# Jon Schrader

To the Department of Ecology, Clean Energy Coordination:

My name is Jon Schrader. I live at 7722 Greenridge Ct. SE in Snoqualmie Ridge. This is my scoping comment on the Programmatic EIS for stand-alone, utility-scale lithium-ion battery energy storage systems (Publication 26-06-017).
Jupiter Power has proposed a stand-alone BESS facility, the Cascadia Ridge project, near my neighborhood. My kids go to Snoqualmie Elementary, near the proposed site. My family depends on Snoqualmie Parkway, which is also the emergency route for everyone who lives along it. Ecology has said project-level reviews will tier to this PEIS, so this study will set the baseline for how a project like Cascadia Ridge gets evaluated.

The PEIS should start from four realities.

Fires will happen. Failure rates per installed unit have improved, but across a growing fleet and a 20-plus-year operating life, a thermal runaway event is a statistically probable outcome, not a remote one. The PEIS should plan for the fire, not just for the odds of preventing it.

The impacts don't stay inside the fence. Toxic gases including hydrogen fluoride, smoke, contaminated runoff, and explosion risk all travel. With homes within 500 feet of the proposed site, the risk is at the community's doorstep, and nothing enforceable currently protects the people living there. These events are dangerous even to trained, equipped responders. Firefighters were seriously injured in the 2019 McMicken explosion in Arizona, and two firefighters were killed in a 2021 battery storage explosion in Beijing. There are documented cases of first responders battling long term health issues due to proximity to Lithium Ion Battery Fires. Residents should not be expected to have personal protective gear in their homes (for themselves AND guests) and may have no way out. Shelter in place is the expectation for residents within specific proximity.

The aftermath lasts years. Moss Landing burned in January 2025. More than a year and a half later the damaged batteries are still being removed, and the EPA doesn't expect cleanup to finish until mid-2027. That happened in a town of fewer than 1,000 people. The PEIS needs to account for what the same event means inside a community with 10's of thousands of residents, with schools, a hospital, and other vulnerable residents nearby.

The risk is being shifted onto residents. King County's BESS ordinance caps developer liability at $1 million. That is a small fraction of what a Moss Landing-scale response and cleanup costs. If the developer won't be fully accountable for the consequences of a failure, the community can't be asked to accept the risk. The PEIS should treat full financial accountability as a precondition, not an afterthought.

Q1 · Facility types
Ecology's earlier studies looked at remote sites. Stand-alone BESS is different. Ecology itself says these facilities "could be sited in a variety of locations," and in practice that means rows of shipping-container-sized battery units next to homes and schools. The PEIS should study that scenario, including the largest container installations being proposed today, not just small substation batteries.

The analysis should assume facilities are built to the code Washington has actually adopted, not the newest standards, since Ecology acknowledges the state's fire code lags behind. Then it should spell out what the current edition of NFPA 855 and UL 9540A large-scale fire testing would change. Safety conclusions should rest on independent incident data, not developer assurances.

Q2 · Geographic scope
"Suitable" should mean safe for the people who live there, not just buildable. Proximity to a substation or transmission line is a grid convenience, not a safety finding, and it shouldn't be treated as one.
Because site details get pushed to later reviews, this is the one chance to shape the study area. The PEIS map should say where facilities should not go, not only where they could. At minimum it should screen for:
• proximity to homes, schools, and hospitals
• wildland-urban interface and wildfire-prone areas, along with local fire-district capacity (Ecology's earlier studies already flagged "new ignition sources in remote locations with limited response capabilities")
• mapped seismic hazard zones and floodplains
• areas that rely on private wells
• communities with limited evacuation routes
The Snoqualmie Valley has most of these conditions at once. It's a good test case for whether the screening works.

Q3 · Impacts to analyze
The scoping document says Ecology "will evaluate" responder training, hard-to-extinguish fires, toxic emissions, water and fish impacts, and cleanup. Each of those needs a full analysis, not a sentence. Specifically:
• Toxic gas exposure for neighbors, not just firefighters. The scoping document notes that gases from damaged batteries can harm firefighters' skin and lungs. It says nothing about residents, who have no protective gear and may not be able to leave. The PEIS should run dispersion modeling for hydrogen fluoride and other thermal-runaway gases under valley inversion conditions, which trap air at ground level.
• Evacuation and displacement as impacts in their own right. Moss Landing, Ecology's own example, forced roughly 1,200 people from their homes.
• Firefighting water. Contaminated suppression runoff and its path to groundwater, private wells, and fish-bearing streams.
• Multi-day incident demand. What an extended BESS fire requires from local fire, HazMat, hospital, and evacuation resources. Ecology could not previously say whether the burden on small fire districts can be mitigated, and our own district, Eastside Fire & Rescue, has publicly said it isn't prepared for a BESS incident.
• Explosion risk. Deflagration from off-gassing, as in the 2019 McMicken incident in Arizona, where firefighters were injured.
• Nighttime noise measured at the nearest home, not the fence line. Ecology's earlier studies found facility noise carrying 1,000 feet in quiet rural areas; the analysis should go beyond that distance.
• Seismic performance of container installations in mapped fault zones.

