To: Shorelands & Environmental Assistance Program
Washington State Department of Ecology

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Date: October 1, 2026

RE: Battery Energy Storage Systems Programmatic Environmental Impact Statement (PEIS)

Background

At Clean & Prosperous, we work to accelerate the clean energy transition to power prosperity for Washington communities and businesses. Battery energy storage systems (BESS) are safe, rapidly growing, and thoroughly vetted, low-impact technologies that provide important community benefits. They are a resiliency asset for communities to keep their lights on during power outages and extreme weather. They also enable a steady supply of clean energy when it is needed most, rather than relying on highly polluting fossil fuel peaker plants. This makes BESS development a crucial component in helping Washington state meet its mandatory statewide requirement to transition to a 100 percent greenhouse gas-free electricity supply by 2045.

However, our state ranks last in the nation for renewable energy growth, according to landmark reporting last year from ProPublica. This is something we desperately need to change. Clean & Prosperous has so far identified over 100 battery storage projects stuck in Washington's pipeline that could provide 10.85 gigawatts (GW) of storage capacity to the grid. These storage projects represent tens of billions of dollars in economic activity and thousands of highly skilled and long term jobs. This is why we commend Ecology's work to develop a programmatic Environmental Impact Statement (EIS) for standalone BESS facilities, which could help move more projects through the pipeline much more quickly, while maintaining enforceable standards and appropriate safeguards.

Our key requests are: (1) size classes that distinguish smaller and larger utility-scale systems, (2) analysis that separates legacy designs from UL 9540A/NFPA 855-compliant

ones, (3) a study area that includes industrial and near-substation lands, (4) crediting existing codes as mitigation, and (5) statewide solutions to any regulatory gaps the PEIS identifies.

Types of facilities to be evaluated

- The scoping document defines utility-scale BESS as 1 megawatt (MW) or more and notes that Ecology will determine the specific facility types after considering scoping input [Scoping Doc, Section 3.1.2]. This definition is straightforward, but it groups systems that local jurisdictions are differentiating. For example, in Pierce County's recently adopted BESS ordinance, Tier 2 systems are those from 2 MW to 7 MW, and Tier 3 systems are those above 7 MW. The distinction makes sense because BESS impacts differ materially by scale. Smaller facilities have smaller footprints, lower stored energy, and different fire, noise, and emergency-response profiles, and they fit on small parcels in developed areas. Larger facilities are broader grid resilience assets designed for regional resource adequacy. Clean & Prosperous advocates for a uniform statewide tier framework classifying systems by both power and energy capacity to address these differences. Clean & Prosperous recommends the PEIS reflect this by evaluating a "commercial and medium scale" category from 1 MW to 10 MW and an "industrial and utility scale" category above 10 MW. Ecology should also describe these categories by both power (MW) and energy capacity (MWh), since power alone does not capture a facility's size or duration.

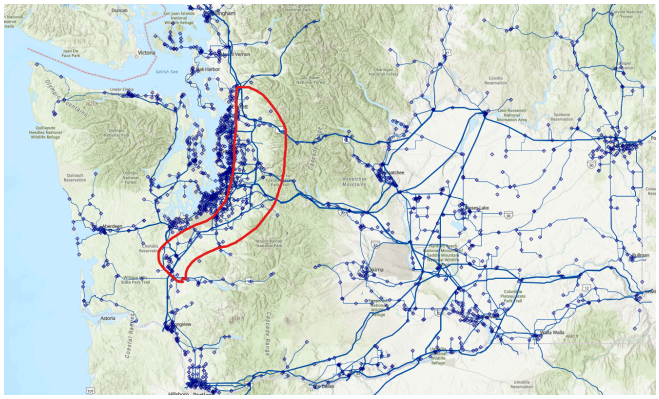
- Within lithium-ion technology, the PEIS should analyze impacts separately by design generation (earlier-generation vs. current UL 9540A/NFPA 855-compliant designs) and enclosure type (outdoor containerized vs. warehouse-type enclosures). The scoping document already notes that development of the Moss Landing facility began before the NFPA 855 requirements were released, and that newer codes and standards require large-scale fire testing and other changes that reduce the risk of a similar incident [Scoping Doc, Section 4]. It also notes that failure incidents per gigawatt-hour deployed have decreased even as deployment has grown [Scoping Doc, Section 4]. We urge Ecology to carry this approach through the analysis, using failure data normalized by deployed capacity and differentiated by design generation, rather than a single "BESS" failure rate.

