

New Directions in the Western Canadian Environmental Technology Industry

by Anthea Jubb, EIT

Introduction and Context

The Western Economic Diversification Environmental Technology Forum was held at the Wosk Centre for Dialogue in Vancouver BC on December 5, 2003. It brought together approximately 150 leaders from industry, non governmental environmental organizations and government. The goal of the event was to find ways to advance the Environmental Technology Industry in Western Canada. The summary provided here is intended to inform the APEGBC membership on government and industry directions in this field. Speeches and comments have been paraphrased for brevity.

Opening Remarks by the Honourable Paul Martin Prime Minister of Canada

Regional development has evolved to use technology to solve social problems. A good economist comes to the same conclusion as an environmentalist, that toxic wastes must be accounted for and studies on environmental indicators are necessary. Furthermore, the GDP should be measured in a way that includes environmental indicators.

We can turn around our environmental problems with technology. There are a wide series of small and medium size businesses about to take off.

China and India are becoming superpowers, and it will be catastrophic to the planet if they follow the same path we did to prosperity. Western Canadian Environmental Technology Firms have an opportunity in those countries to mitigate the environmental problems associated with growth.

Government cannot pick winners, but can pick winning sectors, in this case health care and environmental technologies. To achieve its goals government will rely heavily on the private environmental industry. The \$1 billion-plus in revenues from the sale of Petro Canada will be directed to the development of Canada's environmental technology industry.

Suggestions and Comments from Participants to Paul Martin

A discussion followed with two main themes, access to capital and access to market. Major issues identified as blocking access to capital included lack of investment from senior capital funds and pension funds and a dearth of angel investors and venture capital. Suggested measures to increase capital availability included expansion of flow-through shares; mandatory Renewable Portfolio Standards; tax credits such as those that the wind and oil & gas industries enjoy; the creation of a Canadian version of the Dow Jones Sustainability Index; and the shift of Technology Partnerships Canada towards environmental technology.

Access to market was also discussed, with the focus being on the uptake of environmental technology domestically, leading to progress in international markets,

particularly in the developing world. Barriers to uptake were identified as being lack of commitment and consistency regarding environmental technologies and policies by government; resistance to change; and small average size of environmental technology companies. Suggested improvements included requiring all new government buildings to meet a LEED standard; growth of public private partnerships; the use of regulations to force uptake of environmental technology; requirements to report on environmental performance; and creation of an integrated energy strategy for Canada.

Other issues that received mention included the importance of green space for public health, efforts to more fully involve first nations, the achievement of sustainable communities through design, and the power of consumers to demand environmental improvements.

Closing Remarks by the Honourable Paul Martin

There are three themes of interest regarding environmental technology: its use to improve and protect public health, the importance of foreign market penetration; and the growth of public private partnerships. First nations partnerships and public private partnerships will increase and the private sector needs to design these partnerships. Although the Finance Department resists it, there may be an expansion of flow-through shares. An integrated energy strategy will be considered, and action will be taken on other concrete suggestions coming out of the event. Penetration of foreign markets is key.

Key Points from The Honourable Stephen Owen, Secretary of State Western Economic Diversification, Indian and Northern Affairs

(now Minister of Public Works and Government Services)

Michael Porter of Harvard University found that countries with high environmental standards have more competitive industries. Sustainability is imperative and we are in a transition to a post hydrocarbon era. Consumer environmental boycotts (ie – market democracy) are increasingly powerful. Canada needs to take global leadership in the 750 billion dollar a year environmental technology industry, and the World Urban Forum in Vancouver in 2006 presents an opportunity for Canada to showcase both its transitional and transformative environmental technology. As an example of the changing attitudes, mining operations are now required to add brownfield remediation costs into their startup cost. There is a need to mitigate de-ruralization by developing and promoting enabling technologies.

Remarks from The Honourable David Anderson, Minister of the Environment

Climate change is the challenge for industrialized societies for this century. There is great potential for a positive future response to climate change. Canada, as an export dependant, thinly populated country grew because of energy abundance. Canada's approach to climate change recognizes the challenge to the economy in implementing mitigation. We need to recognize the important contribution of energy efficiency in new technologies, and recognize that boosting supply and market demand of these technologies is important. Two main points:

1. We do our best when government sets clear targets with reasonable time frames, and then lets the private sector achieve the results.

