

Vision for a Low-Impact Renewable Energy Future for Canada



Recommendations for Government Policy: 2004 - 2005

The production of energy in Canada is poised to enter an exciting phase of innovation that could lead to increasing international competitiveness. This new phase of energy production will come from low-impact renewable energy forms. Over time, these energy forms could reliably produce as much power in Canada as both thermal and nuclear combined. The push to low-impact renewable energy is happening because carbon is becoming constrained as an energy source, there is a greater need for flexible sources of electricity and because opportunities exist for Canada to develop lucrative new energy technologies and to export green power. To make the most of these opportunities, we must develop a vision of where our energy future will take us and how to get there.

The Clean Air Renewable Energy Coalition's goal is to have low-impact renewable energy account for a minimum of 7 per cent of Canada's electricity production in 2010, and 15 per cent by 2020. Today, it is 1.3 per cent.

To achieve this goal and ensure low-impact renewable energy has a strong and meaningful role in Canada's energy sector, the Coalition recommends that Canadian governments (a) treat low-impact renewable energy production in the same way other energy technologies have historically been supported and (b) take the following steps:

1. **Define a comprehensive Low-Impact Renewable Energy Vision for Canada** including a comprehensive renewable energy resource assessment, R&D money for early-stage technologies, & differentiated guaranteed prices for pre-commercial phase technologies

2. **Set long-term targets for Low-Impact Renewable Energy in Canada** such as the goals above
3. **Commit to a package of long-term, broad, market and government incentives**, including enhancements to the Wind Power Production Incentive (WPPI), extension of similar programs to other renewable technologies, and expansion of the Marketing Incentive Program (MIP)
4. **Develop partnerships between the Federal Government and its Provincial and Territorial counterparts to provide incentives or measures to increase Low-Impact Renewable Energy investments in Canada**
5. **Recognize that Low-Impact Renewable Energy has the potential to contribute to reducing the carbon intensity of Canada's energy supply** and reflect this in the rules for the proposed domestic emissions trading and offsets system

Most recently¹, the Coalition has suggested to the Prime Minister that the Federal Government:

- develop a **National Renewable Energy Strategy** (relating to low-impact renewable energy/green power)*
- **set a target and a timetable for green power**, for instance, 7% of Canada's total electricity mix by 2010 and 15% by 2020
- **enhance or introduce power production incentives** to accelerate the development of these emerging renewable energy technologies:
- **expand the application of WPPI from 1000 to 4000 MW at a level not less than 1.0 cents/kWh**;^{*}
- allow wind energy projects to access both WPPI and the Canadian Renewable Conservation Expense (CRCE); and,
- **develop a series of other power production incentives (GPPI - Green Power Production Incentive)** for other technologies such as small hydro, biomass, geothermal, as well as wave and tidal power ².

The Numbers Tell the Story: Demand for Green Electricity is Increasing

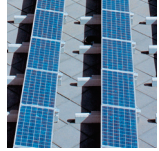
Canada needs electricity. **Over the next 50 years, Canada's electricity needs will increase between 60 per cent to 270 per cent.**³ Further, Canada will be influenced by rapidly growing demand for electricity in the United States. **Currently only 7 per cent of our electricity is exported to the United States but export opportunities are projected to increase significantly in the next 50 years.** As the U.S. expands its requirements for minimum levels of green energy, known as renewable energy portfolio standards (RPS), Canada will need to be in a position to provide that type of energy.

* The intention to proceed with these matters was announced in the **October 5, 2004 Federal Speech from the Throne**

1. Letter to Prime Minister Martin dated August 30, 2004. For full text see www.cleanairrenewableenergycoalition.com

2. For solar photovoltaics (PV), a government buy-down program restoring part of the purchasing cost is recommended.

3. Growth rates expected between 1 and 2 per cent annually.



The Benefits of Low-Impact Renewable Energy are Clear

Low-impact renewable energy is a non-depleting resource with minimal environmental impacts

Low-impact renewable power generation produces little to marginal amounts of the emissions associated with acid rain, smog or climate change.

