

Energy Efficiency, Conservation & Awareness Program

EECAP

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“Energy Efficiency, Conservation & Awareness Program” (EECAP) outlined in the following pages will provide details on how Freeport Electric believes everyone should confront the need to address these issues. Our goal is to provide our community with the tools it needs to understand and manage its energy usage behavior.

Executive Summary

Freeport Electric was established by Public Referendum in 1897. The Utility commenced operation in April 1898 and provided power for 24 carbon lights. As applications for electric service began to grow, the Utility developed a rate structure to meet the demand. Much has changed since 1898. Today, Freeport Electric serves a community of over 45,000 people with a customer base of approximately 15,000 meters. The Utility operates two generating stations with a total installed capacity of 78 MW and has a system peak of 65 MW. A new interconnecting substation was energized in December of 1996 and has a capacity of 84 MW. This substation operates at 138 kV, is 100% redundant, and can be easily expanded in the future to carry up to 138 MW.

The bulk of the Utility's energy requirements are met with hydropower purchased from the New York Power Authority (NYPA). The Utility continues to first rely on that hydropower purchased from NYPA. The Utility has succeeded in meeting the growing electrical energy needs of the community in a reliable and cost effective manner. In recent years, however, it has become apparent that the growth in energy usage we long viewed as a sign of prosperity is nearing levels which cannot be sustained on a global basis.

Energy efficiency is first and foremost a matter of controlling and reducing energy demand, although targeted actions are required for both energy consumption and energy supply. "Business as usual" is not a sustainable response. The "Energy Conservation & Awareness Program" (EECAP) outlined in the following pages will provide details on how Freeport Electric believes everyone should confront the need to address these issues. Our goal is to provide our community with the tools it needs to understand and manage its energy usage behavior.

Plan Description

EECAP will focus on three program plans: Energy Efficiency, Customer Education, and Marketing and Administration.

Energy Efficiency

This plan will entice Freeport Electric customers to take action to use electricity more efficiently by investing in cost effective energy conserving technology. Initial planning will be conducted to identify technology that will allow electric customers to save money on their utility bills, lower their financial impact on the community, and lower their energy usage impact on the environment. Funding availability will be assessed, financial incentives will be developed, and procedures shall be instituted to allow customers to participate in the propagation of various programs targeted at the various classes of customers (residential and commercial). Initial programs expected to be implemented include:

a. Retrofit Municipal Building (Recreation Center)

The recreation center uses outdated inefficient boilers used to heat the showers in the Recreation Center. During the non-heating months the big boilers are run

only for hot water – extremely inefficient. We will add new energy efficient hot water heaters to the mechanical system allowing the Recreation Center to shut down the old boilers during the non heating season and use the hot water heaters to heat the shower water. This will have a significant impact on the cost to heat water for the building.

- i. The yearly budget is FYE 2010 is \$60,000 for the program.
- ii. The first year will be funded by the PSC JP revenues.
- iii. The second year and thereafter will be funded by the 1 mill adder.

b. Street Lighting Replacement Program

This program will upgrade current high pressure sodium lights to more efficient longer lasting Induction Light design. Street lighting is an integral part of the municipal environment serving local business, promoting economic development, enhancing safety, security and the aesthetic appeal of surrounding property.

- i. Street lighting increases the perception of safety and security, reduces vehicular accidents, improves pedestrian visibility, increases commerce, creates a particular architectural “look”, illuminates building facades and responds to public demand.
- ii. The yearly budget for this plan in FYE 2011 is \$100,000 and will be funded by the 1 mill adder.
- iii. Impact
 1. We will see a reduction in green house gas emissions of 1,379,896 pounds of CO when all lights are converted.
 2. We will save the Village \$197,000 annually when all lights are converted.

c. Weatherization - LI Green Partnership Program

Freeport Electric will offer Freeport homeowners a Free Home Energy Study that will provide homeowners with the tools necessary to make improvements in their home that will save 25% or more of their total energy bill. This work can be done either with the help of approved implementation partners or by the homeowner. LI Green can even assist in arranging favorable market financing if appropriate.

