



PUBLIC INTEREST ADVOCACY CENTRE
LE CENTRE POUR LA DEFENSE DE L'INTERET PUBLIC

ONE Nicholas Street, Suite 1204, Ottawa, Ontario, Canada K1N 7B7

Tel: (613) 562-4002. Fax: (613) 562-0007. e-mail: piac@piac.ca. <http://www.piac.ca>

Michael Buonaguro
Counsel for VECC
(416) 767-1666

March 13, 2009

VIA MAIL and E-MAIL

Ms. Kirsten Walli
Board Secretary
P.O. Box 2319
2300 Yonge St.
Toronto, ON
M4P 1E4

Dear Ms. Walli

**Re: Consultation on the Development of Demand Side Management
Guidelines for Natural Gas Distributors
Board File No.: EB-2008-0346**

Please find enclosed comments by the Vulnerable Energy Consumers Coalition (VECC) in the above-noted proceeding.

Thank you.

Yours truly,

Michael Buonaguro
Counsel for VECC
Encl.

**BOARD STAFF REPORT
MEASURES AND ASSUMPTIONS FOR
DEMAND SIDE MANAGEMENT (DSM) PLANNING
(Navigant)**

**Comments of the Vulnerable Energy Consumers Coalition
VECC**

Introduction

VECC represents vulnerable consumers who by virtue of disposable income, domicile, age or other factors are less able to access and pay for demand side management programs in order to reduce their growing utility bills and/or improve their home comfort and lifestyle.

Collectively these “vulnerable” customers are often referred to as “Low Income”, a term that certainly characterizes the largest group of vulnerable consumers. However, the demographic profile is broader and encompasses important groups such as senior citizens.

Overview Comments

VECC considers the Board Staff discussion paper and Guidelines as addressing the *framework* for Gas Utility DSM in Ontario beyond the period covered by the current three year DSM plans of Union Gas and Enbridge Gas Distribution. As such, the Measures and Assumptions are a critical part of the planning, execution and evaluation of Gas DSM Programs for the forward period.

On March 8, 2009 the Board issued its Report and Proposed Code Amendments resulting from the EB-2008-0150 Stakeholder Consultation on Low Income Energy Issues.

The issuance of this report gives new impetus to development and implementation to CDM/DSM programs targeted to Low Income Families and Seniors.

The Report of January 26, 2009 notes at page 9:

As part of a separate policy initiative (EB-2008-0150), the Board hosted a stakeholder conference from September 22 to 25, 2008. The purpose of the conference was to provide participants with the opportunity to present information to assist the Board in gaining a better understanding of the issues associated with low income consumers, and to assess the need for and nature of policies or measures to address those issues. Among the issues discussed, was the role of conservation and demand management initiatives targeted to low income customers.

Some of the common themes raised in this area include:

- Need for conservation and demand management programs to be equitably accessible province-wide and the important role of education in assisting low income consumers to reduce consumption
- Provision for financial incentives for some of the “deep” measures that have high capital costs and are prohibitive for low income consumers to invest in.
- Potential revisions to TRC screening to account for the high capital costs of the low income consumer proposals that could result in a negative total resource cost for most programs.
- How “low income” should be defined, and once defined, how to identify these consumers, in a manner consistent with privacy legislation.

The Guidelines provide for the development of expanded low-income programs with separate DSM budgets, metrics, targets and shareholder financial incentive payments. The low-income programs and the associated metrics and targets will be the subject of a rate proceeding allowing for stakeholder review.

With respect to Board Staff, the current Guidelines section *3.7 Low-income Customer Program Targets (Changes Proposed)* are lacking in definition and do not reflect Section 5.3 of the Board's Decision and proposed Code Amendments. This makes for too much flexibility in interpretation and will lead to delays and inconsistent application of CDM/DSM targets and program design.

The Board Report indicates that

The Board intends to revisit its CDM and DSM policies to ensure that they reflect the expectation that distributors target a portion of their programs to low-income energy consumers. With respect to natural gas DSM, the Board initiated a consultation process (EB-2008-0346) in October 2008 to develop guidelines to be used by natural gas distributors in developing their next generation DSM plans. Under the proposed DSM Guidelines, natural gas distributors would be expected to propose explicit metrics and corresponding targets for the DSM programs targeted at low-income energy consumers. The Board intends to review its electricity CDM policies in the near term to ensure that similar provisions are included in relation to CDM programs for low-income electricity consumers. [Board Report EB-2008-0150 page 14]

VECC submits that it is important that the *framework issues* (including those cited above) related to targeted CDM/DSM programs for Low Income Families and Seniors in Low Rise and Multifamily buildings be addressed

in these DSM Guidelines prior to their issuance. To this end, a second round of stakeholder meetings with Board Staff is urgently required.

