

# New York State SHOPP Overview Presentation

Matthew Milford  
NYSERDA  
October 8, 2014

# State Heating Oil and Propane Program (SHOPP) Importance

## Importance to heating fuel stakeholders

- Timely, credible price information
- Information is used by New York petroleum businesses, State and local government agencies, industry trade groups, consultants, media organizations, and individuals.
- Information used in newsletters, media inquiries, government inquiries, and to inform the public.
- Information is used in investigations of consumer price complaints and analyses of changing marketplace dynamics

# New York State SHOPP Program

- New York's expanded SHOPP Survey
  - Heating oil, kerosene (not required by EIA), and propane fuels
  - 139 heating oil outlets, 83 propane outlets
  - Provides more than just one average statewide price with prices for different regions of the State
    - 8 heating oil regions, 6 propane regions
    - Regional price trends provide more utility and value than one statewide average price

# New York Expanded SHOPP Survey

Survey is conducted year round

- Semi-monthly surveys conducted April through August and weekly from September through March
  - Consumers expressed strong interest in summer price information to gauge various pre-buy, prepaid, price cap, and price lock-in programs offered by many dealers during the summer.
  - Informs consumers of energy price trends throughout the spring and summer months since energy prices can be volatile.
  - Allows NYSERDA to maintain continuous contact with the industry and survey respondents.

# SHOPP Methods

NYSERDA collects SHOPP prices by both phone and email.

- Phone Calls: 10 staff members each call approximately 8-10 companies each week
- Emails: NYSERDA emails approximately 85 SHOPP survey participants and the average response rate is approximately 80% with a follow up phone call to the remainder

# Heating and Transportation Fuels Reports

- Each fuel oil and propane dealer receives the NYSERDA “Heating Fuels Report” and “Transportation Fuels Report”
- Weekly reports inform energy stakeholders and monitor market activities and energy trends with information including:
  - Regional and statewide retail prices of heating and transportation fuels
  - Spot prices of heating and transportation fuels
  - Crude oil prices
  - Natural gas spot prices in Downstate market (Transco Zone 6)
  - U.S. crude and natural gas inventories
  - Transportation fuels production and demand
  - Mid-Atlantic distillate and propane stocks
  - New England propane stocks
  - Heating Degree Days

# Web Information

- Prices are posted on the NYSERDA website weekly
- NYSERDA provides weekly, monthly, and annual prices with a comparison to the previous year
- Energy prices include motor gasoline, diesel, heating oil, propane, kerosene, natural gas, and electricity.
- Weather significantly affects demand and price of heating fuels.
  - NYSERDA provides weekly heating degree-days during the heating season for New York State and New York Metropolitan areas from NOAA.
  - NYSERDA provides a “Monthly Heating Degree-Day Report” covering New York State and New York metropolitan areas.

# Additional Resources

## NYSERDA's Patterns and Trends Report:

<http://www.nyserderda.ny.gov/Energy-Data-and-Prices-Planning-and-Policy/Energy-Prices-Data-and-Reports/EA-Reports-and-Studies/Patterns-and-Trends.aspx>

New York State Energy Plan: <http://energyplan.ny.gov/>

## New York State Energy Assurance and Energy Emergency Plans:

<http://www.nyserderda.ny.gov/Energy-Data-and-Prices-Planning-and-Policy/Energy-Prices-Data-and-Reports/EA-Reports-and-Studies/Energy-Assurance-and-Energy-Emergency-Plans.aspx>

## Petroleum Fuel Infrastructure Studies:

<http://www.nyserderda.ny.gov/Energy-Data-and-Prices-Planning-and-Policy/Energy-Prices-Data-and-Reports/EA-Reports-and-Studies/Petroleum-Infrastructure-Studies.aspx>

