



# Acadia Center

Advancing the Clean Energy Future

## How Maine's Transportation Infrastructure – and Economy – Can Benefit from Clean Transportation Investments

Building a Stronger Maine: Navigating the Path to the Clean Energy Future  
December 7, 2018

Emily Lewis

[acadiacenter.org](http://acadiacenter.org) • [info@acadiacenter.org](mailto:info@acadiacenter.org) • 617.742.0054 ext. 001

Boston, MA • Hartford, CT • New York, NY • Providence, RI • Rockport, ME





# Equitable Mobility Indicators

## Goal #1

### Increase Access to Mobility

1. Affordability
2. Accessibility
3. Efficiency
4. Reliability
5. Safety

## Goal #2

### Reduce Air Pollution

6. Clean Air and Positive Health Benefits
7. Reduction in Greenhouse Gases
8. Reduction in Vehicle Miles Traveled

## Goal #3

### Enhance Economic Opportunity

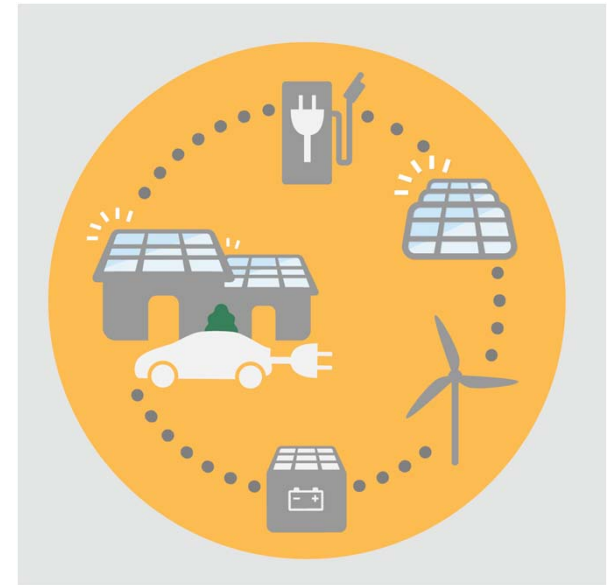
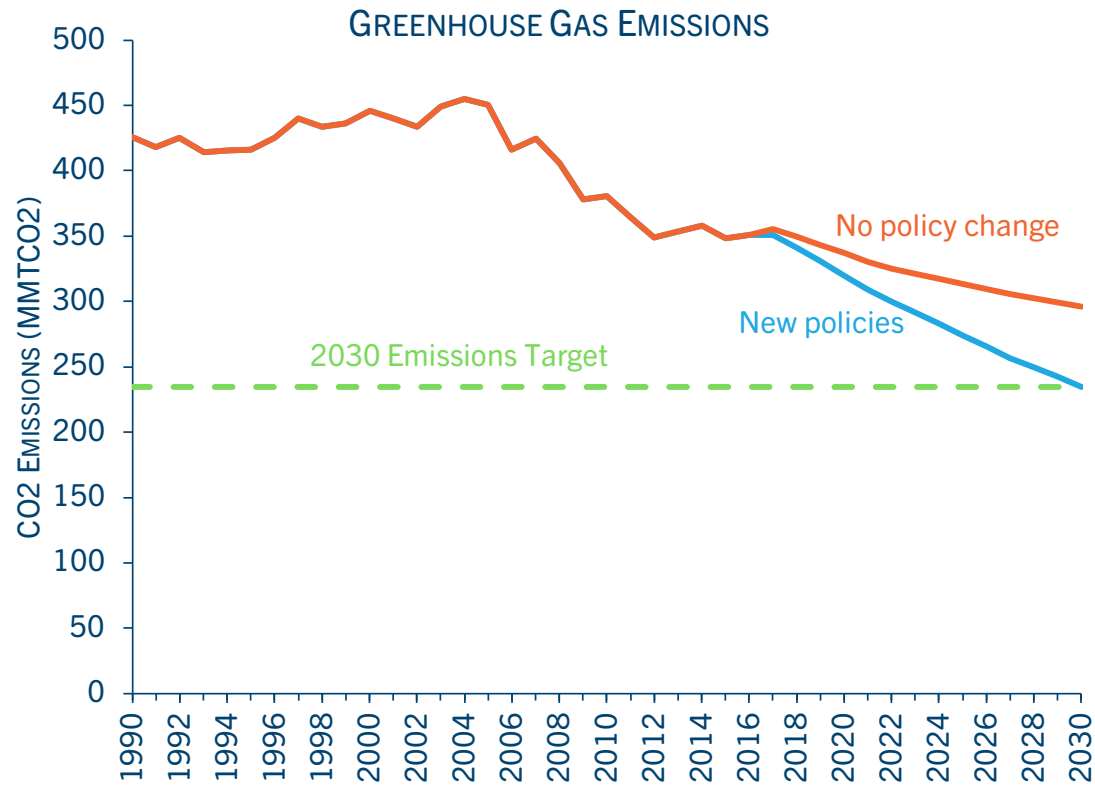
9. Connectivity to Places of Employment, Education, Services, & Recreation
10. Fair Labor Practices
11. Transportation-Related Employment Opportunities
12. Inclusive Local Business & Economic Activity

