

**Ontario Energy
Board**

**Commission de l'énergie
de l'Ontario**



Appendix A

**DRAFT DEMAND SIDE MANAGEMENT GUIDELINES FOR
NATURAL GAS DISTRIBUTORS**

EB-2008-0346

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TABLE OF CONTENTS

1.0	OVERVIEW	4
1.1	Background	4
1.2	Overview of Draft Guidelines	5
2.0	COST EFFECTIVENESS	6
2.1	TRC Calculation	6
2.2	TRC Benefits	9
2.2.1	Avoided Costs	9
2.2.2	Natural Gas Savings	10
2.3	Inputs and Assumptions (Changes Proposed)	11
2.4	TRC Costs	11
2.4.1	Equipment Costs	12
2.4.2	Program Costs	13
2.5	Adjustment Factors in the TRC Test for Assessing DSM Programs	15
2.5.1	Free Riders	15
2.5.2	Attribution	16
2.5.3	Spillover (New)	17
2.5.4	Persistence (Changes Proposed)	17
2.6	Fuel Switching	17
2.7	Pilot Programs	18
3.0	DSM BUDGETS AND TARGETS (Changes Proposed)	18
3.1	Budget Determination	18
3.2	Budget Term and Reporting	19
3.3	Adjustments to an Approved Plan	20
3.4	Targeted Program Spending	20
3.5	TRC Savings Targets	21
3.6	Market Transformation Targets	21
3.7	Low-income Customer Program Targets (Changes Proposed)	22
4.0	LOST REVENUE ADJUSTMENT MECHANISM (LRAM)	22
4.1	Eligible Programs	23
4.2	Calculation of LRAM	23
4.3	Lost Revenue Adjustment Mechanism Variance Account (LRAMVA)	24
4.4	Timing of LRAM Application	24
5.0	INCENTIVE PAYMENT MECHANISMS (Changes Proposed)	25
5.1	Eligible Programs	25
5.1.1	Shared Savings Mechanism (SSM) for Resource Acquisition Programs	26
5.1.2	Market Transformation Incentive	26
5.1.3	Low Income Customer Programs Incentive	27
5.2	Shared Savings Mechanism Variance Account (SSMVA)	27
5.3	Timing of Application	27
6.0	PROGRAM EVALUATION AND AUDIT	28
6.1	Evaluation Plan	29
6.2	Program Type Specific Guidelines	30
6.2.1	Direct Acquisition Programs	30

6.2.2	Market Support Programs	31
6.2.3	Custom Projects.....	32
6.2.4	Market Transformation Programs.....	33
6.2.5	Low Income Customer Programs.....	33
6.3	Implementation of Updated Input Assumptions	33
6.4	Evaluation Report.....	34
6.5	Independent Third Party Review	35
7.0	DSM CONSULTATIVE.....	36
8.0	ACCOUNTING TREATMENT	38
8.1	Funding of DSM Programs.....	38
8.2	Cost Allocation	38
8.3	Revenue Allocation	39
8.4	Demand Side Management Variance Account (DSMVA).....	39
8.5	Carbon Dioxide Offset Credits Deferral Account (CDOCDA)	39
8.6	Recording of DSM Spending Not Funded Through Distribution Rates.....	39
9.0	ANNUAL REPORTING GUIDELINES (New)	40
10.0	ADMINISTRATION	41
10.1	Filing Guidelines (New)	41
10.1.1	Program Funding through Distribution Rates.....	42
10.1.2	Lost Revenue Adjustment Mechanism (LRAM)	44
10.1.3	Shared Savings Mechanism (SSM) and Other Financial Incentives	45
10.1.4	Adjustments to an Approved Plan.....	46

1.0 OVERVIEW

1.1 Background

The Ontario Energy Board (the Board) determined the original regulatory framework for gas distributor (“distributor” or “utility”) sponsored Demand Side Management (“DSM”) programs through guidelines established in its EBO 169-III Report of the Board dated July 23, 1993. DSM programs are programs which assist distributor customers in reducing their natural gas consumption. Union Gas Limited (“Union”) and Enbridge Gas Distribution Inc, (“EGD”) filed DSM plans in response to the directives of the Board in the EBO 169-III Report until 2006.

In 2006, the Board conducted a hearing on generic issues related to distributor DSM activities (EB-2006-0021).

The Board’s August 25, 2006 decision in the generic proceeding dealt with a large number of issues relating to DSM. A rules-based and framework approach was established where appropriate and practical, which the Board expected would result in significant regulatory savings for the parties, the Board and, ultimately, for ratepayers. Below is a list of the broader matters that were agreed by stakeholders and decided by the Board in that decision.

- A three-year term for the first DSM plan
- Processes for adjustments during the term of the plan
- Formulaic approaches for DSM targets, budgets, and distributor incentives
- Determination of how costs should be allocated to rate classes
- A framework for determining savings
- A framework and process for evaluation and audit
- The role of distributors in electric conservation and demand management activities and initiatives

In a separate decision dated October 18, 2006, the Board approved the input assumptions based on which Union and EDG filed their three-year DSM plans. DSM plans for each of Union and EDG were subsequently approved by the Board, and expire in 2009.

1.2 Overview of Draft Guidelines

On October 31, 2008, the Board initiated a consultation process on the development of Demand Side Management Guidelines for Natural Gas Distributors (the “Guidelines”) to assist in the development of next generation of gas distributor DSM plans. The Guidelines are expected to be applicable to natural gas distributor DSM initiatives beginning in 2010, and should be used in the preparation of distributor DSM plans. Those plans, including budgets, program targets and other related matters, will be considered by the Board in the context of rate proceedings for each of the distributors.

These draft Guidelines have been developed by Board staff following consultations with gas distributors and other interested stakeholders. The draft Guidelines largely consolidate existing Board policies in relation to DSM activities as reflected in the following DSM–related decisions and orders of the Board:

- EBO 169-III Report of the Board dated July 23, 1993; and
- The decisions for Phases I, II, and III of the DSM generic proceeding (EB-2006-0021).

By way of exception, the draft Guidelines propose changes in the following areas:

- Development of inputs and assumptions (section 2.3)
- Adjustment factors in the Total Resource Cost test for assessing DSM programs:
 - Spillover effects (section 2.5.2)
 - Persistence of savings (section 2.5.3)
- Development of DSM budgets and targets (section 3.0)
 - Low-income customer programs
- Incentive payment mechanisms (section 5.0)
 - Shared savings mechanism for resource acquisition programs
 - Market transformation incentive
 - Low income customer programs Incentive
- Program evaluation and audit (section 6.0)
- Annual reporting guidelines (section 9.0)
- Filing guidelines (section 10.0)

For symmetry, the draft Guidelines incorporate elements of the “Guidelines for Electricity Distributor Conservation and Demand Management” issued by the Board in 2008 (EB-2008-0037).

2.0 COST EFFECTIVENESS

The Total Resource Cost (TRC) test is the appropriate test to measure cost effectiveness. This test should be used by utilities when evaluating the cost effectiveness of a measure or program to determine whether a measure or program can be considered for inclusion in the portfolio¹.

The TRC test measures the benefits and costs of DSM efforts from a societal perspective. Under the TRC test, benefits are driven by avoided resource costs, which are the marginal costs that are avoided by not producing and delivering the next unit of natural gas to the customer. In addition, it includes the reduction in use of other resources such as electricity, water or other resources. Marginal costs (or avoided costs) include natural gas costs (both system and customer) and distribution costs (e.g., pipes, storage, etc.).

Costs in the TRC test are the costs of any equipment and program support costs associated with delivering that equipment to the marketplace.

<u>Benefits</u>	<u>Costs</u> ²
Avoided natural gas supply costs	Equipment costs
Other avoided resource costs	Distributor program costs

This section sets out the expectations regarding the benefit-cost analysis for DSM programs.

2.1 TRC Calculation

Evaluating the cost effectiveness of DSM is done in stages at many different levels, including technology or measure, program, and portfolio. The TRC test should be performed at each level. For examples of how to apply the TRC Test see Appendix A of the Guidelines for Electricity Distributor Conservation and Demand Management (EB-2008-0037).

At the most detailed level, a TRC test should be performed to evaluate the cost effectiveness of a measure or technology. At the technology level, the TRC test takes into account the benefits, which are the avoided natural gas supply costs and other avoided resource costs, and the equipment costs. There are no other adjustments to the TRC test at this stage of the evaluation.

¹ California Public Utilities Commission. (2001) Standard Practice Manual: Economic Analysis of Demand-Side Management Programs and Projects.

² In the case of fuel switching measures, the costs of the other fuels should be included.

