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EnergyVision 2030

Transitioning to a Low-Emissions Energy System in the Northeast

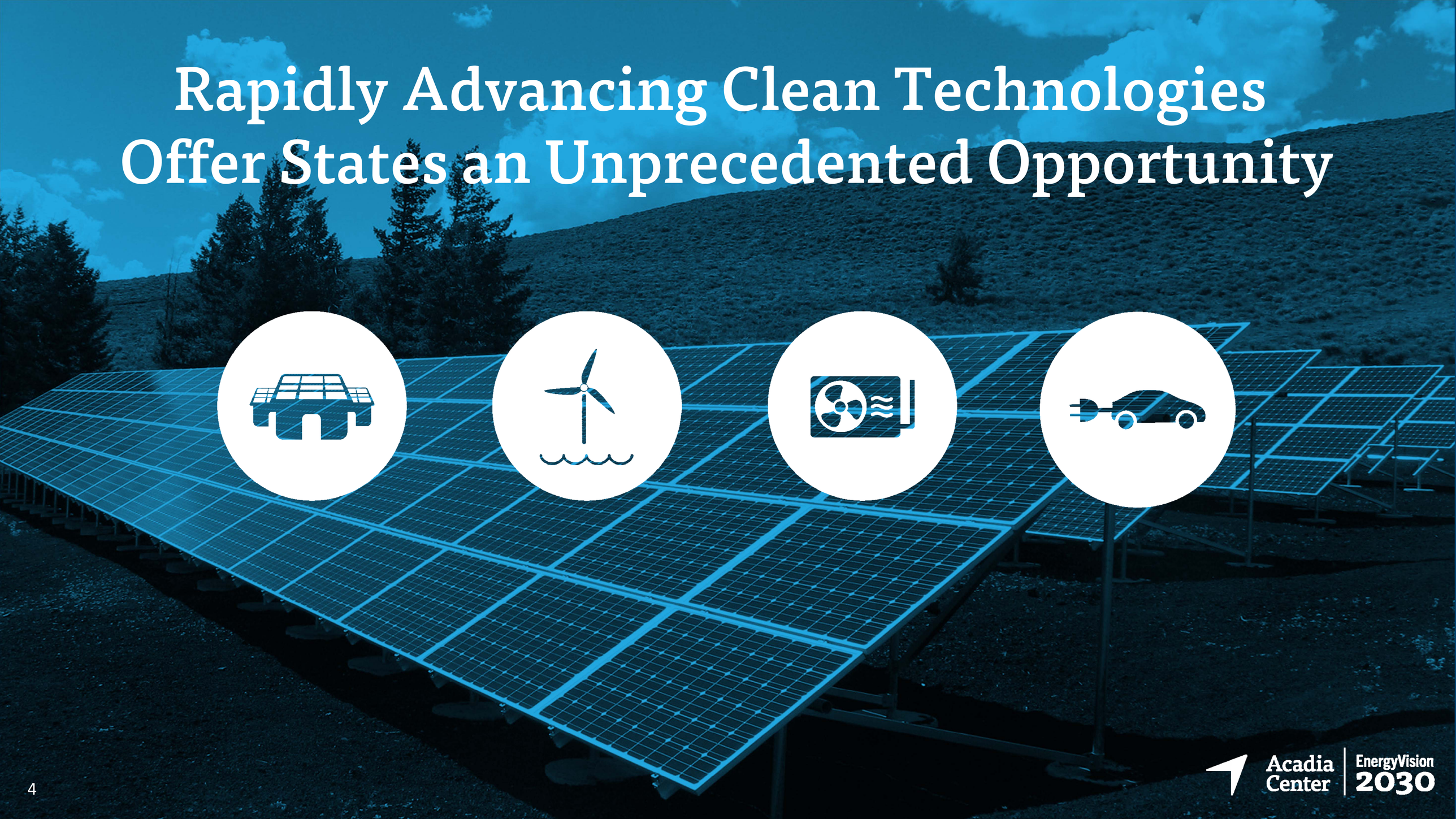
Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont

Questions We Addressed

EnergyVision 2030: Overview

- Data driven analysis for 7 states
- What clean energy market levels are needed to achieve 45% GHG reduction from 1990 levels
- Policy recommendations in 4 key areas
- States can achieve 2030 climate goals **if they act now**.

