2006 EDR Conservation Working Group

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Topic 1: Scope of the utilities' customer-side of the meter conservation programmes.

Summary of work to date: see below

Questions of scope: none

Issues on which the group has reached general consensus: Ontario's electric utilities should be allowed to seek approval for conservation spending to promote energy conservation programmes on the customers' side of the meter, that:

1. Reduce the demand for grid electricity (kw and kva), particularly system peak coincident demand, while reducing or not increasing the amout of energy (kwh) used; and/or
2. Reduce the amount of energy (kwh) that is used to meet a customers' energy services needs.

There are four broad categories of energy conservation programmes that can satisfy these criteria, namely:

1. Programmes that increase the efficiency of an electric end-use;
2. Peak reduction and peak shifting programmes;
3. Fuel switching programmes that substitute an alternative fuel to meet a customer's end-use energy service need at a lower cost; and
4. Programmes that promote switching from grid-supplied electricity to self-generation to meet a customer's electricity service need at a lower cost.

Each utility should be allowed to determine which categories of conservation programmes it will pursue. For example, a utility should be allowed to just pursue peak day demand reduction conservation programmes if it wishes to.

The Total Resource Cost (TRC) Test should be used to evaluate all of the proposed categories of conservation programmes.

Unresolved issues:

This subgroup has not dealt with utility side of the meter conservation. Programs and funding for utility side conservation need to be developed by a group in the 2006 EDR process, and in the Conservation Handbook.

Should fuel switching initiatives be examined in a broader public policy context due to concern about rate impacts.

Should any conservation programs that will raise rates be included.

Filing requirements for funding requests for 2006 qualifying C&DM adjustments.

Crossovers:

The Rate Design Sub-Group is developing a proposal to motivate the utilities to reduce

distribution system losses.

Test year and adjustments 3.1: to consider adjustments for utility side C&DM.

Proposed path for this issue: The inclusion of fuel switching in the acceptable scope of utility conservation is a matter that could be addressed in argument or evidence.

The inclusion of any conservation programs that will raise rates may require evidence or argument.

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Topic 2: Revenue Protection for Utility Conservation Impacts. (LRAM).

Background: Volumetric ratemaking links the electric utilities' distribution revenues and profits to their distribution volumes (kW and kWh). After rates are set for a period, the higher are their distribution volumes, the higher are their profits. Conversely, after rates are set for a period, each kWh saved beyond the level assumed in the rate setting process reduces a utility's profits. Accordingly utility conservation programs lower revenues, in the absence of rate adjustments.

Questions of scope:
Whether revenues lost in 2005 due to 2005 C&DM activities should be recoverable in 2006 or beyond? Is this within the scope of the 2006 Rate Handbook?

Unresolved issues:

1. Should an LRAM be used at all?

If an LRAM is used, it was suggested that each utility should be allowed (not required) to apply to the OEB to create an LRAM deferral or variance account to recover the lost distribution revenues plus carrying charges that it experiences as a result of its energy conservation programmes. (For definition of LRAM and other terms, please see glossary to EBO 169–III.) Depending on the treatment of utility conservation impacts in rate setting, one of the following two scenarios will be appropriate:

Scenario #1: If rates are a function of a load forecast which takes into account the impact of the utilities' conservation programmes: If the actual electricity savings of a utility's conservation programmes are greater than forecast, the utility should be allowed to recover its lost revenues plus carrying charges from its customers in a subsequent rate year. Conversely, if the actual electricity savings of a utility's conservation programmes are less than forecast, the utility should be obliged to return its excess revenues plus carrying charges to its customers in a subsequent period.

Scenario #2: If rates are not a function of a load forecast which takes into account the impact of the utilities' conservation programmes: Each electric utility should be allowed to recover, in a subsequent rate year, its lost distribution revenues plus carrying charges that it experiences as a result of its conservation programmes

2. Given that it is proposed to use an adjusted 2004 test year as the base for 2006 rate setting, what mechanisms, if any, should be used to provide revenue protection for the effects of any 2005 C&DM activities on 2006?

Crossovers: Note that the choice of mechanism is related to treatment of load forecast – test year and adjustments 3.1.

Proposed path for this issue: evidence or argument.

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Topic 3: Shareholder Incentives for conservation and demand management programs.

