

**Mainspring Energy**

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**VIA ELECTRONIC FILING**

Sherri L. Golden  
Secretary of the Board  
New Jersey Board of Public Utilities  
44 South Clinton Ave., 1st Floor  
PO Box 350  
Trenton, NJ 08625-0350

**RE: IN THE MATTER OF THE NEW JERSEY ENERGY STORAGE INCENTIVE PROGRAM. DOCKET NO. QO22080540.**

Dear Secretary Golden:

Mainspring Energy, Inc., (“Mainspring”) commends New Jersey’s climate and energy policy leadership. Moreover, Mainspring appreciates the opportunity to provide comments on the Board of Public Utilities (“BPU”) request for information (“RFI”) regarding the development of New Jersey’s Storage Incentive Program (“SIP”). Mainspring is a clean energy and technology company that has created and is commercializing a new way to generate electricity that does not require combustion, is dispatchable and can follow load, and can provide ancillary services and capacity. Mainspring has three projects in New Jersey currently under development that are in their final stages of achieving commercial operation.

[About Mainspring](#)

Driven by its vision of a reliable, affordable, net-zero carbon grid, Mainspring has developed and commercialized a new type of power generation technology — the Linear Generator.

The Linear Generator is the ultimate fuel flexible resource. It can operate on any type of gaseous fuel and can switch fuels on the fly via the onboard power electronics system, so it does not require down time for hardware upgrades or retrofits to switch fuels. Due to its fuel flexibility, LGenS also mitigate the risk of having a stranded asset that cannot evolve to meet the emissions and reliability profiles needed in the future. This means that LGenS can use conventional and ubiquitous fuels today or newer and cleaner fuels as they become more economical and widely available in the future. And, because LGenS are fuel-based resources, they can have built in resiliency and redundancy with on-site storage.

The Linear Generator encompasses the best qualities of various power generation technologies. Like combined cycle gas plants, it is dispatchable and can follow load and ramp up and down as needed for system reliability. It can run around the clock as a prime power source, or it can run as a peaker plant supplying critical electrons when demand is at its highest. Additionally, it complements intermittent renewable sources like solar and wind and can help firm these resources for consistent and reliable power. Like fuel cell technologies, the Linear Generator does not use combustion to generate electricity, rather, it uses a low-temperature reaction that creates very low emissions. In fact, the CO<sub>2</sub> emissions profile of LGenS is zero when they operate on clean fuels, like green hydrogen or green ammonia.

Mainspring's Linear Generators are tailor made to assist New Jersey with its decarbonization transition while maintaining system reliability. LGenS offer a unique and highly flexible energy and capacity expansion solution that can simultaneously address the critical need to reduce greenhouse gases and criteria pollutant emissions, while also maintaining reliability and resilience.

Modular and scalable, Mainspring's Linear Generators can be deployed where demand exists, either at a local site or at utility scale. Full dispatchability and rapid response also allows Linear Generators to consistently match power output with demand, while integrating with and firming variable renewables such as solar and wind. These performance attributes make Mainspring's LGenS one of the key technologies able to support the continued rapid adoption of

renewable energy while providing system balancing services, bolstering resilience, and avoiding unnecessary curtailment.<sup>1</sup>

## Comments

Mainspring's comments are focused on *Section 5.0 Other Questions* and more specifically on *5.8 Please Provide any other comments on the NJ SIP*.

### **5.8 Please provide any other comments on the NJ SIP**

In its straw proposal issued last year, the New Jersey BPU indicated eligibility in the SIP would be technology neutral, and staff proposed "adopting as broad of a definition of energy storage as possible"<sup>2</sup> in order to achieve New Jersey's storage goals in the most cost effective manner for customers. Mainspring wholeheartedly agrees that this is the right approach and will allow New Jersey to deploy resources that are critical to increasing the resilience of New Jersey's electric grid, reduce carbon emissions, and enable New Jersey's transition to 100% clean energy in the most cost effective way. In fact, Mainspring's CEO, Shannon Miller, was recently a guest on the Interchange Recharged podcast discussing Long Duration Energy Storage and highlighted the need for a broad definition of energy storage.<sup>3</sup> While we agree with staff that a broad definition is important, we respectfully argue that the proposed definition should be broader.

