

ENHANCING OUTCOMES THROUGH ENERGY PERFORMANCE CONTRACTS

Transferring the risks of hospital retrofits with EPCs

By Peter Love

EPC Funding Model



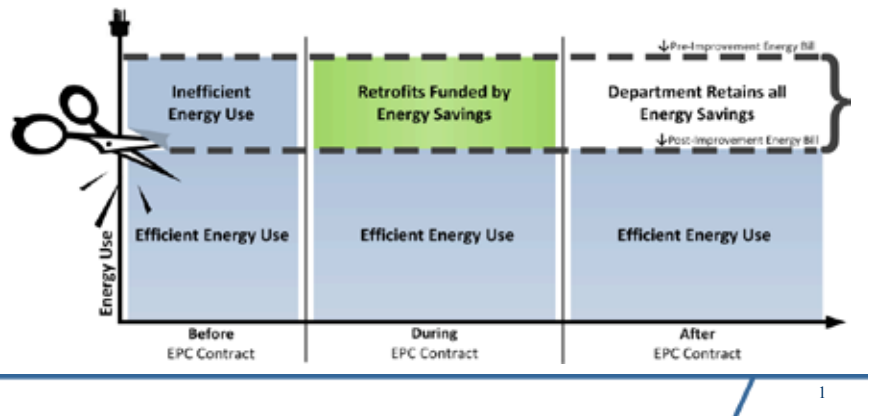
Hospitals and other public sector organizations across North America have been using performance-based solutions such as Energy Performance Contracts (EPCs) to undertake their energy efficiency upgrades for the last twenty-five years. The federal government has used them since 1992 to attract \$320 million in private sector financing to upgrade the energy efficiency of their buildings. Today, these buildings are saving about \$43 million less per year. Municipalities, schools, universities and schools (the MUSH sector) across Canada have undertaken similar projects.

As these projects were done using an Energy Performance Contract, the technical and financial risks associated with them were successfully transferred to the private sector. Figure 1 (shown right) illustrates how such contracts work.

Before the contract, the owner is paying more than they should for their energy use. During the contract, the energy savings realized are used to pay the capital cost of the energy efficiency project. At the end of the contract, the owner pays the reduced energy bills. As the contracted savings are guaranteed by the private energy service company, the technical and financial risks are transferred to the private company.

In addition to transferring risk, this type of contract has many advantages over the more traditional fee-based model. In addition to reducing pressure on capital

- Budget-Neutral approach to funding Energy Efficiency improvements



funding allocations, it is a turnkey approach with one contract managing many activities. Based on its 20 years of experience with such contracts, the federal government has concluded that using EPCs are not more expensive than using traditional contracting models with multiple sub-contractors.

The potential savings for hospitals is very large. Recent studies have found that energy consumption in hospitals with similar facilities can be more than twice as much as that in the best performing hospitals.

EPCs can be structured in many ways to suit the specific needs of the client. Interestingly, it is also used to at least partially address the deferred maintenance backlog faced by many facility managers. In this type of

arrangement, the energy savings from the EPC can also be used to fund non-energy deferred maintenance priorities such as roofs, parking areas, etc. This is typically achieved by extending the terms of the EPC contract.

In Ontario, many leading hospitals have used EPCs. Highlights include:

- Hamilton Health Sciences: This hospital complex includes five facilities serving more than 2.3 million residents. Their EPC is projected to save \$55 million over ten years and was completed without additional funding from the Ontario government. This hospital is on track to become a best practices benchmark.
- London Health Sciences: This multi-phase project covered 3.5 million sq. ft. of

property. Completion of the 5th Phase is expected to reach \$3 million in annual savings. One of the campuses has the potential to be relatively energy self-sufficient.

- **The Ottawa Hospital:** This hospital signed a \$17 million, 15-year performance contract that guarantees savings of \$2.6 million per year with the savings invested in patient care.
- **St. Michael's Hospital:** Founded in 1892, a \$258,000 EPC transformed a 90,000 sq. ft. building into a "green" facility. It has resulted in reduced energy consumption as well as improved light levels and space conditions for patients and staff.
- **Sunnybrook Hospital:** Their objective is to reduce their \$11 million per year spent on energy by half. The process to select the ESCO was found to be compliant with Broader Public Sector (BPS) guidelines.
- **Timmins and District Hospital:** Following a detailed assessment, major energy components were replaced and enhanced. This project is expected to result in savings of more than \$4.2 million over the next eight years. This hospital was the 2009 recipient of the Ontario Hospital Association's Annual Energy Efficiency Award.

Take the worry and risk out of your next energy efficiency upgrade project and investigate the many advantages of using an Energy Performance Contract. You'll be glad you did.

For more information on Energy Performance Contracts including further background on these and other successful case studies, visit www.energyservicesassociation.ca.

Furthermore, the upcoming CHES Conference in Niagara Falls Sept 22-24 is a great opportunity to find out more about the many benefits of using an Energy Performance Contract to retrofit your existing hospital. ■

Peter Love is the President of the Energy Services Association of Canada, who will be speaking and exhibiting at the CHES Conference. He is also an Adjunct Professor at York University's Faculty of Environmental Studies and was Ontario's Chief Energy Conservation Officer.