



July 12, 2019

Email to: doCKET@energy.ca.gov

Docket Number: 19-ERDD-01

Subject: Preliminary Draft Renewable Energy Generation Research Roadmap

Re: Comments of the California Energy Storage Alliance (CESA) on the Preliminary Draft Renewable Energy Generation Research Roadmap

CESA appreciates the opportunity to comment on the development of the *Preliminary Draft Renewable Energy Generation Research Roadmap* and to provide feedback to the California Energy Commission on potential research, development, demonstration, and deployment (RDD&D) opportunities that support the achievement of higher penetrations of renewable generation on the grid. CESA is a 501(c)(6) organization representing over 80 member companies across the energy storage industry and is involved in a number proceedings and initiatives that address the various strategies and barriers related to growing the energy storage market to support a more reliable, cleaner, and more efficient electric grid. With our background and expertise, CESA hopes to help inform the CEC staff on research priorities for future grant funding opportunities through the Electric Program Investment Charge (EPIC) Program that target some of the barriers identified in the Draft Technical Assessment.

Energy Storage: Feedback on Draft Roadmap

CESA appreciates the opportunity to provide these comments and feedback on the Draft Roadmap. CESA generally supports the initiatives proposed in the Draft Roadmap but recommends the following key points or additional focus areas:

- Energy storage funding initiatives should focus on applications and performance attributes that are needed for our future deeply decarbonized electric grid. For example, further attention could be provided on improving performance around degradation, not only just a focus on roundtrip efficiency.
- Multi-day and season system modeling capabilities are needed to support the valuation of long and seasonal duration storage technologies. Despite all the growth and technological developments for longer-duration storage technologies, such resources will not be deployed without a model that adequately values these attributes to support their procurement.
- Hydrogen storage is a seasonal energy storage resource that warrants attention in the roadmap, especially with such resources potentially being needed in deep decarbonization futures.
- Storage for resiliency and non-wires solutions requires focus in the grid integration strategies area of the roadmap. Supporting the development of long-duration technologies



align with this application, so funding for the proposed initiative should consider how such resources could be deployed and improved for that purpose.

Conclusion

CESA appreciates the opportunity to provide these comments and feedback on the Draft Roadmap. We look forward to collaborating with the CEC and other stakeholders in this proceeding.

Sincerely,

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