ENERGY MARKETERS OF AMERICA ISSUE BRIEF

Lower Carbon Emissions from Heating Fuels

The Problem

Congress needs to permanently reauthorize the National Oilheat Research Alliance (NORA) to ensure the oilheat industry can continue providing efficient and reliable heat and hot water to consumers.

Background

The Energy Marketers of America (EMA), formerly known as the Petroleum Marketers Association of America (PMAA), is a federation of 47 state and regional trade associations representing energy marketers throughout the U.S. who supply 80 percent of all finished motor and heating fuel products sold nationwide including renewable biofuels, gasoline, diesel fuel, biofuels, heating fuel, jet fuel, kerosene, racing fuel and lubricating oils. EMA member companies are mostly independent, family-owned and operated businesses representing approximately 60,000 retail motor fuel stations nationwide and **supply heating fuel to more than 5 million homes and businesses.** EMA members have invested billions to comply with complex regulatory requirements and provide a safe and efficient infrastructure for liquid fuels. As Congress sets forth proposals to address societal and environmental changes, policymakers need to consider long-term economic impacts as they develop policies to move the country to cleaner liquid fuels.

Biodiesel

The heating "oil" industry has led the way on converting to a low carbon alternative fuel. For nearly two decades, the industry through the National Oilheat Research Alliance (NORA) in partnership with the Clean Fuels Alliance America (formerly National Biodiesel Board) has worked to develop low carbon clean burning liquid fuels. Improving the efficiency of heating oil has been one of NORA's highest priorities and has resulted in clean, environmentally friendly, and American-grown **Bioheat®** fuel. Biodiesel is produced from a variety of renewable resources, such as plant oils, animal fats, recycled grease, and even algae, making it one of the most sustainable fuels on the planet. NORA is also conducting research to achieve low-carbon liquid fuel (LCLF) made from cellulose on a commercial scale and advance heating technologies, including LCLF heat pumps focusing on efficiency and zero net carbon. Through these efforts, the industry has been using five percent biodiesel for over a decade and is moving to higher blends. Currently, most equipment sold is qualified to use 20 percent biodiesel and manufacturers are working to raise the threshold to 100 percent, and state associations representing heating oil dealers are working to increase the amount of biodiesel sold in every gallon of heating oil. Dealers from Seattle to Boston are successfully selling and experimenting with 100 percent biodiesel.

Waste to Fuel – Ethyl Levulinate

In addition to biodiesel, the industry has been working closely with Biofine Development to introduce into the market a liquid fuel that is derived from cellulose (waste wood products, municipal solid waste, etc.). This fuel has been scored as reducing emissions by 100 percent as it also generates specialty chemicals that would otherwise be produced by petrochemicals. This product has been tested successfully in both residential and commercial applications. It does require minor work on the burners and pumps (around $500 per site).

An All-Electric Heat Pump Future Unlikely to Work

Unfortunately, partisan politics continue to promote an all-electric policy. These policies would mean widespread adoption of heat pumps in the coldest areas of the country, where heat pump efficiency is at its lowest. Additionally, heat pumps will have an extremely difficult time heating older homes with minimal insulation in the coldest areas of the country, and heat pump water heaters will also struggle maintaining hot water for bathing and domestic uses while also providing water for dishwasher, washing machines, etc.

Converting a home will also be expensive. Homes may need to have ductwork installed, or depending on the design of the home, may need a mini-split in every room, and a series of compressors outside. Better insulation and new windows to ensure the homeowner is comfortable may also be necessary. And the existing heating system, radiators, baseboard, the oil tank and the furnace or boiler may also need removal. This will be a major expense to the homeowner, and a major inconvenience which is likely why the response to heavily subsidized heat pumps has been tepid.

Power Supply Concerns

To reduce greenhouse gas emissions will require huge investments in renewable power. While this is a worthwhile goal, matching demand with supply will be almost impossible. Photovoltaics are very inefficient in the winter and produce no power when covered with snow. Cold days can also have no wind, which means very little electricity from wind. Or on an extremely windy day, such as during a Nor'easter, the power supply may need to be shut down. Currently, only 20 percent of the electricity in the U.S. comes from renewables. A high percentage of that comes from hydropower, which is consistent and can be well managed, but dams are not being installed anymore. The rest of the energy comes from nuclear (20 percent) with fossil fuels powering the remaining portion. Therefore, additional demand to the grid will increase the amount of power coming from fossil fuels.

The heating oil industry has proven solutions. What can Congress do to help?

EMA encourages lawmakers to permanently reauthorize NORA which allows the oilheat industry to provide more efficient and reliable heat and hot water to American consumers. Permanently reauthorizing NORA will also help with research into renewable hydrocarbon biofuels, also called "green" or drop-in biofuels, and speed up the replacement of older heating oil tank systems to new, efficient systems. The program is conducted without any funds from the federal government.

EMA also urges Congress to extend the biodiesel and advanced biofuels (renewable diesel and cellulosic biofuels) blender's tax credits that are set to expire at the end of this year. The cellulosic biofuel tax credit will support the production of ethyl levulinate (EL), a net-negative carbon liquid fuel for use in the home heating fuels market.

Finally, EMA encourages Congress to closely examine the issues of electrification identified in this issue paper.

EMA Staff Contact: Rob Underwood, runderwood@emamerica.org; Sherri Stone, sstone@emamerica.org, Austin Harrison, austin.harrison@squirepb.com