

Dairy Cares Comments on the May 31 and June 1, 2023
Low Carbon Fuel Standard Virtual Community Meetings

June 14, 2023

Dairy Cares[1] appreciates the opportunity to provide the following comments on the California Air Resources Board's ("CARB") recent Low Carbon Fuel Standard Virtual Community Meetings held on May 31 and June 1, 2023. Dairy Cares represents the California dairy sector, including dairy producer organizations, leading cooperatives, and major dairy processors. These comments primarily respond to a regulatory proposal offered by Stanford University professor, Dr. Michael Wara, and repeated arguments of other parties who propose to remove dairy biogas as an eligible feedstock in the Low Carbon Fuel Standard ("LCFS") and otherwise remove existing dairy operations from the local communities they operate in (collectively "anti-dairy activists").[2]

Over the last several years, anti-dairy activists have reiterated the same proposal to completely eliminate or eviscerate dairy fuel pathways in the LCFS program via petitions submitted to CARB. These petitions were correctly denied by CARB on January 26, 2022 and again on April 25, 2022. These parties continue to repeat their conjecture that LCFS incentives cause the expansion of dairies and digester projects, leading to environmental impacts. They overlook the fact that the productive use of dairy biomethane is the primary strategy that can reduce short-lived climate pollutant ("SLCP") emissions, as required by state law. Dairy Cares' comments point to evidence showing overall declines in herd sizes during the same period when the State created market-based incentives for dairy biogas. We also offer evidence of the overall environmental performance benefits dairies provide in local communities. These comments note CARB's findings with respect to the role of dairies in the LCFS and express concern that removing digesters would constitute a major divergence in the State's existing plans for Senate Bill ("SB") 1383 implementation and the 2022 Scoping Plan Update. Such a drastic policy decision would undoubtedly create significant environmental impacts that could not be mitigated through other regulatory designs. Anti-dairy activists have failed to offer any kind of a credible

[1] For more information about Dairy Cares, please visit www.dairycares.com.

[2] See Petition Requesting Amendments to the LCFS (October 2021), CARB's response to the petition (January 2022), Petition for reconsideration (March 2022) and CARB's response to the petition for reconsideration (April 2022), available at: https://ww2.arb.ca.gov/resources/documents/2021-lcfs-petition.

plan for reducing methane emissions. Alternative Manure Management Practices ("AMMP") cannot achieve the level of reductions necessary under SB 1383 without causing massive leakage of emissions to other states. For these reasons, CARB should reject proposals to exclude dairies from the LCFS or eliminate avoided methane crediting in 2024, as proposed.

DISCUSSION

1. Consolidation of Dairies in California is Not Related to the LCFS and there Is No Evidence of Increases in Herd Sizes During Periods of LCFS Incentives.

The number of dairies in California has decreased by 94 percent over the past 70-plus years. The number of milk cows in California has also declined since its peak of 1.88 million cows in 2008 to just over 1.7 million cows today. Despite this drop in cow numbers over the past 14 years, California milk production has remained relatively steady—thanks to continued efficiency gains and advancements in animal care and nutrition. The most apparent ongoing trend in California dairy farming has been the consolidation of smaller family farms into larger family farms. According to research conducted by the U.S. Department of Agriculture, "larger farms are more likely to realize positive net financial returns to milk production…"[3] The regulatory burdens and resulting high cost of doing business in California and resulting economics of dairy production in a national market are driving consolidation, not the presence of LCFS incentives. Thus, the conclusion in the Stanford presentation that excluding dairies from the LCFS would "reduce the economic concentration in dairy industry" is without any merit or factual foundation and at odds with market forces that have been underway in the industry for decades.

Anti-dairy activists have also argued that the LCFS encourages increases in herd sizes. This argument is also without factual foundation and at odds with observed data. Reductions in total herd size are especially apparent in Tulare County, which is the largest dairy producing county in the nation and location of many of the dairy digester projects that have already contributed to considerable methane reductions in California. A March 2023 report produced by Tulare County shows that milk cow populations in Tulare County decreased by nearly 15% during the same period that 39 digester projects began operations and another 13 were in planning and development.[4] Tulare County reported significant emission reductions during this same timeframe, making clear that, in Tulare County, the presence of LCFS incentives clearly did not increase total herd populations or otherwise alter the ongoing trend of herd reductions and consolidation in California's dairy industry.

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[3] MacDonald, *Scale Economies Provide Advantages to Large Dairy Farms* (August 3, 2020), U.S. Department of Agriculture, Economic Research Service, available at: https://www.ers.usda.gov/amber-waves/2020/august/scale-economies-provide-advantages-to-large-dairy-farms/; See also James M. MacDonald, Jonathan Law, and Roberto Mosheim. *Consolidation in U.S. Dairy Farming*, ERR-274, July 2020.

