



NYSERDA

New York State Biofuel Forum

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New York State Energy Research and Development Authority (NYSERDA)

- Established in 1975 by State Legislature
 - Executive level organization
- Cognizant energy agency for New York
- Mission: To identify solutions to State's energy and environmental challenges in ways that benefit the State's economy
- Forge public/private partnerships with businesses, municipalities, residents, and other energy stakeholders to accomplish this goal

Why the Interest and Emphasis on Biofuels?

NYSERDA's Mission Elements

“Use innovation and technology to solve some of New York's most difficult energy and environmental problems in ways that improve the State's economy”

- Energy
- Environment
- Economic Development

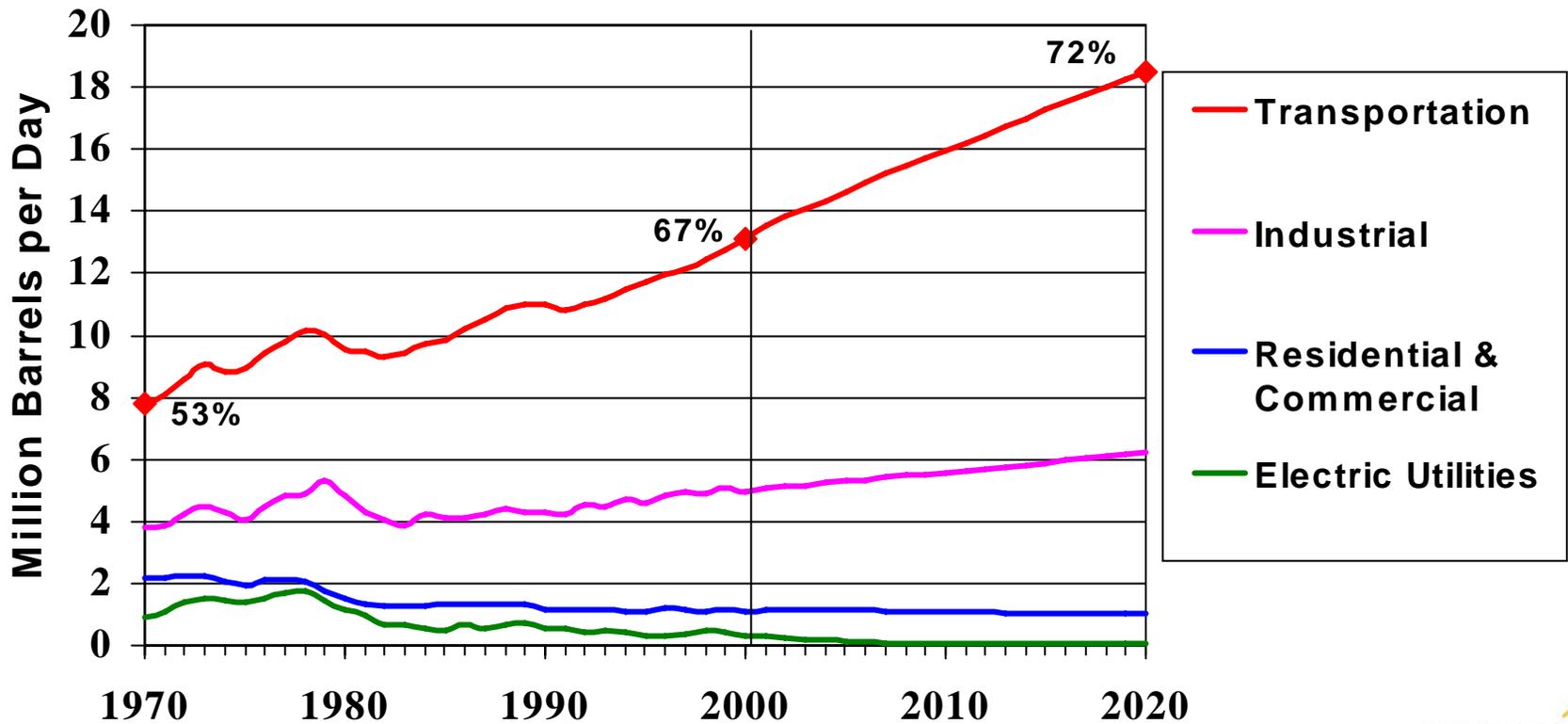
The Benefits of Biofuels

- **Energy:** New York has an 90% reliance on foreign oil as a proportion of total petroleum used.
 - Use of fuels either already available in New York or renewable bio fuels add to the energy security of the State and the nation
- **Environment:** Over half of the population of the State lives in areas that are not in attainment of Federal Clean Air Standards.
 - Biofuels can reduce emissions especially CO₂ (Global Warming)
- **Economic Development:** Opportunities for New or Expanded, Sustainable Industries & Jobs in New York State
 - Programs have spurred on biofuel businesses in New York
 - Production and distribution
 - Keep New York dollars in New York