2. To create a new market for innovation, the government must create opportunities.

Climate change mitigation is and will continue to be of primary importance to the Federal Government.

Summary of Recommendations to Government from Participants

Two breakout sessions were held in which forum participants discussed opportunities and strategies for government to pursue to expand the environmental technology sector in Western Canada. A summary of the action items is presented here.

1. Fiscal incentives
 - a. Expand eligibility for flow-through shares to attract investment.
 - b. Enhance Canadian Exploration Expense to include all renewable energy sources.
 - c. Implement tax credits for environmental technology adoption similar to those used in the film industry.
 - d. Coordinate and streamline government funding programs.
 - e. Provide incentives for innovation, early technology adoption and conservation.
 - f. Address energy costs in mortgage financing.
 - g. Provide consumer and small and medium sized enterprise funding.
 - h. Establish mandatory Renewable Portfolio Standards.
 - i. Create a mechanism for an enhanced small and medium sized enterprise profile within public private partnerships.
 - j. Expand the national system of Green Tags to all environmental technologies.
 - k. Provide independent power producers with insurance bonds.
 - l. Level the playing field for all energy sources.
2. Regulations and Policy
 - a. Establish results based regulations and standards.
 - b. Establish consistent and predictable regulatory mechanisms.
 - c. Coordinate policy at all levels of government and first nations.
 - d. Promote eco-efficiency through performance based standards.
 - e. Transfigure the electricity industry from one of vertical integration to a distributed generation model.
 - f. Introduce net metering for the electricity industry.
 - g. Support technology certification, insurance and bonding.
 - h. Establish a government procurement policy that favours "green" technology for new infrastructure and retrofits.
 - i. Implement emissions caps.
 - j. Demonstrate a commitment to sustainability at the highest level of government.
3. Centres of Excellence
 - a. Create coordinated environmental innovation networks and industry driven centres of excellence that include regional, national and international clusters.

- b. Demonstrate integrated solutions.
 - c. Facilitate independent review of technology.
 - d. Facilitate linkage between existing centres and resources to commercialize environmentally sustainable technology.
 - e. Define the needs of the sector for commercialization to refine the vision and strategy.
 - f. Audit resource centres and centres of excellence.
 - g. Perform market research.
 - h. Reduce technical and financial risk by proving technology.
4. Demonstration Projects
- a. Increase access to large markets and reduce technological risk by proving a technology.
 - b. Showcase community solutions targeted at first nations, rural and urban challenges.
 - c. Communicate best practices.
 - d. Use the 2010 Olympics to profile green buildings, the South East False Creek Sustainable Development in Vancouver and closed loop systems.
 - e. Model a green remote village. The project should demonstrate integrated, sustainable community systems in lower-tech Canadian communities with a view to exporting what we learn to address population growth in less industrialized countries.
 - f. Use the Britannia Beach Mine site remediation to demonstrate best practices.
5. Marketing Strategies
- a. Develop marketing enablers to clear blocks.
 - b. Create a pan-Canadian approach to introduce commonality among the environmental technology industry and reduce fragmentation.
 - c. Capture and disseminate knowledge of group case studies and best practices.
 - d. Enhance industry connectivity.
 - e. Create targeted trade alliances segmented by market.
 - f. Create a strong brand name.
 - g. Enhance visibility of small and medium sized enterprises.
 - h. Provide federal government assistance
 - i. Create mechanism to get marketing expertise to companies at an earlier stage.
 - j. Continue to follow up with networking and problem solving.
 - k. Create a comprehensive marketing strategy linking consumers and users with technology developers.

The Environmental Technologies Forum was made possible by support from Western Economic Diversification Canada. Anthea Jubb, EIT is the Sustainability Researcher at the Association of Professional Engineers and Geoscientists of BC. For further information she may be reached at ajubb@apeg.bc.ca