

Introduction

Your energy team has taken stock of the information available and has agreed to begin planning for a comprehensive retrofit of your municipal buildings. It is now time to describe the project in general terms, document the plan, and seek Council approval for the resources to gather detailed information about your municipal buildings.

The Action Plan makes the broad business case for a retrofit program and outlines the scope of work and resource requirements for the next step, the Project Proposal. Besides spelling out key decision factors for your Council, the Action Plan allows you to investigate your options and state clear requirements to potential contractors. The Action Plan can also be instrumental in making your case for grants from FCM's Green Municipal Funds or other federal programs such as the Canadian Building Incentives Program (CBIP) and Renewable Energy Deployment Initiative (REDI).

It is entirely possible that your department may have sufficient information on municipal buildings to combine the Action Plan (Section 4) with the Project Proposal (Section 5). Please review the Information Requirements below and in Section 5 to determine if this is the case.

Purpose

The purpose of the Action Plan is to define the broad objectives and benefits of a retrofit program, to establish resource requirements for subsequent steps, and to secure commitment from senior staff and Council members to move forward to the Project Proposal stage. The Action Plan is a pivotal point for launching a building modernization program within your municipality.

The Action Plan is designed to help gain senior management or Council commitment and approval for the creation of the Project Proposal, which will require more technical detail and resources to complete. Thus, the Action Plan provides the information they need for a decision to proceed. This includes:

- current levels of utility expenditures
- preliminary goals, description and terms of an energy-efficiency program
- the business case justifying an energy-efficiency program, including financial incentives and co-benefits
- the policy context for energy efficiency in your municipality
- alternatives to implementing the program
- resource requirements and timing for next steps
- recommended course of action



Team/Partnership

The group that reviewed the Green Leaf™* Assessment ideally becomes the core energy team internal to the municipality. Together, this team should be able to collect and analyze all the information needed for an Action Plan.

*Green Leaf™ is available from TerraChoice Environmental Services. For more information, contact: 1-800-478-0399, or 613-247-1900, or visit <http://www.terrachoice.ca>.

The team may include:

- supportive member(s) of Council
- energy or environment manager(s)
- finance staff with knowledge of the capital budget and borrowing process
- building manager(s)
- legal staff
- communications staff



Information Requirements

The Action Plan requires the basic information that was collected in the Green Leaf™ Phase I Assessment, including the total annual utility costs for all municipal buildings. You will also need to estimate the cost of filling in the information gaps that the Green Leaf™ Assessment identified.

Secondary information that would be useful, but not necessary at this stage, includes:

- a listing of facilities with information on their area and usage
- the five-year or 10-year capital expenditure plan for your municipal buildings
- the current annual maintenance expense figures
- the utility and water cost and consumption by building



Action Items

During this phase, your main actions are:

1. Finish forming an internal energy team to guide the creation of the plan
2. Explore financing options (see the Resource Manual)
3. Explore implementation options (see the Resource Manual)
4. Gather financial utility data
5. Develop the Action Plan



Template Material

- Action Plan Template and Guide



Next Steps

1. Present the Action Plan to senior staff or Council and obtain their commitment to the process and approval for resources required for the creation of the Project Proposal.
2. Build external partnerships as required.
3. Compile the building inventory and energy use information for each facility.
4. Select a preferred method for implementation and financing.
5. Prepare the Project Proposal.



Resources from FCM

- Resource Manual: sections on Financing Options and Data Collection.



Federation of Canadian Municipalities Municipal Building Retrofits



Section 4 Action Plan

Guide

All templates in this guide are available in text and PDF format on the accompanying CD ROM or on the Knowledge Network at <http://kn.fcm.ca>.

Guide to Action Plan Template

Template Section 4 Page 1

The Introduction highlights the activities completed in Phases 1-3 of the building retrofit process advocated by FCM and relates the retrofit proposal to municipal priorities and critical success factors. It should summarize your recommended course of action.

Activities should include:

- Letter of Commitment (Section 1)
- Green Leaf™ Assessment (Section 2)
- Post Assessment Review (Section 3)
- Any meetings with external partners, for example if you are working with an energy services company (ESCO)

Include any other relevant activities.

- Insert your municipality's Green Leaf™ Assessment.
- Insert building portfolio information (if available).
- Insert energy consumption data.

