



Connecticut
Petroleum Council
A Division of API

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**Testimony of
Steven Guveyan, Connecticut Petroleum Council
In Opposition to SB-382, Low-Sulfur Heating Oil/ Bio-Heat Mandate**

The Connecticut Petroleum Council---a trade association representing major oil companies, refiners and terminal operators doing business in Connecticut---strongly opposes SB-382 (the Low-Sulfur Home Heating Oil/Bio-Heat mandate bill) which contains a reduction in sulfur levels to 50 ppm by 7/1/2011 and 15 ppm by 7/1/14, and adds a bio-heat mandate beginning next year at 2%, increasing to 20% by 2020.

Both proposals in the bill are draconian; no state has adopted either one---let alone both---for the reasons articulated below. Passage of this bill would create the ultimate “boutique” or specialized fuel for Connecticut-only. As you know, state-specific fuels such as California gasoline cost more---usually much more---than widely used fuels. In lieu of this proposal, we propose reducing the sulfur content of heating oil from the current 3,000 ppm standard to 500 ppm, beginning July 1, 2014, an 82.5% reduction. Doing so would help improve our air quality with respect to sulfur, particulate matter (PM 2.5) and regional haze, and offer significant environmental benefits, while still providing the necessary flexibility to the transportation and refinery sectors. That, in turn, would help minimize the chance of supply and price disruptions.

LOW-SULFUR FUEL

We oppose moving the home heating oil sulfur standard to 15 ppm----the same as diesel fuel----because it would put homeowners in direct competition with diesel fuel, demand for which has been growing worldwide. If passed as written SB-382 will place extreme pricing pressure on diesel fuel and home heating oil which, according to this bill, would now effectively be the same fuel. The two fuels should remain separate in order to assure an orderly market for each.

The price differential between 15 ppm ultra low sulfur diesel (ULSD) and 3,000 ppm home heating oil over the last 3 years in NY Harbor shows diesel to be almost always more expensive, with the spread ranging up to 18 cents per gallon more. Had this bill passed 3 years ago, homeowners in Connecticut would have been guaranteed substantially higher heating oil costs for the 2007-2009 time period.

Normally, regulators give a minimum of four years when changing fuel specifications because of the time that refineries need for planning, engineering, permitting, procurement, construction and start-up. This bill gives only 14 months (7/1/11), and establishes a new Connecticut-only heating oil standard of 50 ppm, neither of which is practical. Currently, there is no 50 ppm sulfur standard anywhere in the U.S.

The 15 ppm standard for ULSD was introduced in order to enable advanced after-treatment devices on engines that reduce tailpipe emissions in cars and trucks. Removing sulfur was a prerequisite to avoid damage to catalytic after-treatment devices. The use of 15 ppm fuel is NOT required for homeowner burners, boilers and furnaces.

Currently, 15 ppm ULSD can be purchased for use as heating oil by heating oil dealers who have customers wanting it. It is not necessary to mandate it. Consumers should be allowed freedom to choose.

Most people choose not to buy it because of its higher cost and questionable cold-weather performance. Some heating oil dealers recently complained that tanks holding 15 ppm fuel have corroded. Until the cause of the corrosion is found, we strongly recommend against requiring 15 ppm fuel in heating oil tanks.

The refining industry proposal to reduce sulfur content from 3,000 ppm to 500 ppm is very significant and will yield major benefits. Any proposal to reduce sulfur below 500 ppm needs to be economically justified. Refinery upgrades to produce 15 ppm fuel are extremely expensive (over \$100 million estimated for the HESS refinery in NJ that supplies fuel here; about \$210 million for a recent SUNOCO refinery upgrade in PA), and those costs may be passed on to consumers.

