Technology Development and Demonstration: Climate Change Initiatives

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ABSTRACT

Achieving success in meeting today's challenging sustainable development goals, such as reducing GHG emissions, improving urban air quality or cleaning up water effluents, demands an aggressive and well-crafted combination of policy, program and science and technology initiatives. Initiatives in sustained, patient investment in technology development, demonstration and deployment spanning the innovation spectrum are highlighted in this paper.

Mobilizing technology solutions calls for critical elements - prompt take-up of today's best technologies by industry, development and demonstration of new technologies via partnerships amongst players in the public-private-academic sectors, adequate financial resources and knowledge development capacity, and taking the best advantage of international developments and opportunities. The challenge for managers and investors in industry, government, academia and the venture capital community is to make this an economic reality - certainly no easy task.

Recently-announced initiatives by Canada's governments and industry have shown encouraging signs of progressive steps to build up this combination of instruments in Canada. On the public sector front, new technology-related investments add to ongoing energy technology programs in various departments on energy supply, transportation and end-use efficiency. Recent federal announcements include: the Climate Change Action Plan ($500m); the Climate Change Action Fund 2000 ($150m); the Sustainable Development Technology Fund (initial $100m); extension of Technology Early Action Measures (TEAM) ($13m per year); and, Green Municipal Enabling and Investment Funds ($125m). Recent provincial initiatives include Alberta's Climate Change Central, Ontario's Technology Investment Program, Quebec's Sustainable Technology Fund, BC's Technology fund.

These new investments are encouraging. What needs to be done in addition to this suite of new programs to ensure success? Capacity and infrastructure in the private and public sector critically need re-building. A high degree of collaboration is important between industry, government and academia to take advantage of synergies and leverage. Thinking ahead to identify fundamentally-new approaches will lead to step changes in the way we supply and use energy in a clean, efficient, economical manner. Also, Canada is not alone in this campaign; we need to take advantage of breakthroughs abroad, find available technologies adaptable to Canadian condition and infrastructure, and jump on market opportunities as they emerge.