rationale for not mirroring the Ontario Energy Board's *Regulated Price Plan* programme, which allows for energy consumption price adjustments on three levels: on-peak, mid-peak and off-peak?

Thirdly, the On-Peak price component is expressly left out of the CPI escalation clause. Yet in the OPA/OEB Joint Report to Minister of Energy (17 March 2006), the OPA recognizes that it requires dedicated investment to achieve generation capacity for over 80% of the on-peak production period.

Recommendations:

The On-Peak Performance Incentive Payment should be readjusted upwards for farm-based AD projects.

The On-Peak Performance Incentive Payment should be subject to 100% CPI Escalation, in recognition of the additional investment required for increased on-peak generation production.

Section 5.5 (Re: CPI Escalation of 20% of Base Rate):

What is the rationale for allocating only 20% of the Base Rate indexed for inflation escalation protection?

Clearly this rationale does not take into account the added capital, maintenance and operational costs of anaerobic digesters in comparison to other renewable energy technologies. ADs must be continuously sourced biomass fuel via relatively complex infrastructure, incorporating multiple wear-and-tear costs. **These costs cannot seriously be compared to the minimal cost of catching the wind when it blows, water when it flows or the sun when it shines.**

Furthermore, under current reality a farm-based AD's consumption costs for the energy it requires for the farm operation is subject to 100% of the ongoing cost of inflation of Ontario's electricity consumer costs.

Recommendation:

The Base Rate for farm-based anaerobic digesters should be 100% indexed to inflation.

**Section 5.6
(Re: Assignment of Related Products to OPA):**

It is unreasonable to require the assignment of related products to the OPA. This places the sustainability and development of the Ontario biogas industry at risk.

Section 5.8 (Re: OPA Amendment Right):

This provision allows the OPA to revise the Contract Price, Base Rate, On-Peak Performance Incentive Payment and the CPI escalation of the Base Rate, but any adjustment would exclude previously entered contracts.

The purpose of the RESOP is to encourage and promote smaller generating renewable energy projects and the OPA has committed to doubling the amount of electricity drawn from renewable sources to 15,700 MW by 2025.

However the OPA acknowledges that it does not know what generation capacity to expect from successful RESOP proponents and as a result, it will conduct a full review of the program in two years.

It appears that the OPA cost analysis that lead to the *one-price-fits-all-technologies* rate structure is flawed when the true capital, maintenance and operational costs of the various types of renewable energy sources are taken into account. In light of the fact that there are no Ontario farm-based ADs currently supplying power to the distribution grid, what was the basis for the OPA's comparative cost analysis in this regard?

The current Base Rate (11 cents/kW) is clearly more favourable to wind, water and landfill-biogas sourced projects than farm-based anaerobic digester projects.

As the OPA reviews its RESOP remuneration schedule and makes adjustments, this proposed rule does not include early participants in subsequent remuneration adjustments and thereby penalizes those proponents who took the risk in the early stages of the RESOP and provided reviewable, example projects by pioneering Ontario's renewable energy technological and industry development.

Recommendation:

An equitable position would be for those proponents who entered the RESOP prior to its first programme review (in Year 2) to be given subsequent remuneration adjustment consideration.

Section 6.2

(Re: LDC will bill the Load Customer for the actual Electricity consumption prior to such reduction):

It appears from this purposed rule that farm-based anaerobic digester proponents cannot benefit from the power they produce and that they must sell all the (Generator Customer) farm-based AD produced power to the OPA (at the 24/7 average rate of 11.7 cents/kW) and purchase required (Load Customer) farm-used power from their Local Distribution Company (LDC).

Under this scenario, farm-based ADs will actually be purchasing power they produce at a higher cost than they can sell the power they produce back to the grid. In fact, preliminary research has shown that in one proponent's case, the existing cost to purchase power is +14.0 cents/kW, while the cost to sell it under the RESOP averages 11.7 cents/kW.

Making matters worse is the coupling of the draft rule in Section 5.5 that stipulates that only 20% of the 11 cent/kW sale price (Base Rate) is subject to CPI adjustment, while the ongoing purchase price of farm-used power (Load Customer Rate) will be subject to 100% of the ongoing cost of inflation of Ontario's electricity consumer costs.

