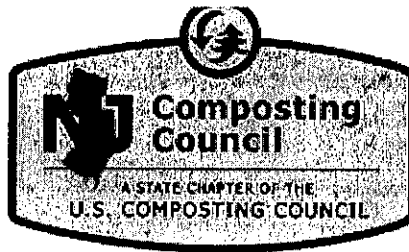


**APPENDIX**



May 16th, 2022  
Isaac Bearg  
Vice President  
New Jersey Composting Council

Senate Energy and Environmental Committee Testimony re: Climate Change

Thank you for your time today and the opportunity to testify on the important issue that is climate change. We're excited that Governor Murphy and the state legislature and especially this committee take the issue extremely seriously, have acted to address climate change and are prepared to continue to do so.

My name is Isaac Bearg. I'm Vice President and a founding member of the NJ Composting Council. We are a chapter of the national US Composting Council, and our mission is to promote compost manufacturing, compost utilization, and Organics Recycling to benefit our members, society, and the environment in the state of New Jersey

We requested to speak before this committee, because while we recognize that this committee understands the importance of organics recycling we feel it's often ignored in the broader discussion of climate change.

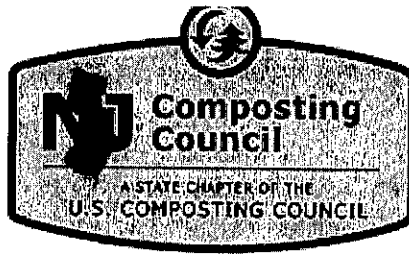
This of course is a mistake. The statistic we most often use when talking about organics recycling is that according to the EPA organics rotting in landfills account for the 3rd highest source of methane emissions, a greenhouse gas that while short lived is far more potent than carbon dioxide. As the 2021 UN Report details, we need to reduce our Methane Emissions by 45% by 2030 to have a fighting chance at staving off climate change. We cannot wait to act on our waste sector.

In NJ we have towns sending out our trash to Ohio increasing the emissions from transportation and disposal, while handing our problems to someone else. We have counties expanding their landfills to the tune of millions of dollars all the while missing out on the regenerative and climate-fighting opportunities of using compost for growing food, managing stormwater and reducing harmful pollution from runoff. Not to mention the opportunity to reduce dependency on petroleum based fertilizers and sequester carbon in the soil which is needed over and above stopping our emissions.

This committee helped pass the Food waste recycling law in 2018 and it was a great accomplishment but currently its effects are very limited for reasons I will discuss. We must do more.

Isaac Bearg \*Vice-President, NJ Composting Council \* Isaac@njcomposting.com \* 973-477-9724

/x



With that in mind we wanted to give a quick overview of the landscape of the organics recycling industry here in NJ and then discuss how this committee might be able to help.

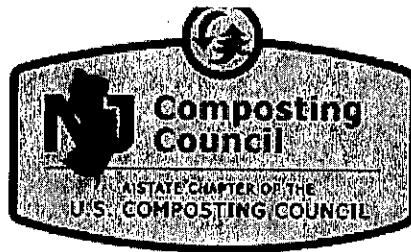
Currently in NJ the primary organic feedstock that is being recycled and in most cases composted is green waste primarily leaves and yard waste. The reason this is getting composted is primarily because the state has mandated it, but also, the rules allow for some reasonable exemptions to solid waste permitting that allow facilities of not an insignificant size to get up and running with minimal hurdles. There is also some biosolids composting happening at a well operated facility in Burlington, and some food waste in pockets but it is a fraction of the waste that could be diverted from landfills. Recently we have seen some AD facilities come on line that will accept food waste, these are the Trenton Renewables facility and the Rahway Valley Sewage Authority which is contracting with the CORE Waste Management Facility.. These are the only two permitted food waste facilities that trigger the food waste recycling law that the senate passed in 2018 and came into effect last year and they are both AD. While AD is a very good alternative we also need composting to realize the full climate value of organics recycling including soil rehabilitation, fertilizer replacement and beyond.