Mobility Equity Framework • *How to Make Transportation Work for People*





# Clean Transportation Future





# Maine Is Ready for a Change

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- \$460 annually on repairs due to deteriorating roadways
- \$1 billion annually for vehicle operation, congestion delays, and crashes
- \$500 million in health costs in 2015 due to passenger vehicle emissions
- Half of all bridges are older than 50 years, 1 out of 7 are structurally deficient
- At the same time, transportation makes up 52% of the state's total GHG emissions

Sources: American Society of Civil Engineers, American Lung Association, and Regional Greenhouse Gas Initiative





# Modernizing Transportation Is Good for Maine

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- By capping emissions and auctioning allowances, Maine could generate **\$1.38 billion between 2019-2030**.
- Investing across the transportation system could generate:
  - 8,700 long-term jobs
  - \$1 billion in new wages
  - \$3.8 billion in new business sales
  - \$2.3 billion in other benefits, including \$63 million in savings from avoided GHG emissions



# Investing in Modern Transportation

Final portfolio  
needs to be  
developed with  
stakeholder  
process

Maine	Possible Investment Portfolio	2019-2030 Total Revenue (millions)	Average Annual Revenue (millions)
EV & Charging Infrastructure Rebates	34%	\$469	\$39
Bus & Rapid Transit	32%	\$441	\$37
Intercity Rail (Trains & Commuter Rails)	12%	\$165	\$14
Walking & Biking Infrastructure	8%	\$110	\$9
Port Electrification	14%	\$193	\$16
<b>Total</b>	<b>100%</b>	<b>\$1,378</b>	<b>\$115</b>



