

ONTARIO POWER AUTHORITY

June 9, 2009



“Changing to a Culture of Conservation”

IES Lunch Seminar

Peter Love, Ontario Power Authority

Ontario Context



Coal-fired electricity generation phase out

- All coal plants to be shut down by end of 2014

Aggressive conservation targets

- 6,300 MW reduction in peak demand by end of 2025 (75 percent growth in peak demand)
- Interim target of 1,350 MW by end of 2007
- Second interim target of a further 1,350 MW by end of 2010

Progress

- Achieved 2007 interim target
- Ontario received an “A” on recent report card from Canadian Energy Efficiency Alliance, up from a “D+” in 2001

Conservation Challenge

Conservation is:

1. Hard to see
2. Difficult to measure
3. Requires buy-in by every citizen and organization

Overcome challenges by:

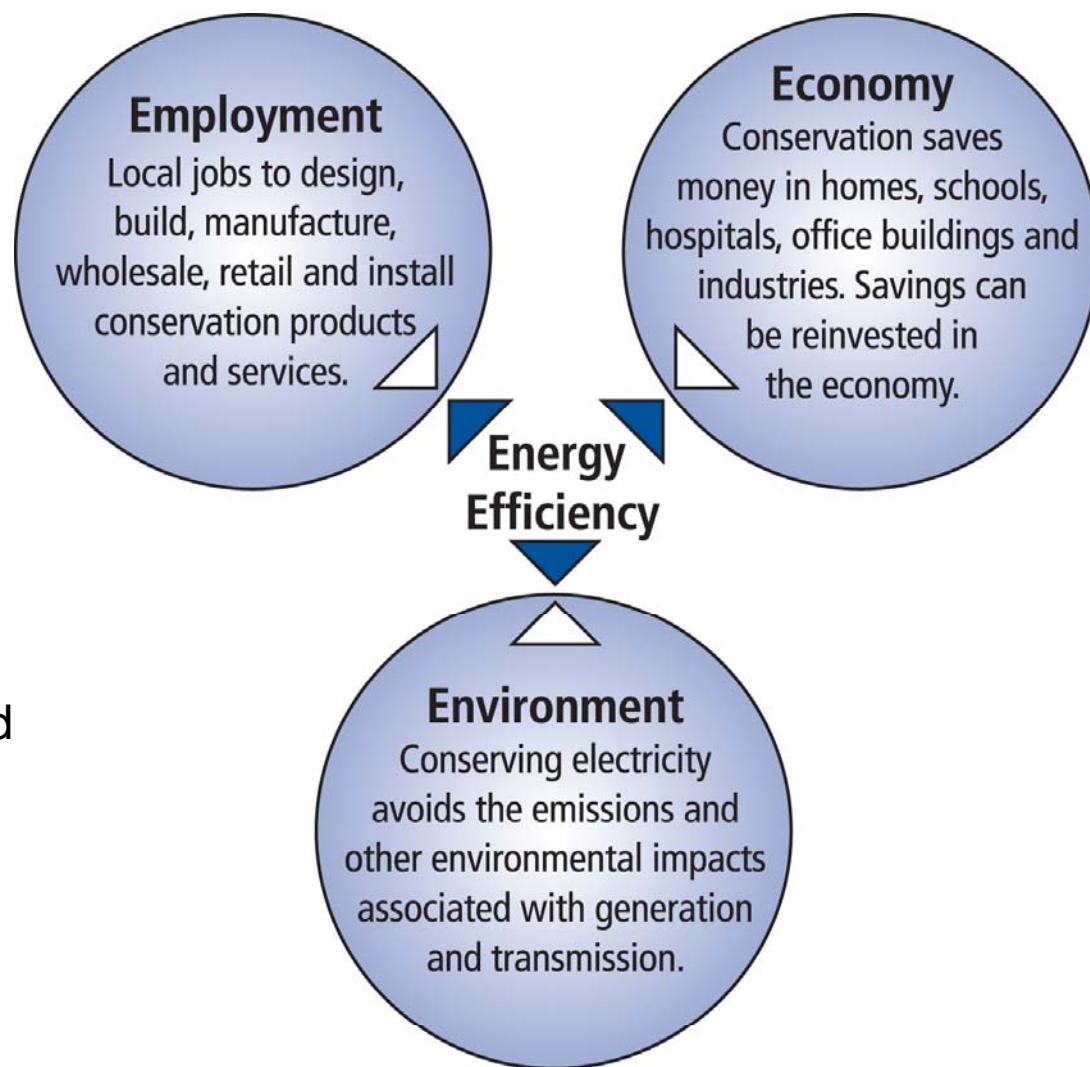
1. Bringing conservation leadership/successes to public attention
2. Emphasizing importance of conservation to economy and environment
3. Reporting regularly on progress being made and barriers