Part of the reason there are so few facilities is that permitting and compliance costs are very high, especially for new facilities and new entrants which across the nation is where we see growth from small to large over time. This is especially problematic for composting facilities (as opposed to AD) in light of smaller profit margins and fewer incentives.

Additionally, while the legislature has enacted the previously mentioned food waste recycling law, over 2 years later we do not have rules from our DEP and there is no enforcement program in place. There was also a food waste recycling market development council established in that bill and it has yet to meet, with limited reports that perhaps it is starting to appoint members.

So where do we go from here?

We think the quickest solutions are probably small scale food waste composting exemptions. A community garden should not need the same permit as a landfill. Today it does. Let's exempt community gardens and perhaps other small scale projects entirely from solid waste, air and stormwater permitting. These are small scale solutions but they can be acted on quickly. If we want to go a step further we can establish a system similar to what NY state and others have which provide blanket exemptions under a certain tonnage, then a registration which requests a little more information is required for a higher threshold and then a permit is needed only above a significant amount. Currently the permitting process here in NJ is too long, too expensive and too one size fits all. To the extent the legislature can act on permitting would move the entire industry forward.



We can also help by incentivizing composting. Currently there are no tax breaks or financial benefits for composting or for generators who divert towards organics recycling. Grants and loans do not exist or are at a minimum difficult to find for facilities who want to start composting or businesses who want to cover the cost of starting a transition program. In NY state you can get costs associated with both of these covered - their leadership has stated this is because they are treating organics reduction and diversion as a way to meet their climate change goals.

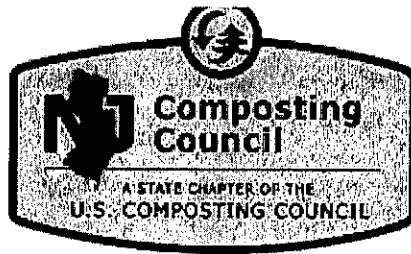
Another hurdle composters face and this is an issue you see in any environmentally friendly project is not in my backyard issues. No one wants a solar farm in their backyard, much less a facility that's handling wasted food. Yet when properly run, these facilities are not a nuisance for their neighbors. Unfortunately the neighbors are not convinced of that until the facility is operating without issue and this process then causes many delays and costs far too much for facilities trying to get permits. There currently exists a bill in the legislature requiring county plans to incorporate food waste reduction. We have colleagues in the state who would opt for a different tactic in addressing county planning but any such bill and action must include a plan for food waste recycling. This would encourage the counties whose sign off is currently needed for facilities to take action by either operate their own food waste recycling operations, work with others in public private partnerships or at a minimum provide a preference for these projects including, perhaps most importantly, over lack of support of the town from whom they do not need approval but will often withhold if they don't receive.

We ask for the legislature's help in ensuring that the Food Waste Recycling Market Development Council which you wisely called for is finally appointed. Our members have suggested that NJ could implement:

- a) Soil Organic Matter content standards for new developments to cut down on amount of storm water runoff and improve storm water quality
- b) For redevelopment in urbanized areas, adopt a model ordinance for localities to consider to require soil profile rebuilding to achieve similar storm water quantity/quality goals

While the particulars of these last two recommendations need not be acted on by the legislature these are activities the food waste recycling market development council should be considering as we speak but is not as it has not been appointed. We're happy to provide assistance and recommendations on appointments as we have done some time ago.

There are many ways the legislature can take it even to the next level. Looking at the new laws in California about climate change that requires a far broader class of organics recycling is an option. A small tax on trash generated that would support regenerative activities including composting is another opportunity.



Lastly, we can help raise awareness. This testimony is not insignificant; it was not until the end of my education in sustainability that I learned about the issues of food waste and composting and as I said to start raising awareness about this issue is critical. The first full week in may every year is International Compost Awareness Week. We asked the legislature to recognize it with an official resolution and were met with positive feedback but have not yet gotten that accomplished.