Assumptions to identify the geographic scope of study used for the PEIS analysis

- We agree with Ecology that standalone BESS facilities are smaller than co-located facilities and could be sited in a variety of locations, including in or near cities [Scoping Doc, Section 1.1]. The study area should reflect this. Section 5.3 states that Ecology may consider factors for likely development and proximity to existing

infrastructure. For standalone BESS, the most relevant infrastructure are substations: both transmission and distribution level with available interconnection capacity, along with proximity to load and grid constraints. The study area should incorporate these factors.

- The study area should include industrial and commercial lands inside city limits and urban growth areas (UGAs). Standalone BESS projects commonly cluster near substations and load centers or adjacent to UGAs. Excluding these areas would leave the projects most needed for grid reliability unable to tier from the PEIS.
- The study area should include western Washington, with particular attention to the Puget Sound load centers, where cross-Cascades transmission constraints limit delivery of solar and wind generation from eastern Washington. Much of the state's load growth, grid congestion, and resilience needs are concentrated here, and storage sited near this constraint can relieve it. A substantial share of proposed storage projects are located in the red circled area on this map showing Open Infrastructure data of transmission lines and substations in Washington.



- The PEIS should specifically evaluate brownfields, previously disturbed industrial sites, and retiring fossil generation sites. These sites often have existing interconnection, established industrial land use, and prior disturbance, so their impact profile is substantially different from greenfield development.
- The study area should not outright exclude particular zones or areas near sensitive uses (schools, nursing homes, etc.) as geographic buffers. This is an overly blunt tool that could have significant adverse impacts. For example, an analysis of existing Puget Sound Energy substations in King County finds that there is not a single substation more than 0.25 miles from a sensitive area. Separation from sensitive uses is better addressed at the project level through performance-based measures, such as receptor-based noise limits and fire code separation requirements.
- Clean & Prosperous maintains an inventory of more than 100 proposed battery storage projects in Washington, along with GIS data on substation locations. We would welcome the opportunity to share this data with Ecology to help define study areas that reflect where storage projects are actually being proposed.

Potential impacts to environmental resources to analyze

- We support Ecology's plan to build on the analysis of co-located BESS in the 2025 solar and onshore wind PEISs. For many topics, including earth, biological resources, energy and natural resources, land use, aesthetics and visual quality, recreation, and transportation, the solar PEIS found that impacts from facilities with co-located BESSs would be generally the same as for facilities without a BESS. In carrying these findings forward, Ecology should adjust for the much smaller footprint of standalone BESS, and for the likelihood that many standalone projects will be sited on previously developed or industrial land, where impacts such as land conversion and habitat loss are substantially lower.
- Noise is one area where the analysis should be adjusted for standalone facilities. The prior PEISs identified potentially significant noise impacts from activities within 1,000 feet of people in quiet rural areas, and found those impacts could be mitigated below significance [Scoping doc, Table 1]. The solar PEIS also found that BESS cooling units "do not meaningfully contribute to the noise generated by the substation transformers where they are typically co-located, but can generate higher noise levels when concentrated in a single area" [Section 4.11.4.1], and it recommended a dispersed layout to reduce noise. That measure does not apply to standalone facilities, which are compact by design and have no larger site across which to disperse equipment. The noise analysis for standalone BESS should instead focus on the equipment that actually drives the (already minimal) BESS noise: HVAC and thermal-management fans, power conversion systems, and transformers. It should also recognize that many standalone sites will be in industrial areas with higher existing noise levels than quiet rural settings. The corresponding measures should be performance-based, such as:
    - Orienting and placing the noisiest equipment away from adjacent noise-sensitive areas
    - Specifying low-noise cooling options
    - Using sound walls or berms where needed
    - Meeting receptor-based noise limits, such as the EDNA limits in WAC 173-60, rather than mandating a prescribed layout

Potential mitigation measures to consider

- Rely on existing requirements as mitigation. The scoping document notes that battery failures are rare, and that Washington has adopted portions of the 2021 and 2024 International Fire Code and the 2023 edition of NFPA 855 [Scoping Doc, Sections 3.1.2 and 4]. We support Ecology's plan to identify which codes are applicable. The PEIS should go a step further and state explicitly where compliance with these requirements reduces an impact below significance. Under the State Environmental Policy Act (SEPA), agencies must consider existing regulations as mitigation [WAC 197-11-660(1)(e)]. Clear statements to that effect

would allow lead agencies to issue mitigated determinations of nonsignificance where appropriate, rather than defaulting to project-level EISs.

