

New York State SHOPP Overview Presentation

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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

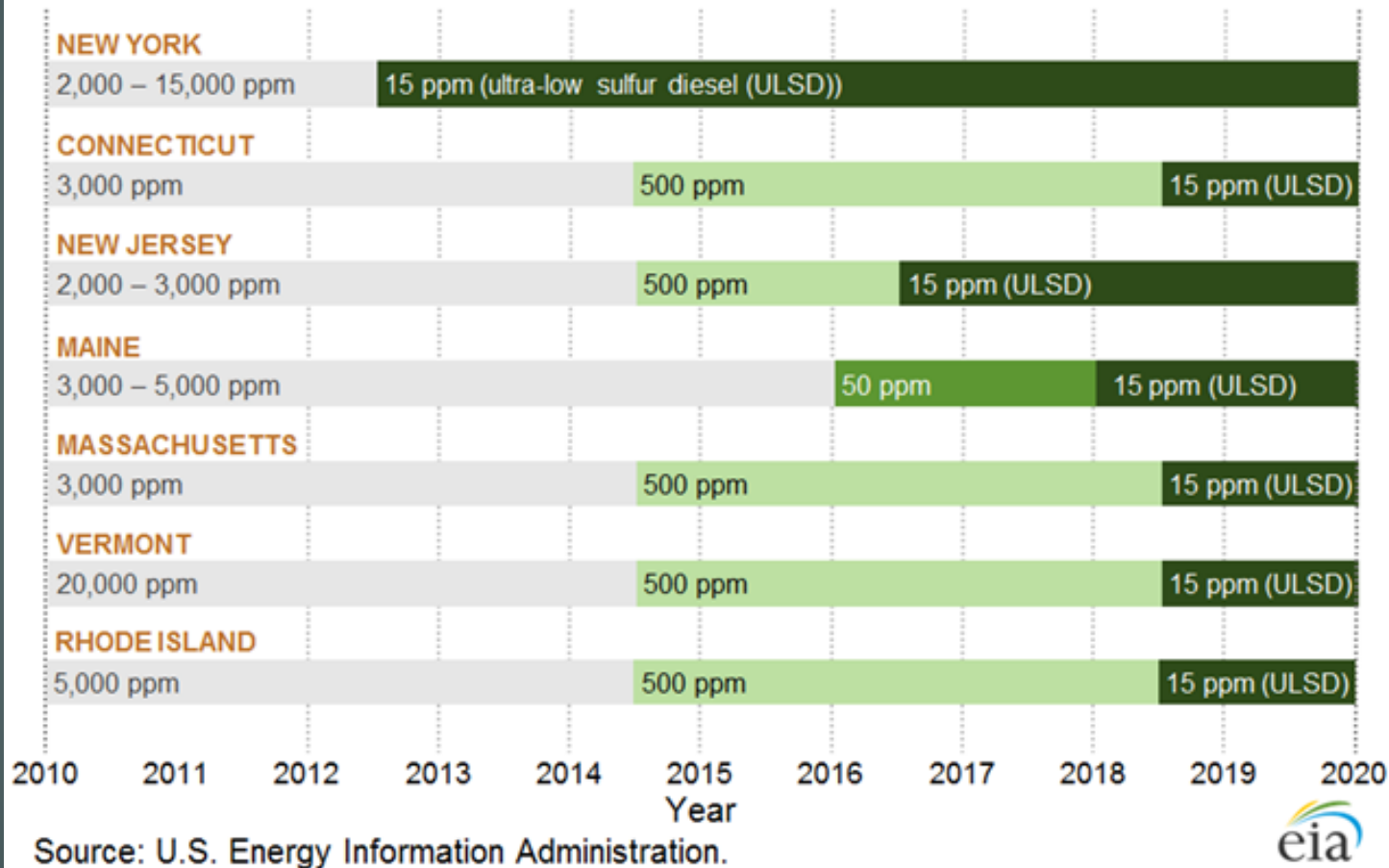
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Changes in Sulfur Content of Northeast Heating Oil

- 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.

