A National Energy Efficiency Strategy for Canada

Results of a Multi-stakeholder Dialogue
August, 2010

Investing in energy efficiency boosts productivity, reduces costs, cleans our air and water, and creates jobs everywhere.

This report summarizes the results of discussions among energy efficiency industries, utilities, non-government organizations, and academics working on energy efficiency. It sets out the reasons why a national strategy is important and makes several key recommendations for national and federal action. A supplement to this report contains model national energy efficiency initiatives for each sector of the economy. The stakeholder dialogue was hosted by the Canadian Renewable Energy Alliance (CanREA) and the Canadian Energy Efficiency Alliance (CEEA).

Energy Efficiency is Our Cleanest, Cheapest and Most Productive Energy Source

An energy efficient economy is a strong, competitive economy. Lower energy demand should be seen as a measure of productivity rather than a sign of economic weakness.

An energy efficient economy also means that everyone pays less for energy, freeing up capital and discretionary income for more important investments. Energy efficiency is unique among energy sources in that it pays for itself through savings.

An energy efficient economy means less energy needs to be produced from polluting energy sources. Energy efficiency is therefore by far the cheapest way of reducing GHG and other emissions.

Finally an energy efficient economy is a safe and secure economy. Every wasteful unit of energy saved means less has to be generated or imported.

While energy efficient technologies and conservation measures have all these benefits, getting energy users to adopt them is difficult. Barriers and market failures such as higher first cost, lack of information on unfamiliar technologies, and lack of trained staff are only partially removed by energy price increases and therefore have to be addressed through government, industry, and utility programs and policies.

Canada needs a National Energy Efficiency Strategy

Many businesses and consumers across Canada are investing in energy efficiency. Business associations have set targets for their members and have established a systematic performance-based approach to help meet these targets. Homeowners are retrofitting their homes in record numbers.

Governments and utilities provide enabling measures to support these efforts – setting minimum standards and code requirements, establishing rating systems, and providing financing and training. Programs like the EnerGuide energy rating system, R2000, CIPEC, truck driver training, and minimum standards set under the Energy Efficiency Act are examples of world class measures.

However, Canada as a nation is falling far short of its efficiency potential. Only 8 % of homes have had a retrofit. Many buildings operate at 50% below their efficiency potential. Most of us still commute by car. Support policies vary considerably across the country and many Canadian homes and businesses are not enjoying the benefits of efficient energy use throughout the economy. Much more needs to be done.

Canada faces some unique institutional barriers as well. Split jurisdiction over energy between the federal and provincial governments means it's harder to set targets and implement efficiency measures on a national level. Split jurisdiction *within* governments also compounds these difficulties.

Canada lags behind other G8 and OECD countries in both the resources assigned to improving energy efficiency and the lack of targets or a well defined plan to move forward. The International Energy Agency in its recent review of Canadian energy policy praised Canada for its EcoEnergy programs and initiating federal-provincial collaboration through the Council of Energy Ministers. However, they observed that Canada still lacked time-bound national efficiency targets and a national strategy to attain them. The IEA also observed that much more national harmonization across provinces and territories was needed.[i]

Our vision for the future of energy in Canada is one where:

1. Canadians and their governments accept the significant value and benefits of energy efficiency. Reduction in energy use through efficiency is established as a national goal with targets that are regularly met.
2. Canada as a nation has collaboratively put in place successful and cost effective nationwide energy efficiency initiatives that are transforming the way we all use energy in every sector.

This vision will result in a new way of looking at energy and its use, as well as providing savings to consumers and businesses, lowering the need for new energy supply, reducing waste and emissions, increasing productivity, and providing new jobs.

We believe that all levels of government must work together to maximize efficiency gains and harmonize efforts across the country so that all Canadians benefit. Canada needs a bold plan to transform every energy-using aspect of the Canadian economy – building on the excellent base established by past projects and programs.

