

# Linking Sustainable Energy Strategies with Various Sectors

*A Macro Perspective  
on Energy Efficiency*

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EfficiencyOne Services

# About EfficiencyOne Services

- Based in Nova Scotia, Canada
- Specialized in energy efficiency
- Subsidiary of EfficiencyOne, operator of Canada's first energy efficiency utility
- Services:
  - Energy efficiency policy support
  - Efficiency program design and administration
  - On-site services for large customers
- Work in Barbados with Caribbean LED Lighting Inc., EnSmart Inc. and BREA

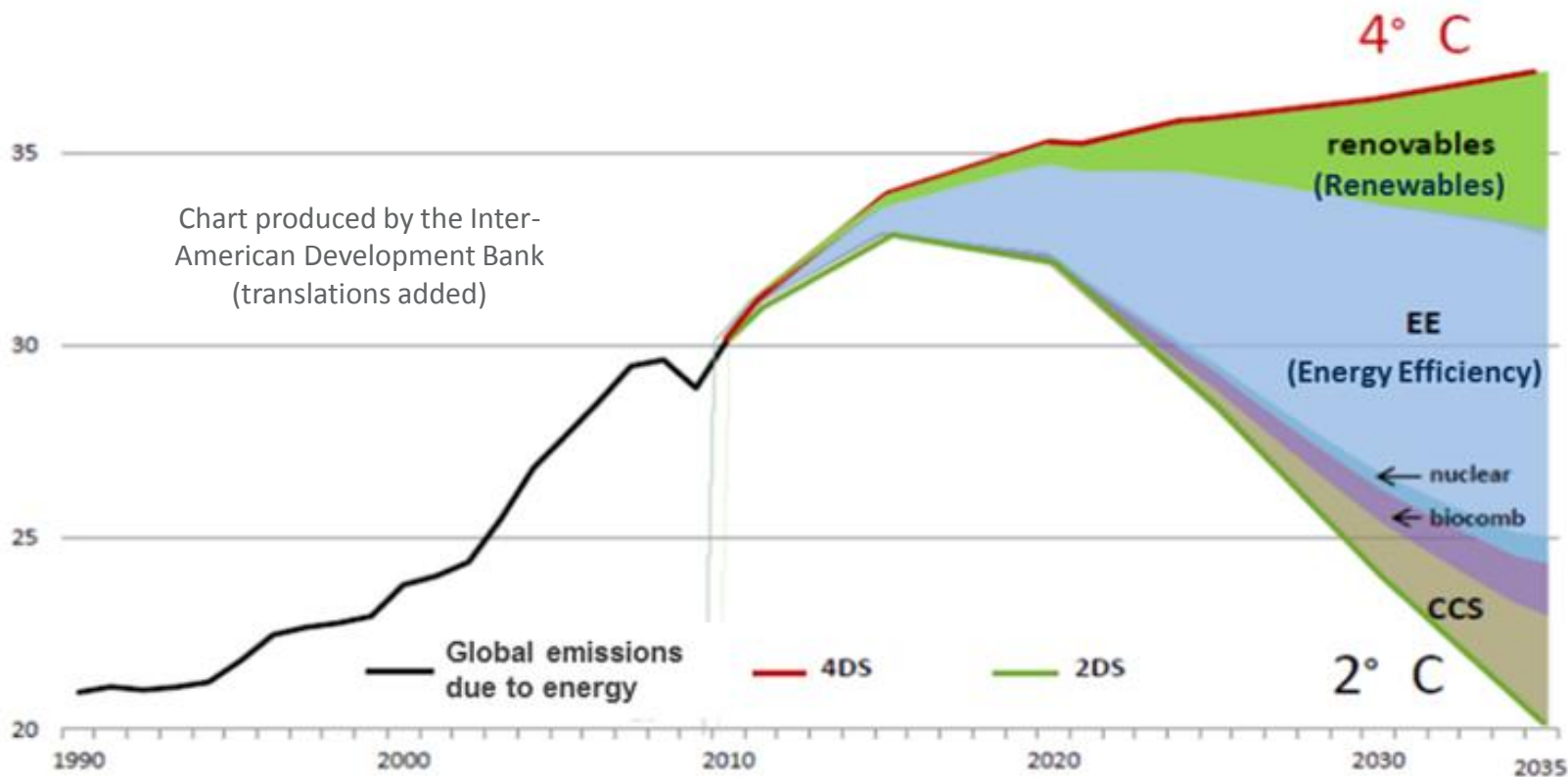


# The Challenge

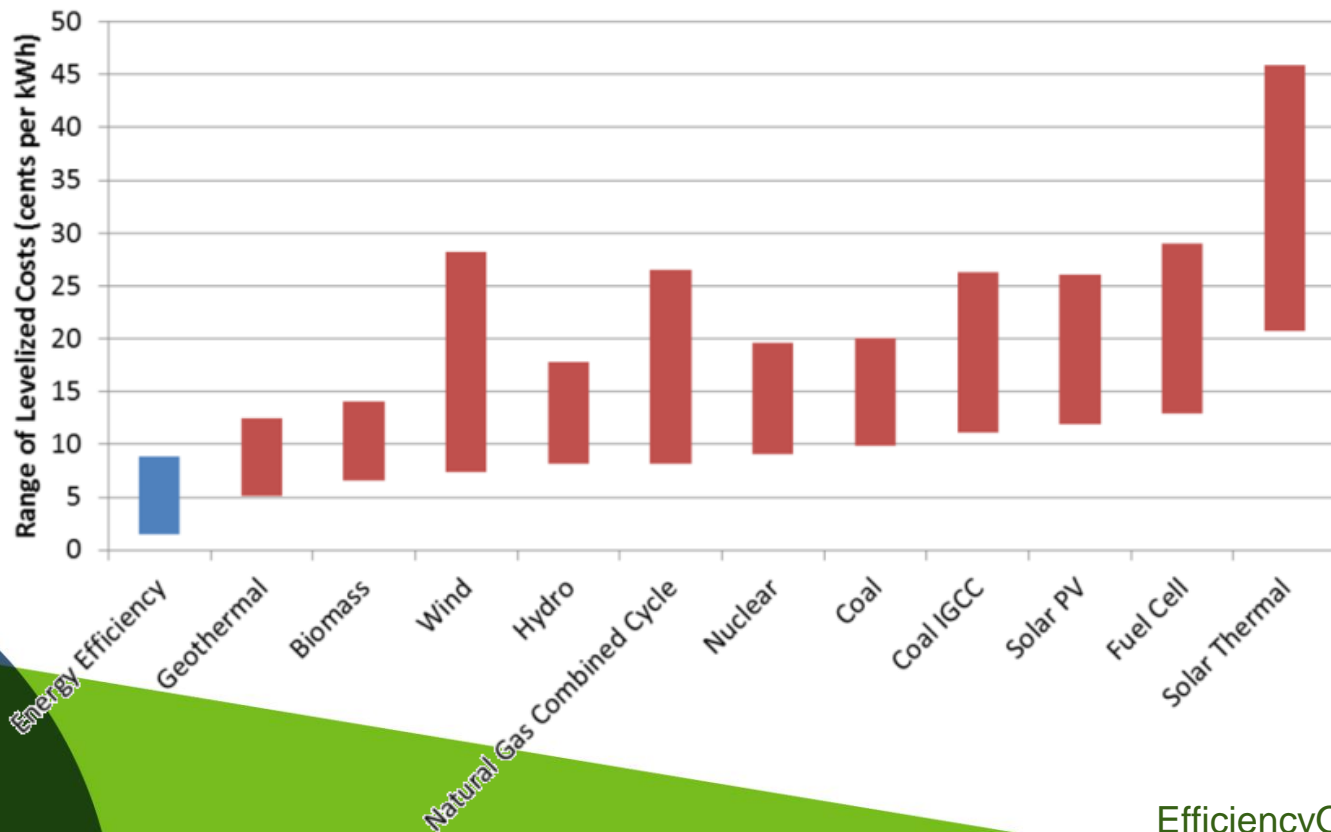
190 countries have COP21 commitments for GHG reductions



# How much can Energy Efficiency Contribute?



# How Much does Energy Efficiency Cost?

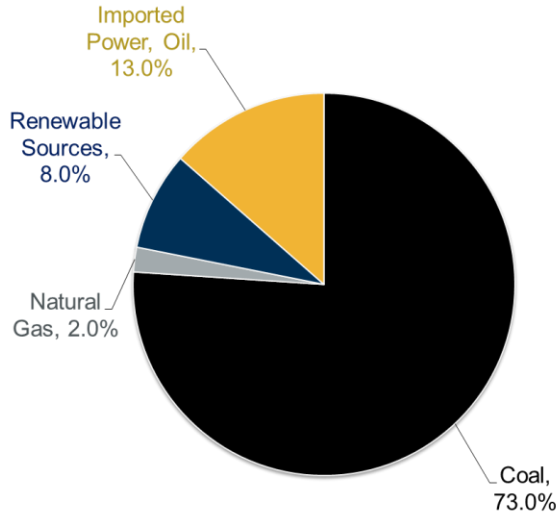


# Efficiency Enables Uptake of Renewable Energy

- The best approach to overall system efficiency:
  1. Reduce the load
  2. Optimize distribution and transmission
  3. Optimize generation
- Three for the price of one
  - Electricity systems are about 30% efficient
- It's easier to sell renewable systems to efficient customers

