



# EfficiencyOne: An Energy Efficiency Utility

2016 Alberta Climate Summit  
September 20, 2016

# Background

2010

**Efficiency Nova Scotia Corporation** established to manage electricity DSM initiatives in Nova Scotia. Initiatives are funded by a DSM charge on electricity bills. **NS Power** and **Conserve Nova Scotia** cease administering DSM and conservation programs.

2014

Legislative changes establish **Efficiency Nova Scotia** as a franchise and require DSM initiatives to be provided by a franchise holder, now known as **EfficiencyOne**. The cost of these activities are embedded in electricity rates.

2015

The **UARB** approves a 3-year, \$102 million investment in DSM activities. Funding from the **Province of Nova Scotia** continues to support no-cost upgrades in income-qualified homes across the province.

# Efficiency Nova Scotia



- A franchise granted by the Province of Nova Scotia
  - ✓ Supply DSM to NS Power
  - ✓ Provide energy efficiency and conservation services to the Province of Nova Scotia
  - ✓ Other uses as approved by the Province
- The franchise may be terminated for a failure to achieve a performance requirement
- The franchise is a Public Utility regulated by the Nova Scotia Utility and Review Board



# Services for Every Nova Scotian

## Residential

- Product rebates
- Home Energy Assessment
- New Home Construction
- Efficient product installation
- Appliance retirement
- Low-income homeowner support
- Services for rental properties and condos

## Commercial

- Product rebates
- Small business rebates/financing
- New construction
- Existing building optimization
- On-site energy managers
- Strategic energy management
- Employee engagement
- Custom projects



# Outsourced Delivery



- Nova Scotia model focuses on building industry capacity
- EfficiencyOne is an administrator of energy efficiency services
- Services are delivered by more than 100 local partners
- Partners continually evolve and improve services for participants
  - ✓ Open and competitive procurement

## Economic - Direct

- **Participants:** immediate savings through reduced energy costs
- **Everyone:** reduces strain on grid and need to invest in generation
- **Industry:** services are delivered locally

## Environmental

- Reduced GHG emissions
- Helps Nova Scotia meet emissions targets
- Decreased use of other resources (e.g. water)
- Complementary with renewable energy strategies

## Economic - Indirect

- Increases disposal income
- Increases Nova Scotia's productivity and competitiveness
- Improves energy security

## Social

- Reduces costs for institutions and community organizations
- Improves air quality, lighting, and comfort
- **Greater benefit to those with lower income**

