Date of Hearing: April 24, 2024

ASSEMBLY COMMITTEE ON AGRICULTURE
Esmeralda Soria, Chair
AB 2870 Muratsuchi – As Amended April 15, 2024

SUBJECT: Low Carbon Fuel Standard regulations: carbon intensity calculation: avoided methane emissions from livestock manure: prohibition

SUMMARY: This bill would prohibit the State Air Resources Board (CARB) from including avoided methane emissions (AME) in the calculation of carbon intensity for purposes of the state board's evaluation or reevaluation of a fuel pathway, as specified. Specifically, *this bill*:

1) Requires CARB to not include avoided methane emissions in the calculation of carbon intensity for purposes of the state board's evaluation or reevaluation of a fuel pathway, pursuant to the Low Carbon Fuel Standard (LCFS) regulations.

2) Defines "AME" to mean any captured methane from livestock manure management.

3) Provides that the Low-Carbon Fuel Standard (LCFS) regulations are null and void when applied to fuels derived from livestock manure.

EXISTING LAW:

1) Establishes CARB as the state agency responsible for monitoring and regulating sources emitting greenhouse gases. (*Health and Safety Code (HSC) 39000 et al*.)

2) Requires the state board to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions to ensure that the statewide greenhouse gas emissions are reduced to at least 40% below the statewide greenhouse gas emissions limit, as defined, by December 31, 2030. (*HSC 39730.5*)

3) Requires CARB to provide guidance on credits generated pursuant to LCFS regulations adopted pursuant to the act from the methane reduction protocols described in the comprehensive strategy for short-lived climate pollutants. (*HSC 39730.7 (b)*)

4) Authorizes, by regulations, a fuel pathway that uses biomethane from dairy cattle or swine manure digestion to be certified with a carbon intensity that reflects the reduction of greenhouse gas emissions achieved by the voluntary capture of methane, subject to meeting specified requirements. (*17 CCR 95488.9 et al*)

5) Requires, by regulation, the carbon intensities that reflect AME from dairy and swine manure projects to meet certain requirements in order to be eligible for credit generation. (*17 CCR 95488.9 et al*)

FISCAL EFFECT: Unknown.

COMMENTS: Dairy digesters are a renewable technology that uses livestock manure to produce methane, which is a renewable source of electrical energy generation and transportation fuel. The technology has many environmental and social benefits. In 2016, SB 1383 (Lara)

established a statewide goal of reducing methane reductions by 40 percent below 2013 levels by 2030.

In total, California has 227 dairy digester projects, capturing methane from 255 dairy farms, and creating either renewable electricity, renewable natural gas, or hydrogen fuel. About 120 of the digesters are currently in operation, with the rest in development. According to California Climate Investments 2023 Annual Report, Greenhouse Gas Reduction Fund (GGRF) used for dairy digesters cost $9 per metric tons of carbon dioxide equivalent. Diary digesters are usually in the top three cost efficient uses of GGRF.

Dairy and livestock methane emissions originate from two primary sources, manure management, and enteric fermentation. Manure methane emissions can be reduced through two primary methods – installation of an anaerobic digester and alternative manure management practices. Dairy and livestock are responsible for over half of California's methane emissions. Improved dairy manure management offers significant, near-term potential to achieve reductions in the state's methane emissions, and potential dairy and livestock enteric emissions reduction technologies offer longer-term potential for additional GHG emission reductions.

SB 1383 (Lara), Chapter 395, Statutes of 2016, requires CARB to approve and implement the comprehensive short-lived climate pollutant (SLCP) strategy to achieve, from 2013 levels, a 40% reduction in methane, a 40% reduction in HFCs, and a 50% reduction in anthropogenic black carbon, by 2030. SB 1383 establishes specific procedures to regulate dairy sources of methane.

SB 1383 aimed to create a path for regulation of dairy methane sources, as long as it wasn't before 2024. To date, CARB has not implemented such regulations. The existing LCFS regulation provides a "soft landing" in the event methane emissions become regulated, at least in California. Once any law, regulation, or legally binding mandate requiring greenhouse gas emission reductions from manure methane emissions from livestock and dairy projects is adopted, a methane capture project would be eligible to continue receiving LCFS credits the remainder of the project's current (10-year) crediting period. CARB is currently updating its LCFS regulations.