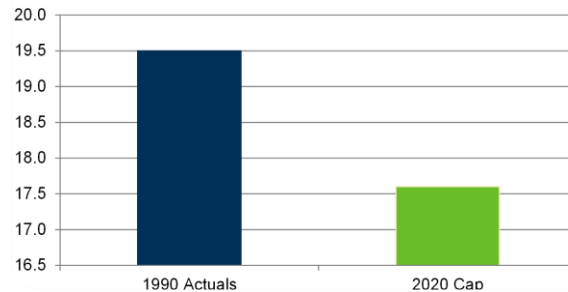
# Nova Scotia: Policy Goals

Nova Scotia's Electricity Mix: 2005

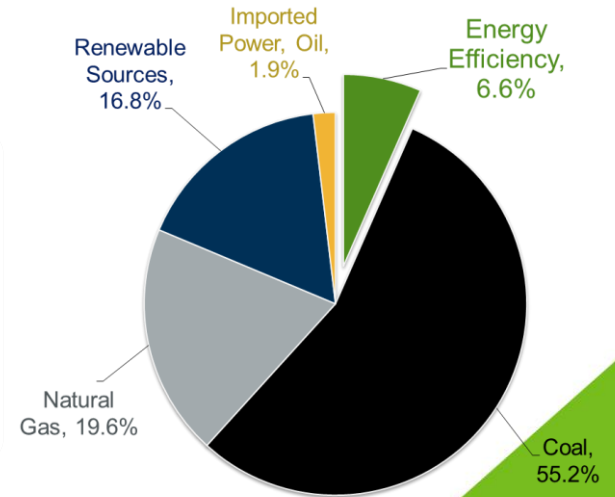


2005: First in North America to set hard caps on CO<sub>2</sub> emissions

Total NS CO<sub>2</sub> Emissions (Mt)



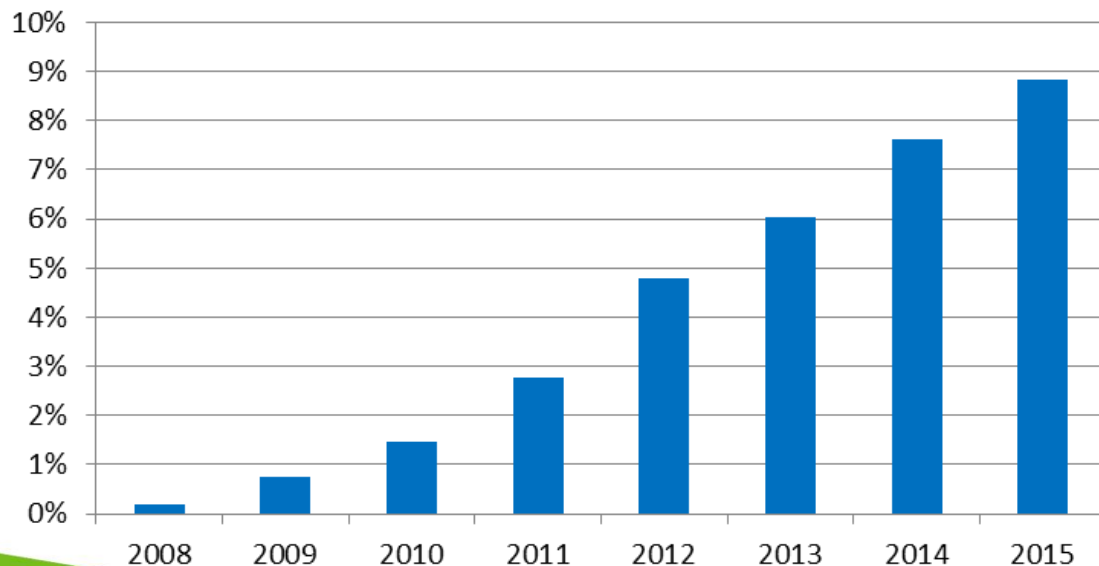
Nova Scotia's Electricity Mix: 2014



# Results in Nova Scotia

Annual electricity bill savings total CAD \$110M (and growing)

