

July 21, 2010

Ms. Kirsten Walli  
Board Secretary  
Ontario Energy Board  
P.O. Box 2319  
26th Floor  
2300 Yonge Street  
Toronto, ON M4P 1E4

**SENT VIA MAIL AND EMAIL**

**boardsec@oeb.gov.on.ca**

Dear Ms. Walli:

**Re: EB-2010-0215 - Toronto and Region Conservation (TRCA) Comments on Conservation and Demand Management Code for Electricity Distributors**

Toronto and Region Conservation (TRCA) welcomes this opportunity to provide input to the Conservation and Demand Management Code for Electricity Distributors. As a first time intervenor, TRCA's interest and knowledge relate to The Living City energy conservation programming which TRCA has been delivering to a growing number of building sectors across Ontario since 2003.

Greening Health Care is one of The Living City programs which we launched in May, 2004. Today, more than twenty Ontario hospital corporations and over 40 hospital sites are members of Greening Health Care. A central element of Greening Health Care is its web based building performance management system developed in Ontario, which now contains one of the largest performance databases in North America. The hospitals use the system to:

- benchmark their energy and water use;
- set targets based on high-performing facilities;
- determine their conservation potential; and
- monitor their monthly energy and water savings.

Member hospitals meet quarterly in facilitated workshops and webinars where they receive education in technology and best practices, plan and implement improvements, and network knowledge and experiences with each other. Together they form a collaborative community of interest working progressively towards ever higher levels of efficiency and cost savings.

Greening Health Care exemplifies what we have come to refer to as performance based conservation. Such programs share the following characteristics:

- voluntary, collaborative and member directed;
- continuous energy reporting – members have been monitoring their energy performance for many years;
- data-driven – targets and best practices are informed by benchmarking and validated by actual energy savings recorded by the hospitals
- multi-year commitment – it can take 2 years or more for a new member hospital to demonstrate early success with operational improvements and make the business case for greater investment in conservation;

- continuous improvement – energy conservation evolves from one-time projects to an ongoing management process of individual initiatives working towards higher and higher performance targets.

Performance based conservation begins on a foundation of utility data collected from monthly utility bills. A building baseline is created to compare to future energy consumption which may have changed due to conservation activity. Using utility data and documented conservation measures, it is a straightforward process to verify actual savings and performance improvements. This serves a number of purposes, including verification for utility company incentive programs, tracking the effective useful life of measures, and ongoing performance tracking for continuous improvement.

While operational improvements can reduce electricity consumption, substantial electricity reductions in most buildings require changes to installed equipment. Performance based conservation includes development of power density standards which ensure that retrofits go beyond technology changes to achieve optimal levels of electricity use.

It is now well documented that prescriptive measures can not only fail to achieve optimal savings, but in some cases actually lead to an increase in consumption. The chart below shows lighting power densities from audits of office buildings across the country. Most installations are T8s but the remarkable finding is that several T12 installations are scattered across the middle and T8 installations are among the far right or worst performing. Changing lighting from T12s to T8s is no assurance of better performance.