Benefits of Conservation

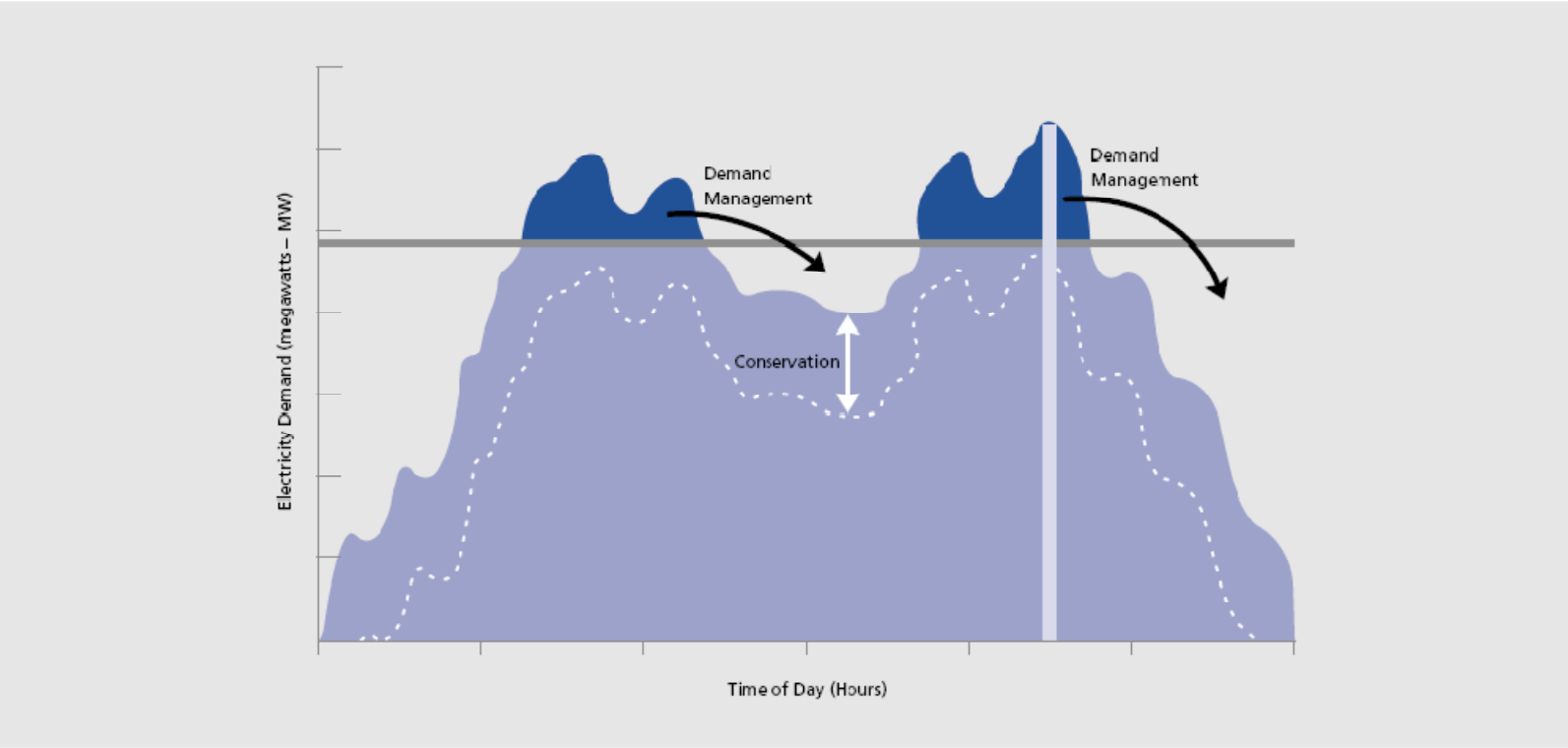
The Three “Es”:

