

**ONTARIO SUSTAINABLE ENERGY ASSOCIATION'S
COMMENTS ON PACIFIC ECONOMICS GROUP'S PAPER:**

***TOP DOWN ESTIMATION OF DSM PROGRAM IMPACTS
ON NATURAL GAS USAGE***

GENERAL COMMENTARY

OSEA is appreciative of the opportunity to provide its comments herein and is pleased that Pacific Economics Group shares the view that the current framework for natural gas DSM has become complex and cumbersome to calculate reductions in gas usage by way of DSM.

It appears that over the last fifteen years of gas DSM in Ontario, the original framework has become increasingly complicated with layered techniques rather than structural or holistic changes. Much has evolved on many fronts since gas DSM began in Ontario, not least of which is ability to manage large amounts of data, real time communications technologies, metering, and an explosion in the range of participants in the conservation market. Long gone is the day when a utility intervention with an incentive for a conservation measure directly resulted in discrete energy savings, subject to an assessment of the rate of natural conservation.

OSEA also complements the Pacific Economics Group for persevering on a difficult if not impossible task. Trying to use econometric analyses to find DSM savings within a model used for forecasting gas usage is tantamount to "searching for a needle in a haystack". A critical issue is the DSM is a curious combination of strategic marketing and economics – two disciplines that look at the market place and consumer behaviour through vastly different prisms. In consumer marketing, there is an old saying. "*I know that half of my advertising budget is wasted, but I'm not sure which half*". Debates about free rides and spillover effects continue despite the difficulty in truly knowing the difference.

In our view, a conservation culture requires the following elements:

- Empowered consumers making informed decisions with information on rating systems, building labelling, energy performance benchmarks and energy assessment tools;
- Consumers with access to regular and in some cases, real time feedback on their energy consumption and relative energy performance compared to similar customers;

- Reserving a portion of the net benefits for conservation research, development, education, training, codes and standard rating systems;
- Financing for programs that help communities, individuals and businesses to improve energy efficiency and increase conservation in order to reduce their energy bills;
- Strong elements for energy efficiency and renewable energy Building Codes and equipment standards with adequate resources to keep them up today and reflect international best practice;
- Educating students in all grades on environmental protection, energy efficiency and conservation as about good will for our environment;
- Consumers pay the real price of energy, which will result in a reduction in consumption so that energy costs represent a decreasing share of disposable income;
- Smart metering and billing infrastructure is in place for real-time pricing of energy (and water) and user pay principles are in effect through individual metering and sub metering;
- Protection of vulnerable energy consumers through direct install conservation programs, bill assistance through universal service plans and emergency assistance. These elements are necessary prerequisites to the ability of this customer class to benefit from sub metering; and
- Supporting greening programs (e.g. roofs, urban forestry etc.) through financing programs, incentives and building codes.

COMMENTS ON THE METHODOLOGY USED

Again, PEG must be complemented for trying three different approaches despite what must have been a frustrating process to use forecasting models which were never designed to or intended for estimating the impact of DSM programs¹.

¹ OSEA cautions that any apparent shortfalls in the ability of forecasting models to offer up confirmation of DSM program savings should not be viewed as shortfalls in either company's models. OSEA offers no opinion on these models with respect to their usefulness in doing what they were intended to do and accepts that this is not the intent of this process.

However, OSEA contends that any econometric methodology to develop a top down estimate of gas usage reduction resulting from DSM efforts, particularly at such a high level of aggregation and over such a short time span would also result in failure to find much correlation. Even the one example provided from California was not so much testing the impact of programs but the impact of the technology. Canada has an alternative for such testing in the residential sector.²

PEG identified some of the issues with the DSM spending data, not least of which was using monthly expenditure data which would be likely be more dependent on business processes than on savings in that same month. There are other factors which could not be accounted for in any of the three methodologies used. PEG has characterized the bulk of Ontario's gas DSM programs as composed of predominantly "measures", "participants" "incentives per measure" and estimated savings per "measure". This may be partially true in the residential sector, but it would be significantly different in the commercial, institutional and industrial sectors where the approach is "solutions" through a combination of key account approaches and leveraged relationships with other market players makes a big difference. One needs only to look at the cover page of Enbridge's website to see the differences³.