Thank you for your time and happy to answer any questions,

Testimony of Fred DeSanti Executive Director, New Jersey Solar Energy Coalition  
Before the Senate Energy and Environment Committee on S-431  
May 16 2022

Good morning, Chairman Smith and members of the committee, my name is Fred DeSanti I am the executive director of the New Jersey solar Energy Coalition and I'm very pleased to have an opportunity to present testimony this morning on the most important issue of utility interconnection.

Before I begin, I would like to complement the work of this committee in achieving the important milestone of carbon reduction as was discussed at the last meeting. Clearly, moving back to an environmental state where we are now having 20% lower carbon emissions than we did in 2006 is an important achievement and reflects well upon the policies that this committee has forged over the recent years.

S-431 represents another important step forward in creating actionable plans to meet the goals set forward by Governor Murphy and the Board of Public Utilities in their Energy Master Plan. The problems currently facing the solar industry are unprecedented and if we are to move forward, we need the kind of practical, clear thinking, approaches that exist in your proposed legislation.

I'd like to begin by calling your attention to circuit maps that I have circulated that were printed from the Internet a few days ago showing the current state of the distribution network as it relates to making further accommodations for solar energy in the Atlantic City Electric territory. As you can see from the legend in the upper right corner, all of the primary voltage distribution circuits shown in black have been close completely to any additional solar installations. That includes the 8 kW to 10 kW residential systems that are simply no longer available to any Atlantic City Electric customer located in these areas. I would add that that also means that these same customers are paying for a clean energy program in their utility rates in which they cannot participate. The legend further shows the areas marked in red which are closed to any solar application in excess of 250 kW. These circuits, therefore, are close to being closed completely, and at 250 kW can only serve some remaining residential customers or some very modestly sized retail or warehouse establishments. Circuits shown in red cannot host any community solar projects, any grid scale projects of any kind, and most commercial and industrial facilities including all office space in excess of 250 kW. Moving further down on the legend in yellow, the limits established of between 250 kW 500 kW would still preclude hosting community solar projects as well as most large retail stores and other commercial properties. Finally, the areas shown in blue and green would still be open to projects in excess of 1 MW which would begin to open up the service territory to community solar and other larger solar market segments. It's not a pretty picture if you are trying to sell solar projects into this franchise territory limited by 3MW per circuit along with other considerations.

On the second sheet, you can see the detail of these distribution circuits in the areas surrounding Vineland which, as you know, has its own municipal owned electric system and is not part of the

Atlantic City Electric territory. So, we are now left with a situation in Atlantic City Electric territory where a large segment of residential installations are being shut out creating a whole class of their customers who are paying for but cannot take part in the state's renewable solar energy program, and there is nothing right now that they can do about save moving to another area that is still open.

The need to create a fund to support grid modernization is no longer an issue that is years away. It is here now, it is not going away, and it threatens to grind the New Jersey solar program down to geographic areas so restricted that will produce nowhere near the solar capacity result expected in the state's energy master plan at 750 MWs annually.

Now, I think it is very important and fair to complement Atlantic City Electric. I want to repeat that; I think it is important to complement Atlantic City Electric for the actions that they took back in December 2020 when they filed their last base rate case before the Board of Public Utilities. In that petition they argued that the board should approve a \$10 million fund that would then be used to reopen some of the 38 circuits now closed and the 19 substation transformers in need of upgrade.

Upon learning of this petition, my group, the New Jersey Solar Energy Coalition joined with the Mid-Atlantic Solar Energy and Storage Association, (Lyle Rawlings) and the national Solar Energy Industry Association, (Scott Elias) in hiring an attorney to petition for full intervention status in the base case to support this important socialization of costs. Atlantic City Electric was the first, and to date, the only one of our states' utilities to file such a petition and our three organizations were at the table to support this idea aggressively through the base case litigation process.

At the end of the day, however, perhaps as a result of the Ratepayer Advocate's objections we learned that the Board of Public Utilities staff had recommended that this issue not be included in the final stipulation of settlement arguing that the issue of socializing grid modernization costs was a "generic" utility issue that would best be handled on a statewide basis and not in the "one off" context of a single utility's base rate case. The stipulation of settlement, however, did suggest that Atlantic City Electric file a new petition so that this issue could be resolved at the Board with all parties at the table. Unfortunately, it has been more than a year since the case has been settled and we have yet to see any petition filed.

