

# Transportation and Energy Policy

Beyond the Gas Tax Symposium  
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## NYSERDA Highlights

- public benefit corporation created in 1975 in response to the energy crisis
- three primary NYS focus areas  
energy - environment - economy
- \$400M+ annual budget FY08/09,  
225+ employees, four NYS locations

FOR MORE INFO...

[www.nyserda.org](http://www.nyserda.org)



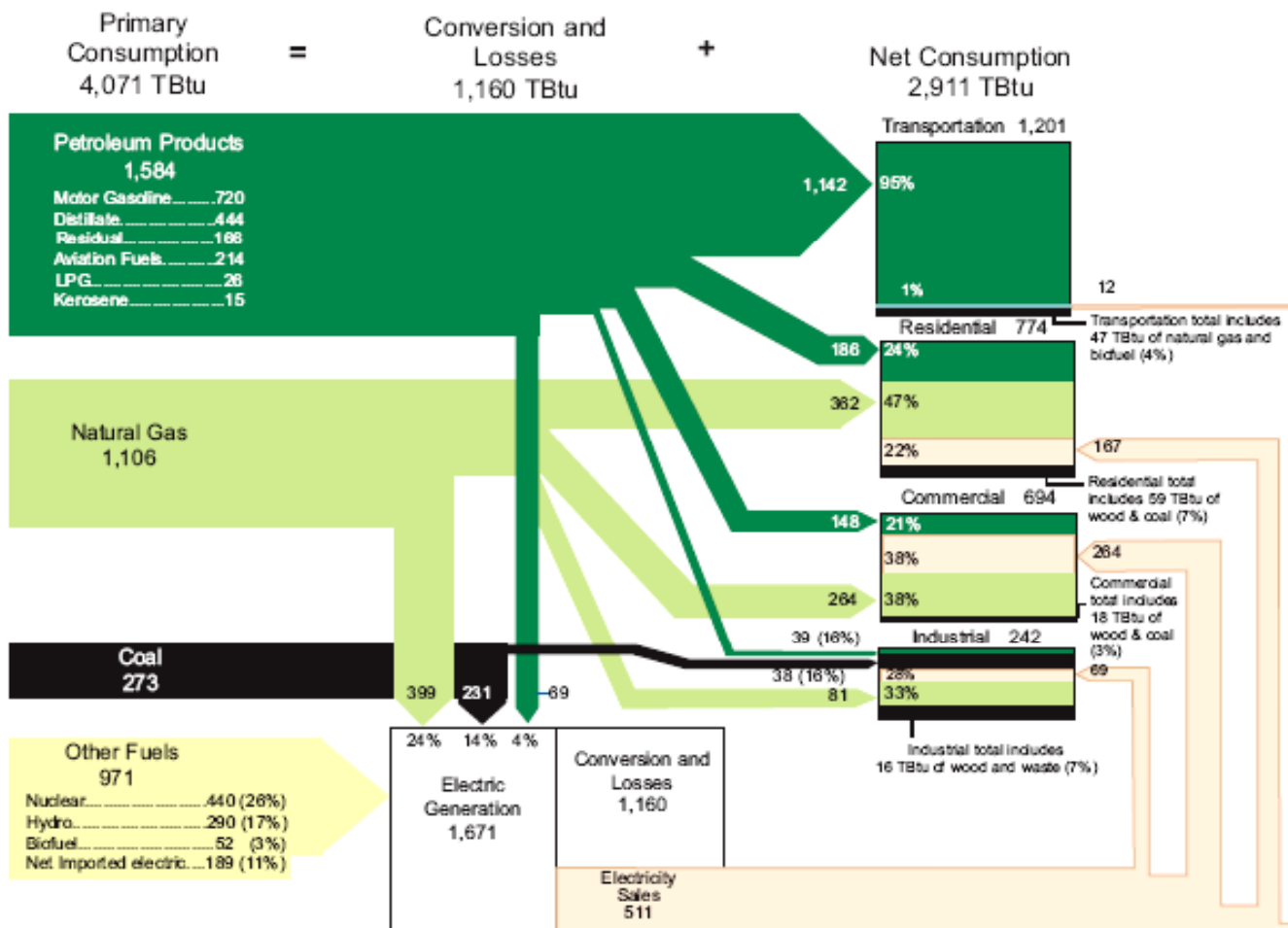
# NYSERDA Responsibilities

- State Energy Plan & Analysis
- Energy Research, Development and Demonstration
- System Benefits Charge Administrator
- Renewable Portfolio Standard (RPS) Administrator
- Energy Efficiency Portfolio Standard Administrator
- Regional Greenhouse Gas Initiative Administrator
- Power Plant Siting Board
- West Valley Demonstration Project
- Executive Order 111 (Green Buildings)
- EO 142 (Alt. Fuels & Heat)