# Customer Impact



## Oxford Frozen Foods

Savings: \$500,000 per year



## Capital District Health Authority

Savings: \$1.6 million per year



## Low Income family

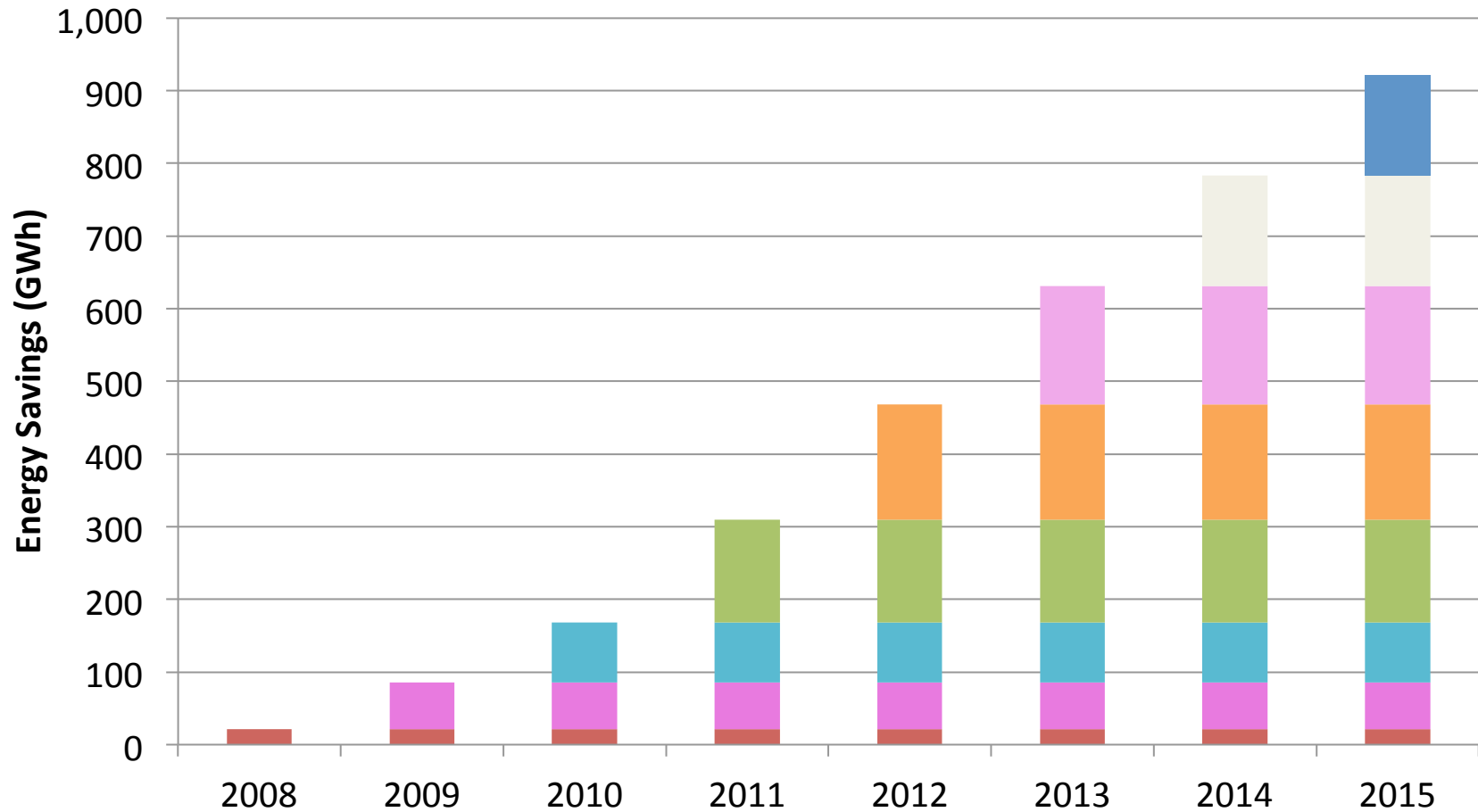
