

## **BRIEF**

Sept 24, 2007

# **Scaling Up Action on Energy Efficiency**

Key Recommendations for an Effective National Energy Efficiency Plan

## **Energy ministers have a real opportunity to start a massive scale up of energy efficiency**

On September 25, 2007, at a meeting of the Council of Energy Ministers (CEM) in Whistler, B.C., federal, provincial and territorial energy ministers will be discussing a National Energy Efficiency Action Plan, the first time both levels of government have agreed to work together on this important issue. But will the agreement that the Minister's produce be a real "plan" and contain the targets, policies and concrete actions needed to transform the way we use energy in Canada?

## **What would real progress look like?**

Ministers meeting in Whistler should make concrete commitments for the coming year – agreeing to report back regularly on progress towards their goals at future CEM meetings. We encourage the following:

- Within 2008 federal, provincial and territorial budgets, commit significant new multi-year financial and staff resources to new energy-efficiency initiatives for each sector of the economy;
- Work together on at least five concrete collaborative actions in 2008 and report on progress at the next CEM meeting;
- Prepare individual federal and provincial energy-efficiency targets and plans in 2008 for consideration at the 2008 CEM meeting;
- Set up and fund a CEM energy-efficiency secretariat to support inter-governmental and stakeholder collaboration, monitor progress and prepare a white paper consolidating targets and plans by September 2008 - or delegate this role to the federal OEE.

## How much energy efficiency can we achieve?

Background papers prepared for the ministers by multi-stakeholder working groups show that energy use in all sectors of the Canadian economy could be completely transformed through energy efficiency over the next 20 years:

- All existing buildings and homes could be retrofitted to provide, on average 30% or more savings in heat and electrical energy.
- All new buildings and houses could have net zero energy requirements (annual energy used equal to energy produced on-site annually).
- Cities, towns and communities could produce most of their own energy through urban design improvements and local energy production.
- Industrial energy intensity (energy use per unit of production) could be improved by up to 4% each year.
- Personal energy use for transport (km per person) could be reduced by one-third and freight energy use reduced by a similar amount.

All of these improvements implemented together could lead a significant reduction in absolute energy use and greenhouse gas emissions in Canada by 2030.

## Energy efficiency and climate change

At meeting after meeting of Canada's G8, APEC and OECD partners<sup>1</sup>, energy efficiency has been identified as the most cost effective solution to climate change, as well as providing significant other benefits such as lower energy bills for business and consumers, local employment opportunities, and reductions in other environmental and social impacts of conventional energy use. At the same time, the cost of building and living efficiently is falling rapidly.<sup>2</sup>

Many countries have committed to ramp up their efforts on efficiency. For example, members of the European Union have agreed on a target of 20% reduction in energy use relative to 2005 through efficiency by 2020 and are working on individual plans to achieve it.<sup>3</sup> This target was developed through consultations among all members of the EU - in much the same way the federal government and provinces are now working on Canada's National Action Plan. Its time for Canada to have its own targets.

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<sup>1</sup> Most recently at the APEC meeting in Australia.

<sup>2</sup> The World Business Council on Sustainable Development recently reports the cost of building green is much lower than expected. <http://www.wbcsd.org/Plugins/DocSearch/details.asp?DocTypeId=251&ObjectId=MjU5MTM>

<sup>3</sup> <http://www.euractiv.com/en/energy/energy-efficiency-eu-action-plan/article-143199>

## Current federal and provincial efficiency programs are not up to the task

Significant new initiatives and resources must be committed by all levels of government to achieve these efficiency gains. In the words of the federal Environment Commissioner Johanne G  linas a “massive scale up” of efforts is needed to effectively address climate change.<sup>4</sup>

The government of Canada through its Office of Energy Efficiency has significant expertise in energy efficiency. However, the level of support provided for energy efficiency by federal programs has stalled in recent years. In fact less support is offered now than in 2004 and it is not sufficient to make a significant difference to energy consumption.

Several provinces offer energy efficiency and utility demand side management programs but few have actually developed a strategy to realize the full potential of energy efficiency. The Province of Alberta, for example, has committed to develop an Energy Conservation and Efficiency Framework, but no substantial progress has been made on this foundational step to date. In Ontario, energy efficiency has the potential to reduce peak and base load power demand by 10,000 MW but targets have been set much lower than this and there is no comprehensive provincial strategy to maximize efficiency gains.

In recent years, collaborative initiatives have been set up among federal and provincial governments on coordinating energy efficiency standards, building labeling, efficient lighting, and getting energy efficiency into building codes. These can provide a strong base on which to scale up our efforts. Clearly, much greater action is required, however.

