



An overview of Ethanol in

New York State

Greater Long Island Clean Cities

“A Decade of Making a
Difference”

October 25, 2006

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NEVC's Main Functions

- Advocate the use of E85 as a form of alternative transportation
- Educate consumers, organizations, public policy officials and the media as to benefits of the use E85.
- Serve as a technical consultant to transportation fuel providers, ethanol producers, policy makers.
- Promote the use of E85 in the political arena.
- Provide information regarding tax incentives available to reduce price of E85.
- Sometimes – provide financial assistance to build fueling systems.
- Support all forms of alternative fuels.



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What is ethanol?

- Ethanol is an alcohol- ethyl alcohol which is odorless and colorless
- It is considered a neutral or grain spirit- pure grain alcohol
- Produced primarily from corn, but is also made in lesser amounts from cheese whey, wheat, sorghum and beverage wastes
- Thus, it is a “renewable” fuel, made from agricultural products



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What's all the fuss about ethanol?

- For transportation purposes, ethanol has replaced MTBE as an oxygenate, causing a huge increase in demand nationally
- The Renewable Fuels Standard mandates volume usage of ethanol at 4 billion gallons/year in 2006, 4.7 billion in 2007, with yearly increases to 7.5 billion in 2012
- Many high profile billionaires investing- Bill Gates, Richard Branson, Vinod Khosla- Sun Micro

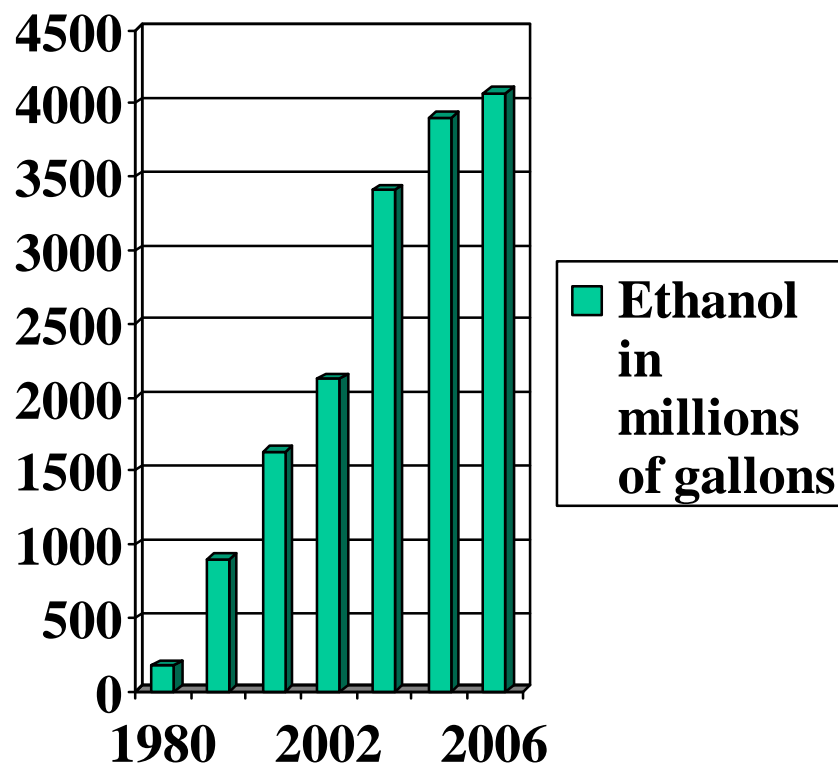


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Growth in Production



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National supply

- The vast majority of ethanol is produced in the Midwest where huge amounts of corn are grown
- It comes to the northeast by rail. Albany has over two million gallon storage capacity at the CSX "Super Hub"
- Tankers bring a large supply into Seawaren, New Jersey
- Ethanol cannot be shipped by pipeline



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Where is all this ethanol used?

- The majority goes into the E-10 market, which is considered a fuel blend for our Clean Cities alternative fuel usage report.
- We hope more goes into the E85 market. Over 600 new stations were added this year alone.



