WARREN COUNTY
DEPARTMENT OF LAND PRESERVATION
500 MT. PISGAH AVE.
P.O. Box 179
OXFORD, NEW JERSEY 07863

COREY J. TIERNEY
DIRECTOR

Telephone: (908) 453-3252
Fax: (908) 453-3150
ctierney@co.warren.nj.us

May 26, 2021

Via Email

State of New Jersey
Board of Public Utilities
44 South Clinton Avenue, 9th Floor
Post Office Box 350
Trenton, New Jersey 08625-035

Re: Comments regarding Docket No. QO20020184, Solar Successor Program
By Chairman Joel Schentzer on Behalf of the Warren County Agriculture Development Board

Hon. Board of Public Utility Commissioners,

On behalf of the Warren County Agriculture Development Board (WCADB), please accept this letter expressing its concerns about the overall impacts of large scale solar development on farmland. Farmland should be protected from incentivized solar development because it is commercially productive, beneficial to communities, and may prove helpful in sequestering carbon and other emissions. Incentivizing such development on *any* productive farmland runs contrary to State, County, and Municipal Plans that identify these same lands as important to the State's agriculture. It would also undermine the taxpayers' substantial investment in farmland preservation by increasing land costs and thwarting the program's goals. Moreover, incentivizing the conversion of farmland to solar development will exacerbate climate change stressors already impacting local agriculture.

The WCADB strongly cautions against relying on the promise of unproven dual-use agriculture in formulating state energy and farmland preservation policies. The proposed solar siting criteria should also exclude more farmland from incentivized solar development because soils other than those classified as prime and of statewide importance have historically been productive and are still an important, integrated component of regional farming economies. Prohibiting solar development on certain farms containing prime soils or in certain areas like the Highlands Preservation Area will only increase solar development pressure on unprotected farms in other areas. This has the potential to destroy rural farming communities in Warren County, undermining decades of investments in farmland preservation and our ongoing struggles to maintain agriculture as a way of life in New Jersey.

Consequently, incentivized solar development should not be sited on any farmland that is: (i) growing and producing agricultural products, (ii) benefitting from farmland assessment under the New Jersey Farmland Assessment Act, (iii) located in a County's Agriculture Development Area (ADA) and targeted for farmland preservation under the New Jersey Agriculture Retention and Development Act, (iv) located in the Highlands Regional Master Plan's Agriculture Resource Area under the Highlands Water Protection and Planning Act, or (v) located in the 2001 New Jersey State Development and Redevelopment Plan's Rural Planning Area (PA4), Rural/Environmentally Sensitive Planning Area (PA4B), or Environmentally Sensitive Planning Area (PA5). If a waiver process is allowed enabling solar development to any extent within the ADA, the WCADB should have the power and ability to review such solar development proposals.

Farmland Should Be Protected From Incentivized Solar Development Because It Is Commercially Productive, Beneficial To Communities, And May Potentially Help Sequester Carbon

Known as "The Garden State," food and agriculture are New Jersey's 3rd largest industry, behind pharmaceuticals and tourism, bringing in billions of dollars in revenue to the state. In 2017, the state's more than 9,000 farms generated cash receipts of more than $1 billion. Additionally, beyond its commercial productivity, agriculture also provides numerous environmental, social, and economic benefits. As the New Jersey Chapter of the American Planning Association explains:

> "Productive farmland provides food and fiber, habitat, groundwater recharge, and open space. It adds to community character, provides access to locally produced fresh food and agricultural products, and allows us to connect with our agricultural heritage. Agricultural land within a municipality also increases property values and, as farms demand less in public services, helps keep municipal taxes down."

While agriculture does account for a relatively small percentage of greenhouse gas emissions when compared with other economic sectors like transportation, electricity, and industry, there is reason to believe that farmers could help the State achieve its climate goals by adopting practices to offset greenhouse gas emissions, such as trapping carbon in the soil through increased conservation cover and reduced tillage. More information is needed about the sequestration rates for cropland and the sequestration potential if preserved farmland is managed in ways to increase carbon sequestration, but developing over farmland with solar may severely limit, if not altogether preclude, the lands ability to be managed for that purpose.