# Community Reinvestment Opportunities

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## Electric Vehicles

- EV Rebates
- Charging Infrastructure



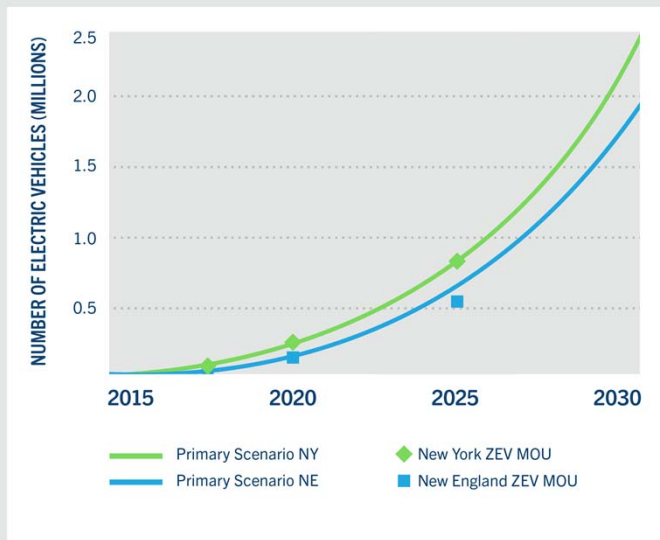




# Electric Vehicle Adoption



## Projected Electric Vehicle Adoption Rate

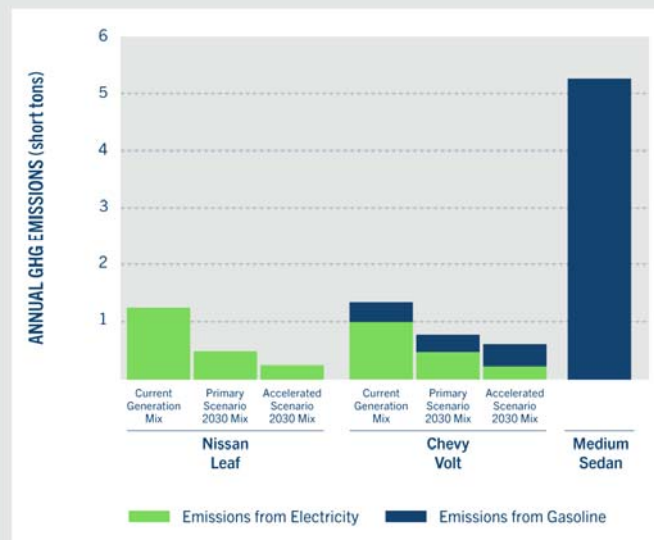


Learn more about this report at [2030.acadiacenter.org](http://2030.acadiacenter.org)



## Electric Vehicle Comparison

Based on 15,000 miles of driving annually



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# Community Reinvestment Opportunities

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## Electric Vehicles

- EV Rebates
- Charging Infrastructure



## Electric Transit

- Expand inter- and intracity bus service
- Replace aging and polluting diesel vehicles



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## Walking & Biking Trails





# Community Reinvestment Opportunities

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## Walking & Biking Trails



## Intercity Rail



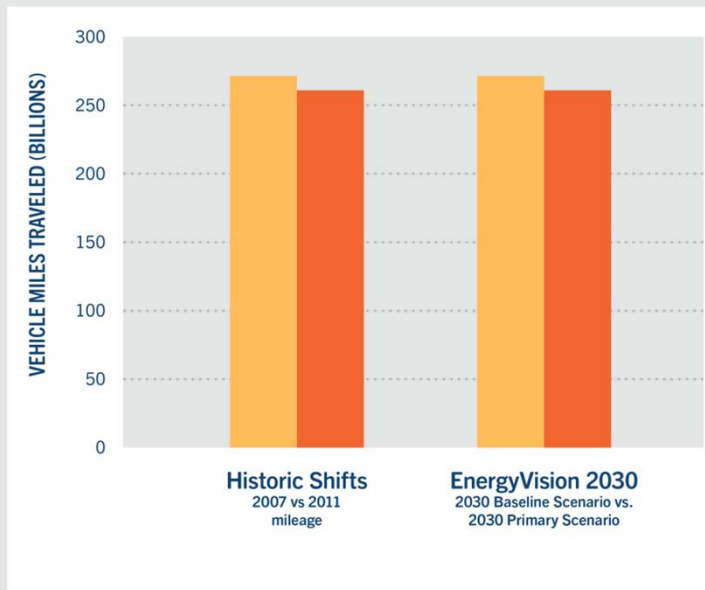


# Increasing Mobility Options Reduce Vehicle Trips



## Vehicle Miles Traveled

Comparison of Northeast historical shifts to required shifts by 2030.



Learn more about this report at [2030.acadiacenter.org](http://2030.acadiacenter.org)





# Community Reinvestment Opportunities

## Electric Vehicles

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## Electric Transit

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## Walking & Biking Trails



## Intercity Rail







# Understanding & Meeting Community Needs

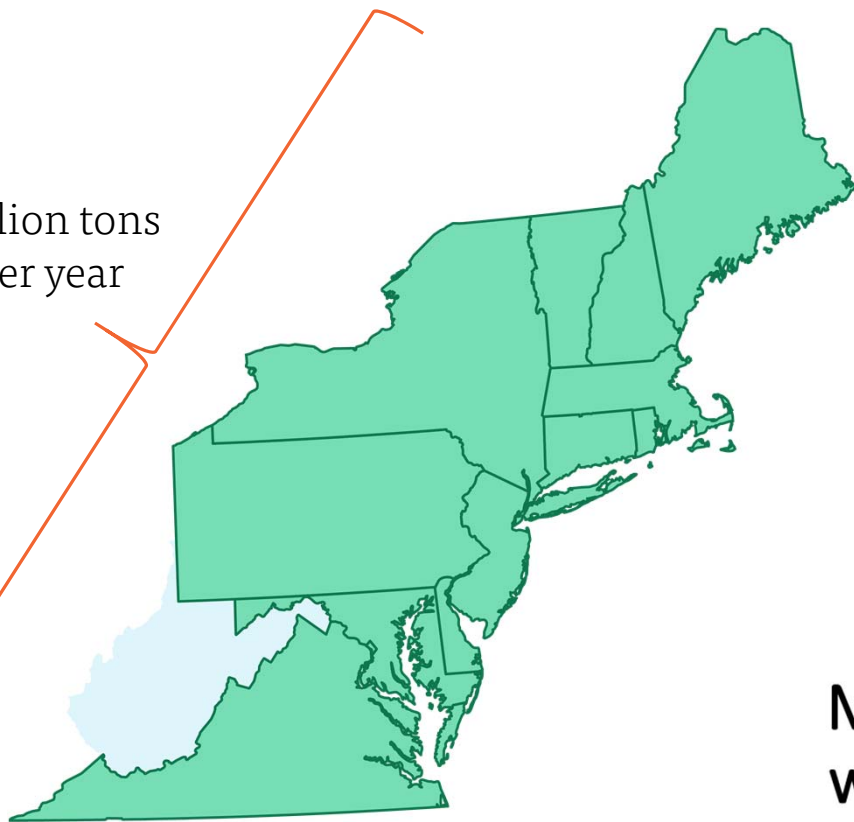
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- What are the challenges of our current transportation system?
- What would an improved transportation system look like?
- What would make it easier to transition to low-carbon transportation choices?