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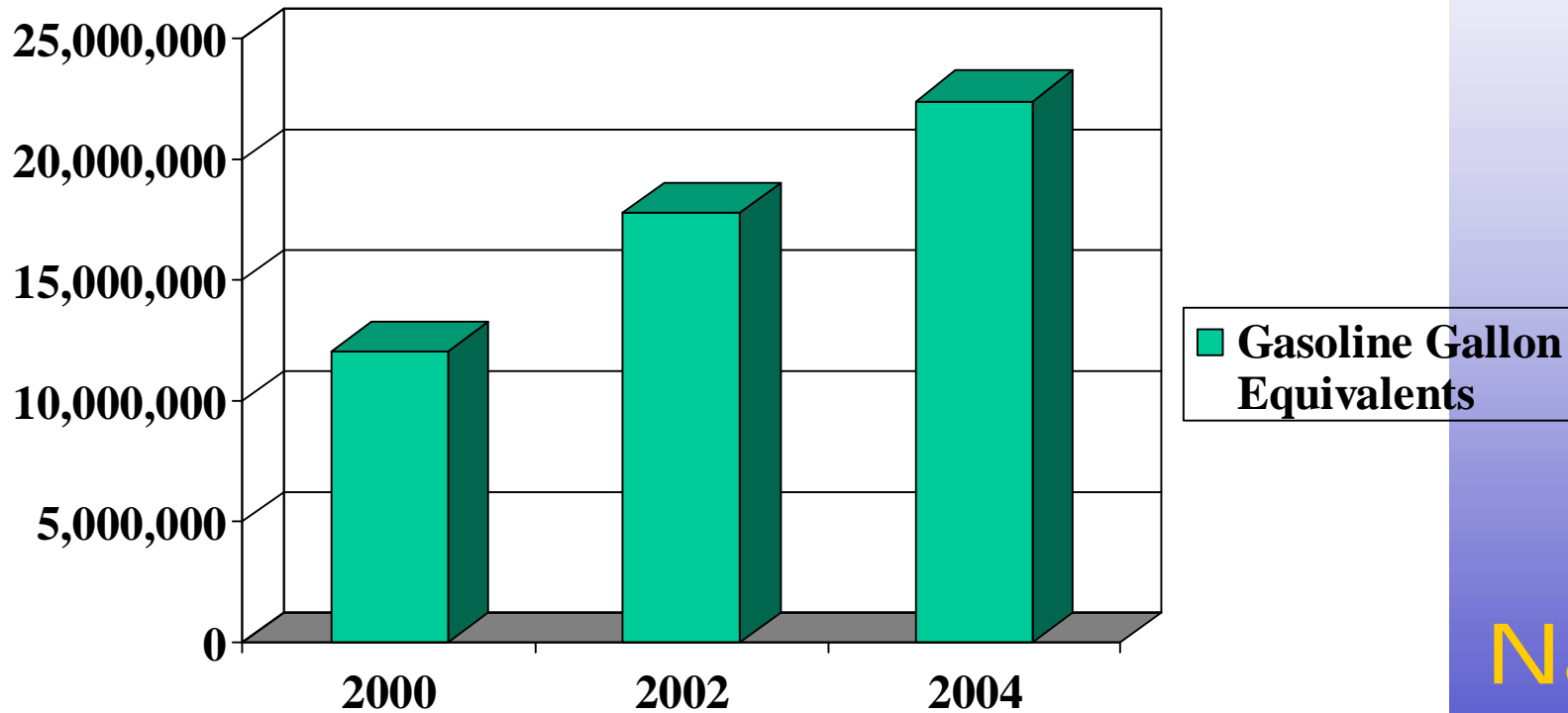
Production in New York State

- Significant ethanol production facilities are planned for our state
- Northeast Biofuels is currently utilizing a former Miller brewery to create a 100 million gallon plant in Fulton, NY. The feedstock is corn
- Lake Distillery is building a community sustainability sized one million gallon/year plant at its granary in King Ferry, in the Finger Lakes region. The feedstock is waste wheat.