Once a technology has proven to be cost effective, a program can be designed using that technology. Once the program costs have been assessed, the TRC test will be performed again to evaluate the cost effectiveness of the program. At the program level, the TRC test takes into account the following:

- The costs and benefits as estimated at the technology level;
- The distributor program costs; and
- Further adjustments to account for free ridership, persistence of savings, etc.

Finally, several programs are bundled together, further indirect costs are included and the TRC test is carried out once again to evaluate the cost effectiveness of the portfolio. This three layered structure; technology or measure, program and portfolio, is key to performing TRC analyses.

The results of the TRC test should be expressed as a net present value (NPV). As a NPV assessment, the TRC test sums the streams of benefits and costs over the lifetime of the equipment/technology and uses a discount rate to express these streams as a single “current year” value. Thus, the NPV_{TRC} is the net discounted value of the benefits and costs over a specified period of time (usually dictated by the equipment life of the DSM technology).

The TRC test is a measure of the change in the total resource costs to society, excluding externalities, of the DSM program. If the NPV_{TRC} is positive, or the benefit to cost ratio exceeds 1, indicating that benefits exceed costs, the measure, program or portfolio is considered cost effective from a societal perspective.

The NPV_{TRC} formula is as follows:

$$NPV_{TRC} = B_{TRC} - C_{TRC}$$

where;

$$B_{TRC} = \sum_{t=1}^N \frac{AC_t}{(1+d)^{t-1}}$$

$$C_{TRC} = \sum_{t=1}^N \frac{UC_t + PC_t}{(1+d)^{t-1}}$$

and,

- B_{trc} = the benefits of the program
- C_{trc} = the costs of the program. Where a measure includes fuel switching for a given end use, the cost of the other fuel must be included in the cost component of the TRC formula.
- AC_t = avoided costs in year t
- UC_t = distributor program costs in year t
- PC_t = participant cost in year t
- N = number of years for the analysis (i.e., the equipment life of the DSM technology)
- d = discount rate.

Note: Distributors should use a discount rate equal to the incremental after-tax cost of capital, based on the latest prospective capital mix, debt and preference share cost rates, and approved rate of return on common equity.

2.2 TRC Benefits

2.2.1 Avoided Costs

As noted above, the TRC test assesses DSM costs and benefits from a societal perspective. The benefits are defined as “avoided costs.” This represents the benefit to society of not having to provide an extra unit of supply of natural gas to the customer. For natural gas distributors, supply costs include the gas commodity and the avoided distribution system costs (e.g., pipes, storage, etc.).

Certain DSM programs may have other benefits, including savings of other energy sources such as electricity, heating fuel oil, propane or water. While these savings are not the primary target of the program, the TRC test will accommodate an assessment of savings associated with avoiding the use of these resources. In these cases, the benefits accrue from the avoided costs associated with these resources. Utilities wishing to assess resource savings relating to other energy forms or water will need to use avoided cost estimates for those resources in the same manner that natural gas avoided costs are used.

The TRC test involves an analysis over the life-cycle of the DSM measure. To accommodate this, long-term projections of avoided costs should also be undertaken. Also, any DSM measures included in the analysis should have equipment life estimates along with estimates of savings and costs.

Each distributor should calculate avoided costs for natural gas, other energy forms and water that reflect the cost structure and franchise area of the distributor. In order to ensure consistency, a common methodology should be used to determine the costs. The distributors should coordinate the timing for selecting commodity costs so that they are comparable.

The avoided costs should be submitted for review as part of the DSM plan filing and should be in place for the duration of the plan. The commodity portion of the avoided costs should be updated annually.

As avoided costs are long term projections, updating the costs, other than the commodity costs, on a multi-year cycle should not cause benefits to be significantly under or overstated. Regardless of how often the avoided costs are updated, the same avoided costs are expected to be used to calculate both the target and incentive amount. It is therefore anticipated that the relative impact of avoided costs on both the target and incentive amount would be minimal.

Estimating the natural gas avoided costs applicable to each customer class should include the following analytical steps:

1. estimate marginal natural gas commodity costs;
2. estimate marginal distribution costs;
3. determine the appropriate costing periods, if applicable; and
4. attribute marginal costs to the costing periods, if applicable.

Marginal cost studies typically involve detailed analyses starting with an understanding of the current costs for gas commodity and distribution (e.g., pipes, storage, etc.).

The avoided cost data that distributors should use for calculating the benefits of reducing electricity use will be posted on the Board's website.

2.2.2 Natural Gas Savings

The benefits in the TRC test are driven mainly by the annual natural gas savings. They are often calculated at the technology level and are commonly referred to as "prescriptive" savings estimates. For programs that rely on prescriptive savings estimates, savings are calculated by multiplying the per unit (i.e., single technology) savings with the number of units installed.

Savings and technology costs should be defined relative to a frame of reference or "base case." To accurately specify the impacts of any given technology, the analyst should know what would have happened in the absence of the technology. The base case technology variable represents the piece of equipment or technology that is being replaced by a more efficient technology. The application of a base case technology can vary; for example, in the case of a DSM program consisting of a residential programmable thermostat, the base technology would be a manual thermostat. In the example of a program consisting of a high efficiency furnace, the base case equipment would be the homeowner's current furnace. At a minimum, the base case technology should be equal to or more efficient than the technology benchmarks mandated in energy efficiency standards.

In practice, specifying savings relative to a frame of reference can be simply characterized by the three general decision types:

- new;
- replacement; or
- retrofit.

In the TRC analysis, equipment life is used to determine the time period over which the net present value analysis is carried out. The equipment life variable represents the number of years that the more efficient equipment installed is assumed to produce natural gas savings. The benefits (i.e., natural gas savings) from an energy efficient piece of equipment are assumed to persist for the life of the equipment. Equipment life is estimated based on the nature of the equipment and an assumed usage pattern.

An important consideration when assessing equipment life is the potential difference between the energy efficient equipment and the “base case” equipment that is being replaced. A simplifying assumption in the case of replacement programs is that the energy efficient equipment lives are the same as in the base case. However, there are some technologies where the energy efficient equipment has a much longer life than the base case equipment, which should be accurately accounted for.

2.3 Inputs and Assumptions (Changes Proposed)

The inputs and assumptions for a selection of measures, covering a range of typical DSM activities/technologies in residential, commercial and industrial applications are being developed by the Board with assistance of an external consultant and with input from distributors and other stakeholders. The approved inputs and assumptions will be posted on the Board’s website. Distributors should use this data for undertaking benefit-cost analyses of DSM measures and programs.

Distributors may use other data where appropriate and justified. However, where a distributor uses other data the distributor should provide detailed evidence to justify its use.

2.4 TRC Costs

The TRC includes two types of DSM costs:

1. equipment costs; and
2. program costs.

2.4.1 Equipment Costs

Typically in DSM programs, equipment costs are paid by the participant/customer. Customer equipment costs (sometimes termed “participant costs”) are the costs to purchase the more efficient equipment. They include capital, installation and operating and maintenance (O&M) costs associated with the technologies of the DSM program. It is important to note that the TRC test does not differentiate between who (distributor or customer) pays the cost of the equipment.

Customer costs can be incremental or full depending upon the nature of the energy efficiency investment decision. Incremental equipment costs are defined as the cost of the energy efficient technology above the base case technology. In the same way that the base case is important for specifying the savings, it is also important for specifying the cost of the energy efficient equipment. For example, in a replacement scenario, the cost of the energy efficient technology is typically incremental. In a retrofit or discretionary investment case, the cost of the energy efficient technology would be the full cost of the equipment.

Equipment costs, whether paid by the customer or the distributor, including purchase and installation, should always be defined relative to a base case. It is not enough to know the installed cost associated with the energy efficient equipment used in the program. To calculate the impact of the program, the cost of the equipment that would have been purchased in the absence of the program, the base case, should also be known. The appropriate specification of incremental cost for use in the TRC analysis is the difference between the base case and the energy efficient purchase.

As in the case of savings, there are typically three generic categories for specifying equipment costs, representing the type of investment decision:

- new;
- replacement; or
- retrofit.

The information sources for equipment costs will vary. For residential equipment, retail store prices are appropriate sources of information for many technologies including appliances and “do-it-yourself” water heater or thermal envelope upgrades. It is common practice to specify an average price based on a sample of retail prices. For commercial and industrial equipment, cost data can be more complicated to acquire due to limited access and confidentiality concerns. For larger “custom” projects, invoices or purchase orders may be necessary to support the cost estimate.

Equipment that requires O&M expenditures is often not incremental (i.e., those costs would have been incurred in the base case anyway). However, if the energy efficient equipment requires significantly more maintenance than its less energy efficient counterpart, the incremental O&M costs need to be factored into the TRC analysis. There will be exceptions and a proper TRC analysis should incorporate these.