Rapidly Advancing Clean Technologies Offer States an Unprecedented Opportunity



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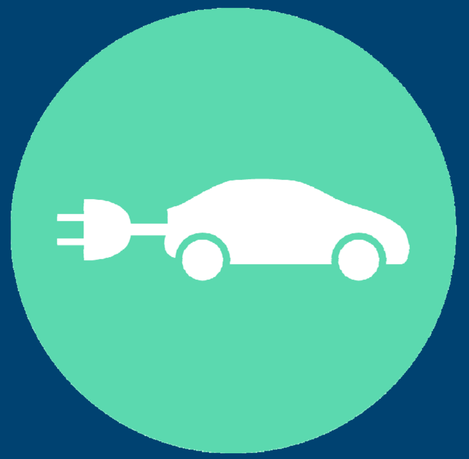
Pathways in 4 Key Areas:

Generation



Transportation

Buildings

Grid

EnergyVision 2030: Providing the Data and Pathways for Clean Energy Market Goals

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EnergyVision 2030 Undertook Extensive Modeling of These Markets to Get the Numbers

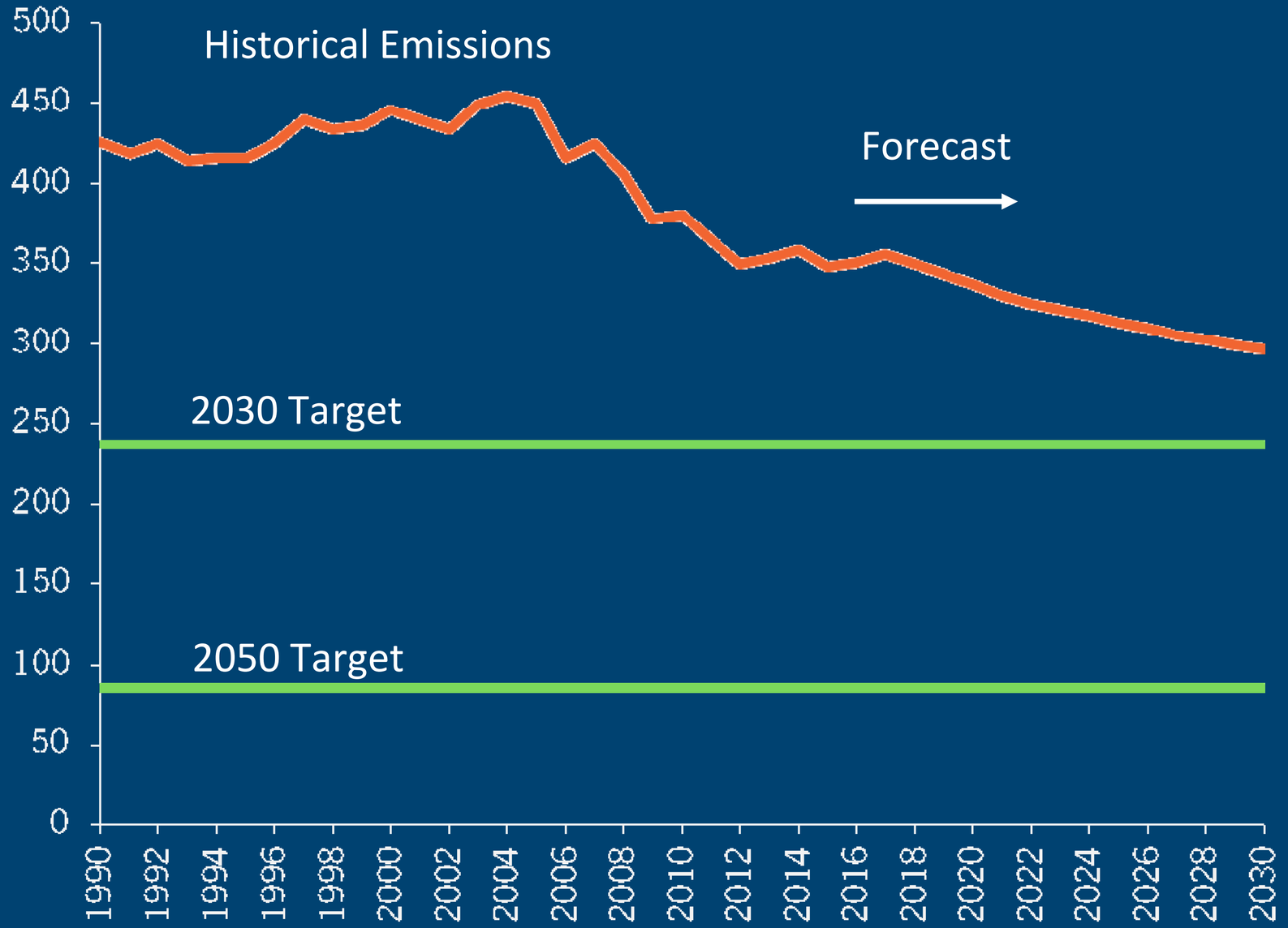
Long-range Energy Alternatives Planning

https://www.energycommunity.org

States' efforts are paying off and lay the foundation for redoubled efforts

The first generation of climate and energy policies have been successful

