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October 1, 2026

Clean Energy Coordination
Department of Ecology
P.O. Box 47709
Olympia, WA 98504-7709

Dear Ecology:

Jupiter Power applauds the Department of Ecology's efforts to facilitate the permitting of Battery Energy Storage Systems (BESS) facilities in Washington. Battery storage plays an important role in the energy transition and a significant increase in battery storage capacity will be needed to achieve Washington's ambitious clean energy goals. To the extent that a Programmatic Environmental Impact Statement (PEIS) can make BESS facility permitting faster and more efficient, Jupiter Power fully supports this effort.

To achieve this objective, the PEIS must provide accurate and useful information to permitting authorities. Doing so begins by defining an appropriate scope. Jupiter Power submits the following comments regarding the Scoping Document for Programmatic Environmental Impact Statement on Battery Storage System Facilities in Washington State published earlier this month.

Introduction

Jupiter Power is a leading developer, owner, and operator of utility-scale battery energy storage facilities across the United States. Based in Austin, Texas, Jupiter Power has more than 2.5 GW of projects in operation or construction across the United States and more than 28 GW in development. Jupiter Power develops and manages energy storage resources designed to support electric reliability, facilitate the integration of renewable energy resources, and provide flexible capacity and ancillary services to electric systems. Through its nationwide portfolio of battery storage projects, Jupiter Power has substantial experience developing, financing, constructing, and operating large-scale energy infrastructure projects.

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In Washington, we are in the process of developing the Cascadia Ridge Resiliency Energy Storage Project, an approximately 130 MW battery storage project proposed in King County. Jupiter Power also has several other BESS projects in early stages of development in Washington.

Scoping Comments

1. Battery Projects within the Scope

A. Stand-Alone vs. Hybrid Projects

Jupiter Power agrees with Ecology's proposal to focus on stand-alone BESS projects. In Ecology's previous PEISs, Ecology has addressed battery storage equipment included as part of utility-scale solar or wind generation facilities. Although there may be similarities in the battery storage equipment used in these hybrid projects, stand-alone storage facilities can have important differences in location and siting.

B. Typical Stand-Alone Projects

To be useful in the permitting process for specific facilities, the PEIS must consider the range of size, configuration and associated equipment typically included in a stand-alone BESS project. This means that Ecology should not only consider the range of typical utility-scale facilities found today, but it should also consider how facilities may be developed in the future.

In the past several years, the capacity of stand-alone BESS projects has typically ranged from 100 MW to 400 MW, capable to storing power for 4 to 8 hours or more, depending on configuration. As technology improves over time, it will likely be possible to store more power for a longer duration, and facilities will likely have greater capacity. The PEIS analysis should not be limited by capacity or duration of battery storage.

Distinguishing between a BESS facility and the project site is important. Today, most BESS facilities have a footprint (the area in which the equipment sits) that is between 5 and 40 acres, but some may be larger. Often, a facility is strategically located on a much larger overall project site to minimize impacts to neighboring parcels. The size of the overall project site is also highly dependent on the site's features. For example, a project site may include steep slopes or wetlands that the developer intends to avoid, but they may occupy considerable acreage.

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BESS facilities generally include a transmission line, sometimes called a gen-tie line, that connects the BESS facility to a utility substation or existing transmission line. From the developer's standpoint, the shorter the gen-tie line the better, but there are not always appropriate sites available adjacent to or near substations or transmission lines. Today, the length of the gen-tie line is often one mile or less, but gen-tie lines may be longer depending on project conditions.

C. Battery Technology

The Scoping Document indicates that Ecology intends to address only lithium-ion batteries in the PEIS. We think that would be a mistake. Developers are currently using or proposing to use battery technologies other than lithium ion. Battery technology under development includes solid state batteries, metal-ion batteries (e.g. sodium-ion, aluminum ion, and magnesium ion), metal-air batter systems (e.g. zinc-air, lithium-air, iron-air, and aluminum-air) and flow batteries. Technologies will undoubtedly continue to develop over time, and the development of BESS facilities using a variety of technologies would have supply chain advantages.