2.4.2 Program Costs

From the perspective of the TRC test, DSM program costs are those incurred by the distributor. These costs include the marketing and support costs associated with delivering the DSM activity. Participant or customer incentive costs, which are considered transfers in the TRC test, are not included in the analysis. Distributor costs typically cover a number of activities such as marketing and advertising, consulting, channel support, monitoring and evaluation. There are five major categories of distributor costs:

- i. development and start-up;
- ii. promotion;
- iii. equipment and installation;
- iv. monitoring and evaluation; and
- v. administration.

In practice, all of these costs can be expected for programs that utilities in Ontario might be considering. For an accurate TRC assessment, the distributor should ensure that all costs associated with designing, operating and tracking the programs, other than incentive costs, are accounted for in its TRC analysis.

i. Development and Start-up Costs

Development and start-up costs are different from on-going operating costs. For example, initial costs may be incurred to train distributor staff in the use of the equipment or techniques used in a program and usually occur at the early stages of the program's life. Costs of developing DSM plans and procedures are also often concentrated in the early program years. In general, start-up costs are only a small component of the total costs in the life cycle of a DSM program.

ii. Promotion Costs

Promotion costs may be incurred to educate the customer about a DSM program and will vary by program type and level of promotional effort. The cost of promotion depends on the method employed, the market segment and the DSM measures promoted. Program promotion may also involve trade-offs between increases in promotion costs and expected increases in participation.

As noted above, incentive payments from the distributor to a customer for participation in a program are not a component of the TRC analysis, but still should be included in the distributor's program budget. The incentive merely represents a transfer payment between two parties involved in the program.

iii. Distributor Equipment and Installation Costs

Distributor equipment and installation costs include the costs of any distributor devices needed to operate the programs such as specialized software or tools, as well as any equipment directly installed by the distributor.

iv. Monitoring and Evaluation Costs

This section focuses on the cost to the distributor of monitoring and evaluating a DSM portfolio.

There are two broad categories of evaluation activity: impact evaluation and process evaluation. Impact evaluation focuses on the specific impacts of the program – for example, savings and costs. Process evaluation focuses on the effectiveness of the program design – for example, the delivery channel. The costs associated with each of these activities are program costs that need to be included in the TRC analysis. Some of these costs will be assigned directly to a specific program or programs, while a portion of the costs are more appropriately assigned across all programs (i.e., at the DSM portfolio level).

Monitoring and evaluation costs are incurred for systems, equipment and studies necessary to track measurable levels of program success (participants, impacts on consumption and costs) as well as to evaluate the features driving program success or failure. It is important to develop the necessary tracking systems at the time of program design. At a minimum, the tracking system should collect information on the key components that drive the TRC test, including:

- number of participants/installations;
- natural gas savings;
- cost of equipment; and
- distributor program costs.

To facilitate the evaluation of DSM programs and results, utilities should have clearly documented “paper trails.”

v. Administrative Costs

Administrative costs are generally the costs of staff who work on DSM activities. These costs are often differentiated between support and operations staff. Support staff costs are considered fixed costs or “overhead” that occur regardless of the level of customer participation in the programs. Operations staff costs are variable, depending on the level of customer participation. Utilities should include all staff salaries that are attributable to DSM programs as part of the costs in the TRC analysis.

2.5 Adjustment Factors in the TRC Test for Assessing DSM Programs

In performing a TRC analysis of a DSM program, several adjustments should be made to the benefits side of the equation. These adjustments include:

- free ridership of participants (section 2.5.1);
- attribution of the benefits (section 2.5.2);
- spillover effects (section 2.5.3); and
- persistence of the measures (section 2.5.4).

2.5.1 Free Riders

Free rider adjustments are one of the key components of the TRC test when it is applied in the assessment of a program. The standard definition of a free rider is “a program participant who would have installed a measure on his or her own initiative even without the program.”² This participant simply uses the program to offset the cost of installing or undertaking the energy efficient initiative.

Costs and benefits associated with free ridership should be assessed as part of the TRC analysis of a program. In determining overall savings of a program, these participants are excluded from the benefits attributed to the program. The equipment costs associated with these participants is similarly excluded from cost side of the equation.³ However, all program costs associated with free riders should be included in the analysis. Programs that have high free ridership are self-evident in the marketplace (i.e., they do not rely on distributor promotion) and are less cost effective since the program costs are included in the TRC calculation while the benefits are not.

² Violette, Daniel M. (1995) *Evaluation, Verification, and Performance Measurement of Energy Efficiency Programs*. Report prepared for the International Energy Agency.

³ Eto, J, (1998) *Guidelines for assessing the Value and Cost-effectiveness of Regional Market Transformation Initiatives*. Northeast Energy Efficiency Partnership, Inc.

Assumptions on free ridership should be assessed for reasonableness prior to implementation of the plan or program and should be reviewed and updated on an annual basis as part of each distributor's ongoing evaluation and audit processes.

2.5.2 Attribution

DSM-related activities could be managed and/or delivered not only by natural gas distributors, but also by others such as electricity distributors, electricity retailers, gas marketers, the Ontario Power Authority and different levels of government.

A fundamental issue for the evaluation of DSM programs is whether the effects observed after the implementation of a distributor DSM activity can be attributed to that activity (otherwise known as causality) or result from the activities of others.

While attribution is not a true adjustment to the TRC test, this issue is important in the calculation of a Lost Revenue Adjustment Mechanism ("LRAM"), Shared Savings Mechanism ("SSM") or other financial incentive claims.

Attribution of benefits as between a distributor and a non-rate regulated third party will be determined on a case-by-case basis.⁴ In order for the distributor to claim 100% attribution of benefits, the distributor should demonstrate that its role was 'central' to the program. The centrality principle as expressed by the Board in proceeding EB-2005-0001 dictates that the distributor plays a central role if the distributor initiated the partnership, initiated the program, funded the program, or implemented the program. Centrality is established by the distributor if its financial contribution is greater than 50% of program funding or, where the distributor's financial contribution is less than 50% of program funding, the distributor initiated the partnership, initiated the program or initiated the implementation of the program. Where the distributor's financial contribution is less than 50%, it is expected that the distributor will provide supporting documentation outlining its role in the program.

By extension, should the distributor's role not meet the test of centrality, attribution should be determined between the parties and presented to the Board for approval at a time when it becomes relevant.

TRC benefits for program partnerships with Board rate-regulated entities such as electricity distributors should be allocated in the manner indicated in the Board's "Guidelines for Electricity Distributor Conservation and Demand Management".

⁴ See the March 3, 2006 Decision of the Board in proceeding RP-2005-0020/EB-2005-0532.

That is, a gas distributor partnering with an electricity distributor may claim all of the benefits associated with the gas savings in their franchise area. Other benefits, such as water savings, need to be allocated between the gas and electricity distributor partners proportionally based on the dollar value of gas and electric TRC savings (i.e., where gas savings represent 60% of the TRC savings of a program, the gas distributor will claim 60% of water savings).

2.5.3 Spillover (New)

Spillover is commonly defined as “customers that adopt efficiency measures because they are influenced by [a distributor’s] program-related information and marketing efforts, though they do not actually participate in the program”⁵. Due to these spillover customers in the distributor’s franchise area, the distributor will lose revenue due to a lower demand for natural gas and the TRC savings could be underestimated. This in turn could affect the SSM claim.

A distributor that wishes the Board to consider spillover will need to provide comprehensive and convincing evidence that clearly quantifies the effect that spillover has had on program savings and the distributor’s revenue.

2.5.4 Persistence (Changes Proposed)

Persistence is a measure of how long a DSM measure is kept in place by the customer. Persistence is important for all energy efficiency programs as a lack of persistence can have very significant effects on overall net program savings estimates. For example, if an energy efficient measure with a 15-year lifetime is removed after only two years, most of the savings expected to result from that installation will not materialize.

As distributors have increased their experience in developing and evaluating DSM programs, there is a need for more thorough consideration of long-term retention, technical degradation, and persistence of savings in particular for programs with significant budgets and savings. Distributors will be expected to address persistence of savings in their next generation DSM plans and evaluations of programs.

2.6 Fuel Switching

Where fuel switching away from natural gas aligns with the distributor’s DSM objectives, the distributor may pursue these activities.

⁵ U.S. Department of Energy (2008). *Understanding Cost Effectiveness of Energy Efficiency Programs: Best Practices, Technical Methods, and Emerging Issues for Policy Makers*

Fuel switching to natural gas is not a DSM activity and DSM funds should not be used for this purpose.

2.7 Pilot Programs

A pilot program is one that involves the installation, testing or evaluation of technologies that are not already in use in Ontario, or in limited use, and that serves as a tentative model for future development.