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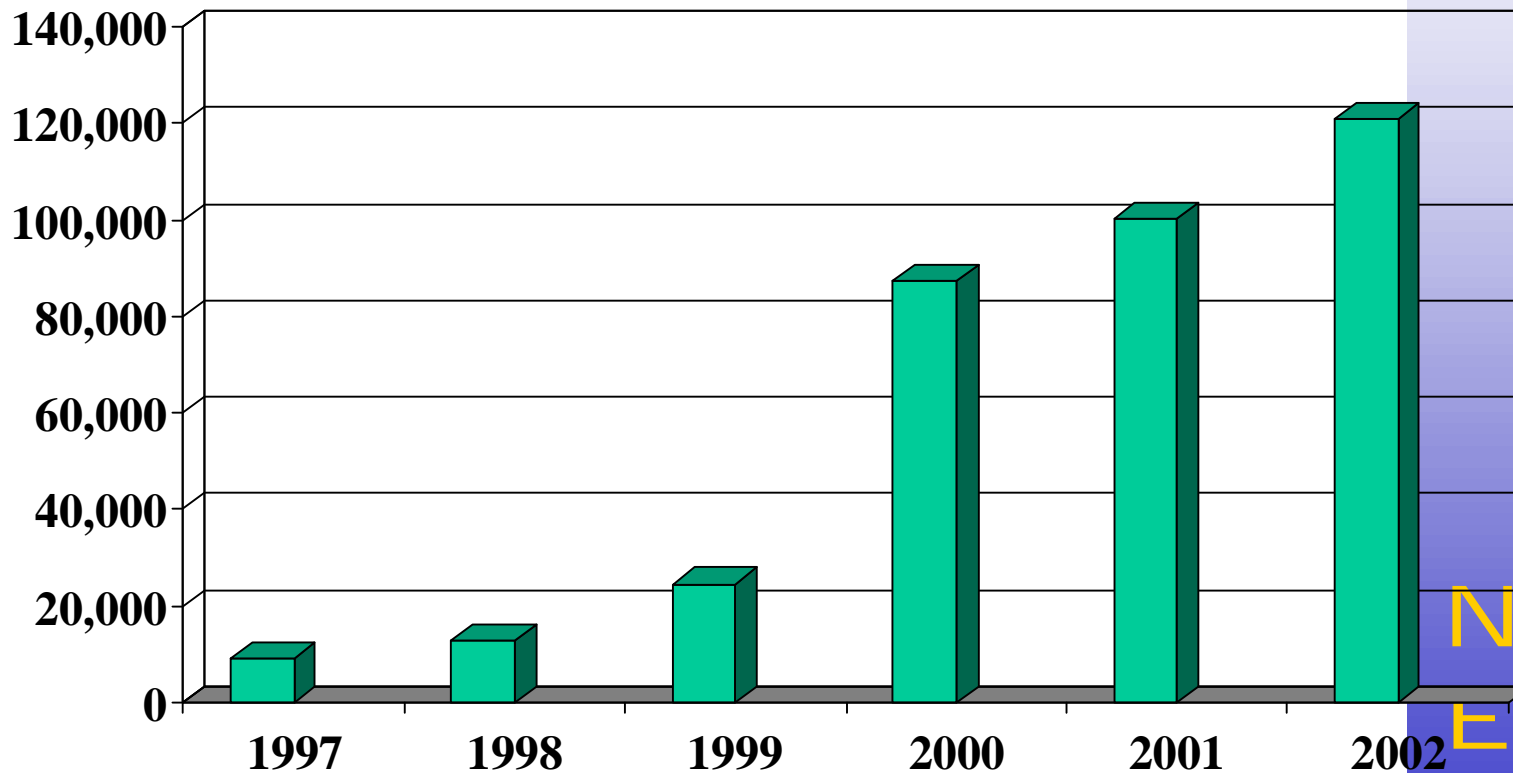
E85 Usage Nationally



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FFV's in use as Dedicated Fleet Vehicles

Source: USDOE CC website



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What is a Flexible Fuel Vehicle?

- Readily available flexible fuel vehicle from manufacturers that can run on either E-85 or gasoline. Standard vehicles from the dealer and require no further modifications to use E85.
- There are over 250,000 FFV's in NY! These include cars, light trucks, SUV's, mini-vans, luxury models.



