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BILL ANALYSIS

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Senate Bill 275 (as introduced 4-19-23)
Sponsor: Senator Sam Singh
Committee: Energy and Environment

Date Completed: 6-21-23

INTRODUCTION

The bill would establish a clean fuel standard to reduce the carbon intensity of transportation fuels. It would require the Department of Environment, Great Lakes, and Energy (EGLE) to use this standard to establish a market for trading carbon intensity credits. Fuel providers that produced fuels below the standard would receive credits that could be traded or sold. Fuel providers that produced fuels above the standard would have to reduce the fuels' carbon intensity below the standard or acquire credits to offset the deficit. A fuel provider that failed to correct a deficit could be ordered to pay a civil fine of 200% of the value of the credits needed to offset the violation. Ultimately, by the end of 2035, the bill would require the carbon intensity of all transportation fuel produced or imported for use in the State to be reduced to at least 25% below a 2019 baseline level.

In conjunction with the credit market, EGLE also would have to support clean energy and accessible transportation projects in disadvantaged communities and pursue a variety of other goals, including supporting the growth and creation of high-paying jobs in Michigan's clean fuels and automotive industries.

BRIEF FISCAL IMPACT

The bill would have an indeterminate negative fiscal impact on the State. The extent of this impact would depend on the carbon intensity credit market and associated transaction fees, and the research and administrative costs for the departments involved.

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CONTENT

The bill would enact a new law to do the following:

-- Set the clean fuels standard goal at a minimum of 25% below the 2019 baseline carbon intensity level by the end of 2030.
-- Exempt aviation fuels from the clean fuels standard.
-- Require a fuel provider that was a deficit generator to eliminate the deficit and prescribe the punishment for failing to comply.

Additionally, the bill would require EGLE to do the following:

-- Calculate the baseline carbon intensity of the petroleum-only portion of all transportation fuel produced or imported in 2019.
-- Establish a schedule of annual clean fuels standards to progressively meet the overall clean fuels standard.
-- Develop a mechanism that automatically increased the stringency of the schedule of annual clean fuels standards if there were a sustained oversupply of credits for two years.
-- Establish a process to review and approve fuel pathways submitted by credit generators, calculated using the GREET model.
-- Establish a fair and reasonable program for tradable credits and deficits, including a market mechanism that allowed credits to be traded or banked for future use.
-- Promulgate rules to implement the bill in consultation with various stakeholders.
-- Support clean energy and accessible transportation projects in disadvantaged communities.
-- Develop a compliance reporting process.
-- Submit, by two years after the creation of effective rules, a report detailing program implementation to the Legislature.

Clean Fuels Standards

The bill would require EGLE to calculate the baseline carbon intensity of the petroleum-only portion of all transportation fuel produced or imported in 2019 for use in the State by doing the following:

-- Reviewing and considering the best available applicable scientific data and calculations.
-- Using a lifecycle missions performance-based approach that was technology and feedstock neutral.

As an overall clean fuels standard, the bill would require the carbon intensity of all transportation fuel produced or imported for use in the State to be reduced to at least 25% below the 2019 baseline level by the end of 2035, calculated using the above formula. The carbon intensity of the overall clean fuels standard would be subject to further reduction by EGLE based on all the following:

-- The cost of compliance.
-- Advances in technology available to fuel providers to achieve the further reduction.
-- The need to maintain fuel quality and availability.
-- The goals of EGLE's MI Healthy Climate Plan (see **BACKGROUND**).

(Under the bill, "petroleum-only portion of transportation fuels" would mean the component of gasoline or diesel fuel before blending with ethanol, biodiesel, biofuel, or other low-carbon-intensity fuel.

"Transportation fuel" would mean fuel, including, but not limited to, electricity, gasoline, diesel, ethanol, biodiesel, renewable diesel, propane, renewable propane, natural gas, renewable natural gas, hydrogen, aviation fuel, and biomethane, that is the following:

-- Blended, sold, supplied, offered for sale, or used to propel a motor vehicle.
-- Compliant with applicable standards, specifications, and testing requirements under the bill and rules promulgated.

"Motor vehicle" would mean an automobile, motorcycle, truck, train, light rail vehicle, ship, aircraft, forklift, or other road or nonroad vehicle.)

The Department of Environment, Great Lakes, and Energy, in consultation with the MDOT, would have to establish a schedule of annual clean fuels standards to progressively meet the overall clean fuels standard. In establishing the schedule, EGLE would have to consider the cost of compliance, the technologies available to fuel providers to achieve the annual standards, and the need to maintain fuel quality and availability.