The Action Plan is a report to Council requesting and justifying the allocation of funds for the creation of a Project Proposal. It should document the financial, health and environmental benefits of energy efficiency within your municipality. Please refer to the Resource Manual for additional information on these benefits that you can adapt to local priorities. The Action Plan outlines current energy consumption and estimates the potential savings that could flow from a municipal building retrofit. It will outline the preliminary goals, define energy-efficient policies, present implementation alternatives, and recommend a course of action.

1.0 INTRODUCTION AND SUMMARY

[Sample text is provided, where applicable, in the sections that follow.]

1.1 Purpose

This Action Plan provides a strategic direction and presents a strong business case for a project that enables an investment of resources to improve the maintenance, comfort, safety and energy efficiency of [Municipality Name]'s corporately owned buildings. The plan identifies the preliminary goals for such a program and identifies the initial proposed scope. It demonstrates potential financial incentives and other benefits of energy and water conservation in municipal buildings. Implementation and finance options are presented, and a course of action is proposed.

1.2 Background

This Action Plan was undertaken by [municipality x] utilizing the Federation of Canadian Municipalities' Municipal Building Retrofit (MBR) process. The MBR process enables municipal governments to follow a strategic plan that will make the most of opportunities to save money and reduce waste. Drawing on the experience of other municipal governments that have successfully carried out a range of building retrofits, the MBR process consists of eight steps. At each step, there is an opportunity to assess the information available and to decide whether there is a strong case to proceed.

Modernizing municipal buildings decreases expenditures and frees up needed revenue for other critical functions, while conserving energy and water. A recent Green Leaf™ Assessment carried out under the auspices of the FCM process found that for each day [Municipality Name] postpones energy retrofits, \$[insert amount] is lost in potential savings that could be used to finance building improvements.

1.3 Activities to date

[Insert signatory's name] completed the first step by signing a Letter of Commitment to the MBR process on [insert date]. From [insert month range], staff completed a Green Leaf™ Phase 1 questionnaire to assess how well prepared [Municipality Name] is to implement an energy-efficiency program.

[If applicable] The Green Leaf™ Phase 2 Assessment was completed on [insert date] by [insert participants]. A Phase 3 post assessment review meeting was held with [insert names] from FCM and municipal staff including [insert names] on [insert date].

...to municipal goals and policies

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(continued)

Section 5 of the Action Plan goes into more detail on the benefits of building retrofits.

1.4 Summary of relationship of building retrofit to municipal goals and policies

Recent budget cuts have encouraged [Municipality Name] to find ways to reduce operational budgets.

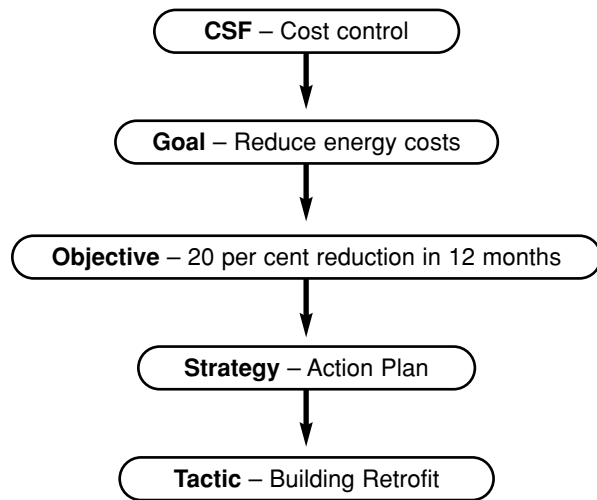
[Municipality Name]'s environmental policy is to increase energy efficiency.

The internal rate of return for energy-efficiency measures is within established objectives for municipal investments.

It is important to be aware of your municipal government's critical success factors and incorporate them into the Action Plan. Critical success factors (CSF) are those elements that meet current municipal needs and must be included in the project for it to be considered successful.

For example: Is there a real need to reduce costs? Is it important that the municipal government be seen to create local jobs? Is there risk management requirement? The closer the relationship to your municipal critical success factors, the more value the Action Plan will have, and the more compelling your case will be to senior management and Council.

