

# MADRI Working Group Presentation

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David Curtis  
Director, Business  
Transformation

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hydroOne

# Roadmap

Overview of Hydro One

Dynamic Pricing Environment in Ontario

PowerCost Monitor™ Pilot

PowerCost Monitor™ Rollout

Hydro One's Next Steps

# Hydro One at a Glance

- Largest transmitter in Ontario; Largest distributor in Ontario
- Over \$12 Billion in assets
- 640,000 sq km service territory
- Approximately 4300 employees
- 2006 Revenue: \$4.5 Billion; 2006 Net Income: \$455 Million
- Integrated 28,600 km transmission grid and interconnection system
- 122,460 km of distribution lines
- Transmission stations and switching stations: 276
- Distribution and regulating stations: 1,035
- Towers: 48,000
- Transformers: 520,000
- Low-voltage wood poles & wood pole structures: 1,600,000
- Extensive fibre-optic system with pre-built network and rights-of-way

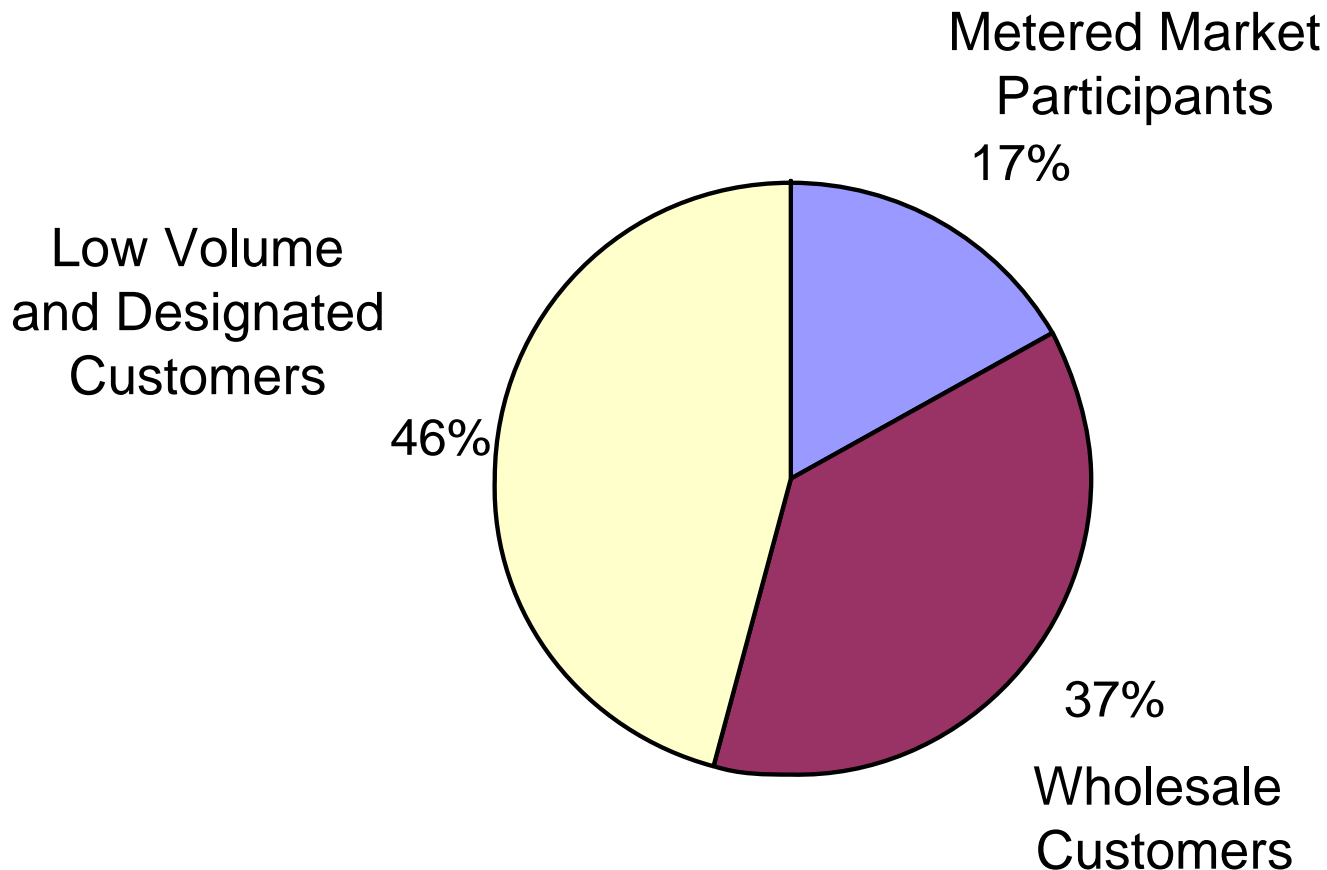
# Hydro One's Service Territory



# Dynamic Pricing Environment in Ontario

- Ontario has a hybrid electricity market:
  - Large volume customers pay hourly wholesale price +/- adjustments
  - Small Volume customers pay fixed price under Regulated Price Plan (RPP)
- Large volume customers typically mitigate pricing risk through contract
- RPP prices reset by regulator (Ontario Energy Board)

# Electricity Load by Customer Class (2006)



How do you get Residential Customers  
to respond to Price Signals?

# Electricity Prices for Regulated Price Plan Consumers

Season	Your electricity use	The regulated price you pay (per kWh)	Applies to...
Summer (May 1 – Oct 31)	Up to 600 kWh	5.3 cents	Residential consumers
	More than 600 kWh	6.2 cents	
Winter (Nov 1 – April 30)	Up to 1,000 kWh	TBD	
	More than 1,000 kWh	TBD	
All seasons	Up to 750 kWh	5.3 cents	Non-residential consumers
	More than 750 kWh	6.2 cents	



How do you get Residential  
Customers  
to respond to Price Signals?