Comments on Navigant Report

VEIC was collectively retained by the Green Energy Coalition (GEC), BOMA/LPMA, VECC, CCC, CME, IGUA, LIEN, and Pollution Probe, to review and draft comments on the gas DSM measure assumptions developed by Navigant Consulting for the Ontario Energy Board (OEB). VECC supports those detailed comments *with the specific exceptions noted below.*

The Navigant Report, Appendix B lists 78 Measures and the corresponding Input Assumptions with further detail provided in the Verification Sheets in Appendix C.

VECC has an interest in all residential DSM measures 1-35 and also space heating measures applicable to Multi-family residential buildings and Social Housing 40-60 and water heating in multifamily housing units 71-78.

However, in order to provide focus to our Comments we have concentrated on the Low Income program measures 26-35 and the Multifamily water heating 71-78.

Harmonization with OPA Measures and Assumptions for CDM Mass Market Prescriptive Measures should be an important objective particularly for Low Income targeted measures and VECC's comments below will illustrate the fact that this has not yet happened.

Water Conservation/Water heating #15-21, 28-34 and 72-78

Low Income water heating –related measures 28-34 are common to the gas utility DSM programs and OPA funded CDM programs. The assumptions about the physical amount of water savings (litres) and installed cost of a particular showerhead or faucet aerator should be the same, regardless of whether the water is heated by an electric or gas water heating appliance.

For *faucet aerators* comparison with OPA (2009 Measures and assumptions pages 209-210) shows the water savings to be the same, but the installed costs to be \$2.00 (Navigant) and \$4.65 OPA. It is clear Navigant has used the purchase price not the installed cost (units are installed by contractors for LI programs)

For 1.25 US gpm *low flow showerhead* water savings are 8817 litres Navigant and 12,400 litres OPA. Navigant has used a purchase/installed price of \$13.00 and OPA an installed cost of \$10.00.

VEIC notes that

Navigant's savings estimate assumes average daily **faucet use** of 14 gallons. That is high relative to most commonly quoted value of 10.9 (including the U.S. Environmental Protection Agency's "water sense" documents). Adopting this lower water usage assumption will further lower savings by approximately 20%.

Navigant estimates an incremental cost of \$6 for a **low flow showerhead**. That is for the hardware only. The vehicle through which measure is delivered sometimes involve installation costs too which are not addressed here. That should be made explicit.

Navigant assumes an average measure life of 10 years. That seems reasonable for the useful life of the physical hardware. However, if the program replaces an existing model that is on average half way through its life (i.e. it is an early retirement), then the baseline efficiency against which savings are calculated would change halfway through the measure life. That change would be a function of the likely efficiency of a new showerhead the customer would buy. Thus, we suggest an average measure life of only 5 years is more appropriate for the savings in the context of the LDCs program designs.

Further, the related energy savings (GJ) should be consistent while taking into account the respective efficiencies of the gas and electric water heating appliances.

Air Sealing, Insulation and Weatherization #1-3 and 26

Once again the differences between the OPA and the Gas DSM for comparable measures is material. Just on the issue of cost the inconsistencies are clear.

OPA breaks down the measures into 3 - Comprehensive Draft Proofing (\$789), Basement Wall (\$1200) and Attic (\$967) Insulation.

The Navigant Report for Gas DSM assumes:

Air sealing (\$1000) Basement Wall (\$2.00/ft²) and Attic (\$0.70/ft²) Insulation; For Low Income Programs the Navigant Gas DSM assumes a bundled set of measures with an installed cost of \$2284.

The VEIC Review questions whether these measures can/should be considered prescriptive versus custom:

If prescriptive savings are to be developed for individual measures, it is critical that the average values developed represent either the average of what is likely to occur, or that the program design includes specific guidelines to ensure installations are limited to those that will produce

the averages in the assumptions. In these cases no program or program design exists. A proper process for developing these values would be to develop a program design and in an iterative manner to develop the screening assumptions. Below we review the individual measures and documentation provided for whether the provided inputs are likely to be reasonable estimates.

VECC agrees that Air Sealing and Weatherization cannot be considered as a prescriptive measure in the absence of one or more programs which specify the specific measures included and the method and costs of installation.

In our December 12, 2008 submission in this proceeding, we noted as above that OPA breaks down Low Income Weatherization into 3 measures -Comprehensive Draftproofing (caulking/weatherstripping etc) and Insulation (Attic and Basement).

This has been done for Residential measures 1-3, but not for Low Income measure 26.

VECC believes that the OPA approach of separating Air Sealing from Insulation is correct and also agrees with VEIC that program design is critical to the appropriate measure input assumptions.

VEIC Notes that

Navigant has appropriately proposed quasi-prescriptive savings and cost assumptions for a variety of measures (e.g. several types of commercial heating equipment). However, they have not done so for others (e.g. air sealing). The Board should adopt a policy that prohibits fully prescriptive assumptions for measures with significant installation variability.

However VECC disagrees that air sealing and Insulation should be dealt with as custom projects (or even quasi-custom) . There is a large body of experience from the ecoEnergy program that supports the average savings approach provided the program design conforms to that data.