Stable cost profile will benefit electricity prices

The main cost of producing low-impact renewable energy is in the capital cost of equipment rather than in operating the equipment once it's there, making the cost of low-impact renewable energy more predictable and fostering price stability of electricity.

Rapid deployment

Low-impact renewable energy, based on modular, simple installations with a small footprint and few environmental impacts can be in place within a two- or three-year time frame.

Mixed portfolio of low-impact renewables resulting in increased reliability

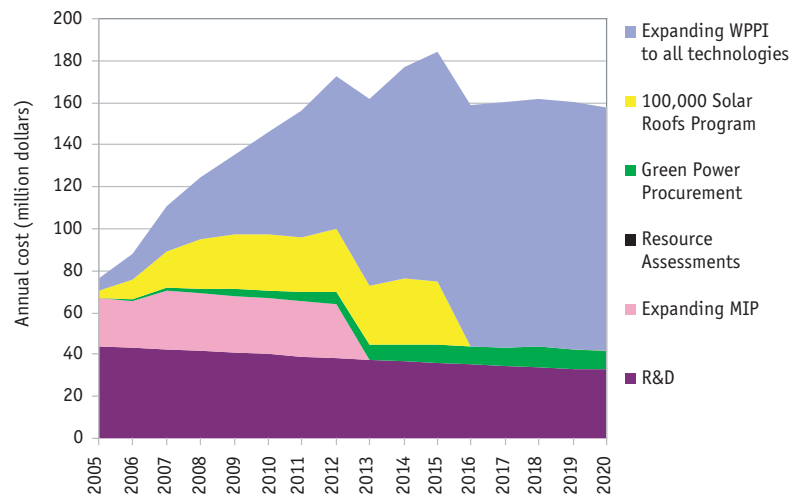
Low-impact renewable energy sources can diversify Canada's energy supplies in a decentralized and distributed manner that would provide enhanced energy security and quicker recovery in the event of incidents.

Creating employment and a new industry

Low-impact renewable electricity sources employ an average of 6 people per 10 MW of capacity, and by encouraging their development with a 1 cent/kWh incentive, governments have the opportunity to leverage the creation of more than 20,000 new jobs by 2015.⁴

FEDERAL BUDGETARY IMPLICATIONS OF OUR VISION DOCUMENT

An assessment⁵ was made to determine the cost of all Clean Air Renewable Energy Coalition recommendations from its "Vision for a Low-Impact Renewable Energy Future for Canada"⁶, for the coming sixteen years (2005 to 2020). For all measures combined, a budget of \$131 million per year would be required between now and 2020. This funding would include a larger Wind Power Production Incentive (WPPI - target increased to 4,000 MW from currently 1,000 MW), the creation of a similar incentive for other low-impact renewable energy technologies (Green Power Production Incentive - GPPI), an extension of



4. The study was conducted by the Pembina Institute – Canadian Renewable Electricity Development: Employment Impacts. For the entire paper, see www.cleanairrenewableenergycoalition.com

5. The assessment, conducted by Environmental Intelligence, is entitled "Federal Budgetary Implications of Coalition Vision Document Recommendations". It can be found at www.cleanairrenewableenergycoalition.com

6. For the full document, go to www.cleanairrenewableenergycoalition.com



the Market Incentive Program (MIP) to 2012 at an increased budget, increased federal green power procurement, a national solar PV (photovoltaic) buy-down program, resource assessments for various technologies, and increased research funding specific to low-impact renewable energy. This level of funding is very much in line with current government support for other types of energy, such as nuclear or bio-ethanol.

CONCLUSION

World-wide, low-impact renewables are going mainstream. Canada is poised to be a significant player in the development of these renewable technologies and in the production of low-impact renewable energy. However, the window for Canada to be a market leader in these areas is narrow. Other countries are already seizing the opportunities, armed with comprehensive government strategies to support low-impact renewable power. Canada now has an excellent opportunity to do this as well.

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