# Ontario Ministry of Energy Direction

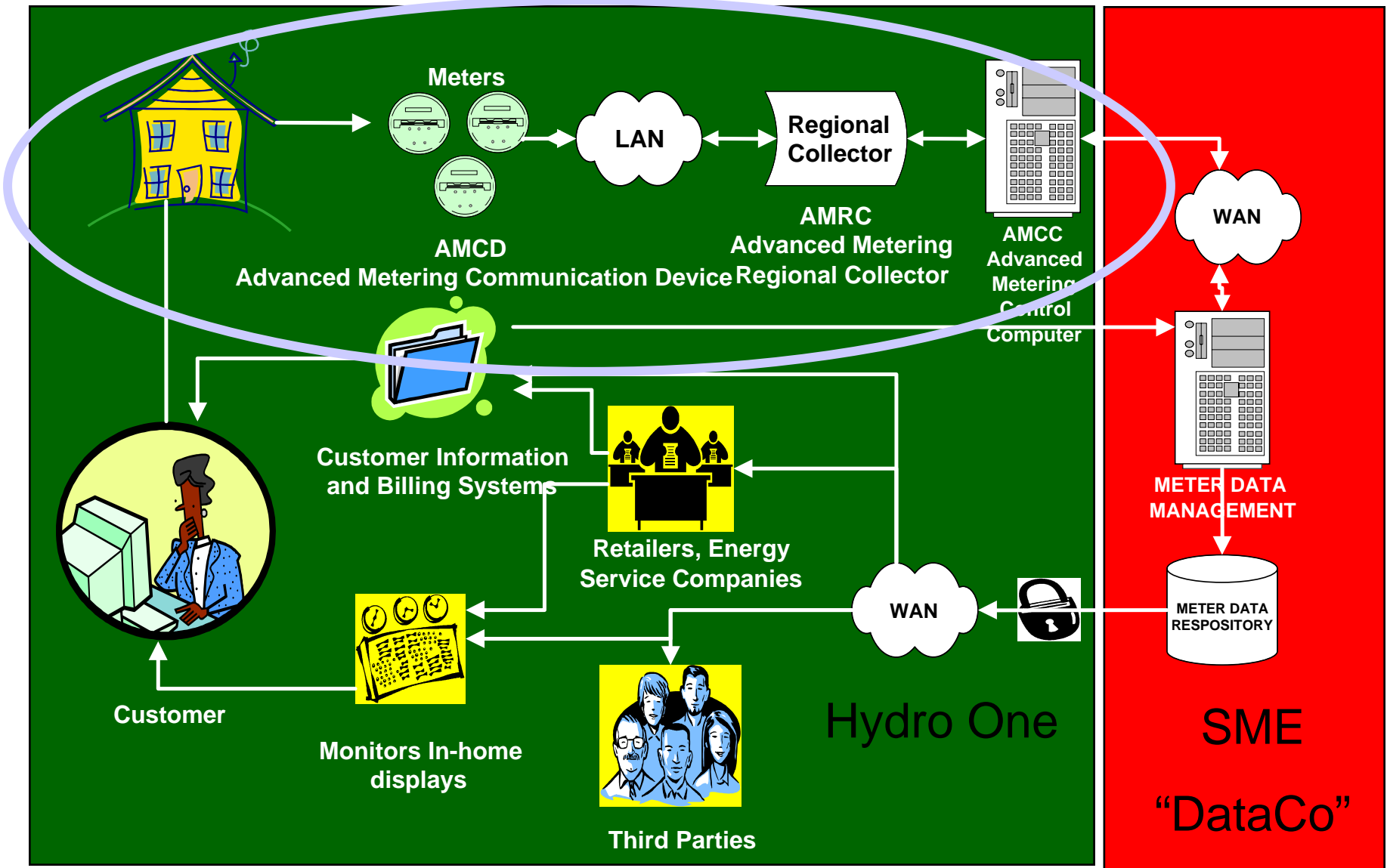
- Create an energy conservation culture across Ontario and help consumers better manage their electricity use
  - More efficient use of Ontario's existing supply
  - Reduce reliance on external generation resources
- Install 800,000 smart meters in Ontario by Dec. 2007— convert 100% to smart meters by 2010