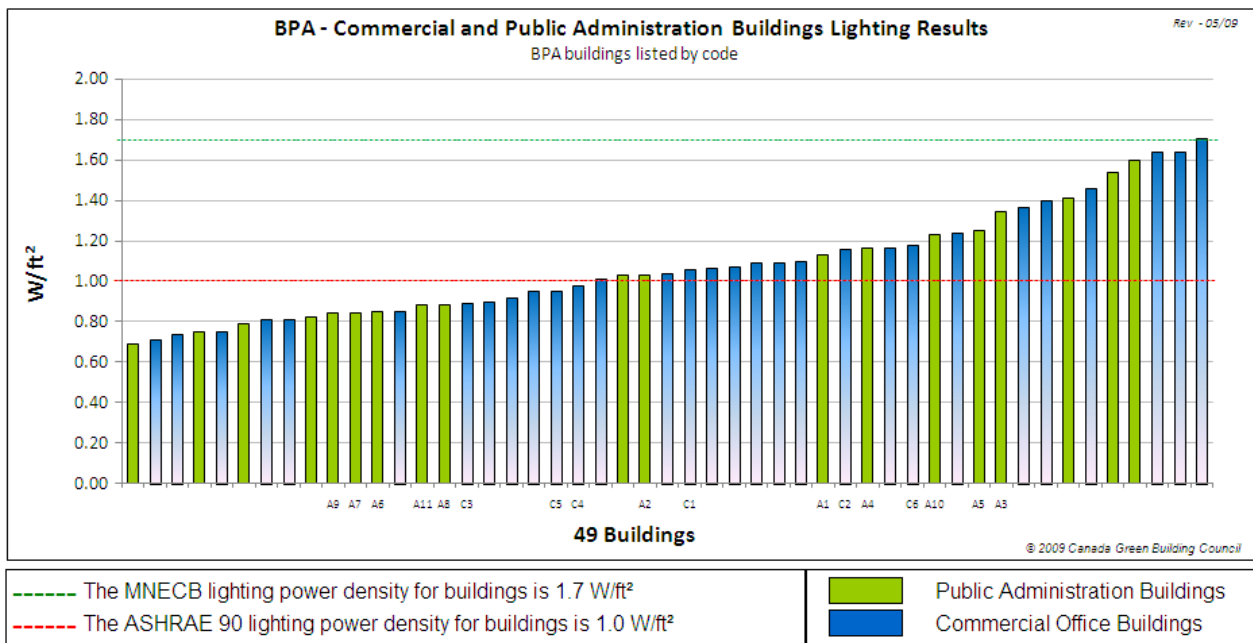


Chart showing results of lighting power intensity across 49 office buildings using similar technology. Most installations use T8 lamps with several T12 installations mixed across the middle. In fact, the poorest performing lighting technology on the far right is in a retrofitted building that replaced T12 lamps with T8s. Note that industry good practice is considerably better than either Canada’s Model National Energy Code or the current ASHRAE standard.

Power density standards such as W/ft2 for lighting and W/CFM for ventilation systems, being developed and continuously updated through performance based conservation programs, are transforming practice for retrofitting existing buildings and designing new buildings.

System performance standards complement the current prescriptive approach in CDM programs in that they help ensure implementation of such measures leads to maximum actual savings. They also unleash innovation among the industry to determine the best ways to achieve the required performance levels.

System performance standards are outcome oriented and can be readily adopted by Ontario through the OPA. The OPA can develop and manage these key system performance standards in the same way they currently manage and publish the Measures and Assumptions list for equipment calculations.

Performance based conservation complements and enhances more prescriptive CDM programs. It harvests the considerable potential for low cost, high total resource cost (TRC) savings resulting from operational improvements, re-commissioning of building systems, and upgraded controls and automation. By continuously monitoring and reporting on actual energy use and savings achieved, it helps verify that prescriptive measures are properly installed and operated and do indeed realize the estimated savings upon which prescriptive incentives are calculated. Performance based conservation informs standard-setting, supports rational “bottom up” estimation of conservation potential in each building sector, and reports on overall energy, cost and emissions savings and progress towards targets using real data, not engineering estimates. It also enables collaboration, competition and accountability among building owners, managers and communities which creates broad market transformation.

Since TRCA introduced this approach seven years ago, performance based conservation has grown rapidly within Ontario and is being adopted across Canada. TRCA also delivers the Mayors’ Megawatt Challenge for municipalities, and helped launch the ongoing Sustainable Schools program. TRCA is working under an agreement with the Canada Green Building Council (CaGBC) to support its national GREEN UP program which uses a similar approach in the commercial office, government/utility company administration buildings, K-12 schools, municipal arenas, bank and credit union branches, and university sectors. TRCA and CaGBC are jointly developing Greening Retail to address the retail sector, and intend to introduce the approach to more building types over time.

Performance based conservation is transforming the market in Ontario and beyond. In September, 2009 Real Property Association of Canada (REALpac) launched its “20 by ’15” target which aims to lower median energy for office buildings by up to one half by 2015. “20 by ’15” is derived from the performance metrics developed through the national performance based GREEN UP program, and is receiving worldwide attention as a model for deep conservation and emissions reductions. The Government of Canada is considering the results of these performance based conservation programs in its development of Energy Star for buildings in Canada.

What we have learned is that:

- performance based conservation delivers far greater energy savings than previous approaches to energy (and water) conservation,
- the larger part of the savings is found in low/no cost improvements,
- successful and sustainable conservation has more to do with good management than with technology,
- conservation programs have to support building managers with information, tools and resources so that they can recognize the unique set of conservation opportunities in their facilities,
- benchmarking can identify buildings with high conservation potential, inform target-setting and point to where savings are to be found in each building, and

- monthly savings reporting flags variances in predicted savings, identifies measures which do not perform as intended, verifies savings which have been achieved and guides continuous improvement.

Such specific, timely and accessible information can align and integrate the efforts of all the players involved in building performance, including managers, operators, contractors and designers, enabling them to work together towards higher and higher standards of energy efficiency.