[4] Tulare County Annual Report of Dairy and Feedlot GHG Emissions in 2021 (March 2023) p. 8, available at: https://tularecounty.ca.gov/rma/permits/dairy/bos-agenda-item-2022-annual-report-of-total-ghg-emissions-from-dairies-feedlots-for-2021/

The assertion in the Stanford presentation that Dairy digester projects "have local impacts on EJ communities" is also without scientific foundation and contrary to the actual significant air and water quality benefits provided by digesters in these communities. Dairy digester greatly improve baseline environmental conditions. This was recently observed by CARB when it rejected the first petition of the anti-dairy activists for numerous reasons, including the fact that digester projects provide odor, air quality, and other environmental benefits.[5] The projects also drive improvements to existing dairy operations such as lagoon lining, providing significant water quality benefits and protection of drinking water. Moreover, digester projects are highly regulated and must receive approvals from numerous public and regulatory agencies who collectively ensure the projects will operate in accordance with environmental laws. Permitting by state and regional water quality control boards is especially strict and has effectively halted or slowed efforts to consolidate dairy operations. In addition, the State and local governments require applicants to provide numerous opportunities for local community engagement. For example, grant programs require applicants to hold community listening sessions in addition to normal comment opportunities for various permitting and environmental processes. Collectively, these measures ensure that dairy digester projects are operated responsibly and achieve significant water quality benefits for local communities. In addition to significant climate benefits, dairy digesters also result in significant air quality improvements by capturing and removing hydrogen sulfide (H_2S). Dairies without digesters emit H_2S, which oxidizes in the atmosphere to sulfur oxide (SOx) which further oxidizes to sulfate particulate matter. Digester projects capture this H_2S allowing for immediate and meaningful improvement in local air quality.

Dr. Wara's presentation presumes, based on California Transportation Supply ("CATS") modeling, that a reduction in total dairy methane production will reduce local impacts. It is not clear how the CATS model, which projects statewide fuel consumption patterns under various policy scenarios, could enable such a conclusion as to the local distribution of fuel usage. The CATS model does not demonstrate where fuels would be used and there is no basis to conclude that dairy biomethane would necessarily be consumed as compressed natural gas vehicles in local communities. Even if a reduction in dairy biogas could somehow be tied to fuel usage in local communities, the non-achievement of the SB 1383 targets and the aforementioned air quality benefits would need to be balanced with the benefit of greater electric vehicle deployment in local communities. Whereas the geographic distribution of fuel usage under different scenarios is highly speculative, there is no question that digesters improve baseline environmental conditions in the communities where these projects are located. Equally important, the Wara modeling exercise ignores the significant impacts on other critical climate objectives such as the SLCP Plan and overall 2022 Scoping Plan Update.

2. <u>The LCFS is a Necessary Measure to Reach the SB 1383 Targets. Removing Dairies would Lead to Significant, Unavoidable Impacts.</u>

CARB has been clear that "California needs methane reductions from the dairy and livestock sector now, and the LCFS provisions that petitioners propose to amend support

[5] See CARB's response to the petition (January 2022), p. 6, footnote 21, available at: https://ww2.arb.ca.gov/sites/default/files/2022-01/LCFS%20Petition%20Response%202021.pdf.

achievement of those reductions."[6] Digester development is particularly important for in-state dairies that are subject to the SB 1383 SLCP reduction targets. SB 1383 prioritizes voluntary emission reductions, which have been successful in reducing emissions to date, largely because of the LCFS. However, there is much more work to be done, particularly at small in-state dairies that face the greatest risks consolidation due to domestic and international competition. The California Health and Safety Code directs CARB to evaluate cost-effectiveness of methane reductions and also requires minimization of leakage risks. While anti-dairy activists continue to argue that there is no potential leakage of milk production in California, this simply is not the case. There has been a conflation between the number of beef cows in California, which has increased in recent years, and the number of dairy cows, which has, by CARB's own analysis, been observed to have decreased steadily since 2008. Ongoing attrition and consolidation in the state's dairy sector is evidence of leakage risk. Switching to the command-and-control mechanisms proposed by anti-dairy activists would cause further leakage, exacerbating emissions in nearby regions of the U.S., and hurting the local economies surrounding California's dairy farms, the majority of which are in the disadvantaged communities the State has identified as priorities. Research recently published by UC Davis confirms this result:

> …misguided efforts to change course by forced conversion to pasture-based operations, direct regulation of dairy farms, or limitations on dairy digester incentives will not only fail to achieve the desired greenhouse gas emission reductions but will exacerbate the problem by causing significant emissions "leakage". As demand for dairy products continues to increase across the U.S. and world, the dairy industry is likely to respond to costly direct regulation by leaving for states with less costly regulations and less commitment to climate protection.