The Key Role of the Federal Government

We believe that the federal government has an essential and special role to play – getting agreement on national targets, maintaining and expanding national efficiency support services, strengthening national efficiency regulations, and leading market transformation through procurement. Many current provincial initiatives rely heavily on Federal programs.

While most energy saving will occur at the provincial and sector level, the federal government can help to "knit" these activities together into a national strategy. It can make sure that Canadians receive common messaging about the benefits of efficiency and conservation and that they have sustained and equal access to supporting measures over the long term.

Finally it can help all Canadians be accountable for their energy use and facilitate investment in conservation and efficiency – investment in people, the market, and information.

Recommendations:

The federal government has built a strong foundation for investment in energy efficiency through initiatives like the successful EnerGuide home rating system and regulations under the Energy Efficiency Act. However, the federal government has many additional regulatory powers, levers, and services available to it. We recommend that the federal government increase its support for national energy conservation and efficiency initiatives across Canada by immediately undertaking the following steps:

Setting Targets:

1. Work with Provinces and Territories to set national targets for energy efficiency.
2. Add energy efficiency to the Clean Energy Dialogue with the United States.

Providing Support and Common Messaging:

3. Expand resources committed to financing and collaboration among provinces and territories.
4. Maintain and strengthen the successful EnerGuide home rating system and develop equivalent systems for all other buildings and vehicles.
5. Strengthen and expand the role and mandate of the Office of Energy Efficiency.

Regulating Efficiency:

6. Streamline and accelarate the inclusion of energy efficiency in the National Building Code.
7. Commit additional resources to the energy efficiency standards process.
8. Conduct a review of federal departmental mandates and supporting legislation.

Procurement:

9. Implement a major new Federal Building and Facilities (House in Order) Initiative.

More details on these recommendations are provided in Appendix 1.

We also recommend that the federal government support energy efficiency in each sector of the economy by working with all stakeholders and other levels of government on the following national initiatives:

1. A national Green Homes program with the objective of retrofitting at least 40% of homes across Canada, and all low income housing, over the next 10 years, and raising the efficiency of new homes to net zero energy.
2. A national Green Buildings program with the objective of improving the technical and operational efficiency of all buildings across Canada by 50% over the next 10 years.
3. A national community efficiency program of financing, capacity building, and financial assistance to municipalities for energy efficiency policies, projects, and smart land use planning.
4. A national industrial energy management program helping Canadian companies adopt international management standards and improve productivity.
5. A national Transport efficiency program of increasing standards for all types of vehicle and support for modal shifting, driver training, and logistical efficiency.

Model national initiatives for each of these sectors are provided in a supplement to this report.

Budgeting for Energy Efficiency Initiatives

The guiding principles governing funding for national energy efficiency initiatives should be:

1. To commit at least as much financial, technical, research and other resources into transforming energy use through efficiency as into new energy supply.
2. To ensure a long term sustained commitment - long term initiatives, no interruption of programs, and consistent funding.
3. To provide accountability for results.

Financing of national energy efficiency initiatives should consider the use of the following:

- ⇒ Annual tax base budget allocations to government departments for energy efficiency activities at least equal to 2005-2009 budgets.
- ⇒ Allocations to national efficiency initiatives from utility and other energy industry revenues, including provincial public benefits charges and DSM programs.
- ⇒ Regular offerings of Green Bonds in collaboration with financial institutions.

Turning Dialogue into Action

Energy efficiency must become a national priority. An energy efficient Canada will be more competitive, cleaner, and fairer. We are doing our part to transform our energy use wherever we can. We ask that our governments support us.