Performance based programs address the whole building and all its systems, delivering electricity, natural gas and water savings, and thereby providing the opportunity for electric and natural gas utility companies to coordinate their conservation programming for all building sectors.

### Centrality of Utility Billing Data

Ready access to complete and reliable utility billing data is a core requirement in the growth and effectiveness of performance-based conservation. The data are used for performance benchmarking and diagnosis, identification of standards and best practices, and verification of energy savings. LDC's and gas distributors play a crucial role in providing the necessary data. TRCA recommends that:

- a standard monthly billing format and content be established for all customer classes clearly showing reading date, actual consumption (and billing demand for LDC's), and costs broken down between consumption, demand, fixed charges and taxes.
- the practice of estimated billing be discontinued.
- LDC's and gas distributors be required, on request, to provide in a timely manner electronic reporting to customers of up to 3 calendar years of monthly billing data for any account as part of their CDM/DSM program.

Where available, interval and smart metering are greatly expanding the potential of performance-based conservation by providing more detailed data about how and when energy is used in individual buildings. TRCA recommends that:

- smart meter deployment should be immediately extended to mid-sized (50kw - 500kW) consumers, including schools.
- LDC's be required to provide timely customer access to interval/smart meter profiles, and electronic reporting in a standard electronic format of up to 1 year of interval/smart meter data for any account as part of their CDM/DSM program.

### Closing Remarks

TRCA's comments on the CDM Code below are based upon expanding and accelerating the proven benefits of performance based conservation across all buildings and building sectors in Ontario. The goals are to:

- support provincial policy objectives,
- scale up the level of conservation,
- harvest the considerable untapped potential for energy savings through operational and other low cost improvements,
- deliver verified energy savings to Ontario ratepayers and consumers, and
- develop a rapidly expanding and readily accessible market for Ontario's green products and services

To meet these goals on a broader provincial basis, TRCA recommends that future CDM/DSM programming in Ontario should include the following elements:

- multi-year term recognizing recruitment and engagement goals in the beginning providing energy reporting, target-setting and conservation planning;
- incentives based on documented energy savings;
- coordination between electric and natural gas utilities;
- reliable and accessible monthly billing data;
- conservation potential estimation based on aggregated results;
- adoption, management and publication of system performance standards;
- advanced metering for mid-sized buildings, including schools;
- research into best practices identified through continuous savings reporting;
- related education for building owners and managers, and for the buildings industry.

**COMMENTS ON CDM CODE FOR ELECTRICITY DISTRIBUTORS**

[TRCA comments are in bold]

**1. GENERAL AND ADMINISTRATIVE PROVISIONS****1.1 The Purpose of this Code**

1.1.1 The purpose of this Code is to set out the obligations and requirements that licensed distributors must comply with in relation to the CDM Targets set out in their licences. This Code also sets out the conditions and rules that licensed distributors are required to follow if they choose to use Board-Approved CDM Programs to meet the CDM Targets.

**1.2 Definitions**

in this Code:

"Act" means the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Schedule B; "annual milestones" means the forecasted electricity savings (kWh) and peak demand savings (kW) that a distributor hopes to achieve each year in order to meet its CDM Targets; "Annual Report" means the report that a distributor shall file with the Board each year that shows the distributor's progress in meeting the CDM Targets set out in its licence; "attribution" means the division of CDM benefits between a distributor and another person;

"Board" means the Ontario Energy Board;

"Board-Approved CDM Programs" means a distributor's CDM Programs that have been approved by the Board in accordance with this Code and for which the distributor has received approval to recover the costs of the CDM Programs from the GAM;

"business day" means any day that is not a Saturday, a Sunday, or a legal holiday in the Province of Ontario;

"CDM" means conservation and demand management;

"CDM Programs" means programs that are designed to reduce electricity consumption and/or provincial peak electricity demand behind customers' meters, are GAM funded, and are either Board-Approved CDM Programs or OPA-Contracted Province-Wide CDM Programs;

"CDM Strategy" means the strategy that a distributor files with the Board that outlines how a distributor will meet the CDM Targets set out in their licences;

"CDM Targets" means the targets for reductions in provincial peak electricity demand and electricity consumption established in a distributor's licence;

"Code" means this Conservation and Demand Management Code;

"distribution system" means a system for distributing electricity, and includes any structures, equipment or other things used for that purpose;

"distributor" means a person who owns or operates a distribution system;

"Electricity Act" means the *Electricity Act, 1998*, S.O. 1998, c. 15, Schedule A; "electricity savings (kWh)" means the reduction in electricity consumption associated with the implementation of CDM Programs;

