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Low Carbon Fuels Standard Program
California Air Resources Board
Sacramento, CA 95814

RE: Mainspring Energy, Inc.'s comments on the July 7th Public Workshop to Discuss Potential Changes to the Low Carbon Fuel Standard

To LCFS Program Staff:

Mainspring Energy, Inc. (Mainspring) appreciates the California Air Resources Board's (CARB) efforts to update the Low Carbon Fuel Standard (LCFS) program and offers the following comments and recommendations on the proposed program updates discussed in the July 7th workshop.

About Mainspring

Driven by its vision of the affordable, reliable, net-zero carbon grid of the future, Mainspring has developed and commercialized a new distributed power generation technology — the linear generator — that delivers dispatchable, fuel-flexible electric power at low cost. Mainspring's linear generator offers a unique and highly flexible energy and capacity expansion solution that can simultaneously address the critical need for greenhouse gas and criteria pollutant emissions reductions while also maintaining reliability and resilience.

Modular and scalable, Mainspring's linear generators can be deployed where demand exists at a local level for one customer, a community level, or even to power a fleet of electric vehicles (EVs). Full dispatchability also allows linear generators to turn on and off as needed and consistently match power output with the specific energy need, while integrating with and firming variable

renewables such as solar and wind, thereby supporting the continued rapid adoption of renewable energy while bolstering resilience and avoiding unnecessary curtailment.

Mainspring linear generators are uniquely positioned for biogas applications, both onsite and directed, because they are highly efficient (i.e., more kilowatt hours for a given biogas flow), have ultra low criteria emissions that meet the CARB DG standard, are fuel flexible with the ability to operate on low and varying quality biogas, and are fully dispatchable to ramp power output with varying biogas production levels.

LCFS Rules should be updated to allow Book and Claim RNG for EV Chargers

As discussed in the workshop, LCFS is a key policy in accelerating investments in low-carbon fuels and transportation buildout.¹ There is a fast growing desire to electrify vehicles, particularly for fleets. Governor Newsom's Executive Order N-79-20 established a target where 100 percent of medium and heavy duty trucks be zero emission vehicles by 2045.² LCFS is a critical program to help the state meet this goal, but updates to the program are needed to ensure that California is on track to meet this aggressive target.

Currently, LCFS rules allow a pathway for electricity generated from biogas, when the generation is co-located with the biogas production, to book-and-claim the electricity with EV chargers. This is a useful and valuable pathway for accelerating renewable generation to power EV chargers and for enabling smaller or remote biogas production facilities (e.g., smaller dairy farms) for which upgrading biogas to renewable natural gas (RNG) or transporting to a gas pipeline would be prohibitively costly for market participation.

With the fast growth of EVs and associated charging facilities, particularly for fleet EV charging, there is a growing opportunity for biogas to play a larger role in providing renewable power for the EV transition. One of the biggest issues with deployment of fleet EV charging facilities is that they require a significant amount of power (often a few megawatts or more), which requires utility upgrades that can take 2 to 5 years to complete. Additionally, even after the utility upgrades are made, there is still a need for resilience since most fleets need to charge even when the grid is down. Onsite generation using directed RNG helps solve both of these problems — by getting renewable power faster for EV charging and providing renewable resilience while eliminating the need for diesel backup gensets.

LCFS rules should be expanded to allow for book-and-claim RNG to onsite power generation co-located and directly powering EV charging facilities. The existing rules already allow for book-and-claim RNG to compressed natural gas (CNG) fueling stations. Modifying the rules to

¹ July 7th LCFS Workshop Presentation, at Slide 9. Available here:

https://ww2.arb.ca.gov/sites/default/files/2022-07/LCFSWorkshop_Presentation.pdf.

² Governor Newsom issued Executive Order N-79-20 in January 2021, which can be found here:

<https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf/>

allow for onsite power generation for EV charging is inline with the program's and the State's environmental objectives and would greatly accelerate the build out of EV charging infrastructure using renewable generation, while also eliminating the need for diesel backup generators at EV charging facilities. Additionally, making this pathway available is also good for the biogas producers because it provides access to a fast and growing EV charging market.

To support the above policy goals and principles, Mainspring recommends that book and claim for directed biogas/RNG for power generation co-located and directly tied to EV chargers should be allowed in LCFS. By making these changes to the LCFS regulations, CARB will help accelerate the EV transition and displace the need for diesel backup generators.

Mainspring appreciates the opportunity to provide comments and looks forward to continued discussions on these issues in the future.

Sincerely,

/s/Melicia Charles

Melicia Charles
Director of Regulatory Affairs, West