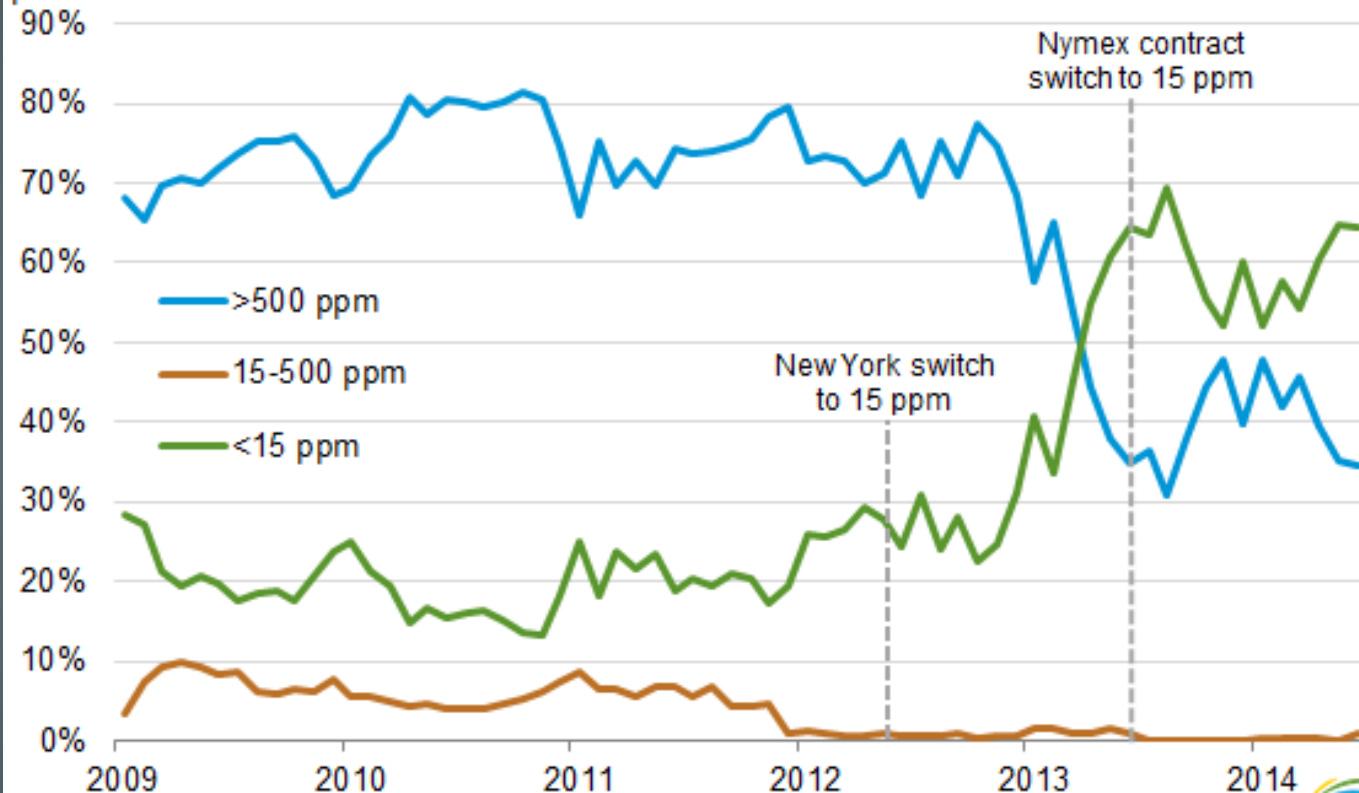
Heating Oil Supply, Cont'd.

- 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

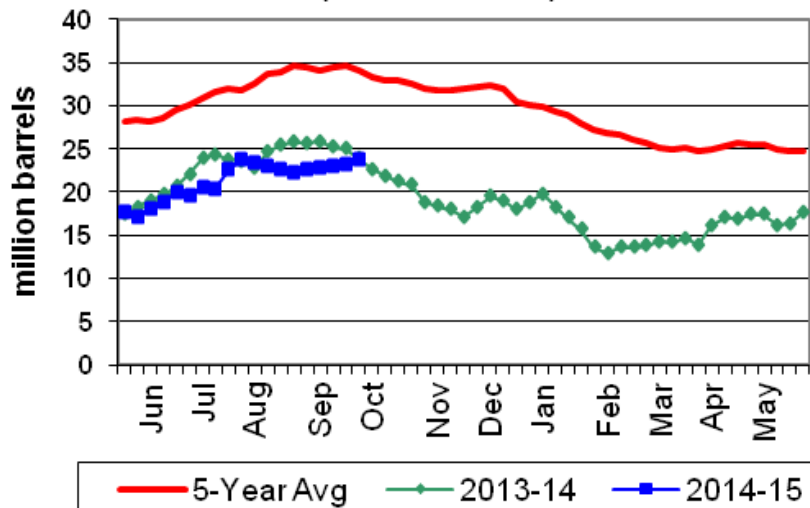


Source: U.S. Energy Information Administration, *Petroleum Supply Monthly*.

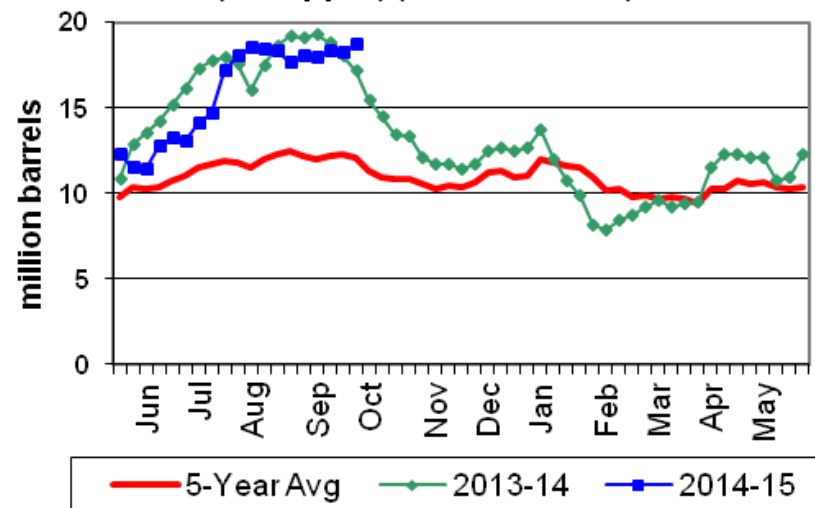


Mid-Atlantic Distillate Stocks

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