Critical Success Factor Hierarchy



Recommend that Council allocate money as outlined in the budget to:

- evaluate financing and implementation options
- collect and examine secondary building and energy data
- prepare a Project Proposal based on the information gathered above

1.5 Recommended next steps

A program of building improvement is recommended. Such a program would allow for a \$[insert amount] investment in our municipal facilities for equipment renewal, training and program implementation. The program would save \$[insert amount] in annual operating costs. The program will be entirely self-funding, and all program costs will be retired by operational cost savings within [insert number] years.

The details of such a program need to be confirmed by proceeding to the next step in the MBR process. It is recommended that Council endorse continued participation in retrofitting municipal buildings, and approve \$[insert amount] from the [insert department] budget for the creation of a Project Proposal.

Council should approve in principle the concept of a comprehensive municipal building retrofit program and allow the energy team to continue moving forward based on the budget and implementation plan provided. The data will be used in the Project Proposal to make specific recommendations on retrofit activities.

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The Action Plan and the Project Proposal require information from a variety of sources. Internal partners are municipal staff and councillors who will contribute expertise, information or decision-making power to help prepare and implement the Action Plan.

Include as many of the staff listed in the table as possible. Your team needs early buy-in and strategic advice from any department that will bring resources to later stages of the retrofit, as well as any department whose policies have an impact on implementation and finance options. For more information on roles, see the Partnerships section of the Resource Manual.

2.0 INTERNAL PARTNERSHIPS

An energy-efficiency team has been established to assess municipal energy savings potential: [insert name]. Team members collect and evaluate building and energy data and present options for prioritizing, financing, and implementing retrofits. Each team member plays a specific role as identified in Appendix A.

Internal partnership contact table

| Name | Title | Department | Phone | E-mail | Role |
|------|-------------------|------------|-------|--------|------|
| | Energy Manager | | | | |
| | Financial Manager | | | | |
| | Building Manager | | | | |
| | Communications | | | | |
| | Council Member | | | | |
| | Human Resources | | | | |
| | Legal | | | | |
| | Other | | | | |

It is recommended that you use the information from the Green Leaf™ Assessment report.

List any pertinent issues associated with municipal buildings, for example: how old they are, the extent to which facilities are out-dated or inefficient for current uses, the potential for year-round use if cost-effective heating or cooling were available, etc.

At this stage utility expenditures used can simply be the annual total cost for the entire building portfolio (the same information as was gathered for the Green Leaf™ Assessment). The past two years' worth of utility data would be ideal. This information should be available from your financial manager. At this point you do not need data for each individual building.

3.0 CURRENT SITUATION

[See Appendix E Project Proposal Development Timeline]

3.1 Building portfolio

[Municipality Name] has [insert number] buildings that cost \$[insert amount] in energy as indicated in the following table.

- or -

At this point a detailed building inventory has not been completed. Capital plans indicate that [equipment to be retrofitted/replaced] in [name of building] is scheduled for replacement by [insert date].

3.2 Utility expenditures and challenges

Most departments within [Municipality Name] pay utility bills without verifying costs. The accounting department plans to consolidate the payment system, allowing centralized tracking of bills that would facilitate the tracking of energy expenditures. Table 1 summarizes the current utility costs and the level of carbon dioxide emissions from municipal buildings.

Point out the implications of these costs. How do they compare with the costs for fully retrofitted buildings? How fast have utility costs risen recently? What is predicted for the major sources of energy for your buildings?

If utility and building data are already available in much greater detail than suggested here, you may prefer to move directly to the Project Proposal stage. Review Section 5, Project Proposal, and the Data Collection section of the Resource Manual.

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Use the CO₂ emissions conversion factors below to calculate the carbon dioxide emissions related to your use of electricity in the CO₂ Emissions column of Table 1. The electricity factors vary from one province to another due to different methods of power generation.

Table 1 Municipal Building Portfolio (Entire Building Stock)

| | Annual Costs (\$) | % of Cost | Equivalent kWh | % of Energy | CO ₂ Emission ¹ |
|-------------|-------------------|-----------|----------------|-------------|---------------------------------------|
| Electricity | | | | | |
| Natural Gas | | | | | |
| Oil | | | | | |
| Propane | | | | | |
| Water | | | | | |
| Renewable | | | | | |
| Other | | | | | |
| Total | | | | | |

¹ Use the coefficients table in the guide to calculate your CO₂ emissions or use the CO₂ calculator found on the accompanying CD.

