CANADIAN
Energy Efficiency Alliance

Demand Side Management Framework for Ontario

February 9th, 2004

Submission to the Ontario Energy Board
With respect to the Minister's Directive on Demand-Side Management and Demand Response
(RP-2003-0144)

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Canadian Energy Efficiency Alliance Policy Paper

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1 Introduction

1.1 Background

On June 18, 2003 the Minister of Energy issued a directive to the Ontario Energy Board (OEB) to undertake a stakeholder consultation process on demand side management (DSM) and demand response (DR) in Ontario. The purpose of the consultation was to identify and review options for delivery of DSM and DR in the Ontario electricity market. In August, 2003, the OEB expanded the scope of the consultation process to include the role of gas distribution companies in DSM.

The Canadian Energy Efficiency Alliance (CEEA) was pleased to participate in the OEB's Stakeholder Consultation Process from October 2003 to December 2003 as a member of the Advisory Group and to provide input on the development of the Advisory Group's *Report of the Advisory Group on Demand-Side Management and Demand Response in Ontario in Response to the Minister's Directive to the Ontario Energy Board*. CEEA would like to thank the OEB for the opportunity to participate as a member of the Advisory Group.

The focus of this OEB Advisory Group consultation was on the development and assessment of governance models for DSM in Ontario. In particular, nearly all of the discussion focused on models for the electricity sector.

The OEB released its Staff Report to the OEB, *Demand-Side Management and Demand Response in the Ontario Energy Sectors* (Staff Report), on January 23, 2004, providing stakeholders an opportunity to provide comment by February 9, 2004.

As part of CEEA's early contribution to the OEB discussion on governance models, CEEA submitted a discussion paper entitled "Options for Demand Side Management and Demand Response in Ontario" in early November 2003. This paper was designed as a complement to the Board Staff Background Paper and as a working document outlining the options for establishing a consistent and symmetrical policy and regulatory framework for DSM and DR.

This CEEA policy paper, "Demand Side Management Framework for Ontario" is CEEA's second submission to this stakeholder consultation process. This policy paper is based on what CEEA has learned as a participant on the OEB's Advisory Group, on discussions among CEEA's Board members, and on the OEB Staff Report.

Throughout its participation on the Advisory Group, CEEA adopted a neutral position and aimed to be as helpful to the Board as possible in understanding the implications of the models under discussion. Now that CEEA has had the benefit of participating in the consultation process and of reviewing the OEB Staff Report, CEEA has developed a position on some of the issues under discussion. This CEEA policy paper outlines those positions as well as describes a number

of components that should be a part of any DSM framework in Ontario regardless of the governance model that is adopted.

CEEA believes that the OEB consultation process on DSM and DR was an important first step in developing a sustainable DSM and DR framework for Ontario. CEEA wishes to congratulate Board Staff and the participants on the Advisory Group for the amazing amount of work that was accomplished under severe time constraints in preparing the Advisory Group report. However, CEEA is disappointed with the way in which Board Staff has presented some of its recommendations in its Board Staff Report. It does not reflect a balanced approach. This raises doubts about the overall quality of the report. .

1.2 Purpose of this paper

The purpose of this policy paper is to:

- Describe components that should be included in Ontario's DSM framework regardless of the governance model adopted; and
- Present CEEA's positions on certain aspects of governance regarding DSM.

Chapter 2 describes the components of the DSM framework that should be included regardless of the governance model. Chapter 3 presents CEEA's positions on certain aspects of governance regarding DSM. Chapter 4 summarizes the conclusions we have drawn.

1.3 Recent Ontario government announcements related to DSM

On November 25, 2003, the Ontario government introduced new legislation to "ensure a fair and predictable approach to electricity pricing and send a clear and powerful conservation message to Ontarians".[1] The proposed legislation, entitled the *Ontario Energy Board Amendment Act, 2003*, puts in place an interim pricing structure until the OEB implements a new pricing mechanism no later than May 1, 2005. The interim pricing structure raises the existing price cap for electricity. As well, as of March 1, 2005, local electricity distribution companies (LDCs) will be permitted to achieve their full commercial return conditional upon the LDCs reinvesting the equivalent of one year of the monies in conservation and demand management initiatives.[2]

CEEA supports the interim pricing structure as it brings electricity prices one step closer to the true price of electricity. This will provide improved price signals in the market place and, as a consequence, should lead to higher levels of energy

[1] "Ontario Government Takes Responsible Action on Electricity Pricing", News Release. 25 November, 2003.
[2] Beginning March 1, 2004 LDCs would be allowed to recoup some of the cost that the previous government had put on hold, and these costs would be spread over a four year period. Backgrounder to News Release. "Ontario Government Takes Responsible Action on Electricity Pricing". 25 November, 2003.

conservation and efficiency. As well, CEEA supports the government's commitment to DSM, providing for a potential initial DSM budget for the local distribution electric utilities of $250M.[3] These are important first steps toward a sustainable, long term and aggressive DSM program in Ontario.

