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April 20, 2011

Ontario Energy Board
P.O. Box. 2319
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Attention: Ms. Kirsten Walli, Board Secretary

Dear Ms. Walli:

Re: Comments on Behalf of the Ontario Sustainable Energy Association (OSEA)
Board File No. EB-2008-0346 – Review of Demand Side Management Framework for Natural Gas Distributors (Revised)

Please find enclosed our comments completed on behalf of OSEA regarding the DSM Guidelines for Natural Gas Utilities.

Yours truly,

Cherie L. Brant

Encls.

cc: Mr. Kristopher Stevens, Executive Director, OSEA

Document #: 422801

OSEA's Comments Re: Demand Side Management ("DSM") Guidelines for Natural Gas Utilities (EB-2008-0346) Issues for Further Comment

The Ontario Sustainable Energy Association (OSEA) is pleased to provide its response to the Board's letter requesting further comments for the *DSM Guidelines for Natural Gas Utilities*.

In June 2010, OSEA provided input on the Concentric Report and the Pacific Economics Group Report. In February 2011, OSEA provided its commentary on both the draft Guidelines and the Staff Report.

OSEA is deeply concerned that the direction of the Board on Utility DSM does not sufficiently consider the July directive of the Minister of Energy.

OSEA also feels strongly that the significant change in direction represented in the Board letter from the original Staff Discussion Paper and Draft Guidelines warrants a more fulsome regulatory review which would include a broader range of stakeholders.

1. Issues for Further Comment

Regarding the issues for comment, in the absence of knowing what the Board's final guidelines will include, the following comments can only be read as comments specific to the issue – not as comments on the guidelines as a whole.

Issue 1

How should the low-income DSM budget be set? Should the low-income budget stay at the same level or increase? Should the current low-income budget funding from the residential class be maintained or should the funding be recovered from all rate classes? Is there a different set of programs that are appropriate for low-income consumers e.g. should "deep" measures be promoted for this group of customers to a greater extent? What approach should be used to coordinate gas DSM programs with electricity CDM programs for low-income consumers?

OSEA Comment

OSEA defers to the position of the Low Income Energy Network on matters relating to the design of low income programs.

The matter of coordination of gas and electricity conservation programs applies not only to low income programs, but the full range of programs. OSEA believes there are incredible synergies that are being overlooked in the absence of coordination and a more fully integrated approach to energy, writ large, which could deliver even great customer and societal savings. As the Board is the only agency with explicit responsibilities for both gas and electricity, it seems that there are great opportunities for added value in coordinating not just programs, but setting consistent guidelines, timeframes and methodologies which would also respect the differences between the fuels. For example, electricity is more time sensitive than natural gas.

Respecting the matter of cross subsidization, the Board has concluded that "the justification for gas DSM cross subsidies is eroding, and that expansion of DSM initiatives funded by natural gas ratepayers is not warranted at this time." But what has changed since the original guidelines were set up in 1993? OSEA concurs with the Minister that that **an increase in natural gas DSM may be needed now more than ever.** At this point, it is impossible to know if such an increase requires higher or lower spending if the guidelines were revised as per the experience of TRCA.

Issue 2

Do industrial and commercial DSM programs with significant incentives create competitive advantages for the participants of the programs relative to their competitors? What programs, if any, are appropriate for these sectors? Should there be a focus on monitoring consumption, data analysis or benchmarking energy use in buildings and industrial processes? Should DSM programs in these sectors focus more on energy audits and efficiency training or case studies to highlight best practices and new technologies, rather than financing equipment and installation costs for specific DSM projects?

OSEA Comment

OSEA believes generally that competitive advantages issues are minor compared to the benefits are realized in DSM Program that enable long term benefits. Programs targeted to individual customer groups will necessarily have advantages and disadvantages, and for that reason the goal should be to develop programs based on sustainable principles, are multi-faceted and flexible enough to allow maximum participation.

In general, there is clearly a competitive advantage for industrial and commercial customers who pursue conservation in their factories or buildings. As long as participation in DSM program is open to all, there is no issue with respect to competition. The out of pocket "value" being transferred is but a small portion of the overall and eventual benefits which accrue to both participants and non-participants. The primary value obtained by a participant is in the value of the long term bill savings. The long term savings occurs both for participants and non-participants and are much greater than any cost or benefit derived from the incentive. Given Ontario's economic challenges and Canada's lagging productivity indicators, conservation can only help our economy. With respect to the institutional sector or the broader public sector, such competition is meaningless – Any bill savings can reduce the cost of public services.

