

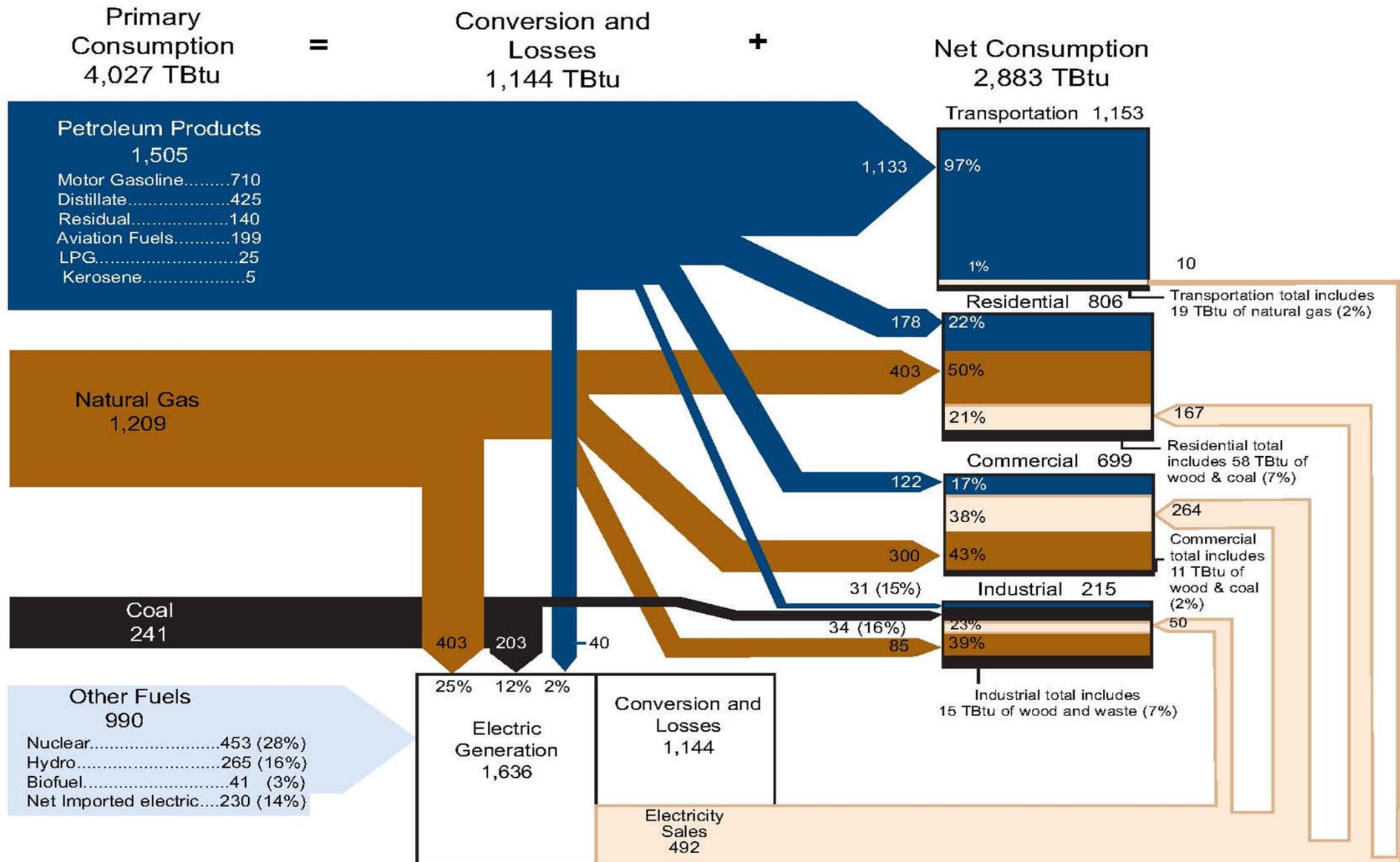
Energy Planning in New York State

John Williams

Director, Energy Analysis
NYSERDA

A Systems Approach to Energy Transitions:
Land, Economic and Community Transformations
March 31, 2011

2008 New York State Energy Flow (TBtu)



Observation of Comparison

Net energy demand in New York differs from national demand in several respects:

- Residential net energy use accounts for 28% of total energy demand in New York, compared to 19% nationally.
- Commercial net energy use accounts for 24% of total energy demand in New York, compared to 14% nationally.
- Transportation net energy use accounts for 41% of total energy demand in New York, compared to 43% nationally.