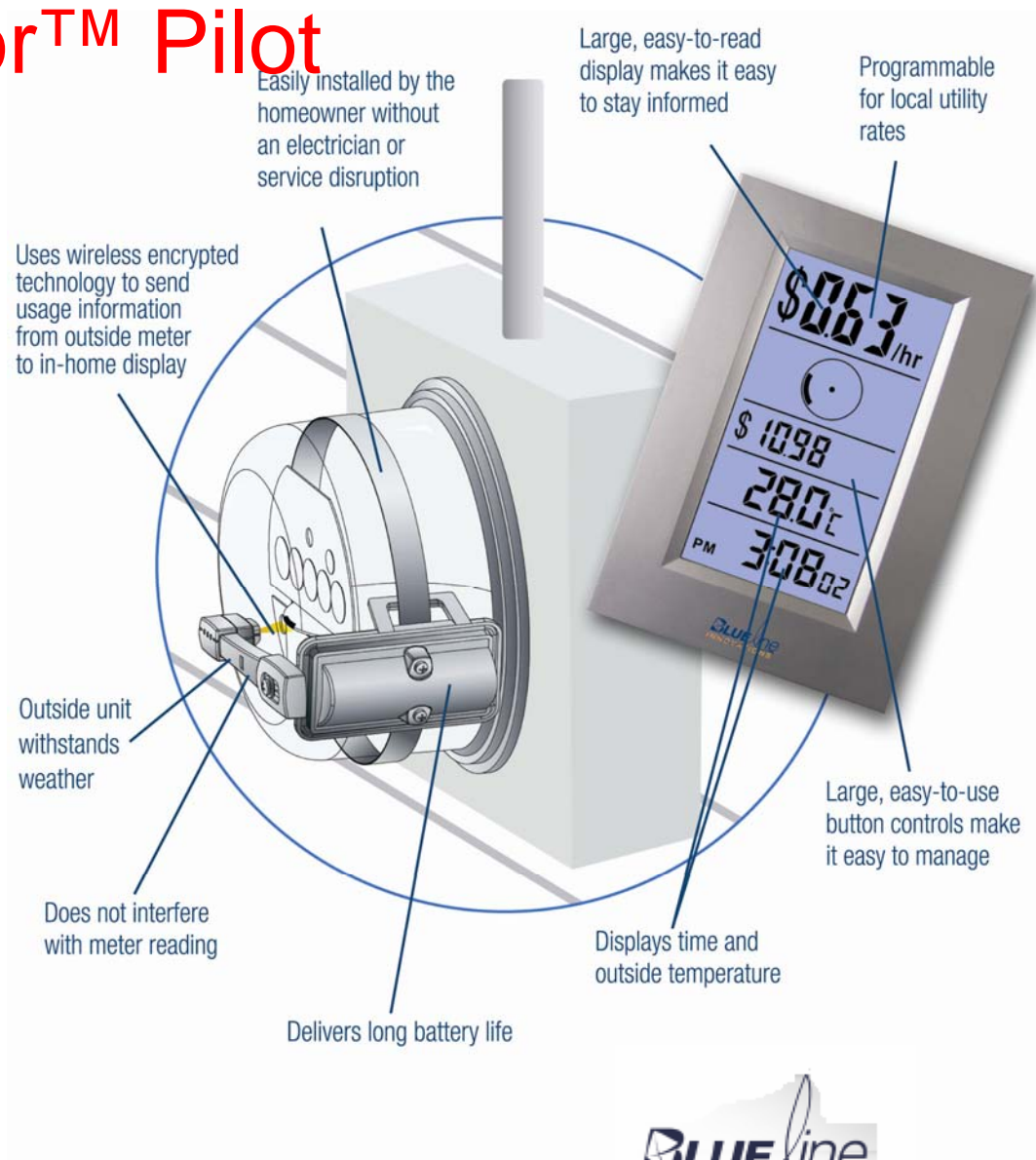
# Time of Use Prices – Smart Meters

Week	Time	Use	Price (¢/kWh)
Weekends & Holidays	All Day	Off-peak	3.2
Summer Weekdays (May 1 <sup>st</sup> – Oct 31 <sup>st</sup> )	7:00 a.m. to 11:00 a.m.	Mid-peak	7.2
	11:00 a.m. to 5:00 p.m.	On-peak	9.2
	5:00 p.m. to 10:00 p.m.	Mid-peak	7.2
	10:00 p.m. to 7:00 a.m.	Off-peak	3.2
Winter Weekdays (Nov. 1 <sup>st</sup> – Apr. 30 <sup>th</sup> )	7:00 a.m. to 11:00 a.m.	On-peak	9.2
	11:00 a.m. to 5:00 p.m.	Mid-peak	7.2
	5:00 p.m. to 8:00 p.m.	On-peak	9.2
	8:00 p.m. to 10:00 p.m.	Mid-peak	7.2
	10:00 p.m. to 7:00 a.m.	Off-peak	3.2

# Ministry of Energy. Smart Meter System



# PowerCost Monitor™ Pilot



# Hydro One's PowerCost Monitor™ Pilot Study

- Large comprehensive study

- 5 regions in our service territory

- 500 pilot customers followed over 2.5 year period

- Statistically significant results (McMaster University)

