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RE: Renewable Northwest's Comments on Scoping for Utility-Scale Battery Energy Storage Systems Programmatic Environmental Impact Statement

Renewable Northwest ("RNW") appreciates the opportunity to provide comments to the Department of Ecology ("Ecology") as it scopes its utility-scale Battery Energy Storage Systems ("BESS") Programmatic Environmental Impact Statement ("PEIS"). RNW is a nonprofit advocacy organization with the mission to strengthen and expand clean energy infrastructure in the Pacific Northwest. We are a membership based organization, with diverse members spanning other nonprofit public interest organizations, clean energy infrastructure developers, tech companies, consultancies, manufacturers, and more. We frequently engage in BESS ordinance drafting processes in local jurisdictions throughout the Northwest, and we know safety and environmental impact mitigation is a priority for communities. We understand these concerns are valid and should be addressed through education, sound regulation, and responsible development. RNW maintains that existing industry standards and best practices address these safety concerns and can effectively alleviate environmental risks.

Washington's requirements to achieve 100% renewable or zero-carbon electricity by 2045 combined with the Pacific Northwest facing unprecedented growth in electricity demand means that there is an urgent need for new generation and transmission capacity on the electric grid. Recent forecasts estimate more than a 40% increase in electricity demand over the next decade requiring that much increase in resources to support a reliable system.[1] In addition to required new generation resources to meet this additional demand, the electricity grid itself requires major improvements to perform reliably. BESS infrastructure is an indispensable piece of this in addition to supporting Washington reliably and efficiently meeting its electricity demand and climate goals.

[1] PNUCC's 10 year forecast:
https://www.pnucc.org/wp-content/uploads/2022-PNUCC-Northwest-Regional-Forecast-final.pdf
NW Power and Conservation Council's preliminary 20 year outlook:
https://www.nwcouncil.org/news/2025/05/02/pacific-northwest-load-forecast-2025/

While BESS projects are critical for the regional grid, they also offer tremendous energy resiliency and reliability benefits to host communities. For example, they can help maintain local reliable service during times of high transmission constraints and extreme weather events such as ice storms, heat waves, or wildfires. As such, BESS systems are critical not just to the regional energy grid but to local resilience planning. These systems can reduce utility bills, allow for more local economic growth, reduce the impacts of transmission constraints, and increase reliable power supply.

Generally, **RNW is hesitant to endorse a PEIS that could introduce more process or confusion for siting and permitting BESS in the state.** However, RNW would be supportive of a PEIS that strongly reflects the robust and growing body of research around potential impacts of BESS and regularly updated industry standards like the National Fire Protection Association's *Standard for the Installation of Stationary Energy Storage Systems* ("NFPA 855") and would help with the current difficulties of siting and permitting BESS in the state. RNW is pleased to see that many of the safety and siting considerations outlined in the draft scoping document are in line with existing industry standard development procedures. It is worth noting that, unlike solar or wind, BESS are not considered electricity generation resources and instead serve as grid assets - a utility facility function - that Washington desperately needs. Unfortunately, we have continuously seen highly restrictive ordinances in local jurisdictions that are not reflective of current safety standards and industry best practices. We hope the PEIS will support the inclusion of the latest research and standards to inform decisions throughout the state. Given the state's need for bringing BESS onto its electricity system, we support Ecology's goal of identifying ways to limit impacts which RNW sees as core to responsible development. RNW looks forward to a balanced PEIS that will support the integration of more utility-scale BESS onto Washington's electricity grid.

As Ecology begins its process of drafting a BESS PEIS, RNW offers specific recommendations below and generally notes that more clarity on how the agency expects developers to use this document would be helpful. We welcome any follow-up questions.

Section 3: Battery Energy Storage Systems

Section 3.1.1

1. *Consider affordability benefits of BESS*

RNW recommends adding affordability as a benefit of BESS systems in the "What is BESS" section. Due to the variable power production of renewable energy projects (solar generates when there is sun, wind turbines generate when there is wind, etc.), there may be times when the electricity generation capacity will exceed the demand. Equally, when there is excess electricity on the grid, rates are lower. BESS helps capture both of these things - the additional generation capacity of renewables and when rates are lower during times of excess. These two things are

not mutually exclusive and often the excess capacity scenario also results in lower cost electricity. When this happens and BESS captures these moments of extra electricity at lower rates, it allows utilities to offer these cost savings to their customers. In other words, BESS offers significant cost savings for ratepayers by capturing electricity when rates are low and putting that low-cost power back on the grid for use at other times.

It is also worth noting that high rates can also result from times of high transmission constraints. By capturing the excess, lower-cost power closer to where it will be needed, this also allows for cost savings for ratepayers in addition to the reliability benefits.