So, today Atlantic City Electric's territory has more than 50 circuits closed, up from 38 two years ago and is headed further downhill with no process in play to even begin to resolve this issue.

In fairness, I would also like to point to the fact that currently both JCP&L and PSE&G's service territories are nowhere near as challenged as the Atlantic City Electric territory, but clearly there is ample evidence that both of these franchise territories are headed in the same direction.

Also in fairness, you're going to hear a number of stories today about interminable utility delays in making necessary upgrades to accommodate additional renewable energy on their circuits, but let's take a minute to think about the economic construct of what renewable energy does to

utility revenues and earnings. To begin with, renewable energy installations significantly reduce utility throughput, the less they sell, the less revenue they have to apply to distribution system maintenance, and the less they have to show in earnings significantly impacting shareholder's value. This process is no less than the death from a thousand cuts, and what makes it worse is that we are all clamoring that they hire additional resources to accelerate interconnection upgrades and worsen their financial losses at a faster pace. While the Clean Energy Act of 2018 provided that made energy efficiency expenses would be fully recovered by ratepayers as well as lost revenue impacts to shareholders, no similar decoupling exists for solar. Clearly this is an issue for another day, but, in my opinion, there is no way that we are going to achieve the buildout of renewable energy in the state of New Jersey at the rate of 750 MW per year to achieve Governor Murphy's goals unless we get serious about also including solar into the concept of decoupling or eliminating the relationship between utility revenues and sales volume. Clearly, this committee is going to have jurisdiction over this issue to create the statutory framework necessary to fix this problem, but this is a difficult issue and one that we are all going to have to work to equitably resolve, because it is standing directly in the path to achieving our clean energy goals.

Before discussing the practical elements of this legislation, I think it's important to very quickly review the process associated with our current system of utility interconnection.

There are three levels of interconnection studies that must take place prior to a developer being furnished with an interconnection agreement. The level I studies are relegated to small projects almost entirely associated with residential rooftops. Due to the size of these projects, interconnection approvals are granted very quickly, usually within a few days, and almost always without the requirement for the payment of a system upgrade.

However, when we begin to look at larger projects in level II and level III interconnections, the studies become far more complicated involving network load flow studies and detailed analysis of the impact of these renewable resources on the host circuits and the customers that share those circuits. These studies cost as much as \$30,000 and can run many months. The study also includes a detailed cost accounting of the upgrades required which are then required to be paid in advance if the project is to go forward. With interconnections costs now known, the project can commence construction and hope that the utility work will be done within the timeframe permitted for the project to go into commercial operation. This cost allocation is known as "but for" essentially that means the developer is responsible for any and all costs associated with the upgrades necessary to accommodate this installation on the distribution circuit. There is no socialization of any of these costs, they are born exclusively by the project, and, of course, where circuit is already closed there is no option to even consider any new projects.

So, under the current process there is no mechanism, and no funding available to reopen circuits that have been closed by exceeding the 3 MW maximum as in the case of Atlantic City Electric. While projects can limp along in the areas still open, interconnection costs can become extraordinarily high since this system is somewhat like the game of musical chairs.

When we first started out introducing renewable energy into utility distribution circuits there was an element of forgiveness based upon the nature of the system. For example, in PSE&G territory where loads are denser and geographic distances that circuits travel are smaller, there is more flexibility to accommodate renewable energy without requiring any system upgrades. However, once this system "slack" is absorbed, the next project in the queue can get slammed for a very significant expense. So our system provides a cost benefit for early movers and penalties for projects that are being proposed now. It is also exceedingly difficult for the utility to study the impacts of a project on a circuit when there may be two or more other projects proposed for the same circuit. That gets us into who pays for what and how can these costs be equitably shared and on what basis.

S-431 offers practical solutions to a number of these problems and can set us on the right course to again moving forward toward our Governor's goal.

Let's first look at the level of funding that could be provided on a fixed basis by the solar and other renewable resource projects on a kilowatt of capacity basis.