According to the 2020 New Jersey Scientific Report on Climate Change:

> "The Intergovernmental Panel on Climate Change (IPCC) defines a *sink* as any process, activity, or mechanism that removes a greenhouse gas, an aerosol, or a precursor of a greenhouse gas or aerosol from the atmosphere (IPCC 2014). *Terrestrial carbon sequestration* is a process that involves the capture of CO_2 from the air by plants through photosynthesis, and storage of that carbon in woody biomass and in plant-derived soil organic carbon (United States Department of Energy and the National Energy Technology 2010). New Jersey has large areas of permanently preserved lands, which already serve as carbon sinks (NJ Climate Adaptation Alliance 2014, Lathrop et al. 2016, Crocker et al. 2017) and include state parks, forests, wildlife management areas, and natural areas; *preserved farmland*; county and municipal parks; nongovernmental

organization nature preserves; and federal wildlife refuges, parks, and military installations." (Pg. 111, emphasis added)

Incentivizing Solar Development On Any Productive Farmland Runs Contrary To State, County And Municipal Plans That Identify This Same Farmland As Important to Agriculture

Despite its many benefits, in a state with about 4.7 million total acres of land, productive farmland now covers only about 734,000 acres - or about 15% of the Garden State. Agricultural land is among the most susceptible to development, with New Jersey losing more than 300,000 acres of farms over the last 40 years. Consequently, working in partnership with many of its localities, the State has taken aggressive steps to maintain farming through special land assessment, preservation programs, and comprehensive planning. It would seem self-defeating that the State of New Jersey has undertaken such measures for decades, only to now completely reverse course under this proposal by incentivizing solar development on these very same critically important and endangered lands.

For instance, various planning documents and legislation indicates that incentivized solar development is inappropriate on any farmland that is (i) growing and producing agricultural products, (ii) benefitting from farmland assessment under the New Jersey Farmland Assessment Act, (iii) located in a County's ADA and targeted for farmland preservation under the New Jersey Agriculture Retention and Development Act, (iv) located in the Highlands Regional Master Plan's Agriculture Resource Area under the Highlands Water Protection and Planning Act, or (v) located in the 2001 New Jersey State Development and Redevelopment Plan's Rural Planning Area (PA4), Rural/Environmentally Sensitive Planning Area (PA4B), or Environmentally Sensitive Planning Area (PA5). Doing so is contrary to State policy and generally accepted Smart Growth planning principles.

With regard to the Rural Planning Area (PA4), for example, the 2001 New Jersey State Development and Redevelopment Plan sates:

"In the major farming regions of New Jersey, adequate water resources and large, contiguous tracts of land with minimal land-use conflicts are essential to sustaining successful farming operations and farmland productivity... Prudent land development practices are required to protect these resources and retain large contiguous areas of agricultural land. If a viable agricultural industry is to be sustained in the future, the conversion of some of these lands to non-farm uses must be sensitive to the area's predominant rural character and agricultural land base. Throughout New Jersey, some Rural Planning Areas are subject to greater development pressure than other areas. Without a greater attention to maintaining and enhancing our rural areas, these economic activities are at risk. (Pg. 206, emphasis added)

The 2008 Highlands Regional Master Plan also states:

"Agriculture, if it is to remain viable in the New Jersey Highlands, requires a sustainable land base... Agricultural land in the Highlands Region is an important resource that provides economic benefits to New Jersey in the form of agricultural production, agri-tourism, provides a local food source to area residents using less energy than would be required to import produce from other regions, and helps maintain the Highlands rural character. In order to preserve and sustain agricultural resources and enhance the viability of the agricultural industry, preservation of farms throughout the Highlands Region must be encouraged..." (Pg. 281, emphasis added)

Incentivizing Solar Development On Any Productive Farmland Undermines The Taxpayers' Substantial Investments In Farmland Preservation By Increasing Land Costs And Thwarting Program Goals

The WCADB is concerned about large scale solar development on farmland and the impacts this will have on the farmland preservation program. It has already had several farmers inquire about withdrawing their farmland preservation applications after being contacted by solar development companies and at least one landowner with a large farm, in fact, withdraw its application and is selling to a solar developer. Currently in Warren County, land preservation easements can range from $3,000 to $10,000 per acre, depending on a particular site's development potential, with the countywide average coming in around $4,500 per acre. According to some farmers, solar developers are offering them $1,000 to $4,000 per acre, *per year* for farmland leases up to a 30 year period. If Warren County offered $5,000 per acre for a 100 acre farm, that would be half a million dollars for a permanent farmland preservation easement. A solar developer at $2,000 per acre per year is offering $6,000,000 for a 30 year lease.