- i. This program helps customers cost justify/evaluate the economics of installing energy efficient products. The annual estimated cost is \$20,000 per year for FYE 2011 and 2012. By forming a partnership with LI Green, Freeport Electric will be able to offer its residential customers a proven program targeting the “Low Hanging Fruit.” The low hanging fruits are the efficiency improvements that offer the highest return on investment. Bethpage Federal Credit Union will

provide low interest energy efficiency loans to eligible customers. This agreement will allow qualified Freeport Electric customers to obtain energy efficiency loans at a reduced rate.

- ii. The budget for this plan in FYE 2011 is \$20,000 be funded by the 1 mill adder.

d. Electric Vehicle Program

The EV Program will be purchasing more energy efficient and environmentally friendly highway transportation technologies that will enable Freeport to use less petroleum. The long-term aim will provide us with greater freedom of mobility and energy security, while lowering costs and reducing impacts on the environment. We will be purchasing 6 vehicles – 3 electric hybrids and 3 totally electric.

- i. The power research institute's study figured a plug-in hybrid with a 40-mile all-electric range would use about 100 gallons of gas and 2,500 kilowatt hours a year of electricity if driven 12,000 miles. (That's between two and three monthly bills worth of electricity for the typical customer.)
- ii. With gas at \$2.20 a gallon and electricity at 10 cents a kilowatt hour, you'd save just under \$600 a year on fuel driving that plug-in -- almost two thirds less than your fuel cost for the gas-powered car.
- iii. We would save roughly 16 tons/year of carbon.
- iv. The budget for this plan in FYE 2010 is \$173,100. (\$150,000 car purchases – \$15,000 for administrative fees, and \$8,000 for marketeering). The first year the program will be funded by the EECBG and subsequent years will be funded by the 1 mill adder.

e. Compact Fluorescent Light (CFL) Bulb Program

This initiative is intended to demonstrate the positive impact that the CFL can have to reduce the amount of energy used for lighting, especially at the residential level. We will offer a pair of free indoor fluorescent light bulbs to every customer (two 60 watts equivalent / 15 watts). This will also increase awareness and hopefully stimulate the purchase of additional bulbs. The estimated cost is \$60,000.

- i. A program will be implemented for the collection and recycling of old CFL bulbs.
- ii. Impact
 - 1. We will see a reduction in green house gas emissions of 3,154,224 pounds of CO when all 26,100 CFL lights have

replaced the same amount of incandescent lights.

2. Homeowners will save \$15.00 annually when both lights are replaced.

iii. The budget for this plan is \$60,000 and will be funded by the PSC JP funds.

Education Program

Our objective is to build awareness of our energy efficiency programs and to make sure our customers understand the benefits of these programs from an energy savings and environmental standpoint. This education program will focus on the education of both Freeport Electric Staff and the public regarding the impacts of energy usage on a wide variety of levels. There are many low-cost, simple things that customers can do in and around their homes to reduce energy use and save money. The first step customers will be counseled to take is to request an energy audit on their home. The scope and objectives of the Education Program are outlined below.

a. Customer Education Program:

- i. Education helps customers feel more committed to the program and gives customers some control over their energy usage and savings.
- ii. **Presenting a Power Point presentation on “Helping Customers Manage High Bills”:** Energy efficiency is the quickest, cleanest, and most economical way to reduce energy use and save money on your energy bill. This power point presentation is intended to provide information on the benefits of using energy efficient products. It will show the impact that energy consumption within our community creates from a financial and environmental perspective, and suggest ways that energy can be used more responsibly.
- iii. Providing teaching aids for primary and secondary schools.
 - Wise Energy Use – an interactive Web tool that practices wise energy use to save money while saving the planet. We will create a link on our Web page directing users to “Wise Energy Use”.
http://iec.electricuniverse.com/eu_wiseuse.php?sec=5&mc=0&sc=0&pn=wiseuse_home.html
 - Louie the Lightning Bug – This is intended for primary school children. Louie the Lightning Bug® has been associated with

electrical safety since 1983.