- **Employment** benefits: labour-intensive, local jobs
- **Economic** benefits: cost-effective for households and makes private sector more competitive
- **Environmental/health** benefits: reduced GHGs, acid rain, smog



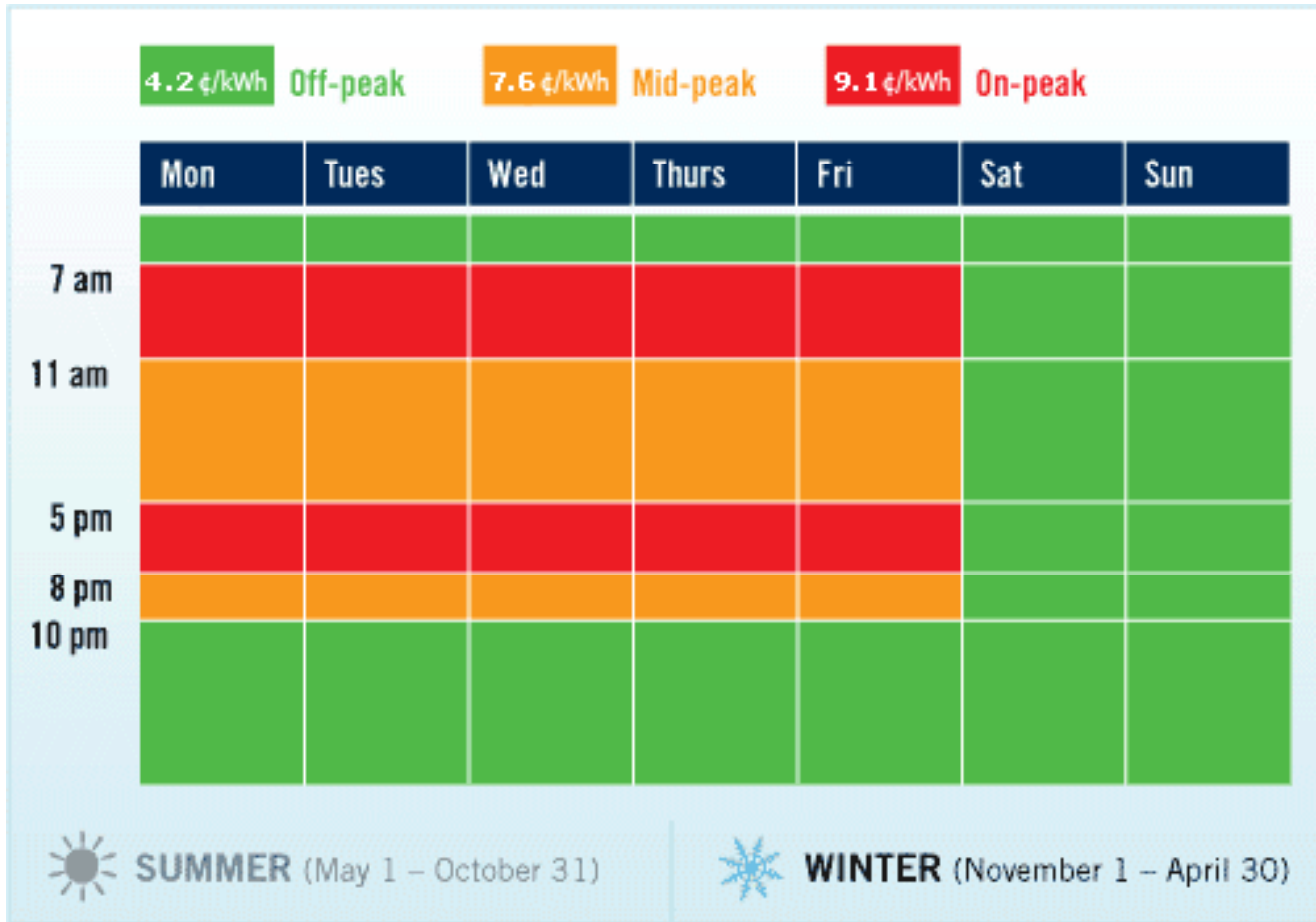
Components of Conservation & Demand Management

