October 22, 2021

Rajinder Sahota
Deputy Executive Officer – Climate Change & Research
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Submitted online

Subject: Mainspring Energy, Inc. ("Mainspring") Comments on 2022 Scoping Plan Update - Scenario Inputs Technical Workshop.

Dear Ms. Sahota,

Mainspring appreciates the opportunity to participate in the Scoping Plan process and is pleased to provide these comments on the 2022 Scoping Plan Update – Scenario Inputs Technical Workshop. We applaud your leadership and the ARB staff for taking an aggressive approach to combating climate change.

As discussed below, Mainspring's linear generator technology offers a unique and highly flexible distributed generation solution that can simultaneously address the need for critical emissions reductions while also maintaining reliability and resilience.

Mainspring's 240kW linear generator is a new onsite power generation technology -- distinct from a fuel cell, engine, or microturbine -- that delivers resilient, low-cost, and low-carbon, electricity to commercial and industrial buildings, grid infrastructure, and microgrids. The product directly converts motion along a straight line into electricity using a low-temperature reaction of air and fuel. No other distributed energy resource available today delivers the same combination of low cost, multi-day resilience, dispatchability, low emissions, and fuel-flexibility. Mainspring's linear generator is more dispatchable and lower cost than fuel cells, more resilient and lower cost than batteries, and cleaner than engines and microturbines.

Mainspring's linear generator is designed to run on clean fuels such as renewable biogas and green hydrogen, however, dynamic and rapid fuel switching capability also enables the seamless use of traditional fuels when needed for reliability and resilience. Modular, portable, and stackable, with a UL-listed package and grid-tie inverters, the linear generator can deliver on-demand generation where and when it's needed. Load tracking, fast on/off, and blackstart capability allow the linear generator to match power output with building demand while integrating with onsite solar and energy storage, enabling the continued rapid adoption of renewables. In addition, Mainspring's technology provides power when the grid is down, making it the ideal backbone of any renewable microgrid.

The unique capabilities of the Mainspring linear generator are critical for enabling the global transition to net-zero carbon electricity while meeting the immediate resilience and affordability needs created by increases in climate-related weather events and the growing movement towards electrification. Vast amounts of solar and wind will be essential to the future grid, but because these non-firm sources have variable output, the challenge is and will be in finding additional technology solutions that will also enable the grid to be affordable, reliable, and resilient. Dispatchable, low cost, fuel-flexible generation resources are essential for firming renewables while simultaneously ensuring year-round reliability and multi-day resilience.

In order to meet the ambitious GHG reduction goals identified in any of the scenarios presented at the September 20, 2021 workshop, it is critical that load serving entities ("LSEs") are able to consider and evaluate the widest possible range of clean energy solutions. Accordingly, Mainspring urges the ARB to avoid arbitrarily limiting modeling and analysis to only those generation technologies identified in Attachment B. Mainspring respectfully suggests, at a minimum, that fuel-flexible, dispatchable linear generators should be added but

also that the ARB build in some discretion to consider any other innovative clean energy technologies that may arise in the future and present an opportunity to accelerate achievement of the identified GHG reduction goals.

Mainspring supports directing LSEs to evaluate technologies that can be easily configured to run on zero-carbon fuels. Mainspring encourages all innovative approaches and options that will help facilitate meeting emissions reductions goals without limiting the approaches that LSEs can take.

Mainspring appreciates the opportunity to provide comments.

Respectfully submitted,

/s/

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