Use the following formulas:

- Electrical Consumption.....Equivalent kWh * CO₂ e conversion factor for your Province = kg CO₂ per year
- Natural Gas.....Consumption (Cubic Meters) * 2.2 kg/m³ = kg of CO₂ per year
- Oil.....Consumption (litres) * 3.0 kg/litre = kg of CO₂ per year
- Gasoline.....Consumption (litre) * 2.5 kg/litre = kg of CO₂ per year

CO₂ conversion factors

| Province/Territory | Conversion Factor (kg of CO ₂ e / kWh) | Province/Territory | Conversion Factor (kg of CO ₂ e / kWh) |
|----------------------|---|--------------------------------------|---|
| Newfoundland | 0.19 | Saskatchewan | 0.862 |
| Prince Edward Island | 0.546 | Alberta | 0.991 |
| Nova Scotia | 0.78 | British Columbia | 0.02 |
| New Brunswick | 0.546 | Yukon/Northwest Territories/ Nunavut | 0.32 |
| Quebec | 0.0014 | Natural Gas (kg/m ³) | 2.2 |
| Ontario | 0.18 | Oil (kg/litre) | 3.0 |
| Manitoba | 0.011 | Gasoline (kg/litre) | 2.5 |

Provide the total annual budget for building operations. Mention here any special challenges encountered due to aged or inefficient systems.

3.3 Operations expenditures and challenges

Operational expenditures have increased over the past [insert number] years.

3.4 Maintenance expenditures and challenges

Heating equipment in [Insert names of buildings] is old and requires constant maintenance and attention. New equipment would save time and money on maintenance.

Provide the total annual budget for maintaining buildings and equipment. Mention any special challenges encountered due to aged or inefficient systems.

Discuss the five-year capital budget for equipment renewal. Mention any special opportunities to address planned capital in the retrofit program.

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(continued)

In this section you need to describe the benefits of an energy-efficiency program within the context of your municipality. General information on market conditions, financial incentives, environmental and health concerns, and other benefits specific to your municipality should be covered. For a detailed list, see the Co-Benefits section in the Resource Manual. Highlight those benefits that relate to your municipality's Critical Success Factors.

Energy, by itself, is a commodity with little intrinsic value. Its real worth is that it can be converted to services that improve comfort and productivity, transport people and goods, and support a broad range of communications resources, time saving appliances, and data management systems.

4.0 A BUILDING RENEWAL PROGRAM FOR [MUNICIPALITY NAME]

[See Appendix E Project Proposal Development Timeline]

4.1 *Expected results*

There are several important reasons to implement an energy-efficiency program in [Municipality Name].

In general, energy-efficient retrofits are proven to:

- reduce operating costs such that the savings repay the capital invested
- upgrade or replace old inefficient equipment
- reduce emissions
- increase indoor air quality

As documented in the Green Leaf™ Assessment, [Municipality Name] could expect an energy-efficient retrofit to build on the following strengths and address the following weaknesses in its building management. [Incorporate the findings (strengths and weaknesses) of the Green Leaf™ Assessment]

4.2 *Market conditions*

Energy prices have increased considerably in recent years, such that total utility costs were \$[insert figure] in [most recent year] compared to \$[insert figure] in [previous year]. According to many energy analysts, prices will continue to increase over the next decade. Such market conditions will lead to price increases not only in the electricity market but for other goods and services too.

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4.3 *Financial incentives*

The Green Leaf™ Assessment demonstrates that a potential energy savings of \$[insert amount] can be realized with a payback of [insert number of years]. Numerous other Canadian municipalities have documented the financial benefits of building retrofits.

4.4 *Environmental and health concerns*

In addition to purely financial incentives, building retrofits and energy efficiency have many other benefits:

- increased indoor air quality (the U.S. Environmental Protection Agency ranks poor indoor air among the top five environmental risks to public health)
- reduced air pollution from energy generation (if this is a factor in your province)

At the end of the day energy-efficiency programs pay for themselves, save municipal costs, improve air quality, reduce environmental pollution, increase occupant satisfaction, and demonstrate responsible stewardship to the public.