"EM&V" means Evaluation, Measurement and Verification;

"Environmental Attributes" means any certificates, credits, reduction rights, allocated pollution rights, emission reduction allowances, or any other benefit that relate to or result from a distributor's Board-Approved CDM Programs;

"GAM" means the Global Adjustment Mechanism;

"OPA" means the Ontario Power Authority;

"OPA-Contracted Province-Wide CDM Programs" means province-wide CDM programs that a distributor may undertake through a contract with the OPA;

"OPA EM&V Protocols" means the protocols and framework that the OPA has adopted for the evaluation, measurement and verification of OPA-Contracted Province-Wide CDM Programs;

"OPA's Cost Effectiveness Tests" means the cost effectiveness tests that the OPA has adopted for OPA-Contracted Province-Wide CDM Programs, including all related assumptions and avoided cost assessments;

"OPA's Measures and Assumptions Lists" means the OPA's collection of prescriptive and quasi-prescriptive input assumptions for electricity CDM measures;

"peak demand savings (kW)" means the reduction in a distributor's peak electricity demand that coincides with the provincial peak electricity demand that is associated with the implementation of CDM Programs; and

"service area" means the area in which a distributor is authorized by its licence to distribute electricity.

### **1.3 Application and Interpretation**

1.3.1 All appendices attached to this Code form part of the Code.

1.3.2 Unless otherwise defined in this Code, words and phrases shall have the meaning ascribed to them in the Act or the Electricity Act, as the case may be. Headings are for convenience only and shall not affect the interpretation of this Code. Words importing the singular include the plural and vice versa. Words importing a gender include any gender. Words importing a person include (i) an individual, (ii) a company, sole proprietorship, partnership, trust, joint venture, association, corporation or other private or public corporate body; and (iii) any government, government agency or body, regulatory agency or body or other body politic or collegiate. A reference to a person includes that person's successors and permitted assigns. A reference to a body, whether statutory or not, that ceases to exist or whose functions are transferred to another body is a reference to the body that replaces it or that substantially succeeds to its powers or functions. Where a word or phrase is defined in this Code, the Act or the Electricity Act, other parts of speech and grammatical forms of the word or phrase have a corresponding meaning. A reference to a document (including a statutory instrument) or a provision of a document includes any amendment or supplement to, or any

replacement of, that document or that provision of that document. The expression "including" means including without limitation.

- 1.3.3 If the time for doing any act or omitting to do any act under this Code expires on a day that is not a business day, the act may be done or may be omitted to be done on the next day that is a business day.

#### **1.4 To Whom this Code Applies**

- 1.4. This Code applies to all licensed distributors that have CDM Targets as a condition of their licence.

#### **1.5 Coming into Force**

- 1.5.1 This Code comes into force on the date on which it is published on the Board's website after it has been issued by the Board.

- 1.5.2 Unless expressly provided otherwise, any amendments to this Code shall come into force on the date on which they are published on the Board's website after they have been issued by the Board.

#### **1.6 Requirements for Board Approvals**

- 1.6 Any matter under this Code requiring an approval, consent, or determination of the Board may be determined by the Board without a hearing or through an oral, written or electronic hearing, at the Board's discretion.

#### **1.7 Timeframe for the Code**

- 1.7.1 This Code applies to CDM Programs that start on January 1, 2011 and end on December 31, 2014 or occur anytime in between those two dates. All electricity savings (kWh) and peak demand savings (kW) resulting from CDM Programs must also occur within that timeframe.

**TRCA comment: TRCA sees an end date as inconsistent with the intent and direction of conservation in Ontario as described in the Green Energy Act as well as the province's CDM targets for 2025. The Act places conservation responsibility on the utility companies and this continues beyond 2014. There should be no end date but a process to review and update the code before the end of 2014 for LDCs to prepare for another four-year cycle of programming.**

**TRCA proposes a performance-based conservation approach to the CDM Code as described in the Background section above which has as its foundation continuous improvement for ongoing conservation. In this context, savings resulting from CDM programs must be recorded and valid over multiple years and continue beyond 2014. TRCA recommends removing the last sentence "All electricity savings (kWh) and peak demand savings (kW) resulting from CDM Programs must also occur within that timeframe." This removal has the added benefit of allowing longer-term planning of conservation programs which will a) allow LDCs to develop more comprehensive programming that builds a culture of conservation within organizations to yield deeper savings that often need time to develop and continuously improve, and b) mitigates the current practice of short-term interventions with non-verified savings. A performance based conservation approach will ensure that savings are verified and recognized when they occur, and sustained over time.**