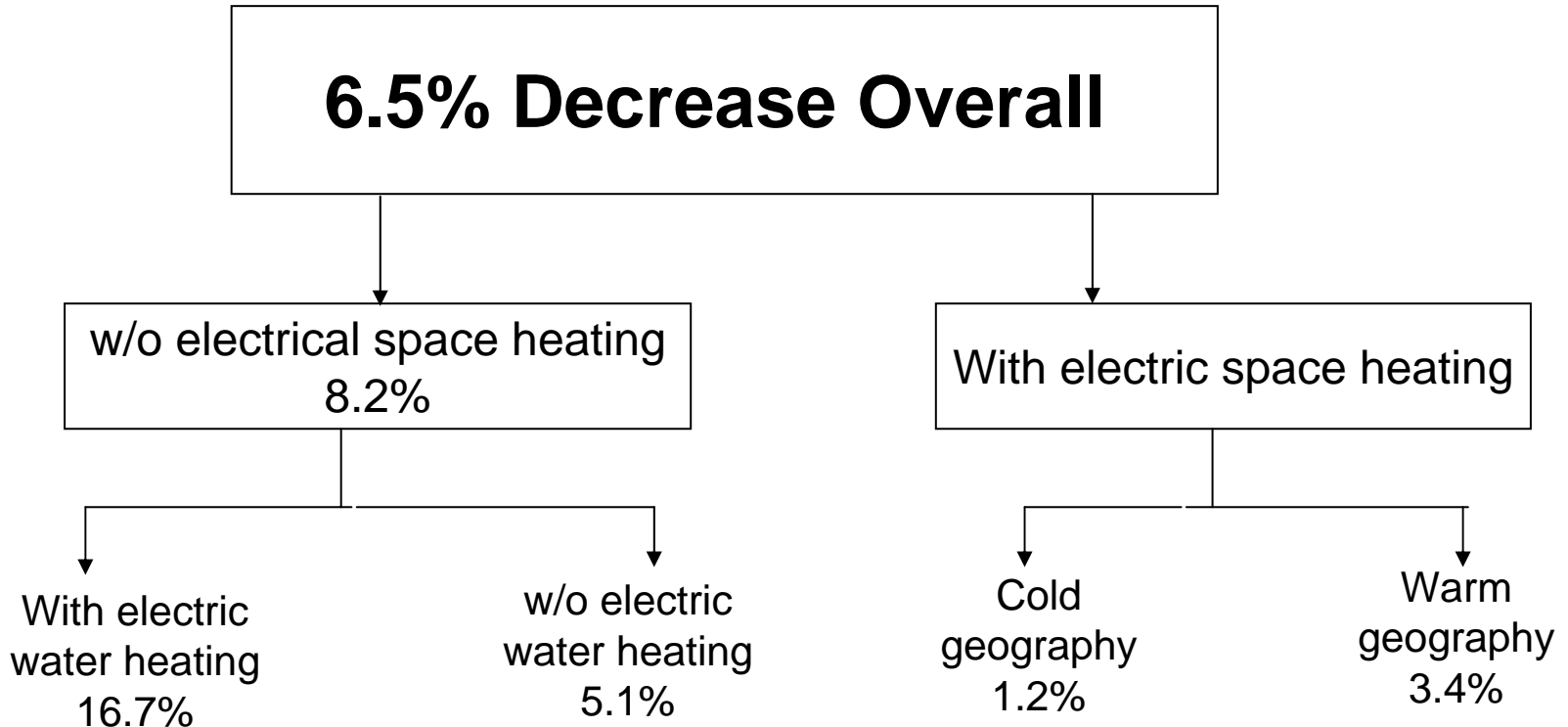
- PowerCost Monitor can be placed anywhere in the home

- Provides immediate feedback to consumers



# Customer Reduction in Electricity Consumption

Results are Impressive (1.2 – 16.7%)



**And customers love them...**

# PowerCost Monitor™ Rollout





# Program Overview

- Pilot success prompted program rollout
- Residential customers in Northern Ontario (Zones 6 and 7)
- First 30,000 customers to order receive PCM free of charge (value \$150). Customers pay shipping and handling (\$8.99)
- Third party delivery of program – Blue Line Innovations
- Marketed through bill channel, radio and newspaper advertising
- Program began July 2006; successfully completed April 2007
- Budget \$5 Million