On January 14, 2004 the Minister of Energy released the Electricity Conservation & Supply Task Force report. With its release, the Minister announced that all reforms of the electricity sector would be aimed at creating: a conservation culture in Ontario, reliability, diversity and affordability, effective consumer protection, a strong investment climate and cleaner air.[4] CEEA strongly supports this approach to electricity sector reform and believes that all of these objectives should become the drivers for electricity DSM and DR in Ontario. CEEA is of the view that these objectives are appropriate for all DSM in Ontario.

On January 16th, 2004 the Minister of Energy announced the formation of a Conservation Action Team that will promote the government's conservation initiatives and work to remove barriers to conservation in existing government policies and programs to incorporate conservation principles. The Action Team will engage stakeholders across the province. CEEA is pleased with the creation and mandate of this Action Team and would welcome the opportunity to participate in the consultation.

[3] Spears, John. "Hydro bills jump by $5-$9**",** *Toronto Star*, Wednesday, November 26, 2003.
[4] News Release. Queen's Park. :Electricity Conservation and Supply Task Force Report Confirms Need for New Direction in Ontario Electricity Sector. January 14, 2004.

2 Common ground – Standard components for Ontario's DSM

There are overriding objectives that should set the direction for DSM in Ontario. In his announcement on January 14, 2004, Minister Duncan provided a set of objectives that should be the basis for all reforms of the electricity sector. It is CEEA's view that these objectives apply equally well to the natural gas sector and should become the set of objectives that guides all of DSM in Ontario.

> "All reforms will be aimed at protecting the interests of Ontarians and achieving the following objectives:
>
> 1. **Creating a "conservation culture" in Ontario** : Making conservation, demand management and demand response strategies a cornerstone of Ontario's long-term energy future;
> 2. **Reliability, diversity and affordability**: A reliable, sustainable and diverse supply of competitively priced power [energy];
> 3. **Effective consumer protection** : Consumers, especially residential and small business consumers, will be protected from excessive price volatility;
> 4. **A stronger investment climate** : The government will encourage new investment in conservation, generation and transmission;
> 5. **Cleaner air** : The government will contribute to the clean up of our air by eliminating coal fired generation and replacing it with other, cleaner sources of energy. "[5]

Flowing from these objectives, there will be a common set of elements that should be included in every framework for governance of DSM. These common elements will help to ensure that the objectives are met and that the framework helps to strike the appropriate balance between regulated and competitive actions to bring about aggressive levels of DSM in Ontario.

Below is a list of components that CEEA has identified that should be included in any governance model for DSM. These components apply to both natural gas and electric DSM. They fall into two categories: common components that relate to specific market barriers to efficient energy use, and common components that are designed to ensure an effective and efficient delivery of programs to address these market barriers.

[5] News Release. Queen's Park. *Electricity Conservation and Supply Task Force Report Confirms Need for New Direction in Ontario's Electricity Sector*. January 14, 2004.

Common components related to market barriers are:

- Energy prices reflect true costs
- There is no undue burden placed on disadvantaged groups as a result of energy prices
- Energy efficiency standards continually improve over time
- Incentives are available to encourage the development and introduction of new, more efficient technologies
- There are training or other programs to ensure energy professionals and trades people are skilled at using the latest technologies and techniques
- There are coordinated and consistent public education programs on energy conservation and energy efficiency across Ontario
- Natural gas and electric utilities and provincial ministries/agencies are required to implement cost-effective energy efficiency and energy conservation programs in their own operations and report on their progress.

Common components related to efficient and effective delivery of DSM programs are:

- There is a reliable, long term source of funding for aggressive DSM
- There are DSM programs that target each of the market segments
- There is emphasis on local delivery of DSM programs
- There are incentives for delivery agents to carry out successful, aggressive DSM programs
- There are clear rules for DSM
- There is independent, third party verification of DSM energy savings

Each of these components is discussed briefly below.

2.1 Components to address market barriers to efficient energy use

Energy prices reflect true costs

A well functioning market where prices reflect costs will provide appropriate signals to all market participants to allocate resources in an efficient manner. A price signal that reflects the true cost of energy will provide more accurate drivers to use energy wisely in the production, transmission, distribution and end use of energy. This will help to maximize the amount of energy efficiency and conservation that is achieved in a competitive market without additional assistance to overcome remaining market barriers.