Enhanced Efforts CAN Close the Gap



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Climate Policy Success

Climate Policy Success

Energy Efficiency Programs

Climate Policy Success

Energy Efficiency Programs

Renewables

Climate Policy Success

Energy Efficiency Programs

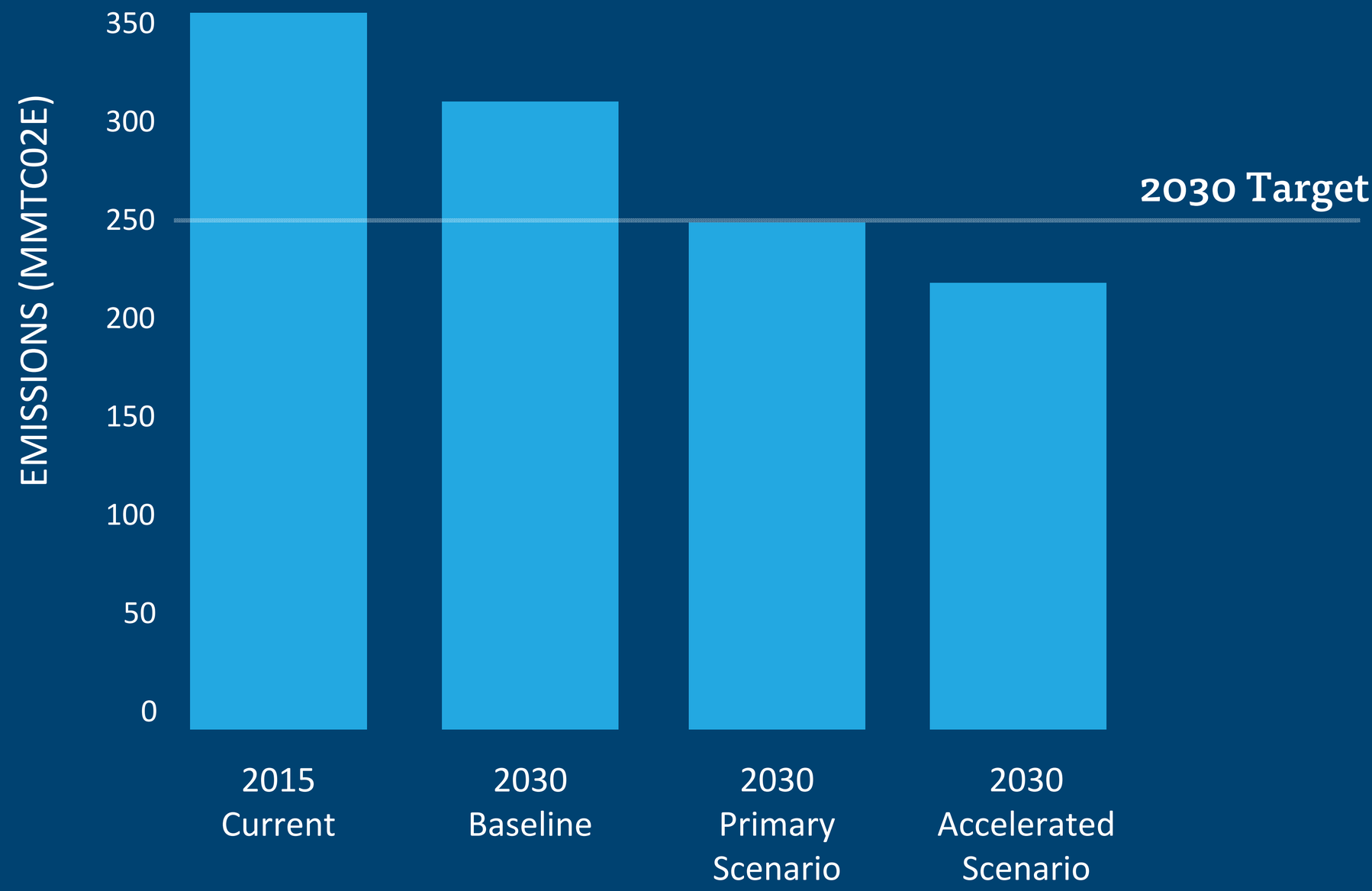
Renewables

Regional Greenhouse Gas Initiative (RGGI)

With enhanced efforts now, New York & New England can:

- Build from this foundation
- Spur development of clean energy markets
- Keep consumer energy dollars invested in-state
- Close the gap on climate pollution
- Show national leadership

Scenario Results



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What does the 2030 clean energy system look like?

