

# New York State Energy Plan and Climate Action Plan



*CLIMATE CHANGE SYMPOSIUM*  
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# Regulatory/Policy History

- “National Energy Policy” 1973
- Power Plant and Industrial Fuel Use Act of 1978
- EO12185 (Carter)
- 40 CFR 6 (CEQ – EIS Content)
- Various CFR planning regs:  
Energy Conservation by Recipients  
of Federal Financial Assistance  
(USDOT, 1980)

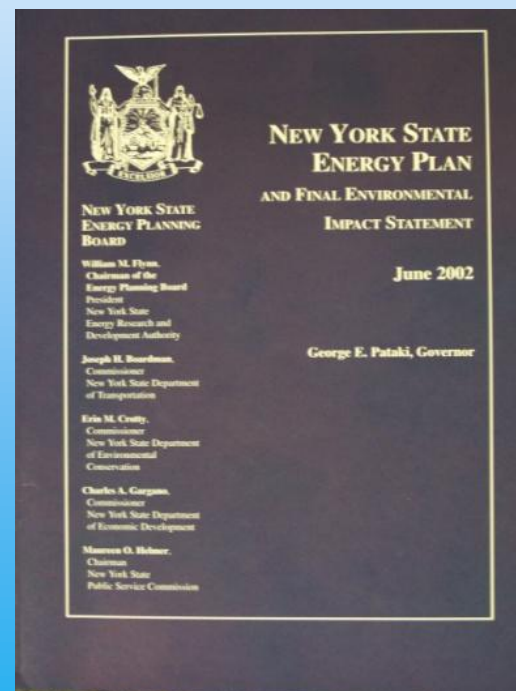


# FHWA and UMTA Rules

- 1980s metropolitan planning requirements
- Energy conservation an “important consideration” in the early project development phase
- Major projects: Document direct and indirect energy impacts of alternatives, mitigate to enhance energy conservation  
FHWA (1987), UMTA (1986)

# 2002 NY State Energy Plan

- Requirement of NYS Energy Planning Law
- Blueprint to inform decision making
- Provides broad Statewide policy direction and planning guidelines for
  - Transportation
  - Environment
  - Energy + Electricity
  - Economic Development



# 2002 NY State Energy Plan

- Adopted by Energy Planning Board, June 2002
- Developed in collaboration with the New York Greenhouse Gas Task Force
- ~ 65 Recommendations
- 30 directly or indirectly related to transportation

# 2002 NY State Energy Plan

- Commitment to statewide goal of reducing GHG emissions 5% below 1990 levels by 2010, and 10% below 1990 levels by 2020
- Work with regional and local planning organizations to analyze and quantify the energy use and air pollution emissions expected to result from transportation plans and programs
- Consider CO<sub>2</sub> production and mitigation strategies , as appropriate, in State transportation planning and State Environmental Quality Review Act (SEQRA) processes

# 2002 NY State Energy Plan

- Redirect transportation funding toward energy-efficient transportation alternatives, including public transportation, walking, and bicycling, and provide incentives to encourage greater use of related alternatives that improve transportation energy efficiency
- Target open space funding to prevent suburban sprawl, promote Quality Communities, reduce VMT, and support, adopt, and enhance transportation measures that reduce energy use and pollutant emissions

## **2002 NY State Energy Plan**

- Support, adopt, enhance transportation measures that reduce energy use and emissions such as Commuter Choice, Air Quality Action Days (Clean Air NY), diesel vehicle retrofits, traffic signal coordination, LED technology, transportation operations management, etc.
- Increase renewable energy share of primary energy use 50% by 2020



# 2002 SEP Implementation

- NYSDOT guidance to Regional Offices and MPOs
- Consistent approach with transportation conformity where applicable
- Analyze regionally significant projects to limit analytical cost, flexibility to do more
- Build vs. No-Build analysis framework
- Based on CalTrans guidance
- Direct (Operational) and Indirect (Construction and Maintenance) energy and GHG estimation