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Source: Conservation Bureau, 2005²

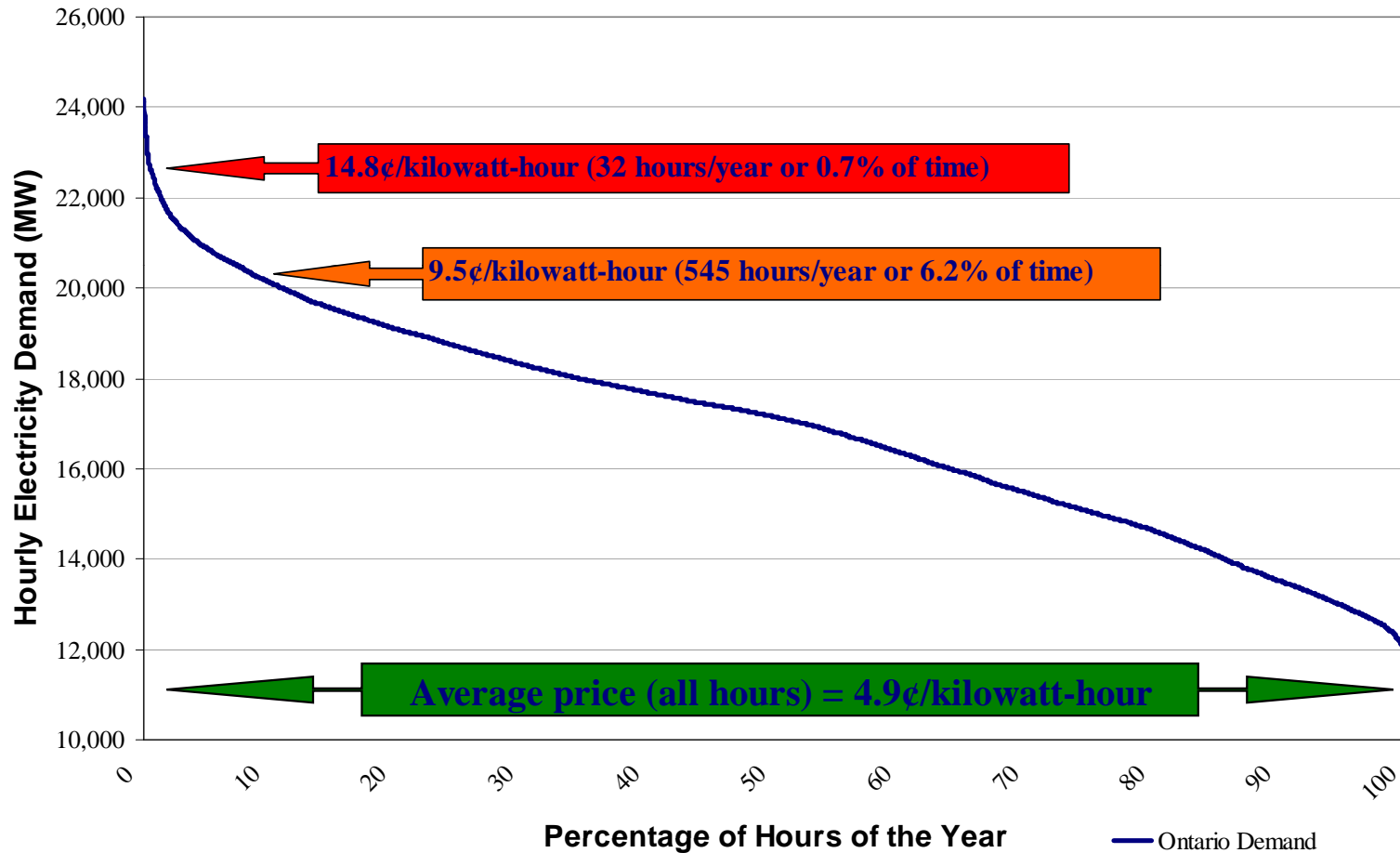
Time-of-Use Rates



Source: Ontario Energy Board
 Note: Weekends and holidays are off-peak.