The consequences, particularly for Low Income customers, of classifying weatherization (air sealing and insulation) as other than prescriptive are that the accompanying measurement/validation for each project will be too onerous and costly and delay implementation. The approach should be that a program design incorporating one or more “bundles” of measures should be piloted and the average savings applied to prescriptive program(s).

VECC believes that weatherization (Air Sealing and Insulation) are critical programs/measures for low income families living in low rise housing. The

programs should be cost effective, and an overall payback of 3.9 years (regardless of TRC results) appears to be the case.

Equally the replacement of standard and mid- efficiency furnaces with code/standard high efficiency units is a cost effective measure that should be added to the Low Income program DSM portfolio.

Pipe Insulation # 22, 35

Navigant has used the purchase price (\$2.00) not the installed cost. For Low income programs the wrap is installed by utility contractors. OPA puts the price at \$6.00.

VEIC notes similar concerns about this measure:

We have two concerns about the pipe wrap measure characterization. They are as follows:

As with faucet aerators and showerheads, savings were calculated using an average water heater annual Energy Factor of 0.57 rather than a typical recovery efficiency of 0.78. See above for more detailed discussion of this error.

The incremental cost shown is for the insulation itself. It does not include any installation cost. That is probably why the comparables cited all show much higher costs. This distinction should be made clear so that if the programs or customers (through a contractor they hire) incur installation costs, such additional costs are captured in TRC net benefits calculations.

Programmable Thermostat #13 and 26 (Residential and Low Income)

OPA does not include PTs in its low income measures list, however the differences between the gas DSM Navigant assumptions and OPA for standard residential application are still material. Navigant uses the same assumptions for gas savings (m3) and electricity savings (kwh) as OPA (2009 Measures and Assumptions pages 78-81), since both rely on the same SeeLine Report.

However, as noted by VEIC there are major issues with these assumptions

Navigant's estimate of cooling savings appears to implicitly presume that (1) every home does a 3 degree setback during the day; (2) no home would have practiced manual setback during the day; and (3) every home has a central A/C. All three of these assumptions can lead to significant overstating of cooling savings.

Navigant's estimate of cooling savings assumes that the average baseline SEER is 8.7 – something that hasn't been legal to sell for nearly 20 years. NRCAN data for Ontario suggest that the real average is probably more like 10.7 in 2010. This assumption alone leads to a nearly 20% overstating of cooling savings.

Navigant appears to be assuming furnace fan savings of 44 kWh. The baseline assumption for furnace electric use appears to be over 2,300 kWh – more than a factor of two more than any study of such use would suggest.

On the Issue of *cost*, the Navigant Report suggests an *Incremental Cost* of \$25 for both standard residential and Low Income Application. OPA lists \$140.

VECC suggests that for a low Income measure the total installed cost of a programmable thermostat should be used.

Use of Board-Approved Measures and Input assumptions

The Board has set out the requirement for Electricity Distributors that the measures and input assumptions should be the “best available” at the time of the audit of the CDM program for LRAM/SSM claims. This principle should apply equally to the gas utility DSM programs

How to achieve this is an issue.

Will the Board seek third party advice annually to approve revisions arising from annual DSM reports and audit processes? Or does the proposed policy to require final annual results claims based only on the ‘best available information’ obviate the need for such a list of ‘pre-approved’ assumptions?

VEIC notes that

One option for managing the new information and amendments could borrow from the process used by the OPA. Its assumptions and measures list is posted on its web site, and includes a process for comments and submissions on them. An open and transparent process that could accept comments, evaluation studies and other new information would help keep relevant information in one place and accessible by all stakeholders, whatever the process for actual review and adoption of changes.

VECC agrees that the OPA approach has merit, however we note that the OPA has a significant Evaluation and Audit function that has the necessary resources among other things to maintain its list of measures and assumptions current.

The Board may consider the resource requirements too large and therefore the use of a consultant to provide annual reviews and also to examine proposed changes or new measures is probably the most realistic approach.

Ratepayer Perspective on Measures and Assumptions

The use of Best Available Measures and Input assumptions is critical to ratepayers, including in particular VECC's constituency of low income renters and seniors.

These customers are the least able to pay the incremental cost of CDM and DSM programs on their utility bills and still are at a disadvantage in being to access the programs because of the acknowledged barriers to their participation.

Low income home owners and renters and senior citizens should be assured that the OEB will protect them from not paying too much for CDM/DSM program delivery and for the savings generated. To this end, VECC submits that the Board must address the issue of a common set of measures and input assumptions for both OPA and Gas Utility CDM/DSM prescriptive mass market measures such as water conservation/heating, space heating and building envelope improvements.

Finally as noted above, VECC submits that It is important that the major *framework issues* related to targeted CDM/DSM programs for Low Income Families and Seniors in Low Rise and Multifamily buildings be definitively addressed in these DSM Guidelines prior to their issuance. The proposed Code Amendments and the CDM/DSM Guidelines should be consistent in their interpretation and application.