While the price of natural gas and other hydrocarbon fuels are largely set outside of Ontario, the price of electricity is set domestically, and there remains a price cap on the price of electricity. The efforts of the government to raise the electricity

price cap, to develop an interim pricing structure and to set a date for the removal of the cap are steps in the right direction.

While moving towards energy prices that reflect true costs, without subsidy and with internalized environmental and social costs is important, there are other market barriers which must also be addressed. DSM programs are designed to address these.

There is no undue burden on disadvantaged groups

Even with energy priced at its true cost, not all groups will have the ability to respond to these market signals adequately. In particular, low income groups do not have the resources to respond to higher prices. For example, some energy saving measures require up-front capital to minimize life-time costs, and low income groups may not have access to capital, or to credit.

Low income consumers represent 11.7% of Ontario residents.[6] Statistics Canada data show that in 2001, the lowest earning quintile of Ontario households spent nearly five times the relative amount of their income on water, fuel and electricity than did the highest income quintile.[7] Low income households in Ontario are likely paying more per unit of energy (since electric heating is more expensive than other fuels and there is a far greater proportion of low income households that have electric heating) and may be using more energy per household (due to older appliances) than other households.[8] As a result, low income households represent a significant opportunity for energy savings.

In the US, this problem has been addressed through most states requiring that the energy and natural gas utilities deliver DSM programs specifically for low income households. Ontario should also have DSM programs specifically designed for low income households to capitalize on the savings opportunity and provide the necessary assistance to this group.[9]

Energy efficiency standards continually improve over time

Two ways have been identified to continually improve energy efficiency standards over time. The first is to require the upgrading of the Ontario Building Code on a periodic basis to reflect new energy technologies and services available.

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[6] Advocacy Centre for Tenants Ontario. Rental Housing in Ontario – quick facts. November 4, 2002.
[7] IndEco Strategic Consulting Inc. *DSM for Low Income Consumers in Ontario*. 2003.
[8] Ibid.
[9] Ontario's low income programs should address the split-incentive problem between owners/landlords and renters, with builders/landlords being given incentives, or barriers removed, to provide an energy efficient building envelope and energy saving appliances.

The second is to introduce market transformation initiatives[10] to raise the lowest energy efficiency level of a particular technology outside of the regulatory framework. As part of the OEB mandate to promote energy efficiency and conservation, the OEB could take a lead role in facilitating the development and implementation of appropriate market transformation initiatives. The OEB and the government would provide incentives, as needed, for market participants to bring about market transformations.

Incentives to raise ceiling on the highest achievable efficiency levels

Incentives need to be available to facilitate technology and information transfer. In addition, incentives should be available to encourage the early adoption of new more efficient and cost-effective technologies.

Training to ensure professionals and trades people can make use of energy saving techniques and technologies

It is essential to have properly trained professionals and trades people in energy saving techniques and technologies. In particular, it is important for architects, engineers, developers, building owners and managers, and contractors to understand the latest developments, to be encouraged to implement them and to implement them in an effective manner.

Organizations such as community colleges, universities, professional and trade associations and groups such as Sustainable Buildings Canada can play an important role in training and retraining. The OEB, in its role as promoter of energy efficiency and energy conservation, can take the lead role in facilitating the development of ongoing skills upgrading programs through the coordination of efforts among relevant ministries and agencies, professionals and trades people, associations, and other stakeholders.

Coordinated and consistent public education programs across Ontario

It is important to have broad-based, multi-faceted public education programs to help consumers make informed choices about their energy usage. To achieve economies of scale and to ensure consistency in the content and quality of the programs, it is necessary to have a coordinated approach to design and delivery across the province. As well, programs should be multi-year campaigns to ensure ongoing learning in step with changes in technologies and available services. The success of the programs should be tracked to make improvements over time.

[10] For example, Ontario's natural gas utilities worked together to raise the minimum level of energy efficiency of water heaters to be installed in Ontario.

Energy utilities and provincial ministries/agencies must have effective in-house energy efficiency and energy conservation initiatives

Utilities and government have an important role to play as models of wise energy use. Natural gas and electric utilities as well as provincial ministries/agencies should be required to implement energy efficiency and energy conservation programs in their own operations. In order to demonstrate that the programs are effective, the organizations should be required to report annually on progress. Oversight for the utilities' performance could rest with the OEB, while oversight of provincial ministry/agency performance could rest with the Ministry of Energy.