# Regional Issues: Changes in Sulfur Content of Northeast Heating Oil

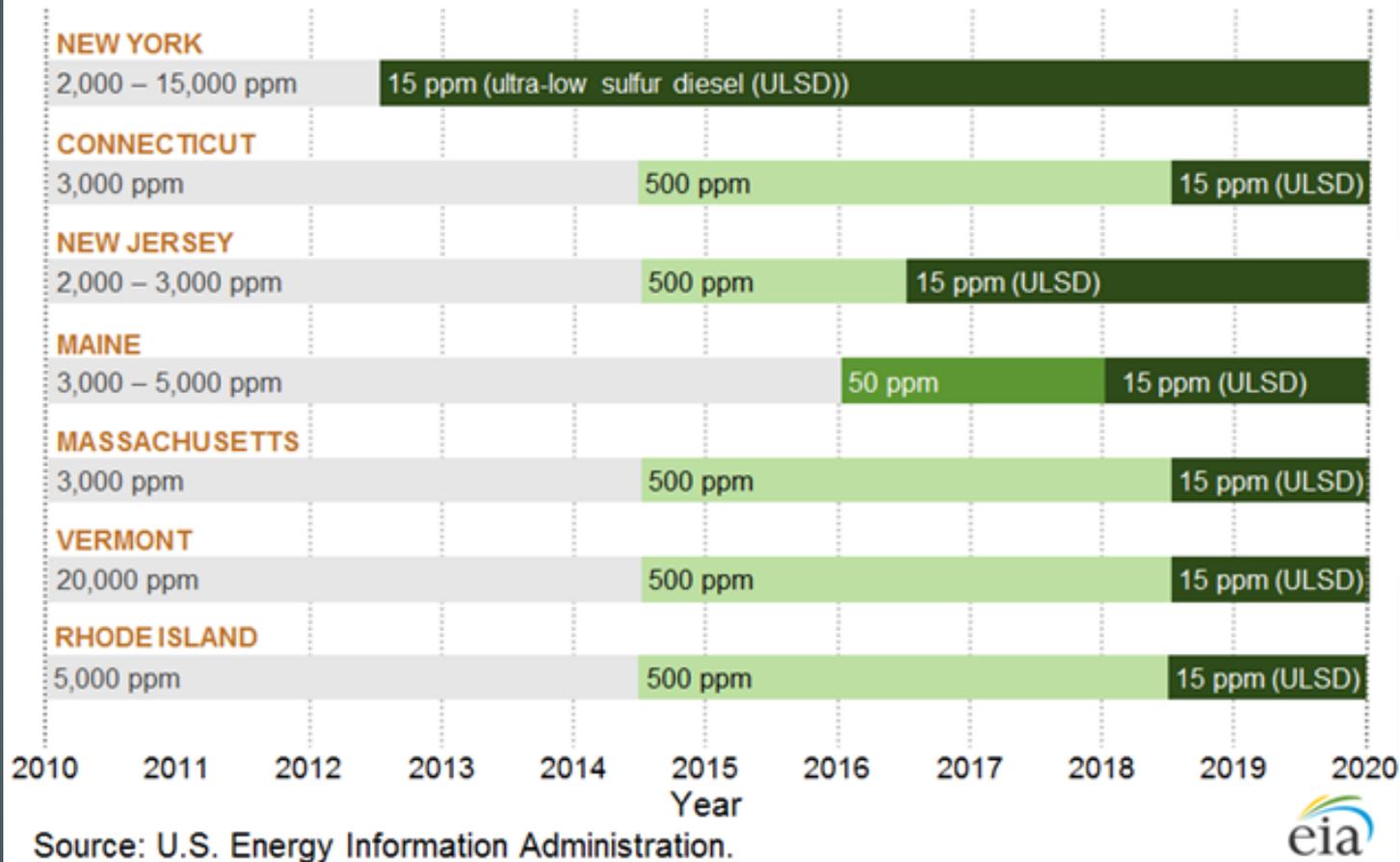
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# Changes in Sulfur Content of Northeast Heating Oil

- Reductions in the maximum sulfur content of heating fuels in five northeastern states will likely result in higher demand for ultra-low sulfur diesel (ULSD). New York switched to ULSD July 1, 2012.
- Overall total distillate demand, including transportation sector diesel, is likely to continue a long-term downward trend (short-term weather dependent).
- On July 1st, New Jersey, Massachusetts, Connecticut, Vermont, and Rhode Island reduced the maximum allowable content of sulfur in heating oil to 500 parts per million (ppm) from 2,000–3,000 ppm.
- It is expected that heating oil meeting the 500 ppm specification will be blended from stocks of higher-sulfur heating oil and ultra-low sulfur diesel (ULSD), which has a maximum sulfur content of 15 ppm.
- The 500 ppm sulfur limit for heating fuel is an interim step in most Northeast states' plans to reduce the acceptable maximum sulfur level to 15 ppm by mid-2016 (New Jersey) or during 2018.