Furthermore, the absolute amount of spending may be one variable in achieving results. The more likely variable is how that money is put to use. What mix of information, incentives, advertising, technical assistance, and moral suasion is employed by the distributor? Furthermore, what are the broader market variables that might affect program take-up: increased media coverage of related issues, a recession, a housing boom or slowdown, government to replace infrastructure which programs do or do not coincide with? What are the other players in the market place doing?

² The Canadian Centre for Housing Technology (CCHT) is a \$1.6-million centre a partnership between the National Research Council of Canada (NRC), Canada Mortgage and Housing Corporation (CMHC) and Natural Resources Canada. The CCHT, which captured international attention long before its official opening, includes a pair of identical, single-family homes that are outfitted with high-tech sensors, monitors and automated systems to simulate occupancy. One of the homes remains untouched, to serve as a reference house or control. The other is available to manufacturers or builders in Canada or abroad, to enable them to evaluate the performance of innovative products and building techniques under realistic conditions. "The basic premise is that a house is a system," notes Luc Saint-Martin, newly named as the CCHT's business manager. "In a lab, you can optimize a single component, such as a new type of furnace. But the CCHT lets you evaluate an integrated system of heating, cooling, ventilation and hot water distribution in a real-world setting."

³<https://portal-plumprod.cgc.enbridge.com/portal/server.pt?space=CommunityPage&control=SetCommunity&cached=true&CommunityID=203&PageID=0>

COMMENTS ON THE FINDINGS OF THE REPORT

PEG Comment 1: “Overall, PEG’s research did not provide any “top down” evidence that can substitute for the bottom up methods currently used in Ontario.”⁴

OSEA Comment: OSEA concurs with these results.

PEG Comment 2: “More appropriate estimates of DSM savings could also be developed if demand models are estimated separately for participating and non-participating customers. A relatively small share of customers in a revenue class is likely to be participating in utility DSM programs in any given year. The behavioral characteristics of participating and non-participating customers may be so different that they effectively constitute different populations with, accordingly, different underlying demands for natural gas”⁵.

OSEA Comment: OSEA suggests that no evidence that more appropriate estimates of DSM would result from this approach.

PEG Comment 3: “However, developing detailed customer-specific data would likely entail significant costs, and it would take years for enough sample data to be available to facilitate statistical analysis. There is also no guarantee that this approach will be successful and yield statistically significant and robust results.”⁶

OSEA Comment: OSEA suggests that no further work on this approach is necessary.

As implied above, OSEA agrees that the current framework for natural gas DSM has resulted in, according to the Pacific Economics Group (PEG) Report, “a complex and cumbersome process” to calculate the reductions in gas usage due to DSM.

OSEA is of the opinion that the “measures”, “participants” “incentives per measure” and estimated savings per “measure” which is inherent in the current framework along with the other current rules with respect to free riders, attribution, etc. actually limits the scope of DSM and its effectiveness. This is not to say that customers have not benefited from the efforts over the last fifteen years, or that alternative approaches were available on day one in any event. However, given OSEA’s understanding of the broader sustainable energy marketplace and the

⁴ Pacific Economic Group: “Top Down” Estimation of DSM Program Impacts on Natural Gas Usage”, February 2010. Executive Summary

⁵ Ibid.

⁶ Ibid.

background work done by the Green Energy Act Alliance, OSEA does believe a stronger, more performance and holistic approach to helping customers meet their energy (service) needs is possible. This performance based approach can lead to conservation of energy as well as make more productive use of renewable energy and the interactions among fuel choices, water use and storage technologies.

Document #: 327950