



Canadian Bioenergy Association

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Maritime Bioenergy Working Group

Submission to the Province

of

Prince Edward Island

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Who we are: Canbio is a national, industry-driven, not-for-profit organization of individuals, businesses and non-governmental organizations interested in promoting the use of bioenergy in Canada.

Mission: “To promote the utilization of sustainable biomass for the production of biofuels, heat and power.”

The Maritime Bioenergy Working Group is a group of people in the forest, farm and bio-energy industries from the three Maritime Provinces who come together to exchange information and to address specific regional bioenergy development issues. Those issues include industry matters such as sustainable biomass harvest guidelines and policy recommendations to the three provincial governments.

The group has been meeting on a regular basis since 2005. Its most recent workshops were held in Charlottetown in March of 2007 on PEI bioenergy opportunities and in Moncton in June of 2007 on biomass harvesting systems and production potential. The next meeting is planned for Doaktown, New Brunswick on December 6th, 2007.

Background

CANBIO and the Maritime Bioenergy Working Group believe that it is important that the various levels of government in Canada work together to address barriers to bioenergy development and work toward a comprehensive positive policy framework that will allow us to tap Canada’s enormous, green bioenergy advantage. Virtually all regions of Canada have substantial biomass energy resources. Prince Edward Island has major farm and forest bioenergy resources that can contribute to a prosperous and sustainable energy future for Islanders if we take the necessary steps to develop these resources.

The principal bioenergy opportunity for Prince Edward Island and the other Maritime Provinces is to use local biofuels for the production of heat and power. This is an important option, given that our heating season lasts for at least six months of the year and nearly half of the money that Islanders spend annually for energy goes to heat our homes, businesses and institutions.

The Maritime Bioenergy Working Group recognizes that energy efficiency is generally our most cost-effective energy option which must be pursued vigorously. However, we also strongly believe that biomass, in various forms, are local, economical energy resources that can displace increasingly expensive petroleum fuels and imported electricity and provide long-term employment to many rural Islanders.

Barriers to Bio-Energy Development

While most people would agree that developing provincial bioenergy resources would be a good thing, many do not understand that there are currently many obstacles to biomass energy development at the various levels of government. The provincial government needs to be proactive by:

1. ***Formulating a clear PEI bioenergy policy, specific targets and a strategy to achieve those targets.*** Without a clearly defined positive policy framework for bioenergy, development will be very slow and haphazard, which is very frustrating for people working in the field and trying to create new businesses.
2. ***Modernizing regulations pertaining to labour and pressure vessels for heating plants.*** Current regulations require around the clock staffing for relatively small heating plants which seriously undermines the economic viability of many potential bioheat installations. Countries such as Sweden have long since abandoned antiquated labour and pressure vessel regulations in recognition of advances in modern computer control, monitoring and alarm systems for biomass heating plants.
3. ***Providing access to the grid and fair market prices for the production of green power from biomass fuel sources.*** Existing utilities tend to guard their monopolies and resist proposals for the production of green power from independent power producers, even when additional generation capacity is needed. Bioenergy urgently needs mandated targets similar to those already in place to support wind power. (Ontario currently has a standing offer for green power at 11.5 cents per kWh which is generating a lot of private sector interest.)

Working Group Recommendations

The Maritime Bioenergy Working Group asks that the Province of Prince Edward Island take the following steps:

- 1) **Establish clear targets for bioenergy production and use.** The first task is to establish the current benchmark for bioenergy. We suggest bioenergy targets such as **15% of Total Primary Energy by 2010 and 20% by 2015** (from agriculture and forest biomass). We believe that a province such as Prince Edward Island should ultimately be able to obtain bioenergy heat and power energy equivalent to Sweden and Finland which currently derive about 25% of their Total Primary Energy from forest biomass, with plans for further growth. PEI's extensive combined agriculture and forest biomass resources should ultimately allow us to exceed 40% of Total

Primary Energy in the longer term, including biogas and liquid biofuels.* Such an achievement would have huge economic benefits for this province. With an effective forest management system, large-scale forest biomass production would facilitate significant improvements in the productivity, quality and value of PEI woodlands. The development of markets for agricultural biomass would help to strengthen the farm economy. Both industries are currently in crisis.

* This 40% figure does not include growing contributions from other renewables such as solar and wind. Combining all renewables, we can far exceed the target of the previous government which was 30% of Total Primary Energy by 2030.

- 2) **Actively promote the use of solid biofuels (forest chips and farm/forest pellets) to heat public buildings** throughout the province through the application of individual biomass heating systems and district heating using local farm and forest biomass fuels as the primary fuels. Bioenergy technologies for domestic and commercial heating are well developed, efficient and clean burning. They are ready for widespread implementation. PEI had such a policy in the 1980s and early 1990s and many projects were implemented during that period. The Charlottetown district heating system is a model for North America. More recently, PEI has led the development of wind energy in Canada. We need a similar policy to promote the development of our extensive biomass resources. Woodchips are a good option for larger sites. Pellets may be the most practical option for schools and smaller public buildings.
- 3) **Commission a study of the feasibility of building one or more large pellet plants on PEI.** It would be preferable for PEI to be producing its own pellets from forest and agriculture feed-stocks rather than importing them from Nova Scotia and New Brunswick. There are also growing opportunities to export pellets to Europe for heat and power. European companies are actively seeking investment opportunities in Atlantic Canada to produce large volumes of pellets for Europe. PEI has the farm and forest fibre and it can participate in those developing markets.
- 4) **Support the creation of suitable biomass fuel supply infrastructure on PEI to facilitate the consistent and efficient supply of the various biomass fuels.** This could include establishing several strategically located biomass yards for the collection, storage, processing (including screening) and distribution of solid agriculture and forest biofuels on Prince Edward Island.
- 5) **Implement a program to plant stream buffer zones with willows or other fast growing trees that can be harvested for bioenergy.** This can achieve both buffer protection for our streams and provide a consistent source of revenue for our farmers.

