

Terms of Reference



Item 2.2 - Attachment a

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CANADA

Electrical Efficiency and Conservation Project Team

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Background:

In the Alberta government's Climate Change Action Plan energy efficiency and conservation are identified as two of the means by which the province will reduce its green house gas emissions. The CASA Electricity Project Team (EPT) established the Energy Efficiency and Energy Conservation working group to examine the potential for Electrical efficiency and conservation to contribute to improved air quality in Alberta. Its mandate was to examine the issues of efficiency and conservation as they affect air quality and emissions from the electricity sector, and to make recommendations on how these issues might be addressed. A key recommendation from the working group is that a multi-stakeholder team be formed to explore these issues in more detail and to address other recommendations found in the October 2003 Report of the Energy Efficiency and Conservation Working Group to the CASA Electricity Project Team. This group is being formed in response to those recommendations.

The Alberta government has also tasked Climate Change Central's Energy Solutions Alberta with delivering programs to reduce energy usage in the province. Climate Change Central has been at the table throughout the work of the sub-group and is a member of the proposed project team. It is the understanding of both Climate Change Central and the CASA Electrical Efficiency and Conservation group that the work of these two groups will not overlap but will be a valuable partnership between strategic direction and program delivery.

Goal:

The overall goal of the Electrical Efficiency and Conservation Project Team is to implement the energy efficiency and conservation recommendations (#s 65 – 68) found within the November 2003 report of the Electricity Project Team to the CASA Board, with the aim of increasing electricity efficiency and expanding conservation efforts within the province. This work will include identifying the resources required to implement the various programs recommended.

Objectives:

In order to achieve its goal, the Electrical Efficiency and Conservation Project Team will accomplish the following objectives:

1. Develop efficiency measurement mechanisms for the electricity supply chain and set a numerical target for electrical energy efficiency.

2. Collect and develop credible information on electricity efficiency to support the proposed targets and programs.
3. Identify tools and mechanisms to implement the energy efficiency and energy conservation recommendations in the November 2003 report of the EPT to the CASA Board.
4. Identify the costs, benefits, co-benefits, and barriers and assists to market penetration of electrical efficiency and conservation measures for all users of electricity.
5. Identify cost effective approaches and programs to develop electrical efficiency and energy conservation, including implementers and time frames.
6. Make recommendations to the CASA Board.

Key Task Areas:

The tasks set before this group break down into the following areas:

1. Data Collection

- a. Determine the data that is currently available from various sources on Alberta's electrical system's efficiency
- b. Determine the measurement needs of a proposed efficiency target, including the level of dis-aggregation and aggregation that is feasible and appropriate
- c. Collect the needed data for setting targets and determining program needs.

2. Measurement

- a. Work with Climate Change Central's Energy Solutions Alberta, relevant Alberta government agencies and existing data centers to develop measurement tools and to monitor overall electrical energy efficiency for the province.
- b. Develop a process to determine the overall efficiency of the Alberta electrical system, "energy source to end user."

3. Targets

- a. Based on the measurement work outlined above, undertake a detailed technical assessment as to the feasibility of developing a province-wide electric energy efficiency target and, if feasible, define what the target amount should be (including appropriate metrics) and costs to meet the target, its relationship to sector agreements and other ongoing programs, and mechanisms to meet this target.

4. Tools and Programs

- a. Reviewing electrical energy efficiency and conservation tools and programs and making recommendations for their implementation, including pilot projects through appropriate organizations.
- b. Determine which sectors of the electrical system will be focused on in the work of this project team.
- c. Working with retailers and the “wires” companies to ensure that “time of use” metering and rates are made available where they are not available currently.
- d. Seeking ways in which the purchase of ENERGY STAR™ appliances can be encouraged.
- e. Work with electricity retailers to find ways to assist retailers in managing the risks and recovering lost revenues associated with energy efficiency and energy conservation programs. This could involve but would not be limited to performance-based incentive mechanisms that reward the achievement of targeted energy savings and program costs.
- f. Examine the issue of thermal loss at generation facilities, and explore means of encouraging the co-location of other facilities that are able to use waste heat. This could include the use of emission credits and offsets for the use of this energy.
- g. Work with Alberta Energy, Alberta Environment, NewEra, and the Alberta Electric System Operator with the goal of ensuring that the metering and transmission interconnection needs of distributed generation are met.
- h. Work with Alberta Environment and other CASA groups with the goal of ensuring that verifiable improvements in energy efficiency and energy conservation are classified as useable offsets.
- i. Work with the federal government to examine tax issues relating to energy efficiency and conservation, such as district heating, in order that energy efficiency and conservation not be disadvantaged relative to other energy policies and programs.