## **2. CDM STRATEGY AND ANNUAL REPORTS**

### **2.1 CDM Strategy Requirements**

- 2.1.1 A distributor's CDM Strategy must provide a high level description of how a distributor intends to achieve its CDM Targets. The CDM Strategy must include:
- (a) a high level description of a distributor's year by year plan, including annual milestones, for achieving its CDM Targets;
  - (b) a description of each of the CDM Programs, divided into OPA-Contracted Province-Wide CDM Programs and potential Board-Approved CDM Programs, that the distributor plans to undertake to achieve its CDM Targets including, where the information is available, a description of:
    - (i) the program name;
    - (ii) the year(s) the program is intended to be in operation;
    - (iii) the purpose of the program;
    - (iv) the target customer type(s); and
    - (v) where the information is available, projected budgets and projected results;
  - (c) confirmation that CDM Programs will be offered for all customer types (residential, commercial, institutional, industrial) in a distributor's service area, as far as is appropriate and reasonable having regard to the composition of the distributor's customer base; and
  - (d) a section that details how, where applicable, the distributor will pursue administrative efficiencies and co-ordinate its CDM activities with other distributors, natural gas distributors, social service agencies, any level of government, government agencies, and the OPA.
- 2.1.2 Distributors shall file their CDM Strategy in the manner set out in Appendix B.
- 2.1.3 A distributor shall file its CDM Strategy with the Board by November 1, 2010.
- 2.1.4 After receiving an acknowledgement letter from the Board confirming that the CDM Strategy is complete, a distributor shall make its CDM Strategy available for public review at the distributor's offices. If the distributor has a website, the distributor shall also post its CDM Strategy on its website.

### **2.2 Annual Reports**

- 2.2.1 A distributor shall file an Annual Report with the Board by September 30 of each year. The Annual Report shall cover the period from January 1 to December 31 of the previous year. The first Annual Report shall be filed by September 30, 2012 and shall cover the period from January 1, 2011 to December 31, 2011.
- 2.2.2 Distributors shall file their Annual Reports in the manner set out in Appendix C.
- 2.2.3 A distributor shall make its Annual Report available for public review at the distributor's offices. If the distributor has a website, the distributor shall also post its Annual Report on its website by September 30 of each year for the previous calendar year.
- 2.2.4 The Annual Report shall provide an overall review of the activities undertaken by the distributor in the calendar year in order to achieve its CDM Targets.
- 2.2.5 The Annual Report shall consist of the following sections for both Board-Approved CDM Programs and OPA-Contracted Province-Wide CDM Programs:

- (a) an introduction that provides a general overview of the CDM Programs that the distributor offered in its service area;
- (b) a description of the CDM Programs that the distributor offered in its service area, the targeted customer type or group for each of the CDM Programs, the objectives of each of the CDM Programs, and any activities associated with the CDM Programs;
- (c) a section that details the participation levels (i.e., the number of participants by customer type) for each of the CDM Programs that the distributor offered in its service area;
- (d) a section that describes and details the funds the distributor spent on each of the CDM Programs offered in its service area;
- (e) a section that describes and details the verified electricity savings (kWh) and peak demand savings (kW) based on the OPA EM&V Protocols;

**TRCA comment: TRCA suggests that the OPA EM&V Protocols be extended to include actual verified savings derived from utility bill analysis for performance based program results as described in the Background section above. Such reporting could also serve to verify the actual savings achieved in buildings which have used OPA-Contracted Province-Wide CDM Programs.**

- (f) a section that states the balance in the distributor's CDM variance account that shows the distributor's total spending on all of its Board-Approved CDM Programs for the year applicable to the Annual Report;
- (g) a section that summarizes the distributor's progress towards meeting its CDM Targets, an explanation of any significant variances between the annual milestones contained in the distributor's CDM Strategy and the verified results achieved by the distributor for the reporting year, and an explanation of the potential impact that the aforementioned significant variances may have with respect to the distributor meeting its CDM Targets;
- (h) a section that details any changes or planned modifications to the distributor's CDM Strategy; and
- (i) a section that provides any additional information the distributor feels is appropriate, including but not limited to, recommending any improvements to its Board-Approved CDM Programs that could enhance program design, performance, and uptake by customers.