Appendix 1

Detailed Recommendations for Federal Action

1. Targets: Work with Provinces and Territories to set time-bound sectoral and national targets to guide the transformation of the way that we use energy in Canada, and monitor the progress and the benefits that this will bring. We like the following targets already adopted or suggested by Provinces and stakeholders:
   i. Reduce national energy use 20% below 2008 by 2020
   ii. Reduce industrial energy intensity by 4% per year
   iii. Reduce annual person-km and tonne-km by 2% per year
   iv. Retrofit 40% of existing homes and 60% of buildings by 2020 by an average level of 30% savings.
   v. Improve new home and building energy efficiency by at least 2% per year to net zero energy.
2. Dialogue with the US: Add energy efficiency policy and programming to the Clean Energy Dialogue with the United States, which has already taken major steps to reduce energy use through efficiency policies independent of climate change policy.[ii]
3. Collaboration: Guarantee loans to municipalities to allow them to provide financing for energy efficiency projects. Expand resources for federal/provincial/territorial collaboration through the "Moving Forward on Energy Efficiency" process of the Council of Energy Ministers (CEM) and act quickly on their recommendations for federal action. Work with all governments to ensure there is consistency and harmonization of regulations, benefits and access across all regions of Canada.
4. Energy Rating Systems: Maintain and strengthen (without interruption) the successful EnerGuide home rating systems and the support services for its use in all provinces and territories – extending these services to other buildings and all vehicles as soon as possible. Services would include audit, rating and labeling protocols; training and certification tools; and model enabling legislation.
6. Leadership: Strengthen and expand the role and mandate of the Office of Energy Efficiency (OEE) to become a one-stop hub for federal support and regulation of all energy uses. Provide all energy users with the rating and benchmarking information they need to improve and finance efficiency and to provide accountability in their use of energy.
5. Building Codes: Build on the current plan to include energy efficiency performance requirements in the National Building Code by issuing a cabinet directive that would accelerate and streamline the process and mandate that minimum energy efficiency requirements be increased every three years to best practices. Work with the Provinces and Territories to adopt the same three year cycle and introduce the concept of "best practice" into their building codes. Provide financial support for the training of code officials and enforcement across Canada.
6. Equipment Standards: Increase resources committed to the setting of regulations under the Energy Efficiency Act to allow minimum energy efficiency standards for all products that affect energy use to be regularly tightened to best in class. This would add capability to the existing process managed so successfully by the Office of

Energy Efficiency and allow greater cooperation between industry and different levels of government under the Council of Energy Ministers Forum on Energy Efficiency Standards.

7. Streamline Mandates: Conduct a review of federal departmental mandates and supporting legislation to ensure that they do not contradict, impede, or delay energy efficiency; and that they streamline federal efficiency regulations, fill gaps and ensure national consistency on energy efficiency policy.

9. A Federal Building and Facilities (House in Order) Initiative: Significantly expand the current Federal Building Initiative with a new program that:

   - ✓ Adopts aggressive measures that would reduce energy consumption in all buildings and facilities owned, operated and rented by the federal government.
   - ✓ Makes contributing to energy efficiency and sustainability *the business of each federal department*, and require energy conservation to be considered in *how each department carries out its business*.
   - ✓ Makes necessary changes to the Financial Administration Act and Treasury Board regulations, as well as any landlord-tenant relationships to allow all departments and agencies to use their capital funds to invest in technologies and equipment that would conserve energy and to benefit from savings in operational funds. [iii]
   - ✓ Adopts similar measures to ensure high efficiency in fleet management and vehicle/transport mode usage.
   - ✓ Uses full life-cycle costing for procurement of all equipment and services.
   - ✓ Includes a government-wide energy conservation staff education program.

End Notes:

---

[i] *Energy Policies in IEA Countries: Canada 2009 Review: p65 Energy Efficiency.* International Energy Agency 2010

[ii] The US House of Representative recently passed the new "Home Star" program that will help homeowners reduce energy bills through energy efficiency investments and provide construction jobs. In the US Senate, the Energy and Natural Resources Committee agreed on a set of amendments that adopt new consensus minimum efficiency standards on a variety of products. These developments follow the passage of two key Acts in 2009 that significantly increase national support for energy efficiency.

[iii] *Making it happen - the transition to a sustainable society*. University of Ottawa 2009. http://makingithappen.ca/