Reveals opportunities for community action to influence energy outcomes

New York State Energy Facts 2009

Energy Expenditures (\$Billion)

- Total: \$56.5
- Estimated energy expenditures leaving the state: \$28.1
- By sector:
 - Residential (31%) \$17.6
 - Commercial (29%) \$16.5
 - Industrial (4%) \$ 2.4
 - Transportation (41%) \$19.9
- By fuel type:
 - Petroleum (44%) \$24.7
 - Natural gas (18%) \$ 9.9
 - Electricity (38%) \$21.7
 - Coal (<1%) \$ 0.1

NYS Average Energy Prices 2009

	2009	2008
Gasoline - all grades (gallon)	\$2.39	\$3.28
Heating oil (gallon)		\$2.60
		\$3.42
Natural gas (thousand cubic feet)		
• Residential	\$15.08	
	\$16.83	
• Commercial	\$10.90	
	\$10.00	



NYS Comparison Rank 2009

Primary Energy Use:

4

Primary Energy Use per capita:

51

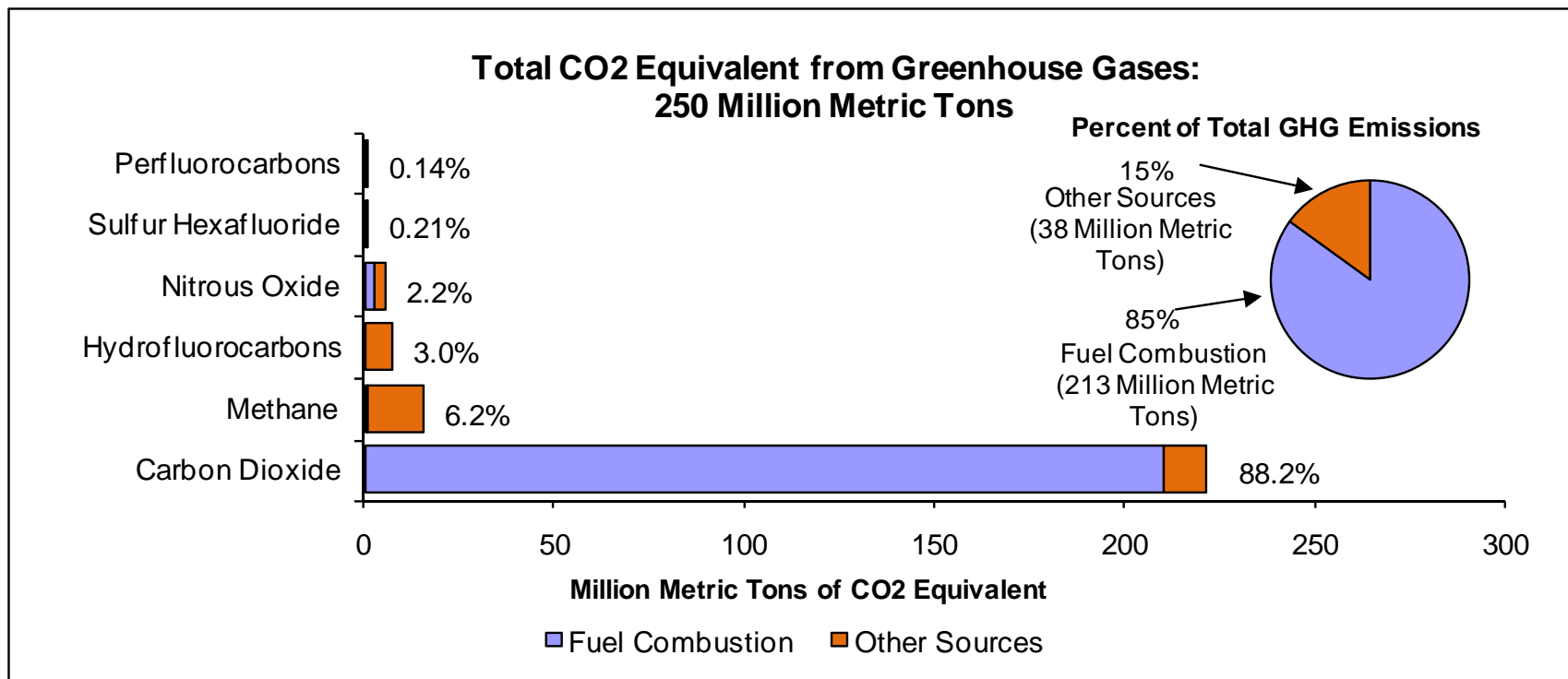
Primary Energy Use per unit GSP:

50

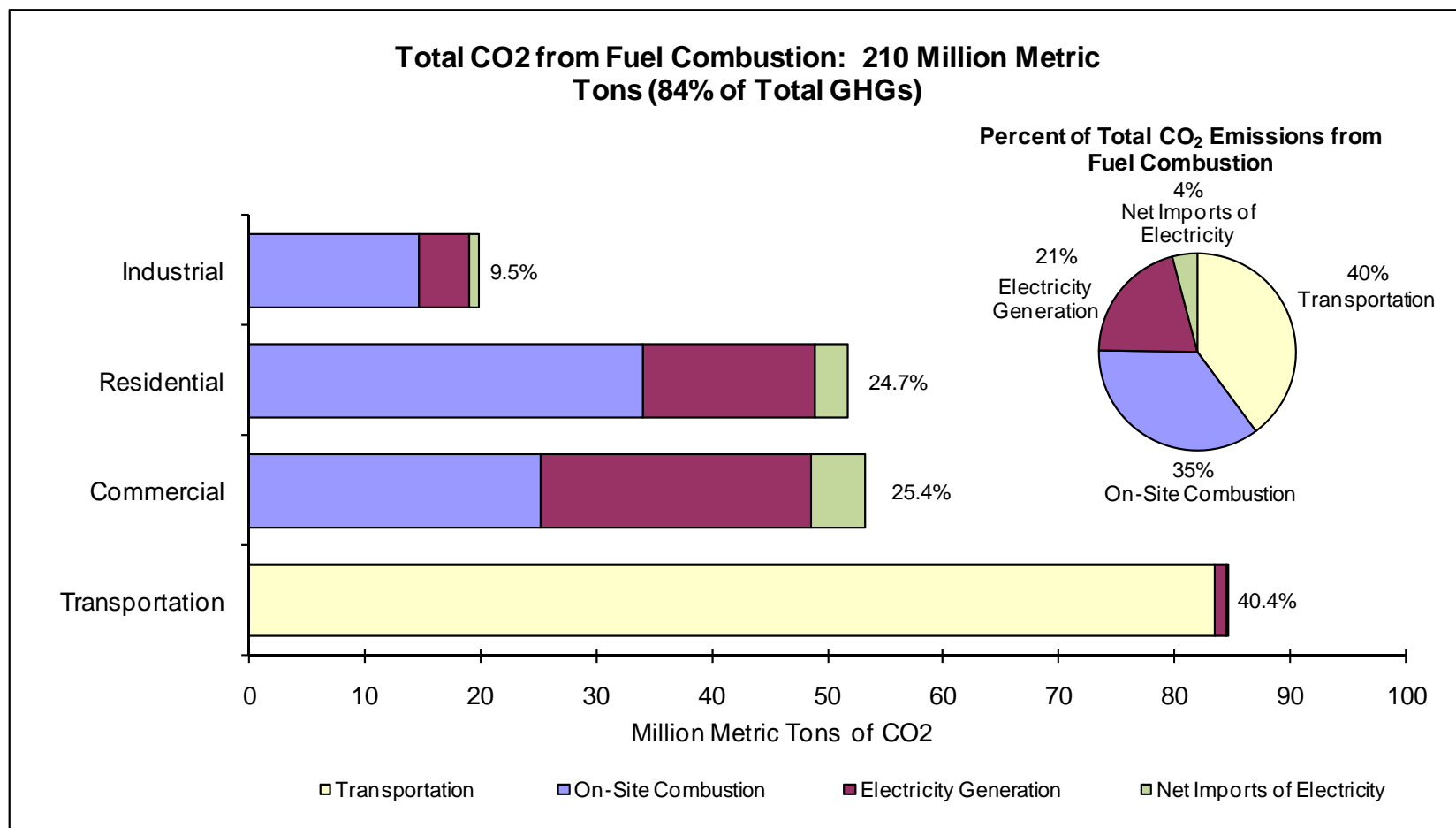
Energy Expenditure per capita:

47

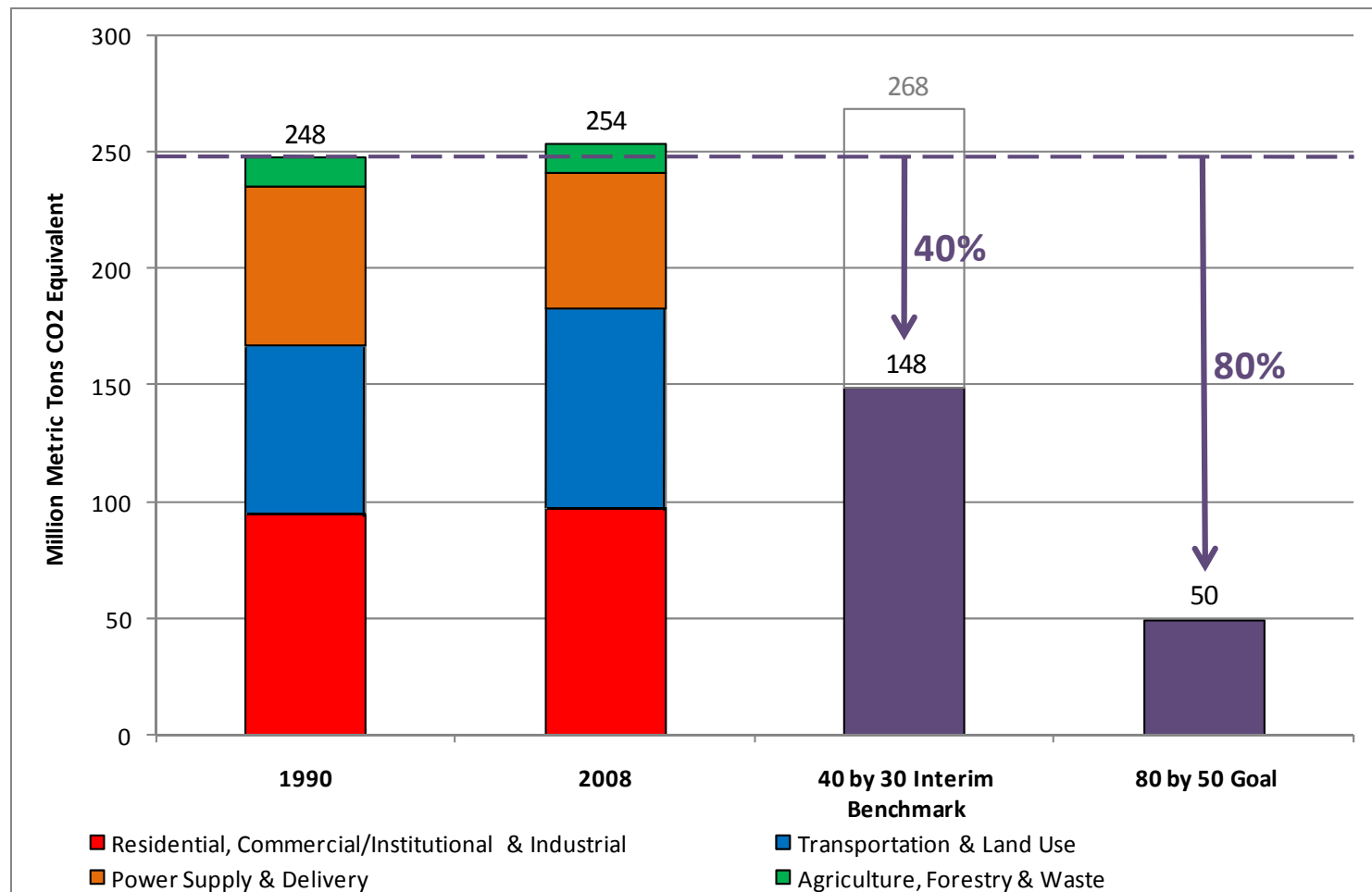
Total Greenhouse Gas Emissions for New York, 2008



CO₂ from Fuel Combustion by End Use Sector for New York, 2008



New York State Climate Action Plan Goal



Integrated State Energy Planning

- **Balance Energy – Economic – Environmental Policies**
 - Benefit-Cost Analyses: At what level does a policy/program contribute relative benefit or cost
 - Overall Energy/Program Costs
- **Identify Economic Opportunities**
 - Reduce fuel imports via In-State energy resources
 - Economic Development
- **Identify and Address Risks to Public Health, Safety, Welfare**
 - Provide rational progression to meet long-term policy drivers