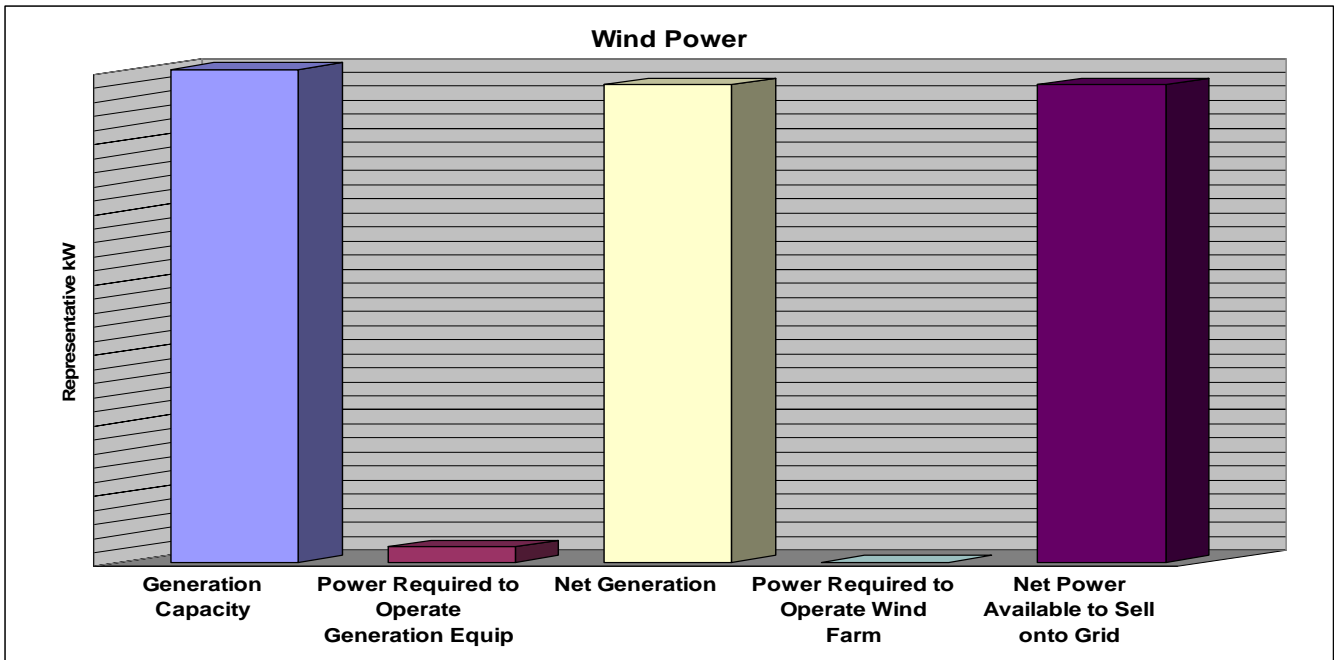
This proposed rule conflicts with the Government's priority to reduce grid demand and to promote the development of the renewable energy sector in Ontario.

In addition, the disadvantage of not being allowed to self-generate farm energy consumption has a substantial negative impact on the economic viability of farm-based, anaerobic digester sourced energy.