## What does a “massive scale up” mean and what should be in Canada’s action plan?

An effective federal/provincial energy efficiency action plan should contain the following key components:

1. **Long Term Vision.** Adopt long term goals for each sector like those identified in the CEM background papers, providing a vision of what an efficient Canada will look like.
2. **Short Term Targets.** Adopt short term targets and milestones that provide a clear definition of the way forward and against which we can measure progress. For example:
  - A national target of 20% reduction in 2007 Canadian energy use through energy efficiency by 2020 – meeting 100% of more of new energy growth through efficiency.
  - Reduce industrial energy intensity (energy per unit of production) in each industrial sector by 4% every year for the next 20 years.
  - At least 50% of all new buildings and homes to be net zero energy by 2015.

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<sup>4</sup> In her 2006 report to Parliament - [http://www.oag-bvg.gc.ca/domino/reports.nsf/html/c2006menu\\_e.html](http://www.oag-bvg.gc.ca/domino/reports.nsf/html/c2006menu_e.html)

- Retrofit 50% of all Canada's homes and buildings by 2020, 100% by 2030.
- Reduce personal and freight transportation use (energy per person.km and per tonne.km) by 2% every year for the next 20 years.
- All municipalities in Canada have smart growth and sustainable energy plans by 2015.

3. **Efficiency Legislation.** Use federal and provincial energy efficiency legislation to:

- Regulate the operating and standby efficiency of all major energy using products (and those that influence energy use) by 2011, and upgrade these standards to the best in North America every four years.
- Regulate a phase out of all in-efficient lighting by 2013.
- Regulate the efficiency of ALL vehicles by 2011 and upgrade these standards to the best in North America every four years.
- By 2012, mandate the energy consumption labeling of all products, houses, buildings and vehicles with special recognition of best practice and best-in-class (e.g. Energy Star).
- Implement a mandatory government procurement policy based on minimum life cycle energy use criteria.
- Embed energy efficiency requirements in all building codes by 2011 and institute a four year cycle of regular upgrades
  - Homes: EnerGuide for Houses = 80 by 2012, 90 by 2020
  - Buildings: 25% improvement by 2012, net zero energy by 2020
- By 2015, introduce mandatory upgrading of energy efficiency at the time of sale or re-commissioning of all houses and buildings.

4. **Continuous Improvement.** Commit to a continuous cycle of energy efficiency improvements that keeps Canada among the most efficient jurisdictions in North America. This would be achieved through a coordinated series of federal and provincial capacity building measures, government procurement, financial incentives, and financing innovations – backed up every few years with new standards and codes. This coordination would be managed by a CEM secretariat with individual collaboratives on each type of measure.

5. **Federal Leadership.** Through a series of new federal programs, engage, foster and support the energy efficiency and green buildings industries, the financial and real estate community, and other industries that will lead investment and implementation of energy efficiency in Canada. These programs should include:

- National/regional training and certification initiatives for all energy efficiency professionals and trades.
- A 5 fold increase in the federal ecoEnergy retrofit financial incentive program to keep pace with the goal of retrofitting all Canadian homes by 2030.

- A new federal financial incentive programs for the retrofit of commercial and institutional buildings with goals and scale similar to those of the expanded ecoEnergy retrofit program (filling a huge gap in current programs).
  - A new federal retrofit assistance program of direct financial support, training and evaluation for low income and first nations housing with the goal eliminating “energy poverty” by 2020. This addresses the energy affordability issue which poses unique and critical risk to low income families.
  - Green building standards and tax incentives to help the building industry adopt green practices and achieve the target of 50% net zero energy houses and buildings by 2015
  - A revenue neutral “feebate” system for appliances and lighting that provides financial incentives for high efficiency products and adds fees for low efficiency products. This would help accelerate the penetration of “Energy Star” products and allow a faster regulated phase out of inefficient products.
  - A major national initiative to reduce the distances traveled by freight and improve the overall efficiency of freight movement.
  - A major federal government investment program/provincial transfers to support public transit and the coordination of intercity and local transport modes.
  - A national green communities initiative helping to achieve the goal of all municipalities having smart growth and sustainable energy plans by 2030.
6. **Giving Energy Efficiency its True Value.** Coordinate federal/provincial policies to fully value energy efficiency in Canadian markets:
- Ensure energy efficiency is fully eligible in carbon offset and carbon pricing systems and renewable energy certificate programs.
  - Provide shared saving incentives to utilities to make energy efficiency financially attractive.
  - Use mandatory standard offer contracts to provide a guaranteed return for energy savings delivered to utilities.
  - Provide production incentives for combined heat and power systems.