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Hon. Kathleen H. Burgess, Secretary
New York State Public Service Commission
Empire State Plaza, Agency Building 3
Albany, NY 12223-1350
Via Electronic Filing to *secretary@dps.ny.gov.*

Re: Case 20-F-0043 Certificate of Environmental Compatibility and Public Need, pursuant to Article 10 of the Public Service Law for construction and operation of a solar generating facility located in the Town of Conquest, Cayuga County.

Dear Secretary Burgess:

I am writing to recommend that the acceptability of this application be based on New York State Department of Agriculture and Markets (Ag & Market/Department) policies on solar energy project or delayed until the State develops utility-scale solar development guidelines for agricultural protection and land use consistent with New York's 10 GW Distributed Solar Roadmap: Policy Options for Continued Growth in Distributed Solar, the recommendations in the American Farmland Trust Smart Solar Siting on Farmland: Achieving Climate Goals While Strengthening the Future for Farming in New York document, and the New York State Energy Research & Development Authority Agricultural Technical Working Group.

Ag & Market Solar Energy Project Policies

On March 10, 2022 Michael Saviola submitted prepared testimony on the Garnet Energy Center application that included a summary of the Ag & Markets solar energy siting policies. His responsibility for Ag & Markets was "to determine if the Project as proposed follows the Department's Guidelines for Agricultural Mitigation for Solar Energy Projects." He notes that the Department of Ag and Markets does not have an opinion on the need for utility-scale solar generation but (Page 6, line 3):

> The Department discourages the conversion of farmland to a non-agricultural use. This effort is in accordance with Section 4 of Article 14 of the 2018 New York State Constitution, which provides for the conservation of agricultural lands, as well as NYS Agriculture and Markets Law (AML), Article 25-AA, §300, which more specifically states:
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> > *"It is, therefore, the declared policy of the state to conserve, protect and encourage the development and improvement of its agricultural land for production of food and other agricultural products. It is also the declared policy*

> *of the state to conserve and protect agricultural lands as valued natural and ecological resources which provide needed open spaces for clean air sheds, as well as for aesthetic purposes.".*

After acknowledging that the Department is aware of the Climate Act and supports the general initiative, the testimony goes on to state that these projects are permanent installations (Page 6, line 20):

> The Department will continue to discourage the conversion of agriculture land to a non-agricultural use. Prior to large-scale solar development, the Department has not been associated with PSL 22 Article 10 cases that constitute large, long-term conversion of agricultural lands to non-agricultural uses. Commercial wind generating facilities generally allow for farming activity to continue once the project is in-service. In comparison, the solar industry arguably eliminates the ability to perform normal viable agricultural operations within, and potentially immediately surrounding the facility. This constitutes a long-term conversion to a non-agricultural use. Due to increasing NYS energy goals encouraging renewable energy development, we see no reason facilities will not be upgraded and re-leased to maintain the growing or static renewable energy demand, in this case, 35 years from energization. The Department further asserts that as long as NYS incentives for the development of renewable energy exists, the complete decommissioning of solar electric energy generation, and full resumption to agricultural use is not likely to occur.

In response to the question "What Department policies are subject to the proceeding", he responded (Line 17, page 7):

> As previously mentioned, The Department discourages the conversion of farmland to a non-agricultural use. However, to support the New York State's CLCPA initiatives, the Department has developed a siting policy supportive of solar development efforts on agricultural lands **if** (*his emphasis added*) the proposed projects are properly sited on lands other than the State's most productive farmland. The Department's goal is for projects to limit the conversion of agricultural areas within the Project Areas, to no more than 10% of soils classified by the Department's NYS Agricultural Land Classification mineral soil groups 1-4, generally Prime Farmland soils, which represent the State's most productive farmland. Soils classified with the soil groups 5-10 are identified as having soil limitations. The only responsible position the Department can take to stay true to the 7 AML Article 25-AA §300 and to support the NYS CLCPA renewable energy initiative is to ensure the preservation of agricultural areas involving soils classified as soil groups 1-9 for the production for food and fiber, as well as not object to proposed development on lesser productive soils, i.e. agriculture lands comprised on classified mineral soil groups 5-10. Additionally, the Department requires the Applicant to follow Department Guidelines for constructing solar facilities in agricultural lands. Draft Certificate Condition 47 and 95 identifies the Applicant's

agreement to comply with Department's Guidelines entitled Solar Energy Projects - Construction Mitigation for Agricultural Lands (Revision 10/18/2019), specifying construction mitigation techniques intended to protect and restore agricultural soil resources. Furthermore, the Applicant has agreed to consult with the Department for any potential deviation from the Guidelines to develop applicable construction and restoration alternatives.