## 2.3 Co-ordination with the OPA

- 2.3.1 Prior to applying for Board approval of any CDM Programs, a distributor must review the existing OPA-Contracted Province-Wide CDM Programs.
- 2.3.2 Distributors shall not apply for Board approval of CDM Programs that duplicate existing OPA-Contracted Province-Wide CDM Programs.
- 2.3.3 CDM Programs that will be considered duplicative of OPA-Contracted Province- Wide CDM Programs include, but are not limited to, CDM Programs that have:
  - (a) different customer incentive levels on products or services already offered through the OPA-Contracted Province-Wide CDM Programs;
  - (b) different qualification requirements to receive customer incentives or services already offered through the OPA-Contracted Province-Wide CDM Programs;
  - (c) different technology specifications for technologies already incentivized or utilized through the OPA-Contracted Province-Wide CDM Programs;

- (d) different marketing approaches for promoting customer incentives or services already offered through the OPA-Contracted Province-Wide CDM Programs; and
- (e) different budgets for delivering customer incentives or services already offered through the OPA-Contracted Province-Wide CDM Programs.

**TRCA comment: With the OPA-Contracted Province-Wide CDM Programs using a prescriptive model, LDCs should be able to develop Board-Approved CDM Programs that would not be considered duplicative that are based on a performance based conservation approach.**

### **3. BOARD-APPROVED CDM PROGRAMS**

#### **3.1 Requirements**

- 3.1.1 A distributor shall not apply for Board-Approved CDM Programs until the OPA has established its first set of OPA-Contracted Province-Wide CDM Programs.

**TRCA comment: Distributors should be allowed/encouraged to begin recruitment into performance based programs as soon as possible.**

- 3.1.2 Subject to the restrictions in sections 2.3.3 and 3.1.5, a distributor may apply to the Board for approval of CDM programs that are designed to assist the distributor in meeting the CDM Targets set out in its licence.
- 3.1.3 Board-Approved CDM Programs must end by December 31, 2014.

**TRCA comment: See TRCA comments on section 1.7.1 regarding concerns with the end date.**

- 3.1.4 A distributor's application for a proposed Board-Approved CDM Program must include the following:
- (a) a program evaluation plan, based on the OPA's EM&V Protocols, for each program;

**TRCA comment: TRCA suggests that the OPA EM&V Protocols be extended to include actual verified savings for program results as described in the Background section above.**

- (b) a benefit-cost analysis of each program which shall be completed by using the OPA's Cost Effectiveness Tests;

**TRCA comment: In TRCA's experience, measuring the effectiveness of measures and programs is much more reliable through the use of actual billing data before and after measures have been implemented. These measures include technology but also extend to operations, recommissioning and occupant engagement.**

- (c) a detailed explanation of the program's objective(s) and method of delivery;
- (d) the types of customers targeted by the program;
- (e) a forecasted number of participants that the distributor expects will participate in the program;
- (e) the total projected peak demand savings (kW) and electricity savings (kWh) per year, or if the program is for less than one year, the total projected peak demand savings (kW) and electricity savings (kWh) for the duration of the program;

- (f) a complete projected annual budget for each of the distributor's CDM Programs, including the following information:
  - (i) projected expenditures incurred on an annual basis, for each year of the CDM Programs, separated into customer incentive costs and program costs;
  - (ii) a division of program costs into direct and indirect expenditures incurred as a result of program implementation;
  - (iii) information on the allocation of total expenditures incurred by targeted customer types for each direct projected expenditure; and
  - (iv) total projected expenditures for each program evaluation conducted; and
- (g) a statement that confirms that the distributor has used the OPA's Measures and Assumptions Lists or if the distributor has varied from the OPA's Measures and Assumptions Lists the following information must be provided:
  - (i) a distributor must appropriately justify the reason for varying from the OPA's Measures and Assumptions Lists in the application and provide a statement that the distributor has followed the OPA's EM&V Protocols for custom measures not included in the OPA's Measures and Assumptions Lists.

3.1.5 Distributors shall not apply for CDM Programs that:

- (a) relate to a distributor's investment in new infrastructure or replacement of existing infrastructure;
- (b) relate to any measures a distributor uses to maximize the efficiency of its new or existing infrastructure; or
- (c) are associated with the OPA's Feed-in Tariff Program or the OPA's Micro Feed-in Tariff Program.

Any initiatives that are captured in (a), (b) or (c) above will not be considered CDM initiatives and are therefore not eligible for approval under this Code.