# 2002 SEP: Results

- Confidence in trends, not absolute results
- Most areas achieved a 1-3% reduction in energy consumption and GHG emissions
- Some visionary plans achieved ~10% reduction
- Build < No-Build

## **2002 SEP: Transition to Now**

- Provided a baseline and generated momentum for development 2009 State Energy Plan
- Continued interest by NYS Governor(s)
- NYSDEC issued SEQRA guidance on consideration of GHG emissions in July 2009
- Multiple Executive Orders to agencies
- State Energy Planning Board: April 2008

## 2009 SEP: Policy Objectives

- Assure reliable energy and transportation systems in New York State
- Support energy and transportation systems that enable the State to significantly reduce GHG emissions (to address climate change and compete in a carbon constrained economy)
- Address affordability caused by rising energy bills and improve the State's economic competitiveness
- Reduce health and environmental risks
- Improve the State's energy independence and fuel diversity, including in-state supply

# 2009 SEP: Five Strategies

- Produce, deliver and use energy more efficiently
- Support development of in-state energy supplies
- Invest in energy and transportation infrastructure
- Stimulate innovation in a clean energy economy
- Engage others in achieving the State's policy objectives

# 2009 SEP Transportation Action Steps

- Identify available green transportation choices, promote and expand them
- Endorse smart growth and GHG emission reductions as key principles in Transportation Plans and TIPs
- Work with the federal government to strengthen the recently proposed CAFE stds

# 2009 SEP Transportation Action Steps

- Work with New York Congressional Delegation and transportation organizations to develop new funding formula within the next Surface Transportation funding bill that provide incentives to state to reduce energy use

# 2009 SEP Transportation

## Action Steps

- Determine the optimal fuel(s) for a substantial replacement of petroleum, considering environmental, economic and energy benefits
- Provide financial incentives for alt fuel infrastructure development and encourage public and private fleets to purchase alternative fuel vehicles through incentives and mandates



# 2009 SEP Transportation Action Steps

- Educate end users on the economic and environmental benefits of alternative fuels
- Work with New York Congressional Delegation and transportation organizations to support federal and State tax incentives for fleet and private individual alternative fuel vehicle purchases, including infrastructure development

# 2009 SEP Transportation Action Steps

- Inventory existing transportation corridor rights-of-way that could be used for new energy infrastructure facilities and existing utility corridors that are underutilized or could be re-configured to accommodate new facilities.
- Allow private individuals and businesses to provide direct public transportation infrastructure investments in return for State income tax credits. e.g., sponsor the installation of a bus shelter on a transit line and offset portion of cost with tax credit

# 2009 SEP Transportation Action Steps

- Demonstrate the feasibility of electrification of the transportation system across all modes of transportation by expanding the State fleet plug-in hybrid vehicle demonstration program to private sector fleets, by expanding the use of electric ground equipment, and by considering increased electrification of rail lines

# 2009 SEP Transportation Action Steps

- Promote land use patterns that reduce reliance on vehicle trips and establish consistency between transportation planning and land use planning
- Promote land use and zoning tools that promote Smart Growth
- Pursue and expand TOD strategies
- Encourage federal financial support for more energy efficient transportation infrastructure systems

# 2009 SEP: NYSDOT Early Implementation

- Continued all 2002 SEP recommendations for transportation
- NYSDOT developed a GUI to perform direct energy and GHG estimates
- Direct (Operational) estimates based on MOVES-HVI
- Indirect (Construction and Maintenance) still based on CalTrans guidance
- MOVES-RREGGAE (Roadway and Rail Energy and Greenhouse Gas Analysis Extension)
- Recently rolled out to Regions and MPOs – no new results yet