Savings as % of Total Electrical Energy Use



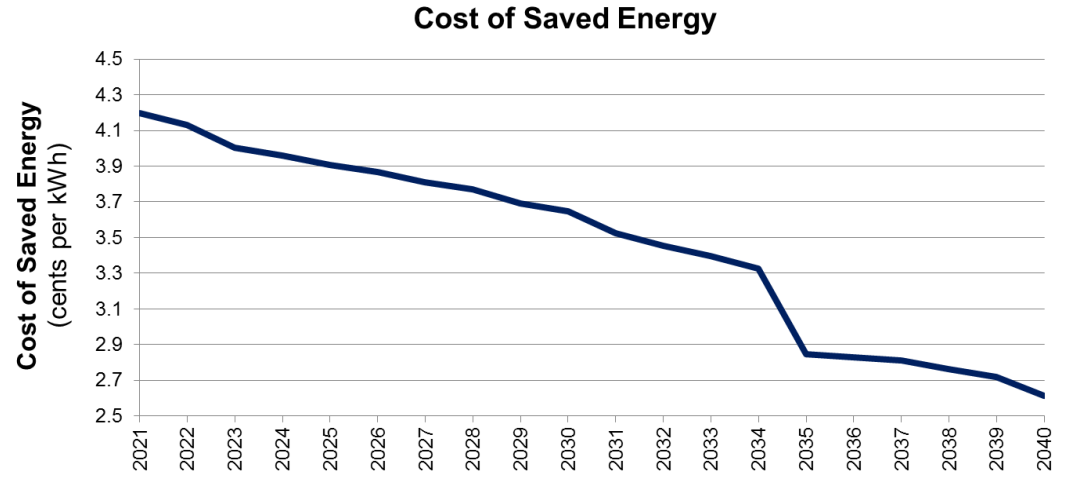
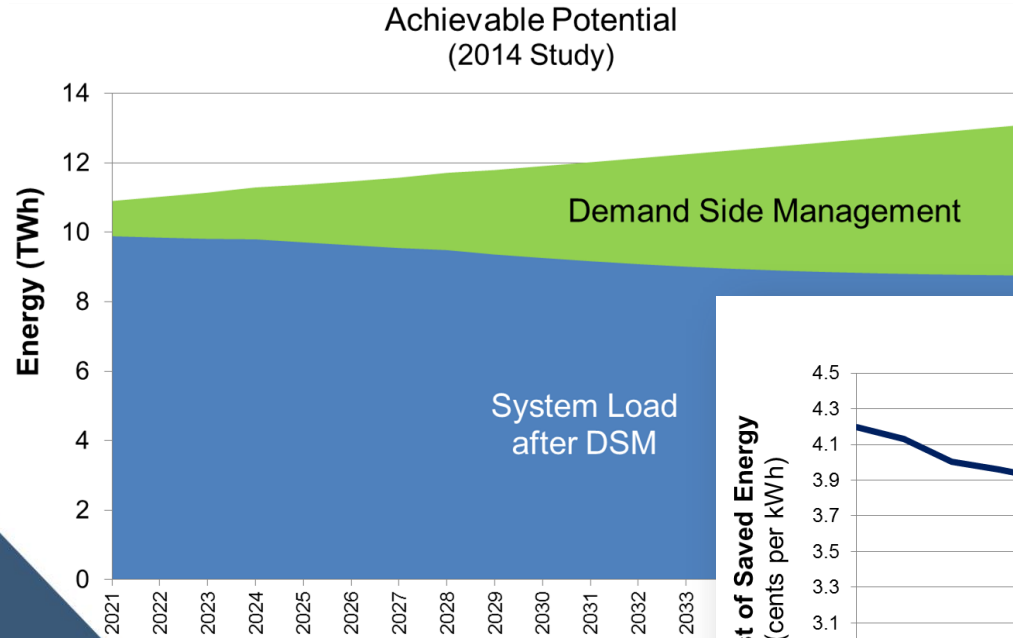


