

Intelligence MEMOS



From: Benjamin Dachis

To: The Hon. Catherine McKenna, Minister of Environment and Climate Change Canada

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Re: **CLEAN FUEL STANDARD DRIVING IN THE WRONG DIRECTION**

Transportation is a major contributor to Canada's greenhouse gas (GHG) emissions, accounting [for 24 percent](#) of total emissions. One policy tool Ottawa is driving forward with to reduce transportation emissions is a clean fuel standard, which also known as low-carbon fuel standard (LCFS). An LCFS is, however, a complex means of reducing GHGs, given the vast uncertainties involved in properly measuring emissions associated with fuel production and consumption. Ottawa should stick with basic carbon pricing instead.

Under an LCFS, fuel suppliers – refiners, importers, and blenders of passenger vehicle fuels – would be required to ensure that the mix of fuel they sell has a maximum GHG emissions content, measured in CO₂-equivalent grams per gigajoule (GJ). The regulation would cover the full life-cycle of emissions from resource extraction, refining, transportation to market, and, ultimately, consumption. Ottawa would reduce the maximum allowable emissions content over time to encourage producers to reduce the GHG intensity of fuels they sell. Suppliers that reduced the average carbon content of the fuels they sell below the standard would receive credits that they could sell to other suppliers.

Several problems are inherent in the implementation of an LCFS. One is how to conclusively measure the total amount of emissions created during the production of a fuel – this cannot be done simply by burning the fuel in a test facility. In determining the relative carbon intensity of ethanol and gasoline, scientifically defensible differences in modelling assumptions of the effect of land use change, to take just one example, can yield sizable differences in emissions estimates for each stage of the full fuel cycle.

Another problem arises with respect to hybrid-electric or plug-in hybrid vehicles. The emission intensity of electricity consumed at a given location depends on the type of power plant and can vary dramatically by time of day. Regulators would have to determine the specific times at which people recharge their vehicles at millions of possible charge points. In this sense, electric vehicles, if they are the future of transportation, would present a daunting challenge for LCFS regulators.

Finally, when an LCFS is integrated with a cap-and-trade system, as is implemented in Quebec and going ahead in Ontario, firms in the rest of the economy can find ways to offset or find cheaper emissions reductions. However, fuel retailers would not be able to seek reductions outside the transportation sector. An LCFS would increase compliance costs if lower-cost carbon reductions are available outside the transportation sector. Yet, one tonne of CO₂-equivalent GHG emissions causes the same environmental damage regardless of its source. The simpler option would be to have in place a single price on emissions and let companies determine on their own which activities are best suited to emissions reductions.

Imposing a single-sector, carbon-intensity-based regulation such as an LCFS is less likely to reduce total GHG emissions than would a comprehensive carbon pricing system. Ottawa should put its plans of introducing a LCFS in reverse.

Benjamin Dachis is Associate Director of Research at the C.D. Howe Institute and author of [Low-Carbon Fuel Standards: Driving in the Wrong Direction](#).