("Clean fuel" would mean a transportation fuel that had a carbon intensity level that is below the current clean fuels standard.)

Fuel Pathway Review Process

In addition to its prior responsibilities, EGLE would have to develop a mechanism that automatically increased the stringency of the schedule of annual clean fuels standards if there were a sustained oversupply of credits for two years.

(Under the bill, "credit" would mean a measure, in metric tons of carbon dioxide equivalent, of the amount by which the carbon intensity of a clean fuel provider's transportation fuel volume produced or imported for use in the State is exceeded by the carbon intensity of the current clean fuels standard.

"Credit generator" would mean a person that produces or imports a clean fuel for use in the State, which in the case of electricity used as a transportation fuel could include, but is not limited to, automakers, electric charging providers, electric utilities, and electric vehicle fleet operators).

The Department of Environment, Great Lakes, and Energy would have to establish a process to review fuel pathways submitted by credit generators. Fuel pathways would have to be calculated using the GREET model.

(Under the bill, "fuel pathways" would mean a detailed description of all stages of a transportation fuel's production and use, including extraction, processing, transportation, distribution, and combustion or use by an end user. "GREET model" would mean the Argonne National Laboratory's most recent Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation model).

The fuel pathway review process would have to meet the following requirements:

-- Be consistent for all fuel types.
-- Be science- and engineering-based.

-- Reflect differences in motor vehicle fuel efficiency and drive trains.

The Department of Environment, Great Lakes, and Energy would have to consult with MDOT and the Michigan Economic Development Corporation's (MEDC) Office of Future Mobility and Electrification to determine fuel pathways. The bill would permit EGLE to coordinate with third-party entities or other states to review and approve pathways.

Credits and Deficits Program

The bill would require EGLE to establish a fair and reasonable program for tradable credits and deficits. (Under the bill, "deficit" would mean a measure, in metric tons of carbon dioxide equivalent, of the degree to which the carbon intensity of a fuel provider's transportation fuel volume produced or imported for use in the State exceeds the carbon intensity of the applicable annual clean fuels standard.

"Deficit generator" would mean a fuel provider that generates deficits and that first produces or imports a transportation fuel for use in the State).

The generation of credits would have to use a life-cycle emissions performance-based approach that was technology and feedstock neutral to achieve fuel decarbonization. The program would have to include the following:

-- A market mechanism that allowed credits to be traded or banked for future use.
-- Transaction fees associated with the credit market.
-- Procedures to verify the validity of credits and deficits.
-- The ability to carry over up to 5% of deficits each year if credits were unavailable.

The Department of Environment, Great Lakes, and Energy could allow the generation of credits associated with the clean fuel or infrastructure that existed before the bill's effective date or the start date of program requirements. Aviation fuels would be exempt from the clean fuels standard; however, sustainable aviation fuel would be eligible to generate credits on an opt-in basis.

A fuel provider that was a deficit generator during a year would have to eliminate the deficit by doing either or both of the following:

-- Producing or importing transportation fuels whose carbon intensity was at or below the level of that year's annual clean fuels standard.
-- Purchasing credits to offset the deficit.

A fuel provider that failed to fulfill these requirements could be ordered to pay a civil fine of 200% of the value of the credits needed to offset the violation. The civil violation could be prosecuted by the prosecutor of the county in which the violation occurred or by the Attorney General.

Rules

By one year after the bill's effective date, EGLE would have to promulgate rules under the Administrative Procedures Act to implement this Act. In developing the rules, EGLE would have to consult with MDOT and the MEDC's Office of Future Mobility and Electrification and solicit input from stakeholders, which could include fuel providers; consumers; rural, urban, and tribal communities; agricultural organizations; environmental and environmental justice organizations; and technology providers, through a task force, working groups, public meetings, and other means. The bill would require EGLE to support clean energy and

accessible transportation projects in disadvantaged communities by directing certain credit generators to allocate revenue earned from trading certain credits toward those projects.