Currently, the board has established as part of the successor program a 150 MW per year tranche for the creation of residential solar applications. Now as the bill proposes up to \$50 per kilowatt and most residential solar arrays run between 8 and 10 kW of capacity, so each residential project proposed could then be required to send the utility a check for up to \$500 per project. While residential projects due to their small size rarely require system upgrades these funds could be used by the utility to offset system upgrade costs for any other project or even applied to the cost of grid modernization. So, with residential projects alone we could be generating up to \$7.5 million dollars annually exclusively from the residential solar development community. The bill also provides that the Board of Public Utilities develop similar fixed costs per kilowatt for larger projects across the different market segments. So, to pick a number, let's say on average that the board proposes \$100 per kilowatt of capacity that then multiplied by the residual 600 MW of goal buildout could create an additional \$60 million of funding provided exclusively by solar developers. Therefore, up to \$67.5 million dollars could be available as an annually replenished developer fund. When equitably supported by all ratepayers' contributions socializing the residual interconnection and grid modernization costs to reopen closed circuits, we would easily have the financial resources for robust and ongoing grid modernization. This is a path to an equitable sharing of costs that will keep us on track to achieving our clean energy goals.

I think it is important to note that the solar community is supporting this level of funding upgrades with their own project funding because as you can see from the Atlantic City Electric distribution territory map that if we don't resolve this problem equitably through cost sharing there will be no future solar business in New Jersey.

The bill also creates a pre-application process so that utility engineers can, for a modest fee, take a quick cursory look at their system and make some qualitative judgements that they can then share with the project developer, early on, regarding the potential overall cost of developing the project at the location selected by the developer. This process would not bind utility in any way,

but would clearly eliminate exhaustive studies for projects whose interconnection costs are well beyond any affordable limits. This would immediately help to reduce the logjam that exists with our state's utilities swamped by attempting to study a great number of projects as was evidenced by last year's 600 MW of project applications that were filed in the Pilot Year II Community Solar Program.

The bill would also provide that the board set a dollar limit to the socialization of charges for projects where the estimated interconnection charges were simply beyond what is reasonable even under the proposed cost-sharing arrangement. This cost "circuit breaker" would then make certain that projects being approved were the most cost effective for both ratepayers and project developers.

As you consider some of these numbers think about the cost-sharing of grid modernization funded by what could be well in an excess of \$100 million a year jointly by developers and ratepayers. This would quickly begin to turn the corner on grid modernization expenses and under Board guidance from their ongoing interconnection stakeholder process resolve the technical problems associated with incorporating these new technologies onto the grid. These technical issues are, in our opinion, best left to the engineers currently at the table in this stakeholder process. We hope, however, that the issue of funding grid modernization and interconnections in an equitable and practical way will support those continuing technical discussions by create the financial resources necessary to implement them.

This bill will provide our state's public utilities with an incentive to invest in grid modifications to modernize as their expenses would be treated as normal utility rate base investments. Our state's utilities have similarly well spent over \$2 billion dollars hardening and strengthening the grid to make it more resilient. These expenses have resulted in greater grid resilience, and we have all benefitted greatly, however, in truth, these expenses are treating the symptoms of climate change, and it is now time to treat the cause.

Under this legislation, developers will be dealing with known interconnection costs on a fixed basis, an efficient process for interconnection study, and a methodology to quickly manage the number of projects proposed immediately eliminating those which are deemed to be far beyond any reasonable cost to interconnect.

Our current utility grid was based upon the design over one hundred years ago as a system of arteries where power was created at the heart and then distributed in a linear fashion through successive voltage reductions to end-use customers.

Our new modern grid, however, needs to be designed as system of interstate and local roadways where power can be produced anywhere and then transmitted freely throughout the system to be used in the most efficient manner possible.

While this transition will not be inexpensive, we need to be on that road now, as we are all serious about climate change and meeting our Governor's vision for New Jersey's Energy Future.

We look forward to continuing this discussion, but hopefully moving forward as quickly as possible in order to get back on track.