- Recognize measures that are now standard practice. Modern BESS design includes safety measures that are standard across the industry. The PEIS should identify and encourage these practices, including:
    - UL 9540A large-scale fire testing to inform equipment spacing and fire protection design
    - Continuous remote monitoring through battery management systems
    - Gas detection, explosion prevention, and deflagration venting
    - An emergency response plan developed in coordination with the local fire authority
    - Sharing relevant hazard and site information with emergency responders before operations begin

  Clearly distinguishing these measures from genuinely site-specific considerations, such as local fire response capacity, access routes, and proximity to sensitive receptors, would help lead agencies focus project-level review where it adds value. The recent Grid Strategies Gap Analysis of Permitting Reforms in California, Illinois, New York, and Washington report also gives valuable insights and recommendations for Washington's PEIS to increase permitting efficiency and effectiveness.
- Present measures as helpful tools, not minimum requirements. Ecology stated in its response to comments on the solar PEIS that siting and design considerations are informational, and that measures would be needed for projects only if applicable [Appendix S]. The standalone BESS PEIS should state this clearly in the document itself, so that local jurisdictions do not treat the full list of measures as mandatory permit conditions.
- Keep measures performance-based and tied to recognized standards. The solar PEIS provides a good model. Its water resources measure for co-located BESS directs facilities to be located to prevent contamination of surface waters, floodplains, wetlands, and buffers, with specific distances determined at the project level. Its setback measure (Appendix A, Section 10.1.2) ties setback distances to specific purposes such as maintenance, emergency access, and preventing spread between containers. The standalone PEIS should take the same approach throughout, with separation distances derived from the fire code, NFPA 855, and UL 9540A test results rather than fixed distances from property lines or zones.
- Scale emergency response measures to siting context. The prior PEISs found that wildfire risk and fire response impacts depend on the specific project and site, driven largely by remote locations with limited response capability [Scoping Doc, Table 1]. Many standalone BESS projects will be located near existing substations, roads, and developed areas with better access and shorter response times. The

PEIS should analyze these siting contexts separately and scale mitigation accordingly, rather than applying remote-site measures statewide.

- Address regulatory gaps with statewide solutions. Ecology has said this PEIS will identify gaps in regulations, state code, and emergency response. The scoping document also notes that the most recent edition of NFPA 855 has not been adopted into state code, and that local governments may adopt newer standards on their own [Scoping Doc, Section 3.1.2]. That creates a risk of inconsistent standards across jurisdictions. Where gaps exist, we urge Ecology to recommend uniform statewide solutions, such as:
    - A statewide program for BESS responder training and funding, particularly for rural fire districts
    - A standard emergency response plan template or minimum contents defined at the state level
    - Relying on the state fire code and NFPA 855 as the baseline for separation distances, with any updates made through the State Building Code Council

  A consistent statewide framework holds BESS to the same technically grounded standards everywhere and gives developers the predictability needed to bring projects forward.
- State clearly whether impacts can be mitigated. Table 1 of the scoping document usefully indicates, for each co-located BESS impact, whether it can be mitigated below significance. The standalone BESS PEIS should do the same for every potentially significant impact, and state where compliance with laws and permits, together with mitigation measures, would reduce impacts below significance.

Conclusion

We appreciate Ecology's thoughtful development of this PEIS, which could help Washington tap into the existing economic, clean energy capacity, and workforce potential of BESS. We encourage inclusion of (1) size classes that distinguish smaller and larger utility-scale systems, (2) analysis that separates legacy designs from UL 9540A/NFPA 855-compliant ones, (3) a study area that includes industrial and near-substation lands, (4) crediting existing codes as mitigation, and (5) statewide solutions to any regulatory gaps the PEIS identifies.

Clean & Prosperous is happy to be a resource and partner in our shared efforts to advance less polluting, more affordable, and more resilient forms of energy for Washington communities.