Energy costs cut by 50%



## Jewelry Retailer

Energy costs cut by 50%

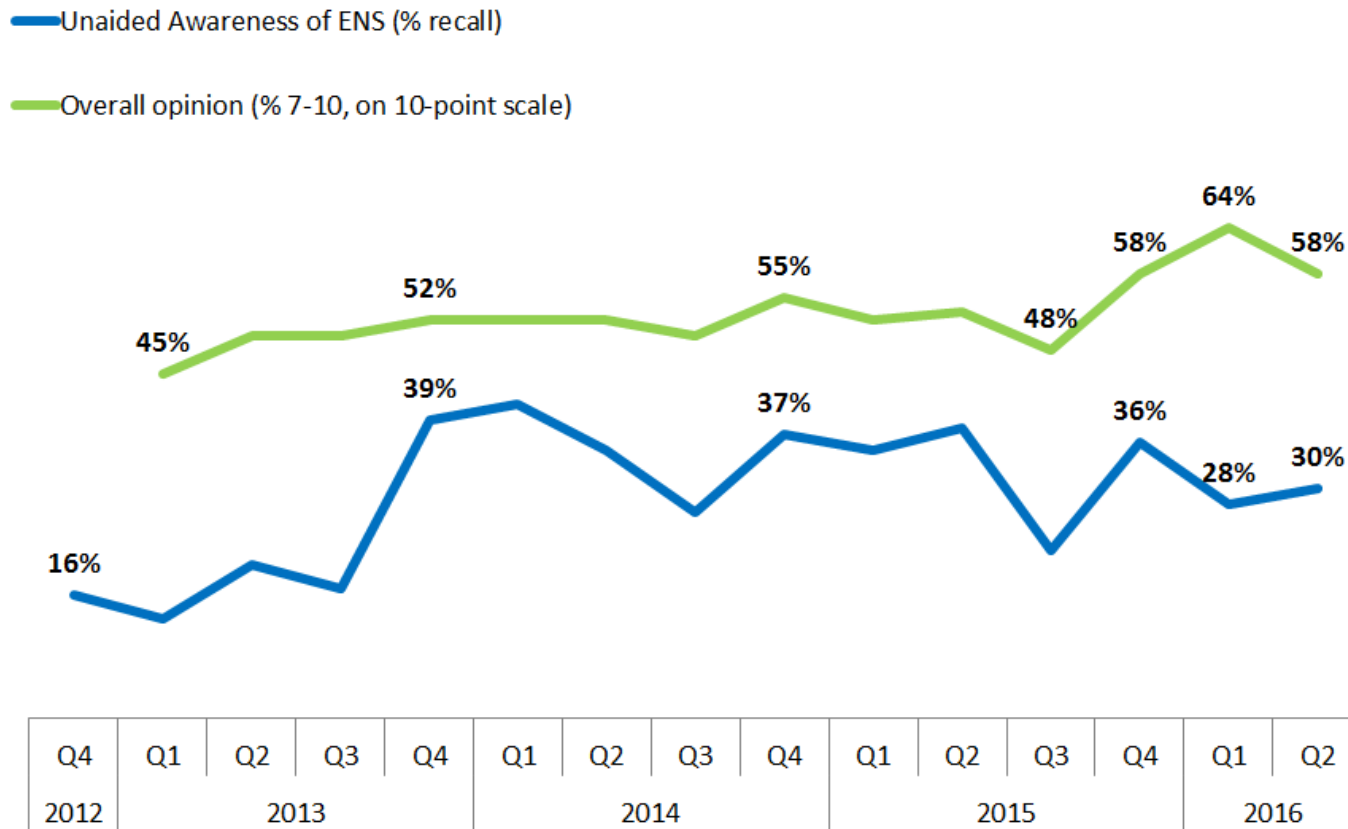
# Incremental DSM Achievements in Nova Scotia