Q4 · Mitigation
Mitigation described "at a high level" gives King County nothing to put in a permit. The county will lean on this PEIS when it reviews a real project, so the measures need to be specific and

enforceable:
• minimum setbacks from homes, schools, hospitals, and drinking-water wells, backed by evidence that the distance is actually protective
• UL 9540A large-scale fire testing and compliance with the current edition of NFPA 855 for every facility, regardless of what the state has adopted, since Ecology credits large-scale testing with reducing risk
• funded emergency response plans, training, and equipment for local fire districts in place before a facility operates
• containment and disposal plans for fire-suppression water
• enforceable nighttime noise limits at the nearest residence
• decommissioning plans and financial assurance sized to a worst-case incident and cleanup. King County's current $1 million liability cap doesn't come close to that.
Where a harm can't be reduced below significance, such as a fire a small district can't contain, the PEIS should say so plainly and call it unavoidable. Lead agencies and the public shouldn't have to guess.

Q5 · Lithium-ion chemistry and alternatives
This PEIS is scoped to lithium-ion, but SEPA requires a look at reasonable alternatives. Many of lithium-ion's problems come from the chemistry itself, not just from where a facility is sited. Better setbacks don't fix them. The PEIS should evaluate these problems directly and compare lithium-ion against non-lithium storage such as sodium-ion, iron-air, and flow batteries.
• Toxicity. Burning or venting lithium-ion cells release hydrogen fluoride, carbon monoxide, and other toxic gases. The electrolyte can generate HF even without open flame once a cell vents. Nickel-manganese-cobalt (NMC) cells also contain heavy metals, and after Moss Landing, researchers found elevated nickel, manganese, and cobalt in nearby marsh soils. Many cells also use fluorinated binders from the PFAS family. The PEIS should analyze what settles out after an incident on soil, gardens, school fields, and surface water, not just what is in the air during the event.
• Instability. Thermal runaway is self-sustaining. A failing cell produces its own heat and flammable gas, spreads to its neighbors, and cannot be reliably extinguished, only cooled or allowed to burn out. Damaged cells keep stranded energy and can reignite days or months later. Moss Landing flared up again a month after the main fire, and responders there still cite reignition risk during cleanup. Lithium iron phosphate (LFP) is more stable than NMC, but it still vents flammable gas that can explode inside an enclosed container. The PEIS should compare runaway behavior by chemistry and should not treat a switch to LFP as solving the problem.
• Cooling, HVAC, and noise. Lithium-ion has to be held in a narrow temperature band. That means chillers, fans, and inverters running 24 hours a day, year-round, including the low-frequency hum that carries at night and through walls. A cooling failure is itself a runaway trigger, refrigerants add a greenhouse-gas leak risk, and the cooling load cuts the facility's net efficiency. The PEIS should quantify cooling-system noise, including low-frequency and tonal components (dBC, not just dBA). It should also identify refrigerant types and leak rates, and analyze what happens when cooling or site power fails.
• Supply chain ethics. Much of the world's cobalt comes from the Democratic Republic of Congo, including artisanal mines with documented child labor. Lithium brine extraction in South America draws down water in arid regions that Indigenous communities depend on. Graphite and cell processing are concentrated in China, with forced-labor concerns serious enough that federal import law now targets parts of that chain. Washington shouldn't approve "clean" energy whose harms are simply exported. The PEIS should include a lifecycle analysis of the chemistries it covers, and it

should require project applicants to disclose cell chemistry, manufacturer, and material sourcing.

I ask that the PEIS evaluate non-lithium storage chemistries as reasonable alternatives. It should compare chemistries on fire behavior, toxic emissions, cooling demand, and noise. It should also require project-level disclosure of chemistry and supply chain, so lead agencies know what is actually being built.

Closing
Bottom line: Ecology's own framing says these facilities can go almost anywhere, including next to neighborhoods. The PEIS should treat proximity to residents as a defining condition of the analysis, not an edge case. It should also take a hard look at whether lithium-ion is the right chemistry to put there at all.

Please include this comment in the scoping record. Our community is following this closely and will be commenting on the Draft PEIS.

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