

# Developing Strategies to Promote Conservation and Demand Management



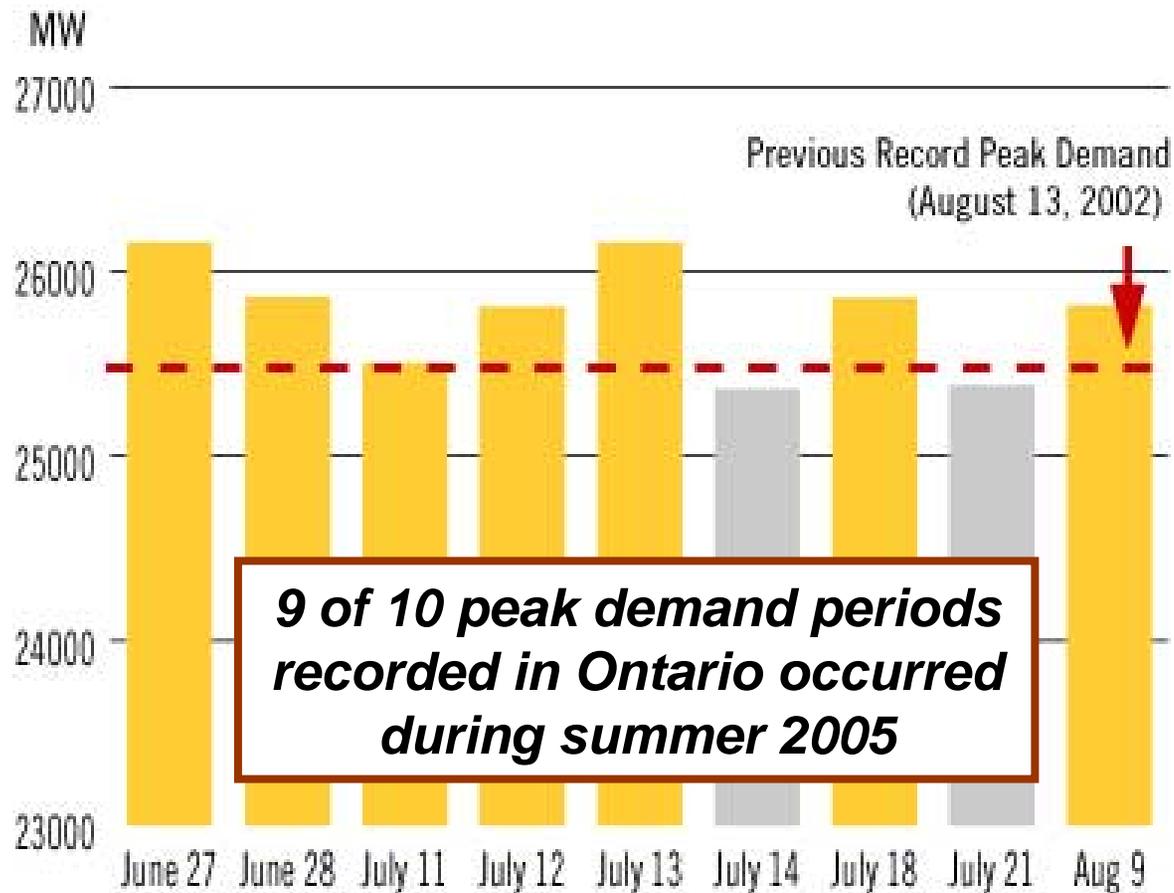
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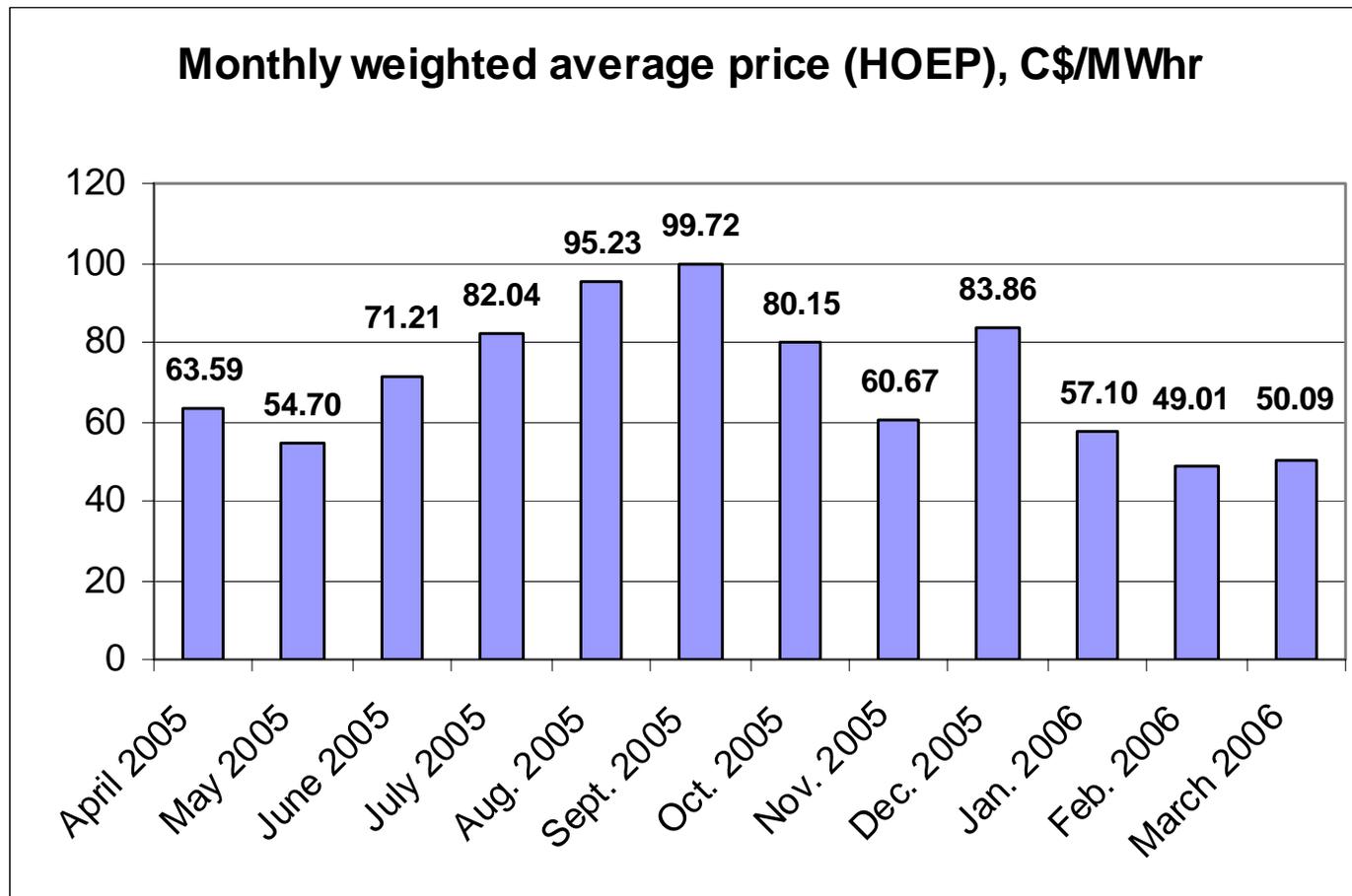
*And support from:* **Centre for Energy**