# Program Delivery Territory

**High Voltage Transmission Lines**

- 115 kV
- 230 kV
- 500 kV

**Transmission Interconnection**

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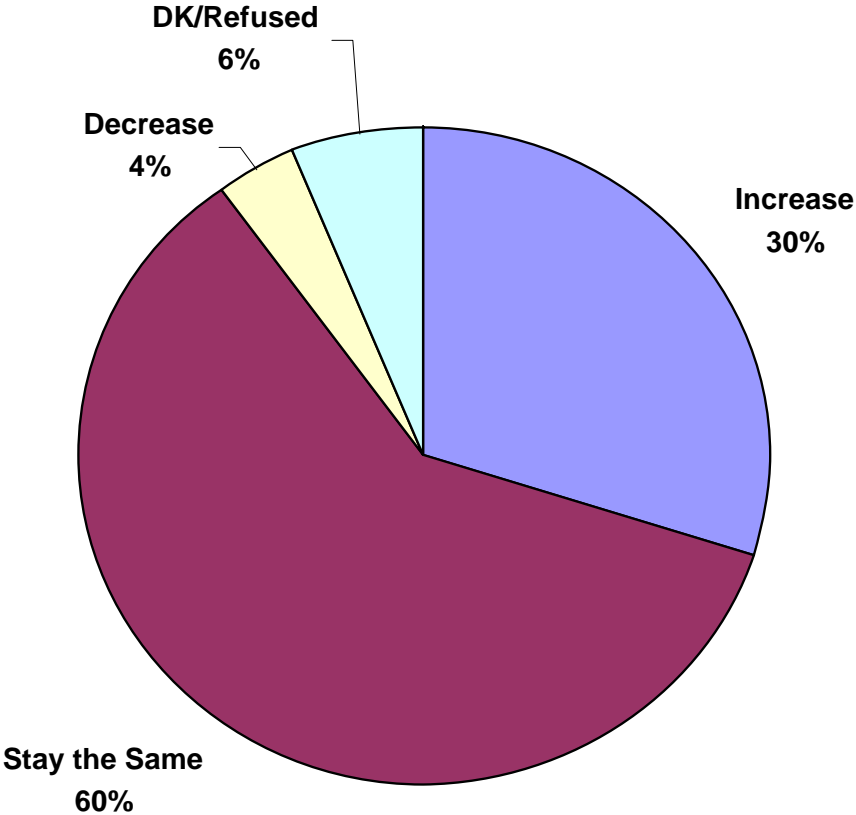
# Customer Survey – August 2006

- Purpose – Testing awareness and buyer behaviour
- Target audience – 500 customers who received bill insert
- Context – **67%** satisfaction with HONI
- Awareness of program – **57%**
- **25%** ordered monitor, **41%** likely to order
  - Main benefit expected – see how much consuming
- Awareness of Blueline Innovations – **20%**
  - Implications for reputation of HONI

# Customer Survey – October 2006

- Purpose – Customer satisfaction with product and process
- Target audience – 500 customers who ordered monitor
- Satisfaction with ordering process – **92%**
- Knowing what know now, would still order – **82%**
- PCM has had an impact on behaviour – **46%**

# Impact of Program on Satisfaction with Hydro One – Phase One & Two



Q - What impact, if any, did your experience (with PCM Program) have on your opinion of HONI?

# Widespread Notice and Interest

- Chartwell's Best Practices article (January 2007)
- Blueline earns Outstanding Energy Efficiency Technology Deployment of the Year award from the Association for Energy services Professionals (January 2007)
- Numerous internet blogs, newspaper articles, publications, radio and television interviews

# Hydro One's Next Steps

- First Nations' program in Northern Ontario
- Time of Use Pilot Study employing PowerCost Monitors™
- Track actual conservation of customers in Northern Ontario who have a PowerCost Monitor™
- Determine if in-home monitor units should be part of Hydro One's Smart Meter program going forward