# Overcoming Barriers: Awareness

## Awareness and Attitudinal Trends



# Overcoming Barriers: Participation



## Lack of time

*"I don't have time to figure this out"*



## Lack of knowledge

*"I don't know where to start"*

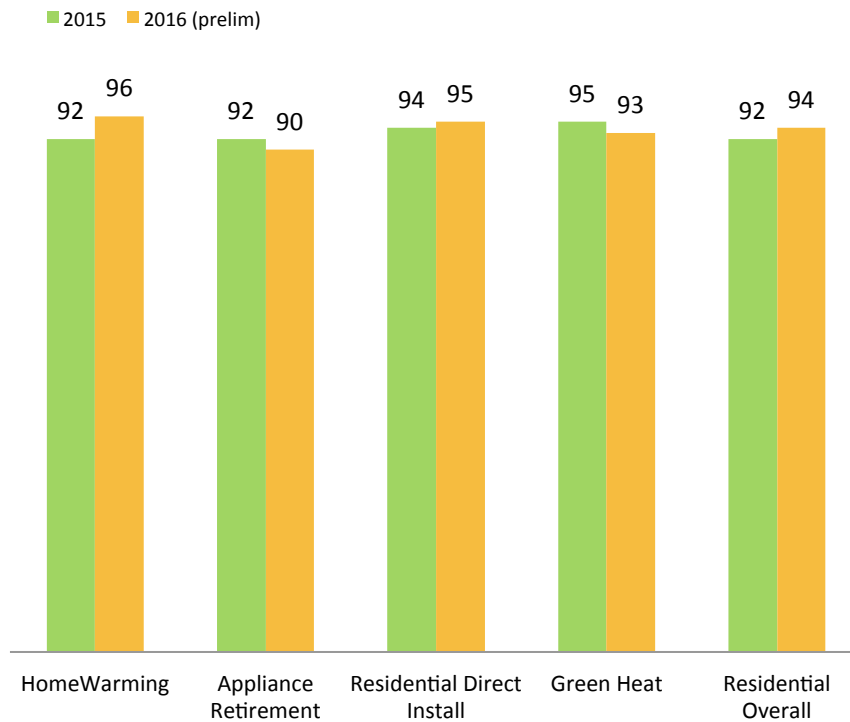


## Lack of money

*"I can't afford the upfront cost"*

# Overcoming Barriers: Support

**Residential Customer Satisfaction**  
(as of June 2016)



## Independent Audits and Evaluation

Financial Statement Audit	Ensures financial statements are free of material misstatement
Cost Allocation Audit	Ensures just and reasonable allocation of costs between electricity efficiency and non-electric efficiency services
Program Evaluation	Ensures effectiveness of EfficiencyOne's program design and delivery, and that energy savings are measured accurately
Program Verification	Verifies that efficiency projects were implemented effectively and that energy savings are correctly measured
Other Audits & Evaluations	Examine EfficiencyOne's organizational practices and internal control systems

# Overcoming Barriers: Support



“The numbers speak for themselves.”

- Clark Hanna, Production Manager, Oxford Frozen Foods

#### OXFORD FROZEN FOODS

Over the past three years, we've worked with industrial companies like Oxford Frozen Foods to improve productivity and reduce operating costs through our Energy Management Information Systems (EMIS) service. EMIS provided the Appetizer Plant with the tools and training required to systematically monitor, manage, and control their energy consumption.

“Having Efficiency Days at the Discovery Centre was a great way to expose students to issues and solutions regarding energy efficiency and other “green” matters. As a science teacher, the hands-on opportunities for learning are the most engaging, most lasting and most far-reaching.”

- Eva Farmakoulas, Science Teacher, Gorsebrook Jr. High



#### DISCOVERY CENTRE

Last fall over 50 students visited the Discovery Centre for a day to learn from experts in the energy efficiency industry. Students learned how to identify air leaks using ultrasonic headphones, how to conduct a blower door test and had the chance to build their own energy efficiency model home through our sponsored Heat of the Moment program.

“In the long-term, it allows us to be a sustainable company, in a market that’s growing in leaps and bounds.”

- Blaire Martell, Owner, Lobsters 'R' Us



#### LOBSTERS 'R' US

Every year since 2012, Lobsters 'R' Us has implemented large-scale efficiency projects. They've now automated 100% of their plant - recording, controlling and documenting all operations and energy consumption. This has improved their efficiency by more than 33%.



“The school certainly wouldn't be as efficient without Efficiency Nova Scotia's participation. It was very, very welcome.”

- Chief Terry Paul, Membertou First Nation

#### MEMBERTOU FIRST NATION

Membertou First Nation's new elementary school has energy saving features expected to trim annual electricity costs by \$70,000. Through our New Construction program, energy efficient technologies were incorporated into the building plans for the new school that exceeded the energy code baseline by 60%. Technologies included an open-loop ground source heat pump, improved insulation, low flow faucets, more efficient light fixtures and occupancy sensors.

# Current Innovations and Pilots

- Property Assessed Clean Energy (PACE) Financing Programs for Municipalities
- Public Purpose Energy Services Company
- Behavioural Demand Response Pilot for Municipal Utilities
- Combined Home Inspection/ Energy Assessment on Home Sales
- Geotargeting
- Revolving Microlending Fund for Energy Efficiency Upgrades
- Online Educational Tool
- Community Ambassadors
- Upgrades for Homes Built in the Early 1900s
- Energy Specialist Dedicated for New Home Construction
- Affordable Multifamily Housing Upgrades

# Summary

*At \$0.03/kWh, energy efficiency is one of the most cost effective and quickest responses to mitigate climate change. It's sourced locally, creates jobs for Nova Scotia's youth and improves the Province's productivity and competitiveness.*

