CLEAN AIR RENEWABLE ENERGY COALITION

Policy Recommendations for Canada's Low-Impact Renewable Power Sector

This document explains the Clean Air Renewable Energy Coalition's reasoning behind its recommendation to expand the ecoENERGY for Renewable Power program to support 12,000 MW of low-impact renewable energy by extending the application date to 2015, as an intermediate target towards the Coalition's 15% by 2020 goal.

Low-impact renewable energy provides great benefits in terms of employment creation, export opportunities, clean air and greenhouse gas emission reductions. As government support in other nations is extended to renewable energy technologies, the new ecoENERGY for Renewable Power program will assist the continued development of wind, hydro, biomass, geothermal and ocean energy in Canada over the coming four years, supporting 4,000 MW of power. CanWEA estimates that provincial governments are seeking to obtain at least 10,000 MW of wind power by 2015. Current provincial targets for all types of renewable electricity will result in an overall capacity of certainly more than 10,000 MW in the same timeframe (see Table 1). The Clean Air Renewable Energy Coalition recommends that 15% of Canada's electricity come from Ecologo certified low-impact renewables by the year 2020 – equivalent to an estimated total generating capacity of 35,000 MW, and compatible with Ontario's target of approximately 8,700 MW in 2025. **To achieve this target, continued and extended support for Canada's renewable energy industry will be crucial**.

Table 1 Current Provincial Renewable Electricity Targets

Province	BC	AB	SK	MB	ON	QC	NB	PEI	NS	NF
Target	50% of new facilities	3.5%	100% of new facilities	1,000 MW (wind)	10%	4,000 MW (wind)	10%	100% (wind)	20%	150 MW (wind)
Date	2012	2008	2010	2014	2010	2015	2016	2015	2013	
Estimated MW	400	900	200	1,000	2,700	4,000	400	200	500	150

It is essential to provide certainty for this new market in order to build the industry and consistently reap its benefits in Canada, which is competing with other jurisdictions for a share of the international renewable energy market:

- certainty for investors and developers so that renewable energy technologies continue to find an attractive market in Canada into the coming decade;
- certainty for on-going planning and target-setting in Canada's provinces, who rely on continued federal support to transform the way electricity is generated across the nation;
- certainty for potential Canadian and foreign manufacturers planning to set up manufacturing facilities in North America, who are looking for locations where governments have created and sustain a policy environment committed to clean technologies, and
- certainty for Canada as a whole in reaching GHG emissions reduction targets and enjoying the concomitant clean air benefits.

Creating such certainty will indeed result in the creation of a new industry in Canada, and create employment in both urban and rural areas, which exceeds employment creation of natural gas power plants and is in the same range as that of coal power plants. Not moving ahead with continued support for the industry may result in the loss of opportunities, which will instead be captured by other countries where support for renewables is strong.

As an intermediate target, the Clean Air Renewable Energy Coalition suggests expanding the ecoENERGY initiative to a target of 12,000 MW by extending the application date to 2015. Table 2 details the expected installation rates over the period between 2011 and 2015, as well as the nominal cost of such an expansion at the same rate currently paid to power producers (1¢/kWh).

Table 2 Cost of Expanding ecoENERGY to 12,000 MW by 2015

Technology	Total MW installed* 2011 – 2015	Generation Share in 2015	MW financed	Capacity Factors	Financed through eco-ENERGY 2	Cost in C$ @ 1 ¢/kWh*
Onshore Wind	7,000	34.1%	3,949	27%		934,032,882
Offshore Wind	1,850	7.1%	1,044	36%		246,851,547
Small Hydro	2,250	28.7%	1,269	50%		555,971,954
Geothermal	100	3.0%	56	95%		46,948,743
Wave & Tidal	308	1.0%	174	30%		45,663,830
Biomass	900	26.0%	508	80%		355,822,050
TOTAL	**12,408**	**99.9%**	**7,000**		**56.4%**	**2,185,291,006**

Note: Solar PV is to be supported by other measures; costs are not corrected for inflation.
* Actual annual installation rates for each technology based on Coalition assumptions.

Bearing in mind that the WPPI incentive program (announced December 10, 2001) supported 1,000 MW of wind power only, and that the current ecoENERGY initiative supports a further 4,000 MW of various renewable technologies, an extended ecoENERGY program would have to support another 7,000 MW. This would reach the total of 12,000 MW suggested as an appropriate target for extending the initiative through to 2015. It is assumed here that the extended program is subscribed to over five years (2011 – 2015). Note that the 12,000 MW expansion would only support about 56% of the new installations that would be required over the same period in order to reach the Coalition's 15% by 2020 target. It is very likely that the current ecoENERGY initiative will be subscribed to earlier than the 2011 date, since Table 1 shows that many provinces are implementing ambitious targets over the coming years. Some large projects envisaged, such as the Lower Churchill wind project in Newfoundland or some big wind power projects in BC, may lead to an early exhaustion of the new program, such that an ecoENERGY 2 initiative may have to be started earlier than FY2011.

While solar PV was included with the current ecoENERGY Initiative, the Coalition thinks that a separate program is needed to support the technology at this stage. It supports the idea of buydowns, working with provinces to establish more standard offer contract programs including solar PV as is now the case in Ontario, or the creation of loan programs that support solar and possibly other small-scale technologies.

Low-impact renewables present a plethora of benefits and should be made the preferred solution to mitigate environmental impacts of power generation while creating an innovative, new industry that benefits all Canadians, and can also be used to assist other countries in reaching their environmental targets.

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