# Transportation & Climate Initiative

338 million tons  
CO<sub>2</sub> per year



- Convened in 2010 to explore regional solutions to transportation emissions
- Joint announcement from subset of states in 2017
- Extensive stakeholder process: listening sessions

Meeting the Region's Needs  
with Cleaner Transportation





# Emerging Consensus

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Overwhelming support for:

- Equitable policies to deliver benefits to underserved and overburdened communities
- Electrification of transportation
- Improved and expanded public transit
- A price on transportation carbon emissions



# Regional Greenhouse Gas Initiative (RGGI)



- 9 states (soon to be 11)
- Cap on CO<sub>2</sub> emissions from power plants
- Since 2008:
  - 41 auctions raised over **\$3 billion**
  - CO<sub>2</sub> emissions down 51%
  - Electricity prices down 5.7%
  - GDP up 34%

New Jersey and Virginia are planning to enter the RGGI market in 2020

# Modernizing Transportation Is Good for Maine

- Investing **\$1.38 billion** across the transportation system could generate:
  - 8,700 long-term jobs
  - \$1 billion in new wages
  - \$3.8 billion in new business sales
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155,000 EVs



500 e-buses



400 miles  
of trails





# From Proposal to Policy

- Stakeholder process (2018)
  - Regional
    - Policy design
  - State-specific
    - Local considerations
- Rulemaking (2019)
  - Regulations drafted with public input
  - Emissions target, guiding principles
- Legislation (2020)
- Implementation (2021)





# Community|EnergyVision

## Action Guide

A guide to taking action in your community.



# Community|EnergyVision

## Action Guide



Acadia  
Center

Community|EnergyVision  
Action Guide

## A Comparison of Community Actions by State

The laws, ordinances, and regulations that pertain to community clean energy policies vary across the region. This comparison of the seven Northeast states by policy action should help you identify which community actions are permitted, limited, or prohibited in which states, and inspire you to work toward expanding policy opportunities in your state. Definitions and considerations for each action are included in the state-specific section of the Action Guide.

### ACTION KEY



THERE ARE NO STRUCTURAL BARRIERS TO ACTION. GO FOR IT!

This action is legislatively authorized or enabled and/or there is clear precedent for this action in your state. However, this does not mean that a particular policy has been adopted in your community.



THIS ACTION MAY BE POSSIBLE OR PRECEDENT-SETTING. LEARN MORE.

There may be limitations or considerations and/or no clear precedent for this action in your state. Changes may be necessary at the state level. See your state's section of this guide for more information.



THIS ACTION IS NOT POSSIBLE. STATE-LEVEL ADVOCACY NEEDED.

This action is legislatively prohibited and/or it is an option that does not exist in your state. Changes at the state level may enable this action.