New York State Energy Law

Article 6, State Energy Planning

Energy Planning Board, chaired by NYSERDA President

- 14 Agency/Appointee Members
- Agency staff shall provide services as requested by Board

The Board shall...be guided by the goals of:

- Improving the reliability of the State's energy systems
- Insulating consumers from volatility in market prices
- Reducing the overall cost of energy in the State
- Minimizing public health and environmental impacts, in particular, environmental impacts related to climate change
- Additional charge: Maximize cost-effective energy efficiency to meet projected demand growth

Energy Law Article 6

Section 6-104(2) State Energy Plan shall include

- 5, 10, 15 year demand and supply forecasts
- Infrastructure assessments, needed additions or alternatives
- Alternative (emerging) technologies
- Trends in supply, price, demand and review of current programs
- Security issues analysis
- Environmental Justice analysis
- Greenhouse gas emissions inventory and low carbon strategies
- Impact to Economic Development; Health, Safety, Welfare; Environmental Quality; Energy Costs for Consumers, low-income consumers

Energy Law Article 6

- 4-year Plan Cycles; No Sunset Provision
- State Agency Identification for Policy/Program Implementation
 - Annual Report to Board on Progress
 - Biennial Reports on Agency Progress, or recommended policy change
- SEP “shall provide guidance” to public and private sectors
 - Any energy-related decision by an agency “shall be reasonably consistent” with SEP
 - If not consistent, agency action to include statement explaining a finding why SEP is no longer reasonable
- Amendment, Appeals, Hearings processes

2009 State Energy Plan

5 Policy Objectives

- Assure reliable energy and transportation systems
- Support energy and transportation systems that significantly reduce greenhouse gas emissions
- Address affordability and improve economic competitiveness
- Reduce health and environmental risks of energy production and use
- Improve energy independence and fuel diversity

2009 State Energy Plan

5 Key Strategies to Simultaneously Achieve Energy Plan Objectives

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

120 Action Items tracked via Implementation Table

New York State Clean Energy Policy

“45 by 15” Goal

- 15 x15 - Reduce electricity consumption 15% below projected by 2015
- 30 x 15 - Thirty percent of electricity sold in NYS will come from qualifying renewable energy sources by 2015
- Translates to:
 - New EEPS program
 - Expanded RPS program; expanded CST
 - Refocused SBC program

Key Strategy: Engaging Others

Sustained Commitment from Local Governments

- Energy Codes – Adoption and Enforcement
- Planning and Land Use Decision-making
 - Recommended legislation: Require energy considerations in Comprehensive Plans
 - Tax incentives to encourage distressed community redevelopment
 - Assistance to promote Smart Growth and reduce VMT
- Locally-sponsored Efficiency Initiatives
- Locally-developed Renewable Resources
- Energy Infrastructure Siting

Climate Smart Communities

Target Initiative of Energy Plan: Increase the number of participating communities

Program Attributes:

- Adopt the Pledge
- Create Climate Action Plan
 - Greenhouse Gas Inventory, Set Goals, Initiate Action
- Decrease Energy Demand for Local Government
 - Energy Efficiency, Transportation, Purchasing
- Encourage Renewable Purchases for Operations
- Non-Energy Activities (e.g. Waste Management)

NYSERDA-DEC Regional Coordinators

Energy Smart Communities

NYSERDA program to increase effectiveness of program and encourage clean energy at community level

Program Attributes:

- Link community and program opportunity/Establish goals
- Increase knowledge of consumers to create demand
- Recruit mid-stream partners for programs to ensure supply
- Education for future consumers
- Project referrals
- Help promote community success stories

NYSERDA Regional Coordinators

Cleaner, Greener Communities

Announced \$100 Million Initiative; Competitive Grants

Envisioned with at least 2 types of Support:

- Local/Regional Planning
 - Innovative, Comprehensive, Smart Growth Strategies
 - Energy (supply and demand side), Transportation, Housing, etc.
- Implementation
 - Climate Smart Communities Pledge/Emissions Reduction Focus
 - Urban Revitalization; Brownfield Redevelopment
 - Green (not Gray) Infrastructure
 - Environmental Justice
 - Public Transportation

2013 State Energy Plan

<http://www.nysenergyplan.com>

- Draft Scope Issued
March 2011
- Public Comments
April 29, 2011
- Draft State Energy Plan September 1, 2012
- Public Hearings and Comments
- Final State Energy Plan March 15, 2013