

Notrica's 32nd Street Market

16100 Lakewood Boulevard
Bellflower, California

Energy Saving Evaluation Report for Energy Savings Module

Prepared For:

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This report contains the results of an energy saving performance evaluation project, which was performed for Energy Savings Module (EC2) at Notrica's Market located at 16100 Lakewood Boulevard in the city of Bellflower. The Energy Savings Module unit was installed on two compressors of the refrigeration system at the Notrica's Market.

The Energy Savings Module is marketed by The Energy Conservation Technologies, Inc., 13711 S. Normandie Ave., Gardena, CA 90249, Tel: (310) 324-9292.

Copies of the monitored data, graphs and background information are attached to this report.

Project Goal

To test and evaluate the Energy Savings Module unit as a new technology to save electric energy for refrigeration systems.

Background

Los Angeles Department of Water and Power (DWP) has been always looking for new ways to promote energy efficiency and energy conservation to help both our customers and the environment. DWP initiated this project to investigate energy efficiency and energy savings potential of the Energy Savings Module.

Project Team

The participants in this project are as follows:

- Shirl Harris, DWP
- Eric Taylor, DWP
- Linda Kingsford, DWP
- Rolando Cruz, DWP
- Gabriel E. Coloma
President, Energy Conservation Technologies, Inc.
- Jerry Christman
Senior Operations Manager, Energy Conservation Technologies, Inc.
- John Dalton, Universal Air-conditioning
- Mo Mirseyedi, DWP

Procedure

- One Energy Saving Module (EC2) unit was installed on two compressors.
- The EC2 unit could be set at “ON” or “OFF” by a toggle switch installed next to the unit.
- The following items were monitored, measured and logged by DWP monitoring equipment:
 - Compressors kW and kWh
 - Outside air temperature
 - Outside air relative humidity
- The logged data was collected and put into graphs and tables for proper analysis. A copy of the graphs and tables are attached to this report.
- The monitoring duration was from October 30, 1997 to January 4th, 1998.
- The energy saving calculation was based on comparing the kWh consumption of the compressors with EC2 at “ON” and “OFF” positions. The comparison was done for identical number of operating hours, and relatively close outside air temperature and humidity.

Summary of Findings

The findings are as follows:

- The average kWh saving, for comparable days, is in the range of 20 to 24 percent.
- The EC2 unit is capable of reducing the operating time of the compressors of the refrigeration system, which reduces the energy consumption of the compressors and saves electric billing dollars. The EC2 does this by monitoring the controls operating range and number of calls by the thermostat to run the compressors, and through its built-in logics, to decide the ON/OFF operation of the compressors.
- We realized that the compressors were turned on and turned off more often during the EC2 “ON” time when the EC2 is in saving mode. The number of cycles per hour was registered at 3 to 4 cycles per hour, which is in the safe range of cycles for a compressor.

On Site Photos



Notrica's Market in Bellflower



Energy Saving Module EC2 installed on compressors



DWP technician downloads kW data monitored and logged by power recorder into laptop computer

Graphs and Tabulated Data