- Primary and secondary school presentations of a working model of the Village of Freeport's Electric Distribution System.

b. Staff Education Program

- i. The staff will attend American Public Power Association (APPA) seminars dealing specifically with energy efficiency programs.
- c. The budget for the Education Program is \$4,000 for the first year and \$10,000 per year for FYE 2011 and 2012. The first year will be funded by the PSC JP funds and from the 1 mill adder thereafter.

Marketing and Administration Plan

Marketing is an important part of any energy efficiency program. In order for a program to be successful, customers must be interested in participating. The Utility must understand and identify all income market segments, and market the program in a way that will minimize barriers and maximize participation. An important component of this marketing strategy is that customers be contacted by someone they trust. The Utility will take the following steps to inform the public of the energy efficiency program.

- i. Press Release – prepare and issue a press release to the local media to coincide with the implementation on our website of the applications.
- ii. Bill Envelope Message – print on the outside of the billing envelope (or print and insert the message into the bill) an announcement regarding the implementation of the energy efficiency programs.
- iii. Email Strategy – send out an email announcement to our customers for whom we have email addresses; send periodic email newsletters and reminders about the applications to serve their needs.
- iv. Brochures / Advertising Campaign – have available to hand out to the public 1500 professionally printed brochures; implement some distribution to the public; place in Village Hall, the Recreation Center and the Library.
- v. Posters – The installation of large posters at key areas in the Village such as in Village Hall, the Library and the Recreation Center. Posters would be changed seasonally.
- vi. Installation of Truck Decals on all trucks - the decal will say “for energy tips visit our Web site at www.freeportelectric.com”.
- vii. The budget for this plan is \$10,000 for the first year and \$15,000 per year for FYE 2011 and 2012. The first year will be funded by the PSC JP funds and from the 1 mill adder thereafter.

Budget Cost and Financial Management

The activities included in the EECAP have been structured in such a way as to allow the partial implementation of each initiative to take place on a prioritized basis, as funding becomes available. The overall objective of the plan is to change the way Freeport Electric customers use energy. Behavioral change on a large scale basis is expected to occur very slowly, and the efforts needed to bring about this result must be maintained over a considerable period. Therefore, the overall implementation of the plan has been assumed to take place over a 3 year period beginning in June 2009 and ending in June 2011. Below is a detailed breakdown of the estimated annual cost to support this effort. The first year will be funded with the \$173,100 Energy Block Grant from the Economic Recovery Stimulus Program and \$128,656 from the settlement in the 2007 PSC joint proposal. FYE 2011 and for FYE 2012 the funding will come from the 1 mill adder funds.

- Overall Estimated Cost of EECAP: \$300,000 first year followed by \$250,000 per year thereafter.
 - i. Education Program costs included in EECAP: \$4,000 - \$10,000 per year
 - ii. Energy Efficiency Initiative costs included in EECAP: \$293,000 per year
 - iii. Marketing and Administration Plan: \$4,000 - \$15,000 per year

	FYE 2010	FYE 2011	FYE 2012
Estimated Revenue Source	\$301,656 EECBG & PSC JP	\$269,073 1 mill adder	\$269,073 1mill adder
Retrofit Municipal Building	\$60,000	\$60,000	\$60,000
Education Program	\$4,000	\$10,000	\$10,000
Street Lighting Program	0	\$100,000	\$100,000
Electric Vehicle Program	\$173,100	\$40,000	\$40,000
Weatherization Program Partnership with LI - Green	0	\$20,000	\$20,000
Compact Fluorescent Program	\$60,000	\$0	\$0
Marketing and Administration	\$4,000	\$15,000	\$15,000