EnergyVision 2030: Enhanced Clean Energy

	Current Market Levels (2015)	2030 Baseline Under Current Trends	EnergyVision 2030 Primary Scenario	EnergyVision 2030 Accelerated Scenario
Electric Vehicles (% of fleet)	<1%	5%	17%	23%
Heat Pumps (% of residential heat)	<1%	3%	13%	16%
Electric Generation (% renewable)	19%	44%	57%	66%
Wind and Solar	3%	24%	35%	45%
Hydro	13%	18%	20%	19%
Other	4%	3%	2%	2%
Electric Efficiency (average % annual savings)	1.4%	1%	2.5%	2.7%
Emissions Reduction from 1990 Levels	18%	30%	45%	50%

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A Look at the Heat Pump Forecast

- Bottom-up
- Factors considered:
  - Existing heating fuel
  - Distribution system (air or hydronic)
  - Presence of central air conditioning
  - Natural turnover rate of equipment type

A Look at the Heat Pump Forecast (cont.)

- Installation rates grow through 2030
- Assumes some technology improvements in the 2020-2022 timeframe
- Conversion rates based on costs and technology fit
- Propane furnaces see the highest turnover rate in 2030 – 4% (natural turnover is 6.7%)
- Heating fraction grows from 50-60% today to 90% for 2030 installations

A next generation of clean energy policies is needed.

Selected Policy Recommendations

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Increase Renewable Markets

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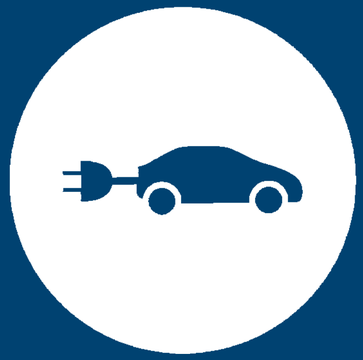

Strengthen EV Market

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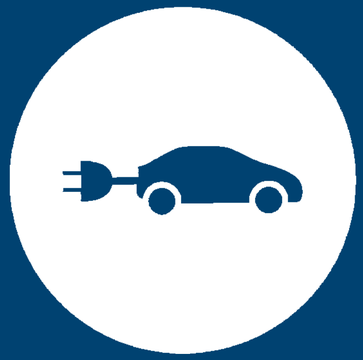
Selected Policy Recommendations

Increase Renewable Markets

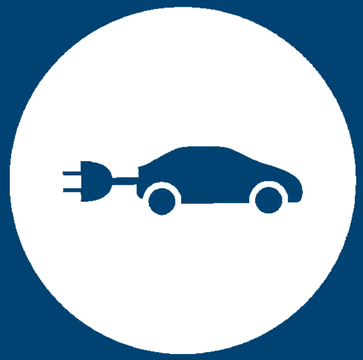


Strengthen EV Market

Expand Use of Heat Pumps

Selected Policy Recommendations

Increase Renewable Markets



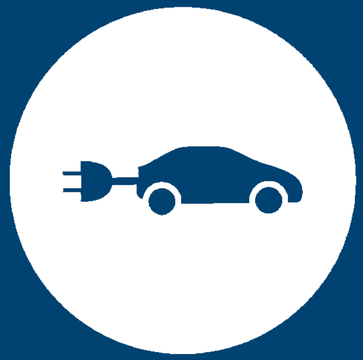
Strengthen EV Market

Expand Use of Heat Pumps

Modernize Energy Grid

Selected Policy Recommendations

Increase Renewable Markets



Strengthen EV Market

Expand Use of Heat Pumps

Modernize Energy Grid

Reform Utility Incentives

Conclusion:

A clean energy future is in our reach
and will benefit us all.

EnergyVision 2030: Materials and Resources

- Dedicated interactive website: **2030.acadiacenter.org**
- Summary brochure with fold-out infographic poster
- 4-page handouts with in-depth recommendations on specific issues
- 50-page Technical Appendix with full results and modeling details

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Jamie Howland

Director, Acadia Climate and Energy Analysis (CLEAN) Center

860-246-7121 x201, jhowland@acadiacenter.org

Krysia Wazny

Communications Director

617-742-0054 x107, kwazny@acadiacenter.org