A properly structured pilot should provide an opportunity to gain experience in business processes, installation procedures, logistics, deployment, integration issues, customer communications, and customer impacts. A distributor should provide a rationale for how its program will increase the collective understanding of the technology and its benefits as a DSM measure. Where the pilot program involves a non-cost effective technology, the onus will be on the distributor to prove the usefulness of the program. Utilities should be prepared to share the results and knowledge gained through the pilot with the Board and other utilities.

It is not considered appropriate to have distributors piloting the same technology or piloting technology that has already been deployed within the Province.

Therefore, where a technology is already being, or has been, installed, tested or evaluated by another distributor, a distributor that wishes to implement a pilot program using the technology will need to show how it will coordinate or work with the other distributor to ensure effective use of the program and of lessons learned.

3.0 DSM BUDGETS AND TARGETS (Changes Proposed)

3.1 Budget Determination

In recognition of the knowledge and experience that the natural gas utilities have gained in developing and implementing DSM plans, distributors should propose a budget for their respective DSM plans. However, each distributor will need to justify its proposed DSM budgets based on:

- the results of its DSM programs to date,
- the results of the program evaluation and market potential studies that it has completed, and
- the government's policies/initiatives in advancing conservation in Ontario.

Distributors should propose separate DSM budgets in the following program areas:

- Resource acquisition (TRC Net Savings)
- Market transformation
- Low income customers

Distributors are encouraged to consult with stakeholders in developing their budgets for their DSM programs.

3.2 Budget Term and Reporting

There are benefits associated with multi-year funding for ongoing programs. Multi-year funding supports better planning and management and facilitates the utilities' entering into of partnerships with other delivery agents. Distributors may therefore apply to the Board for multi-year DSM funding. The term of the DSM budget will be the subject of a rate proceeding where distributors and stakeholders will have the opportunity to provide their views to the Board.

When applying to the Board for funding, budgets, LRAM and SSM or other financial incentives they should be developed and measured on an annual basis (market transformation amounts may be an exception). Annual budget amounts will be an input to each year's distribution rate adjustment.

The application submitted to the Board should be in the form of a DSM plan, a budget and an evaluation plan. The budget should include cost estimates for administration, evaluation, research (including market potential studies) and support.

Utilities should file annual reports, as described in section 9.0 below.

Spending will be tracked in a DSM variance account, which will be used to "true-up" any variances between the spending estimate built into rates for the year and the actual spending in that year. If the Board has approved budgets with terms longer than one year, unspent funds can be carried over to a subsequent year. At the end of the approved funding term, any unspent funds will be returned to ratepayers through rates.

Where programs have been more successful than expected, such that the annual budget is insufficient, the distributor may bring forward an application, with appropriate evidence and rationale, for recovery in rates of the amount spent in excess of the approved budget and tracked in the DSM variance account.

Consistent with the approach set out in the Board's August 25, 2006 decision on Phase I of the generic DSM proceeding:

- Additional spending may only be used for incremental program expenses; and
- At the time of its next cost-of-service application, the distributor must provide appropriate evidence demonstrating the prudence and cost effectiveness of the amounts spent in excess of the approved annual budget.

3.3 Adjustments to an Approved Plan

Utilities should evaluate the effectiveness of programs on an ongoing basis, and make adjustments as necessary to improve program design, performance, and uptake by customers. Where cumulative fund transfers among Board-approved programs are less than 20% of the approved annual budget, no Board approval is necessary.

Utilities should apply for Board approval for cumulative fund transfers among programs that exceed 20% of the approved annual budget, as well as for approval to re-allocate funds to new programs that are not part of the distributor's approved DSM plan.

3.4 Targeted Program Spending

There is a tension between ensuring that each rate class is allocated an appropriate portion of DSM funds, on the one hand, and the benefits of targeting spending to the most cost effective programs regardless of what rate class they apply to, on the other. As a principle, DSM programs should provide customers in all rate classes and sectors with equitable access to DSM programs to the extent reasonable. This principle must be balanced against and consistent with the principle of optimizing cost-effective DSM opportunities.

If DSM sector (i.e., residential, commercial, or industrial) level spending is significantly different than the historical percentage levels of spending in those sectors, the distributor should provide its explanation for this in its proposed DSM plan. The Board will then determine whether to approve the revised spending ratios and, if so, under what conditions.

To the extent that actual sector level spending then varies significantly from the ratios identified in the plan, interested parties may challenge the appropriateness of the deviation from the plan when the distributor seeks approval for the clearance of the relevant accounts.

Market potential studies, or updates to an existing study, should be filed by each distributor together with its DSM plan. The distributor may, at its discretion, do additional studies of market potential or updates during its plan. The results of these studies could inform distributors in allocating DSM budgets among different sectors, rate classes, types of markets etc.

3.5 TRC Savings Targets

TRC savings targets are designed to set goals for all of the savings achieved by a distributor's DSM activities. These targets are applicable to all DSM programs offered by a distributor excluding market transformation programs and DSM programs targeted to low-income customers. When evaluating the success of a distributor in reaching these targets, the distributor's DSM activities are assessed based on the net benefits accrued when utilizing the TRC test.

Distributors are expected to propose TRC savings targets based on the programs they plan to deliver over the next planning period.

3.6 Market Transformation Targets

Market transformation programs are those that are designed to make a permanent change in the marketplace over a long period of time. These programs tend to be more applicable to lost opportunity markets where, for example, equipment is being replaced or new buildings are being built.

Such programs are not amenable to a formulaic evaluation approach and therefore should be assessed on an individual basis using metrics which are suitable to a given program. Such metrics should be objective and able to measure success objectively, such as increasing the market share of a DSM technology. Depending on the program, other quantifiable metrics could include increase in consumer awareness due to an educational program and the like. Distributors are expected to propose specific metrics and corresponding targets for any proposed market transformation program.

For each market transformation program the utility should propose a program description, goals (including measurement method), shareholder financial incentives (including structure and payment), length, level of funding and program elements.

3.7 Low-income Customer Program Targets (Changes Proposed)

Low-income customers face certain barriers in accessing DSM programs which are unique to this group of customers. In addition, the TRC net savings for these programs are typically low relative to the savings of other programs although very valuable for this market sector.

Targets for these programs could be based in part on TRC savings for these programs but also in part on other metrics such as market penetration of DSM programs in the low income segment of the population.

Distributors are expected to develop eligibility criteria and program parameters for low income residential programs. Criteria presently used by various levels of government for the purposes of determining eligibility for low-income consumer programs may be appropriate for use by distributors.

Distributors are also expected to propose explicit metrics and corresponding targets for the DSM programs targeted at low income consumers.

4.0 LOST REVENUE ADJUSTMENT MECHANISM (LRAM)

Unforecasted DSM results can have the effect of eroding distributor revenues due to lower than forecast throughput. Utilities recover fixed distribution costs through both a fixed and a variable rate, which is set based on a forecast of consumption, including natural changes in energy efficiency. If actual consumption is less than the forecasted amount used for rate-setting purposes, the distributor earns less revenue than it otherwise would have, all other things being equal. Since the intention and effect of DSM activities is to reduce natural gas use, it also has the effect of reducing throughput and associated distributor revenues, which can result in a disincentive for utilities to deliver DSM programs.

A mechanism to compensate for distributor-induced lost revenues is intended to remove the disincentive. LRAM is a retrospective adjustment, which is designed to recover revenues lost from distributor supported DSM activities in the prior year. It is designed to compensate a distributor only for unforecasted lost revenues associated with DSM activities undertaken by the distributor within its franchise area.

4.1 Eligible Programs

The LRAM applies to programs implemented by the distributor, within its franchise area, including programs delivered by the distributor itself and/or programs delivered for the distributor by a third party (under contract with the distributor).

Distributors may undertake some programs in partnership with other entities, such as electricity distributors or community agencies. In assessing the distributor's involvement in program delivery, and the resulting potential impacts on revenue, distributors should be guided by section 2.5.2 regarding the attribution of benefits. Distributors may only recover LRAM for revenue losses that can be attributed to the distributor's involvement in the program.

4.2 Calculation of LRAM

The LRAM is determined by calculating the energy savings by customer class and valuing those energy savings using the distributor's Board-approved variable distribution charge appropriate to the class. Lost revenues are only accruable until new rates (based on a new revenue requirement and load forecast) are set by the Board, as the savings would be assumed to be incorporated in the load forecast at that time.

The LRAM mechanism will be calculated using the assumptions and savings estimates approved in the plan and adjusted for the audited Evaluation Report (see section 6.4) results, and will apply from the beginning of the year being audited. The LRAM account discussed in section 4.3 will be cleared annually. LRAM will be recovered in rates on the same basis as the lost revenues were experienced so that the LRAM ends up being a full true-up by rate class. Assumptions used should be best available at the time of an audit.

