Report No. 060513

Prepared for:

Municipality of the District of Clare

Clare Community Energy Master Plan

Milestone Three – Implementation Plan

Final Report

April 2007

CBCL LIMITED
Consulting Engineers

ISO 9001
Registered Company

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1 INTRODUCTION

The Community Energy Plan will remain just that, a plan, unless the local community resolves to make it a reality. Those of us on the trip to Gussing saw what can happen through determined hard work over many years. It is important to note, however, that we saw the results of a plan many years after beginning the implementation of that plan. Gussing started slow building up their knowledge of renewable energy systems as well as their contacts in government and private industry. Most importantly, they developed and nurtured a philosophy that spread throughout the community about the importance of sustainable development and energy conservation. What this did was make it much easier to attract investment in new renewable technologies when investors came and saw the level of interest and commitment to sustainability in so many homes, businesses, and industries in the community.

Clare stands ready to begin what we all hope will be a similar journey. The plan calls for a slow start, building upon renewable resources currently available but underutilized, and developing expertise and confidence in our abilities to expand into newer technologies and attract investment to improve and transform the local economy. Recent polling of community members indicates a high level of interest among owners of older homes to participate in energy efficiency upgrade programs. An even higher level of participation is likely if information about funding programs can be widely delivered in the community and followed up with telephone calls or visits to obtain pledges of participation.

Additional follow-up will also be required with the business community to encourage participating in government incentive programs to reduce energy consumption and to share their experiences and successes with the wider community. This information sharing and a cooperative approach will be critical to maintaining long term interest and involvement in the community energy plan.

2 DEMAND SIDE MANAGEMENT

2.1 Awareness Building

2.1.1 Public Education

Knowledge is power and a knowledgeable society has the power to create meaningful change. That is what is desired as an outcome of this Community Energy Plan, meaningful, positive change in the way energy is created and used in Clare. The community energy plan project has thus has not included any public consultation sessions, however, due to the number of residential and business audits conducted, a large number of residents have been made aware of the project. In order to ensure that public support for project implementation can be maintained at a high level, it is considered important that the public is kept fully aware of what project initiatives are planned and what expected benefits they could see. Information to be conveyed to the public should include the following:

- typical energy costs per household in Clare;
- typical costs of energy retrofit measures in houses;
- expected energy and cost savings associated with energy retrofit measures;
- costs of energy for the municipality;
- typical costs for energy saving measures for the municipality;
- expected energy and cost savings associated with municipal energy savings measures;
- GHG emission reduction potential of the proposed renewable energy projects.
- Information on government programs for homeowners and small businesses to reduce energy consumption.

A community newsletter could be produced and distributed which would include the items previously mentioned. All information need not necessarily be conveyed in one newsletter but rather a series of newsletters could be produced that highlight different aspects of the community energy plan, as well as, use examples of best practices used in the community and elsewhere. Many publications are currently in existence which can provide examples and information for the newsletter. Some sources include Natural Resources Canada, Conserve Nova Scotia, Nova Scotia Department of Energy, Clean Nova Scotia, Union of Nova Scotia Municipalities, and Halifax Regional Municipality. The Federation of Canadian Municipalities can also be utilized for information on successful conservation initiatives in other municipalities in Canada, as well as the relationship of Clare with the city of Gussing Austria, can be used as inspiration for what can be.

In addition to the newsletter, a series of public open houses can be used to allow the community to more fully understand all that the community energy plan involves and to ask questions and learn how they can participate. There are eight municipal districts within Clare municipality so it seems logical to arrange the open houses at locations close to or within these municipal districts. The open houses should focus on the goals and expected outcomes of the Community Energy Plan as well as highlight the measures proposed or already under way to achieve the goals. Displays should provide information on the costs and benefits of each measure as well as costs and benefits to the individual homeowner. The open house should also

provide a forum for feedback form community members and provide information on energy efficiency programs for homeowners to take away. Considerable information on the provincial Energuide program should be provided as well as an opportunity for homeowners to sign up for the program. The ultimate success of the community energy plan will be based on the number of community members who get involved and commit to making positive changes to reduce emissions in their homes and businesses.

Another proposed method of public education will be public announcements using radio station CFIA. A public phone in talk show on this station could also be used to provide the programs and actions of the CEP, as well as promote upcoming public meetings or demonstration projects.

2.1.2 Demonstration Projects

Although not necessarily new, the concept of energy conservation and renewable energy can be confusing and intimidating to many people. Energy conservation and renewable energy initiatives in use in residential and small commercial settings are a very good method of selling the concept to a sceptical public. This is a great opportunity for the municipality to lead by example and turn one or more of its buildings into showpieces of energy efficiency by incorporating many efficiency measures into its buildings and inviting the community to come and see the difference these measures make.

Although the new medical centre is planned to be a highly energy efficiency building, incorporating efficient features, the public can be better educated by taking an existing building, upgrading it, and demonstrating to the public what significant energy and emission savings have resulted. The public library in Meteghan is suggested as a great candidate for such an upgrade since it is visited regularly by a large percentage of the community. An alternate suggestion would be the building housing radio station CIFA and having the radio hosts describe the ongoing process as well as describe the improvement in energy efficiency and comfort.

On the residential side, a series of demonstration projects involving four or five houses is proposed. Due to the fact that a majority of the residences in Clare were built prior to 1970 and these homes typically are the worst energy performers, the demonstration projects should target homes of this age. The economic benefits of reduced home energy costs could most benefit low income households so it is proposed to implement demonstration projects in year round owner occupied homes of low or modest income. Funding to cover the cost of the demonstration projects has been found through the provincial Residential Energy Assistance Programme (REAP). This program is funded by conserve Nova Scotia and provides grants of $5,000 to low income homeowners to make home upgrades to reduce energy consumption. The program includes initial and follow-up Energuide audits that will allow the program to access funding from the provincial and federal programs. There is no cost to the homeowner and no sweet equity component is expected. The Burridge Campus of the Nova Scotia Community College has a building technology program that may be able to contribute students to the project as a part of a training program. In order to effectively monitor the energy consumption of each demonstration home before and after the upgrade project a monitoring program using Powercost monitors, energy records, reviews, and follow-up reviews will be required. Powercost monitors could also be purchased and loaned to homeowners through the public library. The monitors have been proven to have a positive effect on energy efficiency when

installed in a home, by making the homeowner immediately aware of the cost of their electricity use. People tend to use less when they see what it costs.

In order to get greater participation in the Energuide program, the municipality could advertise the program and accept applications from homeowners to participate. All candidate homes would need to be able to supply valid energy records to be used to establish a baseline to qualify for Energuide funding each house in the program would receive an initial energy audit and receive a score. A follow-up audit is conducted following the upgrade project and a second score is given. The difference between the two scores determines the amount of the Energuide grant. The average grant per house is between $1,200 and $1,500 but maximum grants are $2,000 through the provincial program and $5,000 through the federal program.

Our study team has been conducting unofficial polls of homeowners in Clare to determine their interest in participating in the Energuide program. Of the homeowners contacted to date, approximately 50% have indicated a willingness to participate. Our team members are reminding the homeowners that they must pay an upfront cost to have the initial energy audit and scoring done and must pay the entire cost of energy retrofits prior to receiving a rebate based on the relative improvement in the Energuide score between the initial and follow-up energy audits and the specific improvements made. This high level of interest, coupled with the demonstration program, should help to ensure a relatively large number of residences in Clare will receive energy retrofit upgrades. It is expected that as greater numbers of homeowners go through the Energuide process, they will tell their family, friends, and neighbours about it and interest will increase. A successful participation rate would be 100 homes in the first year and 1,000 homes within five (5) years.

Homeowners polled that did not express interest in participating in the Energuide program generally had the following reasons for not participating:

.1 Home has already been renovated and little could be gained from further upgrades.

.2 Home is old and not worth much investment.

.3 Homeowner not planning to remain in home much longer.

.4 Home is newer and already energy efficient. This was the answer usually given by owners of homes less than twenty (20) years old.

2.1.3 School Projects

School children are often seen to be an excellent resource to convey new ideas to a community via their families. Some examples of school based energy awareness programs that could be applied in Clare are as follows:

.1 Energy conservation information is provided to school children as part of an eco competition between different schools. Schools in different parts of the province could report on their electricity

and heating fuel consumption and the number of students and staff in each building in order to determine an energy consumption figure per person. Each school then starts different energy conservation measures such as turning off lights when not needed, setting back thermostats over night, reducing hot water consumption, fixing air leaks around windows and doors, and other ideas developed and implemented by students and staff. Each school provides a brief report on their activities and monitors their energy consumption to report in changes from their previous consumption per person figures. Minimal funding is required if most measures are the result of operational changes. Small prizes could be awarded to the schools with the greatest energy savings. Suggested prizes could include home energy efficiency packs presented to students and staff like those developed and distributed by Nova Scotia Department of Energy. In addition to energy savings information, these packs usually include one or two compact fluorescent light bulbs, a hot water heater blanket, a roll of weather stripping, outlet cover insulators, and a faucet aerator.

.2 Students obtain their home energy records and enter into a competition with classmates to achieve the largest energy reduction per person in their households. They report in class what energy saving measures they are trying at home and what impact it is having. These competitions are better suited to children above the elementary grade levels.

.3 Children in a class are divided into teams and are given a computer generated model house. Each team is given a budget and told to reduce energy consumption in their house as much as possible. Each team is given a list of possible measures and their costs. Each team selects their measures to use up their budget, the measures are entered into the model house, and the energy reductions are determined. The team with the best reduction wins. These online houses models are available through various government energy and educational websites.

2.2 Local Support

Ultimately, the success or failure of this Community Energy Plan will depend upon the ability of the municipality to inspire the public, institutional, and business communities in Clare to support the plan.

Although formal public and stakeholder consultation was not part of the mandate for development of the plan, the extensive audit program of homes, businesses, institutions, and industries provided an excellent opportunity to explain the rationale and goals of the CEP to a significant portion of the community. In total, over 150 audits were conducted which provided our team with direct contact with hundreds of people who have seen first hand what the community energy plan can mean for them.

A local program coordinator will be needed to ensure that the implementation of the Community Energy Plan maintains momentum. The municipality needs to seek out funding to support the creation of this position. The current CEP project steering committee could be retained to augmented to provide advice and support for this new position. If the energy program coordinator position with the regional development agency is staffed, a portion of that person's responsibility could be the Clare CEP implementation. If this happens, the requirement for the full time local program coordinator may not be necessary. Funding for the coordinator position may be available through the federal government

EcoAction community funding program of Environment Canada. Summer Co-op students from a local university may fill the role temporarily. The Nova Scotia Youth Conservation Corps Program is another possibility although this program is better suited to works projects.

Whichever position is created, it is essential that momentum be maintained once implementation initiatives have begun. New promotional ideas must be continuously developed to maintain interest among community residents and to ensure pledges of participation are followed up with actions. The local business community must be engaged to support the program since it stands to benefit directly through sales of materials and construction labour.

2.3 Funding Sources

Potential funding sources identified to provide monetary or in kind support to a community demand side management program include the following:

.1 Federation of Canadian Municipalities – Green Municipal Funds

.2 Conserve Nova Scotia – Energuide for Houses, Residential Energy Assistance Program

.3 Natural Resources Canada – Eco Energy Retrofit Program for houses and businesses, Canadian Industry Program for Energy Conservation (CIPEC)

.4 Nova Scotia Community College – Building Construction Trades Programs field experience

.5 Habitat for Humanity – New construction and rebuilding of homes for low income families. Privately financed.

.6 Union of Nova Scotia Municipalities – Energy efficiency best practices manual, Energy Programs Coordinator

.7 Canada Mortgage and Housing Corporation – Financial support for low income, disabled, and senior homeowners and tenants to make upgrade to their homes.

.8 Nova Scotia Power Incorporated – A corporate demand side management study has been completed as part of a larger integrated resource planning project. Investment in DSM initiatives has been identified as having the potential to delay major capital expenditures in new generation infrastructure for several years, thus improving the long term financial outlook for the company.

.9 Environment Canada – EcoAction Community Funding Program.

3 RENEWABLE ENERGY PROJECTS

The Milestone No. 2 report included ten renewable energy projects that met all the established evaluation criteria and were accepted by the project steering committee. These projects were as follows:

.1 Université Sainte Anne, Combined Technologies Project – A project combining a biomass fired central heating plant with solar domestic hot water heating on residence buildings and a small wind turbine on campus for power generation.

.2 Villa Area, Biomass Heating Plant with District Heating – A project to install a biomass fired heating plant at Villa Acadienne in Meteghan and install hot water supply and return piping for approximately 800 m along Route 1 adjacent to the Villa to provide a source of heating energy to nearby homes, institutions, and buildings.

.3 Comeau Lumber, Modifications to Existing Cogeneration System – The mill uses wood waste to produce steam to drive a steam turbine and produce electricity. The current arrangement does not send all the available high pressure steam through the turbine, thus reducing the system's efficiency. The modifications would allow all the high pressure steam through the turbine, increasing system efficiency and reducing fuel consumption.

.4 Spectacle Lake Group, AD System for Hog Manure and Other Organic Wastes – Four separate organic waste streams were identified as potential feedstocks for an anaerobic digester that uses bacterial activity to break down organic waste, kill harmful pathogens in the waste, and produce methane for use as a fuel to produce heat and electricity.

.5 Meteghan River Mini Hydro – A small run of river hydroelectric development in the vicinity of Indian Falls.

.6 Comeau Sea Foods, Biodiesel System – A project to take the semi refined herring oil by-product form the meal plant and process it into a fuel for use in diesel engines in fishing boats or vehicles.

.7 Comeau Sea Foods, large Wind Turbine – A project to install a large utility size wind turbine on a site adjacent to the processing plant in Saulnierville.