### 3.2 Re-Allocation of Funding Among Existing Board-Approved CDM Programs

3.2.1 A distributor must apply to the Board for cumulative fund transfers among the distributor's Board-Approved CDM Programs that exceed 30% of an approved budget for an individual CDM Program. An application to transfer more than 30% of a distributor's funds from an approved budget for an individual CDM Program shall include:

- (a) current and proposed budgets for programs affected by the re-allocation;
- (b) a description of the programs from which, and to which, funds are being re-allocated;
- (c) confirmation that CDM Programs will still be offered for all customer types (residential, commercial, institutional, industrial) in a distributor's service area, as far as is appropriate and reasonable having regard to the composition of the distributor's customer base; and
- (d) cost effectiveness calculations for all programs where re-allocation of funding has occurred and confirmation that the program receiving the additional funding is still cost effective.

### 3.3 CDM Programs for Low-Income Customers

3.3.1 A distributor may meet a portion of its CDM Targets through the delivery of CDM Programs targeted to low-income customers.

#### 4. COST EFFECTIVENESS

##### 4.1 Cost Effectiveness Tests

- 4.1.1 A distributor may only apply to the Board for the approval of CDM programs that are cost effective. Cost effectiveness shall be measured by using the OPA's Cost Effectiveness Tests.

**TRCA comment: There are several Cost Effectiveness Tests listed and better direction on the specific tests to be used would be helpful. In TRCA's experience, measuring the effectiveness of measures and programs can be much more precise through the analysis of utility billing data before and after measures have been implemented. These measures include technology and also extend to operations, recommissioning and occupant engagement. In addition, when these actual savings results are fed back to customers, it drives a process of continuous improvement and builds momentum for more right actions.**

**In addition, our experience indicates that real savings grow every year when people are engaged through feedback from actual performance data. Therefore, TRCA suggests that these tests be applied over a multi-year basis.**

- 4.1.2 Despite section 4.1.1, a distributor may apply to the Board for approval of CDM programs where cost effectiveness cannot be demonstrated if the program is:
- (a) a pilot program; or
  - (b) designed for educational purposes.

- 4.1.3 A distributor shall use the OPA's Measures and Assumptions Lists to conduct the cost effectiveness tests. If the distributor is using custom measures that are not included in the OPA's Measures and Assumptions Lists, the distributor must appropriately justify the reason for varying from the OPA's Measures and

**TRCA comment: TRCA recommends that the OPA adopt and manage system performance (power density) standards derived from performance based programs as described in the Background section to direct measures implementation to achieve high levels of verifiable savings.**

- 4.1.4 Although there is no requirement that pilot or educational CDM programs be cost effective, distributors shall provide, in addition to the requirements set out in section 3.1.4, adequate evidence (as described in sections 4.2 and 4.3) that the CDM programs will likely result in peak demand savings (kW) and electricity savings (kWh). The Board will take into consideration the cost and the number of pilot and educational CDM Programs that a distributor already has undertaken or plans to undertake when approving these CDM programs.

##### 4.2 Pilot CDM Programs

- 4.2.1 A pilot CDM program will only be eligible for approval by the Board if: (a) it involves the testing, or evaluation of methodologies and/or technologies that are not already in use in Ontario and that may serve as a model for other distributors or the OPA to use in future CDM development; (b) it does not duplicate existing CDM pilot programs being undertaken by the OPA or other distributors; and (c) the distributor has already applied to the OPA for CDM program funding and was not approved by the OPA.

- 4.2.2 A distributor shall provide a detailed description of the costs and benefits of the proposed pilot program and demonstrate how the pilot program will increase the collective understanding of the methodology and/or technology and its benefits as a CDM activity.
- 4.2.3 A distributor shall file with the Board a report on the expected outcome(s) and benefits of the pilot program (i.e., projected data or information to be produced by the program and how the data or information will be used in the operations of, or planning frameworks for, future CDM initiatives).
- 4.2.4 A distributor must specify the customer type(s) and the number of participants that will be targeted by the pilot program.

**TRCA comment: TRCA agrees with this approach to pilot programs.**

#### **4.3 Educational CDM Programs**

- 4.3.1 A distributor must demonstrate how the educational CDM program will promote the understanding of energy issues and lead to behavioural changes that result in the overall reduction of electricity demand and consumption.
- 4.3.2 A distributor must: (a) identify the customer type(s) that will be targeted; (b) specify the number of participants that will be targeted; (c) explain why the educational CDM program is needed (i.e., why there is a need to educate the specified customer type(s) on the specified energy issues); (d) articulate the educational approaches that will be utilized by the distributor (i.e., brochures, seminars, etc.); (e) provide estimates of costs of the educational CDM program; and (f) describe the anticipated benefits of the educational CDM program.