LRAM amounts to be recovered in rates should be adjusted for free riders. As noted above, free riders are those customers who would have adopted or installed an energy efficiency measures regardless of the involvement of the distributor. This is often called natural conservation. Given that the LRAM is intended to compensate utilities for revenue losses resulting from the distributor having implemented a DSM program, the LRAM should be adjusted to remove the free riders. Similarly, LRAM should be adjusted for spillover effects to the extent they can be empirically estimated.

As indicated by the filing guidelines set out in section 10.1, utilities should include in the application for recovery of LRAM the volumetric impact of measures and programs implemented in a specific year. Volumetric savings, costs of programs, free riders and other adjustments, as discussed above, should be based on the results of the evaluation and audit work completed for the year for which LRAM is applied. The impacts should be calculated for each program and for each class both gross and net of free riders. The amount to be recovered through rates will be determined as net of free riders and spillover effects.

By way of example, if in June of 2008 the audit of the 2007 programs demonstrates a change in assumptions, that change will apply for LRAM purposes from the beginning of 2007 onwards until changed again.

Utilities will be expected to file an audit report and any back up program evaluation reports needed to support the volumes used in the LRAM calculation. The audit report should be prepared by an independent auditor and provide an opinion on the LRAM proposed and any necessary amendment thereto.

4.3 Lost Revenue Adjustment Mechanism Variance Account (LRAMVA)

The purpose of the LRAMVA is to record the amount of distribution margin gained or lost when the distributor's DSM programs are less or more successful than budgeted. When the distributor's DSM programs are less successful in the test year than budgeted, the distributor gains distribution margin. Similarly, the distributor loses distribution margin in the test year when its DSM programs are more successful than budgeted.

4.4 Timing of LRAM Application

An application to clear the balance in the LRAM variance account, together with carrying charges, should be made on an annual basis. As discussed above, for purposes of clearing LRAM, input assumptions will be adjusted on an annual basis, as a result of the evaluation and audit work completed and should apply for the beginning of the year being completed.

5.0 INCENTIVE PAYMENT MECHANISMS (Changes Proposed)

LRAMs remove a disincentive for utilities to implement DSM, but do not provide an incentive for utilities to aggressively implement DSM programs. Given a certain level of resources, the distributor should make a trade-off between pursuing a DSM activity versus other activities.

Shareholder incentives are an appropriate way to encourage utilities to pursue DSM programs.

5.1 Eligible Programs

The SSM and other financial incentives are available for customer focused initiatives that are funded through distribution rates and where the costs of the initiatives are expensed, such as efficiency improvements in the use of natural gas. The SSM and other financial incentives are not available for distributor-side expenditures or programs that are not funded through distribution rates.

Utilities may undertake some programs in partnership with other entities, such as electricity distributors or community agencies. In assessing the distributor's involvement in program delivery, utilities should be guided by the guidelines set out in section 2.5.2, regarding the attribution of benefits. A distributor may only claim a shareholder incentive in relation to its contribution to the program, as determined by the attribution guidelines.

Distributors can apply for separate incentives for the following types of programs:

- SSM for Resource Acquisition Programs (TRC Net Savings)
- Market Transformation Programs
- Low Income Programs

The SSM and other financial incentives are pre-tax amounts. In addition, the SSM should be calculated across the entire portfolio of DSM programs (excluding market transformation and low-income programs), including any programs with negative benefits.

The amount of any SSM and other financial incentives should not be included in the distributor's return on equity for the purposes of setting rates or in the calculation of any earnings sharing amounts.

5.1.1 Shared Savings Mechanism (SSM) for Resource Acquisition Programs

For SSM purposes, distributors should calculate the TRC net benefits of the DSM programs, and adjusting for free riders and spillover effects as required. The TRC savings from low income programs and market transformation programs should be excluded from this calculation since there is a separate incentive mechanism for low income customer programs as discussed in section 5.1.3 below.

The reward structure will continue to be the non-linear function relative to TRC savings as decided in the DSM generic proceeding.

Distributors are expected to propose annual financial incentive targets relative to the TRC savings targets they expect to achieve as a result of the programs they plan to deliver over the next planning period.

Regarding allocation of SSM costs among customer classes, DSM shareholder incentive amounts should be allocated to the rate classes in proportion to the net TRC benefits attributable to the respective rate classes.

For the purposes of determining whether each distributor has met its TRC target, the input assumptions for the calculation of SSM should be based on the best available information at the time of evaluation, similar to LRAM adjustments. The utilities have had several years of experience to conduct evaluation studies and make major changes to the input assumptions and as a result there is no need to lock-in the input assumptions from the year before. By way of example, if in June of 2009 the evaluation or audit of the 2008 programs demonstrates a change in assumptions, that change shall apply for SSM purposes from the beginning of 2008 onwards until changed again.

5.1.2 Market Transformation Incentive

For market transformation programs, a utility could be entitled to an incentive payment up to a certain amount each year based on the measured success of the programs relative to the established targets discussed in section 3.6 above. This amount will be in addition to any amount earned as SSM discussed in section 5.1.1 above.

Incentive payments for market transformation programs should be made on an individual program basis. Distributors are expected to use a program's approved evaluation metrics to determine the program's success relative to the established targets. The incentive payment will be tied to the ability of the program to meet (or surpass) its established targets.

The measurement and calculation methodologies to be used to determine whether the incentive has been earned in a year should be detailed by each distributor in its DSM plan.

5.1.3 Low Income Customer Programs Incentive

Incentive payments for low-income customer programs may be made on an individual program basis. This incentive will be in addition to any amount earned as SSM discussed in section 5.1.1 above.

Distributors are expected to use the program's approved evaluation metrics to determine the program's success relative to the established targets discussed in section 3.7 above. The incentive payment will be tied to the ability of the program to meet (or surpass) its established targets.

The measurement and calculation methodologies to be used to determine whether the incentive has been earned in a year should be detailed by each distributor in its DSM plan.

5.2 Shared Savings Mechanism Variance Account (SSMVA)

The purpose of the SSMVA is to record the amount of the shareholder incentive earned by the distributor as a result of its DSM programs. The SSMVA account should include incentives earned from distributors from Resource Acquisition Programs (TRC Net Savings), Market Transformation Programs and Low Income Customer Programs.

The balance of this account, together with carrying charges, will be disposed annually.

5.3 Timing of Application

Distributors should apply for SSM and other financial incentives annually. As discussed above, for purposes of calculating SSM and other financial incentives, input assumptions will be adjusted on an annual basis based on the results of the evaluation and audit work completed and should apply for the beginning of the year being completed.

6.0 PROGRAM EVALUATION AND AUDIT

Effective monitoring, evaluation, verification and reporting of DSM program outcomes is a critical part of ensuring that programs are cost effective, generating the desired outcomes, and providing real savings to consumers. Evaluation also provides utilities with the opportunity to identify ways in which a program can be changed or refined for greater efficiency in delivery and cost effectiveness.

Utilities should undertake evaluations of programs funded through distribution rates. The evaluation of DSM activities is important to support the Board's review and approval of LRAM, SSM and other financial incentive claims made by utilities. Evaluation of the energy savings of a program is needed to determine the impact on a distributor's revenues as a result of reduced throughput.

The California Evaluation Framework identifies two key functions of evaluation:

- 1) To document and measure the effects of a program – “Summative Evaluations.”
- 2) To help understand why those effects occurred and identify ways to improve the program – “Formative Evaluations.”

The first function represents a threshold for assuring accountability for the expenditure of resources on that program. Evaluation activities are done after the program has been operating and focus on documenting impacts with a view to informing decisions regarding continuation, expansion or cancellation of the program. Formative evaluations (often referred to as process evaluations) may be done earlier in a program's continuum and focus on providing feedback regarding the operational effectiveness of a program. The results of the evaluation serve to inform decisions regarding mechanisms to improve the program.

A key tenet of good program evaluation practices is the identification of the evaluation activities as part of the initial program design. This ensures that the operational characteristics of the program generate the data and information that can assist in the program evaluation. This can be as simple as collecting relevant contact information as part of the operation of the program which will be used in follow-up activities, or more complicated activities such as pre and post implementation metering of equipment. In both cases, the evaluation techniques and parameters are integrated with the design and operation of the program.

It is incumbent on utilities to attempt to improve their programming capabilities over time. This may involve re-visiting the programs from time to time through the use of process evaluations that examine the effectiveness of the delivery. All programs should consider a certain level of process evaluation effort at some point. Typically, process evaluations occur earlier in a program's life rather than later – i.e., early enough to revise the program as a result of the evaluation. This will vary based upon the size and nature of the programs, where they are in their life, and the similarity (or lack of similarity) to other distributor programs. For small programs, the evaluation effort could focus on secondary research augmented by interviews with key personnel involved in the program. Larger programs might involve greater depth of evaluation including market research, surveys with participants and non-participants and related primary research activities. In the end, the intent is to ensure that programs operate at the highest level of effectiveness and that the process evaluation results are made available to other utilities to assist them in their delivery.