- 6) **Implement long-term programs to encourage the installation of biomass heating systems in homes and businesses.** The federal government has supported bioheat technology research and development and implementation through various programs for over 20 years. Unfortunately, this support came to an end in March of 2007 with the end of the NRCan **REDI Program** which was not renewed for bioenergy heating systems. This was a great loss to the bioenergy industry. We ask that PEI actively lobby Ottawa for a new bioenergy support program.

Assistance is needed for bioheat systems until economic fuel distribution is available province-wide and Canadian manufacturers and installers of automated central heating appliances are firmly established. A new bioheat program should be designed to achieve significant uptake in the next 3-5 years with ongoing support for a further five years to ensure that the bioheat industry is firmly established. This would be consistent with policies in most EU countries. A new federal bioheat support program would generate huge investments and economic activity that would be very beneficial to Prince Edward Island businesses and provide direct savings and price stability for energy users.

We note that all Maritime provincial governments are coming under increasing pressure to subsidize heating oil, especially for seniors and poorer families. We respectfully suggest that it is wiser to support energy conservation measures and conversions to high-efficiency bioenergy systems in rural areas which will provide long-term solutions to this serious problem.

- 7) **Establish a program to support investments in urban district heating systems on PEI.** (Existing federal programs could support this initiative). Heating PEI homes and businesses is going to be a major economic challenge as oil prices continue to escalate. District heating systems offer many long-term benefits such as reduced GHG pollution, lower maintenance and replacement costs for conventional heating systems, direct savings and energy cost stability. But district heating energy distribution infrastructure is very costly and returns on investment have not been sufficient to attract adequate private sector investment capital. District heating infrastructure has a long-term payback when evaluated using a “present-value cost analysis”. It needs government support to develop the industry. Urban heating should be regarded as a basic utility service like power, water and sewage.

Summerside is an ideal site for district heating starting with its large, new government buildings and other communities such as Kensington, Montague and Souris could utilize smaller district heating systems. Charlottetown also needs to expand its district heating system to include private housing.

- 8) **Establish a Renewable Portfolio Standard (RPS) for biomass-fired CHP (combined heat and power).** Bioenergy needs a targeted RPS to encourage the development of new heat and power systems. PEI has a limited industrial base, but

there are some excellent CHP opportunities such as Cavendish Farms, McCains and Summerside district heating, as well as moving to full cogeneration at PEI Energy Systems in Charlottetown. Bioenergy power generation interfaces very well with wind power as output can be turned down or up to complement the variable output from wind farms. Wind power on PEI is constrained by a lack of economic, green base-load capacity. New biomass power capacity can facilitate the further expansion of PEI wind farms.

- 9) **Encourage the combined use of agricultural biomass (e.g., straw) and forest chips in large heating and power generating plants wherever practical.** Prince Edward Island is rich in both farm and forest biomass. Combining these biofuel resources in local heat and or power plants offers benefits to both the farm and forest industries and makes it practical to provide larger volumes of fuel to more plants. It is not economic to transport solid biofuels over long distances (over 100 km). Biomass must be used relatively close to the source of supply, which means that the economic benefits go to the region where the fuel is produced.

- 10) **Commission a study of feed-stocks and siting opportunities for anaerobic digestion systems for the production of biogas (methane).** Collective or community biogas systems are proving to be economically attractive renewable energy options in many jurisdictions in Europe and North America. The biogas can be used for both transport vehicles, such as buses, and heat and power generation.

- 11) **Take steps to modernize labour and pressure vessel** regulations for biomass heating plants in recognition of advances in modern computer control, monitoring and alarm systems. Consider the Swedish approach as a model. Work with other Maritime Provinces to standardize regulations pertaining to bioenergy systems throughout the region.

- 12) **Commit PEI to achieving the Kyoto targets** (a 20% GHG reduction from 1990 levels by 2012) to be achieved through aggressive energy efficiency measures and a rapid shift to renewable sources of energy, with biomass energy as a key component of this strategy. Canada may not be able to achieve our Kyoto targets by 2012, but forward thinking provinces such as Prince Edward Island can certainly do so and set an example for other provinces to follow.

Conclusion

Co-ordinated federal and provincial support policies and programs will be needed to realize the full potential of PEI's bioenergy resources. The Maritime Bioenergy Working Group asks for your support and looks forward to working with you to allow us to achieve the full potential of farm and forest biomass energy on Prince Edward Island.

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