The definitive study comparing rate increases and bill savings was done in 1991 by a researcher at the Oak Ridge National Laboratory, entitled: *The Effects of Utility DSM Programs on Electricity Costs and Prices*, Eric Hirst:[1]

> *"Typically, the percentage reduction in electricity cost far exceeds the percentage increase in electricity price (rates) caused by DSM programs. Roughly speaking, the ratio of percentage changes is 2:l for the surplus utility, 5:l for the base utility, and 8:l for the deficit utility."*

[1] http://www.ornl.gov/info/reports/1991/3445602868886.pdf

Similar results for natural gas would result from the application of the same fundamental set of DSM rules used for EBO-169-III.

OSEA suggests that Natural Gas DSM guidelines for buildings adopt the process-based approach used by TRCA as set out in previous submissions in EB-2008-0346. Programs developed within this process could include incentives for retrofit projects, energy audits with accountability for results and improvements, R&D funding and initiatives and pilot projects as appropriate to the customer group. It is unnecessary for the Board to pick one program type over another.

In its letter, the Board noted that: "In light of current market conditions, achieving incremental benefits through ratepayer funded natural gas DSM programs will be more limited and by necessity more costly to implement. OSEA is unaware of any analysis or evidence to support this assumption. The submission of the Toronto and Region Conservation Authority provided insight into how a performance based approach to conservation could deliver **more savings at less cost** if the Gas DSM guidelines more fully reflected TRCA's approach both in program design and in monitoring and evaluation of results.

Issue 3

What should be the natural gas utilities' role, if any, in providing natural gas DSM education and training programs funded through distribution rates? Should they focus on targeting contractors, trades and professional associations to ensure DSM messages reach end-users?

OSEA Comment

The natural gas utilities should have a leadership role with respect to education and training related to natural gas applications or any appropriate fuel switching.

It should be left to the natural gas utility to decide how to target their DSM Programs.

Issue 4

What should be the natural gas utilities' role, if any, in undertaking R&D and pilot programs funded through distribution rates? Should utilities work with key industry leaders to encourage further changes in building codes and improve standards in heating equipment?

OSEA Comment

The natural gas utilities should have a leadership role with respect to R&D, pilot programs as well as changes in building codes and standards, but not limited to heating equipment. The funding of R&D by natural gas utilities could be beneficial, but it must be considered on a case-by-case basis.

Codes and standards affect new buildings and new equipment purchases; neither addresses the retrofit or replacement market. In any event, utility DSM programs make excellent complementary contributions to the overall framework for energy efficiency enabling code and standard setting organizations to move efficiency levels up the curve faster, but they are no substitute for well-designed utility programs.

The Board noted "that the implementation of higher mandatory efficiency standards for new building construction, as part of the Ontario Building Code, and the more stringent efficiency

standards and ratings of appliances, including water heaters and furnaces, has led and is expected to lead, to significant natural gas savings over time" OSEA agrees that codes and standards affect new buildings and new equipment purchases. However neither addresses the retrofit or replacement market. In any event, utility DSM programs make excellent complementary contributions to the overall framework for energy efficiency enabling code and standard setting organizations to move efficiency levels up the curve faster, but they are no substitute for well-designed utility programs which push the envelope further and faster than codes and standards.

2. Additional Comments

Consistency with Government Objectives

It is unfortunate that so much time has passed since this proceeding began and that the Board now appears to be moving in a direction that contradicts the principles of the *Green Energy and Green Economy Act* and the stakeholder vision paper prepared by the Green Energy Act Alliance and given to the Minister of Energy and Infrastructure. OSEA believes it is worth revisiting the principles and vision that surrounded the genesis of the *Green Energy and Green Economy Act* in the first place.

The Green Energy Act Alliance was a multi-stakeholder process of organizations and Ontarians with the goal to establish a vision for a green Ontario. OSEA was a key stakeholder. Together they prepared a vision paper, a copy of which is attached, and imagined what a green Ontario might look like in 2020. Set out below are the vision statements that represent the views of Ontarians. OSEA would like to a see DSM Guidelines that equally recognizes these value and principles as they represent the views of the Ontarians that comprised the Green Energy Act Alliance.

