

Practical Alternative Financing Strategies for Building Commissioning

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ABSTRACT

Owning and operating a commercial/institutional building requires a substantial financial investment as well as a well-trained workforce. Poor performance means building owners may be losing money. Excessive repair and replacement costs, employee/occupant absenteeism, inadequate indoor air/environmental quality (IAQ/IEQ), and tenant turnover costs U. S. building owners and employers, hundreds of millions of dollars every year. Building Commissioning stops this unnecessary loss of money by restoring equipment and building systems to high level of productivity.

Building Commissioning is the key to quality assurance in more than one way; it prevents problems from developing, anticipates and regulates system interactions, and implements a systematic method of meeting the building's mechanical, electrical, and control requirements.

The basic purpose of this paper is to suggest and discuss various options and/or strategies that may be available, in order to pay for either the building commissioning of new facilities or retro-commissioning of existing buildings/facilities that are going through major retrofit/renovation. In a recent study of some 60 commercial buildings, the Portland Energy Conservation, Inc.(PECI) found the following alarming conditions -

- i) more than half of the buildings suffered from control problems
- ii) 40% had problems with HVAC equipment
- iii) 15% were missing specified equipment
- iv) 1/3 had inoperable HVAC sensors and/or dampers
- v) 25% had malfunctioning EMS (Energy Management System)

Similar types of unacceptable building functions/operations were found by E-Source in a study of some 44 existing commercial buildings that required retro-commissioning work with estimated costs, as indicated below -

- a) \$ 1,500 to \$ 3,000 to scope out a typical project
- b) \$0.10 to \$1.00 per square foot for the retro-commissioning process, depending on the number and complexity of building systems vs. design specs.

Therefore, in order to pay for the above-listed trouble-shooting and corrective measures' costs, one needs to check out various relevant resources, such as the Government Appropriations, Low Interest Loans, Public Benefit Charges, Energy/Utility Savings (Performance) Contracts, and Set Aside Project Budgets for Leadership in Energy & Environmental Design (LEED) certification, Energy Star designation, and/or Whole Building Design guides.