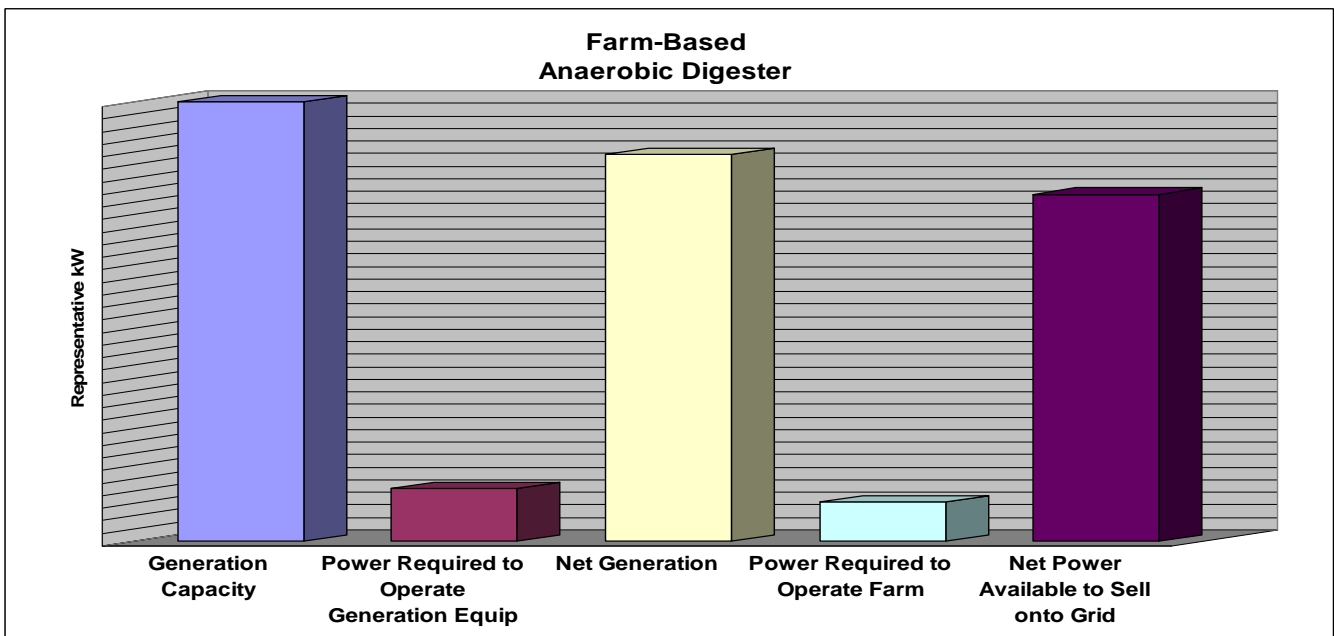
By comparison, a landfill biogas project has an outsourced "fuel" for its energy production (municipal waste collected off-site) and also does not have the same pre-existing Load Customer consumption requirements compared to farm-based ADs.

The rationale for the low Base Rate (of 11 cents/kW) being offered by the RESOP in comparison to the true costs of anaerobic digester projects warrants reconsideration.

By comparison, wind farms do not have the same pre-existing power requirements for farm operation (Load Customer requirements) that farm-based ADs have since wind farms do not have to manufacture the wind that creates their energy production. As a result, wind farms have a higher percentage of their energy production available for sale to the grid system.



In the case of a farm-based AD, the power consumption required for the farm operation (Load Customer consumption requirements) is directly related to the processes, technologies and infrastructure required to produce the manure and crop residue biomass fuel for the AD -- the farm is integrated with the AD and vice versa. This is a unique circumstance to farm-based ADs. While farm-based AD biomass fuels are admittedly byproducts of farm food production, they cannot be considered in a similar manner as 'free' wind, water or solar power fuel.



This proposed rule puts farm-based anaerobic digesters at a further financial disadvantage to other renewable energy sources. This is deeply disturbing and a substantial disincentive to the development and sustainability of the biogas industry in Ontario.

Section 8.1 (b)

(Re: Establish Gross Nameplate Capacity and the Contract Capacity of the Contract Facility and each phase thereof ;)

Our concerns with this draft rule are related to those concerns expressed in **Section 2.2(a) (Re: Contract Facility)**.

Section 8.1 (c) (Re: Term):

It is unreasonable to set the contract term at 20 years.

The term should be flexible and open to specific project negotiation.

Section 8.1 (i) (Re: Related Product Benefit):

Our concern here is similar to the concern outlined in Section 5.6.

It is unreasonable that all related products generated from the contract facility during the term of the contract be sold only to the OPA.

In the case of anaerobic digesters, there is the potential to develop valuable by-products which have further farm benefit and would assist in the sustainability and further development of the biogas industry.

The OPA has acknowledged a necessity of *favourable bias* toward photo voltaic (PV) projects through the RESOP pricing scheme, based upon the sustainability of the PV industry. Therefore, it is only reasonable that the OPA apply similar rationale and not impede the sustainability of the biogas industry by allowing the anaerobic digester sector to benefit from related products generated by its facilities.

Dispute Mechanism:

Under the proposed RESOP rules the dispute mechanism is arbitrary and one-sided to the benefit of the OPA.