## Energy Policy is responding to Climate Change & Energy Security

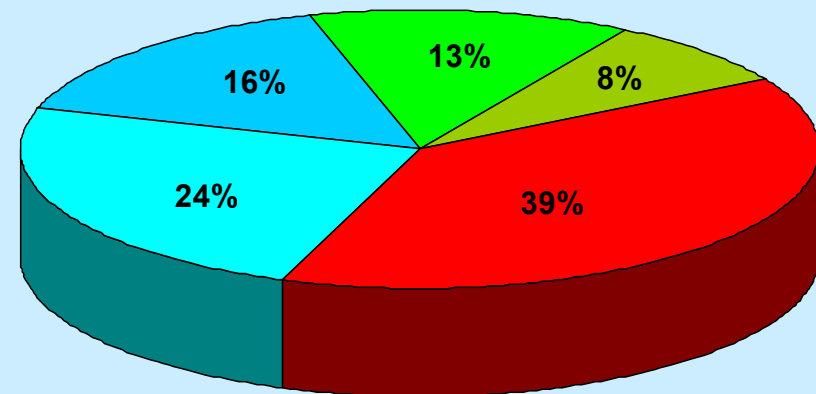
- Global warming is real and will have a devastating impact on the planet without a major reduction in Greenhouse Gas production.
- The US has 4.5% of the world's population but produces 25% of the world's CO<sub>2</sub>
- In 1975 the US imported 35.8% oil, today 58.2%

## 2006 NEW YORK STATE ENERGY FLOW (TBtu)



## New York's Transportation Sector is responsible for

- 42% of the energy used in the State
- 72% of the oil used in the State
- 39% of the Greenhouse Gas produced



■ Transportation ■ Utilities ■ Residential  
■ Commercial ■ Industrial

Fuel Combustion Greenhouse Gases

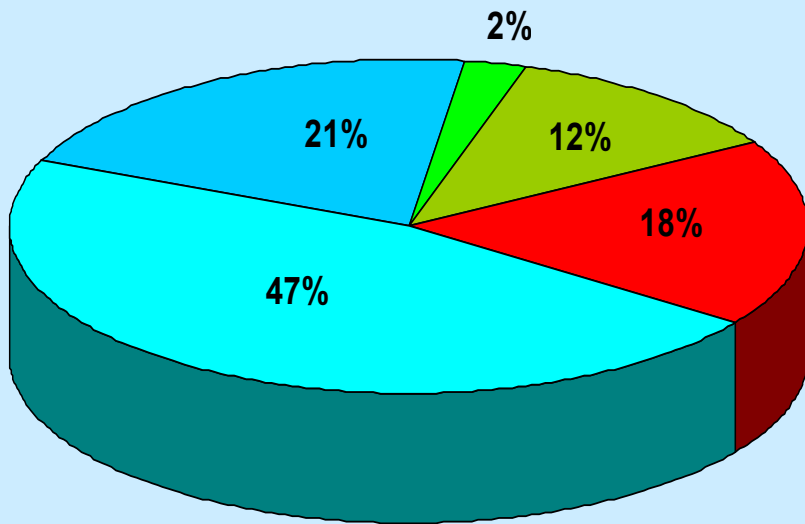
# New York's GHGs from fuel combustion

By Sector	1990			2000			2006			%Δ 1990 2006
	CO2 MTCDE	Total GHG MM Tons	%	CO2 MTCDE	Total GHG MM Tons	%	CO2 MTCDE	Total GHG MM Tons	%	
Electric Generation	70.3	70.5	29	69.8	70.0	27	53.6	53.8	24	-23.7
Residential	37.1	37.6	15	43.3	44.2	17	35.9	36.6	16	-2.7
Commercial	29.3	29.4	12	35.2	35.4	14	28.0	28.1	13	-4.4
Industrial	25.2	25.3	10	28.1	28.3	11	17.7	17.8	6	-29.6
Transportation	80.5	83.3	34	78.1	81.3	31	82.4	85.7	39	+2.3
Total	242.3	246.7	100	254.6	259.2	100	217.7	222.0	100	-10.0