In response to the question: What are the primary agricultural impacts associated with the construction of a commercial solar energy generation facility on agricultural lands the testimony states: (Line 16, page 8)

> The construction of a commercial solar energy generation facility within agricultural land constitutes a long-term impact and permanent conversion of farmland to an industrial (non-agricultural) use. The development of solar arrays and ancillary facilities (including panels, panel racking, transformer/inverter equipment pads, access roads, security fencing, substations, energy storage options, operation and maintenance facilities, planted visual screening areas, etc.) makes it infeasible to continue farming on viable agricultural land within the Project area. Furthermore, the location of project-related infrastructure- panel spacing and alignment in agricultural fields create obstacles that the farm operator will have to avoid during numerous types of agricultural equipment operations; including, but not limited to, cultivation, seeding, nutrient recycling, weed management, harvest, etc. The difficultly created by the obstacles forces the farm operator to abandon use of the field.
>
> Impacts to agricultural lands remaining outside of the security fencing also has a high likelihood to become abandoned and/or orphaned. More specifically, these generally narrow areas outside the fenced facility are created by development limitations (municipal setbacks, buffers, etc.) and limit the conduct of mechanized farming. The scenarios cited above create narrow strips of land that although may be available to some agricultural producers are unattractive for most commercial farm operators, as they are inefficient to harvest crops due to the limitations of acreage and maneuverability for modern mechanized farming equipment. These "indirect" impacts often result in the loss of additional farmland which, in turn, result in a decrease in mechanized farming efficiency leading to a reduction in the production of crops, livestock and livestock products necessary for food production and security.

On page 10 line 8, the testimony asks the question How does the siting of commercial solar project-related infrastructure impact agricultural operations?

> There are several potential impacts. Farms demand a certain acreage to meet their business, long-term staffing, and environmental objectives and to remain viable. If leased land is abruptly lost to another use, such as a solar installation, the farm will grow and market less produce, grains, forages, and livestock products; may have to downsize

> and lay-off employees; and could be challenged to have adequate acreage for proper manure nutrient recycling. Such changes may force the farm to close. As in other sectors, farmers seek improvements to management and efficiency to remain competitive and viable. Larger, more efficient tillage, planting, crop management, and harvesting equipment is one example of how farmers have adapted to remain viable and more productive. Often, this equipment can include two pieces of harvesting or tillage equipment pulled by a single tractor. As the size of the farming equipment has increased over the years, the turning radius for the equipment has also increased. The location of access roads and other project-related infrastructure in an agricultural field creates an obstacle which the farm operator has to avoid during field planting and harvesting operations. Placement of project-related infrastructure in agricultural fields can result in a loss of productive acreage as well as a decrease in field operation efficiency or viability with the larger planting and harvesting equipment because of the increased turning radii required. Depending on the location of project-related infrastructure, primarily solar arrays and access roads, the loss of acreage available to farming, and the loss of farming efficiency or farm viability can be significant and, in some cases, devastating to farms and for food production.

I believe that these policies are the appropriate measure to determine the approvability of utility-scale solar projects such as Garnet Energy Center. The Siting Board should ensure that this application is consistent with these policies in order to protect New York's farming communities.

Responsible Solar Energy Siting

The reason that the State is developing solar energy resources is to comply with the Climate Leadership and Community Protection Act (CLCPA). The CLCPA has specific mandates for solar capacity and zero-emissions electric generation. At this time there are no specific siting requirements for utility-scale solar projects that protect farming communities and restrict conversion of prime farmland in agricultural use to solar panels. In my opinion, however, recent developments point to the obvious conclusion that those requirements are inevitable.