2.2 Components to ensure effective and efficient delivery of DSM programs

A reliable, long term funding source for aggressive DSM

It is important to have a reliable, long term funding source to achieve aggressive DSM. This will enable a more strategic approach to DSM program development and help to encourage programs that go beyond the capture of shorter term efficiency opportunities.

There are many options to achieve reliability and stability. For example, the provincial government could set the overall DSM budget (e.g. the electricity DSM budget could be set for a five year period, with annual budgets each year based on the five year allocation) [11]. Or the DSM budget could be determined on an individual DSM program or portfolio basis[12] based on the experience of the entity accountable for DSM and market conditions. Alternatively, there could be a hybrid approach where the government sets the provincial electricity DSM budget, while the DSM budget for each of the natural gas utilities continues to be approved by the OEB. Other options are possible and should be explored.

DSM programs target each of the market segments

It is important to have DSM programs that target each of the market segments (e.g. industrial, residential, and commercial). Each of the market segments has different needs, requiring programs that are designed to address them. In addition, programs that are specifically targeted to each of the segments should enhance DSM participation rates and thereby increase energy savings achieved.

[11] An electricity DSM budget was proposed by the Minister of Energy in the November 25, 2003 government announcements for the first year of DSM as part of the interim pricing structure.
[12] The DSM budgets for the natural gas utilities are approved annually by the OEB based on the past experience of the utility and its particular market conditions. The budget levels have tended to stabilize over the past few years as the DSM portfolios of the utilities have matured.

Emphasis on local delivery of DSM programs

In order to achieve aggressive DSM, it is necessary to provide DSM programs that are designed to suit local geography and market conditions. Such an approach should provide more creative program designs and delivery options. This will help to ensure that the programs are responsive to local program participants and as a result should achieve higher participation rates and energy savings. A large number of delivery agents will also stimulate competition and broader innovation in the marketplace. As well, reliance on local program delivery utilizes and develops the local skills base (e.g. contractors, retailers, community groups) and contributes to local economic development.

In some cases, for example, because of the total number and dispersion of potential participants over a large area or because of economies of scale, it may be useful to aggregate the coordination of programs.

Incentives for delivery agents to carry out successful, aggressive DSM programs

Incentives need to be available to the accountable entity for DSM as well as to the delivery agents of their DSM programs to achieve aggressive DSM. Delivery agents need to be adequately encouraged to achieve high levels of energy savings, to involve as many participants as reasonable in the programs, and to spend their resources wisely. Contracts with delivery agents will need to be carefully crafted to ensure that the savings that are specified for delivery are actually achieved. To do so, contracts between the entity accountable and the delivery agent will need to strike the appropriate balance between penalties and rewards to ensure cost-effective delivery of the agreed to level of savings.

There are clear rules for DSM

To expedite and simplify the design and delivery of DSM programs across Ontario, the government should develop clear rules for the design, delivery, monitoring and evaluation of DSM programs and results. This role is best suited to a central coordination function. The OEB performs this function for the natural gas utilities' DSM framework and this OEB function could be extended to the electricity sector.

Independent, third party verification of DSM energy savings

In order to maintain the credibility of the DSM programs that are delivered, it is important that the savings achieved be verified on a regular basis by third parties independent of the delivery agents and those accountable for the DSM programs. Regular scrutiny, with the results of the audits used in a timely manner for corrective action, will ensure that the savings achieved are verified appropriately and will also help delivery agents to learn more effectively from past experience.

This approach to the audit process will help to raise the ceiling on savings achieved.

3 Recommendations on governance for DSM

There are two key issues that CEEA will address in this section regarding governance for DSM in Ontario. The first is what type of governance model should apply to the natural gas utilities. The second is what type of governance model should apply to the electricity utilities. CEEA's position on each of these issues is discussed below.

3.1 Governance for natural gas utilities and for electric utilities can be different

In many jurisdictions the governance model that is applied to the natural gas sector is different than that applied to the electricity sector. Such a flexible approach enables the jurisdiction to be more effective in addressing the needs of a sector and its companies. The governance models adopted in Ontario should take a similar flexible approach. This approach should encourage more aggressive levels of DSM.

In the Board Staff Report, Board Staff recommends that "Implementation of DSM should be the same in gas as in electricity. Otherwise gas distributors could structure programs to their competitive advantage.[13] CEEA does not agree with this conclusion as the need for symmetry between the sectors is not supported by the governance models in other jurisdictions. Several jurisdictions design governance models to cater to the needs of the specific sector and even to individual companies within a sector. Further, CEEA does not agree with Board's Staff's recommendation to prescribe symmetry between the two sectors because there is no evidence in Ontario that the differences in regulatory treatment between gas and electricity have given one of the sectors a competitive advantage.