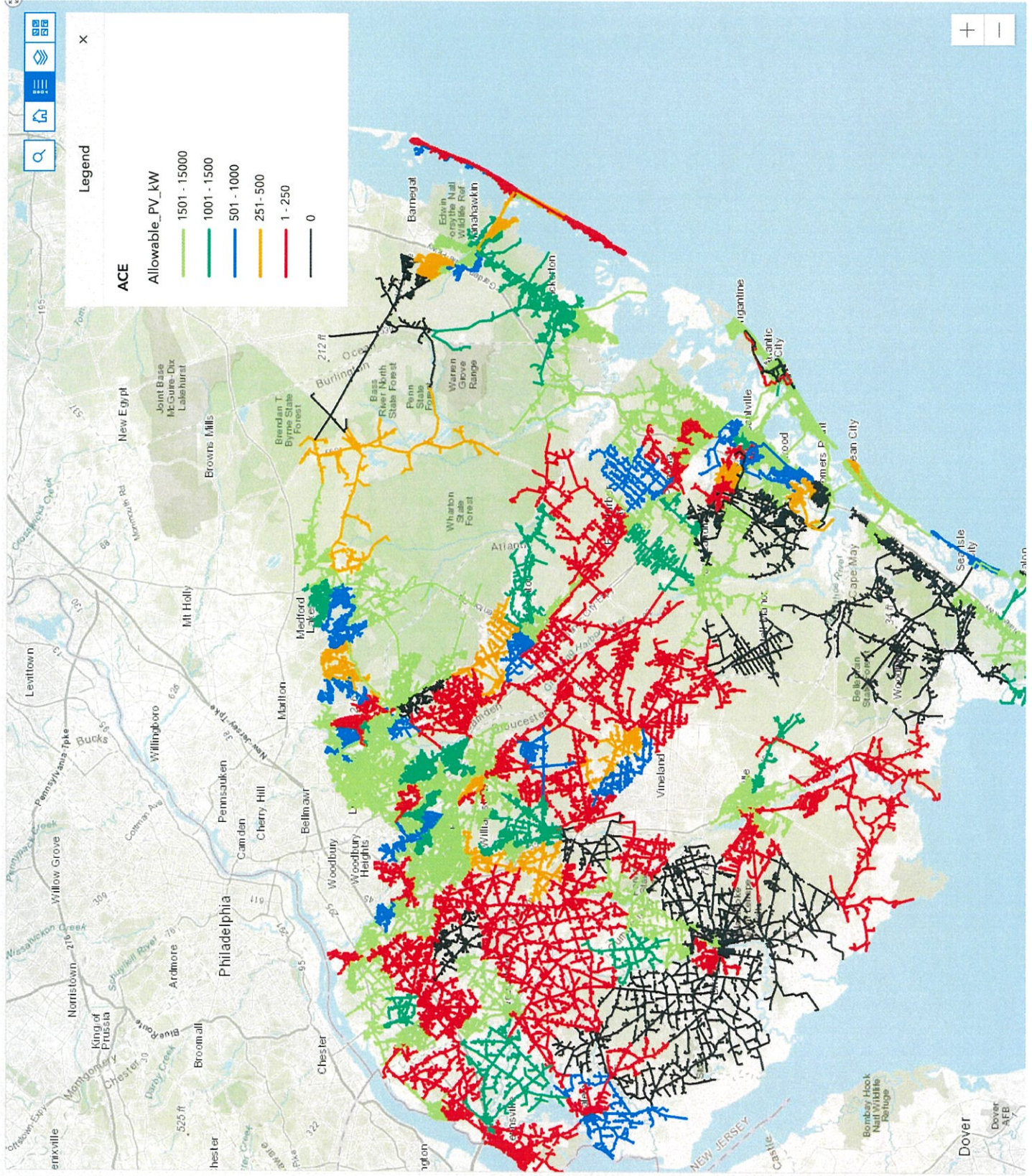
I appreciate the time you have provided me, if you have any questions, I'd be happy to try to answer them for you.