For example, Saviola's testimony describes a document on responsible siting of utility-scale solar development:

> The American Farmland Trust published a study in February 2022 on smart solar siting on farmland in New York State. This study was completed with input from, and collaboration with, advisory members from government and non-governmental organizations, solar industry advocates, not-for profit land trusts, solar developers, and academia. The study was conducted to develop smart solar strategies to meet climate goals while supporting its agricultural economy and future food security. The report reveals trends that show that good quality farmland has been a first-choice site for solar development. As in with this proceeding here. The lowest hanging fruit. The study

strongly recommends against siting solar infrastructure on prime farmland or farmlands comprised of Mineral Soil Groups 1-4 and to site infrastructure on marginal lands. The Study also indicates that farmers are interested in agrivotalics. The Study concludes by stating that the choices we make today about where and how solar projects, particularly large-scale facilities, are sited on active farmland will make a difference to rural economies and influence our ability to farm and grow food in New York to feed ourselves and reap environmental benefits now and into the future.

In addition to this testimony there has been progress on other initiatives for responsible solar siting that should be considered in the Garnet permit proceeding. The New York's 10 GW Distributed Solar Roadmap: Policy Options for Continued Growth in Distributed Solar document includes a section on Agricultural Protection and Land Use (Section III.a.4):

Farmland protection and the maintenance of a vibrant agricultural economy are important State policy goals. New York State recognizes the importance of collaboration between the agriculture and clean energy sectors as a critical part of the State's overall decarbonization strategy. NYSERDA works in close coordination with the Department of Agriculture and Markets (NYSAGM) and other stakeholders to responsibly support the development of renewable energy projects. In the 2019 NY-Sun Expansion Petition, NYSERDA described the interaction of distributed solar with agriculture in New York:

> "The majority of projects in [the Upstate C/I] market sector are expected to be ground-mounted arrays ranging between 5 MW and 7.5 MW in size, which occupy approximately 20 – 25 acres of land, typically on rural properties that are leased or sold to the solar developer by the landowner. Notably, this includes properties that are currently used, or could potentially be used for, agricultural production. While NYSERDA expects that the total agricultural acreage utilized for distributed solar projects will remain modest as compared to total farmland in New York State, through its implementation efforts, NYSERDA will act to ensure that negative impacts to farmland and the State's agricultural economy are avoided and minimized, and where they are unavoidable, mitigated. NYSERDA, working with partner agencies and stakeholders, has already taken multiple actions along these lines and will pursue additional actions under an expanded NY-Sun program." (This section is from the NY-Sun Petition, p. 21.)

In the subsequent two years, NYSERDA and NYSAGM have continued to work in partnership to put in place requirements for solar projects to minimize impact to farming and agricultural soils. (These requirements include, inter alia: complying with New York State Agriculture and Markets Law; submitting appropriate notices to NYSAGM and local Agricultural and Farmland Protection boards; executing a copy of the Guidelines for Solar Energy Projects – Construction Mitigation for Agricultural Lands document published by NYSAGM; and making a Mitigation Fund payment or committing

to other mitigation measures where impacted agricultural soils exceed 30 acres.) These requirements have already demonstrated their effectiveness: In 2021 to date, all 50 distributed solar projects subject to these requirements, totaling 1,037 acres of affected area, have committed to avoiding and minimizing impacts to prime soils in consideration of the solar layout. For 48 of these projects, all unaffected portions of the farms hosting the solar projects, a total of 3,385 acres, will remain in agricultural production. Many of the farmers hosting projects on a portion of their land report that the steady lease revenue from the solar projects has enabled them to continue farming on most of their property despite challenging agricultural economic pressures.

Finally, the New York State Energy Research & Development Authority Agricultural Technical Working Group is working on a "Smart Solar Siting" scorecard to encourage responsible siting of renewables on agricultural land. The scorecard lists five area to avoid:

- Avoid prime agricultural soils
- Farmland in active cultivation
- Forested land
- Wetlands
- Grass lands

It is in the best interests of New York State to institute policies that mandate responsible solar development especially for large utility-scale solar projects. Using the Draft Scoping Plan solar projections and land use estimates for solar projects in the Article Ten queue in 2020 suggest that the smallest Scoping Plan scenario solar equipment area covered will be 353 square miles. Moreover, there are CLCPA considerations. The CLCPA has a "net-zero" target by 2050 that requires 15% sequestration. One of the strategies to meet that target is soil carbon management. Taking productive farmland out of production hinders that goal.