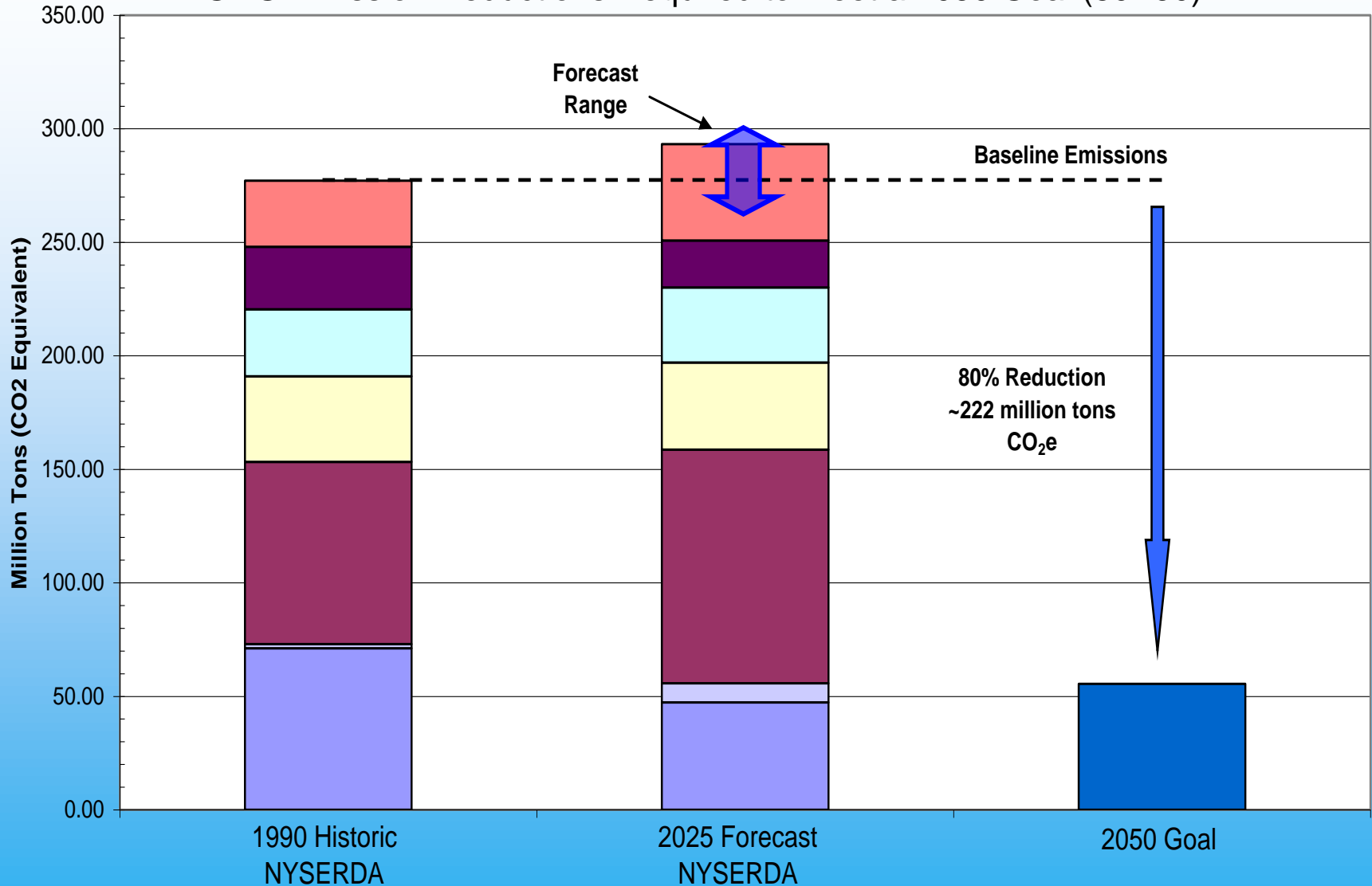
# NYS Climate Action Plan

- On August 6, 2009, Governor Paterson signed Executive Order No. 24 setting a goal to reduce greenhouse gas emissions in New York State by 80 percent below 1990 levels by 2050.
- The Executive Order also created the Climate Action Council (CAC) with a directive to prepare a draft Climate Action Plan (CAP) by September 30, 2010.
- The CAP is assessing how all economic sectors can reduce greenhouse gas emissions and adapt to climate change, and identify the extent to which such actions support New York's goals for a clean energy economy.