.8 Residential Solar Hot Water Projects – A project to convince a large number of residential and commercial domestic hot water users to install solar hot water heaters on their properties to reduce the energy consumption associated with hot water production. The large number committed to the project, the better price per building can be negotiated with equipment suppliers and installers.

.9 AF Theriault Shipyard, Solar Air Heating – A project to install a solar wall or other solar air heating system on a large industrial assembly building at the shipyard. The system will supplement the existing oil heating system and reduce consumption.

.10 New Medical Centre, Combined Technologies – The proposed new medical centre in Meteghan centre is intended to be designed to be a model of energy efficiency. Proposed technologies to be incorporated into the building include earth energy using ground source heat pumps, solar hot water heating, and an onsite wind turbine. The building is intended to be a showpiece of efficiency and renewable technology.

3.1 Local Support

Five of the ten projects assessed in Milestone No. 2 are located within the boundary of a private industrial operation. The remaining projects are at municipally owned or operated facilities, the university, or throughout the wider community.

The projects located within the private industries must meet minimum criteria for commercial feasibility since the investment and benefit will be primarily to the host industry. Although some financial incentives may be available through federal government programs, these projects will depend primarily upon investment from the host private industry to determine if they proceed or not.

The other projects on the short list will be much more dependent upon local support because they will require more direct community investment and resulting benefits. The solar domestic hot water program will be successful only if a sufficiently large number of homeowners commit to a substantial up front capital investment to have a solar thermal system installed on their homes. The new medical centre project represents a small incremental difference in the cost of the building compared with construction costs for a less energy efficient building. Over the life of the building, the additional capital investment will pay for itself many times over. This message needs to be conveyed to the community, where tax dollars will be used to fund the majority of the new building cost. The university project represents the largest capital investment of any of the projects agreed to by the steering committee. It presents an opportunity to reduce annual operating costs at the university by over $100,000 while increasing employment both at the university and for the forestry companies that would supply the fuel for the new heating plant. Although not funded directly by the local community, the university is a key cultural component of the community and any project that can strengthen it and makes it more closely tied to the greater community will undoubtedly be popular. The remaining two projects, the Villa Acadienne biomass boiler plant and the Indian Falls hydro plant were deemed by the steering committee to be not economically viable and will not be considered for implementation.

3.2 Public Funding Sources

A listing of possible government program funding sources is included in the Appendix. Specific information on regulations for most federal government programs is not yet available but is scheduled to be released in April 2007. The following table lists the renewable energy projects and possible government funding sources.

Table 1. Renewable Energy Projects and Potential Funding Sources

PROJECT	ESTIMATED COST	POTENTIAL FUNDING SOURCES
.1 University St. Anne combined Technologies Project	$2 M	FCM Green Municipal Funds will issue a request for proposals on May 23, 2007, for financing to support district energy projects that use renewable or waste energy sources. USA biomass heating plant project may qualify, particularly if part of the project involves serving buildings off campus in the community. Total available funding is $20 M in loans and $3.2 M in grants. Federal Eco Energy Retrofit Program offers grants of 25% of project costs to a maximum of $50,000 for building energy efficiency upgrades. Federal Eco Energy for Renewable Heat program will provide 25% of the purchase and installation costs of solar dhw systems.
.2 Comeau Lumber Cogeneration Modifications	$275 K	Project will be privately financed by the client if final cost estimate confirms previous feasibility analysis.
.3 Spectacle Lake AD System	$1 M	NS Department of Environment and Labour offers up to $100 K to existing septage haulers to upgrade or replace existing septage lagoons. There are potentially 3 haulers within range of Spectacle Lake who may have an interest in dumping there rather than build there own facility. NSDEL would consider a joint application from multiple haulers for a combined facility. Maximum potential funding from this source would be $300 K. Natural Research Council's Industrial Research Assistance Program could provide funding to assist with design and process research costs. Atlantic Canada Opportunity Agency could provide funding to support business start-up based on job creation guarantees and a future business plan showing growth potential.

PROJECT	ESTIMATED COST	POTENTIAL FUNDING SOURCES
.4 Comeau Sea Foods Biodiesel System	$70 K	Project would be privately financed by the client. No current economic viability due to the high value of fish oils to the nutraceutical industry.
.5 Comeau Seafood wind Turbine	$3.5 M	Interest shown from private wind developer. Request for Proposals for 130 MW of renewable energy for NSPI expected soon. Project would be privately financed.
.6 Residential Solar Hot Water Project	Approximately $5,000 per Household	Local manufacturer, Thermodynamics Ltd., quotes a price of $5,200 plus HST per household installed based on a minimum of 20 houses. Price is for a single 4' x 8' panel and a 60 gallon storage tank as part of a complete, installed turnkey system. This system is sufficient for a 2 – 3 person household. Larger households will require two panels and a system cost of approximately $7,000 plus HST. Nova Scotia Department of Energy offers rebates of 10% up to a maximum of $500 for solar dhw systems. The Federal Eco Energy Retrofit Program includes an additional $500 rebate for solar dhw systems if included as part of an Energuide upgrade,
.7 AF Theriault Shipyard Solar Air Heater	$45 K	Project may qualify under new federal Eco Efficiency Program for a rebate of up to 25% of project costs to a maximum of $50,000. Remainder will be privately financed.
.8 New Medical Centre Combined Technologies	Unknown	The Federal Eco Energy Program may offer incentives for installing solar and wind energy systems on the new building.

3.3 Private Funding Sources

Private sources of funding are more difficult to ascertain. Interest has been shown in the local community for establishment of a wood fuel supply company to utilize harvesting waste and underutilised tree species to produce wood chip fuel for use at the proposed facility at the University of Ste. Anne as well as other existing or potential facilities in western Nova Scotia. Communications with local investors must be maintained in order to expedite project implementation. The municipality could assist this development by offering the stockpiled wood waste at the construction and demolition site to the fuel supply company at little or no cost as a source of start-up raw material.

The large wind turbine project at Comeau Sea Foods has attracted interest from private wind developers who generally use private equity markets to finance their projects.

Another mechanism to attract local investment could be the establishment of a community economic development investment fund (CEDIF). This allows local investment in projects that show an economic return on investment. Investment in a CEDIF provides additional investment tax credits that can make the project more attractive. The CEDIF also need not be limited to one project so could be used to provide capital to a number of local projects. Additional information on CEDIF's is provided in the Appendix.

4 IMPLEMENTATION SCHEDULE

		RESPONSIBILITY	TIMEFRAME
.1	Appoint local CEP coordinator or implementation committee or both.	Council	April
.2	Secure funding for residential demonstration project through REAP program.	CEP Coordinator	April
.3	Select demonstration homes.	CEP Coordinator	April – May
.4	Determine demonstration homes baseline energy use.	Contractor	May
.5	Demonstration homes initial Energuide Audits.	Contractor	May – June
.6	Demonstration homes upgrade construction.	Contractor	June – August
.7	Demonstration homes follow-up Energuide Audit.	Contractor	June – August
.8	Develop Community Energy Plant Newsletter.	CEP Coordinator	April – May
.9	Develop radio public service announcements about CEP.	CEP Coordinator	April – May
.10	Plan for public information meetings.	CEP Coordinator	April – May
.11	Research use of CEDIF for local projects.	Implementation Committee	May – June
.12	Funding application to FCM for USA district heating.	Council/USA	May
.13	Obtain commitments from homeowners to participate in Energuide program.	CEP Coordinator	May, June
.14	Arrange for Energuide Program audits for participating homeowners.	CEP Coordinator	June, July, August
.15	Determine eligibility of AD project for funding to receive septage wastes.	Spectacle Lake	April
.16	Meet with school representative to discuss energy awareness projects and competitions.	CEP Coordinator	September, October
.17	Obtain commitments from homeowners to purchase solar dhw systems.	CEP Coordinator	May, June
.18	Arrange with solar equipment manufacturer for supply and installation of systems on participating homes.	CEP Coordinator	July, August
.19	Design of USA project upgrades.	Contractor	July – September
.20	Wind monitoring of Comeau Sea Foods.	Private Developer	September 2007 – September 2008
.21	Design of air heater at A.F. Theriault.	Contractor	June
.22	Construction of USA project upgrades.	Contractor	November 2007 – May 2008

		RESPONSIBILITY	TIMEFRAME
.23	Wind turbine design and construction at Comeau Sea Foods.	Private Developer	April – June 2009
.24	Comeau lumber cogeneration upgrades.	Contractor	May – October 2007
.25	Energy newsletters issued.	CEP Coordinator	Bimonthly June 2007
.26	Radio station public service announcements.	CEP Coordinator	Weekly May 2007
.27	Design and construct AD facility.	Contractor	September 2007 – September 2008
.28	School energy projects/competitions.	CEP Coordinator	November 2007
.29	Applications submitted or commercial and industrial DSM retrofit incentives.	Provide Businesses/ Contractor	June – July 2007
.30	Applications submitted for institutional building retrofit incentives.	Institutions/ Contractor	June – July 2007
.31	Purchase Powercost monitors for use to establish baseline energy consumption in demonstration homes and buildings.	Council/CEP Coordinator	April 2007
.32	Purchase Powercost monitors for homeowner use. Loan out through the public library. Publicize in newsletter and on the radio.	CEP Coordinator	May 2007

Appendix A
Program Descriptions

ecoACTION
A Community Funding Program

What is EcoAction?
Before You Begin
Your Project: Start to Finish
Success!
News Releases / Announcements
REGIONAL SITES

ecoACTION
Using Less, Living Better

What is EcoAction?

Find out more about this Environment Canada funding program

What is EcoAction?

Since 1995, Environment Canada's EcoAction Community Funding Program has provided financial support to community groups for projects that have measurable, positive impacts on the environment. Funding support can be requested for projects that have an action focus, a community capacity building focus, or a combination of both objectives.

EcoAction encourages project submissions that will protect, rehabilitate or enhance the natural environment, and build the capacity of communities to sustain these activities into the future. Projects require matching funds or in-kind support from other sponsors.

Non-profit groups are eligible to apply to the program. This includes, but is not limited to: community groups, environmental groups, aboriginal groups and First Nations councils, service clubs, associations, and youth and seniors' organizations. Private sector organizations, educational institutions, and municipal, provincial/territorial and federal governments are not eligible applicants, but are encouraged to partner with non-profit organizations.

In keeping with major Environment Canada and Government of Canada environmental priorities, EcoAction supports projects that address the following themes:

- Climate Change - projects focusing on reducing greenhouse gas (GHG) emissions that contribute to climate change
- Clean Water - projects focusing on the diversion and reduction of substances that negatively affect water quality (e.g., pesticides, fertilizers, household hazardous wastes, etc.) and on the conservation of water resources;
- Nature - projects focusing on protecting wildlife and plants, and protecting and improving the habitat where they live (e.g., grasslands, rivers, forests, etc.); and,
- Clean Air - projects focusing on reducing air emissions that contribute to smog and air toxics issues

Submission deadlines are February 1st and October 1st annually. The maximum amount available per project is $100,000. Applicants must ensure that at least 50 percent of the total value of their project comes from sources other than the federal government.

To obtain more information on applying to the EcoAction Community Funding Program, link to the Your Project: Start to Finish page. For more information on developing a project and on other funding sources, link to the Before You Begin page.

Should you have any comments or questions about this website or EcoAction, please contact us.

The Green Lane™, Environment Canada's World Wide Web site

Last updated: 2003-01-30
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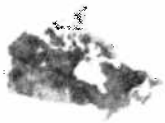
URL of this page: http://www.ec.gc.ca/ecoaction/what_is_e.html



Office of Energy Efficiency

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Retrofit Your Home and Qualify for a Grant!

Thinking of ways to make your home more energy efficient? Here's what you can do to reduce your energy consumption and receive grants through ecoENERGY Retrofit.

Natural Resources Canada (NRCan) is offering a new residential energy efficiency assessment service to owners of single family homes including detached, semidetached and low-rise multi-unit residential buildings (MURBs) that are no more than three storeys high. Under the ecoENERGY Retrofit program, property owners can quality for federal grants by improving the energy efficiency of their homes, and reducing their home's impact on the environment.

NRCan-licensed energy advisors conduct a detailed on-site assessment of your home's energy use from the attic down to the basement. They then provide you with a personalized written report, including a checklist of recommended retrofits to improve the energy efficiency of your home or MURB and, in some cases, to reduce water consumption. The report also shows the grant amounts for each eligible upgrade that you can receive by carrying out these energy saving improvements.

On the following pages, you will find a list of improvements covered under ecoENERGY Retrofit – Homes and the corresponding grant amounts. The maximum grant you can receive for a home or MURB is $5,000. Property owners of multiple residential buildings are eligible for up to $500,000 over the life of the program ending March 31, 2011.