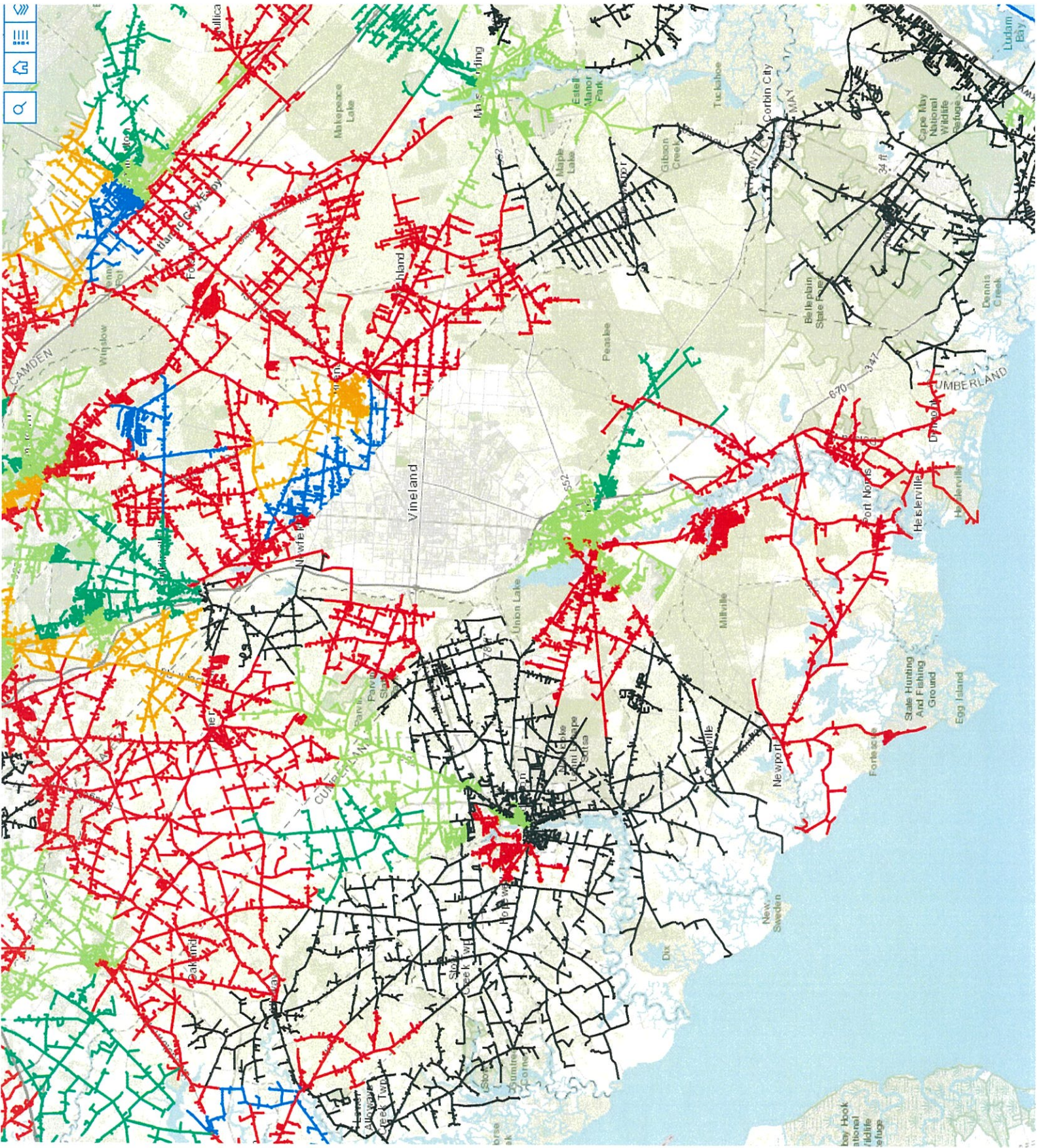
# Distribution Feeder Hosting Capacity

PHI defines large DER systems by feeder primary voltage class,  
 4-13.8kV: 250kW and greater  
 23-25kV: 500kW and greater  
 33-34.5kV: 1MW and greater

Feeder restrictions can be confirmed via the [Restriction Map](#).