6.1 Evaluation Plan

An overarching element of effective evaluation is the need to identify, at the outset, how each program will be evaluated. This establishes both the individual metrics that will be measured/tracked and evaluated and the mechanisms that will be used. It further ensures that the evaluation effort is adequately contemplated and resourced.

Utilities should file an Evaluation Plan along with the application for funding for any program(s). Approval of the distributor's DSM plan will be conditional upon approval of an acceptable Evaluation Plan for the program(s) contained in the DSM plan.

The purpose of the Evaluation Plan will be to identify the key evaluation metrics, activities and outcomes associated with each of the distributor's DSM programs.

It is recognized that not all programs will need an evaluation effort in each year. However, at a minimum the distributor should anticipate and plan for a certain level of evaluation activities over the continuum of a program's life.

In addition to meeting the evaluation objectives listed below, any Evaluation Plan should include the distributor's proposed methodology for:

- Measuring program effects (summative evaluation); and,
- Assessing why effects occurred, and how the program can be improved (formative or process evaluation).

The Evaluation Plan(s) should outline how the distributor will accomplish the following evaluation objectives:

- Measuring the level of natural gas savings achieved;
- Measuring cost-effectiveness;
- Informing decisions regarding LRAM, SSM and other financial incentive amounts;
- Providing ongoing feedback, and corrective and constructive guidance regarding the implementation of programs; and
- Helping to assess whether there is a continuing need for the program.
-

6.2 Program Type Specific Guidelines

This section focuses on the guidelines, in addition to those set out above, for tracking and measuring the effects of the following five types of DSM programs:

Direct acquisition programs are programs that have clear causality between distributor activity and natural gas and other resource savings.

Market support/outreach programs are programs in which the distributor supports outreach or educational efforts which generally promote the energy efficiency message, but where savings are indirect and it is difficult to see a clear cause and effect relationship.

Custom projects are those projects that involve customized design and engineering, and where a distributor facilitates the implementation of specialized equipment and technology that is not identified in the list of inputs and assumptions posted on the Board's website.

Market transformation programs are those that (a) seek to make a permanent change in the market for a particular measure, (b) are not necessarily measured by number of participants and (c) have a long term horizon.

Low income customer programs are those that are specially designed to reduce the natural gas consumption of low income customers.

6.2.1 Direct Acquisition Programs

Direct acquisition programs are relatively straightforward to track and measure. Tracking represents one of the administrative functions of program delivery. While the specifics will vary for each type of program, there is a need to show clear cause and effect between the distributor's activities and the customer's reduction of natural gas consumption. In direct acquisition programs, this is often

precipitated by the processing of a participant incentive. Utilities will need to have systems for collecting relevant information for each program, including:

- technology type;
- number of installations;
- savings estimates;
- equipment cost estimates;
- customer address or location;
- delivery channel; and
- participant incentive amount.

It may not be feasible to collect all information for all programs. For example, a program delivered by a retailer that relies on in-store coupons will likely not have the means to track who actually used the coupons and received the product(s). However, the retailer can be expected to track information about the number of coupons turned in, and the distributor's tracking system could then calculate the resulting cost to the distributor. With this information, the distributor can then calculate the savings and equipment cost and combine the information with equipment life, free rider and spillover estimates and program costs - resulting in both a tracking report and the components of the TRC analysis.

In the case of a program delivered by a third party, tracking should include reports that the delivery partner provides to the distributor. These reports should provide details such as number of customers visited including address and equipment installed.

6.2.2 Market Support Programs

Natural gas savings from DSM activities related to training, public outreach and the general provision of information on efficient energy use are difficult to track, measure and establish clear causality. Since market support programs typically do not result in natural gas savings, other assessment criteria should be used to assess their benefits. A distributor should endeavour to have at least one metric for each market support activity.

Below is a sample of potential tracking activities that might accompany the delivery of market support program.

<u>Support</u>	<u>Metric</u>	<u>Additional Information</u>
Web-site calculator	Number of hits	Survey re: usefulness of website
Training sessions for contractors	Number of sessions Number of attendees	Survey re: specific activities undertaken by attendees
Home shows	Number of giveaways	Survey re: energy efficient appliances
Design workshops	Number of professional attendees	Surveys re: design activities

6.2.3 Custom Projects

Custom projects are those projects that involve customized design and engineering, and where a distributor facilitates the implementation of specialized equipment or technology not identified in the list of inputs and assumptions as posted on the Board's website. Projects that involve a combination of several measures provided in that list of inputs and assumptions are not considered to be custom projects.

For a custom project, utilities will need to track:

- the type of equipment that was installed;
- the related savings and equipment cost; and
- distributor support costs.

Since custom projects usually involve specialized equipment, savings estimates should be assessed accordingly. It is expected that each custom project will incorporate a professional engineering assessment of the savings. This assessment would serve as the primary documentation for a claim that savings exist. Assumptions with respect to measure life should reflect actual expected measure life.

A special assessment program should be implemented for custom projects. The assessment should be conducted on a random sample consisting of 10% of the large custom projects; and the projects should represent at least 10% of the total volume savings of all custom projects. The minimum number of projects to assess should be 5. Where less than 5 custom projects have been undertaken, all projects should be assessed. The assessment should focus on verifying the equipment installation and estimates of savings and equipment cost.

Custom projects should be audited using the same principles as any other program. Audit activities should be sufficient for the auditor to form an opinion on the overall LRAM, SSM and other financial incentives proposed in the Evaluation Report. As noted earlier, only the part of the project that the distributor influenced is to be counted for SSM or LRAM purposes.

6.2.4 Market Transformation Programs

For each market transformation program the distributor should, in its DSM plan, propose a program description, goals (including specific metrics and measurement method), shareholder financial incentives (including structure and payment based on specific metrics), length, level of funding and program elements. Such programs are not amenable to a formulaic approach and therefore should be assessed on their own merits and all of the above components should be suitable given the subject matter and program goals.

6.2.5 Low Income Customer Programs

For each low income customer program the distributor should, in its DSM plan, propose a program description, goals (including specific metrics and measurement method), eligibility criteria, shareholder financial incentives (including structure and payment based on specific metrics), length, level of funding and program elements.

6.3 Implementation of Updated Input Assumptions

The input assumptions used to screen DSM technologies and programs may change over time due to more accurate and up-to-date information. The timing at which changes in assumptions become effective will differ depending on the use of the assumption, as follows:

Program Design and Implementation

Utilities should design, screen and evaluate programs using the best available information known to them at the relevant time. Therefore, it is expected that utilities will incorporate new information into program design and implementation as soon as available. In considering the prudence of any spending in excess of an approved budget that has been tracked in a DSM variance account, it is expected that the information available to the distributor at the time the program was implemented will be considered. That is, when amounts in a DSM variance account are being reviewed for the purposes of disposition, it is expected that the information available to the distributor at the time the spending decision was made by the distributor will be considered. This will apply even if the input assumptions have changed since that time.

LRAM, SSM and Other Financial Incentives

The input assumptions used for the calculation of LRAM, SSM and other financial incentives should be the best available at the time of the independent third party review referred to in section 6.5 below.

For example, if any input assumptions change in any given year, those changes should apply for LRAM and SSM purposes from the beginning of that year onwards until changed again.

Assume a program was delivered from January 1, 2007 until December 31, 2007. In June 2007, it was determined that the free rider rate used in the initial program analysis was under-stated. The distributor obtains a third party review of its evaluation of program results in April 2008. The input assumptions that will apply in relation to any lost revenue between January 1, 2007 and December 31, 2007, will be those that were introduced in June 2007. That is, the new free rider rates apply for the entire period from January 1, 2007 to December 31, 2007.

6.4 Evaluation Report

A distributor that makes an LRAM, SSM or other financial incentive claim will need to file a detailed Evaluation Report at the time of making that claim. The Evaluation Report should consist of the following sections:

Introduction

In the "Introduction" section of the Evaluation Report, utilities should provide a general overview of their DSM initiatives including any relevant local context.

Evaluation of the DSM Plan

This section should provide an overview of the effectiveness of a distributor's DSM plan. Utilities should report on all initiatives worked on and detail the process and impact analysis of the individual programs.

Note:

Stand alone education or marketing programs that do not have quantifiable benefits should report all relevant information (potential assessment criteria are identified in section 6.2.2). Marketing or support programs (i.e., programs designed to enhance market acceptance of other programs) should not be reported individually as they are components of other programs. Rather, the costs of marketing or support programs should be allocated to the programs they support.