# Results in Nova Scotia: Economic Impact



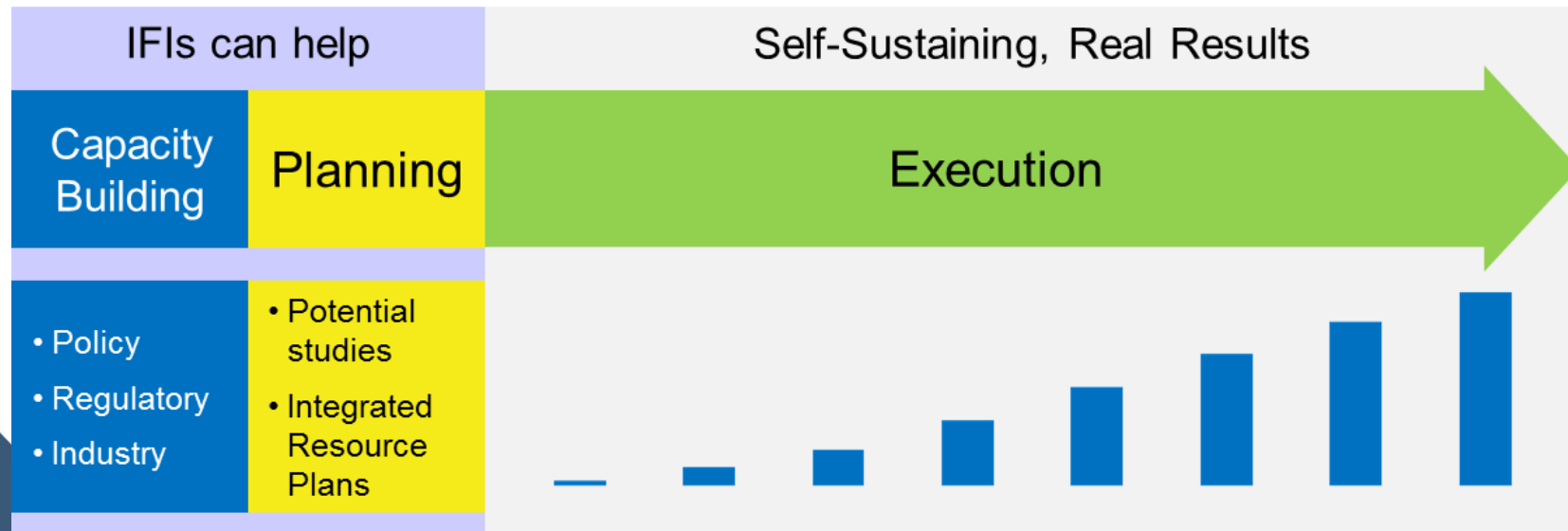
- Growth in quality jobs
- More competitive businesses
- More disposable family income
- Reduced energy imports

# Results in Nova Scotia: Low Hanging Fruit all gone?

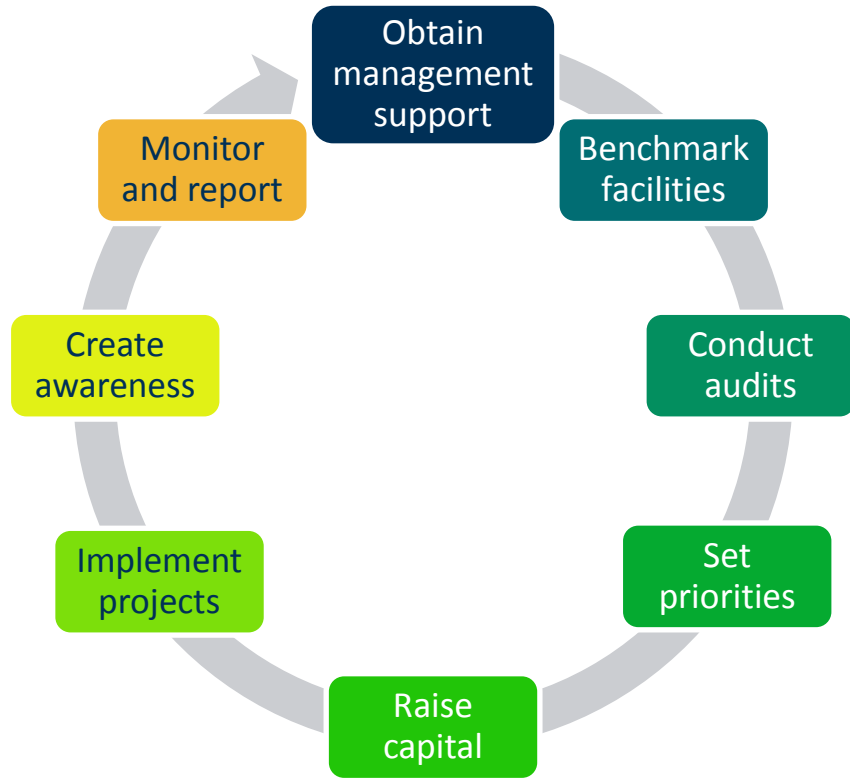


# Opportunity: Macro Scale

Centralized efficiency programs work, where conditions are right.



# Opportunity: Commercial/Industrial sectors



Efficient commercial buildings can use 20% to 50% less energy than inefficient buildings.

**Thank You**