Additionally, the bill would require EGLE to pursue the following practices:

-- Support the growth and creation of high-paying jobs in the clean fuels and automotive industries in the State.
-- Ensure transparency and fair competition.
-- Complement and further existing State and Federal fuel, transit and mobility, transportation decarbonization, infrastructure, and greenhouse gas emissions policies and programs, as well as existing efforts by the agricultural sector to increase the adoption of practices that improve soil health and water quality.
-- Recognize voluntary farm emissions reductions that contributed to the reduced carbon intensity of fuels by allowing credit generators to choose between a credit premium or individualized farm-level carbon intensity scoring for approved sustainable agricultural practices.
-- Identify safeguards and incentives to protect biodiversity, reduce potential land use impacts, consider unintended consequences at scale, safeguard customer privacy, and promote equity.

The Department of Environment, Great Lakes, and Energy would have to determine projects and goals in consultation with credit generators, communities, community leaders, and environmental justice advocates.

("Greenhouse gas" would mean carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, or sulfur hexafluoride.)

Reporting Requirements

The Department of Environment, Great Lakes, and Energy would have to collaborate with MDOT and the MEDC's Office of Future Mobility and Electrification to develop a compliance reporting process, including forms, for credit generators and deficit generators. It would have to regularly post on its website data on deficit and credit generation and credit prices.

By two years after the creation of effective rules, the requirements of which are described above, EGLE would have to submit a report detailing program implementation to the Senate and House committees responsible for transportation, energy, and natural resources legislation. Additionally, EGLE would have to make summary information on the program available to the public.

BACKGROUND

In 2020, Governor Gretchen Whitmer issued Executive Directive 10, committing Michigan to achieving economy-wide carbon neutrality no later than 2050. To this end, Executive Directive 2020-10 ordered EGLE, through its Office of Climate and Energy, to develop, issue, and implement the MI Healthy Climate Plan to serve as the State's action plan to reduce overall greenhouse gas emissions, focusing on a 52% decrease below 2005 emission levels by 2030. The Department of Environment, Great Lakes, and Energy released the final MI Healthy Climate Plan in April 2022.[1] The plan identified transportation as the second largest source of emissions in both 2005 and 2019, though the intervening years saw a 10% reduction in emissions.[2]

[1] A digital version of the plan can be found at Michigan.gov/EGLE.
[2] EGLE, *MI Healthy Climate Plan*, p. 13-14, April 2022.

FISCAL IMPACT

The bill aims to establish a standard to reduce the carbon intensity of transportation fuels in Michigan. The fiscal impact of this legislation would be multi-faceted. Firstly, it would require investment in research and development to determine the carbon intensity levels of different transportation fuels and establish a baseline. This would involve collaboration between EGLE, MDOT, and the Office of Future Mobility and Electrification.

Secondly, the bill would require ongoing monitoring and enforcement to ensure compliance with the clean fuels standard. This would necessitate additional funding for regulatory agencies to carry out inspections, verifications, and audits of fuel providers and credit generators. Transaction fees associated with the credit market would contribute to the funding of these activities.

Additionally, the bill would result in increased administrative costs for EGLE and MDOT. The bill attempts to provide money for public transportation; however, the revenue from the fees and penalties would likely not cover the costs needed to invest in public transportation to offset the negative impacts on the poorest in the State. While low carbon fuel may be cleaner, it may also be less efficient, and costlier. For example, according to the United States Department of Energy, ethanol has 27% less energy than gasoline. This means more gallons are needed to drive the same distance as with gasoline and with current gasoline and ethanol prices switching from regular gasoline to E85 ethanol would have an increase in cost per gallon of approximately 13%. These points would lead to lower State revenue and potentially much higher State spending. This also could mean higher costs for local units of government that would have to invest more in public transportation if fewer people could afford to drive.

Furthermore, the establishment of a market for trading carbon intensity credits would have economic implications. It would create opportunities for credit generators to earn revenue by producing or importing clean fuels with carbon intensity levels below the standard and selling their excess credits. Conversely, fuel providers that did not meet the standard would need to purchase credits to offset their deficits. The trading of credits would involve transaction fees, which could generate revenue for the State.

Lastly, the bill includes provisions to support clean energy and accessible transportation projects in disadvantaged communities. This would require allocating a portion of the revenue earned from trading certain credits towards these projects. The specific projects and goals would be determined through consultation with credit generators, community leaders, and environmental justice advocates.

Overall, the fiscal impact of this legislation would involve investments in research, monitoring, enforcement, and the establishment of a credit market, as well as the allocation of funds for clean energy projects in disadvantaged communities. The exact financial implications would depend on various factors such as the scale of implementation, research and personnel costs associated with administering the program, and the market dynamics of carbon intensity credits.

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