Framing the Issue

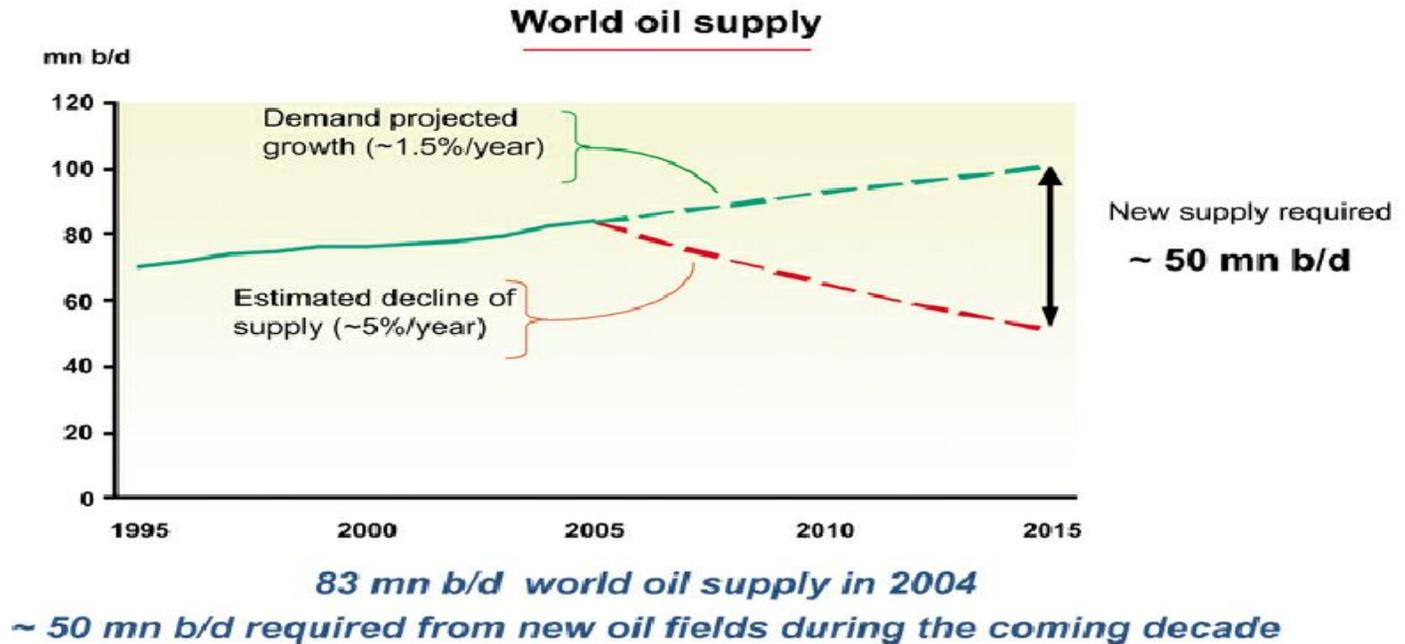
- In 2005, New York's reliance on foreign oil as a proportion of total petroleum was 90% while the US reliance was 67%
- About 45% of New York's imported petroleum comes from OPEC countries
- Transportation sector accounts for 66% of petroleum and 33% of distillate fuel used

Transportation Is Almost Entirely Dependent on Oil. It Accounts for 67% of U.S. Oil Use Now. This Will Increase Significantly in the Future



Peak Oil?

Answering the global call for oil represents a key challenge for the industry over the coming decade