### BUILDINGS

		CT	ME	MA	NH	NY	RI	VT
Building Codes	Enforce State Building Energy Code							
	Adopt Municipal "Lead by Example" Energy Initiatives							
	Adopt a Stretch Code							
	Require New Construction be "EV-Ready"							
	Require New Construction be "Solar-Ready"							
Building Siting & Permitting	Adopt Mandatory Solar Requirement for New Homes							
	Preserve Solar Access in New Developments							
	Establish a Sustainable Building Expedited Permit Program							
Benchmarking	Adopt an Energy Performance Ordinance							
	Mandate Building Energy Labeling							
	Mandate the Disclosure of Building Energy Performance							
	Establish a Minimum Energy Code for Rentals							
Municipal Facilities	Require Energy Usage Disclosure for Rentals							
	Establish Energy Efficiency Operations & Maintenance Standards for Municipal Facilities							



### CLEAN ENERGY: LOCAL GENERATION, LOCAL DELIVERY AND PURCHASING

		CT	ME	MA	NH	NY	RI	VT
Clean Energy Supply	Enroll in a Green Tariff Program							
	Participate in Community Choice Aggregation							
Delivery Infrastructure	Establish a Municipal Utility (Municipalization)							
	Develop a Municipal Microgrid							
	Develop a Municipal District Energy System							
	Purchase Utility-Owned Street Lights							
	Upgrade Street Lights with Energy Efficient Technology							
Vehicles & Equipment	Develop or Follow a Green Fleet Policy							
	Establish a Public EV Charging Station Policy							
	Develop or Follow an Energy Efficiency Purchasing Policy							



### CLEAN ENERGY: ZONING AND SITING

		CT	ME	MA	NH	NY	RI	VT
Renewable Energy Siting	Adopt Energy Facility Siting Ordinances							
Zoning & Clean Energy Districts	Adjust Zoning Requirements for Renewables							
	Honor State-Required Zoning Exemptions for Renewable Energy Developments							
	Establish a Clean Energy District or Regional Clean Energy Commission							
Permitting Process	Require EV Access in New Developments							
	Establish a Streamlined Process for Renewable Energy Permitting							



### FINANCIAL INCENTIVES

		CT	ME	MA	NH	NY	RI	VT
Tax Policy	Establish Municipal Property Tax Exemptions for Clean Energy Systems							
	Establish Tax Increment Financing (TIF) Districts for Clean Energy Improvements							
Grant Opportunities	Participate in Energy Efficiency Grants for Municipalities							
	Participate in DG, CHP and/or Microgrids Grants for Municipalities							
Financing	Enable PACE Financing for Residential Projects							
	Enable PACE Financing for Commercial Projects							
	Participate in Financing for Municipal Projects							