Eligible Improvements / Retrofits

	Grant Amounts		
	Single Family Home		MURB (per building)
	for 1st system	for 2nd system	
Heating System Replace your heating equipment with:			
an ENERGY STAR qualified gas furnace that has a 90.0% annual fuel utilization efficiency (AFUE) or better	$300	$150	Same as single family home
an ENERGY STAR qualified gas furnace that has a 92.0% AFUE or better, and a DC variable-speed motor	$500	$250	
an ENERGY STAR qualified oil or gas boiler that has an 85.0% AFUE or better	$600	$300	

an ENERGY STAR qualified oil furnace that has an 85.0% AFUE or better, and a DC variable-speed motor	$500	$250	
an ENERGY STAR qualified oil furnace that has an 83.0% AFUE or better	$300	$150	
a CAN/CSA-C448 compliant ground- or water-source heat pump	$3,500	N/A	
Install an ENERGY STAR qualified air-source heat pump. (*per equipment installed)	$400	N/A	* $400
Install a minimum of 5 electronic thermostats for electric baseboard heaters. Electric baseboards must be the primary system. (**for each set of 5 installed)	$30	N/A	** $30
Replace your wood-burning appliance with a model that meets either CSA-B415.1-M92 (Performance Testing of Solid-Fuel-Burning Heating Appliances) or the U.S. Environmental Protection Agency (EPA) wood-burning appliance standards (40 CFR Part 60). (*per equipment replaced)	$300	$150	* $300
Ventilation System			
Install a heat recovery ventilator that is certified by the Home Ventilating Institute. (See www.hvi.org) (*per equipment installed)	$300	N/A	* $300
Cooling System [Replacement Only]			
Replace your central air conditioner with an ENERGY STAR qualified unit.	$200	N/A	$200
Replace your window air conditioner (s) with an ENERGY STAR qualified unit(s). (*per unit replaced)	* $20	N/A	* $20
Domestic Hot Water System			
Install a solar domestic hot water system that meets CAN/CSA Standards.	$500	N/A	$500
Replace your domestic hot water heater with an instantaneous gas water heater that has an energy factor (EF) of 0.80 or better. (*per equipment installed)	$200	N/A	* $200
Replace your domestic hot water heater with a condensing water heater that has an EF of 0.80 or better. (*per equipment installed)	$300	N/A	* $300

Install a grey or drain water heat recovery system. (*per unit installed)	* $50	N/A	* $50

For a multi-unit residential building, the insulation grant is multiplied by the MURB MULTIPLIERS shown in a following section.

Attic Insulation

	Single Family Home Starting Point		
Grants listed reflect 100 percent of roof area being of one type. When the roof has more than one type (e.g. attic and cathedral), all applicable grants are pro-rated based on area type that is entirely insulated. Increase the insulation value up to 100 percent of:	**up to R-12**	**R-13 to R-25**	**R-26 to R-35**
your attic to achieve a total minimum insulation value of RSI 7 (R-40)	$400	$200	N/A
your attic to achieve a total minimum insulation value of RSI 8.8 (R-50)	$600	$300	$100
your flat roof and/or cathedral ceiling to achieve a total minimum insulation value of RSI 5 (R-28)	$600	$200	N/A
your uninsulated flat roof and/or cathedral ceiling by a minimum of RSI 1.8 (R-10) [Starting Point: Uninsulated]	$400		

Exterior Wall Insulation

	Minimum Additional Insulation		
		R-3.8 to R-10	**R-11+**
A minimum of 20 percent of total wall surface must be insulated to qualify. The grant is based on the percentage of surface area insulated.	20%	$180	$300
	40%	$360	$600
	60%	$540	$900
	80%	$720	$1,200
	100%	$900	$1,500

Basement Insulation

	Minimum Additional Insulation		
		R-10 to R-24	**R-25+**
A minimum of 20 percent of the basement's total wall surface must be insulated to qualify. The grant is based on the percentage of surface area insulated.	20%	$100	$200
	40%	$200	$400
	60%	$300	$600

	80%	$400	$800
	100%	$500	$1,000
Basement Header Insulation	**Single Family Home**	**MURB**	
Seal and insulate all of your basement header area by a minimum of RSI 3.5 (R-20).	$100	see MURB multiplier	

Crawl Space Insulation

	Minimum Additional Insulation	
	R-10 to R-24	**R-25+**
A minimum of 100 percent of total wall surface must be insulated to qualify, or	$400	$800
Insulate 100 percent of the floor above the crawl space to a minimum of RSI 4.2 (R-24) to qualify.	N/A	$200

Air Sealing

	Single Family Home	**MURB**
Perform air sealing to improve the air tightness of the home/building to reach the target as indicated in your Energy Efficiency Evaluation Report. *Bonus*: You can obtain an additional $150 incentive if you reach 20 percent better than target.	$150	see MURB multiplier

Doors/Windows/Skylights

	Single Family Home per unit replaced	**MURB per unit replaced**
Replace windows and skylights with models that are ENERGY STAR qualified.	$30	$30
Replace your exterior door(s) with an ENERGY STAR qualified model(s).	$30	$30

Water Conservation

	Single Family Home per unit replaced	**MURB per unit replaced**
Replace your toilet with a low-flush or dual-flush toilet rated at 6 litres per flush or less that meets the Los Angeles Supplementary Purchase Specification (SPS) and with a flush performance of 350 grams or more. A product list is available on this Web site: www.veritec.ca.	$50	$50

MURB Multipliers

	Number of Dwellings			
	2-3	4-6	7-9	10+
Attic	1.0	1.5	2.0	2.5
Wall Insulation	1.0	1.5	2.0	2.5
Basement Insulation	1.0	1.5	2.0	2.5

Important Notes:

1. All upgrades or renovations must meet local codes and by-laws. Pay special attention to the placement of vapour barriers when adding insulation to the building envelope.
2. Incentives for attic insulation will vary according to the existing level of insulation. For example, if you increase the insulation from a low RSI value, such as RSI 1.8, to a new value of RSI 7, you will receive a larger incentive than if you started from RSI 4.2 and increased it to RSI 7.
3. In the case of multi-unit residential buildings, the total incentive will be calculated for the entire building and not for each dwelling upgraded within.

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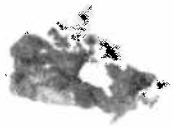

Office of Energy Efficiency

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ecoENERGY Retrofit Incentive for Buildings

- **ecoENERGY Retrofit Incentive for Buildings**
- How the incentive works
- Client guides and proposal forms
- Information on existing buildings
- Contact us

Owners of small and medium-sized buildings in the commercial and institutional sectors often lack the financial and technical resources to make energy improvements.

Natural Resources Canada's Office of Energy Efficiency now offers the *ecoENERGY Retrofit Incentive for Buildings*, a component of the ecoENERGY Retrofit financial incentives for homes, buildings and industrial processes. If you have not yet started a new energy efficiency project, you could receive $10 per gigajoule of energy saved, up to 25 percent of eligible project costs.

The first call for proposals will start on June 15 with a deadline of September 15, 2007. Here's what you need to know if you want to apply:

- Benefits of retrofit projects
- How the incentive works
- Eligible buildings
- Steps to receive the incentive
- Client guides and proposal forms
- Technical energy analysis
- Look for a service provider
- Associated training

We also offer a wide range of information, publications, training and other resources on energy-efficient technologies and practices in existing buildings. If want to automatically receive client guides and forms when they are released, please subscribe to the *Heads Up Energy Efficiency* newsletter.

The OEE is no longer accepting applications for previous incentives such as *Energy Retrofit Assistance for Planning Activities* (ERA-P) and *Energy Retrofit Assistance for Project Implementation* (ERA-I). If you applied before the September 15, 2006 deadline, we will contact you soon to discuss the details of your project.

Important dates to remember

April 1, 2007
Web site launch

Tools

Service Providers Directory

Gigajoule and

June 15, 2007
First call for proposals begins

September 15, 2007
Deadline for first call for proposals

Energy Intensity Calculator

Others Tools and Calculators

Next: Benefits of retrofit projects

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Eligible Buildings Under ecoENERGY Retrofit for Buildings

- **ecoENERGY Retrofit Incentive for Buildings**
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To apply for ecoENERGY Retrofit Incentive for Buildings, the buildings in your proposed project must meet the following requirements.

Eligible Building Types

Commercial buildings such as:

- Retail
- Hotels
- Restaurants
- Office buildings
- Multi-unit residential buildings*
- Warehouses**
- Others

Institutional buildings such as:

- Schools
- Colleges and universities
- Colleges and universities
- Municipal government buildings
- Non-profit buildings
- Public housing*
- Others

* Businesses situated in houses and multi-unit residential buildings with fewer than four storeys should inquire about funding from ecoENERGY Retrofit – Homes.

** Warehouses connected to industrial facilities should inquire about funding from ecoENERGY Retrofit Incentive for Industry.

Eligible Building Size

- You can apply for multiple buildings in a single application, but each building must have a maximum floor space of 10 000 square metres (107 639 square feet).

Other Building Requirements

- Before you apply, you will need a technical energy analysis in each

building, to be done at your own expense.

- Buildings in which you have started or completed energy retrofits within the last year are not eligible. We need 12 months of pre-retrofit energy bills to establish eligible savings resulting from the proposed project.

Next: Steps to receive the incentive

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How the ecoENERGY Retrofit Incentive for Buildings Works

- ecoENERGY Retrofit Incentive for Buildings
- **How the incentive works**
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The following is an overview of the ecoENERGY Retrofit Incentive for Buildings. We will release detailed client guides and proposal forms for the start of the first call for proposals on June 15, 2007.

Available Funding

If you own an eligible building, you could receive:

- $10 per gigajoule of estimated annual energy savings*
- up to 25 percent of eligible project costs, to a maximum of $50,000

* $10 per gigajoule equals savings of approximately $0.036 per kilowatt hour of electricity, $0.372 per cubic metre of natural gas or $0.386 per litre of heating oil.

We will send you a cheque for 100 percent of the eligible incentive after you have completed the project and we have verified the work.

Eligible Measures (examples)

Almost all energy-saving measures such as efficient lighting, building envelope, motors, controls, heating, ventilating and air conditioning may be eligible.

Costs associated with the technical energy analysis or other pre-project work are not eligible.

Selection Criteria (examples)

Funds are limited, and we will not be able to approve all proposals. We will give first priority to:

- Projects with multiple or complex energy efficiency measures
- Projects with technical issues beyond the capability of the building owners
- Projects that use innovative technologies or renewable resources
- Projects from first-time applicants

To ensure fairness, we will also strive toward a balance among successful proposals, such as:

- Balance between projects in rural and urban areas
- Balance among projects in different provinces and territories
- Balance among projects in various types of buildings

Some Other Requirements (examples)

- This must be a new project; it is important that you do not start work or sign any contracts before your organization and the Government of Canada sign a Contribution Agreement (November 2007 at the earliest).
- If you have recently incorporated energy retrofits, you must wait a year before applying.
- You can include multiple buildings in a single proposal, but you can only submit only one proposal at a time for a maximum of $50,000 per proposal.
- You will require a technical energy analysis for each building.
- Your projected payback must be more than one year, taking into account all related incentives from all sources.
- Your projected savings should be in line with our benchmark data.
- You must complete your project within 12 months after the Government of Canada signs your Contribution Agreement.

Complementary Incentives

You may be able to apply for related incentives from utilities and other levels of government.

Next: Eligible buildings

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ecoENERGY Retrofit Incentive for Industry

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Natural Resources Canada's (NRCan's) ecoENERGY Retrofit program provides a financial incentive of up to **25 percent** of project costs to a maximum of **$50,000** per application and **$250,000** per corporate entity to help small- and medium-sized industrial facilities implement energy-saving projects. This helps to improve industrial energy efficiency and contributes to reducing energy-related greenhouse gas (GHG) emissions and air pollution.

Benefits of a Retrofit Project

The retrofit incentive will help industrial facilities overcome financial barriers to improving the energy efficiency of their operations. Companies must have their retrofit application approved by NRCan **before** beginning their retrofit project(s). Typical projects include upgrades to existing industrial buildings and systems or processes that reduce a facility's energy use and, therefore, operating costs.

This program represents an opportunity to:

- implement retrofit projects that generate annual energy savings and pay for themselves through reduced expenditures on utilities, such as energy, water and waste
- establish a baseline against which to compare future improvements
- help kick-start a company's energy management strategy

In conjunction with a facility's retrofit improvements, NRCan's energy management workshops and other tools can help companies to identify low- or no-cost energy-saving opportunities, such as improving a facility's operating procedures and educating building users. Using energy more efficiently helps industry to become more competitive and reduce GHGs and air pollution, thereby contributing to a cleaner environment for all Canadians.

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Organization Eligibility Criteria

Natural Resources Canada's (NRCan's) ecoENERGY Retrofit program provides a financial incentive to help small- and medium-sized industrial facilities implement energy-saving projects. A facility can apply for a retrofit incentive once over a 12 month period. To be eligible for assistance, an industrial facility must:

- have fewer than 500 employees
- not be in a sector that is subject to emissions regulations under the Clean Air Act, unless specifically exempted
- be registered with Natural Resources Canada's (NRCan's) leadership network of Industrial Energy Innovators

Project Eligibility Criteria

To be eligible for an incentive, companies **must apply** to NRCan for funding **before** implementing the energy retrofit. To be eligible for funding, a retrofit project must:

- involve capital expenditures that retrofits the building envelope or existing equipment/systems
- result in a measurable and verifiable reduction of energy use
- have a net simple payback period of more than one year

Facilities that are eligible for retrofit assistance must demonstrate the technical and financial feasibility of their projects in their applications.

To help companies determine the eligibility of their project(s), NRCan provides a sample list of eligible and ineligible projects.