Utilities who have pilot programs (see section 2.6), or other programs for which cost effectiveness data has not been provided by the Board (on the Board's website) should provide their own values, if available, and report all relevant information (attach a separate table if needed).

If the inputs and assumptions used by the distributor vary from those that have been posted on the Board's website, the variation(s) should be identified, and additional information supporting the variation(s) should be filed. If the specific technology promoted by a distributor was not included by the Board (on the Board's website), the distributor may select a similar technology as a proxy for annual reporting purposes. A distributor that selects a proxy technology for reporting should identify the actual technology in its Evaluation Report and the similarities between the proxy technology and the actual technology. However, for the purposes of a claim for recovery of LRAM, SSM or other financial incentives, where a distributor uses a proxy technology, the distributor should provide detailed evidence justifying the appropriateness of using the proxy technology, and detail the steps the distributor has taken, or will take, to determine the actual data for the technology used in the DSM program.

Lessons Learned

In the "Lessons Learned" section the distributor should indicate what has been learned over the course of the program. The goal of this section is to evaluate and benchmark programs for greater efficiency in delivery and cost effectiveness, and to provide information to other utilities with respect to DSM programs. Utilities should indicate if a program is considered a success or not and whether the program should be continued.

(4) Conclusion

The "Conclusion" section should consist of the distributor's summary of its performance relative to the DSM plan approved by the Board.

6.5 Independent Third Party Review

Given the rate-making implications of program evaluations, the Board and all relevant stakeholders need to be confident that evaluations are an accurate reflection of actual program results.

Utilities should undertake program evaluations according to the approved Evaluation Plans, and have the evaluations reviewed by an independent third party engaged by the distributor for the purposes of LRAM, SSM and other financial incentive claims filed with the Board.

The third party, although hired by the distributor, should be independent and will ultimately serve to protect the interests of ratepayers. Utilities should ensure that DSM budgets and spending include adequate funding to procure the third party review.

The third party is expected to:

- Provide an opinion on the cost effectiveness results that are material to the LRAM, SSM and other financial incentives proposed;
- Confirm that the utilities have undertaken program evaluations according to the approved Evaluation Plans.
- Review the evaluation reports and ensure that the distributor has used the most recent results from program evaluations.
- Verify the participation levels;
- Confirm that the input assumptions are those that have been posted on the Board's website. Where any input assumptions have changed in previous years, confirm that the input assumptions were implemented consistent with section 6.3;
- Where the distributor has varied from the input assumptions that have been posted on the Board's website, review the reasonableness of the input assumptions used;
- Recommend any forward looking evaluation work to be considered; and
- Recommend any improvements to the program to enhance program design, performance, and uptake by customers.

7.0 DSM CONSULTATIVE

Distributors should engage and seek advice from a variety of stakeholders and experts in the development and operation of their DSM programs as they consider appropriate.

However, it is expected that each distributor will hold, at a minimum, two DSM Consultative meetings annually. All intervenors in the distributor's most recent rate case should be invited to participate in these DSM Consultative meetings. The purpose of the meetings should be to:

- Review annual results (the Evaluation Report should be sent to the Consultative annually for review)

- Select an Evaluation and Audit Committee (EAC). Three members should be selected using the current process for selecting the Audit Sub-Committee; the fourth member will be the distributor. In the current process, the members of the consultative nominate individuals to stand on the committee. Then each member of the consultative votes for the three members they would like on the committee. The three members with the highest number of votes are selected to the committee.
- Review the completed evaluation results

The EAC should provide formal input into the distributor's Evaluation Plan. In regards to evaluation activities, the EAC should have an advisory role in relation to the matters listed below:

- Consultation prior to the filing of the DSM plan on evaluation priorities over the lifetime of the plan
- Review and comment on evaluation study designs.
- Reviewing the scope and results of evaluation work completed on new programs introduced over the course of the DSM plan
- Selection of the independent auditor to audit the Evaluation Report and determine the scope of the audit. The EAC should ensure that all comments on the Evaluation Report that arise from the DSM Consultative meetings are reviewed by the auditor.
- Following the audit, review the Evaluation Plan annually to confirm the scope and priority of identified evaluation projects.
- The EAC should also be involved in the preparation of the distributor's filing under section 2.1.12 of the Natural Gas Reporting & Record Keeping Requirements Rule for Gas Utilities. The EAC should provide a final report within 10 weeks from the date of receipt of the Evaluation Report and supporting evaluation studies from the utility or the date of hiring of the auditor, whichever is later. Recommendations of the EAC with respect to DSMVA, LRAMVA and SSMVA clearances should be included in the EAC's final report.

Distributors, in consultation with the DSM Consultative, are expected to develop clear terms of reference regarding the role and operation of the DSM Consultative and EAC.

The distributor should determine, as part of the planning process, the appropriate amount to include in its overall DSM budget for stakeholder engagement, based on anticipated needs.

8.0 ACCOUNTING TREATMENT

8.1 Funding of DSM Programs

There could be two potential streams of funding available to distributors for the delivery of DSM programs: funding through distribution rates and funding from third parties.

Should an alternative source of funding become available for a program which was funded through distribution rates, the distributor should apply for that funding. In such circumstances, the DSM variance account should track the funding which was originally included in the distribution rates, so that it may be returned to ratepayers. Alternatively, a distributor may apply to the Board to use the funding for another DSM program.

8.2 Cost Allocation

Utilities should use a fully allocated costing methodology for all distributor-delivered DSM activities. Capitalized assets associated with DSM activities that are funded through rates will be included in rate base, and will be treated in the same manner as distribution assets. Assets purchased with funds from third parties will not be eligible for inclusion in rate base, nor will any ongoing operating costs associated with the asset, or income taxes payable in relation to third-party funded activities. The accounting treatment of DSM spending not funded through distribution rates is discussed in section 8.6 below.

Where funding is coming from a third party, the separation in costs will appropriately establish distribution rates by eliminating any cross subsidization between third-party funded DSM activities, and those activities funded through distribution rates. Where the funding would be from the distributor's rates, fully allocated costing will ensure that there is an appropriate basis to determine the cost effectiveness of DSM programs.

Cost allocation in rates should be on the same basis as budgeted DSM spending by customer class. This allocation applies to both direct and indirect DSM program costs.

8.3 Revenue Allocation

Any net revenues generated by a shareholder incentive for distribution rate-funded DSM should be separate from (i.e., not used to offset) the distributor's distribution revenue requirement.

8.4 Demand Side Management Variance Account (DSMVA)

The distributor should apply to clear DSMVA amounts, subject to review as a component of the DSM audit, to ensure compliance with the Board approved rules. The distributor should include the DSMVA as part of the mandated audit. The distributor will be permitted to recover the amounts in the DSMVA from ratepayers provided it has achieved its annual TRC savings or other targets on a pre-audited basis and the DSMVA funds were used to produce TRC savings in excess of that target on a pre-audited basis.

Utilities should allocate the DSMVA amounts in rates based on their DSM spending variance for that year versus budget, by customer class. The actual amount of the variance versus budget targeted to each customer class should be allocated to that customer class for rate recovery purposes.

If spending is less than what was built into rates, ratepayers should be reimbursed. If more is spent than was built into rates, the distributor should be reimbursed up to a maximum of 15% of its DSM budget for the year. All additional funding should be utilized on incremental program expenses only (i.e., cannot be used for additional distributor overheads).

There should be no limit on the amount of under spending from budget that should be returned to ratepayers.

8.5 Carbon Dioxide Offset Credits Deferral Account (CDOCDA)

The purpose of the CDOCDA is to record amounts which represent proceeds resulting from the sale of or other dealings in earned carbon dioxide offset credits.

8.6 Recording of DSM Spending Not Funded Through Distribution Rates

Third-party funded DSM programs are classified as non-distribution activities. Consequently, the financial records associated with third-party funded DSM should be separate from those associated with the distributor's distribution activities.

A distributor receiving third-party DSM revenues and incurring related DSM expenses and/or capital expenditures should record these transactions in separate non-distribution accounts in the Uniform System of Accounts for Gas Utilities. For this purpose, account 312, Non-Gas Operating Revenue, should be used for revenues and account 313, Non-Gas Operating Expense, should be used for expenses. Sub-accounts may be used as appropriate.

9.0 ANNUAL REPORTING GUIDELINES (New)

The guidelines set out in this section relate only to DSM programs funded through distribution rates.

Reporting on the progress and success of DSM programs is critical to maintaining accountability and transparency. For programs funded through distribution rates, utilities should file annual reports, by June 30 of each year as required by section 2.1.12 of the Natural Gas Reporting & Record Keeping Requirements Rule for Gas Utilities. Where utilities have approved funding for more than one year, a report should be filed annually summarizing the results of the previous year, and at the end of the plan term, addressing results for the entire plan term.