If the governance models for natural gas and electricity are to be the same or similar, then there should be other reasons than what Board Staff has cited to drive this decision. The Board Staff Report does not acknowledge the industry investment in DSM or the achievements of the DSM programs of Enbridge Gas Distribution and Union Gas in reducing gas volumes and providing savings on their customers' energy bills. Because of this expertise and experience, if we were to accept the need for symmetry, then it would seem more appropriate to apply the natural gas DSM Utility Model to the electric LDCs, rather than to create an entirely new system for both sectors.

[13] Board Staff Report. p.17.

3.2 Natural gas DSM governance model should be maintained

The existing governance model for natural gas DSM should be maintained. It is a governance model that requires the natural gas utilities to be accountable for their DSM portfolios to the OEB.[14] However, the utilities can contract out any and all aspects of program design, delivery, evaluation and auditing as needed.

The natural gas governance model has worked very well.[15] Both Enbridge Gas Distribution and Union Gas have achieved significant gas savings and have provided considerable net benefits in the form of energy bill reductions to their customers. The OEB should continue to encourage the natural gas utilities to make improvements to the design and delivery of their DSM programs to achieve higher levels of cost-effective energy savings.

CEEA is surprised by the somewhat casual manner in which the Board Staff Report rejects the natural gas DSM governance model in favour of a central agency model. Only one reason is cited for this conclusion and, as discussed earlier, this reason is not supported by the situation in Ontario or in other jurisdictions.

The OEB should exercise due caution before considering the phase-out of the natural gas DSM framework. Such a major decision in Ontario should only be made after the OEB has described in detail its major concerns with the framework and every effort has been extended by the OEB, the natural gas utilities and stakeholders to make the existing framework work better. If after a period of three years once the OEB has embarked on this pursuit, the Board is considering the phase-out of the gas infrastructure, then it should do so based on a formal Board proceeding (either written or oral hearing), where a more thorough and rigorous testing of evidence can take place among the parties.

3.3 Need for centralized integrated resource planning for the electricity sector

There is a need for a central coordination function for electricity system planning. This function was previously carried out by Ontario Hydro, but got lost with market restructuring. The planning would be based on a least-cost (from a full cost-accounting point of view - including environmental externalities) integrated resource planning (IRP) approach ensuring that decisions regarding the need for

[14] Union Gas and Enbridge Gas Distribution are required by the OEB to prepare annual DSM plans for Board approval.

[15] Union Gas expects that its delivery of natural gas to its customers in 2003 will be reduced by more than 200 million m^3 as a result of its DSM efforts since 1997 when compared to what consumption would have been without DSM. Since introducing DSM programs in 1995, Enbridge Gas Distribution has saved its customers more than 650 million dollars on their energy bills.

new supply, transmission, large scale DSM or DR are made in a coordinated, consistent least-cost basis. The coordination function would include establishing the electricity system planning needs at the provincial and regional levels, and contracting out for the services required to meet these needs. Collaborative mechanisms among the LDCs to develop solutions may be appropriate.

At the local level, responsibility for local IRP could be delegated to the LDCs. The central coordinating function would essentially serve as a default option for local IRP where the LDC is not able to fulfill the IRP responsibility.

Certain market rules and codes may have to be changed to permit the LDCs to assume this function, for example, to allow the LDC to own or contract out for distributed generation resources to solve local constraint problems on its distribution system. The LDCs would also need to be able to obtain the financial benefits from savings in transmission costs due to reductions in transmission of electricity it achieved over its distribution system as a result of its DSM, DR, distributed generation or distribution solutions.

A new central agency need not be created to carry out this system planning function. For, example the system planning function could be housed in the Ministry of Energy and this is consistent with the Ministry mandate.

3.4 Electricity DSM should have a utility governance model

Electricity DSM in Ontario should have a utility (LDC) governance model.[16] This recommendation was also made by the Electricity Conservation & Supply Task Force in its report to the Minister in January 2004.[17] The utility model should contain the elements of the natural gas governance model that are appropriate and adopt different elements as required, to suit the market conditions and the unique characteristics of the utilities.

In a utility model, the electric distribution and transmission utilities (i.e."wires companies") are required to carry out DSM[18] and are accountable to the OEB for DSM portfolio management, program design, program delivery, and monitoring & evaluation. Wires companies are permitted to contract out any or all aspects of their DSM program (portfolio management, program design, delivery, evaluation), and are not negatively financially impacted from DSM activities (i.e. they are 'kept whole'). They are also encouraged to carry out aggressive DSM based on incentives.