Value of Incentive

The maximum amount payable per application is $50,000. The incentive will be calculated after taking into account funding from other sources and will be the lowest of the following amounts:

- $10 per gigajoule (GJ) of energy estimated to be saved by a retrofit project per year
  = estimated annual GJ of energy saved × $10

- 25 percent of the total eligible project costs (including GST, HST and PST net of tax rebate)
  = 25% × [total project cost - other incentives]
- the amount required to reduce the net simple payback period for each project included on the application form to no less than one year
  = dollars of annual energy savings × (net payback period in years – 1 year)

Example 1: Single-Project Application	**Incentive is the lowest of the three following calculations:**
Annual GJ savings: 450 GJ Retrofit cost: $11,000 Est. savings/yr: $8,000 Other funding: $0	A) GJ saved = 450 × $10 = $4,500 B) 25 percent of eligible project costs = 0.25 × ($11,000 – 0) = $2,750 C) Payback-period reduction = $8,000 × (1.375 – 1) = $3,000
Therefore:	Company's contribution: $ 8,250 NRCan's contribution: $ 2,750

Example 2: Multi-Project Application	**Incentive is the lowest of the three following calculations:**
GJ savings per year: Project 1: 200 GJ Project 2: 650 GJ Project 3: 2500 GJ **Retrofit costs:** Project 1: $ 2,500 Project 2: $18,000 Project 3: $65,000 **Est. savings per year:** Project 1: $ 2,000 Project 2: $ 9,000 Project 3: $25,000 **Other funding:** Project 3: $10,000	A) GJ saved = (200 + 650 + 2500) × $10 = **$33,500** B) 25 percent of eligible project costs = ($2,500 + $18,000 + ($65,000 – $10,000)) × 0.25 = **$18,875** C) Payback period Project 1 = $2,000 × (1.25 – 1) = $500 Project 2 = $9,000 × (2 – 1) = $9,000 Project 3 = $25,000 × (2.2 – 1) = $30,000 = **$39,500**
Therefore:	Company's contribution: $56,625 NRCan's contribution: $18,875 Other funding: $10,000

Selecting a Qualified Retrofit Contractor

The estimated energy savings from a retrofit project MUST be certified by either a Professional Engineer or a Certified Engineering Technologist. Companies may use their in-house expertise or may select an external consultant of their choice to certify and/or complete the application. Typically, an external consultant should be with an engineering firm that has experience conducting industrial process improvements.

To help companies locate a contractor, NRCan has developed the Energy

Management Services Directory. When selecting a contractor, companies should ensure that the contractor has the following qualifications:

- relevant educational and professional experience
- a track record of responding to clients' needs
- the ability to provide objective advice and has declared any financial relationships with equipment vendors or service companies
- has staff who are qualified to conduct the retrofit

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ecoENERGY for Renewable Heat

ecoENERGY for Renewable Heat will invest $36 million over four years to: increase the use of renewable thermal energy; help develop renewable thermal energy industry capacity; and contribute to cleaner air by displacing fossil fuel-based energy use for space heating and cooling, and water heating in Canadian buildings.

Incentives will be offered to the industrial/commercial/institutional sector to support the installation of solar space and water heating. Preliminary estimates suggest that, by 2011, the program will support installations in about 700 buildings.

In addition, pilot projects conducted with collaborators (energy utilities, energy service companies, community groups and other interested groups) will explore innovative ways of increasing the market for residential solar water heating systems. The program will not be offering incentives directly to homeowners. These large-scale pilot projects should result in the installation of solar water heating systems into several thousand homes across the country.

ecoENERGY for Renewable Heat will also help establish solar and geothermal (ground-source heat pump) technologies in the marketplace by supporting the development of industry standards and certification processes, promoting the adoption of these technologies by building codes and provincial and municipal regulations, and training system designers, technicians and installers.

Are there financial incentives?

ecoENERGY for Renewable Heat will offer an incentive to purchasers of solar heating systems in the industrial, commercial and institutional sectors. The incentive will be set at 25 percent of the purchase, installation and certain other costs of a qualifying system.

Who is eligible for incentives?

Businesses, industries and public institutions in the industrial/commercial/institutional sector are eligible.

Are there terms and conditions for eligibility?

Yes, certain terms and conditions apply.

How do I apply?

To apply, please consult the guide to the terms and conditions, the terms and conditions and complete the solar water application form or the solar air application form available on-line. All forms must be signed and sent to Natural Resources Canada by fax to 1-613-943-6517 or by mail to the following address:

ecoENERGY for Renewable Heat
Renewable and Electrical Energy Division
Natural Resources Canada
615 Booth Street, Room 150, Ottawa, Ontario, K1A 0E9

Want more information?

If you have questions or need information that is not provided here or in the terms and conditions, please contact the ecoENERGY for Renewable Heat program by e-mail (ecoenergyrhp@nrcan.gc.ca), by fax (613-943-6517) or by toll-free telephone (1-877-722-6600).

PLEASE NOTE: ecoENERGY for Renewable Heat provides funding only for Canadian industries, businesses and institutions. If you are a homeowner interested in renewable energy technologies, please visit the following web sites.

Biomass/geothermal (ground-source heat pumps), solar, wind
Canadian Renewable Energy Network, Natural Resources Canada

Wind
Small Wind Energy, Canadian Wind Energy Association

Solar
Canadian Solar Industries Association

Geothermal
Canadian Geoexchange Coalition

Date Modified: 2007-04-01

Government of Canada / Gouvernement du Canada

Canada

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ecoENERGY for Renewable Power

ecoENERGY for Renewable Power will invest $1.48 billion to increase Canada's supply of clean electricity from renewable sources such as wind, biomass, low-impact hydro, geothermal, solar photovoltaic and ocean energy. It will encourage the production of 14.3 terrawatt hours of new electricity from renewable energy sources, enough electricity to power about one million homes.

Who is eligible?

Businesses, municipalities, institutions and organizations are eligible.

Are there financial incentives?

ecoENERGY for Renewable Power will provide an incentive of one cent per kilowatt-hour for up to 10 years to eligible low-impact, renewable electricity projects constructed over the next four years, April 1, 2007 to March 31, 2011.

Are there terms and conditions for eligibility?

Yes, certain terms and conditions apply.

How do I apply?

To apply, please complete the application form on-line. All forms must be signed and sent to Natural Resources Canada by fax to 613-995-8343 or by mail to the following address:

ecoENERGY for Renewable Power
Renewable and Electrical Energy Division
Natural Resources Canada
580 Booth Street, 11th Floor
Ottawa, Ontario K1A 0E4

Want more information?

If you have questions or need information that is not provided here or in the terms and conditions, please contact ecoENERGY for Renewable Power by e-mail (ecoenergyrp@nrcan.gc.ca), by fax (613-995-8343) or by telephone (1-877-722-6600).

PLEASE NOTE: ecoENERGY for Renewable Power provides funding only for Canadian utilities, businesses, municipalities, institutions and organizations. If you are a homeowner interested in renewable energy technologies, please visit the following web sites.

Biomass/geothermal (earth), solar, wind
Canadian Renewable Energy Network, Natural Resources Canada

Wind
Small Wind Energy, Canadian Wind Energy Association

Solar
Canadian Solar Industry Association

Geothermal
Canadian Geoexchange Coalition

Date Modified: 2007-04-01

Housing Programs

Nova Scotia EnerGuide for Houses Program *NEW*
Find out where your home is losing energy by having a home energy audit. You could qualify for a grant of up to $2,000 depending on how much you improve the energy efficiency of your home. The Department of Energy will also send participants an energy savings kit full of products that can help save up to $100 in energy costs.

To participate, your first step is to book a home energy evaluation. There are three organizations in Nova Scotia that offer this service on behalf of the province.

Sustainable Housing, (provincewide, including Halifax Regional Municipality) | 1.877.722.2842; 435.3637 in HRM

Clean Nova Scotia, (Halifax Regional Municipality) | 1.800.665.5377; 420.3474 in HRM

ACAP Cape Breton (Cape Breton Regional Municipality) | 1.902.567.1628

Learn more about the Nova Scotia EnerGuide for Houses Program.

Nova Scotia EnerGuide for Houses Assistance Program for Low- to Modest-Income Nova Scotians *NEW*
Low- to modest-income Nova Scotians that qualify for the EnerGuide for Houses Assistance Program will also receive a $400 grant in addition to the provincial EnerGuide grant. Qualified participants will also be reimbursed the $150 plus HST cost of the home energy evaluation. If you're a homeowner with a net single income of less than $25,000 or a homeowner with a net family income of less than $40,000, you qualify.

Applications for the EnerGuide Assistance Program are available at all Access Nova Scotia sites, through the energy evaluation groups, by calling 1.800.670.4357, or here.

EnerGuide For New Houses
Building a new house? Make sure it's energy efficient now and start saving once you move in. Through an initial $350 analysis, a home energy technician estimates the future energy bills of a new home based on the building plans. This allows the costs and benefits of energy efficiency upgrades to be realistically evaluated at the planning stages when energy upgrades are easier and less expensive.

Once you've had your second energy audit, the Department of Energy will provide you with a $175 rebate. And if you received an energy rating of 77 or more during the audit, we'll double the rebate to $350.

To apply for the program, contact the Nova Scotia Homebuilders' Association or call 1.800.668.2001 or by nshba@nshba.ns.ca.

Important Note About the former EnerGuide for Existing Houses Program Offered By Natural Resources Canada [federal government]
As of midnight, May 12, 2006 the federal government will no longer offer the EnerGuide Housing programs. No new home energy audits will be conducted after this date. If you've had the first audit ("A" audit), you have until March 31, 2007 to have your second or "B" audit completed. The Province of Nova Scotia intends to honour all financial obligations to existing participants in our Smart Energy Choices program that relate to our EnerGuide additional maximum incentive of up to $1,000 or the Seniors' Home Energy Assistance Program. Book your follow-up or "B" audit as soon as your energy efficiency renovations are complete. Currently, the federal government is not accepting any new participants in the program.

Nova Scotia EnerGuide for Houses Program
Questions and Answers

Q: What is the EnerGuide for Houses program?

A: The EnerGuide for Houses program is an energy efficient housing program. As a homeowner, you can get practical advice on how to make your home more energy efficient and take control of your energy costs by participating in the program. As an added incentive, the Department of Energy offers participating homeowners a maximum $2,000 grant to offset some of the home renovation costs. The actual amount of the grant is based on a rating system and depends on how much you improve the energy efficiency of your home. The rebate will be issued after you've completed your energy retrofits and you've had a "B", or follow-up energy evaluation performed on your home.

Q: How does the program work?

A: To participate in the Nova Scotia EnerGuide for Houses program, your first step is to contact a home energy evaluation group to schedule an energy evaluation, or "A" audit. The home evaluation involves determining existing insulation values, a blower door test to identify air leakage points, a report with customized energy upgrade recommendations, and an estimate of potential annual energy savings. A preliminary EnerGuide rating is assigned to the home this time.

The home energy audit costs $150. Low-income participants get a rebate for the audit ($150).

A second home energy evaluation, or "B" audit, should be conducted after you make the recommended energy efficiency upgrades to the home. The "B" audit must be completed in order to qualify for the EnerGuide grant. You must schedule the "B" audit within 18 months of the first audit. The auditor will then determine the energy efficiency improvement rating. The amount of the rebate from the Province will be determined based on this number. Average provincial grants in the previous program were $824. There is no special application for the grant; however an application is necessary for the additional low-income grant.

You'll also receive an energy savings kit, which can provide up to $100 in energy savings.

Q: How much can I expect to pay?

A: The amount you can expect to pay varies by household. After the "A" audit, the home energy evaluator will give you a list of suggested upgrades that will create the most significant energy savings. The home energy evaluator can also give you an approximate figure for how much you can expect to pay. The upgrades often pay for themselves in a couple of years through your energy savings.

Q: How much can I expect to save?

A: Based on the previous program, Nova Scotia homeowners cut their energy costs by 30 per cent.

Q: Does someone have to come into my home?

A. Yes, a certified home energy evaluator must enter your home to see where your house is

losing energy. The average EnerGuide for Houses evaluation takes one and a half hours to three hours.

Q: How do I book an audit?

A. There are three organizations in Nova Scotia that offer the service on behalf of the Province.

-- Sustainable Housing,(HRM and provincewide) 1-877-722-2842; or 435-3637

-- Clean Nova Scotia,(Halifax Regional Municipality) 1-800-605-5377 or 420-3474;

-- Atlantic Coastal Action Program,(Cape Breton Regional Municipality) 1-902-567-1628.

Q: Are there loans?

A. No, there are no loans under the program. The program only provides grants based on the energy efficiency improvement made to your home. You'll also get an energy savings kit full of items that can cut your energy costs by up to $100.

Q: Do I have to get an audit in order to get the grant?

A: Yes, you must have an "A" audit and a "B" audit in order to qualify for the EnerGuide for Houses grant. It works like a pre- and post-test to determine how much your energy efficiency renovations improve the energy rating of your home.

Q: Is there a special grant based on income?

A: Yes, the Province is offering an additional $400 grant for low- to modest-income Nova Scotians and will rebate the $150 (plus HST) cost of the home energy audits. To qualify, you must have a single homeowner with a net income less than $25,000 or a family with a net income less than $40,000 a year.

Q: How do I get a low- to modest-income grant application?

A: Low- to modest-income grant applications are available at all Access Nova Scotia centres, through the energy auditing groups, on the Department of Energy website (www.gov.ns.ca/energy/energuide) or by calling 1.800.670.4357.

Q: What about your Seniors Home Energy Assistance Program. Is it still available?

A: Yes, this program is still available, but you must have completed an "A" audit prior to May 12, 2006 (the day the federal government cancelled the EnerGuide for Houses program). You must also be over the age of 65 and receive the Guaranteed Income Supplement (GIS) and/or the Allowance; have a net family income below $40,000 or a net single income below $25,000. More information and applications are available at www.gov.ns.ca/energy/energuide

Q: What's in the kit?

A: The kit is full of items that can cut your energy bill by up to $100.

Specifically, the kit includes:

3 energy efficient compact fluorescent lightbulbs (CFLs)
2 LED night lights
1 low-flow showerhead
2 tap aerators
1 package of foam insulators
1 package of child safety caps (to plug air leaks in electrical outlets)
1 roll of V weatherstripping
1 storm window kit

Q: What other rebates do you offer?

A. We offer other rebates under the Smart Energy Choices program. We offer a $200 rebate for wood pellet and Environmental Protection Agency (EPA) certified wood stoves. We also offer a 10 per cent rebate (to a maximum $5,000) on the purchase of domestic solar hot water systems, and we offer a rebate on the cost of energy audits under the EnerGuide for New Houses program. More information is available at www.gov.ns.ca/energy/rebates

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BACKGROUNDER

ecoENERGY Efficiency Initiative: Using Less. Living Better

The biggest untapped source of energy we have available to us is the energy we waste. Using energy wisely to make sure our energy supplies go further yields huge benefits for all Canadians. Consumers reap significant dollar savings while business and industry see increased profits and productivity. However, the biggest impact of our investments in energy efficiency is reduced air pollution and greenhouse gas (GHG) emissions that affect our environment and health.