The battery chemistry is likely to make little difference for purpose of analyzing most impacts in the PEIS, so Ecology should consider a wide range of possible technologies. An unduly narrow focus on lithium-ion technology would likely make the PEIS less relevant over time.

2. The Need for and Benefits of Battery Storage

To facilitate the efficient and timely permitting of BESS facilities, we believe it is important for Ecology to include in the PEIS a detailed discussion of the need for and benefits of BESS facilities. These issues are well-suited for programmatic analysis because they can be assessed in a general way without site-specific information. Including this sort of analysis would provide important information to permitting agencies, avoiding the expense and time that would otherwise be necessary to conduct similar research and analysis in each proceeding.

We noticed in one of the public scoping meetings, Ecology stated that SEPA does not require a cost-benefit analysis. This may be true, but that does not mean that Ecology can or should ignore the positive impacts of BESS development in the PEIS. An environmental impact statement is intended to consider both positive and negative impacts of the proposed action relative to a no action alternative. Moreover, the State Environmental Policy Act defines "environmental impact" broadly, to include impacts on electricity supply, the electric grid, public utilities, and local economies, as well as impacts to traditional environmental media, such as air quality and water quality.

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Here the positive impacts of battery storage are substantial and critically important. BESS facilities are essential for the clean energy transition and to achieve the objectives of Washington's Clean Energy Transformation Act. A recent study by the International Energy Agency concluded that "[b]atteries are key to the transition away from fossil fuel" and that "[f]ailing to scale up battery storage … would risk stalling clean energy transitions in the storage sector."[1] In other words, the no action alternative would rely on more fossil fuels to generate electricity, and result in more of the environmental impacts associated with fossil fuel generation. Ecology should address these issues in the "Energy and Natural Resources" section of the PEIS as well as in the discussion of relevant environmental impacts, such as impacts to climate change and air quality.[2]

Given the anticipated sustained increase in electricity demand due to AI and cloud computing, and the increasing electrification of the transportation and industrial sectors, BESS facilities are critical to meeting electricity demand (resource adequacy), maintaining grid stability, and ensuring uninterrupted electricity supply is available in Washington. Storage can also provide a moderating influence on electricity prices during periods of high demand. These are positive project impacts that should be addressed in the "Energy and Natural Resources" and "Public Services and Utilities" sections of the PEIS.[3]

In addition, the construction and operation of BESS facilities provide numerous economic benefits to local communities that Ecology should address in the PEIS. Construction of a utility-scale BESS facility typically provides hundreds of family-wage jobs over a one-to-two-year construction period

[1] International Energy Agency, Batteries and Secure Energy Transitions 12, 15 (2023), available at https://iea.blob.core.windows.net/assets/cb39c1bf-d2b3-446d-8c35-aae6b1f3a4a0/BatteriesandSecureEnergyTransitions.pdf

[2] Ecology should review the extensive body of research on this topic, including:

- RMI, Stored Potential: The Impacts of Utility-Scale Battery Energy Storage Systems on Communities and the Grid (2026), available at https://rmi.org/resources/stored-potential/
- International Energy Agency, Batteries and Secure Energy Transitions (2023)
- MIT Energy Initiative, The Future of Energy Storage (2022), available at https://energy.mit.edu/wp-content/uploads/2022/05/The-Future-of-Energy-Storage.pdf

[3] Regarding this issue, Ecology should review:

- RMI, Stored Potential: The Impacts of Utility-Scale Battery Energy Storage Systems on Communities and the Grid (2026),
- International Energy Agency, Batteries and Secure Energy Transitions (2023).

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and creates millions of dollars of economic activity. Construction and operation of the facilities also provide significant long-term tax revenues. These impacts are not especially site-specific or project-specific, so they are very suitable to the general analysis found in a PEIS. Ecology's analysis of these economic issues would help local jurisdictions and permitting agencies understand the scope of these impacts and make it unnecessary for them to perform detailed analysis for each project being permitted. This sort of analysis is entirely appropriate under SEPA because it has direct bearing on the provision of public services, which are routinely considered in a SEPA EIS.[4]

3. Analysis of Traditional Environmental Impacts

Due to the general nature of a PEIS, the analysis of many traditional environmental impacts, such as impacts to water quality, wetlands, and wildlife habitat, may not be very helpful in facilitating the permitting of specific projects. The existence and extent of these impacts are almost entirely project-specific. They depend upon the project location, the project design, and the mitigation proposed. A PEIS that simply identifies potential impacts will not help agencies and jurisdictions that must analyze whether these environmental impacts are likely to occur for a particular project, given its location and design.