3. <u>Eliminating Livestock from the LCFS Would Be Inconsistent with the Scoping Plan.</u>

Proposals to eliminate livestock from LCFS eligibility or eliminate avoided methane are inconsistent with CARB's Scoping Plan. The recently adopted 2022 Scoping Plan Update (Table 2-1) identifies three specific dairy/livestock related actions to continue to reduce non-combustion methane emissions as part of SB 1383 and the reduction of short-lived climate pollutants, as follows:

1. Increase dairy digester methane capture;
2. <u>Some alternative manure management deployed for smaller dairies</u>; and
3. Moderate adoption of enteric strategies.

Proposals to eliminate avoided methane would not only lead to a total failure of increasing dairy digester methane capture but would lead to a loss of existing operations and more than 2.3 MMT of CO_2e already being captured by existing operating digesters. For this reason, the proposal to eliminate avoided methane for livestock operations by 2024 is wholly

[6] See CARB response to the petition for reconsideration (April 2022), p.4, available at: https://ww2.arb.ca.gov/sites/default/files/2022-04/LCFS%20Reconsideration%20Petition%20Response.pdf.

inconsistent with the recently adopted CARB 2022 Scoping Plan Update. Dairy digester methane capture is currently accounting for 90% of all dairy methane reductions to date, and the loss of this tool cannot be replaced by other dairy methane reduction strategies such as AMMP or moderate adoption of enteric strategies.

Furthermore, the 2022 Scoping Plan Update identifies, "Install[ing] state of the art anaerobic digesters that maximize air and water quality protection, maximize biomethane capture, and direct biomethane to sectors that are hard to decarbonize or as a feedstock for energy" as a key strategy for successfully amending reductions in dairy and livestock methane.[7] Again, it has been well demonstrated and documented that achieving dairy methane reductions cannot be achieved without the continued operation and expansion of dairy digesters in California.

Finally, efforts to eliminate livestock from LCFS eligibility or eliminate avoided methane crediting are inconsistent with the 2022 Scoping Plan Update strategy of "maintaining focus on methane and short-lived climate pollutants." The 2022 Scoping Plan Update correctly recognizes, given the urgency of climate change and avoiding climate tipping points as identified in the most recent Intergovernmental Panel on Climate Change assessment, that efforts to reduce SLCPs are especially important. The 2022 Scoping Plan Update accounts for the full 40% reduction in SLCPs by 2030, to achieve the overall 48% reduction in GHGs by 2030 sought by the plan. Put simply, the State's 48% reduction goal cannot be achieved without achieving the full goals of dairy methane and other SLCP reductions.

CONCLUSION

CARB and other leading climate researchers have concluded that dairy digester development is a necessity if the State has any hope of fulfilling its role as a world leader in the climate community. The need is acute for CARB to demonstrate to California dairy farmers that there are viable tools and long-term financial markets available for them to justify investing in long-term emission reduction solutions at their farms. This is particularly true now that LCFS prices have declined in recent years. California is one of the few governments in the world that not only has an SLCP target, but is also taking meaningful action to implement it. Most recently, the 2022 Scoping Plan Update provides guidance to CARB and other responsible agencies on how individual regulatory programs, such as the LCFS, are needed to ensure that the State's programs, such as the SLCP Plan, collectively achieve the emission reduction targets. Market mechanisms such as the LCFS are incredibly important to successfully protect SLCP project financing. The bottom line is that without markets for beneficial use of captured biomethane, projects will not be financed and built.

Dairy Cares encourages CARB to continue setting an example for the rest of the country by following the SLCP reduction guidelines established in SB 1383. The statute is clear in its direction to minimize leakage, and other states certainly will not follow California's lead if heavy-handed direct regulatory action is taken that causes dairy farmers to leave the state, increasing emissions elsewhere. This result is not only at odds with California's requirements

[7] CARB's 2022 Scoping Plan for Achieving Carbon Neutrality, p. 232, available at: https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf.

for minimizing leakage pursuant to Assembly Bill 32, but also with the achievement of the SB 1383 targets.

Dairy Cares appreciates CARB's efforts to lead a robust stakeholder process ahead of the formal LCFS rulemaking and provide numerous opportunities for local input. We agree that local input is critical to this process and the perspectives of individuals that live near and work at dairy farms must be taken into account. We hope the evidence provided in these comments is helpful to CARB and disadvantaged communities in evaluating the benefits digester development can provide to local communities where existing dairy operations are located. As discussed above, CARB should reject arguments to completely exclude dairies from the LCFS program or eliminate avoided methane crediting. We look forward to continuing to partner with CARB and other stakeholders in the successful achievement of the State's climate goals, particularly the world-leading SLCP target and programs.