[16] CEEA endorses a utility model, rather than a central agency DSM governance model.
[17] Electricity Conservation & Supply Task Force, Tough Choices*: Addressing Ontario's Power Needs Final Report to the Minister.* January 2004. pp. 40-41.
[18] In the US. it is typical for jurisdictions that mandate natural gas utilities to be accountable for DSM to require the wires companies to be accountable for DSM as well.

The wires companies are expected to encourage intervenors to provide input on the company's DSM portfolio. However, as is the case with the natural gas utilities, the wires companies are to be responsible for making decisions on their portfolios consistent with the DSM rules set by the OEB and are to be accountable to the OEB for the decisions made. Such a rules-based approach will streamline the consultation process for the individual wires companies.

CEEA was not encouraged by the lack of balance in the analysis displayed in the Board Staff Report regarding the choice of DSM governance model for the electric utilities. CEEA expected to see a more even-handed presentation of the pros and cons of each of the option, as was done in the Advisory Group report, and then a supported explanation of the reasons for the choice made. Instead, the Board Staff report describes the pros of the central agency model in detail, but does not identify any cons: the Report describes the pros of the utility model in one paragraph, devoting the remainder of the section on the utility model to the cons. This imbalance casts doubt on the quality of the analysis in the Board Staff Report.

3.5 Specific elements of the electric utility governance model

Specifically, CEEA endorses the following key elements of a utility governance model:[19]

Accountability Electric distribution and transmission utilities (i.e. "wires companies") are accountable to the OEB for DSM portfolio management, program design, program delivery, and monitoring & evaluation.

Contracting out Wires companies can contract out any or all aspects of their DSM programs (portfolio management, program design, delivery, evaluation).

DSM budget The DSM budget is based on a per kilowatt-hour charge to the end user, collected and administered by the wires companies and integrated into their revenue requirement. There is no energy savings target.

LRAM Wires companies are not negatively financially impacted from DSM activities i.e. they are 'kept whole'. There is a standard lost revenue adjustment mechanism (LRAM) and process for true-up that applies to all companies that is set by the OEB. Companies have the option to go to the OEB to request their own unique approach. Utilities are expected to build anticipated energy savings from their DSM

[19] Most of these elements are consistent with those contained in the description of the Ontario Energy Board/Wires Companies DSM Framework described in the *Report of the Advisory Group on Demand-Side Management and Demand Response in Ontario*, December 12, 2003.

programs into their revenue forecasts.

DSMVA Wires companies are able to adjust spending according to program uptake. There is a standard demand side management variance account (DSMVA) and process for true-up that applies to all companies that is set by the OEB. Companies have the option to go to the OEB to request their own unique approach.

Incentives Wires companies are incented to do aggressive DSM. There is a standard set of incentives and processes for true-up that apply to all companies that is determined by the OEB. Companies have the option to go to the OEB to request their own unique approach. The Shared Savings Mechanism (SSM) has been a successful incentive to do aggressive DSM for Enbridge Gas Distribution.

DSM plans As there is no budget or target setting approvals required, DSM plans are not pre-approved by the OEB.

Avoided costs The OEB determines the long term avoided costs (generation, transmission, distribution and losses) to be used in all DSM evaluations and audits.

Guidelines The OEB takes a rule-based approach to DSM similar to that for the gas utilities. The OEB sets guidelines for program selection and portfolio management, including guidelines on program cost-effectiveness, monitoring, evaluation and implementation as was done for the natural gas utilities in E.B.O 169-III.

Audit The OEB hires an independent third party to audit all DSM programs in the province.

There are many reasons to support mandating wires companies in Ontario to be accountable for DSM, including:

- wires companies have existing relationships with electricity consumers in their service area, providing a ‘foot in the door’ for DSM activities and allowing for some economies of scale in program delivery (e.g. bill stuffers);
- wires companies understand the unique situations and needs of their local customers and can design and deliver tailored DSM programs;
- wires companies, because of their understanding of their service areas, are in the best position to determine their local needs and take an integrated resource planning approach to addressing them, which includes determining the role of DSM in meeting their customers’ needs;
- having each wires company accountable for DSM will encourage diversity and innovation in program design and delivery;

- having each wires company accountable for DSM will help to establish benchmarks for DSM performance;
- wires companies have existing relationships with channel partners; and
- wires companies are already regulated by the OEB.

