



NRDC BACKGROUNDER

Low-Carbon Fuel Standard is Key Tool to Ensure Clean Fuels

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A comprehensive climate strategy must address all significant emissions sources. Transportation fuels are particularly challenging because limited substitutes currently exist. To that extent, the Low-Carbon Fuel Standard (LCFS) has rapidly emerged as a key tool for stimulating improvement and innovation in transportation fuels. It also ensures significant greenhouse gas reductions occur from the transportation fuel supply. This backgrounder discusses the need, features and benefits of a low carbon fuel standard.

The Low-Carbon Fuel Standard: A Flexible, Performance-based Standard

The LCFS is a performance-based, greenhouse gas pollution standard on the mix of transportation fuels sold in the U.S. It requires fuel providers to gradually reduce the amount of lifecycle greenhouse gas per unit of energy in their products. Obligated parties comply by mixing low carbon fuels into their supply so that the overall greenhouse gas content declines on average. The policy does not promote specific technologies. It simply sets the performance standard allowing fuel providers to seek the most practical compliance pathways. As a technology-neutral and performance-based standard, it provides industry with tremendous flexibility to innovate in order to find the most effective, lowest cost solutions.

A Low-Carbon Fuel Standard Helps any Cap-and-Trade Program Reduce Allowance Price and Petroleum Dependence

While necessary, including transportation fuels in an economy wide cap-and-trade program is insufficient to overcome all of the market barriers to low-carbon fuels. By contrast, a LCFS focuses specifically on transportation fuels, ensuring greenhouse gas reductions are achieved. These reductions will benefit stationary source emitters under the cap. Fuel providers will purchase fewer carbon allowances as they improve their products. This will reduce allowance demand thereby reducing overall allowance price.

A LCFS also ensures that the cap-and-trade program promotes energy security. Because the cap-and-trade program does not drive significant changes in the fuels market, the LCFS is the primary tool that will diversify fuel supply and reduce our dangerous dependency on oil.

Low-Carbon Fuel Standard Being Adopted Globally

Due to these benefits, LCFS programs are being adopted in large, influential fuel markets. These include California, the European Union, British Columbia and Ontario. Other regions are contemplating LCFS policies as they implement carbon abatement strategies. In November 2007, for instance, Illinois, Iowa, Kansas, Michigan, Wisconsin, and the Canadian Province of Manitoba began considering a low carbon fuel standard as part of their regional climate

program.¹ On April 24, 2008, Massachusetts Governor Deval Patrick directed the state Secretary of Energy and Environmental Affairs to begin developing a Massachusetts LCFS.

A Low-Carbon Fuel Standard can be Compatible and Complimentary to a Renewable Fuel Standard

A LCFS and a renewable fuel standard (RFS) are distinct but complimentary policies. While a LCFS requires carbon intensity reductions, a RFS requires a specific volume of biofuel to be used. The same biofuel used to meet the RFS can also be used to meet the low carbon fuel standard (LCFS). There is no structural reason why the two policies cannot be made to be fully compatible. Compatibility simply requires synchronizing shared features. For instance, both policies should adopt similar definitions for “lifecycle greenhouse gas emissions” and similar baseline years for evaluating greenhouse gas intensity.

While the RFS is an excellent tool for biofuel development, it does not advance other technologies. By contrast, the LCFS is a performance-based pollution standard that allows any type of low-carbon fuel to comply. It will thus support additional technologies such as plug-in hybrids, natural gas, hydrogen or any other low carbon fuel that industry innovates. Unlike a renewable fuel standard, the low carbon fuel standard encourages continuous improvement. The advanced and cellulosic biofuel criteria in the renewable fuel standard require just 50 percent and 60 percent greenhouse gas reductions but provide no additional encouragement once that threshold is achieved.

A Low-Carbon Fuel Standard Prevents High-Carbon Fuels from Undermining the Environmental Gains of other Policies

Development of high-carbon fuels--such as tar sands, liquid coal, and oil shale--will undercut the carbon savings from the RFS. A LCFS prevents this by ensuring that the greenhouse gas reductions from the RFS are not taken back by high-carbon fuels. Additionally, it protects a cap and trade system from emissions “leakage”. Since the cap-and-trade program only covers the carbon content of fuels, it ignores “upstream” production emissions from imported fuel such as Canadian tar sands. By requiring emissions reductions on a lifecycle basis, these upstream emissions are accounted for.

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¹Midwest Governors Association. Last viewed February 2008 at:
<http://www.midwesterngovernors.org/resolutions/GHGAccord.pdf>