2020 EVALUATION OF LONG ISLAND ENERGY EFFICIENCY PORTFOLIO

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IN 2020, THE ENERGY EFFICIENCY UNDERWENT A SUBSTANTIAL SHIFT

- In 2020 New York set new statewide energy efficiency targets on an energy (Btu) basis as part of de-carbonization
- The shift placed beneficial electrification of building and transportation on par with energy efficiency
- In response, PSEG Long Island:
  - Included beneficial electrification measures in its offerings
  - Changed its primary performance metric from electric energy (kWh) and peak demand (kW) to MMBtu at site
- The shift in metrics required PSEG Long Island to change its planning, tracking, and reporting infrastructure
- Program delivery had to adapt program processes due to COVID and shift to virtual audits and inspections

PSEG Long Island was the first utility in New York to shift to a MMBtu performance metric and one of the first utilities in the U.S. to do so

ENERGY EFFICIENCY CYCLE AND OBJECTIVES

	Planning	Implementation	Audit & Verification	Evaluation
Objective	Set goals for future years and set rules for how savings will be calculated for performance	Recruit participants, maximize energy savings, and track activities	Determine if the implementer used the assumptions and calculations pre-approved by PSEG Long Island	Produce the best after-the-fact estimate of savings using the best methods and data available to inform future planning.
Timeline	• **Spring 2019**: Planning for 2020 using draft 2020 TRM assumptions.	• **2020**: Portfolio Programs implemented	• **January 2021**: Verified Ex-Ante Savings Calculated using assumptions from 2019	• **Spring 2021**: Ex-Post evaluation of 2020 portfolio using most up-to-date methods and information

2020 KEY METRICS

Societal benefit-cost ratio **1.74**

$79.6 Million spent

3,280,636 Lightbulbs sold at 378 storefronts

MMBtu in energy savings **889,462**

Customers receiving Home Energy Reports **416,793**

256,124 MWh in electricity savings

5,973 Heat Pumps sold

kW in peak reduction **48,064**

1.315 Million short tons lifetime carbon saved

OTHER KEY FACTS

- The carbon reduction equivalent of removing 255,000 combustion engine cars for a year
- $76.7 million in net societal benefits
- 1.27% reduction on in territory wide electricity use
- 0.91% reduction in system peak demand

BENEFITS

- Avoided energy costs (LBMP)
- Avoided capacity costs
- Avoided T&D costs
- Avoided other fuel costs
- Avoided carbon

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2020 PROGRAM ENERGY SAVING VS GOALS

	Energy Efficiency Program	Planned Savings MMBtu	Ex Post Gross Savings (Evaluated) MMBtu	% of Planning	
Commercial	Commercial Efficiency Program (CEP)	329,232	306,343	93.0%	
Residential	Energy Efficiency Products (EEP)	324,990	363,522	111.9%	
	Home Comfort (HC)	111,021	83,487	75.2%	
	Home Performance	28,387	28,329	99.8%	
	Home Energy Management (HEM)	233,883	105,204	45.0%	
	Residential Energy Affordability Program (REAP)	3,903	2,577	66.0%	
Total Energy Efficiency Portfolio:		1,031,416	889,462	86.2%	

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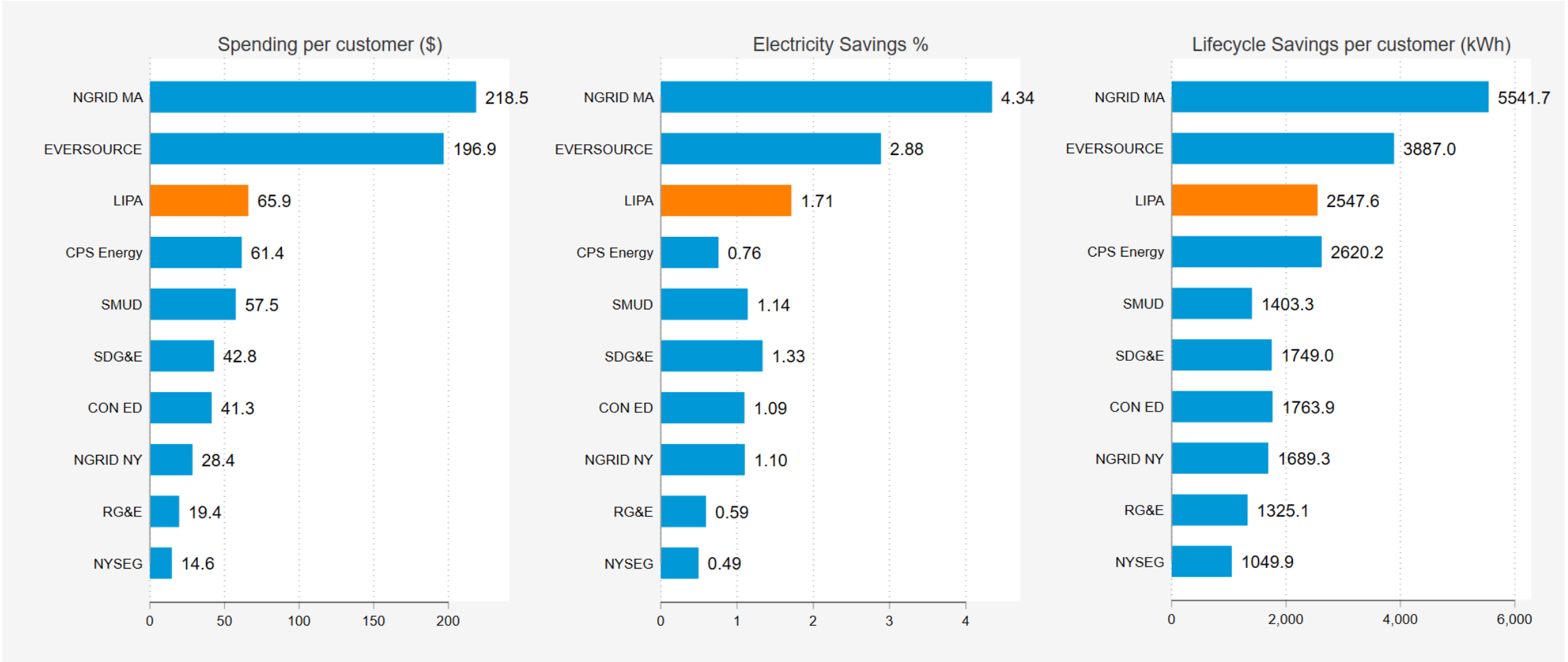
HOW DOES LONG ISLAND COMPARE TO OTHER UTILITIES?



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KEY TRENDS

TECHNOLOGY

- Lighting savings (phasing out)
- AMI and Software based measures
- Heat pumps (ramping up)
- Battery Storage (ramping up)

POLICY

- LED lighting expected to become the baseline
- Emphasis on disadvantaged communities
- 70% Renewables by 2030
- 18% emissions reduction compared to 1990

CONCLUSIONS

- The programs are highly cost-effective
- Based on the level of spending, the programs yield similar or larger savings than peer utilities
- PSEG Long Island continues to leverage evaluation results to improve program design, operations, and planning
- PSEG Long Island is proactively addressing changing markets and regulatory circumstances and identifying new savings opportunities
- Programs continue to yield positive impacts on Long Island electric system, economy, and environment
- Heat pumps have proved to be highly cost-effective (but are no replacement lighting)
- The two-year lag between planning and evaluation creates challenges. A move towards continuous evaluation can help.

QUESTIONS?

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