Next Generation Demand Management

“Taking Demand Management to the Next Level”
The IESO hosted an innovative project to evaluate the effectiveness of demand-side loads to provide grid balancing services that are traditionally supplied by generators.

“ENBALA’s participation in the Alternative Technologies regulation pilot project successfully helped the IESO assess whether non-generation technologies can provide Regulation Service to the grid. The IESO is looking into ways to integrate non-generation alternative technologies as potential suppliers of Regulation Service to the IESO-controlled grid.”

Bruce Campbell
VP, Resource Integration
Independent Electricity System Operator
Three Components to the Power System

Continuous delivery of electricity

Ability to meet peak requirement

Ability to continually match supply & demand (& manage intermittent generation)

ENERGY

CAPACITY

FLEXIBILITY
Leveraging Process Flexibility that Already Exists
Confederation Freezers – A Case Study

• 20,000,000 cubic feet operation across four Ontario locations
• Operates 24 hours per day
• Warehouse space equipped with state-of-the-art refrigeration systems

High Peak Demand
High Annual Electricity Costs

Engaged in Leading Edge Energy Initiatives
Implementation

1. Conduct detailed assessment of site’s energy consumption
2. Identify processes with appropriate flexibility and storage
3. Obtain site’s operational priorities and constraints
4. Install energy monitoring equipment that provides real-time access to energy reporting
5. Conduct rigorous testing including comprehensive commissioning
6. Host demonstration period
How it Works

MAX Freezer Space Temperature

MIN Freezer Space Temperature

Storage Flexibility

Power Range

Asset’s Baseline Operation

Asset’s Operation with Grid Balance
Results

- Cost free program
- Successful demonstration period
  - No impact on facility’s operation
  - Stayed within parameters set by the plant
  - Transparent to daily operations
- Met all security requirements
- Energy consumption and cost remained neutral
Ontario Landscape – Next Steps

• IESO is seeking to procure 10 MW of Regulation Service through new technologies
  – Innovative load management solutions
  – Loads located across Ontario
  – Ability to vary power output on demand
For further information, please contact:

Ron Dizy, President & CEO
ENBALA Power Networks

Tel: 416.419.6393
Email: rdizy@enbala.com
URL: www.enbala.com