While this is a welcome windfall to many farmers working hard to make ends meet, normal market forces are not driving solar developers to pay these substantial amounts for farmland. Rather, such solar development is being incentivized through Federal and State government subsidies. In turn, the farmland preservation program, to remain viable, will need to pay more to preserve farms as an increasing amount of them sell at higher prices to subsidized solar developers. All of these inflated costs will ultimately be borne by the taxpayers.

As more productive farmland is converted to solar and the costs of preserving what remains is artificially driven up as a result, it will be increasingly difficult for the State, Counties, and Municipalities to reach their farmland preservation goals. According to an analysis by the State Agriculture Development Committee (SADC), in order to meet the State's solar goals set forth in the 2019 Energy Master Plan, 70,000 acres of farmland will need to be converted to solar by 2030 and 145,000 acres by 2050. The remaining farmland in New Jersey is very limited. The SADC analysis shows that the majority of unpreserved farmland in the Agricultural Development Areas would need to be converted to solar development. After 30 years, it is highly doubtful that these properties will revert back to farmland as some may claim. Ultimately then, that is 145,000 acres of farmland that will be permanently lost to development.

In the Agriculture Retention and Development Act, the New Jersey Legislature found and declared that:

> "The strengthening of the agricultural industry and the preservation of farmland are important to the present and future economy of the State and the welfare of the citizens of the State, and that the Legislature and the people have demonstrated recognition of this fact... *All State departments and agencies thereof should encourage the maintenance of agricultural production and a positive agricultural business climate*" (emphasis added)

Incentivizing Solar Development On Any Productive Farmland Will Exacerbate Climate Change Stressors Impacting Agriculture

The greater the diversity of farms and overall amount of farmland in New Jersey, the greater the State's resiliency will be in terms of local food production and agricultural productivity in the face of climate change. Converting farmland to solar development will not only reduce the total acreage being

farmed and the number of farming operations, but in doing so it will also put more pressure on the remaining farmers to produce more with less. This is exactly the opposite of what is needed. If crop yields decrease as a result of climate change, as predicted, then more acreage will be needed for farming in order to maintain the same level of overall agricultural productivity.

According to the 2020 New Jersey Scientific Report on Climate Change:

> "*As a result of climate change there is expected to be major impacts to the growth and productivity of New Jersey crops and livestock* due to an increase in dry spells, heat waves, and sustained droughts (NJ Climate Adaptation Alliance 2014). Crop yields are expected to decrease for a number of economically important crops by mid-century due to increasing summer temperatures and heat stress. Crops will be additionally stressed due to agricultural pests and weeds (such a kudzu) moving northward as winter temperatures continue to rise. All of this will increase pressure on farms..." (Pg. 83, emphasis added)

Figuratively speaking, by converting more and more farmland into solar, the state will be putting its agricultural eggs into fewer and fewer baskets. Given the risks associated with climate change, this does not appear to be a prudent or sustainable strategy.

Energy And Preservation Policies Should Not Rely On Unproven Dual-Use Agriculture ("Agrivoltaics")

The WCADB also has serious concerns about the viability of dual-use agriculture or "agrivoltaics". Farming amongst large scale solar development does not appear to be practical or effective. Solar development takes large amounts of land out of production. The remaining preserved land is then going to see increased wildlife pressure making farming and yields even more difficult. Large scale farming also cannot work under solar panels. A farmer cannot use a 15 foot wide disc, a 12 row corn planter, spray fruit trees, or spread manure between the solar panels for example. At this time, agrivoltaics is largely unproven and not practical with current farming practices and infrastructure. Researching dual-use is one thing, but State energy and farmland preservation policies should not rely on unproven practices.

The Proposed Solar Siting Criteria Should Exclude More Farmland From Incentivized Solar Development

The WCADB appreciates the Board of Public Utilities' (BPU) commitment to affordable renewable energy while also preserving and protecting open space and farmland. However, it is very concerned with this proposal to "limit development on prime agricultural soils and soils of statewide importance located in Agricultural Development Areas." These soils fall largely into the area of Northern Warren County and Sussex County. Though not classified as prime or of statewide importance, the soils in these areas are still sufficiently and reliably productive – as evidenced by the fact that they have been farmed for centuries – to warrant protection. That is why they are still identified in the counties' Agriculture Development Areas, farmland preservation plans and target lists, Highlands Master Plan, and State Development and Redevelopment Plan. Looking at only the soil classification ignores how these farms are integrated into local agricultural operations and the regional economies.