In light of all this, the Government's ecoENERGY Efficiency Initiative will invest approximately $300 million over four years to promote smarter energy use across all sectors of society.

The ecoENERGY Efficiency Initiative is a focused mix of information and incentives targeted to improve energy efficiency in housing, buildings and industrial processes. It includes a new initiative designed to help those who need the most help with retrofit projects, such as Canadian homeowners and small- and medium-sized business owners.

ecoENERGY retrofit

Homeowners, smaller businesses, institutions and industrial organizations are all affected by volatile energy costs. However, these same groups often don't know which improvements would yield the largest energy savings, and lack sufficient funds to carry them out. The $220-million, four-year ecoENERGY Retrofit Initiative will fill that gap by offering financial support and information to encourage the retrofit of homes, small buildings and industrial processes.

Homeowners

Only one to two percent of Canada's housing supply is built new each year. Therefore, an important way to reduce household energy use is to make existing Canadian homes more energy efficient. It is expected that the ecoENERGY Retrofit incentives will promote smart energy use in more than 140,000 homes.

A personalized checklist will show homeowners the best upgrades for their homes and how much financial support is available to make those

improvements. The average grant is expected to be more than $1,000 and will yield an average 30 percent reduction in energy use and costs.

Smaller Business and Organizations

Canada has thousands of small- and medium-sized businesses, institutions and industrial organizations, such as manufacturers, schools, hospitals, stores, hotels, restaurants and offices. To help this important and diverse group reduce their energy costs and related emissions, ecoENERGY Retrofit will provide financial incentives to speed up action on energy-saving projects in an estimated 800 smaller organizations.

This support will be particularly helpful to the smaller businesses in Canada's manufacturing base that have been buffeted by high energy prices, along with the impact of a strong Canadian dollar on their ability to sell their products abroad.

The total energy savings for ecoENERGY Retrofit overall, including both housing and smaller organization retrofits, would provide free heating for all the homes in a city the size of Windsor, Ontario for one year.

ecoENERGY for Buildings and Houses

The Government of Canada will also encourage the construction, operation and retrofit of more energy-efficient buildings and houses using complementary activities such as rating, labelling and training. An investment of more than $60 million in ecoENERGY for Buildings and Houses will generate the following:

- new design tools and training so designers, builders, owners and operators can learn about and use best practices and new technologies;
- house and building energy rating and labelling systems; and,
- dialogue and co-operation with provincial and territorial energy-efficient housing programs with a view to encouraging other levels of government to adopt more stringent building energy codes.

Each building constructed to an efficiency level 35 percent better than the current energy code will save 10,000 tonnes of emissions and some $2 million in energy costs over its life.

ecoENERGY for Industry

Canada's industries account for 38 percent of energy demand and are responsible for 34 percent of our greenhouse gas emissions. At the same time, industry is an important contributor to our economy, accounting for approximately 32 percent of the Gross Domestic Product and employing almost 25 percent of Canada's labour force.

To help large industry deal with regulations introduced as part of the Clean Air Act, and to stimulate action across all industries, the new ecoENERGY for Industry program will devote approximately $20 million to encourage information-sharing on new technologies and best practices in energy use; training for energy managers to identify and put in place energy-saving projects; and cost-shared assistance for energy assessments that identify a wide range of ways to improve energy use.

ecoENERGY for Industry is expected to yield energy savings equivalent to the energy used by between 65,000 and 146,000 households.

Using Less, Living Better

The Government of Canada has announced a suite of ecoENERGY Initiatives designed to help boost clean-energy supplies, encourage Canadians to use energy more efficiently and develop clean-energy technologies. One component, the ecoENERGY Efficiency Initiative is all about using less and living better. The Initiative and its targeted programs will provide significant incentives and resources directly to individual Canadians, businesses and industries so they can make wise choices that save energy, money and our environment.

Program details about all three components of the ecoENERGY Efficiency Initiative, including information about how to apply for ecoENERGY grants, will be available when the programs start in April 2007.

For more information, media may contact:

Kathleen Olson
Acting Director of Communications
Office of the Minister
Natural Resources Canada
Ottawa
613-996-2007

Ghyslain Charron
Media Relations
Natural Resources Canada
Ottawa
(613) 992-4447

Inquiries from the general public - please call:
Telephone **1-800-O-Canada (1-800-622-6232)**
Teletypewriter **1-800-926-9105**
Facsimile **613-992-0792**
Contact ecoENERGY

NRCan's news releases and backgrounders are available at www.nrcan.gc.ca/media.

ecoENERGY web site

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CANADA MORTGAGE AND HOUSING CORPORATION

Programs and Financial Assistance

A gateway to information on CMHC's financial assistance programs targeting specific groups, as well as grants and awards promoting housing research and innovation.

In This Section:

- Affordable Housing Initiative (AHI)
  Since 2001, the Government of Canada has committed to an investment of $1 billion through the AHI to increase the supply of affordable housing, in partnership with provinces and territories.
- Rental Residential Rehabilitation Assistance Program — Rental RRAP
  Assistance for landlords of affordable housing to pay for mandatory repairs to self-contained units occupied by low-income tenants.
- Rooming House Residential Rehabilitation Assistance Program — Rooming House RRAP
  Repair assistance for owners of rooming houses with rents affordable to low-income individuals.
- Shelter Enhancement Program (SEP)
  Assistance to build, repair, rehabilitate and improve shelters and second stage housing for women, children and youth who are victims of family violence.
- Residential Rehabilitation Assistance Program — RRAP for Conversions
  Assistance for converting non-residential buildings into affordable housing.
- Residential Rehabilitation Assistance Program — RRAP for Persons with Disabilities
  Financial assistance to undertake accessibility work to modify dwellings occupied or intended for occupancy by low-income persons with disabilities.
- Home Adaptations for Seniors' Independence (HASI)
  Financial assistance for minor home adaptations to extend the time low-income seniors can live in their own homes independently.
- Capital Replacement Planning Manual and Software
  Helps non-profit and co-operative housing providers plan their capital reserve funds to pay for major replacements and repairs as their buildings age
- Grants & Awards
  CMHC provides grants and sponsors partnerships as a way of encouraging research and initiatives that lead to solutions to the housing needs of Canadians.
- Enhanced CMHC Workout Framework
  CMHC is enhancing its workout framework for federally assisted CMHC-insured co-operatives committed under the Pre-86 Program with confirmed premature building envelope failure.

Quebec Region:

- Financial Statements Templates for Co-operatives and Non-profit Organizations
  CMHC has developed templates to standardize the presentation of financial statements by housing cooperatives and non-profit organizations.

Ontario Region:

- Request for Applications
  Canada Mortgage and Housing Corporation (CMHC) is providing an opportunity for homeowners and private entrepreneurs owning existing family residential properties in Ontario to apply for RRAP funding to create secondary suites or garden suites for low-income seniors or disabled adults.

Related CMHC Information

Other Financial Assistance Programs

Rental Residential Rehabilitation Assistance Program — Rental RRAP

The Rental Residential Rehabilitation Program (Rental RRAP) offers financial assistance to landlords of affordable housing to pay for mandatory repairs to self-contained units occupied by low-income tenants. Mandatory repairs are those required to bring properties up to minimum levels of health and safety.

Who is eligible?

Owners (landlords) of affordable self-contained housing units may apply if:

- the household incomes of their tenants are at or below the established ceilings (these vary based on household size and area of the country).
- the projects have pre- and post-RRAP rents at or below the median market rent for the local area .CMHC can assist with market rent information.
- the property lacks basic facilities or requires major repair in one or more of the following five categories: structural, electrical, plumbing, heating and fire safety.
- tenants are not family relatives of the owner.

What assistance is available?

The assistance is a fully forgivable loan covering up to 100 percent of the cost of mandatory repairs with certain conditions attached. Landlords must also:

- agree to place a ceiling on the rents that may be charged after the repairs are completed
- limit rent increases during the term of the agreement
- agree to limit new occupancy to tenants with incomes at or below the income ceiling
- cover cost of mandatory repairs above the maximum forgivable loan available.

Zone 1: Southern areas of Canada	$24,000/unit
Zone 2: Northern areas of Canada	$28,000/unit
Zone 3: Far northern areas, Yukon and Northwest Territories, Labrador and northern Quebec	$36,000/unit

Additional assistance may be available in areas defined as remote.

IMPORTANT: Work carried out before the loan is approved in writing is not eligible for funding under this program.

Other CMHC programs are available to assist eligible Canadians with repairs to substandard housing, accessibility modifications and adaptations for persons with disabilities and seniors.

In some areas of Canada, funding for these or similar programs is provided jointly by the Government of Canada, and the provincial or territorial government. In these areas, the provincial or territorial housing agency may be responsible for delivery of the programs. Program variations may also exist in these areas.

Information Contacts

Related CMHC Information

Residential Rehabilitation Assistance Program — RRAP for Persons with Disabilities

Home Adaptations for Seniors' Independence (HASI)

Switch to Homepage for:

- Housing Industry Professionals and Community Groups
- Housing Finance Clients and International Clients
- Aboriginal

Canada

EnerGuide for New Houses

If you're building a new home, consider making it energy efficient. You'll save money and cut your greenhouse gas emissions. Under the EnerGuide for New Houses program, a certified energy evaluator examines your building plans and makes recommendations on upgrades to improve energy efficiency. After your home is built, a EnerGuide for Houses evaluation is performed on your home to determine the energy rating. EnerGuide ratings are based on a scale of 1-100.

Cost to you is $350 plus tax, but you get that all back if you build to an EnerGuide rating of 77. Participating homes built to a lower rating only get half the rebate.

EnerGuide 80 = $850 in Rebates Now
Better still, if you build to an EnerGuide 80 rating, you'll get the $350 audit rebate, plus beginning January 16, 2007, you can get a $500 incentive. That's $850 back in your pocket.

$950 in Energy Savings This Year - And Every Year.
Think you can't afford to build energy efficiency into your new home? Think again. Financing those energy efficiency improvements works out to about $35 a month tacked onto your mortgage. The energy savings are about $80 a month. With those savings, you can't afford to build inefficiency into your home. And best of all, you're helping the environment. Homes built to EnerGuide 80 also keep about 5.6 tonnes of greenhouse gas emissions from entering the atmosphere.

Build to 80. Breathe easier. For once, it's okay to be a number.

More Information
Go to the EnerGuide for New Houses Cost and Savings Chart.

View the Conserve Nova Scotia EnerGuide 80 print advertisement.

Ready to save? Contact the Nova Scotia Homebuilders' Association | 1-800-668-2001

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ENERGUIDE FOR NEW HOUSES

NOVA SCOTIA HOME BUILDERS' ASSOCIATION

Which home package offers you the best value?

EnerGuide Rating	Energy Features	Upgrade Costs	Monthly financing charges	Monthly Energy costs	Monthly/ annual savings *after upgrade charges
67	• R40 Ceiling • R 20 Walls • Thermopane windows • Uninsulated concrete wall • 4.55 air changes/hr • Low efficiency HRV • Electric heat			$278	Savings $0
77	**Added features:** • Walls to R25 • 3.57 air changes/hour • R12 concrete wall insulation	*$2500 +HST	$16	$201	Monthly Savings $61 Annual Savings $732
80 (R-2000)	**Added features:** • Low-e argon windows • 1.5 air changes / hr • High efficiency HRV • R10 under basement floor • R50 in ceilings	*$5500 +HST	$35	$164	Monthly Savings $79 Annual Savings $948
83	**Added features:** • R20 basement walls • Heat pump	*$11000 +HST	$71	$124	Monthly Savings $83 Annual Savings $996

This is based on a family of four who are home 50% of the time under average operating conditions. Annual costs may vary significantly. This is for heat, hot water and appliances.
*Will vary depending on house size. Actual cost may vary significantly.

Can't Afford Energy Efficiency? Look again!

Ask your builder how you can build a home with **EnerGuide for New Houses**

For more information contact the Nova Scotia Home Builders' Association

902-450-5554 | 1-800-668-2001 | www.nshba.ns.ca

Wood Heating Appliance Rebate

The Department of Energy is offering a $200 rebate to Nova Scotians who purchase Environmental Protection Agency (EPA) certified wood or wood pellet stoves between October 12, 2005 and August 31, 2007.

Applications are available at all Access Nova Scotia centres, at most wood heating appliance dealers, or by calling 1.800.670.4636. Applications are also available here.

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Solar Water Heating Rebate Program

Program Description

You can receive a rebate of 10% of the installed cost of a solar water heating system for residential or commercial use (up to $5,000 including HST). Systems include those used for domestic use, process use, space heating and year-round pool heating.

Eligibility

- The system must be designed for year round operation.
- The system must be purchased and installed after October 11, 2005 and before August 31, 2007.
- The system must be installed in a household or commercial business that is in Nova Scotia.
- The applicant must be the owner of the household or commercial business where the system is installed.
- The **original receipt** must be included with the application.
- Agree to a random inspection/audit by the agents or auditors of the Nova Scotia Department of Energy of the household or commercial business where the system is installed.
- Provide a photo of the installed system at the household or commercial business.

Application

Click here to download a copy of the Solar Water Heating Rebate Program application form.

Send the completed form to:

Solar Rebate Program
PO Box 2664
Halifax, NS B3J 3P7

For more information call our toll-free EnerInfo line at 1.800.670.4636 or visit the the Department of Energy's website at **www.gov.ns.ca/energy** and click on the Smart Energy Choices icon.

