



# Canadian Renewable Energy Alliance

*promoting a transition to renewable energy*

## Financing Sources and Mechanisms for Renewable Energy and Energy Efficiency

Significant improvements in energy efficiency and conservation and a global transition to renewable energy will require huge investments in national and local energy infrastructure in every country over the coming decade.

These investments will need to come from both the public and private sectors, and take many forms – including financial incentives from government; loans and capital investment from banks, private investors, venture capital funds, and communities; and new innovative markets that provide a value to the benefits of renewable energy and energy efficiency. Financing sources include venture capital, share raised capital, energy bill charges (public benefits or lines charges), financial institutions, community development funds, and general tax revenues.

According to New Energy Finance, the total global investment in “clean energy” in 2005 was over US \$42 billion. They estimate that a five fold increase in renewable energy investment will be needed over the next decade if there is to be a meaningful switch away from fossil fuels without requiring new nuclear power capacity. Wind energy dominates renewable energy investments with investments of \$12 billion in 2005, but global solar photovoltaic cell production is expected to climb to over 5 GWp/yr by 2010 spurred by new policy initiatives in US, Germany, Japan, and Spain.

Renewable energy and energy efficiency are unique in that they require higher up-front investment than conventional energy sources, while at the same time providing multiple benefits that are not reflected in their cost. Innovative strategies and policies are therefore needed to increase investment, spread cost over the life cycle, and reflect the multiple benefits of renewable energy and energy efficiency.

While investment in renewable energy and efficiency is increasing, it still lags far behind conventional energy investments. A major reason for this is a continuing focus of investors, governments and lending institutions on conventional energy sources such as fossil fuels, large hydro and nuclear energy. The Pembina Institute has shown that subsidies for the Canadian oil and gas industry were almost \$1.5 billion in 2002 and are continuing to rise.

Financing is therefore a crucial element of a global transition to renewable energy. Government commitment and policies to leverage investment are the keys to success. Canada lags behind the US, Europe,

China and India in support for renewable energy investment. Provinces play an important role in attracting investment through standing offers and Renewable Portfolio Standards. The federal government must show leadership at the national and international levels by providing financial incentives, removing barriers, and leveling the playing field.

### Recommendations for Provincial Strategies

Provincial governments should put in place policies and programs that maximize private, community, and public investment in renewable energy and energy efficiency through:

- ▶ Incentive mechanisms such as feed-in tariffs, renewable portfolio standards (RPS), renewable energy certificates, standards and codes taking into account the technology's relative position on the cost curve and social value.
- ▶ Changes to the public support of energy (tax breaks, subsidies, royalty reductions) – reducing those for conventional energy and diverting investment flows into renewable energy, especially at the local level.
- ▶ Taking action to remove all barriers to renewable energy investment and installation, including requiring solar readiness in building codes; updates of electrical, plumbing and building codes; and training of inspectors.

Investment in energy efficiency should be supported by:

- ▶ Setting Energy Efficiency Portfolio Standards and establishing a tradable permit (white certificates) program.
- ▶ Providing permanent funding sources through the budget process to support a building code and equipment standard review cycle, and through a rate based funding mechanism.
- ▶ Establishing a shared savings DSM incentive mechanism for energy utilities, providing technical support for smaller utilities, and coordination of DSM programs across the Province.

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- ▶ Providing targeted financial incentives to kick start market transformation, providing effective support to suppliers, users, or contractors.
- ▶ Supporting and promoting innovative community scale financing mechanisms such as micro credit, leasing, and use of local improvement charges.

## **Recommendations for Federal Enabling Policies and Support**

The Federal government should play a leadership and enabling role to increase investment and financing of renewable energy and energy efficiency as part of a national strategy. The objective should be to remove barriers, level the playing field, and maximize private and public investment. This should be achieved by:

- ▶ Making a strong political commitment to renewable energy and energy efficiency.
- ▶ Implementing ecological tax reform in which financial incentives for conventional energy sources such as oil, gas, coal and nuclear are significantly reduced and diverted into incentives for renewable energy and energy efficiency.
- ▶ Establishing a national renewable energy and energy efficiency investment facility with major banks and credit unions through Finance Canada, setting investment targets for each technology and end-use.
- ▶ Encouraging the private sector to establish more Canadian venture capital funds and revolving funds that rapidly increase investment in and debt financing of renewable energy and efficiency.
- ▶ Developing and implementing a national renewable energy industrial development and infrastructure action plan through Industry Canada that includes financial support for the commercialization and cost reductions in manufacturing; training and certification of large and distributed system designers, installers, operators, and inspectors; financial incentives for manufacturers, builders, suppliers; and risk reduction strategies for project developers.
- ▶ Supporting innovative financing strategies such as a national tradable certificates program for renewable energy and energy efficiency investments that would work with Provincial portfolio standards, and municipal financing using local improvement charges.
- ▶ Taking an active role internationally in support of a global transition to renewable energy by participating in and supporting international initiatives and finance forums, and supporting the establishment of a new international renewable energy agency and financial institution.
- ▶ Committing CIDA to precise and ambitious targets for official development assistance for renewable energy and make sure this funding is made more accessible to community level projects.
- ▶ Requiring EDC to allocate funds to renewable energy and energy efficiency technologies.
- ▶ Working with stakeholders and Provincial governments to improve Canada's investment attractiveness for renewable energy and energy efficiency.
- ▶ Taking global action to remove trade barriers to renewable energy investments and stop the trade in low-efficiency second-hand equipment to developing countries.

## **Recommendations for Other Actors**

- ▶ Municipalities should encourage community investment in energy efficiency and renewable energy through the establishment of community power corporations, green funds, and the use of local improvement charges for project financing.
- ▶ The Renewable Energy and Energy Efficiency Industries should join with NGOs and other stakeholders in holding finance forums, advocating more support for investment and local manufacturing, and work with government and stakeholders to increase Canada's investment attractiveness.
- ▶ NGOs should work with all stakeholders to lobby for investment supportive policies in Canada, and participate in North American and global networks supporting the establishment of an International Renewable Energy Agency and Investment Bank.
- ▶ Socially Responsible Corporations and Institutions should purchase green energy (power, fuels, and heat) and energy efficiency through purchase of tradable certificates and investment in community power and fuels projects.
- ▶ International Financial Institutions should set meaningful and ambitious renewable energy targets, and part of the funding should be allocated to the development of energy commodities export markets in least developing countries. A new Global Renewable Energy Investment Bank should be established and the grant capacity of the Global Environmental Facility (GEF) increased.

**To review a more detailed version of this policy brief or for more information on the Canadian Renewable Energy Alliance (CanREA), please visit [www.canrea.ca](http://www.canrea.ca) or contact:**

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