4) Reporting

- a. Preparing a final report and recommendations to the CASA Board covering the goals and objectives set out above
- b. Preparing and implementing a plan to communicate to CASA stakeholders and other potentially interested people the results of the team’s work.

Timelines:

It is expected that the Energy Efficiency and Energy Conservation Project Team will report to the CASA Board in November 2004.

Budget:

The financial needs and available resources of this project team are unknown at this time, although it is anticipated that some of this work will involve the hiring of consultants to perform some of the background studies that the team's work will be based on. It is anticipated that there will be some funding available from Alberta Environment to be shared between this group and the Renewable and Alternative Energy Project Team, and also that the remaining funding from the EPT will be made available to these two groups. Fundraising for this work beyond the available monies, if required, will be one of the tasks for this group.

Membership:

- Electricity Industry:
 - "Wires" companies
 - Retailers
 - Energy Service Companies
 - Generators
- ENGOs
- Alberta Environment
- Alberta Energy
- Municipalities
- Small Business Association
- Consumer groups
- Federal Government
 - Natural Resources Canada
- Climate Change Central/Energy Solutions Alberta
- Canadian Association of Petroleum Producers
- Canadian Petroleum Products Institute
- Alberta Electricity System Operator
- Canadian Industry Program for Energy Conservation (CIPEC)
- The Alberta Energy and Utilities Board

EPT Energy Efficiency and Energy Conservation Recommendations

65	<p>Energy Efficiency and Conservation Implementation Team</p> <p>A CASA multi-stakeholder implementation team be struck and provided with sufficient funds to undertake the following tasks, and that it report to the CASA board in November 2004:</p> <ul style="list-style-type: none"> b) Working with Climate Change Central's Energy Solutions Alberta, relevant Alberta government agencies and existing data centres in developing measurement tools and monitoring overall electrical energy efficiency for the province. c) Developing a process to determine the overall efficiency of the electrical system, "energy source to end user." d) Once tasks a) and b) are completed, the implementation team will undertake a detailed technical assessment as to the feasibility of developing a province-wide electric energy efficiency target and, if feasible, define what the target amount should be (including appropriate metrics) and costs to meet the target, its relationship to sector agreements and other ongoing programs, and mechanisms to meet this target. e) Reviewing electrical energy efficiency and conservation tools and programs and making recommendations for their implementation, including implementation of a pilot project. f) Working with retailers and the "wires" companies to ensure that "time of use" metering and rates are made available where they are not available currently. g) Seeking ways in which the purchase of ENERGY STAR™ appliances can be encouraged and incented. h) Working with electricity retailers to find ways of assisting retailers in managing the risks and recovering lost revenues associated with energy efficiency and energy conservation programs. This could involve but would not be limited to performance-based incentive mechanisms that reward the achievement of targeted energy savings and program costs. i) Examining the issue of thermal loss at generation facilities, and exploring means of encouraging and incenting the co-location of other facilities that are able to use waste heat. This could include the use of emission credits and offsets for the use of this energy. j) Working with Alberta Energy, Alberta Environment, New Era, and the Alberta Electric System Operator with the goal of ensuring that the metering and transmission interconnection needs of distributed generation are met. k) Working with Alberta Environment with the goal of ensuring that verifiable improvements in energy efficiency and energy conservation are classified as useable offsets. l) Working with the federal government with the goal of examining the tax issues relating to district heating and other energy efficiency and conservation issues, in order that energy efficiency and conservation not be disadvantaged relative to other energy policies and programs.
66	<p>Encouraging Electrical Energy Efficiency and Conservation by Industry</p> <p>The Alberta government, in its upcoming greenhouse gas sectoral agreements with all sectors, consider including and encouraging electrical energy efficiency and energy conservation as options for reducing emissions from electricity generation in Alberta.</p>
67	<p>Encouraging Electrical Energy Efficiency and Conservation by Governments</p> <p>Climate Change Central</p> <ul style="list-style-type: none"> • work with Alberta and municipal governments to encourage energy efficiency in residential housing design, both in building codes and in municipal planning. • examine the issue of "take or pay" contracts. This work would include: <ul style="list-style-type: none"> ○ gathering information on the extent of the issue; ○ providing information for consumers to assist them in making informed decisions about their electricity purchases; and ○ developing and piloting alternatives that would meet the retailer's needs while allowing for consumers to benefit fully from energy efficiency and conservation practices. • provide a resource in which information about the various government programs all levels and funding options be made available.
68	<p>Funding Energy Efficiency and Conservation Programs</p> <p>The Alberta and federal governments consider means for providing stable and sufficient funding to allow for the development and implementation of energy efficiency and energy conservation programs, and that the various options for funding described in the Energy Efficiency and Conservation Working Group's report to the EPT be considered.</p>