# Northeast Heating Oil Sulfur Specifications

Figure 1. Northeast heating oil sulfur specifications (2010-20)



# Northeast Heating Oil Demand

- U.S. home heating oil consumption is highly concentrated in the Northeast.
- Four-fifths of all homes in the United States that use heating oil are located in the Northeast ([source: U.S. Census Bureau, 2012 American Community Survey](#)).
- 25% of homes in the Northeast, or 5.3 million homes, use oil as their main heating fuel.
- Demand typically peaks in January, with the January average demand for all five states combined over the past 5 years averaging 195,000 bbl/d (8.2 million gallons per day).

# Heating Oil Supply

- ULSD was 90% of total U.S. refinery net production of distillate fuels in 2013.
- Product is readily available in the New York Harbor area because the sulfur specification for heating oil in New York was reduced to 15 ppm in 2012.
- Option 1: Supply USLD: The Northeast has access to a fungible distillate product that can supply both home heating demand as well as transportation demand and that does not require separate storage and handling facilities for the different fuels.
  - ULSD typically costs more than higher-sulfur heating oil, New England homeowners could face higher prices to heat their homes.
  - Current lower crude oil prices may help this year.

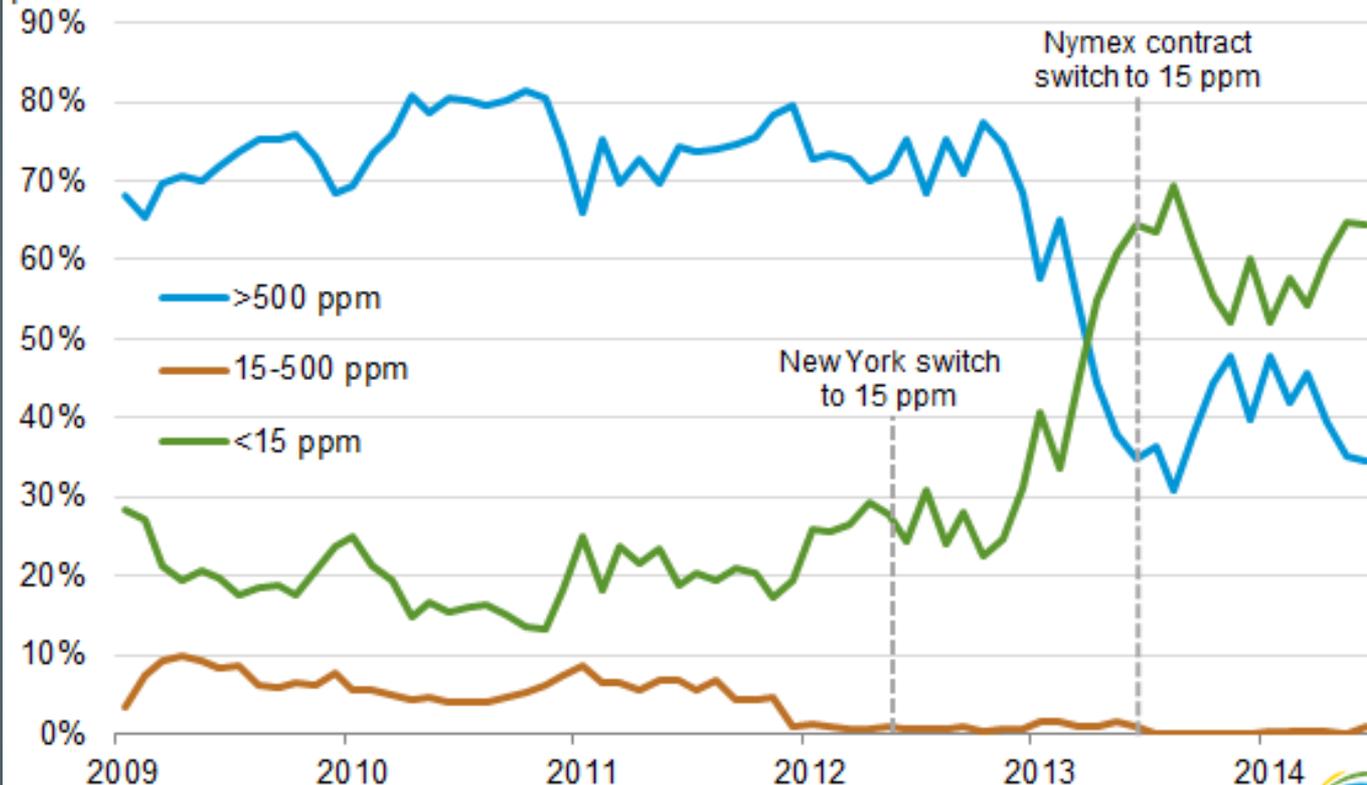
## Heating Oil Supply, Cont'd.