The components of the electricity DSM governance model will help to streamline the DSM approvals process for the wires companies and for the OEB by:

- pre-approving a DSM budget for each of the wires companies based on a standard calculation (a kWh charge)
- standardizing the financial tools available to the wires companies to carry out aggressive DSM (DSMVA, LRAM, incentives such as SSM)
- standardizing program selection and portfolio management through OEB guidelines
- mandating the OEB to set the avoided costs and carry out the verification of program savings.

3.6 Streamlining the introduction of electricity DSM

Even with the above components of the model in place, there is still more that should be done to make it easier for the 93 wires companies (92 LDCs plus Hydro One) to carry out DSM and for the OEB to regulate the wires companies. It is an unreasonable administrative burden to expect the wires companies to develop all the DSM programs from scratch and to reinvent the wheel potentially 93 times. As well, it is an unreasonable administrative burden to expect the OEB to deal with all 93 wires company DSM start-up issues at the same time. Each of these burdens is addressed below in a reasonable and effective manner.

Establish a set of provincial 'brand-name' DSM programs

One way to address the problem of DSM program design for the wires companies and streamline the regulatory oversight required is to establish a set of standard DSM programs that the utilities can draw upon.[20] These programs would be those that would lead to the capture of the greatest economies of scale from standardization and consistency across the Province such as public education programs, market transformation programs and programs for low income households.

The Province would formally endorse these programs. Collectively, the programs would be given an identifiable brand name (an example of a brand-name approach is Power$mart in BC) which will help to market the programs and to

[20] Ideas in this section emerged from CEEA's *DSM Summit III – Taking Action for A Sustainable, Energy Efficient Ontario*, Nov. 24, 2003.

achieve a comfort level with potential program participants. Such an approach also allows the wires companies that lack experience and/or expertise in DSM to begin implementing programs while they are still on the steeper slope of the DSM 'learning curve'.

These provincial brand-name programs would be in 'ready to deliver' format, thereby removing most of the program set up/design costs to the wires companies. The programs would set out standard evaluation parameters, delivery advice, and record keeping procedures. The wires companies could choose to include some or all of the provincial brand-name programs in their DSM portfolios and could contract out program delivery as appropriate. Wires companies would be permitted to also include other than brand-name programs in their DSM portfolios.

Phase-in electricity DSM by wires company size

To minimize the administrative burden of the OEB and to allow smaller wires companies more time to prepare for DSM, electricity DSM would be phased-in according to wires company size (e.g. number of customers served). The twenty largest wires companies, representing about 80% of the Ontario market, could be required to implement DSM programs first, followed by the remaining companies within 3 to 5 years. This type of phase-in based on company size is similar to how the OEB determined the market readiness for the deregulated electricity market.[21] Smaller wires companies would be permitted, if they so choose, to implement DSM programs at the same time as the largest companies.

The phase-in approach would streamline the introduction of electricity DSM. It would enable the companies best equipped to handle the development and implementation of new DSM programs to do so first and to share their experiences with others. The OEB could facilitate the shared learning process. This phase-in would also provide time for the OEB to amend its administrative processes in order to simplify and improve its oversight for both large and smaller LDCs. Smaller companies would have the benefit of an improved regulatory model based on the experience of the initial implementation.

It may be appropriate for the OEB to conduct a review of the performance of the electricity DSM framework and the group of twenty LDCs before requiring the smaller LDCs to be accountable for DSM. The review should be carried out in order to determine the most appropriate DSM framework for the smaller LDCs and to identify any appropriate changes to be made to the framework for the large LDCs. For example, it may be appropriate to allow small LDCs to choose whether they want to be accountable for DSM in their services areas, and if not, Hydro One could become the default provider. Or perhaps, it may be appropriate

[21] It is also similar to how the Ontario Ministry of Environment phased-in company reporting under its new air monitoring regulation. This approach worked well. It gave the smaller companies time to prepare while the regulator was able to debug the regulatory and administrative processes. As a result, the phase-in was beneficial to the companies and to the regulator.

for the OEB to determine whether a particular LDC is in a position to be accountable for DSM in its service area before giving that responsibility to the LDC. Such fundamental differences as Hydro One becoming the default provider or screening the LDCs for DSM capacity or simple tweaking may be required in order to ensure that aggressive DSM that meets local needs effectively is delivered to the service areas of the both the large and smaller LDCs.

4 Conclusion

There are overriding objectives that should set the direction for DSM in Ontario. These have been set by the Minister of Energy in his announcement on January 14, 2004. It is CEEA's view that these objectives apply equally well to the natural gas sector and should become the set of objectives that guides all of DSM in Ontario.