# The Context: Ontario's Electricity System



source: Independent  
Electricity System  
Operator (Ontario)

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# The Context: Ontario's Electricity System

## Current Activities:

- Development of a 'conservation culture'
- Target for 5% reduction in peak load (1,350 MW) by 2007
- Target coal shutdown and Canadian Kyoto commitments
- 800,000 'Smart Meters' by 2007; to all Ontario customers by 2010
- DR programs of the Independent Electricity System Operator and the Ontario Power Authority
- Ontario Power Authority's 'Supply Mix Advice' and development of 'The Integrated Power System Plan'



# Research Overview

## The Purpose:

- To advance the effective implementation of electricity response systems to promote conservation and demand-side management strategies across the Province of Ontario

## The Partnership:

- Working with Milton Hydro with support from the Ontario Centres of Excellence (Centre for Energy)



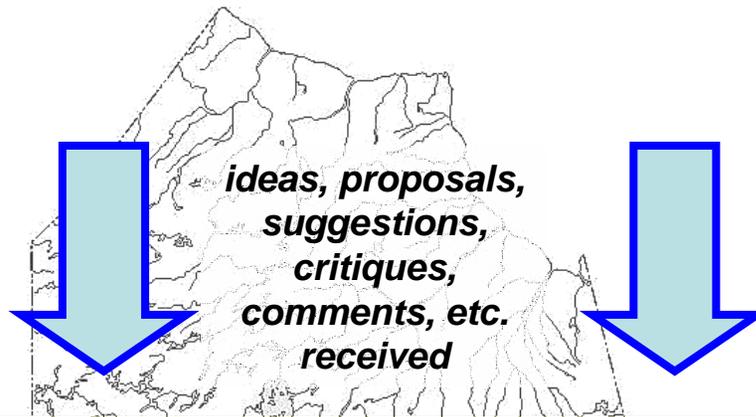
**Centre for Energy**

# Research Overview

## Research Plan:

- Analyse existing programs
- Study various initiatives
- Develop and document effective electricity response systems
- Share that information with stakeholders across the province

# Research Overview



**Jan. 2006**



**Dec. 2007**



# Residential Research

## Area of Interest

- Feedback and behavioural change
- Applications related to the Smart Metering initiative



# Residential Research

## Questions of Interest

- Can household-specific consumption information be useful in helping residents conserve?
- What format is most salient to residents?
- Can feedback affect attitudes towards conservation and help to foster a ‘conservation culture’?



# Residential Research

## Strategy

- 1** Initial assessment of Milton's customer base
- 2** Feedback instrument – information “push”
- 3** Assess effects



# Residential Research

## For Consideration

- Does motivation exist to conserve
  - Real-time consumption displays
  - Fallback effect
  - ‘Permanence’
  - Scalability to customer base
- } frequency



# Large Consumer Research

- Outline
  - Research Overview
  - Energy Drill Program
  - Data Collection
  - Analysis

# Large Consumer Research

## Research Overview

Why do large electricity consuming organizations participate in conservation and demand management (CDM) activities?

- Organizations with demand  $> 100\text{kW}$ 
  - institutional and industrial
- Case Study: Milton

# Large Consumer Research

- Energy Drill Program™
  - Milton Hydro CDM Program
    - community service
    - TDRP aggregator
  - Seminars, Workshops, Site Assessments...
  - Notification and Reporting System



# Large Consumer Research

- Data Collection
  - Observations
    - Seminars, Workshops, Site Assessments etc.
  - Interviews
    - Energy Drill Program Registrant and Non-Registrants
    - Stakeholders - internal and external
  - Consumption, Costs and Payments Data
    - kW and kWh, OEB costs and TDRP payments



# Large Consumer Research

- Analysis
  - Identify themes: motivations
    - Education and marketing, Legitimizing, Financial, Internal champion, Enlightened self interest and/or goodwill, Electricity system reliability, Organization policy
  - Quantitative Data - context setting
  - Correlate activities, motivators and organization types



# Contact Details

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