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(continued)

Energy-efficiency investments let your municipal government meet these objectives at lower cost, but they may well also address broader objectives:

- **Enhanced focus on core business**

Outside management of energy-efficiency improvements can include ongoing services for operations, maintenance, and even the payment of utility bills. Such services can free personnel to focus on core municipal services.

- **Improved comfort and/or functionality**

Sound energy-efficiency improvements often upgrade operational practices and enhance the comfort and functionality of the building environment. When performance and reliability standards for HVAC and lighting are met, operating costs begin to drop.

- **Modernized infrastructure**

Utility savings can subsidize the costs of modernizing a building's energy infrastructure and controls. When cost savings are allocated properly, they support capital investments and substantially decrease the total costs of modernizing a facility.

- **Assured environmental compliance**

Environmental quality is important to a facility's occupants. For example, indoor air quality has an effect on employee productivity as well as on the value of a building. Environmental compliance can include measures to convert cooling systems to CFC-free equipment, or properly dispose of luminaries and other potentially toxic materials.

In the past, when capital and technical support were not readily available, these broad-based benefits were rarely realized. Capital has become available in many more innovative ways in the past two decades (refer to the Financing section in the Resource Manual). As more project managers use innovative financing, it is increasingly possible to contemplate a comprehensive project and secure the full range of benefits. It is recommended that project managers put a monetary value on improved productivity, infrastructure and environmental quality and include them in cost-benefit analyses.

Outline any municipal energy or environmental policies and briefly describe how they support a retrofit program. You should also demonstrate how the proposed building retrofit program would fit into municipal mandates.

Relevant policies may include but are not limited to:

- Municipal Master plans
- environmental policies or resolutions
- construction policies
- procurement policies
- recycling policies, specifically for construction, demolition, and renovation waste

4.5 Proposed activity

This Action Plan lays out a framework for building renewal and leads to the creation of a detailed Project Proposal that spells out how the retrofit program is to proceed. In subsequent steps feasibility studies will confirm the energy savings potential in specific buildings. At the implementation stage there will be upgrades to mechanical, plumbing and electrical systems as well as changes in management and operating practices. These changes will reduce energy costs by approximately \$[insert amount from Green Leaf™ Assessment]. The Project Proposal will cost an estimated \$[insert figure from Budget in Appendix F] to prepare. Energy cost savings will ultimately pay for all retrofit activities including the Project Proposal.

4.6 Benefits of participating in a building retrofit process

[Municipality Name] has been considering a retrofit for [insert names of buildings] for a few years for reasons of both energy and operating efficiency. The building retrofit process advocated by FCM will provide us with the resources to ensure that we are taking advantage of all our opportunities in a cost-effective manner.

5.0 POLICY CONTEXT

[Outline any municipal energy or environmental policies and how they support a retrofit program. See Appendix E Project Proposal Development Timeline]

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Please refer to the Financial Considerations section in the Green Leaf™ Assessment report.

You do not require detailed financing information at this stage. However, you must be aware of the various financing and implementation options to demonstrate that further investigation is needed to find a suitable

combination for your municipal situation. In this section of the Action Plan you need to provide an overview of the options available to your municipality. Ultimately you are seeking approval from Council to further investigate these options.

It should be emphasized to decision-makers that all costs incurred at this stage should be recovered from future energy savings from the retrofit project.

If you have already decided to work with an energy services company (ESCO), you should also be aware of these options. A request for proposal from ESCOs is one of the templates in Section 5. The Resource Manual also provides a description of typical ESCO services.

The basic financing options for an owner-managed energy-efficiency program are:

Internal: Paid directly from current operating or capital funds. Revolving funds are also used.

Debt financing: Can be as simple as a loan from a lending institution, or as complex as a bond issued and marketed to investors.

Lease or lease-purchase financing agreements: Contracts that allow the use of equipment for a fixed period in return for instalment payments. In a lease, energy-efficiency equipment is acquired and financed by a third party.