For information about energy efficiency and conservation, call the EnerInfo experts toll-free at 1-800-670-4636.

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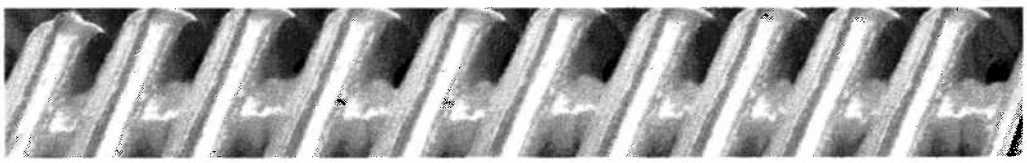

General Description of the 2007 Energy RFP

On May 23, 2007 GMF will issue a Request for Proposals (RFPs) for financing to support district energy projects that use renewable or waste energy sources.

GMF will award a total of up to $20 million in loans and up to $3.2 million in grants through this RFP.

Intent to Apply (Part A)

The Intent to Apply forms will be available from this website and for Quebec municipal governments, from the **Ministère des Affaires municipales et des Régions**, on **May 23, 2007**.

Completed Intent to Apply forms must be received before 17:00 (EST) on **June 20, 2007**.

Detailed Proposal (Part B)

Applicants whose Intent to Apply is accepted under either RFP will be invited to submit a detailed proposal which must be received before 17:00 (EST) on **August 15, 2007**.

This is a competitive RFP: grants and loans will be allocated based on an independent ranking of the proposals. Not all proposals will be funded.

Federation of Canadian Municipalities
24 Clarence Street, Ottawa, Ontario K1N 5P3 Tel.: 613-241-5221 Fax: 613-241-7440

Septage Treatment Facility Assistance Program

About the Septage Treatment Facility Assistance Program

The purpose of the Septage Treatment Facility Assistance Program is to protect the quality of groundwater and surface water resources by ensuring the proper construction, maintenance and operation of septage treatment facilities.

Household water and wastewater services must function properly to protect public health and the environment. Approximately 400,000 people in rural Nova Scotia depend on sewage pumpers and septage treatment facility operators to handle the volume of wastewater that is generated as a result of the pumping out septic tanks. Regular maintenance of septic systems is crucial to groundwater protection. Nova Scotia Environment and Labour recommends that tanks be pumped at 3-4 year intervals. This material (septage) must then be properly handled and treated to reduce potential adverse effects in our environment. This is normally done by storing and treating the material in lagoon systems.

Protecting Nova Scotia water resources: Who will benefit

Rural Nova Scotia will primarily benefit from this initiative. There are 29 privately and municipally operated septage treatment facilities in the Province. These facilities are located in every county except Richmond and Shelburne Counties. Many facilities must undergo major upgrading in order to comply with the Department's "Guidelines for the Handling, Treatment and Disposal of Septage" (PDF: 110k) by 2010.

New Guidelines for Operators: Helping you get there

Operators who will be upgrading their facilities to meet the revised standards have until December 31, 2010 to complete the upgrades so they can continue to service their local areas. The operators must comply with these guidelines by December 31, 2010. The four year Septage Treatment Assistance Program consists of $2.9 million primarily targeted at assisting operators as they work toward that deadline. While this assistance program may benefit the individual operators in the short term, the real benefit will be that rural homeowners will continue to have affordable access to septage management facilities that meet provincial standards.

This four year program, totalling $2.9 million, will offer assistance to septage treatment operators of up to $100,000 for the construction of replacement facilities or the implementation of new technologies, and up to $50,000 for improvements or upgrades to existing septage treatment facilities.

Getting started

The program will be managed by Nova Scotia Environment and Labour. Operators of existing facilities have been advised that they must advise the Department of their intent to comply with the revised "Guidelines for the Handling, Treatment and Disposal of Septage" (PDF: 110k) by October 1, 2006. Those who commit to continuing their operation under the new guidelines will be invited to submit a proposal and application for assistance. Operators who will be closing their facilities in accordance with the guidelines are also invited to submit a closure proposal and apply for assistance. These will be evaluated by a team of professional staff to determine where funds will be awarded.

The assistance program has variable levels of funding through 2010. Owners of privately and municipally operated septage treatment facilities may apply at any time during this period.

How can the Program help me as an operator?

Depending on the amount of assistance that is requested or awarded, participants may be eligible for up to 50% of costs to a maximum of $100,000 for replacement of septage treatment facilities that cannot be simply upgraded, or new technologies, and up to 50% of costs to a maximum of

$50,000 for improvements to existing septage treatment facilities. These costs may include fees associated with engineering studies, environmental monitoring requirements, construction costs and sludge treatment.

The Department will require operators to engage the services of private consultants to carry out any necessary engineering work associated with the upgrades. Private contractors will be required to complete actual construction or modifications based on the engineered designs.

What happens next?

This program will run through 2009/2010, and is allocated as follows:

	2006 / 2007	2007 / 2008	2008 / 2009	2009 / 2010
Improvements	400,000	500,000	300,000	300,000
New / Replacement	100,000	900,000	200,000	200,000

This four-year program totals $2.9 million.

For more information

Download the 2006/07 application form:

Septage Treatment Facility Assistance Program (PDF: 32k)

For further inquiries about the program, protection of Nova Scotia's water resources, or how you can obtain funding, please call 1-877-9ENVIRO (1-877-936-8476), or contact Nova Scotia Environment and Labour at the Kentville Office: 1-902-679-6088.

Septage Treatment Facility Assistance Program
Nova Scotia Environment and Labour
136 Exhibition Street
Kentville, NS
B4N 4E5
Phone: 902-679-6088
Fax: 902 679-6186

Print | Questions

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Housing and Repairs >

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Grants for Home Repair

Help for Major Repairs and Adaptations - Homeowners

Help for Major Repairs and Adaptations - Landlords

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Housing and Repairs

Help for Major Repairs and Adaptations for Homeowner

Homeowner Residential Rehabilitation Assistance Program (Homeowner RRAP)

The Homeowner RRAP offers financial assistance to households in Core Housing Need who own and occupy substandard housing to enable them to repair their dwellings to a minimum level of health and safety. Funding is provided jointly by the Government of Canada (75%) and the Province of Nova Scotia (25%).

Eligibility Criteria
Homeowners may apply:

- if the value of their house is below a specific figure; and
- if their household income is below established ceilings, based on household size and area (Household Income Limits - HILS).

Eligibility is limited to properties lacking basic facilities or in need of major repair in one or more of five categories:

- structural;
- electrical;
- plumbing;
- heating;
- fire safety.

Assistance may also be available to alleviate overcrowding.

Eligible Repairs:
The forgivable assistance is available only for mandatory repairs relating to health and safety, and to extending the useful life of the property.

Ineligible Repairs:
Work carried out before the Homeowner RRAP loan is approved in writing is not eligible.

Description
This program helps fund repairs and modifications that help preserve Canada's stock of affordable housing.

Financial Assistance Available
The maximum level of assistance is $16,000 which is forgiven over a maximum of five years.

To Apply
Contact the nearest Housing Services office of the Department of Community Services.

Help for Major Repair - Homeowners

Disabled Residential Rehabilitation Assistance Program

Home Adaptations for Seniors Independence

Homeowner Rehabilitation Assistance Program

Related Resources

Housing Services Frequently Asked Questions

Nova Scotia Housing Contacts

Housing Options for Lower Income Nova Scotians (brochure)

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Housing and Repairs

Grants for Home Repair

Senior Citizens Assistance Program

The Senior Citizens Assistance Program provides assistance to senior citizens who wish to remain in their own homes but who cannot afford to carry out necessary repairs. Funding is provided by the Province of Nova Scotia.

To Qualify:

- Applicant or spouse must be 65 years of age or older.
- Your household income must be below established ceilings, based on household size and area (Household Income Limits - HILS).
- You must own and occupy your home or have equivalent rights to ownership (life interest, etc.)

Eligible Repairs:
You may carry out repairs that threaten health or safety. Repairs to roofing, plumbing and heating are examples of work that is covered under the program. Repairs for cosmetic reasons (painting for example) are not permitted.

Assistance Available:
A grant to a maximum of $5,000 is available and does not have to be repaid.

To Apply
Contact the nearest Housing Services office of the Department of Community Services.

Grants for Home Repair

Access A Home Program

Emergency Repair Program

Provincial Housing Emergency Repair Program

Senior Citizens Assistance Program

Related Resources

Housing Services Frequently Asked Questions

Nova Scotia Housing Contacts

Housing Options for Lower Income Nova Scotians (brochure)

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Housing and Repairs

Affordable Housing Program

Home Ownership Preservation

Background

This program provides assistance to homeowners who need major repairs or renovations to their homes in order to meet minimum health and safety standards.

Eligibility

There are a number of factors we look at to see if a homeowner is eligible for assistance under this program. These include annual household income, household size and household location. This information also helps us figure out how much assistance a household can receive. We also look at the kind of repairs or renovations required and the cost to do the work. The home must contain at least one major defect involving the structure, framework, plumbing, electrical system, heating system or fire safety system. If an application is approved, homeowners must sign an agreement with the Province to remain in the home for at least 10 years.

For full details on eligibility, contact your local Housing Services Office.

How to Apply

Homeowners interested in applying for this program need to complete a general application form for housing assistance and discuss their needs with staff at their local Department of Community Services Office. Staff will review your application and then contact you shortly to let you know if you qualify for assistance.

For more information, contact your local Housing Services Office.

Affordable Housing Program

New Rental Housing

Rental Housing Preservation

New Home Ownership

Home Ownership Preservation

Related Resources

Housing Services Frequently Asked Questions

Nova Scotia Housing Contacts

Housing Options for Lower Income Nova Scotians (brochure)

Financing economic growth in your community

Community Economic Development Investment Funds (CEDIFs) are pools of capital which are available for investment into business(es) in their communities. These funds are controlled by a local board of directors, which are chosen by the funds' investors at an annual general meeting.

The funds attract the capital (money) to invest by selling shares to individuals in their community. Individuals who choose to invest in the fund purchase common shares which must be held for a minimum of 4 years. The Province of Nova Scotia encourages the creation of these funds by providing a 30% personal income tax credit and a limited guarantee against the final 20% of the investment.

These funds have been recognized by the federal government as pre-approved holdings for a self-directed RRSP (Regulation 4900(1)(i.11) of the federal Income Tax Act). Individuals should consult their financial advisor to ensure these shares can be held in their account.

Since their inception 4 years ago, these funds have grown significantly. At the end of 2003, there were 16 CEDIFs which had raised money (a total of $7.3 million) and reinvested that money back into their communities. More than 1,000 Nova Scotians have chosen to reinvest in their communities through CEDIFs.

Example:

$	1,000	**Investment** *(non-RRSP)*
	-300	(30%) Nova Scotia Equity Tax Credit
$	700	**Net Cost** *(non-RRSP)*
	-300	If new money to RRSP a deductoion at the marginal tax rate for the full amount of the investment. *For illustratiuon, a 30% marginal rate is used.*
$	400	**Total Cost** *"out of pocket"*
$	200	Partial Guarantee *(final 20% for 4 years)*
$	200	**Funds at Risk/Maximum Potential Loss** *(with RRSP)*

BBI, *Halifax*
PURPOSE: Create a pool of capital which will invest in businesses owned by persons in the Black community.

BCA Investment Co-operative Limited, *Sydney*
PURPOSE: Create a pool of capital which invests into business opportunities in Cape Breton

Just Us! Fair Trade Investment Co-op Ltd., *Wolfville*
PURPOSE: Invest the proceeds in their fair trade coffee business.

La Residence Acadienne, *Cheticamp*
Purpose: To build and operate a seniors housing facility.

New Dawn, *Sydney*
PURPOSE: Invest the proceeds in businesses within the New Dawn family of companies.

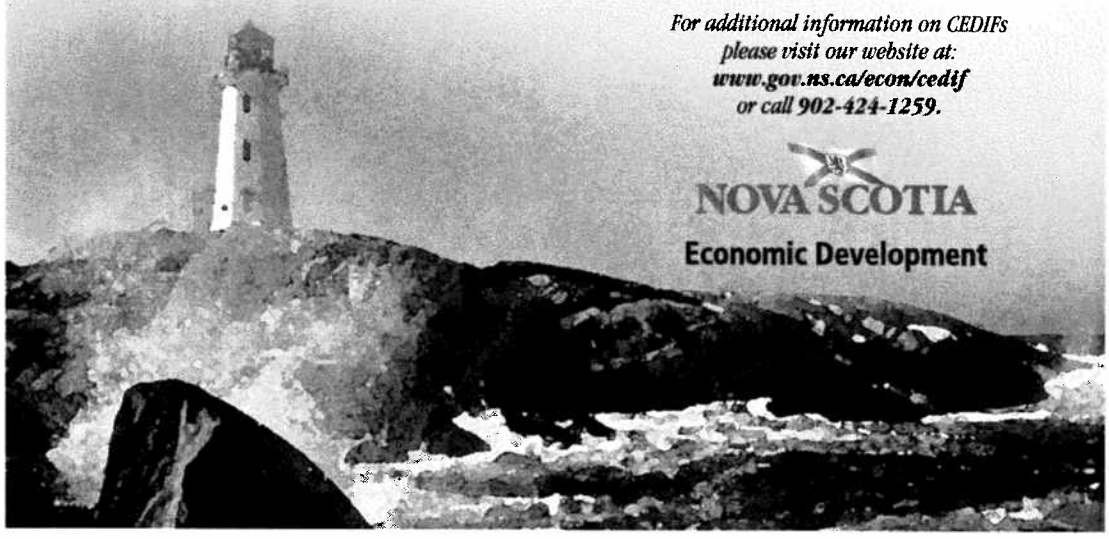
Vale Corporate Training, *Middleton*
PURPOSE: Invest the proceeds into developing the Ledgehill facility. Additional capital required to carry out next phase of the long-term development plan.