The RESOP requires an open and transparent dispute mechanism.

Summary:

We appreciate the opportunity to provide comments on the proposed RESOP rules in the hope that the OPA/OEB will address these programme inequities.

We look forward to hearing back from you in this regard.

Sincerely,

Laurie Stanton
Stanton Bros. Ltd (Dairy Farms)
RR #3 Ilderton, ON N0M 2A0
Tel: 519.666.1865
stantonbros@sympatico.ca
(Farm-based AD project at final pre-construction stage)

Paul Klaesi
Fepro Farms
520 Government Road
Cobden, ON N0J 1K0
Tel: 613.646.2797
peklaesi@yahoo.com
(Current farm-based AD operator)

George Heinzle
Terryland Farms Inc.
1670 Concession #6
St Eugene, ON K0B 1P0
Tel: 613.674.2079
(Farm-based AD under construction)

Josef Heinzle
Pinehedge Farms
RR 2, St. Eugene, ON K0B 1P0
Tel: 613.674.5739
heinzle@pinehedge.com
(Farm-based AD under construction)

John Giles
Delft Blue Veal
435 Dobbie Drive
Cambridge, ON N1T 1S9
Tel: 519.620.9108
jgiles@grober.com
(Farm-based AD at final engineering stage)

Philip Lynn
Lynn Cattle Farms
Lucan, ON N0M 2J0
Tel: 519.227.0318
lynncattle@isp.ca
(Farm-based AD project under construction)

Philippe et Nicolas Henrard
Fem Henrard et Fils
986 route de Comte 19
Curran, ON K0B 1C0
Tel: 613.673.4404
henrard@magma.ca
(Farm-based Ethanol/AD project in planning)

Thomas Kirchmeier
2231 St. Isidore Road
St. Isidore, ON
Tel: 613.524.9959
thomask732002@yahoo.ca
(Farm-based AD project in planning)

Don Crooks
1105 Aberdeen
Glen Robertson, ON K0B 1H0
Tel: 613.874.2558
crookslm@hawk.igs.net
(Farm-based AD project in planning)

Jack Streef
Streef Produce Ltd
Princeton, ON N0J 1V0
Tel: 519 458 4311
jstreef@oxford.net
(Farm-based AD in planning)

Korb Whale
Clovermead Farms
RR #1 Alma, ON N0B 1S0
Tel: 519.638.5995
dlbjones@sympatico.ca
(Farm-based AD project in planning)

Garry Fortune
GFA
175 Lakewood Drive
Amherstburg, ON N9V 2Y8
Tel: 519.965.0092
garry.fortune@sympatico.ca

Jaret Henhoeffler
General Manager
Perth Community Futures
Box 645, Milverton, ON, N0K 1M0
Tel: 519.595.7570
jaret@perthcfdc.ca
www.perthcfdc.ca

Martin Lensink, P. Eng.
PlanET Biogas Solutions Inc.
26 Hiscott Street, Suite 201
St. Catharines, ON L2R 1C6
Tel: 905-935-1969 Fax: 905-935-7878



martin@cemeng.ca
www.planet-biogas.com

Chuck Martin,
Executive Vice-President
Bio-En Power Inc.
Elmira, ON
Tel: 519.669.5171
chuckm@marbro.com

Jan Buijk
Detroit Diesel Allison, GE Energy
1 Moyal Court (Kinacor Bldg.)
Concord, ON L4K 4R8
Tel: 416.804.2203 Fax: (416) 352-5868



buijkjan@ddace.com
www.gejenbacher.com

Andrea LaFleche, President
LaFleche Environmental Inc.
17125 LaFleche Road
Moose Creek, ON K0C 1W0
Tel: 613.528.2776
andre@laflecheenvironmental.com
www.laflecheenvironmental.com
(Regional AD project in planning)

Douglas M Carruthers, President
Organic Resource Management Inc.
3700 Steels Ave. W. Suite 601
Woodbridge, ON L4L 8K8
Tel: 905.264.7700 x113 Fax: 647.439.0834



dcarruthers@nationalchallenge.com
www.nationalchallenge.com

Benjamin Strehler, Ing.
Keller Engineering Associates Inc.
1390 Prince of Wales Drive
Ottawa, ON K2C 3N6
Tel: 613.224.1594

bstrehler@kellerengineering.com



ECB Enviro North America Inc
Thane Hurlburt, President
210 – 2210 2nd Ave
P.O. Box 1119
Fort Macleod, AL T0L 0Z0
Tel: 403.553.4255
thane@ecbna.com
www.ecbna.com

