

Putting More Energy Into Efficiency:

The fast, effective and cheapest way
to fight climate change.

Canadians use a lot of energy. This country is the second largest energy consumer in the world on a per person basis. And Canadians are paying the price with rising energy costs, smog and climate change causing emissions as well as through lower productivity and competitiveness.





Canada needs to get smart about how it uses energy by dramatically improving the efficiency of industries, homes, offices and automobiles. Increasing energy efficiency is often the fastest and most economical way to meet our energy needs. It is also the quickest and cheapest way to reduce both climate change and smog-causing emissions.

Bruce Petersen

The national *Energy Efficiency Act* sets minimum standards for the energy performance of a range of domestic and commercial appliances and equipment that account for close to a quarter of this country's energy use. But the Act is largely focused on eliminating the least energy efficient equipment from the market rather than on increasing the availability of the best technologies and most efficient models. The current approach of bringing up the rear with new standards only when efficient products finally capture a significant (60%) market share means we are wasting a great opportunity to cut emissions and curb climate change.

There is a pressing need for political leadership to ensure that Canada does not fall further behind other nations that have already put in place programs and policies to make them significantly more energy efficient and competitive.

WWF's research shows: good intentions, lagging results

Instead of driving greater energy efficiency with progressive standards, the federal government relies on EnerGuide and EnergyStar® labelling to try to steer consumers and businesses toward more efficient choices. WWF-Canada's research strongly indicates that this approach is simply not moving Canada forward fast enough. Why?

- Public awareness of both programs is relatively modest. EnergyStar® appliances, for example, generally have grabbed no more than one-quarter of the market.
- The onus is on the consumer to understand what the labels mean (e.g., knowing how to translate energy consumption figures into actual operating costs) and how to compare different models (there can be significant efficiency differences even among EnergyStar® units as the label really represents 'better' rather than 'best').
- EnergyStar® selection is often limited to higher-end, higher-cost models that many consumers pass up even if the lower operating costs outweigh the extra sticker price.
- A limited range of products are covered. For example, there is no EnergyStar® standard for clothes dryers, ranges or electric water heaters.
- Developers and landlords have no incentive to install energy-efficient equipment, leaving buyers/renters with the operating costs of cheaper but inefficient appliances, furnaces, windows, etc..
- Computers are an EnergyStar® success story with almost full market penetration. But the key has been mandatory government and institutional procurement policies that have created a strong incentive for electronics manufacturers.

Making efficiency a way of life

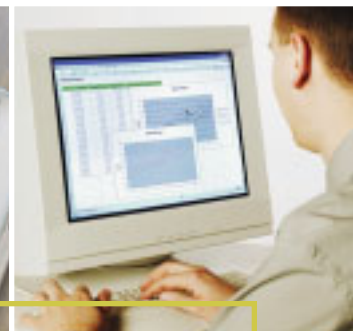
One simple and effective strategy is to set and begin introducing progressive efficiency standards for a wide range of energy-using equipment – everything from household appliances and lighting to industrial motors and heating and cooling systems.

A recently-passed U.S. law (see sidebar), for example, will significantly increase efficiency standards for a wide range of products, while also providing incentives for consumers and businesses to invest in efficiency. Improved standards for household appliances alone will cut 5.3 megatonnes of their greenhouse gas emissions.

California has identified energy conservation as the lowest cost way to meet its power needs; saving a kilowatt of electricity costs half that of having to build a new power plant to generate a kilowatt. Of the 35,000 gigawatts California saved through efficiency programs in 2001, almost half were from improved energy efficiency standards for building and appliances.

United States Energy Policy Act, 2005.

- raises minimum standards for 16 product classes, including commercial air conditioners and heat pumps and commercial clothes washers
- sets minimum standards for several previously unregulated products
- makes current EnergyStar® the minimum standard for a number of products
- allows states to set even higher standards
- provides rebates to manufacturers based on their product's level of energy efficiency, helping to make highly efficient products cost competitive
- provides tax credits to purchasers of efficient large-scale heating and cooling equipment
- provides incentives to consumers for buying EnergyStar® -rated residential refrigerators, clothes washers, dishwashers and ground-source heat pumps



Market share for EnergyStar® and other 'premium' or 'high-efficiency' equipment in selected categories:

- Electric motors (which are extensively used in industry): **approx. 20%**;
- High-efficiency furnaces: **12%**
- Residential lighting: **7%**
- Commercial lighting: **8%**
- Dishwashers: **less than 50%**
- Fridges: **17%**
- Computers: **> 95%**

EnergyStar – better but not best

EnergyStar® is a voluntary program that allows equipment that is 10-50% more efficient than average to bear its label. The availability of EnergyStar®-rated equipment demonstrates that higher efficiency is readily achievable. The low market penetration of EnergyStar® models shows that it will take more than labelling to ratchet up Canadian energy efficiency.



Improve national energy efficiency standards now.

Canada's mixture of un-ambitious standards, voluntary programs and lack of effective incentives has left us lagging behind many jurisdictions. Other countries have combined significantly higher energy performance standards with targeted incentives to outpace Canada in improving energy efficiency and controlling greenhouse gas emissions. Here's what Canada needs to do to close the gap and reach its climate change targets.