Summary of work to date:

Three options for possible shareholder incentive mechanisms have been discussed:

Option 1. An electric utility could be permitted to apply for a Shared Savings Mechanism (SSM) incentive which is a equal to a small fraction of the total bill savings (e.g., 5%) that the utility's conservation programmes create. The Total Resource Cost (TRC) Test would be used to calculate the net bill savings produced by the utility's conservation programmes. The TRC Test would use province-wide avoided (marginal) generation and transmission costs (and local avoided distribution costs where applicable) along with other relevant inputs to calculate the net bill savings.

Option 2. Rather than making the SSM a function of total bill savings, this alternative SSM would concentrate on rewarding incremental savings above a pivot point level of savings. The pivot point would be set by pro-rata formula at a level of savings (in dollars of net TRC benefits produced) corresponding to $5.60 for each $1.00 of its planned C&DM expenditures of ratepayer funds (third-tranche revenues plus additional budgeted expenditures). After the conclusion of each rate year, SSM rewards will be cleared based on actual expenditures and benefits as determined by evaluation and audit. Should a utility company choose to spend shareholder funds on C&DM activities, it shall also be eligible for SSM rewards as if those expenditures were budgeted from ratepayer funds. The proposed $5.60 value is 80% of $7 which is the level of TRC achieved by Enbridge per dollar of C&DM spending.

While the "pivot point" is based entirely on expenditure levels, it is possible to apportion the same Ontario-wide total pivot point to individual utilities based on other metrics (e.g., kwh of electricity sales in 2004, or dollars of electricity sales in the 2004 rate year).

Option 3. Start with option 1, and consider transition to option 2 in future years when experience has been gained to assist in selecting the appropriate pivot point.

Questions of scope: The question as to whether application of an SSM to 2005 activities (funded by MARR or not) is within the scope of the 2006 handbook as it would involve a deferral account for 2005 activity but could involve filings and rate impacts in 2006 or beyond.

Issues on which the group has reached general consensus:

Shareholder incentives for conservation should be implemented, and the incentive should be significant enough to motivate the utilities to seek to achieve the largest possible bill savings per dollar of utility spending. On the other hand, the shareholder incentive must not lead to an undue increase in the utilities' rates.

The SSM is entirely separate from and should not be linked to return on equity.

The SSM should be cleared utilizing pre-approved values where applicable (see pre-approval issue).

Conservation programmes delivered by Ontario's electric utilities, pursuant to a contract with the proposed Ontario Power Authority should not be eligible for a SSM incentive.

Unresolved issues:

The level of incentive and what shared savings mechanism should be used. Should a TRC based SSM be used?

Whether further analysis is needed before setting the level of the incentive rate and implementing the SSM.

Should an SSM be applied to conservation activities other than customer side energy efficiency programs?

Should the incentive be paid, in full, or in part, based on estimates, i.e. prior to post audit true up?

Crossovers:
Tax treatment of any SSM (implications of PILs true-up).

Proposed path for this issue:

Evidence will be required on the appropriate level of the incentive.

The issues of alternative SSM architecture, the use of TRC, and the application of SSM to the range of conservation activities may require evidence or argument.

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Topic 4: Annual pre-approval of conservation program input assumptions.

Background: The calculation of energy and bill savings associated with utility-sponsored conservation programmes depends on many input assumptions (e.g., avoided costs, kWh, kW and kVa savings per measure, measure lives, free-rider rates). A retroactive, post-audit adjustment of some or all of these assumptions by the OEB could delay, complicate and jeopardize the ability of an electric utility to recover its conservation expenditures and/or its expected LRAM and SSM claims. By minimizing regulatory risk and uncertainty the OEB can eliminate a serious disincentive to the implementation of innovative and aggressive conservation programmes by Ontario's electric utilities and streamline the regulatory process.

Questions of scope: Should the filings for pre-approval of conservation programs be included with rate filings or be part of a separate filing?

Issues on which the group has reached general consensus: Each electric utility should be permitted to seek pre-approval of its proposed input assumptions for some or all of its conservation programmes from the OEB. The OEB should use the pre-approved values when determining a utility's LRAM claim and/or SSM reward.

The OEB should post on its web site the input assumptions that it has approved for each utility. After the OEB has given pre-approval to a specific input for a specific utility, another utility (the applicant) should be allowed to file a notice of intent with the OEB to also use the pre-approved input. The OEB could then give the applicant permission to use the pre-approved input or state why the applicant cannot use the pre-approved input because of some unique aspect of its service territory or system.

