

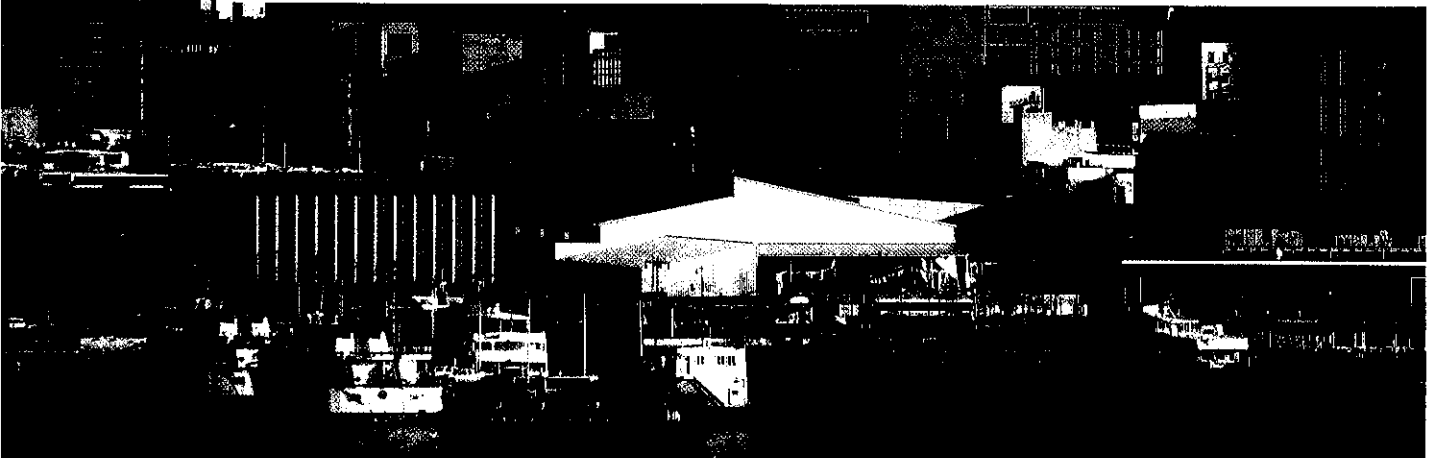
Taking the Risk Out of Retrofits

FOR THE LOVE
OF CONSERVATION

by Peter Love

Cities from Toronto to Orangeville, have made a policy of it. Universities from UBC to York see the wisdom in it. School boards across Nova Scotia and Canada's first "carbon neutral" school in Lively, Ont., learned about it. Hospitals across Canada, such as Sunnybrook and L'Institut Phillippe-Pinel Hospital, got

healthier from it. The Royal Canadian Mint banked on it. Armed forces bases, such as CFB Kingston, are better able to protect us because of it. The federal government has been overseeing the use of it to upgrade federal buildings for the last 19 years. And, the Empire State Building is in the middle of making it the biggest one ever.



What is "it"? It is Performance Based Solutions (PBS), used to implement energy efficiency, renewable energy, and infrastructure renewal initiatives.

Performance based solutions consist of a range of ways in which a private energy service company takes responsibility for funding an upgrade project, taking its remuneration based on the success of the project. In this way, the company transfers the risk from the building owner onto itself. This allows the building owner to put more of his or her time, energy, and limited financial resources into the services provided.

One of the more common types of PBS is an Energy Performance Contract, where the energy service company guarantees the utility savings to be achieved by the project.

Reducing energy consumption continues to grow as a priority for all levels of governments, as well as public institutions and private companies. For governments, this priority forms an essential component of their plans to achieve environmental tar-

buildings), health care, social assistance, and education represent more than 50 per cent of the load. It is estimated that commercial/institutional buildings can typically achieve savings of 15 to 35 per cent. These potential annual savings are critical in meeting energy conservation and GHG emission reduction targets.

Despite environmental and economic benefits, and the progress that has been made to implement various measures in leading organizations, the full potential for energy efficiency measures are nowhere close to being realized. This is due to a number of barriers. Three of the most important are:

• **Limited Information on Opportunities:**

Most energy users do not have energy experts in their organization, and those organizations that do are often surrounded by management and executives who are more focused on the organization's core competencies. They are, thus, often unaware of the existing opportunities. Energy bills lack explanations and clarity, which make it difficult for many organizations to even understand their actual usage patterns.

• **Confidence in the Savings:**

Even if opportunities for energy savings are identified, organizations often lack confidence that these savings will be achieved.

• **Financing:**

Even if management becomes comfortable with the potential savings, the upfront financing required for projects must compete with other capital projects, which typically relate to the organi-

zation's core competencies.

These barriers are fundamental, and, if not adequately addressed, they can severely limit the role of energy efficiency in meeting energy and GHG targets. One of the most effective ways of overcoming all three of these barriers is through the provision of a range of guaranteed Performance Based Solutions.

A new advocacy organization, the Energy Services Association of Canada, has recently been created to actively promote government policies and regulatory support for greater use of guaranteed Performance Based Solutions, to implement energy efficiency, renewable energy, and infrastructure renewal initiatives. The eight founding members of this association are Ainsworth, Ameresco, Direct Energy, Honeywell, Johnson Controls, MCW Custom Energy Solutions, Siemens, and Trane. Together, these companies are responsible for more than 90 per cent of the \$450 million spent annually on the PBS business in Canada. And the projects financed through PBS's generate \$45 million in energy savings every year. The Association recently appointed Anthony DaSilva from Ameresco as its first Chair, and Luis Rodrigues of Honeywell as its Vice-Chair.

For more information on Performance Based Solutions and the Energy Services Association of Canada, visit www.energyservicesassociation.ca.

Peter Love formed Love Energy Consultants after having served as Ontario's first Chief Energy Conservation Officer. He is an Adjunct Professor at York University's Faculty of Environmental Studies and was recently appointed the Energy Services Association of Canada's first President.



gets, primarily in terms of reducing greenhouse gas (GHG) emissions. More than 80 per cent of the man-made GHG emissions in Canada come from the production and use of energy. For provincial governments that are responsible for the electricity system, promotion of energy conservation and efficiency are also embraced, because it reduces the need for expensive additions of electricity generation, transmission, and distribution assets.


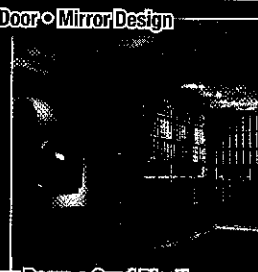

For energy end users, the need to reduce energy use is a growing priority, because it represents a way to control rising energy costs. An important but often unrecognized benefit of investment in energy efficiency is that such investments are relatively labour intensive, with most of the labour supplied by companies in the immediate vicinity of the project.

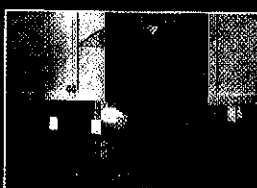


The potential for energy savings and GHG emission reductions in the commercial/ institutional sector is very large. This sector is responsible for 14 per cent of all secondary energy consumed in Canada and 9 per cent of Canada's man-made GHG emissions. Within this sector, office buildings (including public administration

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