#### **5. ACCOUNTING TREATMENT**

- 5.1 A distributor shall follow all the Board's accounting policies and procedures specified for CDM activities.
- 5.2 A distributor shall use a fully allocated costing methodology for all CDM Programs. The fully allocated costing methodology that distributors must use for the CDM Programs it delivers is set out in Appendix A.
- 5.3 A distributor's earned revenues and incurred expenses from all Board-Approved CDM Programs are to be kept separate from a distributor's earned revenues and incurred expenses from all OPA-Contracted Province-Wide CDM Programs.
- 5.4 A distributor's earned revenues and incurred expenses from all Board-Approved CDM Programs and all OPA-Contracted Province-Wide CDM Programs are to be kept separate from the distributor's distribution operations and shall not be included in the distributor's distribution revenue requirement.
- 5.5 A distributor shall track spending for its Board-Approved CDM Programs in a Board-approved CDM variance account, which will be used to record the difference between the funding awarded for Board-Approved CDM Programs and the actual spending incurred for these programs. The disposition of the balance in this account shall be made at the time specified by the Board and in the manner specified by the Board.

- 5.6 A distributor shall not be the owner or beneficiary of any Environmental Attributes that are related to or result from Board-Approved CDM Programs.

**TRCA comment: If this implies that the owner of the Environmental Attributes would be the organization taking the action for the savings then this is good. Is this the case for OPA-Contracted Province-Wide CDM programs as well?**

## **6. PROGRAM EM&V**

### **6.1 Independent Review**

- 6.1.1 A distributor's results for its Board-Approved CDM Programs must be evaluated through an independent third party review. The review of a distributor's results for its Board-Approved CDM Programs must be done by an independent third party selected from the OPA's third party vendor of records list. The third party reviewer must use the OPA EM&V Protocols when conducting EM&V on Board-Approved CDM Programs.

**TRCA comment: Performance based programs can increase the reliability of EM&V, and confidence that savings are actually being made. TRCA recommends that the principles of performance based conservation be incorporated into the OPA EM&V Protocols, and that distributors be required to report on actual (as well as calculated) savings recorded in buildings making use of any CDM Programs.**

**TRCA has been unable to obtain this third party vendor of records list from the OPA or even an understanding of the third party selection process to be able to better comment on this.**

- 6.1.2 The independent third party reviewer's report on the distributor's Board-Approved CDM Programs must be filed by the distributor with the Board at the same time the distributor's Annual Report is filed with the Board (i.e., by September 30 of each year). The independent third party reviewer's report shall cover the period from January 1 to December 31 of the previous year.
- 6.1.3 The distributor shall co-operate with any Board initiated audits and shall provide documentation as requested.

## **7. PERFORMANCE INCENTIVE**

### **7.1 Eligible Programs**

- 7.1.1 A distributor may apply for a performance incentive for its CDM Programs.
- 7.1.2 A distributor may only claim a performance incentive in relation to its contribution to the CDM Programs. In order for a distributor to claim 100% attribution of benefits, the distributor shall demonstrate that its role was central to the CDM Programs. Centrality is established by the distributor if its budgetary contribution was greater than 50% of program funding or, where the distributor's budgetary contribution was less than 50% of program funding, the distributor initiated the partnership, initiated the program or initiated the implementation of the program. If the distributor's budgetary contribution was less than 50 percent, the distributor shall provide supporting documentation outlining its role in the CDM Programs.

7.1.3 If a distributor's role does not meet the test for centrality set out in section 7.1.2, the distributor shall then submit a proposal for an attribution of benefits to the Board for approval and the Board will determine whether the proposal is acceptable.

7.1.4 If more than one distributor applies for an attribution of benefits for the same CDM Program, the total applied for between the distributors cannot exceed 100%.

## 7.2 Calculation of the Performance Incentive

7.2.1 Performance incentive payments shall be made on the basis of a distributor's achieved verified results in meeting its CDM Targets. A distributor must provide verified results for both electricity savings (kWh) and peak demand savings (kW) at the time of its application to the Board for a performance incentive. The verification must have been completed by an independent third party selected from the OPA's third party vendor of records list.

**TRCA comment: TRCA has been unable to obtain this third party vendor of records list from the OPA or even an understanding of the third party selection process to be able to better comment on this.**

7.2.2 A distributor may accrue a performance incentive once it meets 80% of each of its CDM Targets. Performance incentives shall not exceed 150% of each CDM Target.

7.2.3 A distributor's performance incentive shall be calculated across the distributor's entire portfolio of Board-Approved CDM Programs and OPA-Contracted Province-Wide CDM Programs. A distributor's performance incentive shall be calculated in the manner set out in Appendix D.

Sincerely



Brian Denney, P.Eng.  
Chief Administrative Officer