6.0 FINANCING AND IMPLEMENTATION

There are several different financing and implementation options. Municipal governments can pay for building improvements and new equipment using:

- internal capital
- debt financing
- lease or lease-purchase arrangements
- financing arranged by an energy services company

Implementation options include:

- municipal staff manage and carry out measures
- contractors carry out measures under staff direction
- an energy services company (ESCO) manages and carries out measures

A comparison of the various financing and implementation options is provided in Table 2 below.

Table 2 Overview of common financing and implementation options

| Implementation Option | OWNER MANAGED | | | ESCO MANAGED | | | |
|------------------------|------------------|---------------------------|-------------|-------------------|---------------------------|-------------|---------------|
| | Internal Capital | Borrow | Leasing (1) | Internal Capital | Borrow | Leasing (1) | ESCO Financed |
| Initial Cash outlay | 100% | 0-30% | 0% | 100% | 0-30% | 0% | 0% |
| Fixed Payments (2) | No | Yes | Yes | No | Yes | Yes | No |
| Payment Source | Capital | Capital | Operation | Capital | Operation | Operation | |
| Risk Assumed by | Owner | Owner | Owner | ESCO as Requested | | | |
| Ownership of Equipment | Owner | Owner | Owner | Owner | Owner | Owner | ESCO |
| Tax deduction | Depreciation | Depreciation and interest | | Depreciation | Depreciation and interest | | Savings |
| Cost of Capital | Prime | Prime+ | Prime ++ | Prime | Prime+ | Prime ++ | Prime +++ |
| Debt on Balance Sheet | NO | YES | YES | NO | YES | YES | NO |

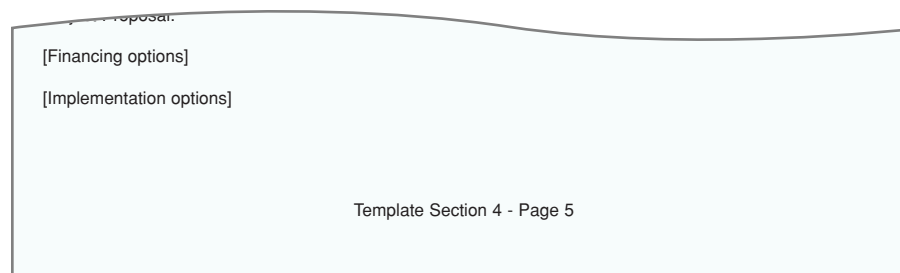
(1) Capital lease, rather than operating lease, is assumed. It is unlikely that building retrofits could be considered as a rental-type arrangement.
(2) Under ESCO managed, payments are corrected after each reconciliation.
Source: Financing Options for Energy Management Services. Natural Resources Canada, 1995.

Each broad financing and implementation option identified above has strengths and weaknesses, and there are further variations within each option. A more detailed review is necessary to ensure that the best financing and implementation options are selected for [Municipality Name]. This review will be conducted as part of the Project Proposal.

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Please refer to the Case Studies section in the Resource Manual for specific Canadian municipal examples of financing choices.



With these options and the flexibility they offer, lack of capital should not be a constraint for a soundly defined energy-efficiency project. The real constraint is more likely to be a lack of knowledge about investment options and how to structure a viable financing package.

Each of these options carries its own considerations for risk, cash flow, capital, accounting, and tax treatment. Your ultimate decision will weigh these factors along with the life-cycle cost of building investments.

Criteria for an Investment Decision

Before a project's goals and objectives can be solidified, the municipality must clearly define what it considers profitable or fiscally sound investment criteria.

These criteria act as a road map that helps program managers avoid pitfalls and gain approval from financiers and other decision-makers. Key investment criteria should be defined at the beginning of any effort to finance energy-efficiency improvements and may include the following:

- Reduced capital and operating costs, which may include reduced utility costs, avoidance of energy cost increases, or decreased capital costs for infrastructure modernization. For example, project criteria may state, *"Targets include a 25 per cent reduction in utility bills, as well as reduced capital investment for the chiller replacement."*
- Exceeding the organization's hurdle rate or minimum internal rate of return. For example, the project criteria may state, *"The target is a 20 per cent annualized internal rate of return for all comprehensive energy-efficiency investments."*
- Maintenance of neutral or positive cash flow on the total investment package compared to pre-retrofit costs. For example, the project criteria may state, *"Positive cash flow, including financing costs, utility bills, and maintenance services, must be achieved within two years of completing energy-efficiency improvements."*
- Financing either on or off balance sheet. This decision will be based on internal capital availability, debt limits, and other factors. For example, project criteria may state, *"All project costs over \$_____ will be financed off the balance sheet through lease, lease-purchase, or energy service performance contracting arrangements."*

Implementation Options

There are three main implementation options with which you should become familiar: internal management and execution, energy services company (ESCO), or third party with municipal management. Each has advantages and disadvantages, as outlined in the Resource Manual, depending on your situation.