Valley Funeral Home Co-op, *Coldbrook*
PURPOSE: Invest the proceeds in the development of a co-operative funeral home in the Coldbrook/Kentville area.

Victoria County, *Baddeck*
PURPOSE: Invest the proceeds in the Victoria County Co-op store in Baddeck. The funds will be used to repatriate long term debt currently held outside the province.

Windsor Super 8, *Windsor*
PURPOSE: Invest the proceeds in an equity stake in a new Super 8 motel to be constructed in Windsor in 2004.

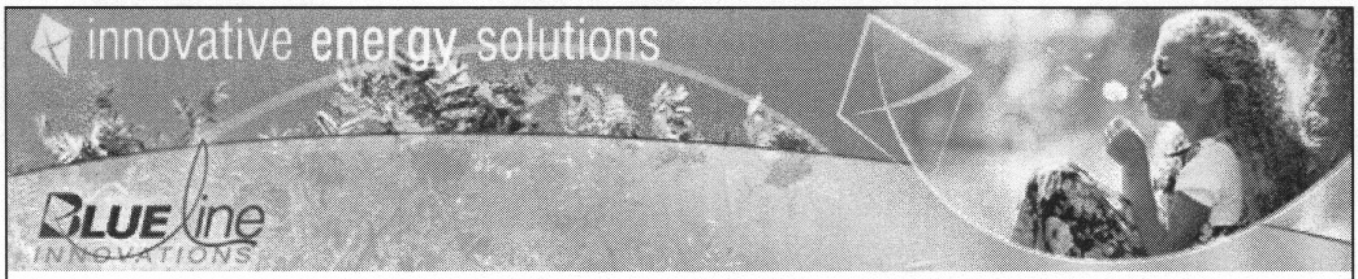
4EverSports, *Sydney*
PURPOSE: Invest the proceeds in the operations of 4EverSports, a Sydney based developer of wireless products and services for golf courses.



For additional information on CEDIFs please visit our website at:
www.gov.ns.ca/econ/cedif
or call 902-424-1259.

NOVA SCOTIA
Economic Development

Appendix B
Additional Information



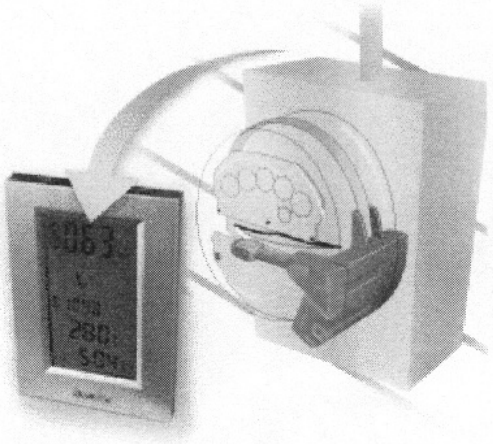
THE POWERCOST MONITOR™

OTHER PRODUCTS

THE POWERCOST MONITOR™

As unobtrusive as a small electric clock, the PowerCost Monitor™ is a powerful real-time direct feedback display device for domestic energy consumers. It tells them at a glance, in real-time, how much electricity their home is using in dollars and cents and in kW.

Domestic energy use studies have demonstrated that real-time feedback yields energy savings anywhere between 10 and 20 percent. The savings at the high end of this range are realized when a tabletop energy display device, such as the PowerCost Monitor™, is used.



The PowerCost Monitor™ technology consists of two discrete functional units:

1. A detection unit, known as the sensor unit, is affixed to an existing household utility meter with a simple ring clamp.

The sensor unit is compatible with standard North American digital and electromechanical meter types. This is the only component of the PowerCost Monitor™ that will be in direct physical contact with the utility's meter and the clamp mechanism allows it to be attached to the outside of the meter glass. It can also be quickly attached and detached without making any changes to the existing meter.

2. The display unit, located inside the home, receives a wireless signal from the transmitter and displays the consumption information in real time and in dollars and cents for the end user. Other information is also displayed such as time and outside temperature.

Personal Energy Meter

Updated: April 9, 2004
Subjects: Science, Language Arts
Grade Level: 5-8
Required Software: Microsoft Excel 98/2000, Microsoft Internet Explorer 4.5 or later, Microsoft Word 98/2000
Curriculum Connections: Science
Standards Connection: National Science Education Standards/National Academy of Sciences

Lesson Information:
Grade / Age Level
Middle School (11-14 yrs)
High School (14-18 yrs)
Class Time
1-2 hours
Find More Lessons For:
Grade / Age Level
Middle School (11-14 yrs)
High School (14-18 yrs)
Learning Area
Economics
Mathematics
Science
Self Regulation
Technology
Thinking and Reasoning
Work Skills
Themes
Community
Energy
Environment & Ecology
Managing Money
Applications
Excel
Internet Explorer
Word

- **Content Standard A, Scientific Inquiry:** As a result of activities in grades 5-8, all students should develop abilities necessary to do scientific inquiry, including the ability to use technology and mathematics to improve investigations and communications and the ability to communicate and defend a scientific argument.
- **Content Standard B, Physical Science:** As a result of their activities in grades 5-8, all students should develop an understanding of the transfer of energy.
- **Content Standard F, Science in Personal and Social Perspectives:** As a result of activities in grades 5-8, all students should develop an understanding of populations, resources, and environments; risks and benefits; and science and technology in society.

Microsoft Class Server Learning Activity

What's in this Lesson:

Teacher Guide

Summary :

Energy costs are on the rise again, after years of calm. At the same time, our society is more "plugged in" to the energy grid than ever before. This lesson asks your students to take a close look at their own energy use, tally up the costs in dollars and environmental impact, and think of ways to save.

Objectives:

- To analyze the amount and cost of energy used for personal day-to-day activities
- To explore methods for and effects of conserving personal energy
- To advocate for better energy conservation among peers and the public

Prerequisite Skills:

- Familiarity with Microsoft Excel
- Ability to do Internet research using Microsoft Internet Explorer

Time Allotted:

Two class periods, plus one week of energy tracking at home

How to Begin:

1. Review the Resources listed below, which provide basic metrics on home energy use and introduce energy-saving measures. In Microsoft Internet Explorer, add the links you like best to your class's Favorites list, or save the sites for students to access offline by opening the File menu, then clicking Save As, then Web archive.
2. Download the Personal Energy Meter from the Resources section. This live Microsoft Excel worksheet is set up to help your students track their electricity use over a week.
3. Your students will work individually to complete their Personal Energy Meters and research ways to save energy at home, but they will be asked to join forces for the last step of the lesson.
4. To introduce the lesson, call your class together and pose these questions: Does our country use more energy now than it did 10 years ago, or less? Is the cost of energy going up or down?
5. Use a data projector or large computer monitor to introduce the Personal Energy Meter spreadsheet. Tell students they will be using this tool to explore their own family's energy use over a typical week.
6. Hand out the Student Activity pages, and have your students being working. They will need one week to gather daily data at home and test some alternatives before they present their findings to the class.
7. As an extension activity, you could challenge students to modify the Personal Energy Meter to track their home heating costs or their transportation energy usage over a week, and explore alternatives in those sectors as well.

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Student Activity

Description: The average U.S. home is quickly becoming high-tech, with enough television sets, DVD players, dishwashers, computers, game consoles, and the like to stock a small appliance store. Ever wonder how much energy it takes to keep all that equipment running? Ever wonder what it might mean for our planet? With this lesson, you'll find out firsthand!

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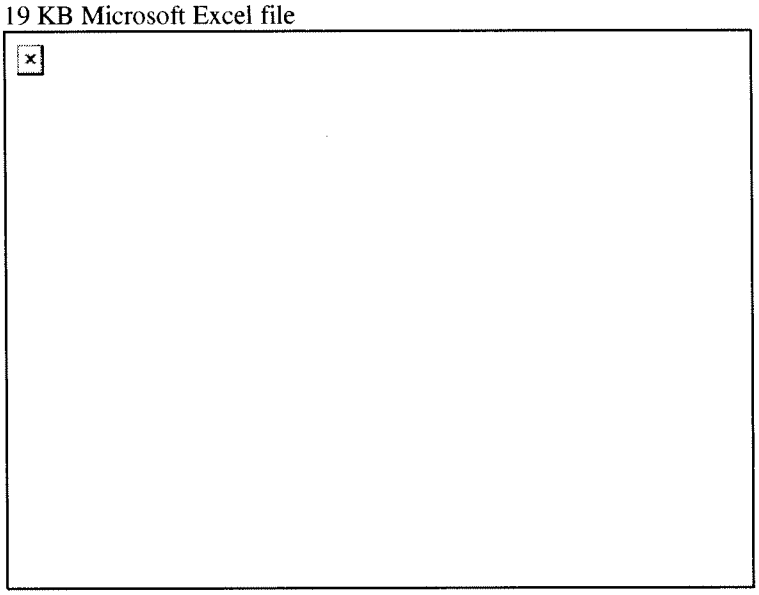
Resources

Central Maine Power
A comprehensive, interactive guide to energy conservation.

Alliance to Save Energy-Home Energy Checkup!
This Java-based calculator helps you determine the impact of changing fuels and adding efficiency measures, such as insulation, new appliances, etc. Displays CO2 saved!

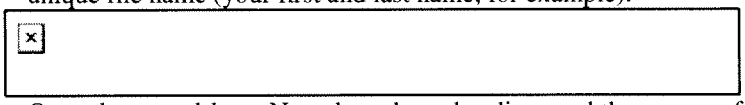
Microsoft Excel Worksheet for Downloading
19 KB Microsoft Excel file



Step A

Meet Your Meter
Software: Microsoft Excel 98/2000
What to do: This spreadsheet will help you track your use of electricity:

1. Electricity is probably your biggest home energy expense. The Personal Energy Meter is an Excel spreadsheet that you can use to track your use of electricity, calculate what it costs, and identify ways to save. Your teacher has a classroom copy of the Personal Energy Meter. Copy it to a local hard disk drive, and save it under a new and unique file name (your first and last name, for example).



2. Open the spreadsheet. Note the column headings and three rows of sample data. Use each row of data in the spreadsheet to represent the use, over a one-week period, of a particular appliance or a particular type of electrical consumption (such as "lighting").

3. When you use this spreadsheet to collect information about your use of electricity, you will enter data only into certain columns of the table:
   - Enter the appliance name or type of electrical use in Column A.
   - Enter the hours of use per day in Columns B through H. The spreadsheet sums up these values to calculate total hours for the week in Column I. You can click a cell in Column I to display the formula in the Formula Bar.
   - In Column J, enter the wattage of the appliance or type of electrical use that the row represents. The spreadsheet calculates total kilowatt-hours (kWh) in Column K. You can click a cell in Column K to display the formula in the formula bar.

4. Try changing hours and wattage values for the sample data, and see what happens to the calculated values. Do they change as you expect they would?

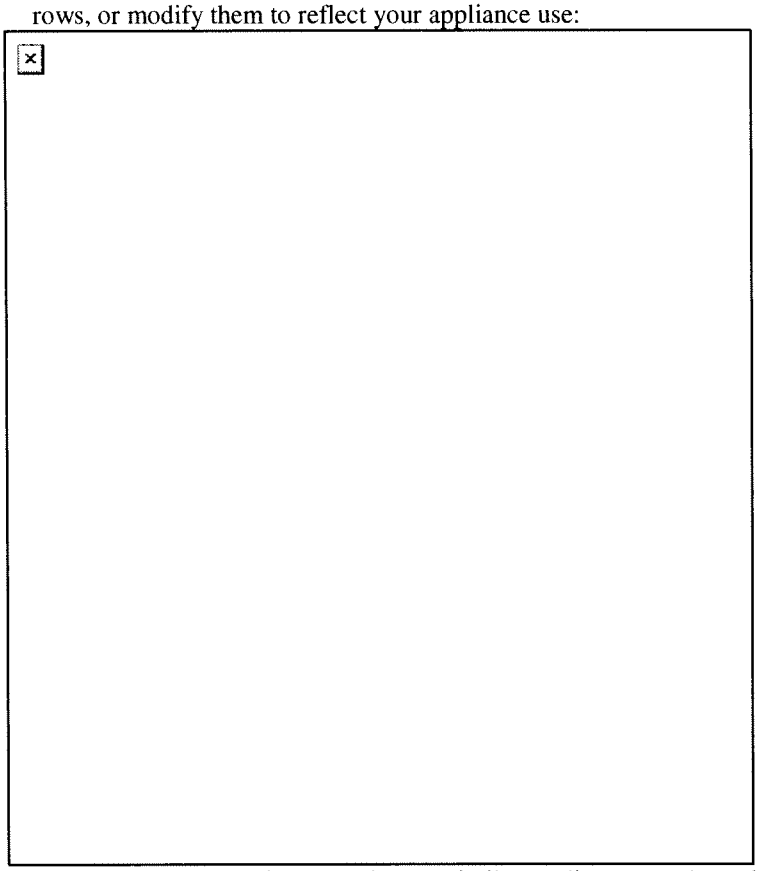
5. In Column L, the spreadsheet calculates the energy cost by multiplying total kilowatt-hours by the cost per kilowatt-hour. The default cost per kilowatt-hour is $0.13, but you can change this value (in the box at the top of the spreadsheet) to reflect your actual local electric rates. Try changing the cost per kilowatt-hour, and see what happens to energy costs in the sample rows.

6. When you are comfortable with the way the Personal Energy Meter works and the cost per kilowatt-hour you are using, you are ready to start tracking your home energy use!