Importance of Demand Management in Ontario

Load Duration Curve (2008 Data)



OPA 2009 Conservation Initiatives

- Business
- Industrial
- Residential
- Enabling



For more information, visit:

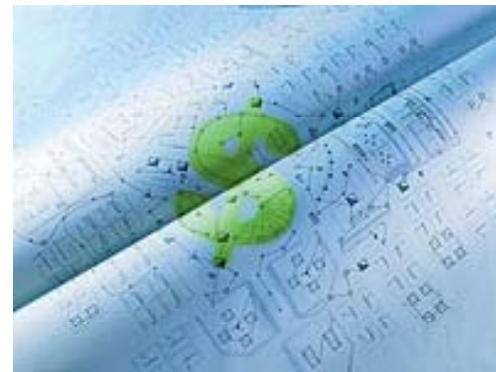
<http://business.everykilowattcounts.com/index.php>

ELECTRICITY
OPTIMALLY
MANAGED

Optimize your return on assets with electricity conservation programs

Electricity Retrofit Incentive

- ERIP offers financial incentives to commercial and institutional organizations for electrical retrofits
- Replaces inefficient products with high-efficiency ones to lower operating costs
- Focuses on installation of more efficient lighting, motors, heating ventilation, air conditioning and other electricity systems
- Operated by local distribution company and funded by OPA



Cool Savings

- Program to replace old central air conditioning or heating systems with more efficient models (i.e., ENERGY STAR® or higher-rated CACs and furnaces with ECMs)
- Rebates are available for residents and businesses (with residential-type systems) who purchase and install their new central heating or cooling equipment through a participating contractor
- Since April 2006, the OPA has partnered with the Heating Refrigeration and Air Conditioning Institute (HRAI) to deliver the program

**COOL
SAVINGS
REBATE**

Industrial Demand Response

- **DR I:** Voluntary peak load shedding program
- **DR II:** contractual load shifting for large industrial facilities in intermediate peak load period, with penalties for non-performance
- **DR III:** contractual peak load shedding on IESO forecast, with penalties for non-performance



High Performance New Construction

- Program for non-residential new construction and major renovation projects
- Includes design assistance through computer modeling and financial incentives to motivate builders and developers to incorporate sustainable and energy-efficient features
- The OPA offers qualifying buildings incentives to exceed Ontario's Building Code by at least 25 per cent to become truly high-performance buildings .
- Program delivery agent is Enbridge Gas Distribution
Tel: 1-888-OPA-HPNC
Website: www.hpnc.ca



Energy Efficiency Contractors Network

- EECN provides training and information to trade contractors to enable them to recognize and promote energy-efficiency opportunities to their small to medium-sized customers
- Motto is “Making Ontario business energy efficient, one contractor at a time”
- Network association members represent over 3,000 independent contractors in Canada
- Supported by \$154K grant from the OPA’s Conservation Fund
- Intent to engage members through their contractor associations – offers a marketing channel
- Opportunity for LDCs to partner with network to deliver programs
- Qualify by attending training and industry association membership
- Informational website – conservation, demand management and other incentive programs for contractors: www.eecn.ca
- Launched series of energy-efficiency training workshops in January 2008 – 12 sessions in 2008 and 10 planned for 2009. A total of 100 contractors have participated in the workshops to date.