# Governor's Executive Order 24 – GHG Mitigation and Adaptation

## GHG Emission Reductions Required to Meet a 2050 Goal (80X50)

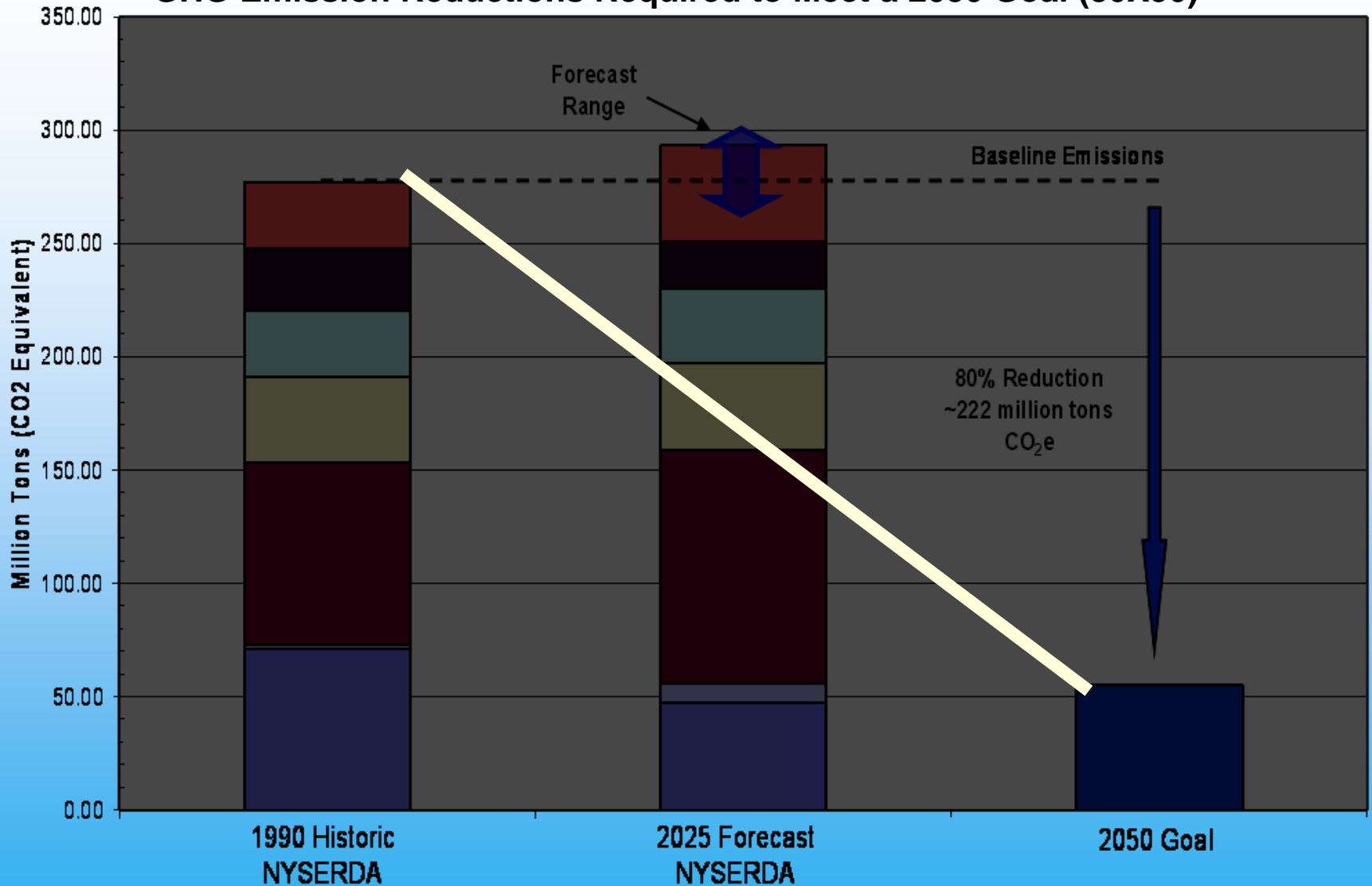


Source: [www.nyclimatechange.us](http://www.nyclimatechange.us)