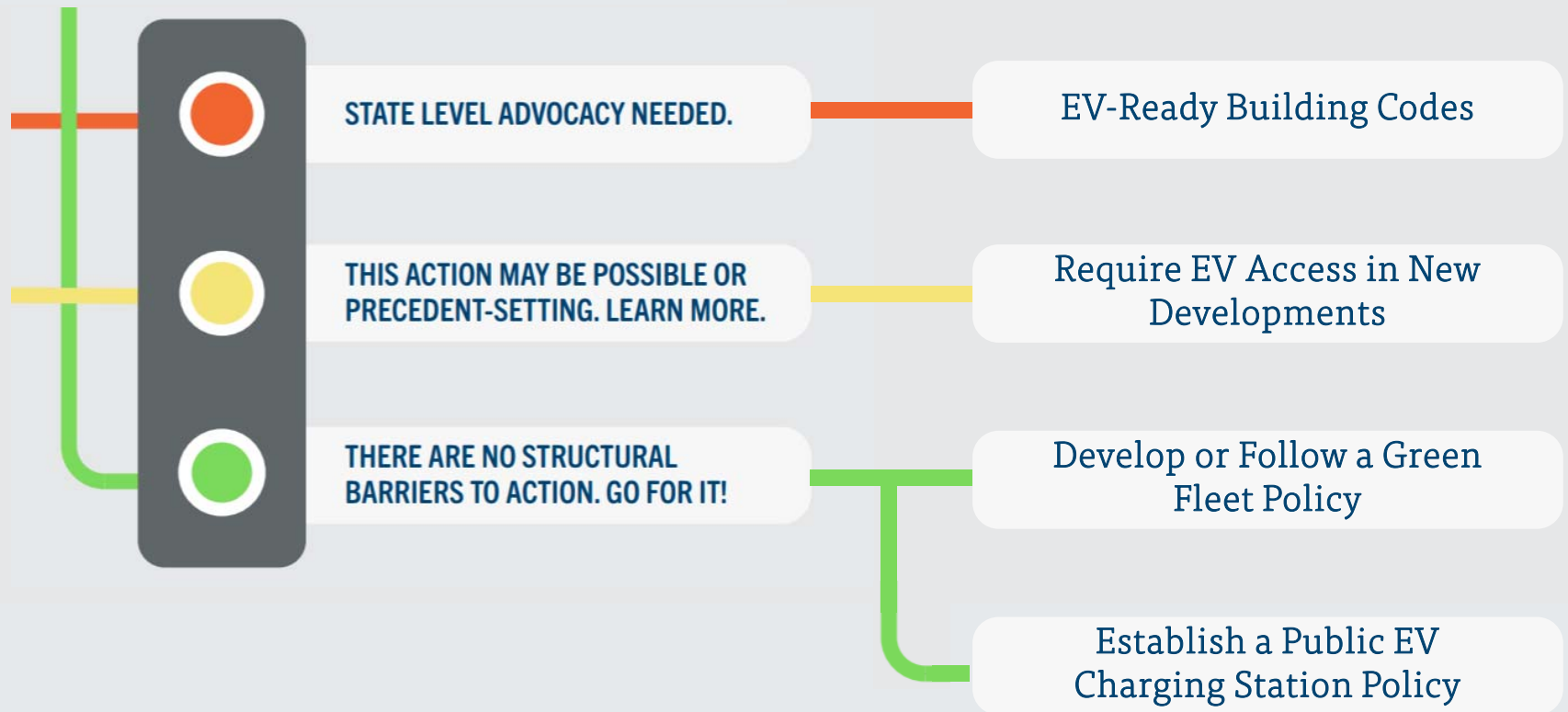
EV Ready  
Building  
Codes

Clean fleets  
Charging stations

EV access

# Community|EnergyVision Action Guide

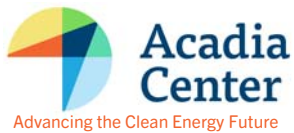
## Maine



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acadiacenter.org  
info@acadiacenter.org  
617.742.0054 ext. 001  
Boston, MA • Hartford, CT • New York, NY  
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## A clean, modern energy system benefits people and communities.

Acadia Center's research shows that if states modernize the energy system, the Northeast can reduce climate pollution emissions by **45% by 2030**, which puts us on the path to an **80% reduction by 2050**.

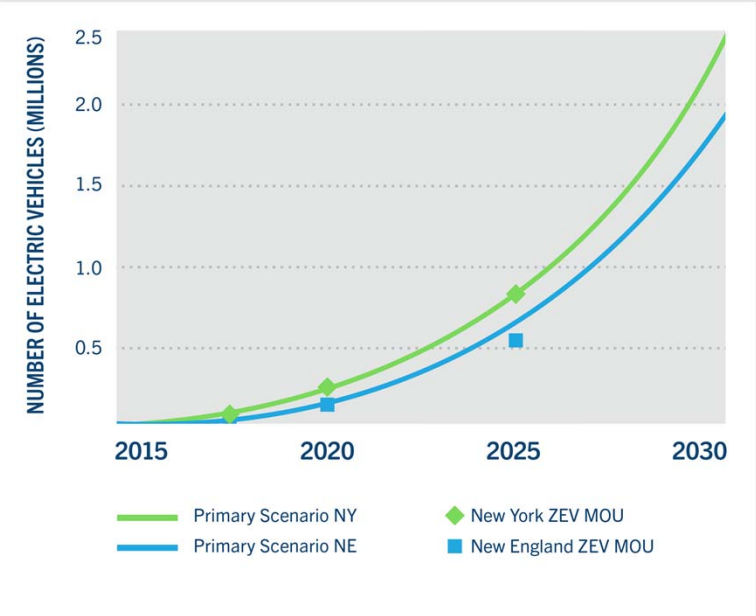




# Transitioning to a Low-Emissions Energy System



## Projected Electric Vehicle Adoption Rate





Energy

A Pathway to a  
Modern, Sustainable,  
Low Carbon  
Economic and Environmental Future

# EnergyVision

A Pathway to a Modern, Sustainable, Low Carbon  
Economic and Environmental Future



# Listening Sessions

## Meeting the Region's Needs with Cleaner Transportation



Sessions held CT, DE, MA, MD, NY, RI

- Urban and rural areas

Broad participation

- Businesses
- Environmental groups
- Environmental justice groups
- Fossil fuel industry
- Auto manufacturers
- and more...



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