Staff's proposed definition of energy storage is:

**A device that is capable of absorbing energy from the grid or from a Distributed Energy Resource (DER), storing it for a period of time using mechanical, chemical, or thermal processes, and thereafter discharging the energy back to the grid or directly to an energy using system to reduce the use of power from the grid.<sup>4</sup>**

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<sup>1</sup> For additional information on technical specifications and performance benefits, visit <https://www.mainspringenergy.com/technology/>.

<sup>2</sup>

[https://nj.gov/bpu/pdf/publicnotice/Notice\\_StakeholderMeetings\\_NewJerseyEnergyStorageProgram.pdf](https://nj.gov/bpu/pdf/publicnotice/Notice_StakeholderMeetings_NewJerseyEnergyStorageProgram.pdf)

<sup>3</sup> <https://open.spotify.com/episode/0Ov1tGs46n4zjbHS1EjYcH>

<sup>4</sup>

[https://nj.gov/bpu/pdf/publicnotice/Notice\\_StakeholderMeetings\\_NewJerseyEnergyStorageProgram.pdf](https://nj.gov/bpu/pdf/publicnotice/Notice_StakeholderMeetings_NewJerseyEnergyStorageProgram.pdf)

Mainspring suggests striking “from the grid or from a Distributed Energy Resource” in the first line of the proposed definition and also “back to the grid or directly to an energy using system to reduce the use of power from the grid” in the third and fourth lines. These qualifiers are unnecessary and would limit the types of resources eligible to qualify as storage. As staff stated:

**By adopting as broad of a definition of energy storage as possible, Staff hopes to leverage innovation and competition to meet our energy storage goals at the lowest possible cost to consumers and to invite all energy storage developers to participate in the NJ SIP.<sup>5</sup>**

Clean fuels can and should be utilized as energy storage. Clean fuels are a vital tool in achieving a zero carbon grid. They are dispatchable, can firm intermittent renewables and can be stored on site to manage peak load. However, the current definition of energy storage in the straw SIP proposal would limit the type of fuels that could participate. Those being created using grid power or distributed resources would be eligible, but those not using grid power or distributed resources would be ineligible. An example of an eligible fuel under the current definition would be yellow hydrogen produced from an electrolyzer powered by the grid. Under the proposed definition, an example of an ineligible clean fuel would be green hydrogen created by utilizing an electrolyser at the substation at a front-of-the-meter offshore wind farm. Yellow hydrogen is not zero carbon because it is derived from the grid and the grid has carbon based resources. While green hydrogen is zero carbon. Excluding certain green hydrogen projects from the SIP and including grid based yellow hydrogen projects in the SIP appears to be counterintuitive to achieving the long term goal of 100% decarbonization.

We applaud the SIPs intention of having a broad definition and encourage the BPU to broaden the definition further in the final SIP.

## Conclusion

New Jersey should establish and invest in programs and policies that seek out and reward resources that provide the most system benefits and flexibility. Preference should be given to technologies that can provide the most value - ramp rates, ancillary services, long-duration storage (days/weeks/months/seasons), onsite storage/dual fuel capabilities/redundancy. In this regard, New Jersey’s straw SIP’s definition of storage should be broader to achieve the most impactful outcomes at the lowest cost.

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<sup>5</sup> ibid 12

Mainspring appreciates the opportunity to provide comments. We are excited about New Jersey's decarbonization plan and the SIP proposal designed to help achieve it. Mainspring Energy's Linear Generators is a new resource that is currently being deployed in New Jersey. We are ready to continue to assist New Jersey achieve its storage and decarbonization goals.

Thank you for the opportunity to comment. We look forward to continued participation in this docket and future proceedings.

Sincerely,

/s/ Kevin Hennessy

Kevin Hennessy,  
Senior Director, Policy