- Ontario's economy is sound, largely due to successful, profitable green enterprises.
- Cities and communities are livable.
- The cities are dark at night.
- Cities are quiet, transit and vehicles are electric sidewalks are wide, bicycles are ubiquitous.
- The air is clear, clean and invigorating – no smog or particulates polluting the air.
- Energy conservation is neither a question nor a concern – it is a lifestyle.
- People are engaging in recreation and leisure, enjoying healthy and clean food, air, water and outdoors.
- Sustainability is the foundation of society.
- Food production is local. Parking lots have become community gardens.
- All forms of pollution are taxed at its true cost to society.
- Our environment has turned around. The Arctic ice caps have stopped receding; people are no longer dying because of the air they breathe and the lakes, rivers and forests are again alive with wildlife.
- Our homes and building are net generators of electricity.
- Ontario natural habitats are protected, accessible and respected by all.
- Energy is produced where it is used.

- It is easy for everyone to generate green power and to connect it to the grid – no more barriers.
- All energy is from low or no impact sources – renewable or clean
- Renewable energy services are main stream, like mobile phones.
- We have a decentralized electricity system empowering and benefitting local communities, First Nations and Ontario's farmers as well as the system as a whole.
- Local distribution companies develop sustainable infrastructure, implement conservation and facilitate renewable and distributed generation.
- Last remnants of nuclear power are 2 units at Darlington and Bruce A, which are all scheduled for phase out and decommissioning by 2030.
- Oil is no longer the fuel of choice.
- Ontario public policy drives efficient use of green energy
- Ontario is are a leader in green job creation, green products and green planning and regulation
- All politicians embrace and demonstrate their commitment to sustainability. They have finally realized that "green change" is not as risky as they thought.

Focusing on "Bills" not "Rates"

OSEA remains deeply concerned that the Board letter focuses mostly on rate impacts (increases) while ignoring the impacts (decreases) of DSM on bills, for both participating and non-participating customers to support its suggestion that gas DSM should be restricted.

A definitive study comparing rate increases and bill savings was done in 1991 by a researcher at the Oak Ridge National Laboratory, entitled: *The Effects of Utility DSM Programs on Electricity Costs and Prices*, Eric Hirst[2]. Hirst finds that, "typically, the percentage reduction in electricity cost far exceeds the percentage increase in electricity price (rates) caused by DSM programs." Further that, "Roughly speaking, the ratio of percentage changes is 2:l for the surplus utility, 5:l for the base utility, and 8:l for the deficit utility." OSEA feels strongly that similar results for natural gas would result from the application of the same fundamental set of DSM rules used for EBO-169-III.

More DSM Does Not Necessarily mean Higher Spending

The Board states in its letter: "In light of current market conditions, achieving incremental benefits through ratepayer funded natural gas DSM programs will be more limited and by necessity more costly to implement." OSEA would like to point out that it is unaware of any analysis or substantive evidence to support this assumption. OSEA along with The Toronto and Region Conservation Authority provided insight into how a performance based approach to conservation could deliver **more savings at less cost** if the Gas DSM guidelines more fully reflected a performance based approach both in program design and in monitoring and evaluation of results.

[2] http://www.ornl.gov/info/reports/1991/3445602868886.pdf

Market Evolution

OSEA notes that the Board places emphasis on the comments made by participants that a market is evolving in energy efficiency and appears to be suggesting that a retreat in utility DSM may be warranted because customers appear to be implementing DSM technologies on their own. OSEA would be interested in understanding what substantive information the Board has relied on to support this view. To suggest that implementation of utility DSM is without barriers and can be implemented at its own pace fails to address the fundamental rationale for DSM. Any DSM guidelines should target systemic barriers that the market is unable to effectively and efficiently address. There continues to be major institutional and marketplace barriers that delay the implementation of the full potential of energy efficiency in Ontario.

The market barriers can be classified into the following five major categories and have not substantially changed in the last decade:

Inadequate financing - The lack of a mature market for financing conservation has resulted in limited availability and high financing cost as lenders are not familiar with the risks and benefits of energy efficiency projects.

Emphasis on first cost - Conservation is hindered because many consumers and businesses base purchase decisions on the initial capital cost of a product without considering the life cycle operating cost savings.

High transaction cost - Adoption of energy efficient products and practices involves high transaction costs such as learning about efficiency opportunities, difficulty in integrating into complex expansion/renovation projects and the effort needed to coordinate the many diverse elements of an energy efficiency project.

Lack of information/limited energy efficiency infrastructure - Many consumers and businesses are unaware of the opportunities that exist for increasing energy efficiency. They lack information about the anticipated costs and benefits of energy efficiency improvements. They are sceptical about the reliability of claimed savings and/or fear performance will be degraded if they switch to energy efficient products.