Furthermore, a PEIS that identifies a wide range of "potential" impacts could easily be misinterpreted. It may be misunderstood to imply that such impacts will occur, even if they are highly unlikely at a particular location or in connection with a particular project. For this reason, we urge caution. We urge even greater caution in recommending mitigation measures that may be unnecessary or inappropriate for some projects and some locations. Doing so may create an improper presumption in favor of such measures, and place additional burdens on project developers and permitting agencies to rebut the need for such measures in particular cases.

Rather than attempting to analyze traditional environmental impacts that are highly dependent on project design and location, the PEIS should analyze impacts that are more susceptible to generalization. Doing so would provide decision-useful information for permitting agencies and jurisdictions.

For example, when considering air quality, an important issue for permitting agencies to consider is the likelihood that battery storage would displace generation from fossil fuel-fired peaker plants

[4] For additional information on these impacts, see RMI, Stored Potential: The Impacts of Utility-Scale Battery Energy Storage Systems on Communities and the Grid (2026),

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during peak demand periods. This is a beneficial air quality impact likely to be associated with any battery storage facility built in Washington and it could be analyzed in a general way in the PEIS. Providing this sort of analysis that would be useful to permitting agencies and local decision-makers. We suggest Ecology consider the existing research on this point.[5]

4. Safety and Fire Risk Assessment

Ecology could also meaningfully assist the permitting process by providing a detailed analysis of safety issues associated with BESS facilities. Many aspects of the safety issue are not especially location- or project-specific, so a more general discussion of risk and mitigation could avoid duplicative study by each permitting agency or jurisdiction. However, the usefulness of the PEIS analysis will depend upon its quality. We have the following suggestions for Ecology to consider in analyzing this issue.

First, Ecology should retain qualified consultants to assist in this analysis. Fire safety is a specialized area and not many have the technical expertise to evaluate it. The Fire Risk Alliance, PNNL, and Hiller Companies are examples of organizations that have deep expertise in this area. It is critically important that Ecology consult with nationally recognized experts in the field of fire safety to properly analyze this important issue.

Second, Ecology should focus on the most recent data, equipment, and research regarding safety issues. Battery technology is evolving, and safety measures have advanced with time. We recommend Ecology consider several recent studies.[6] In particular, we note that EPRI is in the process of completing a detailed study regarding battery incidents, which is expected to be released this year.

[5] Ecology should review available reports including:

- RMI, Stored Potential: The Impact of Utility-Scale Battery Energy Storage Systems on Communities and the Grid (Aug. 2026).
- Aurora Energy Research, Battery Energy Storage Impact and Benefit Assessment in MISO (2025), available at https://cleanpower.org/wp-content/uploads/gateway/2025/07/ACP-Aurora_BESS-Benefits-Analysis-MISO_Report_07.18.25.pdf .

[6] The following reports have considered safety issues:

- EPRI, Battery Energy Storage System Failure Incident Database, https://energystorage.epri.com/hub/public/en/failure-incident-database.html
- RMI, Stored Potential: The Impact of Utility-Scale Battery Energy Storage Systems on Communities and the Grid (Aug. 2026).

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Third, Ecology should consider recent design and operational standards developed to address BESS safety. For example, NFPA 855 was updated in 2025 and now includes requirements for the maximum energy and necessary spacing between units, as well as requiring the performance of a hazard mitigation analysis and development of emergency response plans. In addition, UL 9540 is a safety standard applicable to energy storage equipment, which identifies various safety specifications and requires rigorous fire testing. These safety standards are updated over time based on lessons learned from experience.

Conclusion

Jupiter Power appreciates this opportunity to provide input on the scope of the PEIS. We look forward to reviewing the draft. In the meantime, please do not hesitate to contact us if we can provide information that would help in your analysis of battery storage facilities.

Sincerely

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