Comments of David Wojick, Ph.D. for CFACT on the Washington Department of Ecology "draft PEIS for wind and solar" regarding the potential impact of grid scale battery fires

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The wind and solar PEIS address the very serious issue of spontaneous fire in the huge battery complexes that often accompany wind and solar projects.

In particular section 3.6.1.1 of appendix G in both PEIS says this:

"*WAC 51-54A-0322 includes requirements for storage of lithium-ion and lithium metal batteries. Permits are required when more than 15 cubic feet of most battery types are accumulated. A fire safety plan is required and must include emergency responses to be taken upon detection of a fire or possible fire. Where required by the fire code official, a technical opinion and report complying with Section 104.8.2 should be prepared to evaluate the fire and explosion risks associated with the storage area and to make recommendations for fire and explosion protection. The report must be submitted to the fire code official and should require the fire code official's approval prior to issuance of a permit. In addition to the requirements of Section 104.8.2, the technical opinion and report should specifically evaluate the potential for deflagration of flammable gases released during a thermal runaway event.*"

Unfortunately it is highly likely that this regulation does not apply to wind and solar battery complexes. It covers battery storage while these complexes are batteries in use. Thus they are likely exempt under this exception listed in section 322.1:

"*2. New or refurbished batteries packed for use with the equipment, devices, or vehicles they are designed to power.*"

In this case the equipment being powered is the grid, including stabilization.

It appears that this regulation is either not applicable to wind and solar battery complexes or it is being ignored. In either case this raises the reasonably likely impact of a huge multi-battery fire. That impact needs to be properly assessed, not just mentioned in passing as these draft PEIS seem to do.

An example may be helpful. I recently wrote an article on the desperate national need for standards of design and emergency preparedness for grid scale battery complexes. The title is "*Grid scale battery fires loom large*."

By coincidence my example is the Washington State wind-solar-battery project at Horse Heaven. Lax permitting of a very dangerous project is my focus.

Here is the relevant excerpt :

"*Now let's turn to permitting these facilities where I have another example that speaks volumes. This is a facility that just got permitted by Washington State. It is a combined wind, solar and battery project with a proposed storage capacity of 300 MW.... It might have 200 huge lithium battery units. That number is not disclosed.*

The project is named the Horse Heaven Wind Farm despite its massive solar and battery components. The name, usually shortened to Horse Heaven, is truly ironic because it will be no place for horses. Horse Hell might be better.

The permitting authority is the Washington Energy Facility Site Evaluation Council or EFSEC for short. The permit is called a Site Certification Agreement or CSA and Horse Heaven just got one, with a big push from the Governor.

The astounding point is that there was no discussion, or even recognition, of the fire threat posed by this enormous lithium battery facility. The CSA has numerous requirements for lots of issues, big and small, right down to the facility having water to keep the road dust down. There is nothing on having a million or so gallons to prevent a catastrophic conflagration, nor on the environmental impact of such.

This is wildfire country so there should be liability insurance for harm to others from a fire. Other potential sources of harm are huge amounts of contaminated water runoff as well as toxic air emissions, especially if the whole facility burns.

This neglect no doubt flows from the Horse Heaven Application. The App is over 500 pages long and I can find just one sentence about battery fires. Buried in a long paragraph on PDF page 366 we read "Lithium-ion battery storage may pose a risk of fire and explosion due to the tendency for lithium-ion batteries to overheat."

This single sentence does not even refer to the project. For that matter there are only a few paragraphs about the battery facility in the entire App, mostly just describing it in general terms. There is nothing about the number of giant battery containers or that it is a huge project in its own right, posing an equally huge fire threat. In fact the App says they might double deck these container sized battery units which is absurd given the risk of setting off a chain reaction in the whole complex.

One can easily think from the Application that the batteries are of no significance and that appears to be exactly what has happened at the EFSEC.

This systematic neglect looks to be what is happening around the country. We desperately need a national code or standard covering this issue. The National Fire Protection Association says it is working on one, but it is up to the permitting authorities to make something happen.

The growing threat of grid scale battery fires is a very serious issue calling for equally serious action."

See https://www.cfact.org/2024/10/01/grid-scale-battery-fires-loom-large/

To continue, Horse Heaven is in dry, wildfire prone country and I have read that 100,000 people live within 5 or 6 miles of it. Clearly there is a real threat of enormous property damage and even loss of life if a battery fire gets out of control. This potential impact needs to be included in the PEIS assessment as it is likely to be true for many battery complexes throughout much of the State. Most of the State is dry.

I therefore recommend as follows:

Washington State needs to quickly promulgate and enforce fire safety regulations specifically for grid scale battery complexes. These should cover emergency planning and preparedness, where the latter includes both facility design and material readiness. Design includes container spacing and other necessary engineering features. The material readiness includes having a supply and delivery system for water and/or fire suppressants as needed to prevent a chain reaction of container fires.

In closing I disagree with the PEIS statements that grid scale battery fires are "very rare" as this makes it sound like the threat is not serious which it surely is. There are relatively few battery complexes in America yet there have been a significant number of fires. See for example https://www.firetrace.com/fire-protection-blog/us-has-suffered-second-highest-number-of-major-storage-fires

A large number of grid scale battery complexes are presently proposed for Washington State and the scale of the threat is correspondingly enormous.

I am happy to discuss any of the above issues or to provide additional information.

Respectfully submitted,

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