Geographical diversity - Ontario is a large province with many regions, where distance or population densities make delivering conservation programs expensive. Yet, these regions are frequently where conservation is most needed. For example, in northern Ontario several factors combined make conservation critically important: the older housing stock is inefficient, fuel prices are higher and incomes are lower. The challenge may be on the delivery side, where economies of scale for delivering programs may act as a barrier to cost-effective implementation.[3]

[3] Union Gas, 1998; Demand Side Management Plan: 1999- 2003.

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Green Energy Act Alliance

A Vision of a Greener Energy System for Ontario

Energy
From each and for all
Making it green while using less

On September 16, over 100 people gathered to envision a greener Ontario. The group was diverse: First Nations, farmers, advocates and practioners, current and retired employees of local distribution companies and municipalities, civil servants, lawyers, business leaders and a broad representation of nongovernmental organizations. As the Premier likes to say, "Together we are better".
Together they imagined what a green Ontario might look like in 2020:

- Ontario's economy is sound, largely due to successful, profitable green enterprises.
- Cities and communities are livable.
- The cities are dark at night.
- Cities are quiet, transit and vehicles are electric sidewalks are wide, bicycles are ubiquitous.
- The air is clear, clean and invigorating – no smog or particulates polluting the air.
- Energy conservation is neither a question nor a concern – it is a lifestyle.
- People are engaging in recreation and leisure, enjoying healthy and clean food, air, water and outdoors.
- Sustainability is the foundation of society.
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- Renewable energy services are main stream, like mobile phones.
- We have a decentralized electricity system empowering and benefitting local communities, First Nations and Ontario's farmers as well as the system as a whole.
- Local distribution companies develop sustainable infrastructure, implement conservation and facilitate renewable and distributed generation.
- Last remnants of nuclear power are 2 units at Darlington and Bruce A, which are all scheduled for phase out and decommissioning by 2030.
- Oil is not longer the fuel of choice.
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- Ontario is are a leader in green job creation, green products and green planning and regulation

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- All politicians embrace and demonstrate their commitment to sustainability. They have finally realized that "green change" is not as risky as they thought.

The Green Economy is Thriving

- Ontario's economy is driven by the green industry resulting in a substantial number of green collar workers. Green industries are the leading source of employment in Ontario. Investment policies and economic development strategies reflect sustainability and community goals.
- Ontario has a workforce with new and retrained workers that replace the manufacturing jobs that have been lost. Workers have been trained and re-skilled to install and maintain renewable energy and distributed generation.
- First Nations are included in a meaningful way in Ontario's sustainable and renewable energy industry
- Optimization of efficiencies in food production, renewable energy production, and re-use of waste support rural economic development.
- Improved energy efficiency in industry has increased our energy productivity and economic competitiveness dramatically.

The Conservation Culture is Green

- In order to protect Ontario's natural habitats and reduce our province's environmental impact, our culture of conservation is embraced by all energy consumers. The conservation culture is defining market forces. Energy is an integrated component of all decision making.
- People are energy literate. They measure and manage their energy use. People are proud of conservation and understand the cost of energy just like their do a carton of milk or a litre of gasoline.
- Sustainability and systems thinking is embedded in all education. Energy awareness and leadership are built through effective integration into school curriculum, professional training and certification. Colleges, Universities and trade associations make sure that accurate information on sustainability is widely available. Children are educated about renewable energy as an ongoing part of the curriculum.
- Home based, renewable energy and conservation are status symbols.
- A culture of knowledge exchange exists among the professions and trades.

Green Energy is Preferred

Advanced Renewable Tariffs Promote Green Energy

- All renewable and distributed energy is purchased through advanced renewable tariffs with differentiated pricing based on costs plus a reasonable return on investment, an obligation to connect and priority grid access. Connection costs are included in distribution rates.

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- All Ontarians can generate renewable energy through their homes and locally owned community power organizations such as co-operatives, municipalities, First Nations, farmer collaborative and institutions. Renewable energy infrastructure is in place to facilitate the maximum potential for local renewable energy.
- Techniques and technologies for electricity storage are effectively deployed to mitigate intermittency of wind and solar and to smooth peak demands.

A Smart Green Grid Enables Easy, Economic and Reliable Access for all Consumers and Generators.

- The Ontario Power Grid has been redesigned by world's leading professionals to support sophisticated responsive and adaptive management.
- The grid is truly bi-directional allowing for economic and reliable distributed energy at all levels.
- The gird is resilient, flexible, adaptive, clean, open to all generators, easy to access, based on distributed clean and renewable energy and benefits from significant levels of demand management. Grid costs are fully rate based.