# Public Sector Energy Funding

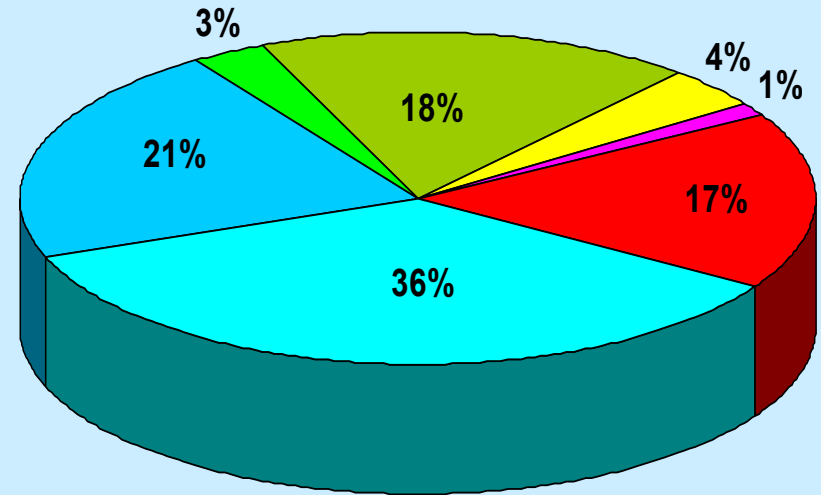
- Federal: DOE
  - \$ 25 Billion Annual Budget
  - \$592 million for Transportation Related Programs
    - fuels and vehicles
- New York State:
  - NYPA, LIPA finance energy efficiency improvements with their customers including: NYC Transit, LIRR, Metro North
  - NYSERDA \$406 Million Annual Budget
    - Statewide investment in innovative technology to solve New York's most difficult energy and environmental problems

# NYSERDA (2008-2009)



- RPS
- State Appropriations
- Other
- SBC
- Federal Grants

Source of Funds



- RPS
- Residential
- Legislative Programs
- Energy Analysis
- EES
- West Valley
- Transportation

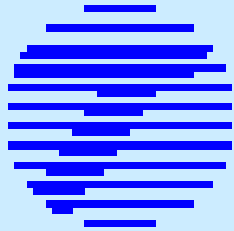
Use of Funds

# NYSERDA's Transportation Program

- **R&D** (120 active projects)
  - Product development w/NYS manufacturers
    - Hybrid & PHEV vehicles
    - Public Transit bus, rail, ferry
    - Taxi & urban duty cycle vehicles
    - Anti idling
  - Transportation Infrastructure Research
    - DOT collaborative R&D
- **Deployment**

Commercially available Alt. Fuel Vehicles (566) & fueling stations (37) to date (\$46MM)

  - DOE Clean Cities Program
  - CMAQ Funded private fleet Alt. Fuels. Vehicle program
  - Bio-fuel Initiative
  - Clean Fuel Bus Program
  - Clean Air School bus program
  - DOE Special Grants



# Transportation Infrastructure Research Consortium



Electronic Truck Inspection



Dual Fuel Snow Plows



Life Cycle Cost Analysis



Work Zone Speed Sensors



Bridge Sensors

Wireless Sensor Nodes  
(vibration, strain, temperature, light, etc.)

Central Sensor Node  
(reports, alarms, etc.)



Construction Sensors



Liquid Natural Gas



Plug-In Hybrids

Hydraulic Hybrid Truck



Hybrid Refrigeration



Ferry Emissions



## New Funding Sources for Sustainable Transportation Programs?

- Clean Air Interstate Rule (CAIR)
  - NOx cap/trade, delayed by Court (future \$75M/year)
- Energy Efficiency Portfolio Standard (EEPS)
  - Governor's 15 x15 initiative, (\$175M/year)
  - Use of electric grid derived funds for transportation TBD by the NY Public Service Commission (PSC)
- Regional Greenhouse Gas Initiative (RGGI)
  - Auction 64M tons/year of carbon offsets
  - Power plants offsets purchases? (public/private partnerships)

# Future Sustainable Transportation Program Possibilities

- The Transportation Efficiency and Environmental Improvement Program for New York
  - a multi-dimensional program involving NYSERDA, State/City Agencies (NYSDOT, NYCDOT, NYSDEC), universities and the private sector .
  - Initially scoped as a \$65M/year program funded with allocations from RGGI, CAIR, EEPS assessments

# Transportation Efficiency and Environmental Improvement Program

Program Activity Program area ↓	RAD	Transition	Deployment			
	Policy Studies/Analysis	Technology Development	Demonstration/Verification	Business Assistance	End-User Assistance	Education Outreach
Government Agency Function	X					X
Public Transit	X	X	X	X		X
Freight/Commercial	X	X	X	X	X	X
Vehicle Efficiency		X	X	X	X	X
Transportation Infrastructure	X	X	X	X	X	X
Alternative Fuels	X			X	X	X
Smart Growth	X		X		X	X

X = area of proposed funded activities

# Take-a-ways

- Good news: Transportation fuel use is down
  - Slowing economy, high energy costs
  - Future reductions from more stringent CAFÉ standards
- Bad news: Gas tax revenue Down
  
- Good news: Fuel use reduction = CO<sub>2</sub> reduction
  - Greenhouse gas reduction programs may be an opportunity to provide transportation program funding via “offsets” or proceeds funded projects

*Thank You!*

**NYSERDA**

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