Garnet Energy Center

The Garnet Energy Center is a proposed 200-megawatt solar project with 20 megawatts of energy storage located in the town of Conquest in Cayuga County, N.Y. NextEra Energy Resources is developing this project. According to the July 2021 Proposed Array Layout the project area is 2,288 acres and the facility area (area within in project fence line) is 1,054 acres. The fenced area encloses the solar arrays, inverters, energy storage modules and the project substation.

On Page 12, line 18 Saviola's testimony addresses the question "Does the facility layout follow the Department's Solar Guidelines and does it align with the Department's siting policy?"

> In general, access roads should follow field edges and the solar arrays should not be sited in a manner in which agricultural areas become orphaned as described in my testimony above. Additionally, the Department finds the Applications proposed siting is

not consistent with the Department's siting policy because it will occur on almost 30% of active farmland classified as Prime Farmland (Generally, Mineral Soil Groups 1-4) within the proposed project. The Application update states that the project will occupy nearly 1,000 acres of land to generate up to 200 MW of electricity, however, areas located outside of fenced areas will likely become fallow or orphaned as a result of screening requirements and setbacks. This will eliminate crop production on nearly 1,000 acres of agricultural lands for a minimum of 30 years-worth of crop yields from some of the most productive farmland soils in the State. While the Applicant describes the impact to agricultural land and farming, in general, as temporary, a 30-year loss of the production of crops, livestock and livestock products constitutes a long-term conversion to a nonagricultural use and a long-term loss of food production. Although a decommissioning plan has been prepared, there is virtually no reasonable assurance that the project will be decommissioned and that the full resumption back to agricultural use will be reestablished.

As if this is not enough the testimony goes on to respond negatively to NextEra's response to questions. For example, "True long-term impacts include the approximate 30 plus year loss in the production of crops, livestock and livestock products as a result of project-related components being constructed inside the fence. Nearly 1,000 acres of farmland will be taken out of production." (Page 14 line 5). On Page 15, line 18 agricultural co-utilization is discussed: "The Applicant indicates that they have not considered incorporating agricultural co-utilization as part of the Project. They indicate that there is not sufficient space for co-utilization." And goes on to say he does not agree with this response: "There is ample space inside the fence for agricultural activities such as sheep grazing, apiary incorporation and pollinator species, and small-scale grass hay production, nor have they demonstrated any reduced impacts to agriculture from the increased density of the panels. The Applicant should work with hosting farmers to explore dual-use, or agrivotalic projects." Similarly, the response to questions about subsurface drainage systems was eviscerated.

On page 19, line 18 comes this: "It is the Department's opinion that the facility will result in or contribute to a significant and adverse disproportionate agricultural impact upon the local farming community. They have not avoided, offset or minimized agricultural impacts to the maximum extent practicable using verifiable measures".

Conclusion

The American Farmland Trust report, the state's policies for distributed solar, the Agricultural Technical Working Group analyses, and the Ag & Markets policies will eventually be used to form the basis of a state-wide policy for responsible siting of utility-scale solar development. This conclusion is supported by the fact that measures are in place now for distributed solar projects. In the meantime, it is inappropriate to allow projects like the Garnet project to proceed without adherence to at least complying to existing Ag & Markets policies.

This Siting Board decision will be a litmus test to see if the State is going to protect farming communities. I believe that the testimony clearly demonstrates that the proposed project is inappropriate because "the facility will result in or contribute to a significant and adverse disproportionate agricultural impact upon the local farming community". Ag and Markets testimony for the Trelina project was similarly negative but that got approved. At a minimum the project approval should be delayed until guidelines for responsible utility-scale solar development are available. If the Siting Board ignores the Ag and Markets testimony and the clear need to wait for guidelines then it will be clear that the State is not going to protect farming communities.

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