Step B

Personalize Your Meter
Software: Microsoft Excel 98/2000, Microsoft Internet Explorer 4.5 or later
What to do: Set the meter to begin tracking your own energy use:

1. Open your copy of the Personal Energy Meter.
   Create a row for each of your family's daily activities that use an electrical appliance. You can delete the sample rows, or modify them to reflect your appliance use:



- To record the electrical use of many similar appliances, such as electric lights throughout the house, don't make a separate row for each. Instead, create one row for all lighting and estimate total wattage and average number of hours per day for all lights in the house.

- Even if your hot water heater, furnace, stove, or clothes dryer does not heat with electricity, it might still use some electricity to power moving parts, switches or sensors.
- If you don't know the actual wattage value for any given appliance, check the tables at Central Maine Power - What Does It Take.
- Those same energy tables will also help you think of all the ways in which you use energy around the house, in case you run out of ideas.

3. If you need to add more rows to your spreadsheet, just left-click any data row, and then choose Insert, then Rows. A new row will be inserted above the selected row. To include the automatic calculation features in the new rows, you'll need to copy and paste formulas from cells in Columns I, K, and L to the corresponding cells in the new rows. Then you will need to edit row numbers in the new cell formulas so that the correct rows are used in the calculations.
4. Print out your meter, and take it home to track your energy use around the house. If you have a computer at home, you can save the meter on a floppy disk so you can enter the data on the spot.

Step C

Track Your Energy Use

Software: Microsoft Excel 98/2000

What to do: Here are some tips for keeping tabs on your household electrical use:

1. Before Day 1 begins, walk around your house with your Personal Energy Meter printout to make sure you haven't overlooked any major appliance. Don't forget things like clocks and aquariums that run 24 hours a day. Pay particular attention to your own room?after all, that's where you can make the most difference!
2. Because you can't be everywhere at once, you might also ask your family to help with the tracking. If your parents and siblings are willing, give them copies of the Personal Energy Meter printout, and divide up the work. Make one person responsible for the family TV, another person for the lights, and so on. Each person should also track appliance use in their own rooms, if they have them.
3. Try to make Day 1 a typical weekday, and do the following:
   - Take note of the first major electrical uses of the day: probably lights, kitchen appliances, blow dryers, and the usual getting-ready-for-school-and-work stuff.
   - If someone stays home while you and the rest of the family are out of the house, have that person keep track of daytime usage.
   - When you get home from school, make sure you track your own stereo, TV, video game, and computer use.
   - Peak energy hours for most families during the week are in the evening, when cooking, watching TV, homework, and hobbies are happening all at once. You may need help keeping track of all this!
   - When Day 1 is over, add up all of the hours of use for each appliance, and plug the total into your Personal Energy Meter worksheet on the computer. How does your total look?
4. Days 2 through 5 should follow pretty much the same pattern. Just keep your eyes open for special events, such as a marathon night of TV or that school report that takes an hour to print. Add your new totals each day.
5. If Days 6 and 7 fall on a weekend, expect very different usage patterns. You'll probably notice that appliances are used all day long, but not all at the same time. It takes good detective work to keep up with it all!
6. At the end of Day 7, put in your final usage figures and check out the grand total in hours and dollars. Are you surprised?
7. Save and print your work.

Step D

More Than Money

Software: Microsoft Excel 98/2000, Microsoft Internet Explorer 4.5 or later

What to do: Take a look at some of the other "costs" of energy consumption:

1. Environmentalists have long been concerned that our increasingly energy-burning lifestyles put undue pressure on natural resources while creating pollution of various kinds. According to the Consumer Federation of America, "The average home causes more air pollution than the average car." Now that you have a handle on your family's electricity consumption, it's time to explore how it affects the environment.
2. Where does your family's electricity come from? Electricity can be generated in many ways, from wind and solar power to the burning of coal or oil. Find out how your local utility company generates its power (or where your family buys its power from, if not locally).
3. If possible, find out how much of each kind of fuel is consumed by the utility company to provide your home with the kilowatt-hours of electricity your family might use in a year (your weekly total multiplied by 52).
4. Next, explore the energy and environment resources your teacher has selected to find out what environmental issues are associated with the kinds of fuels used to create electricity for your home. These can include carbon dioxide emissions, water pollution, acid rain, global climate change, and radiation dangers.
5. Finally, investigate alternatives your family could pursue to use less electricity (through more energy-efficient appliances, for example) or to get electricity from other sources (such as solar panels). Note these alternatives as you prepare for Step E.

Step E

Test Some "What Ifs?"

Software: Microsoft Excel 98/2000, Microsoft Internet Explorer 4.5 or later

What to do: What would happen if you cut your energy use?or found some alternatives? Find out here:

1. Open your Personal Energy Meter. On the Edit menu, click Move or Copy Sheet. Check Create a Copy, and select Before Sheet 2.
2. You'll now have a tab at the bottom of your worksheet that says Meter1(2), which is a copy of your Personal Energy Meter. On the Format menu, click Sheet, then Rename, and then type What If as a new name for this sheet.
3. Look back over your week's worth of energy statistics for the one or two rows that seem especially prominent. What's the energy hog in your household? It could be the appliance that's used the most, or the one that uses the most wattage.
4. On your What If sheet, try experimenting with your energy hog:
   - What happens if you reduce your daily use by one quarter of an hour? Subtract 0.25 from each day's usage, and see what that does to your total. Make note of your bottom-line kilowatt-hours and energy cost numbers.
   - Go back and return your usage numbers to their actual levels, and try decreasing the wattage by 25 percent. Note your new totals.
   - Now try both savings together, and note these totals.
5. For a really big effect, repeat the above steps with your second-biggest energy hog.
6. Save your What If worksheet.
7. Now explore ways in which your family could achieve the savings you've projected. With your parents and siblings, create a plan for reducing energy use; track your efforts for a week to see whether they're working. Use Internet Explorer to research energy-efficient appliances that might further cut back on the amount of wattage your family consumes.
8. Adjust your What If worksheet, and print it.

Step F

It All Adds Up

Software: Microsoft Excel 98/2000, Microsoft Word 98/2000

What to do: Now you'll present your results to the class, and combine information to get the big picture:

1. Using the presentation station your teacher has set up, show your classmates your Personal Energy Meter results (from Step C) as well as your What If results from Step E. Each student in your class will do the same.
2. As a class, add up your current weekly kilowatt-hour consumption and energy costs. How much energy consumption does you class represent in total?
3. Add up your What If results. How much could your class save?
4. Using the number of families in your community as your basis, extrapolate your results community-wide. How much money does your community spend on home electricity alone?
5. Discuss the environmental issues you uncovered in Step D. What is the environmental impact of your community's energy consumption?
6. Team up with a partner to create a public statement about energy conservation for your community. This could take the form of:
   - A public service announcement (PSA) for television or radio
   - A letter to your local utility company
   - A letter to the editor of your local newspaper
   - A petition to your mayor or city council
7. Take turns presenting your public statement to the class. Fine-tune them, and then put them into action!

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Personal Energy Meter

*Energy cost based on total kWh (kilowatt-hours) X cost per kWh. Use default electric cost of $0.13/kWh or enter another value: 0.13

	Energy Tracker (Hours/Day)							Cost Calculator			
Appliance	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Total Hours	Wattage	Total kWh	Energy Cost*
Television (19")	1.50	2.50	2.00	1.00	2.50	2.50	3.00	15.00	100.00	1.50	$0.20
Space heater	4.00	3.50	5.00	6.00	5.50	4.50	5.00	33.50	1500.00	50.25	$6.53
Personal computer	2.00	1.00	1.50	0.00	1.00	2.00	2.50	10.00	200.00	2.00	$0.26
								0.00	0.00	0.00	$0.00
								0.00	0.00	0.00	$0.00
								0.00	0.00	0.00	$0.00
								0.00	0.00	0.00	$0.00
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								0.00	0.00	0.00	$0.00
								0.00	0.00	0.00	$0.00
								0.00	0.00	0.00	$0.00
								0.00	0.00	0.00	$0.00
										53.75	$6.99

Your Business

Saving with Power Smart
- Commercial
- Farm
- Industrial

Customer Communications

Customer Profiles & Success Stories

Energy Products & Services

Energy Rates & Rate Options

Investment Recovery

Open Access Transmission Tariffs

Power Quality

Scrap & Surplus Sales (open new window)

Selling to Manitoba Hydro

Site Your Business in Manitoba

Tender Opportunities

Refrigeration Measures, Paybacks & Annual Savings

- Display Case
- Walk-In Box
- Mechanical Room

Display Case

Energy Efficient New and Used Cases save energy while maintaining required cooling levels due to their energy efficient features. With rebates, typical customer paybacks are as fast as **15 months** for new cases and **11 months** for refurbished cases, with annual savings of **$1500**. Savings will vary depending on current equipment and usage patterns. Energy Efficient New and Used Case annual savings based on installation of 27 ft of case.

Automatic Door Closers save energy by keeping doors closed as much as possible and helping reduce the loss of cold air and infiltration of warm air into refrigerated cases. With rebates, typical customer paybacks are as fast as **3.1 years** with annual savings of **$1400**. Savings will vary depending on current equipment and usage patterns.

Related Info

Power Smart Commercial Programs

Commercial Refrigeration Program for Retail Stores and Restaurants:
- Refrigeration Measures, Paybacks & Annual Savings
- Program Rebates (open new window)
- Measure Terms and Conditions
- No Cost/Low Cost Solutions
- Frequently Asked Questions
- How to Take Part

Contact Us

Automatic Door Closers annual savings based on installation of 4 closers.

Night Covers and Glass Doors save energy by helping reduce the loss of cold air and infiltration of warm air into refrigerated cases. With rebates, typical customer paybacks are as fast as **7 months** for night covers and **16 months** for doors, with annual savings of **$350** and **$1000**. Savings will vary depending on current equipment and usage patterns. Night Cover annual savings based on installation of 36 ft of night covers. Glass Door savings based on installation of 4 doors.

Electronically Commutated Motors (ECM) for Evaporator Fans save energy as they are more efficient than standard motors, and emit less heat in the refrigerated case. With rebates, typical customer paybacks are as fast as **3.6 years** with annual savings of **$570**. Savings will vary depending on current equipment and usage patterns. Electronically Commutated Motors (ECM) for Evaporator Fans annual savings based on installation of 36 motors.

T8 Case Lighting saves energy as it is more efficient than T12/T10 lighting, and emits less heat into refrigerated cases. With rebates, typical customer paybacks are as fast as **1.6 years** with annual savings of **$220**. Savings will vary depending on current equipment and usage patterns. T8 Case Lighting annual savings based on lighting associated with 250 ft of case.

Anti-Sweat Heater Controls save energy by reducing or turning off the anti-sweat heaters found in case doors. With rebates, typical customer paybacks are as fast as **6.4 years** with annual savings of **$120**. Savings will vary depending on current equipment and usage patterns. Defrost Control annual savings based on 15 doors being controlled.

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Walk-In Box

Strip Curtains save energy by helping reduce the loss of cold air and infiltration of warm air into walk-in boxes. With rebates, typical customer paybacks are as fast as **1 month** with annual savings of **$4100**. Savings will vary depending on current equipment and usage patterns. Strip Curtain annual savings based on installation of strip curtain on 2 walk-in box doorways.

Automatic Door Closers save energy by keeping doors closed as much as possible and helping reduce the loss of cold air and infiltration of warm air into walk-in boxes. With rebates, typical customer paybacks are as fast as **5 months** with annual savings of **$590**. Savings will vary depending on current equipment and usage patterns. Automatic Door Closers annual savings based on installation of 2 closers.

Door Gaskets save energy as they reduce the loss of cold air and infiltration of warm air into walk-in boxes. With rebates, typical customer paybacks are as fast as **6 months** with annual savings of **$330**. Savings will vary depending on current equipment and usage patterns. Door Gasket annual savings based on installation of gasket on 2 walk-in box doorways.

Evaporator Fan Controllers save energy as they reduce air flow of evaporator fans and fan motor power. With rebates, typical customer paybacks are as fast as **4.9 years** with annual savings of **$70**. Savings will vary depending on current equipment and usage patterns. Evaporator Fan Controller annual savings based on installation of 2 controllers.

Electronically Commutated Motors (ECM) for Evaporator Fans save energy as they are more efficient than standard motors, and emit less heat in the walk-in box. With rebates, typical customer paybacks are as fast as **3.6 years** with annual savings of **$60**. Savings will vary depending on current equipment and usage patterns. Electronically Commutated Motors (ECM) for Evaporator Fans annual savings based on installation of 4 motors.

Compact Fluorescent Lighting saves energy as it is more efficient than incandescent lighting, and emits less heat into walk-in boxes. With rebates, typical customer paybacks are as fast as **3.1 years** with annual savings of **$40**. Savings will vary depending on current equipment and usage patterns. Compact Fluorescent Lighting annual savings based on lighting associated with 2 walk-in boxes.

T8 Walk-in Lighting saves energy as it is more efficient than T12/10 lighting, and emits less heat into walk-in boxes. With rebates, typical customer paybacks are as fast as **2 years** with annual savings of **$40**. Savings will vary depending on current equipment and usage patterns. T8 Walk-in Lighting annual

savings based on lighting associated with 2 walk-in boxes.

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Mechanical Room

High Efficiency Compressors save energy as they are more efficient than standard compressors. With rebates, typical customer paybacks are as fast as **2.3 years** with annual savings of **$1800**. Savings will vary depending on current equipment and usage patterns. High Efficiency Compressor annual savings based on 50 ton application.

Compressor Suction Line Insulation saves energy by protecting refrigerant temperature from surrounding area temperatures. With rebates, typical customer paybacks are as fast as **11 months** with annual savings of **$60**. Savings will vary depending on current equipment and usage patterns. Compressor Suction Line Insulation annual savings based on installation of 70 ft of insulation.