Green Communities are Served by Green Utilities

Communities Have Become Enablers and Guardians of Sustainability

- Communities are fully engaged and enabled to make the best use of local renewable resources. First Nations can readily access energy opportunities.
- Governance structures are renewed to reflect ultimate goals of sustainable communities and reflect regional goals and local community needs. Decisions are community based.
- Ontario has a world leading public transit system powered by renewable energy, including safe bike lanes. Local community planning drives the development of walk-able communities and low impact transportation. Sustainable transportation is based on non polluting electricity.
- Urban and design and infrastructure minimizes energy use, maximizes green energy sources and encourages active, healthy living. Our urban areas are intensified and neighbourhoods are self-contained: live, work play. Our land base is utilized to its optimum capacity including the production of energy from biomass.
- Waste diversion is maximized and what cannot be diverted is used to produce clean energy.

Utilities Build and Manage Local Green Energy Infrastructure

- Utilities love that they are obligated to connect renewable energy projects and willingly maximize conservation and distributed generation due to their evolved business model.
- Local utilities are freed of regulatory restrictions and provided the commercial incentive to embrace the development of the smart grid, distributed generation and conservation,
- Local utilities are encouraged to develop their distribution systems as smart, dynamic, two way networks to support significant conservation, demand management and distributed energy.

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Our Homes and Buildings are Green

All Ontarians Live and Work In Affordable, Healthy and Comfortable Buildings.

- All buildings are beautifully designed and connected and their skins are vegetated, harvesting H2O and energy positive. Codes enable and require net zero buildings. Tax credits are provided for homes that go above and beyond code
- Climate change mitigation is built into all changes to the built environment: green walls, green roofs, permeable paving.
- Government has implemented codes and standards to ensure our equipment, homes and businesses are the most efficient when built and when retrofitted. An automatic review process is built in to continually adopt best practices. The building code includes:
    - Measuring, monitoring, managing and benchmarking building energy uses
    - Mandated requirement for solar thermal systems for new buildings and substantial retrofits.
    - Enabling features for distributed energy
    - Making use of unproductive roof surfaces to generate electricity (solar power) or reduce energy use (green roofs).
    - Energy labeling requirements that must be up to date at time of sale.

Comprehensive Conservation Programs Reflect Continuous Improvement Approach

- Programs address all forms of energy as well as water.
- Programs are holistic and delivered through industry groups and trade associations in partnership with local distribution utilities.
- Programs include technical training, technology development and reflect best practices in other jurisdictions.

The Government is Green

- Consultation with First Nations is enshrined in legislation
- Effective public policy has made Ontario a world leader in developing and attracting green technologies and industries. Policy and programs adapt and evolve based on best practices and innovation, guided by core sustainability principles.
- Ontario uses power of provincial procurement policy to drive green change

All Ministries, Agencies and Government Programs Drive Investment in the Green Economy

- Legislation, regulation and taxing regimes are modernized to remove barriers and promote sustainability. Legislated tools for regulators and other decision makers can override existing mandates in the name of sustainability.
- Ontario legislation (e.g., *Planning Act, Electricity Act, Condo Act,* and *Cooperatives Act*) and regulatory frameworks (codes, taxation and systems) have been overhauled to remove barriers to renewable energy systems and to promote sustainable systems.

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Economics are Green

- All Ontarians understand that clean and renewable energy are the best economic choices once externalities are included in the alternatives. The provincial government has made the financing of green energy dependent on a publicly accepted statement showing a detailed account of life cycle costs of all alternatives. New nuclear plants are allowed but only if private proponents accept market pricing, and liability for operating risk and eventual decommissioning.
- Prices are fair and transparent; externalities and non energy related benefits are recognized for all forms of generation, scale of generation and ownership modes. The full lifecycle cost of energy, including an environmental damage is reflected in the price
- Everyone has access to the energy they need, but we are constantly reducing the quantity of energy necessary to meet these needs. Low income Ontarians have access to energy services at a price they can afford. Energy poverty is eliminated through complementary conservation and public policy.
- Local energy supply options are valued and effectively integrated into the grid, e.g. local bio digesters in rural communities reduce line losses and infrastructure costs.
- Financing tools are available to enable distributed energy, local ownership, conservation and a smart grid. Banks understand and embrace long term financing of energy projects.
- Funding is available for R&D to develop new generation and energy infrastructures that support distributed renewable, clean energy and conservation.