- Option 2: Blend higher sulfur distillate with ULSD to produce 500 ppm heating oil.
  - This option requires separate storage and handling facilities for the two fuels, but allows the blender to capture the price difference between the higher-priced ULSD and the lower-priced higher-sulfur distillate.
  - Based on a blend of 80% ULSD to 20% No. 2 heating oil, to meet the 500 ppm sulfur limit, blending the two fuels would yield a 2-cent-per-gallon average margin over ULSD based on August spot prices in New York harbor.

# Northeast Distillate Inventories Sulfur Content

Figure 3. Sulfur content of distillate stocks (NJ, MA, CT, RI, VT)

percent of total distillate stocks

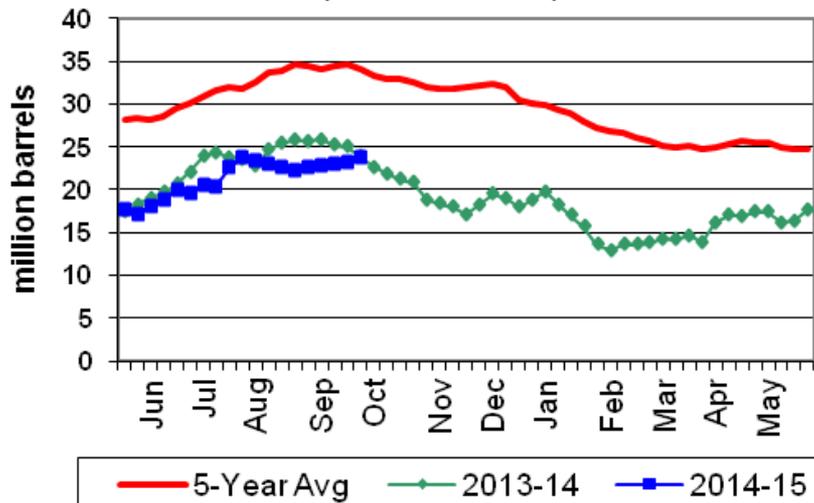


Source: U.S. Energy Information Administration, *Petroleum Supply Monthly*.

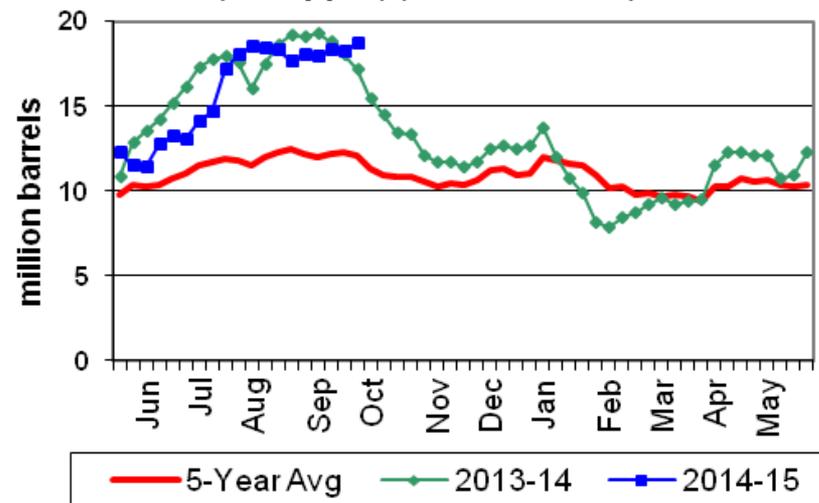


# Mid-Atlantic Distillate Stocks

Mid-Atlantic Total Distillate Stocks  
(source: US EIA)



Mid-Atlantic Ultra-low Sulfur Diesel Stocks  
(0-15 ppm) (source: US EIA)



- For the week ending September 26, total Mid-Atlantic distillate stocks are 30.6% below the 5-year average but are close to last year's levels.
- Ultra-low sulfur distillate stocks are 54.2% above the 5-year average and 8.8% higher than last year's levels.
- These figures do not include New England data.

# Effect on New York ULSD Heating Oil Market

- While the change in Northeast heating oil specifications likely will increase demand for ULSD, the increased low-sulfur demand should easily be met through a combination of domestic refinery production and imports from the actively traded Atlantic Basin market.
- NYSERDA will continue to monitor market developments throughout the heating season