1. Upgrade & expand energy efficiency standards

The federal government should change its approach and proactively use the *Energy Efficiency Act* to lead Canadians toward greater efficiency. Bringing up the rear is an inadequate strategy. Making EnergyStar® or other premium efficiency benchmarks the *minimum* energy performance standard will help drive the innovation, research and marketing needed to make all Canadians energy winners. There aren't a lot of costs or political red tape involved – just the will to get serious about reducing climate change emissions and to make changes to existing regulations.

2. Invest in achieving win-win efficiency

Federal and provincial governments should develop and support education, marketing and incentive programs designed to deliver the greatest possible returns, for example by

promoting replacement of old refrigerators that draw a lot of energy and helping consumers overcome barriers such as long pay-back periods or higher up-front costs. Canadians are missing out on the direct benefits of increasing efficiency, like the U.S. \$15.8 billion saved by California residents and businesses when they turned to energy efficiency to deal with an energy supply crunch.

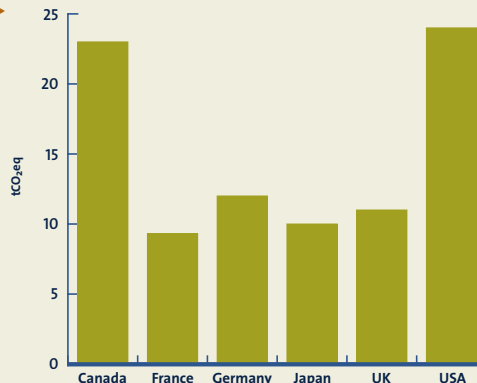
3. Support made-in-Canada efficiency

Provide technical and financial assistance for developing high-efficiency product lines that can meet higher Canadian and international standards that will give Canadian manufacturers a market edge and open new markets for Canadian goods. Such an emphasis will also help to harness the economies of scale that can make energy-efficient products even more attractive to consumers and businesses by lowering up-front costs.

CO₂ Emissions per capita

Don't blame our climate or geography:

Many other large Western nations with heavy heating and/or cooling needs have lower per capita energy consumption, including the United States, Norway, Sweden, and Finland. European countries and Japan are also far ahead of Canada in smart energy use.



Delivering benefits for people and nature

WWF-Canada's research indicates that by making EnergyStar® and other 'premium' standards the minimum energy performance requirement under the *Energy Efficiency Act*, the resulting reduction in energy use would cut greenhouse gas emissions by at least 25 mega-tonnes, almost 10% of the reduction needed to meet Canada's Kyoto target. The earlier we can get efficient products into the market, the greater the savings. This is a critical first step to putting Canada on the road to a cleaner, more sustainable energy future, meeting its Kyoto obligations, and curbing the serious threat of climate change.

Increased market share for efficient products also helps people save money, especially considering increasing fossil fuel and electricity prices. The Canadian Appliance Manufacturers Association calculates that the average Canadian household could cut its energy demand from appliances by close to 40% by using currently available EnergyStar® models, which translates to roughly \$170 off the average energy bill.

Decreased demand for energy also reduces the need to build expensive new power plants, pipelines and transmission lines, or for some provinces, such as Ontario, to import dirty coal-fired power from the United States. Industries can be made more productive and efficient, and therefore more competitive in the global marketplace.



Let's not let this opportunity go to waste

Simply put, expanding and improving Canada's energy efficiency standards and providing effective incentives to manufacturers and consumers is key to meeting Canada's Kyoto commitments, which in turn is key to reducing the devastating impacts of climate change. No other solution can deliver emission reductions as quickly or cheaply.

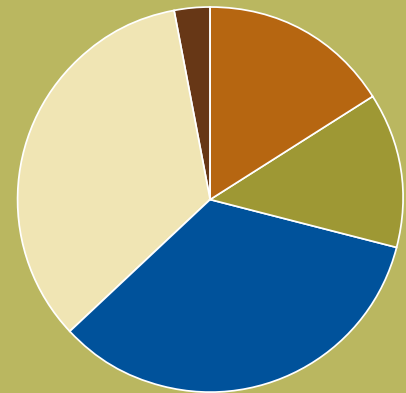
Support WWF-Canada's call to make efficiency the cornerstone of Canada's energy policy by signing our petition at www.saveourclimate.ca

Action on climate change needed now!

As a country particularly vulnerable to climate change and a signatory of the United Nations Kyoto Protocol, Canada is committed to reducing greenhouse gas (GHG) emissions to 6% below 1990 levels by 2012. However, GHG emissions have actually risen by 24% since 1990.

Canadian emissions by end use 2002

Residential	16%
Commercial/ Institutional	13%
Industrial	34%
Transportation	34%
Agriculture	3%



Global warming, global threat

Climate change is already disrupting natural ecosystems and people's livelihoods in Canada and around the world. Urgent action to reduce fossil fuel pollution is needed to keep global warming below the danger threshold of 2° C above pre-Industrial levels.

WWF-Canada works with many stakeholders including governments, corporations and individuals to reduce greenhouse gas emissions and

minimize the effects of climate change on nature and communities. WWF-Canada advances policy and practical measures to ensure implementation of our Kyoto commitment and to put Canada on a sustainable energy path.

For more information about WWF-Canada's work to improve energy efficiency and fight climate change, please visit www.saveourclimate.ca or www.wwf.ca.



Polar Bear, *Ursus maritimus*. Churchill area, Manitoba, Canada



for a living planet

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