For the purpose of the Action Plan you should state the various implementation options that will be considered.

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Now that you have provided a summary of your activities and highlighted your objectives, a formal recommendation with a supporting budget is required.

Also required are recommendations on financing and implementation options, a strategy for waste minimization, the human resource requirements, and the timeline for submission of the Project Proposal report.

Reminder: The purpose of this Action Plan is to secure commitment and resources from Council for the work necessary to create a Project Proposal.

7.0 RECOMMENDATIONS

[See Appendix E Project Proposal Development Timeline]

7.1 Project Proposal

A program of building improvement is recommended. Such a program would allow for a \$[Insert amount] investment in our municipal facilities for equipment renewal, training and program implementation. The program would save \$[Insert amount] in annual operating costs. The program will be entirely self-funding, and all program costs will be retired by operational cost savings within [Insert number] years.

It is recommended that Council approve \$[insert amount] to develop a Project Proposal for a comprehensive municipal building retrofit.

This expenditure will permit [insert name of department] to produce detailed information that will confirm or allow appropriate revision of the recommended program scope, benefits and estimated savings. With greater detail on buildings, equipment and utility costs, the department will also be able to recommend priority expenditures for energy efficiency.

Renewable energy and technologies have demonstrated economic and environmental benefits across the country. They will be considered throughout this project.

7.2 Recommended financing option (if chosen)

7.3 Recommended implementation option (if chosen)

7.4 Recommended strategy for waste minimization

7.5 Human resource requirements for Project Proposal

7.6 Timeline for submission of Project Proposal report (refer to Timeline in Appendix E)

7.7 Budget and source of funds for Project Proposal (refer to Budget in Appendix F)

Sample timeline

| Item | Description | Tasks | Lead | Due Date | Resources |
|--------------------|---|---|--------------------------------------|----------|-------------------------|
| Building Inventory | Compile a list of municipal facilities | <ul style="list-style-type: none"> Request staff to compile inventory OR Hire consultant to compile inventory | Building manager | June 5 | 2 person-days (example) |
| External Partners | Sources of expertise not available in-house | <ul style="list-style-type: none"> Identify skill sets needed Identify external partners | Energy manager | June 30 | |
| Implementation | Identify implementation options | <ul style="list-style-type: none"> Review implementation options Select preferred option | Building manager & Financial Manager | July 10 | |
| Financing | | <ul style="list-style-type: none"> Review financing options Select preferred option | Financial Manager & Building Manager | July 10 | |

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Appendix F Sample Budget

This is a sample. Please use your municipality's standard budgeting method.

It should be emphasized to decision-makers that all costs incurred at this stage will be recovered from future energy savings from the retrofit project.

| | Internal Time | External Cost | Total Expenditures |
|-------------------------------------|---------------|---------------|--------------------|
| Research | | | |
| Building Inventory | | | |
| Collect & Analyze Utility Bill Data | | | |
| Capital and Operating Cost Review | | | |
| Finance & Implementation Options | | | |
| | | | |
| Research Sub Total | | \$ - | \$ - |
| Project Proposal Report | | | |
| Writing, Editing, Printing | | | |
| Consultants' Fees | | | |
| | | | |
| Report Sub Total | | \$ - | \$ - |
| | | | |
| Training | | | |
| Workshops | | | |
| Other Training Opportunities | | | |
| | | | |
| Training Sub Total | | \$ - | \$ - |
| | | | |
| Feasibility Study | | | |
| Internal or External Auditing | | | |
| Consultants' Fees | | | |
| | | | |
| Feasibility Study Sub Total | | \$ - | \$ - |
| Total | | \$ - | \$ - |

Note: This budget describes the cost associated with preparing the Project Proposal and conducting Feasibility Studies