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Via Email: <u>ldarling@younsommer.com</u>

Laura Bomyea Darling, Esq. Young/Sommer LLC Executive Woods Five Palisades Drive Albany, NY 12205

RE: Town of Canton Proposed EDF Battery Storage Facility Concerns

Dear Laura:

As you are likely aware, the news of a major fire at a solar project battery storage facility in Chaumont, New York has raised concerns over the planned battery storage facility associated with EDF's Rich Road Solar Energy Center, LLC ("EDF" or "RREC") project in the Town of Canton. We write today on behalf of the Canton Town Board ("Town") and the citizens they represent to express these concerns to your client EDF concerning the RREC's planned facility.

Based upon published reports, the fire in Chaumont involved a battery storage facility associated with a Major Solar facility. It is not clear to us precisely how analogous the Chaumont battery storage facility is to the planned battery storage facility for the RREC. However, we are aware of an EDF major solar project located in Warwick, New York that suffered a fire in June 2013. Published reports indicate that EDF's project in Warwick used "Powin Centipede" battery technology.

EDF's siting application to the Office of Renewable Energy Siting ("ORES") for the RREC at Appendix 5-A and 5-B describes a modular Lithium Iron Phosphate ("LiFePo4") battery chemistry in modular units manufactured by Powin identified as Stack "750E" and "Centipede." Drawing 801 in Appendix 5-A of the RREC permit application depicts 162 Powin battery units arrayed in nine rows or centipedes. Are the proposed battery storage units proposed for the RREC made by the same EDF vendor as the battery storage units EDF installed in Warwick and are both based on the same LiFePo4 chemistry?

Town Board members have questions and have been asked many more questions by constituents concerning the potential for battery fires at the RREC and whether, like Chaumont, a

fire associated with the EDF facility would cause similar impacts to Town residents including smoke likely containing compounds that are hazardous to human health when ingested, fires that once ignited cannot be quenched with normal fire fighting technologies available to Canton, and why it is necessary for EDF to bring a technology with a very high potential to create a public nuisance to Canton.

When queried about concerns with the RREC battery storage facility Canton's Fire Department Chief stated:

Battery storage systems are like large versions of electric vehicle batteries. They require large amounts of water to aid in extinguishment. Water is not directed into the battery but used to cool the housing to control the runaway reaction that is occurring inside. We have similar concerns with fires in electric vehicles, which can also burn for days. Currently, our closest sustainable water supply to the Rich Road battery system is a fire hydrant at Remington Avenue. My primary concern would be how they plan to provide adequate water in the event of a fire. Secondary is monitoring the air downwind.

Remington Avenue is approximately three (3) miles from the RREC. No fire hydrants are located within a reasonable distance. Water to fight the Rich Road fire once it starts must be trucked. The Fire Chief's description of a "runaway reaction" seems to be consistent with the fires described in both Warwick and Chaumont. Importantly, the location of the proposed RREC battery facility is not served with water, that is, at least arguably, necessary to mitigate the damage to human health and the environment that will be caused by such a runaway reaction. We suggest that unless the RREC battery installation is located within an area currently served or planned to be served, with a municipal water system with adequate supply to properly respond to a major fire at the site, it should not be permitted.

The Fire Chief as well as many residents raise concerns about the impact of smoke emitted by a battery fire. A less than exhaustive literature search will disclose that lithium ion battery fires are known to emit gases containing hydrogen fluoride and phosphoryl fluoride as well as intermediate chemical compounds, carbon dioxide and particulates. Exposure to any of these chemical compounds in significant doses would be antithetical to the health of the exposed individuals and are a significant concern.

We understand that LiFePo4 chemistry is a newer formulation that is different than the lithium ion technology that is known to produce hydrogen fluoride, phosphoryl fluoride and other toxic off gases. However, exactly how different the impacts of the smoke from a LiFePo4 fire are from a lithium ion battery fire remains to be seen. Any comparative studies or literature that would inform this discussion would be appreciated.

The last broad category of concerns that we have heard is that large quantities of water are inevitably poured on a battery fire. As noted by the Fire Chief above, water is used to cool the fire not to extinguish it. The fires reported in the press have burned for days necessitating large volumes of fire water to be poured onto the burning structure. What is the environmental fate of this large quantity of fire water and what pollution does

it carry into the local streams, rivers and aquifers? What engineering controls are in place to address this concern?

Those of us that follow developments in the renewable energy field see new and better technologies in the battery storage space coming to market at a remarkable pace. At this point in the development curve for large-scale battery technology it would be wise to wait until the unacceptable risks of the proposed design are mitigated by new and safer technology and by all accounts the wait should not be too long.

Finally, we offer these comments in the spirit of educating and informing EDF, as the designer of this project, that the Powin Centipede battery technology is not safe. The commonality between Warwick and now Chaumont is that once ignited the batteries will burn until the fuel is gone exposing our citizens to toxic smoke, confounding and endangering our first responders and polluting our water. The anxiety caused by knowing this nuisance will exist for all Town residents is already causing irreparable harm to the collective peace of mind of the entire community. No amount of engineering controls will make 162 of these units safe. An unsafe installation of any scale is not acceptable to our community.

Thank you.

Sincerely,

Buchan & Sutter, P.C.

William M. Buchan

William M. Buchan, Esq.

cc: Canton Town Board ORES