Quality Urban Energy Systems of Tomorrow
Urban Integrated Energy Systems - Addressing the 2050 Energy and Environmental Challenge

QUEST Q&A

What is QUEST?

Quality Urban Energy Systems of Tomorrow (QUEST) is an initiative focused on promoting an integrated approach to land-use, energy, transport, water and waste management in communities and urban centres, in order to address energy end-use and reduce greenhouse gases (GHGs).

Who is QUEST?

QUEST is a collaborative of key players across Canada from industry, environmental movement, governments, academia and consulting community that are encouraging all levels of government, industry and citizens to support integrated approaches to providing energy services in communities.

What is the QUEST proposition?

Meeting Canada's climate change and clean air goals will require large reductions in energy consumption in areas all sectors of the economy. The best way to address energy end-use and reduce GHGs is through an integrated, community based approach, by matching the type of energy with its use, managing surplus heat across applications and sectors, converting waste to energy, as well as integrating on-site renewable sources of energy with existing energy grids.

What is the Mission of QUEST?

To foster integrated, community-based approaches which address energy end-use and reduce related greenhouse gas and air pollutant emissions.

What is the QUEST Vision?

By 2050 every community in Canada is operating as an integrated energy system, and accordingly, all community development and redevelopment incorporates an integrated energy system.

The QUEST vision builds on progress that has been made on energy-efficient appliances, eco-efficient buildings, district heating systems, renewable energy technologies, waste heat utilization, waste recycling and landfill gas capture, net zero energy homes, green roofs, and many more innovations that have paved the way for radical changes in the way quality energy services can be provided. The vision calls for greater integration of these innovations in community-wide energy systems that significantly reduce overall energy consumption.

What are the QUEST guiding principles?

- Improve efficiency – first, reduce the energy input required for a given level of service;
- Optimize "exergy" – avoid using high-quality energy in low-quality applications;
- Manage heat – capture all feasible thermal energy and use it, rather than exhaust it;
- Reduce waste – use all available resources, such as landfill gas, gas pressure drops and municipal, agricultural, industrial and forestry wastes;
- Use renewable resources – tap into local biomass, geothermal, solar and wind energy; and
- Use grids strategically – optimize use of grid energy and as a resource to optimize the overall system and ensure reliability.

For more information please contact:

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