Michael Safty
Biothane Corp
95 Arbour Drive
Oakville, ON M6J 4Y6
Tel: 905.842.9451



msafty@biothane.com
www.biothane.com

Brandon Moffatt, P. Eng.
Conestoga Rovers
651 Colby Drive
Waterloo, ON
Tel: 519.884.0510
bmoffatt@croworld.com

Jose Laurentino
REO Energy Group
950 Brant Road.
Box 97, Paris, ON N3L 3T6
Tel: 519.632.9455
josel@golden.net

Ron Evans, P.Ag.
CEA Technologies International (Canada)
203-25 John Street South
Aylmer, ON N5H 2C1
Tel: 519.765.1555
ronevans@amtelecom.net

Edward Heslop, CEO
Environmental Credit Corp
201-204 East Calder Way
State College, PA 16801
Tel: 315.521.2538
edheslop@envcc.com
www.envcc.com

David Rose
2368 CR 89
Gilford, Ont L0L 1R0
Tel: 705.456.3036
ds.rose@sympatico.ca

Garry Spence
Evergreen Energy
2-89 Chestnut Street
St. Thomas, ON N5R 2B1
Tel: 519.632.6035
sirdocan@allstream.net

Aidan Foss
ANF Energy Solutions Inc
4092 McBean Street,
Ottawa, ON K0A 2Z0
Tel: 613.838.3605
nmfoss@hotmail.com

cc: The Honourable Dalton McGuinty, Premier and Minister of Research and Innovation
The Honourable Greg Sorbara, Minister of Finance
The Honourable Dwight Duncan, Minister of Energy
The Honourable Leona Dombrowsky, Minister of Agriculture, Food and Rural Affairs
The Honourable Laurel Broten, Minister of the Environment
The Honourable Sandra Pupatello, Minister of Economic Development and Trade
The Honourable Harinder Takhar, Minister of Small Business and Entrepreneurship

Ontario Power Authority, Peter Jones, Chair/Jan Carr, CEO
Ontario Energy Board, Howard Wetston, Chair
Hydro One, Rita Burak, Chair/ Tom Parkinson, President/CEO

The Hon. Donna Cansfield, MPP (Etobicoke Centre)
The Hon. Caroline DiCocco, MPP (Sarnia-Lambton)
The Hon. Steve Peters, MPP (Elgin-Middlesex-London)
Kevin Flynn MPP (Oakville) and Parliamentary Assistant to the Minister of Energy
Jean-Marc Lalonde, MPP (Glengarry-Prescott-Russell) and Parliamentary Assistant to the
Minister of Economic Development and Trade and to the Minister of Small Business and
Entrepreneurship
Jeff Leal, MPP (Peterborough) and Parliamentary Assistant to the Minister of the Environment

Lou Rinaldi, MPP (Northumberland) and Parliamentary Assistant to the Minister of
Agriculture, Food and Rural Affairs
Maria Van Bommel, MPP (Lambton - Kent - Middlesex) and Parliamentary Assistant to the
Minister of Agriculture, Food and Rural Affairs
John Wilkinson MPP, (Perth-Middlesex) and Parliamentary Assistant to the Minister of
Research and Innovation
Jim Brownell MPP (Stormont-Dundas-Charlottenburgh)
Bruce Crozier, MPP (Essex)
Pat Hoy MPP, (Chatham-Kent-Essex)
Dave Levac, MPP (Brant)
Deb Matthews, MPP (London North Centre)
Ted McMeekin, MPP (Ancaster-Dundas-Flamborough-Aldershot)
Phil McNeely, MPP (Ottawa-Orleans)
Carol Mitchell MPP (Huron -Bruce), Chair, Ontario Liberal Party Rural Caucus
Jennifer Mossop, MPP (Stoney Creek)
Ernie Parsons MPP, (Prince Edward - Hastings)
Khalil Ramal MPP (London Fanshawe)
Liz Sandals, MPP (Guelph-Wellington)