According to the Author, CARB's approach of incorporating avoided methane crediting for livestock methane as part of the LCFS undermines the state's efforts to decarbonize the transportation sector, impedes our ability to reach climate goals, and entrenches and intensifies environmental injustice. This practice gives livestock methane an extremely negative carbon intensity score even though livestock gas is substantially identical to conventional gas. This has several implications: it creates lavish subsidies and incentives for the production and concentration of liquid manure which has significant environmental impacts particularly for lower income communities of color near industrial dairy and swine operations, it makes livestock gas more profitable than clean energy transportation fuel such as electric vehicles and electric vehicle charging infrastructure, and it transfers agricultural pollution to the transportation sector.

Supporters state this bill aims to rebalance CARB's approach to reducing methane emissions from the dairy and livestock sector and decarbonizing the transportation sector by properly accounting for the carbon intensity of fuel derived from livestock manure. They believe that the state can only transition to clean, zero carbon energy and maintain our commitment to climate justice if LCFS accurately and fairly assesses the greenhouse gas emissions of the fuels in the program. Unfortunately, CARB misclassifies gas derived from livestock manure as carbon

negative through an accounting trick known as avoided methane crediting, whereby CARB subtracts methane captured from massive manure pits in the production of factory farm gas from the overall carbon profile of the fuel. This bill would end that nonsensical and harmful practice.

Furthermore, supporters state that factory farm gas is indistinguishable from conventional gas and burns just as dirty. Digesters capture methane from landfills just as they do from liquid manure pits, yet gas from landfills does not enjoy the boost of avoided methane crediting and landfill gas is therefore considered carbon positive. To illustrate how nonsensical CARB's methodology is, factory farm methane gas is considered far, far more climate-friendly than electricity developed entirely from true zero carbon sources like solar and wind.

Farming groups oppose the bill stating this measure will eliminate the dairy sector's ability to continue reducing methane emissions as well as undermines the state's short-lived climate pollutant reduction strategy. Reducing methane emissions is a key short-term climate policy priority for California and other jurisdictions. Unfortunately, this bill will:

- Eviscerate the SB 1383 dairy methane reduction programs.
- Eliminate the state's most effective climate program.
- Undermine the state's (SLCP) strategy.
- Interfere with the state's ability to achieve recently adopted 2030 and 2045 climate goals.
- Strands more than $2 billion in dairy digester methane reduction project assets, including more than $700 million in state climate, utility ratepayer, and taxpayer funding.
- Eliminate more than 2.2 million metric tons of GHG (CO2e) reductions annually.

California's dairy sector accounts for roughly 45 percent of all anthropogenic methane emissions in California. SB 1383 (2016) sought to reduce all SLCP emissions, including dairy manure methane emissions, by 40 percent by 2030. SB 1383 also created important incentive-based programs to achieve these reductions while avoiding methane leakage to other states.

Opponents from the renewable energy sector state this will dramatically reduce important LCFS market value that enables methane capture and beneficial use projects. Without that revenue stream, projects such as dairy digesters will not be able to be financed or implemented. The development of dairy digesters is widely recognized by CARB and the Legislative Analyst Office as the most productive and cost-effective climate investment currently being implemented. Without avoided methane crediting under the LCFS, new projects will not be developed, and existing projects will not remain economical and will cease operating.

Also opponents state that existing statute (SB 1383) requires dairy crediting to biomethane in the LCFS for at least ten years (even if a mandatory rule is ever developed for manure management methane). Climate investors will likely cease investments if a legislatively guaranteed ten-year security credit is arbitrarily cut short without any substantive justification for such a change in policy. The LCFS must be fuel-neutral, driven by CARB's science-based analysis, capable of incentivizing real-world investment, and focused on performance-based GHG outcomes. This includes any potential amendments that would circumvent the CARB LCFS process, delay methane reduction efforts, harm California's family dairies or change carbon intensity pathways which would substantially curb private investment. As CARB expressed in December 2023, *Ending (dairy) avoided methane crediting in 2025 could stop the development of new anaerobic digestor projects and also cause operating digestors to shut down if the operational expense is*

greater than the value of the gas and other incentives received by the dairies. Without anaerobic digesters, California would not be able to meet its SB 1383 methane reduction goals."

