



TECHNOLOGY INFORMATION SHEET

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FINANCING OPTIONS FOR EFFICIENT LIGHTING

Introduction

Financing is one of the main obstacles in the effective implementation of an efficient lighting retrofit or installation program. Even when efficient light measures have a two to three year payback, finding the extra capital to finance the measures is still difficult for many building owners or institutions. The key to successfully financing any efficient lighting program is being able to commit or borrow the capital for retrofit or new equipment and then being able to pay back the loan out of the electricity savings. In this way, there is no increase in total costs over the term of the loan. The reduced energy bill plus the loan repayment is less than, or equal to, the current energy bill. The energy savings, after the loan is paid back, are essentially free until the equipment needs to be replaced again.

1. Self Financing Schemes

If some efficient light measures can be achieved at little or no cost (*e.g.* delamping or reduced hours of usage), then with proper planning, the savings from these measures can be used to finance more capital intensive measures. No up-front capital is required at all. This financing option is most effective for institutions where energy costs are a budget item that can be kept at a constant level during the retrofit process.

Saskatchewan's Destination Conservation Program is an example of the self financing approach and looks at ways to save energy in schools in the province. To begin with, each school is considered individually and an audit is carried out to determine the current energy use patterns and identify potential savings. A plan for the school in question is then laid out with low or no-cost improvements for the first year, moving on to more capital intensive retrofits in the second and third years as the retrofit energy savings builds. No money is added or pulled out of the budgeted energy costs for the school until after the fourth year, thereby allowing the savings from the initial retrofits to fund the more capital intensive measures that will return the largest savings. A comprehensive education plan for facilities personnel, teachers, and students explains the process and links the savings with the financial and environmental benefits of energy efficiency. In most schools, water usage and energy efficiency measures are included in the plan.

2. Capital Pool or Revolving Fund

Another approach for financing is to set up a dedicated revolving fund that is used to finance energy savings measures and is paid back from the savings achieved. The City of Regina, has developed an "internal bank" program to finance energy management initiatives. The program incorporates a \$250,000 pool set aside by the City

for energy efficiency projects. A client department borrows money from the capital pool to fund the projects and pays the loan back at the going rate of interest, using the money saved through its reduced operating costs.

3. Energy Service Companies or Energy Performance Contracting

Energy service companies (ESCOs) are companies set up specifically to obtain a return from investment in other people's energy efficiency programs. ESCOs can provide a variety of services to their client, which may include supplying the necessary capital to undertake the project. A major attraction of an ESCo contract is that the ESCo can coordinate the program and take responsibility for analysis, design, construction, commissioning, performance monitoring and operator training. In many cases, without the ESCo involved, a facility would not have the necessary capital or expertise to enter into a program to upgrade the building's lighting, HVAC systems, windows, controls, or other similar energy consuming equipment. The ESCo contracts can be written so that the program costs are paid back by from the energy savings resulting from the technical upgrades.

4. Supplier Financing

Supplier financed retrofits are becoming more common. With this type of financing, an equipment supplier provides or arranges financing for the client to fund particular retrofit options using the supplier's equipment or expertise. Often a payback scheme is devised where the energy savings pay for most or all of the financing charges.

Thus, while the buyer achieves high savings without up-front costs, the supplier makes a sale which otherwise may not be made and the financing company, which may also be the supplier, makes interest on its money. Everyone wins.

5. Bank Financing

Banks also are beginning to set up special loan programs to provide capital for retrofit projects, often at special discounted rates. The banks are paid back at a set interest rate over a given term, as with other types of loans, but with terms set so that the savings can be used to repay the loan.

Conclusion

Each of the financing methods outlined in this information sheet, has its own advantages and disadvantages. Since the benefits and responsibilities of each option vary, the facility manager must determine which option holds the proper combination appropriate for the situation and context.

While this report has focussed on the financing options in relation to efficient lighting programs, these options are applicable to other energy efficiency programs as well.

Further information about financing energy management is available from the EMTF publications: *A Guide to Financing Energy Management* and *A Guide for Selecting Energy Efficient Products*.