If the Board has approved DSM plans that span more than one year, annual reporting will be an important tool to allow the Board and stakeholders to monitor utilities' year-over-year progress in the implementation of their DSM plans. The annual report should provide the Board and stakeholders with information on what DSM activities the distributor is undertaking, how it is performing, what it is costing, and the distributor's planned future activities.

Where utilities have separate streams of funding, results should be differentiated in the Annual Report.

The Annual Report should consist of the following sections:

1. Introduction

In the "Introduction" section of the annual report, utilities should provide a general overview of their DSM initiatives including any relevant local context.

2. Description of the programs

In this section, the distributor should provide an overview of each program, including the targeted customer class or group, the objectives of the program, and any activities associated with the program.

3. Participation levels

In this section, distributors should detail the number of participants for each program.

4. Natural Gas savings in M³

In this section, distributors should provide the annual and cumulative energy savings attributable to each program, presented as both net and gross of free riders.

5. Measures evaluation research

In this section, distributors should describe any research completed regarding deemed savings assumptions and free rider and spillover estimates. The completed studies should be included as an appendix to the Annual Report.

6. LRAM statement

In this section, distributors should provide a statement that outlines the expected LRAM claim for the year of the Annual Report.

7. SSM and other incentives statement

In this section, distributors should provide a statement that outlines the expected SSM and other incentive claims for the year of the Annual Report.

8. Comments

In this section, distributors should provide any additional information as appropriate. This may include the distributor's assessment of the success of the programs to date, what activities are planned for the subsequent year(s) (if applicable) and any planned modifications to program design or delivery.

10.0 ADMINISTRATION

10.1 Filing Guidelines (New)

This section contains the filing guidelines for the following types of applications:

10.1.1 - Program funding through distribution rates

10.1.2 - Lost Revenue Adjustment Mechanism

10.1.3 - Shared Savings Mechanism and other financial incentives

10.1.4 - Adjustments to an approved DSM plan

It is expected that utilities will comply with these filing guidelines as a minimum. Utilities should in all cases be prepared to demonstrate to the satisfaction of the Board that any given application should be approved, and are responsible for ensuring to that end that all relevant information is before the Board (including evidence that may have been filed in an earlier proceeding). Utilities are reminded that the Board may make any order or given any direction as the Board determines necessary concerning any matter raised in relation to any of the above applications, including in relation to the production of additional information which the Board on its own motion or at the request of a party considers appropriate.

10.1.1 Program Funding through Distribution Rates

An application for funding through distribution rates for new programs should include:

1. Characteristics of the applicant's distribution system, including:

- Total natural gas purchases;
- Sales by rate class; and
- Number of customers by rate class.

2. For each program, the following information should be provided:

- Detailed description of the program;
- Customer class(es) targeted;
- Projected incremental natural gas savings per year;
- Projected budget, listing:
 - Description of the primary barriers to preventing higher uptake of the measures of the program
 - Description of how the program will remove the barriers;
 - capital expenditures per year;
 - operating expenditures per year separated into direct and indirect expenditures;
 - for each direct operating expenditure, an allocation of the expenditure by targeted customer classes; and
 - expenditures for evaluation of the program(s).
- Measure, programs and portfolio cost effectiveness results;
- The input assumptions underlying the forecasted savings and costs including a detailed presentation of the calculations;

- Where a program involves the implementation of specialized equipment or technology not identified in the list of inputs and assumptions as posted on the Board's website, the distributor should comply with the guidelines set out in 6.2.3 respecting custom projects;
- A statement as to whether the distributor has varied from the list of inputs and assumptions as posted on the Board's website. Where the distributor has varied from that list of inputs and assumptions, the distributor should provide detailed evidence to support the alternative data, including, at a minimum, a completed "Input Assumptions Template"; and
- The benefit-cost analysis, calculating the net present value of the initiative using the TRC test. For the purpose of calculating the net present value, a distributor should use a discount rate equal to the incremental after-tax cost of capital, based on the prospective capital mix, debt and preference share cost rates, and the latest approved rate of return on common equity.

3. The distributor should also provide the following (specified on a per year basis):

- The total amount of DSM spending to be recovered in rates and the allocation of those costs to the customer class(es) that will benefit from the DSM program applied for;
- A forecast of the number of customers in each class and a forecast of M³ of natural gas to be used as a charge determinant to determine the rate rider for each class to benefit from the DSM program; and
- A comparison of the proposed rates with and without the DSM rider for the rate year in question.

4. An Evaluation Plan, in accordance with section 6.1.

5. In addition to the information above, the following information should be provided for pilot programs (see section 2.6):

- A description of the technology being used;
- A discussion of whether and how, to the distributor's knowledge, the technology is being used or tested by any other utilities. Where the technology is being used by another distributor, a description of how the distributor will coordinate or work with the other distributor using or testing the technology to ensure effective use of the program and of lessons learned; and
- The expected outcome of the pilot program. That is, what data or information will the program produce, and how will it be used for future DSM programs.

10.1.2 Lost Revenue Adjustment Mechanism (LRAM)

Section 4.0 contains information on the programs that are eligible for LRAM, the calculation of LRAM, and the timing of any application for recovery of LRAM.

An application for LRAM should include:

Third-Party Funded Programs

- Natural gas savings (both gross and net of free riders) for each program and for each class;
- The free rider rate applied to each program. Where different activities within a program have different free rider rates, the free rider rate for each activity should be provided;
- A calculation of the impact of the DSM program on distribution revenues in each class;
- Verification of the participation levels;
- Duration of the program in years or months;
- An Evaluation Report, in accordance with the guidelines set out in section 6.4; and
- Any reports completed by an independent third party, in accordance with the guidelines set out in section 6.5.

Programs Funded through Distribution Rates

- Natural gas savings (both gross and net of free riders) for each program and for each class;
- The free rider rate applied to each program. Where different activities within a program have different free rider rates, the free rider rate for each activity should be provided;
- A calculation of the impact of the DSM program on distribution revenues in each class;
- Verification of the participation levels;
- Where savings information is not provided in the list of inputs and assumptions posted on the Board's website, the distributor should comply with the guidelines set out in section 6.2.3 respecting custom projects;
- A statement as to whether the distributor has varied from the list of inputs and assumptions as posted on the Board's website. Where the distributor has varied from that list of inputs and assumptions, the distributor should provide detailed evidence to support the alternative data, including, at a minimum, a completed "Input Assumptions Template"; and
- Duration of the program in years or months.

For programs funded in 2010 and beyond, the following information should be provided, in addition to the guidelines set out above:

- An Evaluation Report, in accordance with the guidelines set out in section 6.4; and
- All reports completed by an independent third party, in accordance with the guidelines set out in section 6.5.

All information filed in support of the LRAM claim should correspond to program information used in the calculation of the benefit-cost analysis.

10.1.3 Shared Savings Mechanism (SSM) and Other Financial Incentives

Section 5.0 contains information on the programs that are eligible for SSM and other financial incentives, the calculation of SSM and other incentives, and the timing of any application for recovery of SSM or other financial incentives.

An application for SSM or other financial incentives should include:

- Natural gas savings (both gross and net of free riders) for each program and for each class;
- The free rider rate applied to each program. Where different activities within a program have different free rider rates, the free rider rate for each activity should be provided;
- A calculation of the impact of the DSM program on distribution revenues in each class;
- Verification of the participation levels;
- Where savings information is not provided in the list of inputs and assumptions as posted on the Board's website, the distributor should comply with the guidelines set out in section 6.2.3 respecting custom projects;
- A statement as to whether the distributor has varied from the list of inputs and assumptions as posted on the Board's website. Where the distributor has varied from that list, the distributor should provide detailed evidence to support the alternative data, including, at a minimum, a completed "Input Assumptions Template;" and
- Duration of the program in years or months.

For programs funded in 2010 and beyond the following information should be provided in addition to the information set out above:

- An Evaluation Report, in accordance with the guidelines set out in section 6.4; and

- All reports completed by an independent third party, in accordance with the guidelines set out in section 6.5.

10.1.4 Adjustments to an Approved Plan

An application for adjustments to an approved plan should include:

- Current and proposed budgets for programs affected by the re-allocation;
- A description of the programs from which, and to which, funds are being re-allocated;
- Whether the distributor is requesting that the Board to proceed in accordance with section 21(4)(b) of the *Ontario Energy Board Act, 1998* under which the Board can dispose of the proceeding without a hearing; and
- Where funding is being allocated to a program or programs that are not part of the distributor's approved DSM plan, the distributor should apply for approval of the proposed new program(s) at the time at which it applies for the proposed budget re-allocation.