2. *Maintain system design flexibility throughout the PEIS*

There are specific BESS container dimensions included in the draft scope. However, designs between BESS projects can vary greatly depending on the latest technology and configurations. RNW recommends that the PEIS should maintain flexibility for variation in designs as long as they are NFPA 855 compliant which also allows for future technological changes. Because of this variability between manufacturers and developers, we caution against the PEIS referencing a specific dimension or design.

Section 4: Related BESS Impact Analysis

1. *Keep focus on industry standard*

RNW is pleased to see that "the current state requirements and codes will be evaluated".[2] When scoping environmental impacts of BESS systems, RNW highly recommends an analysis that separates normal operating conditions from a system failure event. Ecology's draft readily identifies that in just 8 years, utility-scale BESS has transformed from having a higher global failure rate to a technology that is being deployed safely at a global scale.[3] We recommend the scoping PEIS separately identifies environmental impacts in normal operating conditions and in incident response.

Under normal operating conditions, there are few water or air emission concerns because the systems are sealed.[4] There is also no ongoing use of water for operational purposes, including cooling, because of how the systems are designed. With appropriate designs that meet industry safety and design standards, BESS present few environmental concerns in their daily operation and throughout the system's lifetime. Noise pollution concerns are also valid; most systems

[2] See Page 17 of Ecology draft scoping document

[3] On page 17 of the scoping document, Ecology cites EPRI's failure incident database. This shows that of 1,300 large scale battery facilities in operation, the global fleet experienced just 24 system failures in 2025. As technology develops and BESS are deployed, the system failure rate has decreased by 97% over the last 8 years. See more on BESS' technological growth here, and safety incident reduction here.

[4] The Pacific Northwest National Lab's 2023 publication on Energy Storage in Local Zoning Ordinances addresses these minimal environmental concerns under normal operating conditions on page 12.

operate at 60 - 80 decibels (dB), which is equivalent to the sound in a moving car. These impacts are frequently mitigated by screening.[5]

In the unlikely event of a thermal incident, NFPA 855 addresses environmental concerns with fire incident responses and recommended setbacks for battery systems. We would also like to flag the standards for fire suppression tactics emphasizing containment, not direct application of water on the fire, which limits the intensity of fires and the possibility of contamination of water runoff - a key concern we hear from local jurisdictions which drive overly conservative ordinances and codes. The Fire Risk Alliance ("FRA") and American Clean Power ("ACP") recently published an *Assessment of Potential Impacts of Fires at BESS Facilities*, which extensively covers air, water, and soil contamination. NFPA 855 is a trusted and continuously updated industry standard that local fire departments are familiar with and regularly utilize. We would like to highlight the below excerpt on water contamination as an example:

> "The consensus best practice for response to a BESS fire is to allow the BESS to consume itself and provide cooling water to targets if needed. Unless there is direct suppression water applied to the BESS on fire, any cooling water applied will be similar to rain and no potential contaminants will be included in any runoff. While lithium-ion battery fires produce chemical byproducts, studies show that their solubility in water is low, limiting the potential for groundwater contamination if direct suppression efforts are performed. Additionally, standard stormwater management practices help prevent runoff from reaching natural water sources in the event that the fire department determines that suppression efforts are required."[6]

RNW recommends the PEIS focuses on how industry standards like NFPA 855 that are trusted resources to firefighters and local jurisdictions alleviate environmental impacts.

2. *A note on Moss Landing*

Ecology included background information from the 2025 Moss Landing fires, including air pollution testing results. RNW would recommend including in more granularity on why this incident is not likely to occur again. The scoping document mentions that existing standards do not allow the same facility to be constructed now, but acknowledging that this is linked to NFPA 855 and industry best practices and standards would bolster this acknowledgement.

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[5] See above, page 11.
[6] Fire Risk Alliance and American Clean Power's Literature Review, Assessment of Potential Impacts of Fires at BESS Facilities

Section 5.3 Geographic Scoping

We are pleased to see the scoping phase is statewide. BESS offers benefits to the grid throughout Washington. BESS especially needs to be under consideration in load pockets and where it will most benefit and address transmission constraints which might deviate from the typical geographic area expected for wind and solar projects. This means siting BESS in and near urban centers. And when considering sites, a primary consideration is proximity to existing energy infrastructure and most notably near substations. The further away a BESS facility is sited, the longer the line will be to connect to a substation, which raises different siting issues and also decreases the efficiency of the BESS facility. RNW recommends that Ecology consider this as a central aspect to the geographic scope for this PEIS of stand-alone BESS - proximity to load and substations, and best locations to alleviate transmission constraints.

Conclusion

RNW appreciates the opportunity to comment on this scoping document. BESS are safe tools to enhance the reliability and affordability of the electric grid, help decarbonize the state's electricity system, and have tremendous potential to deliver resiliency and benefits to local communities.

Sincerely,

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