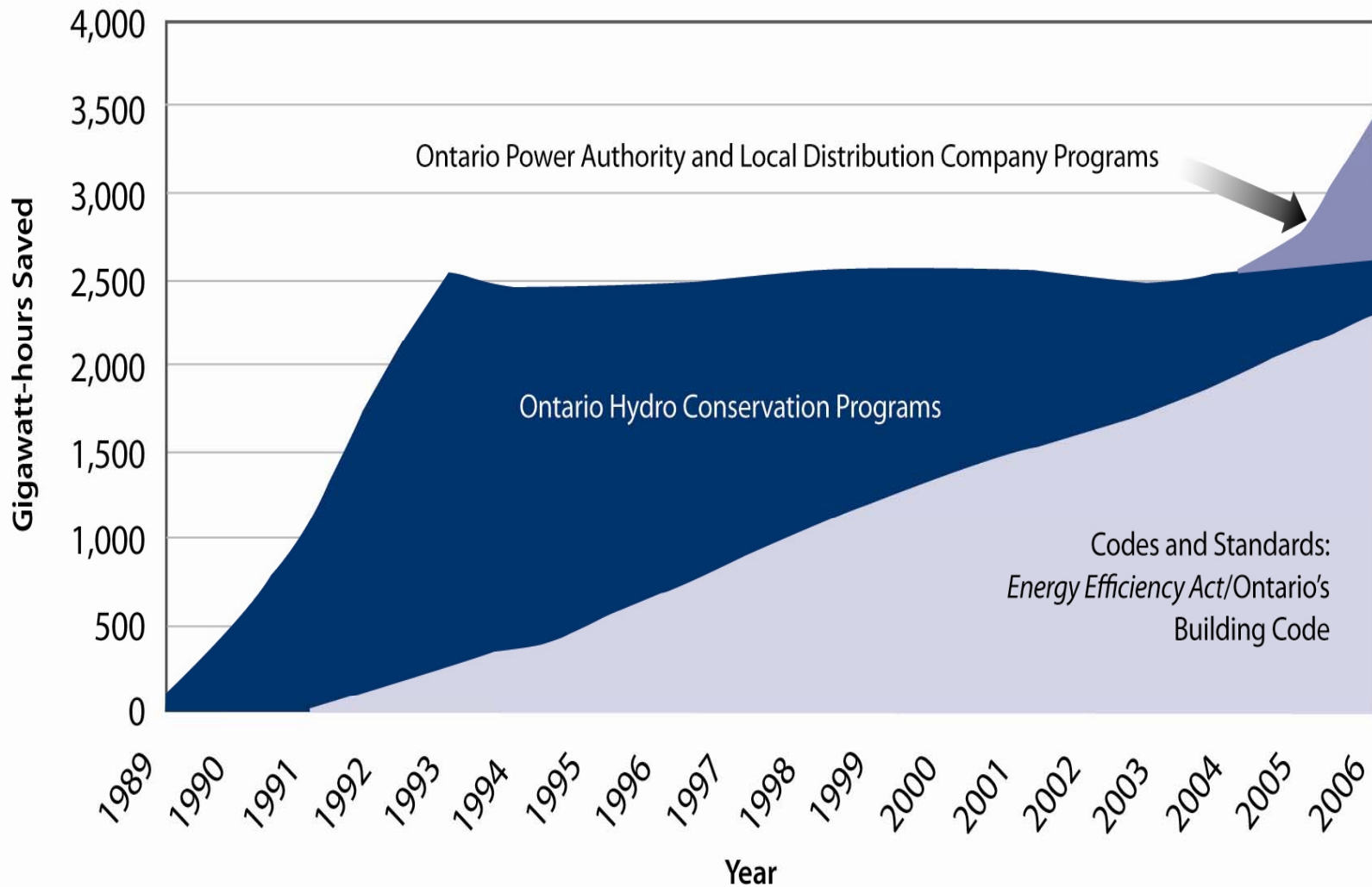
ENERGY EFFICIENCY CONTRACTORS' NETWORK

Codes and Standards

- Codes, standards and pricing may account for **up to 75 percent** of conservation in the long term.
- Results are slow in coming as they rely on the turnover of capital stock in housing, machinery and appliances, but the **effects are sustained**.
- The most successful conservation programs **use a combination** of programs (pull) and changes to codes and standards (push).



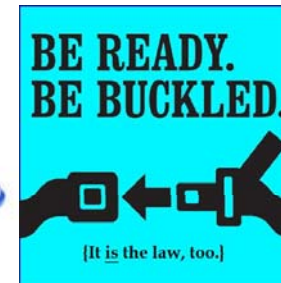
Impact of Codes and Standards in Ontario



Source: Ontario Power Authority, 2007

We've Done This Before ...

- We have changed our attitudes on recycling, seat belts, non-smokers rights and designated drivers



We can do it with energy conservation, too



In Closing – Food for Thought

“You must be the change you wish to see in the world.”

– Mahatma Gandhi, Political and spiritual leader of India

“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it is the only thing that ever has.”

– Margaret Mead, Anthropologist