The objectives are:

1. **Creating a "conservation culture" in Ontario** : Making conservation, demand management and demand response strategies a cornerstone of Ontario's long-term energy future;

2. **Reliability, diversity and affordability**: A reliable, sustainable and diverse supply of competitively priced power [energy];

3. **Effective consumer protection** : Consumers, especially residential and small business consumers, will be protected from excessive price volatility;

4. **A stronger investment climate** : The government will encourage new investment in conservation, generation and transmission;

5. **Cleaner air** : The government will contribute to the clean up of our air by eliminating coal fired generation and replacing it with other,cleaner sources of energy.

Flowing from these objectives, there will be a common set of elements that should be included in every framework for governance of DSM. These common elements will help to ensure that the objectives are met and that the framework helps to strike the appropriate balance between regulated and competitive actions to bring about aggressive levels of DSM in Ontario.

Below is a list of components that CEEA has identified that should be included in any governance model for DSM. These components apply to both gas and electric DSM. The common components are:

To address market barriers to efficient energy use:

- Energy prices reflect true costs
- There is no undue burden placed on disadvantaged groups as a result of energy prices
- Energy efficiency standards continually improve over time
- Incentives are available to encourage the development and introduction of new, more efficient technologies
- Training programs ensure highly skilled energy professionals and trades people up on the latest technologies and techniques

- There are coordinated and consistent public education programs on energy conservation and energy efficiency across Ontario
- Natural gas and electric utilities and provincial ministries/agencies are required to implement cost-effective energy efficiency and energy conservation programs in their own operations and report on their progress

To ensure effective and efficient program delivery to address market barriers:

- There is a reliable, long term source of funding for aggressive DSM
- There are DSM programs that target each of the market segments
- There is emphasis on local delivery of DSM programs
- There are incentives for delivery agents to carry out successful, aggressive DSM programs
- There are clear rules for DSM
- There is independent, third party verification of DSM energy savings

The governance model for DSM for the natural gas utilities and for the electricity utilities can be different. The approach to governance of DSM adopted in Ontario should take advantage of the experience in other jurisdictions by being flexible and responsive to the needs of the sector and its companies. This approach should encourage more aggressive levels of DSM.

Regardless of the governance model chosen for electricity DSM, the natural gas DSM governance model should be maintained. It is a governance model that requires the natural gas utilities to be accountable for DSM to the OEB, but the utilities can contract out aspects of program design, delivery, evaluation and auditing as needed. The OEB should continue to encourage the natural gas utilities to make improvements to the design and delivery of their DSM programs to achieve higher levels of cost-effective energy savings.

Electricity DSM should have a utility governance model. This makes the wires companies accountable for DSM to the OEB, with the ability to contract out any or all aspects of their DSM program. The wires companies would be kept whole from revenues lost due to DSM and would have access to incentives to encourage excellence in performance.

The components of the electricity DSM governance model will help to streamline the DSM approvals process for the wires companies and for the OEB by:

- pre-approving a DSM budget for each of the wires companies based on a standard calculation (a kWh charge)
- standardizing the financial tools available to the wires companies to carry out aggressive DSM (DSMVA, LRAM, incentives such as SSM)
- standardizing program selection and portfolio management through OEB guidelines
- mandating the OEB to set the avoided costs and carry out the verification of program savings.

Even with the above components of the model in place, there is still more that should be done to make it easier for the wires companies to carry out DSM and for the OEB to regulate the wires companies.

One way to address the problem of DSM program design for the wires companies and streamline the regulatory oversight required is to establish a set of standard DSM programs that the utilities can draw upon. These programs would be those that would lead to the capture of the greatest economies of scale from standardization and consistency across the Province such as public education programs, market transformation programs and programs for low income households. The Province would formally endorse these programs. Collectively, the programs would be given an identifiable brand name.

To minimize the administrative burden of the OEB and to allow smaller wires companies more time to prepare for DSM, electricity DSM would be phased-in according to wires company size (e.g. number of customers served). The twenty largest wires companies, representing about 80% of the Ontario market, could be required to implement DSM programs first, followed by the remaining companies within 3-5 years. This type of phase-in based on company size is similar to how the OEB determined the market readiness for the deregulated electricity market. Smaller wires companies, if they so chose, would be permitted to implement DSM programs at the same time as the largest companies.

It may be appropriate for the OEB to conduct a review of the performance of the electricity DSM framework and the group of twenty LDCs before requiring the smaller LDCs to be accountable for DSM. The review should be carried out in order to determine the most appropriate DSM framework for the smaller LDCs.