Custom projects (typically found in the large commercial, institutional and industrial sectors) will not be amenable to pre-approval of most inputs as the inputs will be situation-specific rather than generic. Accordingly, the final clearance of the portion of the conservation variance accounts (e.g., Lost Revenue Adjustment Mechanism, Shared Savings Mechanism, Conservation Expenditures Variance Account) attributable to these projects must await evaluation of custom inputs after delivery. If custom projects contain generic elements (e.g., use of a particular technology that is not specific to the location) a utility may seek pre-approval of the screening and evaluation inputs related to the generic elements to reduce regulatory risk. Further, if a utility delivers a custom or generic programme in a manner different from the pre-approved, reliance on the pre-approval will be limited to the factors unaffected by the changes and the utility will be required to justify all inputs that were not subject to pre-approval.

A top priority for the Board should be to issue pre-approved interim values for the avoided costs of electricity generation, transmission and distribution since these values are a pre-requisite for calculating the benefits side of the TRC Test. The CWG believes that, in the near future, one or more of Ontario's electric utilities will have avoided cost estimates which could be submitted for pre-approval and that will be suitable for widespread application.

In the future the Board may endorse the pre-approval of some or all of the input assumptions by the conservation bureau of the proposed Ontario Power Authority. However, it is essential that the Board perform this function, at least on an interim basis, to reduce regulatory risk and uncertainty for Ontario's electric utilities. Further, the Conservation Bureau is expected to focus on province-wide programmes and the need for a mechanism to

approve utility-specific programmes will persist.

Unresolved issues:

Should the Board give pre-approval only for prescriptive (generic) programmes, or should it also consider pre-approval of generic elements of custom programmes?

Proposed path for this issue:

The applicability of pre-approval for generic elements of custom programs may require evidence or argument.

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Topic 5: Conservation budget post third tranche spending

Summary of work to date: Three options have been developed:

1. The OEB can provide conservation spending guidelines in its Conservation Handbook.

2. The OEB can give all utilities blanket approval, in 2005 and 2006, to collect up to X cents per kWh for each kWh they deliver (less the amount of third tranche revenues expended in that year) to finance their energy conservation programmes.

Utilities that wish to exceed the proposed conservation spending cap (X cents per kWh) should be permitted to apply to the Board for a higher spending cap.

3. The OEB could adopt option #2 and establish "X" at a value of 0.2 cents per kWh.

Questions of scope: Applicability to pre-2006 spending.

Issues on which the group has reached general consensus:

To help the utilities develop multi-year conservation programmes and to reduce regulatory costs, the OEB should establish conservation spending guidelines.

Unresolved issues:

The mechanism for providing guidance on spending.

The level of appropriate spending.

Crossovers:

Determination of the utility revenue requirement.

Proposed path for this issue: This issue will require evidence on the appropriate mechanism and level for conservation spending guidelines.

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Topic 6: Conservation Expenditures Variance Account (CEVA)

Summary of work to date: A CEVA would return to customers C&DM expenditure amounts budgeted but unspent. It would also allow a utility to obtain funding for the costs of continuing a successful program after the budgeted level is exceeded.

The variance between a utility's actual and budgeted conservation expenditures could be recorded in a Conservation Expenditures Variance Account (CEVA). If actual expenditures are less than budgeted expenditures, the variance plus carrying charges will be returned to the utility's ratepayers in a subsequent rate year. Actual expenditures up to 120% of budgeted expenditures plus carrying charges will be recorded to be recovered from ratepayers in a subsequent year. A utility could seek approval from the OEB, during the rate period, to record annual expenditures in excess of 120% of budgeted expenditures in the account.

Questions of scope: none

Issues on which the group has reached general consensus: none

Unresolved issues:

Is a CEVA necessary or appropriate?

Proposed path for this issue: Evidence or argument may be required.

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Recommendations not requiring 2006 Rate Handbook treatment

These matters are recommendations to the Board for early implementation, that would not require direct inclusion in the 2006 rate handbook. However, the rate implications of these recommendations would have to be integrated in to the Rate Handbook.

