

SMART Regulations Stakeholder Feedback 2024

Submitted by:

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My recommendations regarding revising the SMART Program include the following:

The EPA considers solar panels to be hazardous waste and may include Gen X chemicals (including PFAS) which have been found in the film covering the panels. According to cancer biologist David H. Nguyen, PhD, toxic chemicals in solar panels may include cadmium telluride, copper indium selenide, cadmium gallium (di)selenide, copper indium gallium (di)selenide, hexafluoroethane, lead, and polyvinyl fluoride. Silicon tetrachloride, a byproduct of producing crystalline silicon, is also highly toxic.

Lithium-ion batteries, developed for products like smart phones, are being used in grid scale applications without proper long-term study for this application, for necessary safety requirements or prohibitions. When these systems enter a state of thermal runaway, water in huge amounts, is considered the best response to try to prevent spread of the event. Unfortunately, applying water can create hydrofluoric acid which is very damaging to living organisms beyond the risk of fire, explosion and other toxic materials impacting the environment. Only 10 pounds of hydrofluoric acid or 5 to 10 pounds of lithium exposed to the area will constitute a hazardous waste site under MCP regulations.

1. Because of the risk to the health, safety and welfare of the public from large scale solar systems and battery energy storage systems, these systems should be prohibited in high density areas like hospitals and schools where evacuation may be difficult, food production areas like farms, and resource areas like ACECs (areas of critical environmental concern), aquifers, well protection zones and floodplains.
2. Dual use solar projects with non-food related agricultural uses should first provide long term studies that prove that the solar use will not interfere with the agricultural use or negatively impact the agricultural use or site or cause any negative offsite impacts. Large scale solar and battery energy storage systems should be prohibited from all food related agricultural uses due to the risk of negative impact to food production.
3. Large scale battery energy storage systems should be limited to industrial areas as the risk of a thermal runaway event cannot be eliminated, no matter what mitigation tactics are used.
4. The SMART program should require applicants to have liability insurance amounts based on the project size, the BESS Adder if any, and potential on-site and off-site negative impacts.