■ Electric 
 ■ Net Imports 
 ■ Transportation 
 ■ Residential 
 ■ Commercial 
 ■ Industrial 
 ■ Other

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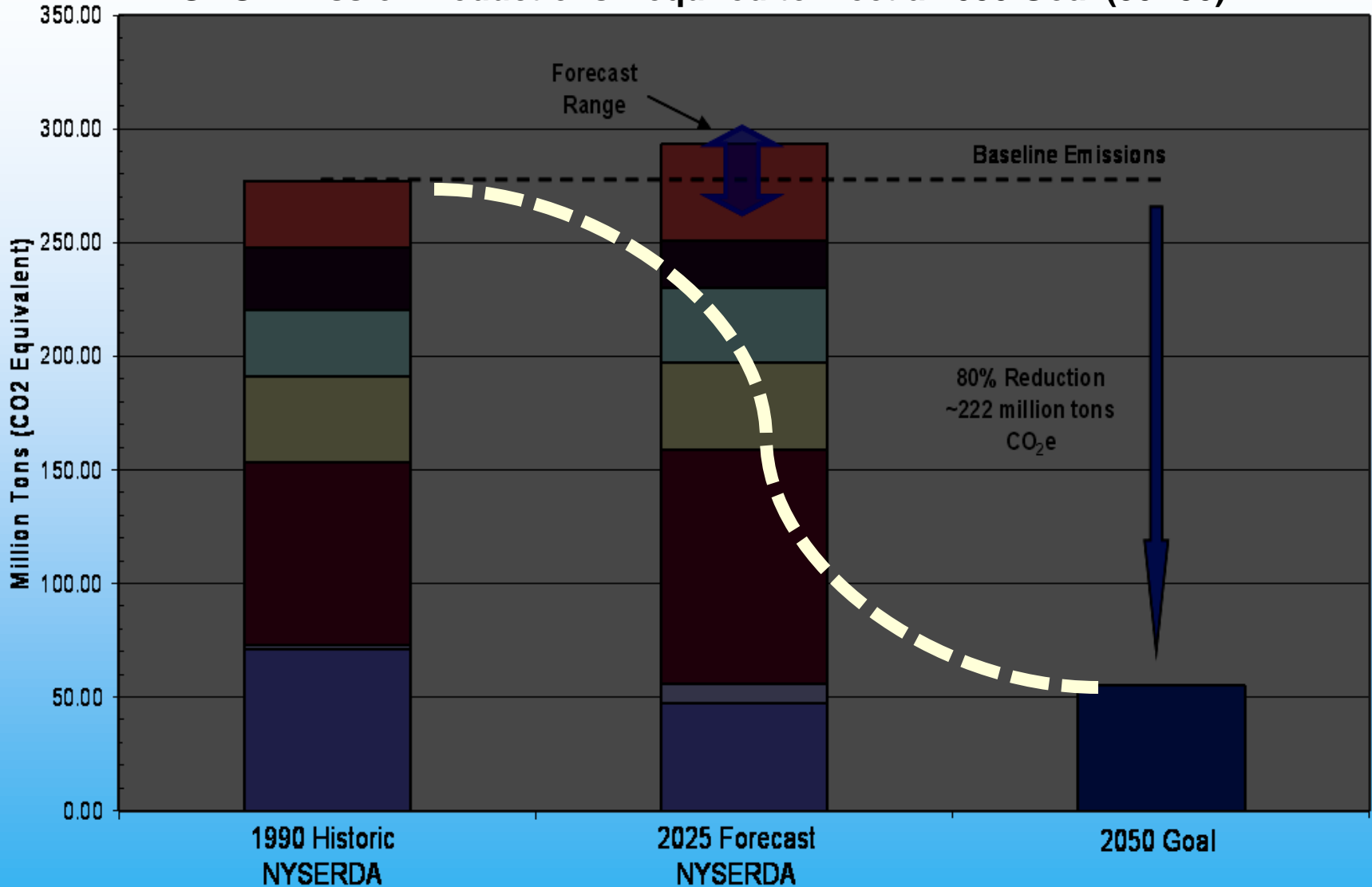
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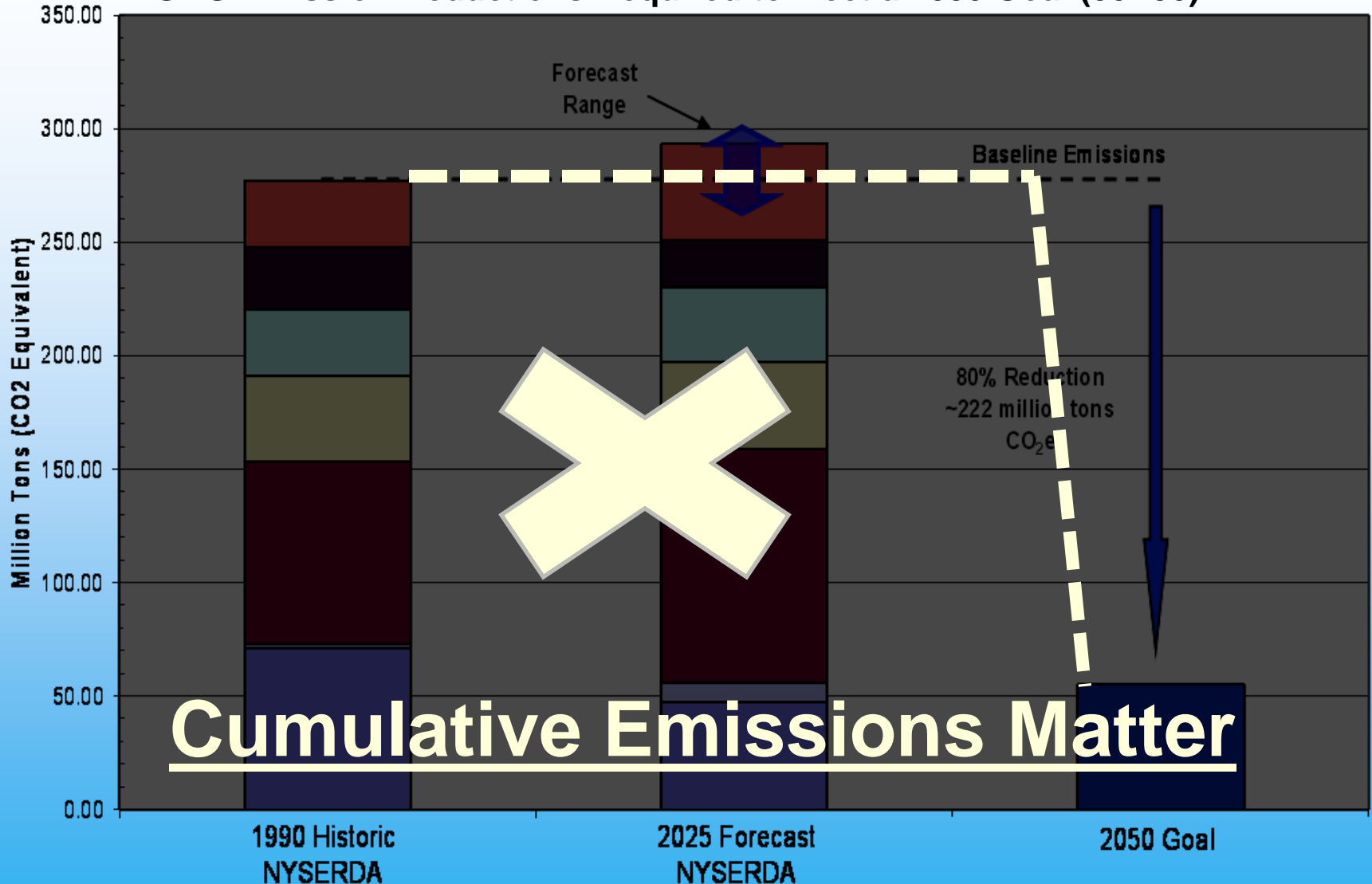