If Connecticut decides to move below 500 ppm sulfur, then the reduction should be limited to 50 ppm, not 15 ppm. A 50-ppm standard should only be considered after Connecticut carefully studies the price/supply implications of such a change. Emissions from 50 ppm sulfur heating oil would not be appreciably different from 15 ppm ULSD in terms of particulate matter (PM 2.5) or visibility (regional haze). Going from 3000 ppm to 50 ppm would be a 98.3% reduction in sulfur. Unlike highway vehicles, there is no emissions control-technology on home heating oil equipment that is enabled by 15 ppm fuel, so there is little justification for making this expensive, incremental reduction. Newer, higher-efficiency heaters and boilers are able to operate on 50 ppm fuel, which could become the ultra-low standard for heating fuel.

If Connecticut were to go to 50 ppm fuel, we recommend going in two steps: 500 ppm by 7/1/14, and 50 ppm by 7/1/18, keeping with the minimum four-year time period needed to make changes at refineries.

Finally, there is a strong likelihood that requiring low-sulfur heating oil will increase greenhouse gas emissions, in direct conflict with the legislation passed by the Connecticut General Assembly in 2008 (HB-5600, PA 08-98) requiring a 10% reduction in greenhouse gas (GHG) emission by 2020 compared to 1990 levels, and an 80% reduction by 2050 compared to 2001 levels. Removing sulfur from heating oil is an extremely energy-intensive process which will emit GHG's to burn the fuels needed to de-sulfurize. De-sulfurizing of distillates is generally accomplished by hydro-treating. To produce the hydrogen needed for hydro-treating, most refineries must "crack" natural gas or refinery fuel gas to obtain the hydrogen needed for the process. The result of this process is, ironically, to produce large amounts of carbon dioxide (CO₂), because the carbon atom being cracked is oxidized to CO₂. The amount of hydrogen needed to for hydro-treating the part of the distillate pool not already at 15 ppm is significant. Therefore, a decrease in sulfur, especially to 15 ppm, will likely yield more greenhouse gases.

It is important to understand that although the greenhouse gases emitted from refineries in order to produce low-sulfur home heating oil are out-of-state (e.g. NJ, Philadelphia, Gulf Coast), the Connecticut law passed in 2008 requires DEP to use full life-cycle analysis when studying greenhouse gases, which means those emissions in NJ somehow need to be reduced here in Connecticut---a problem which no one has yet solved!

BIO-HEAT MANDATE

This bill also requires an oppressive bio-heat mandate, beginning at 2% in 2011, and increasing to 20% by 2020. No state in the country has passed such a far-reaching mandate for good reason---there have been significant cold-weather problems with bio-fuels. Because it is a large soybean state, Minnesota passed a significant (5%) bio-fuels mandate (for diesel fuel) which has been suspended several times (including this year) because of cold-weather performance problems.

Connecticut does not have a large, indigenous bio-feedstock source such as soybean oil or canola oil to rely on the way some other states that pass mandates do (e.g. Minnesota/Missouri). Nor do we have a large animal fat base here. Mandates don't make sense for states that don't have the feedstock; it's clear that if a bio-fuel mandate passes, the bio-fuel added to heating oil will be imported from the Mid-West, or from foreign countries.

The current Connecticut bio-diesel incentive law adopted in 2007, and the amendments to it you are now considering (SB-118) make more sense than a law mandating it. We supported passage of that law three years ago, and we continue supporting it today.

Little bio-fuel is being produced in the U.S. right now because the federal bio-fuel blending credit of \$1.00 per gallon expired on 12/31/09. Without it, bio-fuel is more costly and less competitive than standard petroleum products. IF Congress renews the credit, it may be only for one year (2010). A bio-fuel mandate will force consumers to potentially incur higher costs and increase dependence on uncertain fuel subsidies.

Bio-fuels have been more expensive than standard fuels---sometimes significantly so---and that could be passed on to end-users throughout the state. In 2008, Greenwich dropped a plan to use a soy-based fuel to power about half of its 300-vehicle fleet. At that time, bio-fuel cost about 40 cents more per gallon than regular diesel fuel. We recommend that you instruct the Office of Policy & Management (OPM) to study the price differentials and report back to you by the end of 2010.

Finally, bio-diesel fuel can hurt air quality; it likely increases nitrogen oxide emissions (NOx) ---an ozone precursor---slightly.

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