CLCPA Overview &

NYSERDA's NYS Clean Heat Market Development Plan



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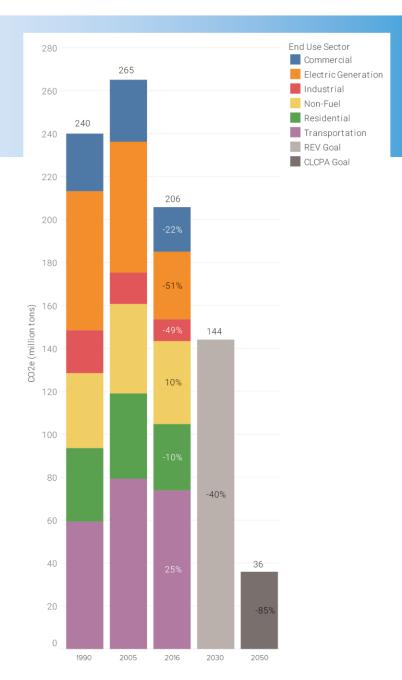
Climate Leadership and Community Protection Act (CLCPA) – Overview

- > Most aggressive greenhouse gas reduction goals of any major economy: 40% by 2030, 85% by 2050
- > 70% renewable energy by 2030, 100% zero-carbon electricity by 2040
- > Path to carbon neutrality
- > Codifies clean energy targets
- > Commitments to environmental justice, disadvantaged communities, and just transition
- > First statutory Climate Action Council

NYS GHG Emissions

New York State GHG Emissions by Source Category, 2016 (MMtCO2e)

> 13% reduction in total New York State GHG emissions since 1990



CLCPA by the Numbers, Targets Codified into Law

Carbon neutral economy, mandating at least an 85% reduction in emissions below 1990 levels 40% reduction in emissions by 2030 100% zero-carbon electricity by 2040 70% renewable electricity by 2030 9,000 MW of offshore wind by 2035 6,000 MW of distributed solar by 2025 3,000 MW of energy storage by 2030 **185 TBtu on-site energy savings by 2025**

Building Electrification Must be a Focus



Electric heat pumps deliver greater efficiency and emission reduction as electricity becomes cleaner

Deployment must scale aggressively to provide these benefits

Technology and business model innovations will be key to cost reduction

NYS Clean Heat – Case-18-M-0084

- \$454M in Statewide Heat Pump Incentive Program
 - □ Consumer incentives
 - □ Led by: NYS Utilities
 - NYS Clean Heat Statewide Heat Pump Program Implementation Plan
 - NYS Clean Heat Statewide Heat Pump Program Manual
- \$230M in Market Development Plan
 - □ Initiatives to develop the NYS heat pump market
 - □ Support the goals of the Statewide Heat Pump Incentive program
 - □ Led by: NYSERDA
 - □ Plan details: Appendix 1 in the Implementation Plan

Critical Market Need	Total Funding	Initiative	Budget
TRAIN AND DEVELOP THE NEEDED CLEAN HEATING AND BUILDING ELECTRIFICATION WORKFORCE	\$38.2	WORKFORCE DEVELOPMENT	\$38.2
BUILD CONSUMER DEMAND AND MARKET CONFIDENCE AND REDUCE CUSTOMER ACQUISITION COSTS	\$60.9	MARKETING	\$19.2
		COMMUNITY CAMPAIGNS	\$10.0 ^{1a}
		CRITICAL TOOLS	\$4.0
		TECHNICAL ASSISTANCE	\$27.7
DRIVE PERFORMANCE IMPROVEMENTS, REDUCE COST, AND DELIVER NEW ECONOMIC SOLUTIONS THROUGH TECHNOLOGY INNOVATION AND DEMONSTRATIONS	\$60.0	CLEAN THERMAL DISTRICT SYSTEMS	\$15.0
		HVAC TECHNOLOGY CHALLENGES	\$15.0
		EMPIRE BUILDING CHALLENGE	\$15.0
		MULTIFAMILY BUILDING DEMONSTRATIONS	\$5.0
		COST REDUCTION STRATEGIES	\$10.0
MAKE ELECTRIFICATION SOLUTIONS AVAILABLE FOR LMI CONSUMERS	\$31.0	LMI	\$31.0 ^{1b}
MAKE PRODUCTS AVAILABLE WHEN AND WHERE CONSUMERS NEED THEM BY BUILDING THE CLEAN HEAT SUPPLY CHAIN	\$12.0	SUPPLY CHAIN	\$12.0
MINIMIZE WINTER ELECTRICAL PEAK BY INVESTING IN DEMAND REDUCING "HEAT- PUMP READY" SOLUTIONS	\$26.5	COMFORT HOME	\$26.5
DEVELOP A LONG-TERM BUILDING ELECTRIFICATION ROADMAP TO GUIDE THE TRANSFORMATION OF HOW NEW YORKER'S HEAT AND COOL THEIR BUILDINGS	\$1.0	BUILDING ELECTRIFICATION ROADMAP	\$1.0
Sub-Total (representing the Heat Pump Phase 2 sub-initiatives in this Investment Plan			\$98.2
TOTAL (representing totality of NYSERDA's Investments in the NYS Clean Heat Market Development Plan			\$229.6

Thank You

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