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New FFV's for MY07

- **GENERAL MOTORS:**
 - More Impala and Monte Carlos
 - Islander van
 - MY 08 of the Malibu automobile
- **FORD MOTOR COMPANY:**
 - Crown Victoria, Mercury Marquis, and Lincoln
 - F-150 pickup (700,000)
- **DAIMLER/CHRYSLER:**
 - Dodge Durango



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VEETC

- \$.51/gallon for every pure gallon of ethanol blended.
- Credit extended to 2010.
- Eliminated highway trust fund issues.
- Payment within 20 days.
- Good for taxable/nontaxable.



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Energy Bill

- Tax credit of 30% of the total cost of an alternative fuel system, up to a maximum credit of \$30,000. The provision that a tax exempt entity may take the credit was also included. The section 179A deduction has been eliminated.
- CAFE credit extension - incentives necessary to absorb the increased cost of production of a FFV.
- A requirement that federal fleets purchase alternative fuel for use in their alternative fuel vehicles.
- A provision that calls on the Secretary of the Department of Energy to make grants and issue contracts to encourage the advancement of hybrid-flexible fuel vehicles.



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How can you help?

- Become a member
- Talk to your car dealer about FFV's
- Provide assistance by demanding E85 at your local station.
- Serve as conduit for NEVC staff to local station owners.
- Support & assist our efforts in your state and in Washington, DC.



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How can we help?

We can provide the following:

- Expert advice to you and the station owners.
- Assist station owners and blenders with adding E85.
- Assist with ethanol contracting.
- Consumer awareness packages.
- Dealership education ideas.
- Federal/State/Commercial Fleets Identification.
- Legislative efforts.



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The future...

- Elimination of MTBE.
- 2012 – after the RFS.
- Consumers want a choice, let's work together to give it to them!



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National E thanol Vehicle Coalition

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Prepared by the American Lung Association of Minnesota (ALAMN)

Since 1999, ALAMN has contracted with researchers at the University of North Dakota Energy & Environmental Research Center and Minnesota State University-Mankato MN Center for Automotive Research to test the state's top-selling fuels and determine their relative polluting potential. Following is a summary of the fuel composition and emissions testing conducted in summer 2003.

Assumptions:

- 15,000 miles per year per vehicle
- Test vehicle was 2002 Ford Taurus flexible fuel vehicle (LEV-rated)
- 505-second-duration hot-start portion of EPA FTP-75 driving cycle (not full federal test procedure)
- Typical Gasoline represented in table below by SuperAmerica fuel as "SA" is #1 service station chain in MN

Emissions data source: ALAMN Summer 2003 Twin Cities Gasoline Survey & Comparison

	# of vehicles/FFVs	Unburned hydrocarbons			Oxides of Nitrogen (NOx)			Exhaust Carbon Dioxide ONLY		*Greenhouse Gases (CO2 Only)	
		E85	SA gasoline	Reduction	E85	SA gasoline	Reduction	E85	SA gasoline	Reduction	Reduction
		lb/yr	lb/yr	lb/yr	lb/yr	lb/yr	lb/yr	lb/yr	lb/yr	lb/yr	Tons/yr
MEASURED	1	0.20	1.49	1.29	0.76	2.21	1.45	15362	16979	1617	0.8
CALCULATED	10	2.0	14.9	12.9	7.6	22.1	14.5	153615	169785	16170	8.1
CALCULATED	100	19.8	148.5	128.7	75.9	221.1	145.2	1536150	1697850	161700	81
CALCULATED	1000	198.0	1485.0	1287.0	759.0	2211.0	1452.0	15361500	16978500	1617000	809
TODAY	5,000,000	990,000	7,425,000	6,435,000	3,795,000	11,055,000	7,260,000	76,807,500,000	84,892,500,000	8,085,000,000	4,042,500
FUTURE?	50,000,000	9,900,000	74,250,000	64,350,000	37,950,000	110,550,000	72,600,000	768,075,000,000	848,925,000,000	80,850,000,000	40,425,000

Hydrocarbons (volatile organic compounds or VOCs) and NOx are primary components in ground-level ozone formation. Carbon monoxide (CO) may contribute as much as 10% to overall ozone formation. It is anticipated that E85 would also reduce CO tailpipe emissions.

*Tailpipe Emissions ONLY (Please see discussion below for carbon dioxide fuel lifecycle emissions)