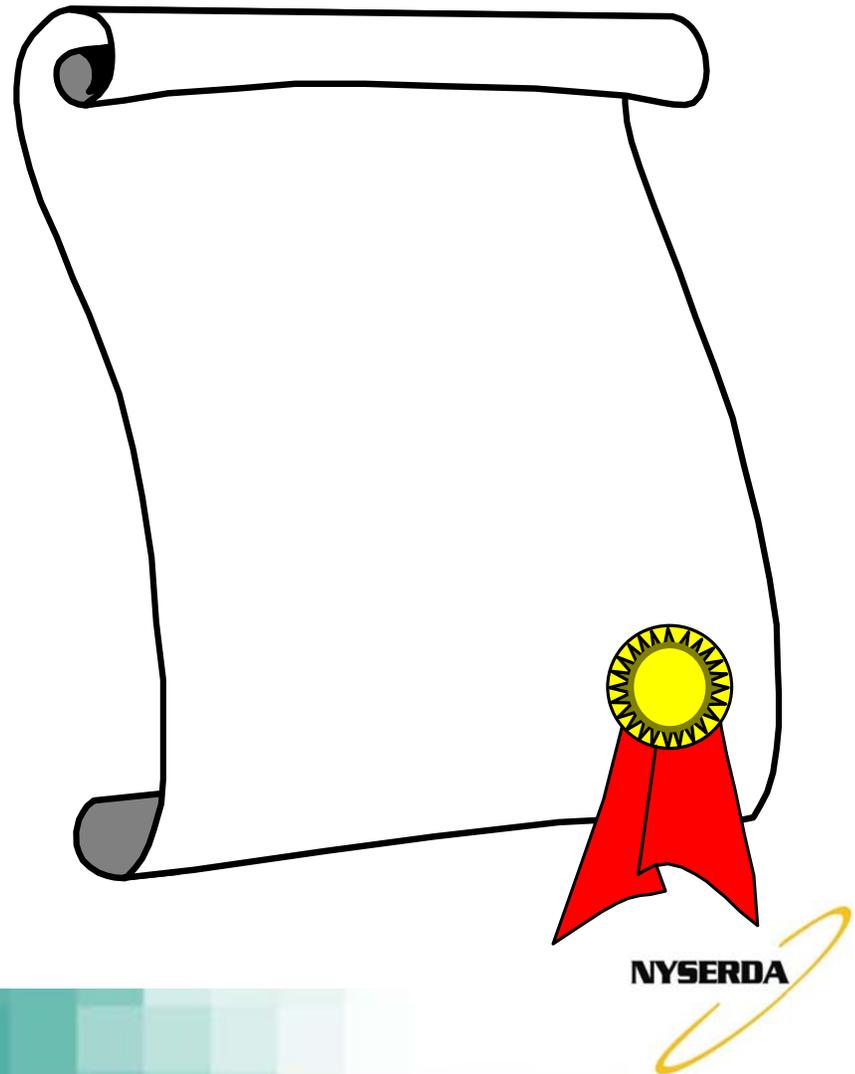


New York Response

- Government leads by example
- Encourage economic in-state production
- Demonstrate use-ability
- Focus on developing local distribution
- Provide incentives through tax policy
- Share risk to encourage retail sale
- Deal with industry barriers and educate the public

Government leads by example

- In 2007 Governor Spitzer reaffirmed Executive Order 111 that required all executive branch entities to purchase increasing amounts of light-duty alternative fuel vehicles up to 100% in 2010. Agencies must also develop strategies to reduce use of petroleum in heavy-duty vehicles.
- Governor Spitzer also reaffirmed Executive Order 142 that requires executive entities to use biodiesel in 10% of their diesel fuel use and 5% of all heating oil use by 2012. Requires increased use of E85.



Government leads by example

- EO No. 111: Requires state agencies to purchase light-duty AFV's
 - Agencies must also reduce petroleum in heavy-duty fleet
- EO No. 142: Requires that biodiesel comprise 10% of transportation fuel and 5% of heating oil by 2012
- Clean Fuel Vehicle Council oversees implementation
- E85 fueling capability for 800 state vehicles at 5 stations
- Biodiesel blends on state contract and pilots underway



Encourage economic in-state production

- Renewable Fuel Production Credit
 - NY companies can receive credit for each gallon produced
 - \$0.15 per gallon after first 40,000 gallons
 - Capped at \$2.5 million annually
- Several plants have been announced such as
 - Northeast Biofuels to make 100 million gallons of ethanol annually at site of former Miller Brewing Company
 - Northern Biodiesel in Rochester
- Cellulosic Ethanol Pilot Plant
 - \$20 million to construct two pilot plants within two years
 - Use plant materials readily available in northeast

Demonstrate use-ability

Demonstration projects

- A total of 158 vehicles are participating in the program over the past 24 months
- Variations in engine type, manufacturer, model year and vehicle style cover nearly all of the available options currently used in heavy-duty New York State diesel fleets.
- A total of 800,000 gallons of B20 used to date while driving approximately 3,550,000 miles.



Demonstrate use-ability

- State operates four E85 stations, soon to be 5
- State fleet of over 2,000 flex-fuel vehicles
- Approximately 800 state vehicles currently operating on E85 with increasing numbers
- Two demonstration E85 stations open to the public



Focus on developing local distribution



- NYS Clean Cities Challenge funding for 6 Biofuel terminals
- Demonstrated use of 1.4 m gallons of B-20 in 500 vehicles
- Seven projects to store, blend and distribute biofuels
 - displace 3.4 m gallons of petroleum annually
- PON 1091 is issued for cost-shared infrastructure projects –

Provide incentives through tax policy

- Elimination of state taxes on sale of E85 or B20
 - Worth \$.42 per g for E85 and \$.08 per g for biodiesel
- Credit up to 50% for E85 and B20 refueling property (no cap)
 - Federal credit is 30% (capped at \$30,000)
- Bioheat: \$.01 per % of biodiesel up to \$.20 per gallon
- What's needed?
 - Credits for terminal improvements
 - Extension of bioheat credit -DONE

Share risk to encourage retail sale

- NYSERDA Biofuels Station Initiative
 - \$9 m incentives for up to 300 retail gas stations
 - 50% up to \$50,000 for equipment/installations
 - new dispensers and retrofits eligible
 - RFP issued for Technical Services contractor
 - Two pilot projects completed
 - Solicitation released in May
 - E85 will require code waivers
- Thruway Authority to introduce biofuels at travel plazas



Dealing with Industry Barriers

- Legislation prohibiting exclusivity
- UL certification of fueling equipment
- Working with industry on cost and supply
- Notifying the public
 - DMV notification of drivers of FFV's
 - Partnership with GM



The Perfect Storm

Major Car Manufacturer Programs

Consumer Awareness

State Tax Credits

NYSERDA Incentive Program

High Fuel Prices

Climate Change

Federal Tax Credits

In-State Production



Instability in the Middle East

Energy Security

Peak Oil

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