1. Development of Conservation Handbook

Recommendation:

The OEB should publish a Conservation Handbook. The Handbook would evolve and embody the Board's regulatory framework for conservation. It would be expected to change over time as the role of the Conservation Bureau of the proposed Ontario Power Authority evolves. The initial details of the Handbook would be settled in the near future in time to provide guidance for screening of 2006 programmes. The initial Handbook should set out:

1. Programme eligibility examples and guidelines.
2. Programme and measure screening templates.
3. Default generation and transmission avoided cost values.
4. Guidelines for calculating local avoided costs.
5. Reporting templates (e.g., templates for calculating LRAM, TRC and rate impacts and illustrative examples).
6. Audit and Audit Advisory Committee protocols.
7. Conservation spending level guidelines.
8. Conservation results filing dates (to facilitate prompt audit and deferral account clearance).
9. The following programme development guidelines:

    a) The utilities should develop a diversified portfolio of conservation programmes to minimize cross-subsidization. A portfolio which will permit all utility customers to participate in at least one conservation programme during the next three to five years is recommended. Specifically, the utilities should design programmes to overcome market barriers, beginning in 2005 or 2006, to enable all customer groups (e.g.,low income customers) to share in the benefits of conservation programmes as quickly as possible.

    b) To the fullest extent possible one customer segment (e.g., industrials) should not subsidize another customer segment's (e.g., residential) conservation programmes.

    c) In order to maximize ratepayer benefits and avoid duplication of effort, the utilities should be encouraged to co-operate, where appropriate, with each other, the proposed Ontario Power Authority and Ontario's gas utilities to develop cost-effective conservation programmes.

    d) The Board should also encourage the utilities to contract out some or all of their conservation programme design, delivery and evaluation if this option will lead to reduced costs or higher value-added.

    e) To minimize customer costs and better address the Government's conservation goals, the utilities should take care not to overlook lost opportunity programmes in addition to discretionary retrofit programmes. (Lost opportunities programmes are conservation programmes that focus on situations where an event is occurring such as a building being constructed or a piece of long-lived equipment being replaced. In

these situations failure to implement a conservation measure at the same time will mean either a considerable delay until the opportunity arises again, or a much higher cost if the premature retirement of the new equipment is required.)

10. Establish Conservation Reporting requirements

Standardized reporting of utility conservation expenditures and results will facilitate the identification and adoption of best practices and simplify regulation leading to larger bill savings for consumers. It is important to measure the rate impacts of conservation programmes.

Utilities should file the following statistics about their conservation programmes on an annual basis:

- Annual kWh, peak kW and peak kVA saved;
- Annual kWh, peak kW and peak kVA saved, as a percentage of the utility's total kWh delivered, peak kW and peak kVA respectively, broken-out according to major customer segments (e.g., residential, commercial/institutional, industrial);
- Conservation expenditures;
- Conservation expenditures per kWh delivered, peak kW and peak kVA, broken out by major customer segments.
- Net present value of TRC benefits, broken-out by major customer segment;
- First year and cumulative rate impacts of their portfolio of conservation programmes, broken out by major customer segments.

The evaluation reports for utilities that are seeking an SSM reward should also provide the following information for each conservation programme:

- Target market;
- Number of participants;
- Dollars spent per participant;
- Lifetime electricity savings (kWh, kW and kVa) achieved; and
- TRC Test inputs and results.

The OEB's independent auditor should compile the above statistics, on a post-Audit basis, for each utility. (See CWG recommendation on audit and advisory committee)

Further filings may be necessary: for example, should rate impact analysis should be provided for each individual program where SSM is sought?

The OEB should consult with stakeholders in the development and evolution of its Conservation Handbook.

Crossover: Integration of rate implications of Conservation Handbook into Rate Handbook and rate filings and approvals.

2. Appointment of an independent auditor and establishment of audit advisory committee

Recommendation:

The OEB should hire an independent auditor to: a) provide it with technical advice with respect to the utilities' applications for pre-approval of input assumptions; and b) audit the utilities' LRAM and/or SSM claims.

Some subgroups members recommend that the OEB should establish an Audit Advisory Committee consisting of one representative from each of the following province-wide constituencies: a) residential, commercial and institutional customers; b) industrial consumers; c) environmental groups; and d) electricity distributors. The Audit Advisory Committee should provide advice to: a) the OEB with respect to the selection of the independent auditor and other audit-related issues; and b) the independent auditor.

Crossover: Integration of the work of the auditor into Rate Handbook.

Further Information

Further information on Conservation and Demand Management as it pertains to the 2006 Electricity Distribution Rates process.

- Full Report of Conservation Working Group – October 19, 2004-10-21:

  http://www.oeb.gov.on.ca/documents/edr_cwgrec_211004.pdf

- Glossary of Terms, from the Report to the Ontario Energy Board in E.B.O. 169-III (July 23, 1993)

  http://www.oeb.gov.on.ca/documents/edr_appb_211004.pdf