The committee may wish to consider that this bill should become a study that examines the impact of AME from livestock manure on air and water quality and the impact on California Dairies removing AME from livestock manure from LCFS.

REGISTERED SUPPORT / OPPOSITION:

Support

350 Bay Area Action
350 Humboldt
350 Sacramento
350 Ventura County Climate Hub
Activesgv
Animal Legal Defense Fund
Arkansas Ozarks Waterkeeper
Asian Pacific Environmental Network
California Coastkeeper Alliance
California Environmental Voters
CAUSE
CCAEJ
Ceja Action
Center for Biological Diversity
Center for Food Safety; the
Center on Race, Poverty & the Environment
Central California Asthma Collaborative
Central California Environmental Justice Network
Central Valley Air Quality Coalition (CVAQ)
Clean Earth 4 Kids
Clean Water Action
Climate Action California
Communities for a Better Environment
Community Water Center
Defensores Del Valle Central Para El Agua Y Aire Limpio
Dolores Huerta Foundation
Earthjustice
Environmental Health Coalition
Environmental Law Foundation
Food & Water Watch
Fresno Building Healthy Communities
Glendale Environmental Coaltion
Leadership Counsel Action, a Project of Tides Advocacy
Leadership Counsel for Justice and Accountability
People's Collective for Environmental Justice
Pink Panthers
Planning and Conservation League
Psr-la
San Francisco Physicians for Social Responsibility
San Joaquin Valley Democratic Club
Santa Cruz Climate Action Network
Scope LA
Sierra Club California
Socially Responsible Agriculture Project
The Climate Center
Union of Concerned Scientists
Valley Improvement Projects (VIP)

Opposition

3degrees INC.
3g Cng
Aemetis
Agricultural Council of California
Agricultural Energy Consumers Association
American Biogas Council
Amp Americas
Anew Climate LLC
Athens Services
Berq Rng
Bioenergy Association of California
Bridge to Renewables

Brightmark
Calchamber
Calgren Dairy Fuels, LLC
California Bioenergy LLC
California Cattlemen's Association
California Dairies INC.
California Dairy Campaign
California Farm Bureau
California Hydrogen Business Council
California Hydrogen Coalition
California Renewable Transportation Alliance
California Teamsters Public Affairs Council
California Waste & Recycling Association
Clean Energy
Cleanfuture, INC.
Coalition for Renewable Natural Gas
Dairy Farmers of America
Dairy Institute of California
Digester Doc LLC
Dominion Energy
E.J. Harrison and Sons, INC.
EFI USA
Envitec Biogas
GEVO
Gladstein Neandross & Associates
Hexagon Agility
Host Bioenergy Systems North America
Land O'lakes, INC.
Lf Bioenergy
Low Carbon Fuels Coalition
Maas Energy Works
Mead & Hunt
Milk Producers Council
Modern Hydrogen
Monarch Bio Energy, LLC
Napa Recycling and Waste Services
National Milk Producers Federation
National Pork Producers Council
National Ready Mixed Concrete Company
Newtrient LLC
NLC Energy
Northern Biogas
Northern Recycling, LLC
Oberon Fuels
Outagamie Clean Energy Partners LLC
Planet Biogas
Raven SR
Republic Services INC.
REV
Roeslein Alternative Energy
Rush Enterprises
Seaboard Foods Rng, LLC
Smart Policy Group
South San Francisco Scavenger Company
Southern California Gas Company
Swinerton Energy, INC.
The Transport Project
Truck and Engine Manufacturers Association
U.S. Energy
Ugi Energy Services, LLC
US Renewable Energy Development Capital, INC.
Valkyrie Analytics, INC.
Valley Milk
Vespene Energy
Waste Connections
Western Propane Gas Association
Western United Dairies
WM

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