Incentivizing large scale solar development on <u>*any*</u> productive farmland will financially impair the farm sector economy and those businesses supporting the farm economy. The State is basically proposing to sacrifice one sector of the economy (agriculture) in favor of the other (solar). The businesses involved with crop production, fertilizer, farm equipment, and animals will have significantly less business requiring many to either close up or merge in order to survive. Since the majority of farmers rent significant portions

of land, they will be affected by not having the land base needed for their operations to survive. These farmers have already put out the investment in large equipment, new buildings, and grain storage. The farmers will either have to farm less land, struggling to make ends meet, or many may just end up going out of business.

Restricting solar development on certain "prime" and "important" farms will effectively divert an enormous amount of solar development pressure onto these otherwise productive and integrated farms. However, these areas of the state are diversified in many crops and home to mostly small family farms which make up the fabric of our communities. They should not be dismissed as unproductive and therefore suitable solar development, especially when there are other more suitable non-agricultural lands and energy alternatives. Rather than destroying thousands of acres of farmland, solar development should be sited on alternative sites such as landfills, old quarries/gravel pits, warehouse rooftops, parking lots, and small backyard solar/rooftop installations.

Similarly, restricting solar from the Highlands Preservation Area, but not from elsewhere in the Highlands Region (as is proposed for the Pinelands Region), will effectively divert solar development pressure to farms in the Highlands Planning Area and elsewhere in the county. But the majority of Warren County's productive farmland lay outside of the Preservation Area.

This proposal must also be looked at in conjunction with N.J.S.A. 40:55D-66.11, which provides "A renewable energy facility on a parcel or parcels of land comprising 20 or more contiguous acres that are owned by the same person or entity shall be a permitted use within every industrial district of a municipality", and N.J.S.A. 40:55D-4 which added "wind, solar or photovoltaic energy facility[ies] or structure[s]" to the definition of inherently beneficial use, making it easier for solar to obtain a use variance. As such, this proposal undermines many municipalities which have been working through their master plans and zoning ordinances to protect and preserve farmland. The majority of Northern Warren County has zoned their land to prevent large scale high-intensity developments from occurring. But state laws previously passed to facilitate solar development, in conjunction with this proposal incentivizing large scale solar development in these municipalities goes directly against their master plans, zoning, and what their communities want.

Therefore, as stated above, the WCADB strongly urges the BPU that incentivized solar development should not be sited on <u>*any*</u> farmland that is: (i) growing and producing agricultural products, (ii) benefitting from farmland assessment under the New Jersey Farmland Assessment Act, (iii) located in a County's Agriculture Development Area (ADA) and targeted for farmland preservation under the New Jersey Agriculture Retention and Development Act, (iv) located in the Highlands Regional Master Plan's Agriculture Resource Area under the Highlands Water Protection and Planning Act, or (v) located in the 2001 New Jersey State Development and Redevelopment Plan's Rural Planning Area (PA4), Rural/Environmentally Sensitive Planning Area (PA4B), or Environmentally Sensitive Planning Area (PA5). Furthermore, the WCADB is opposed to the waiver process whereby solar development can still occur on prime farmland. If a waiver process is allowed enabling solar development within an ADA to any extent, the WCADB should have the power and ability to review the solar development proposal.

The BPU should study the long term effects on the land loss that would result under this proposal and how that will affect farming, agricultural support industries, and the rural communities that do not want solar developments replacing farms in their communities. There are many alternatives to where solar can be sited which will not cause such detrimental impacts to the farming economy and rural

communities. This board is hereby opposed to the siting criteria included in this proposal due to the threats it poses to the farmland preservation programs and the viability of farming in the future. Warren County has invested significantly in preserving land but still has large amounts of unpreserved land at risk which will be lost to solar development if the BPU and State of New Jersey allow the siting criteria as proposed.

Respectfully,

Joel Schnetzer

Joel Schnetzer, Chairman

Warren County Agriculture Development Board

CT/JS