



Integration of Energy Systems Can Achieve Major Greenhouse Gas Reductions

Ottawa, April 29th, 2008

Meeting ambitious long term greenhouse gas reductions of 60 per cent or more by 2050 needs a fundamental transformation of how we produce, deliver and use energy in Canada, say key players from industry, environmental movement, governments, academia and consulting community.

That's the conclusion of *"Integrated Energy Systems in Canadian Communities"*, a report produced from the results of the Quality Urban Energy Systems of Tomorrow - QUEST - workshop held last fall in Niagara-on-the-Lake, ON, which was released today in Ottawa.

The participants at the QUEST workshop agreed that integration of energy systems at the community level is essential to maximize energy savings and reductions in greenhouse gas emissions while continuing economic growth.

"Half of Canada's greenhouse gas emissions come from housing, buildings and transportation," said Michael Cleland, President of the Canadian Gas Association. "Addressing this 50% is essential if Canada is to meet its ambitious long term emission targets, and integrated energy systems can bring significant benefits."

An integrated approach to land-use, energy, transport, water and waste management puts a greater emphasis upon achieving overall efficiency. It features:

- Higher density, mixed use developments of energy efficient housing, commercial space and industry.
- Smaller scale distributed urban energy systems, integrated with other infrastructure systems.
- Increased contribution from multiple local energy sources: solar; geothermal; energy from waste; wind; hydro; supplemented by the electricity and gas grids.

Hans Konow, President and CEO of the Canadian Electricity Association, stressed that taking a holistic approach to energy efficiency at the community level - in addition to addressing the discrete parts - buildings, houses, cars, appliances - can lead to broader results and greater emissions reduction. "When joined together these measures will form sustainable and efficient communities with significantly reduced environmental impacts."

Examples in Canada and around the world show that compared to a traditional approach, an integrated approach to energy planning could cut grid energy use by more than half.

"The feasibility study for the planned Riverbend Heights community energy system in London, ON, shows that integration of energy systems could lead to a 58% overall reduction in energy imported into the community," said Ken Elsey, President of the Canadian Energy Efficiency Alliance.

Many municipalities and developers already recognize the economic, environmental and social advantages of integrated energy systems and are implementing projects across Canada.

"The Dockside Green project in Victoria, BC, is a good showcase of an urban integrated energy system," said Thomas Mueller, President of the Canada Green Building Council. "It is a largely self-sufficient, developer-driven project incorporating LEED certified mixed-use buildings with integrated infrastructure systems for energy, water and waste. Waste from one area will provide fuel for another".

Workshop participants called for action to implement integrated, community based systems in Canada. "While implementation is best achieved at the local level, we need leadership and support from governments to accelerate the wide adoption of integrated energy systems," said Bob Oliver, Acting Executive Director at Pollution Probe. "Physical systems we are building today will define our environment for decades."

The Canada Green Building Council, the Canadian Electricity Association, the Canadian Energy Efficiency Alliance, the Canadian Gas Association and Pollution Probe were among the organizers of the QUEST workshop. They, along with the other QUEST participants, believe that integration is fundamental to meeting the energy and GHGs emission reduction challenge facing Canada. They are committed to making Canada a world leader in urban integrated energy systems.

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