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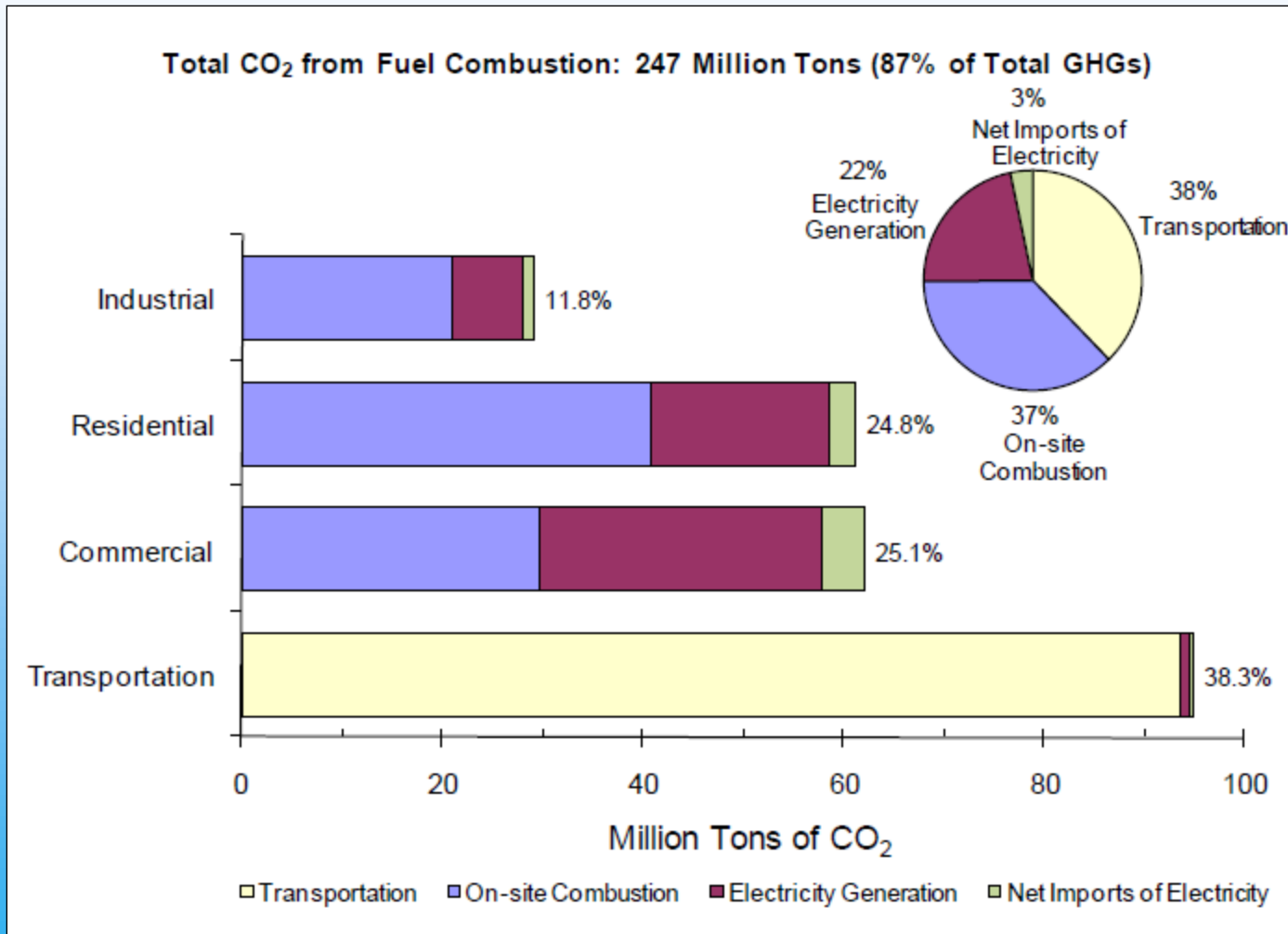
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# CO<sub>2</sub> From Fuel Combustion by End Use Sector, 2007





# Climate Action Council

Val Grey- Chair

DEC, NYSERDA, Ag & Mkts, DED, DHCR, DOT, PSC, MTA, LIPA, NYPA,  
DASNY, DOS, DOB, DSO & Gov's Counsel

Executive Directors: Janet Joseph (NYSERDA) & Alan Belenz (DEC)

Vision 2050

Integration  
Advisory Panel

Power Supply  
and Delivery

Residential,  
Commercial  
and Industrial

Agriculture,  
Forestry and  
Waste

Transportation  
and Land Use

Adaptation

# Technical Work Groups

- Power Supply and Delivery (PSD)
  - Heat and power generation and distribution;
- Residential, Commercial and Industrial (RCI)
  - Energy efficiency & conservation, industrial process
- Transportation and Land Use (TLU)
  - Vehicle efficiency, alternative fuels & demand reduction
- Agriculture, Forestry, and Waste Management (AFW)
  - Land protection, forest restoration, sustainable forest management, bioenergy, sustainable wood products, waste reduction, recycling
- Adaptation (ADP)
  - Responses to potential threats to public health and safety, communities, resources, industries from climate change

# Coverage Of Issues




- All GHG's
- All sectors
- All potential implementation mechanisms
- State and multi-state actions
- Short and long term actions
- Key externalities

# Full Policy Option Template

- Policy Description (Concept)
- Policy Design (Goals, Timing, Coverage)
- Potential Implementation Methods
- Related Programs and Policies (BAU)
- Quantification of costs, results
  - Data Sources, Methods and Assumptions
  - Key Uncertainties
- Externalities, as Needed
- Feasibility Issues, as Needed
- Level of Group Support
- Barriers to Consensus, if any

# A “Portfolio” of Policy Options...

 <small>CENTER FOR CLIMATE STRATEGIES</small>	Codes & Standards	Market Mechanisms	Funding Mechanisms	Voluntary Agreements	Technical & Financial Assistance	Information & Education	Pilots & Demo Projects	Reporting & Disclosure
Power Supply & Delivery								
Residential, Commercial and Industrial								
Transportation & Land Use								
Agriculture, Forestry, & Waste Mgmt.								
Adaptation								



# NYS Climate Action Plan

## Transportation Policy Options

- Vehicle Technology and Operations
- Vehicle Incentives and Disincentives
- Fleet Incentives and Disincentives
- Alternative Fuel Measures (LCFS)
- Vehicle and Fuels R&D
- TSM/TDM

# NYS Climate Action Plan

## Transportation Policy Options

- Transit and High Speed Rail
- Freight Strategies
- Priority Growth Centers
- Transit Oriented Development
- Location Efficient Land Use
- Intergovernmental/Regional Proposals

# Transportation Policy Option Implementation Mechanisms

- CO2 emission based feebates
- CO2 emission based registration fees
- CO2 emission based tolls
- Congestion Pricing
- VMT tax
- Fuel tax
- Pay-as-you-drive insurance

# Transportation Policy Option Implementation Mechanisms

- Parking pricing
- Fuel rationing
- Restrict new SOV highway capacity
- Freight fees
- Increase size and weight of trucks
- Anti-idling regulation enforcement

# Transportation Policy Option Implementation Mechanisms

- Carbon impact test for transportation projects
- Eco-driving program and outreach
- Revise federal transportation funding
- Transportation conformity for CO<sub>2</sub>
- NYS will lobby for CO<sub>2</sub> conformity at national level and Northeast

# NYS Climate Action Plan

- Draft - early November 2010
- Final – next Administration

# Questions?

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