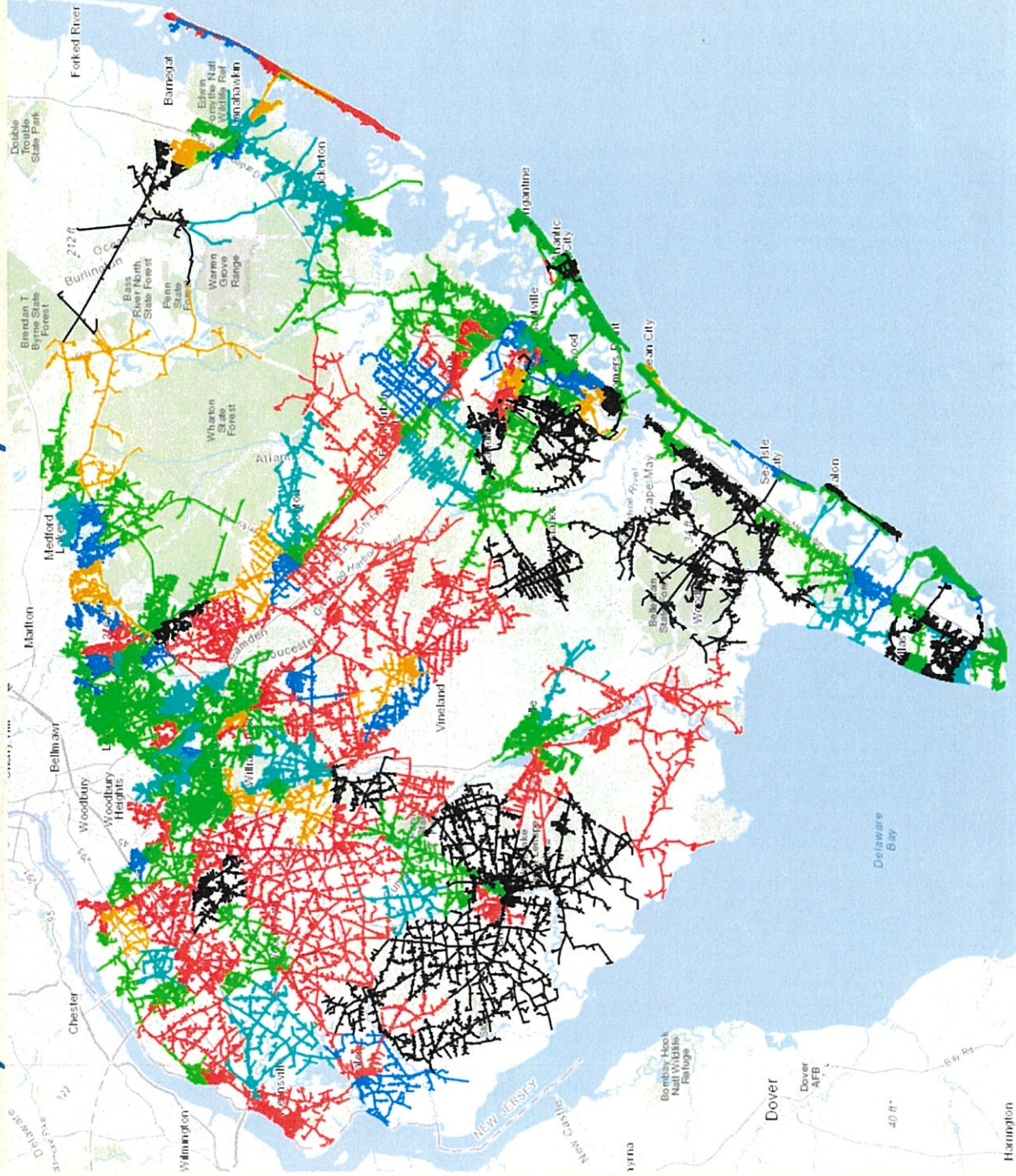
11 X





12x

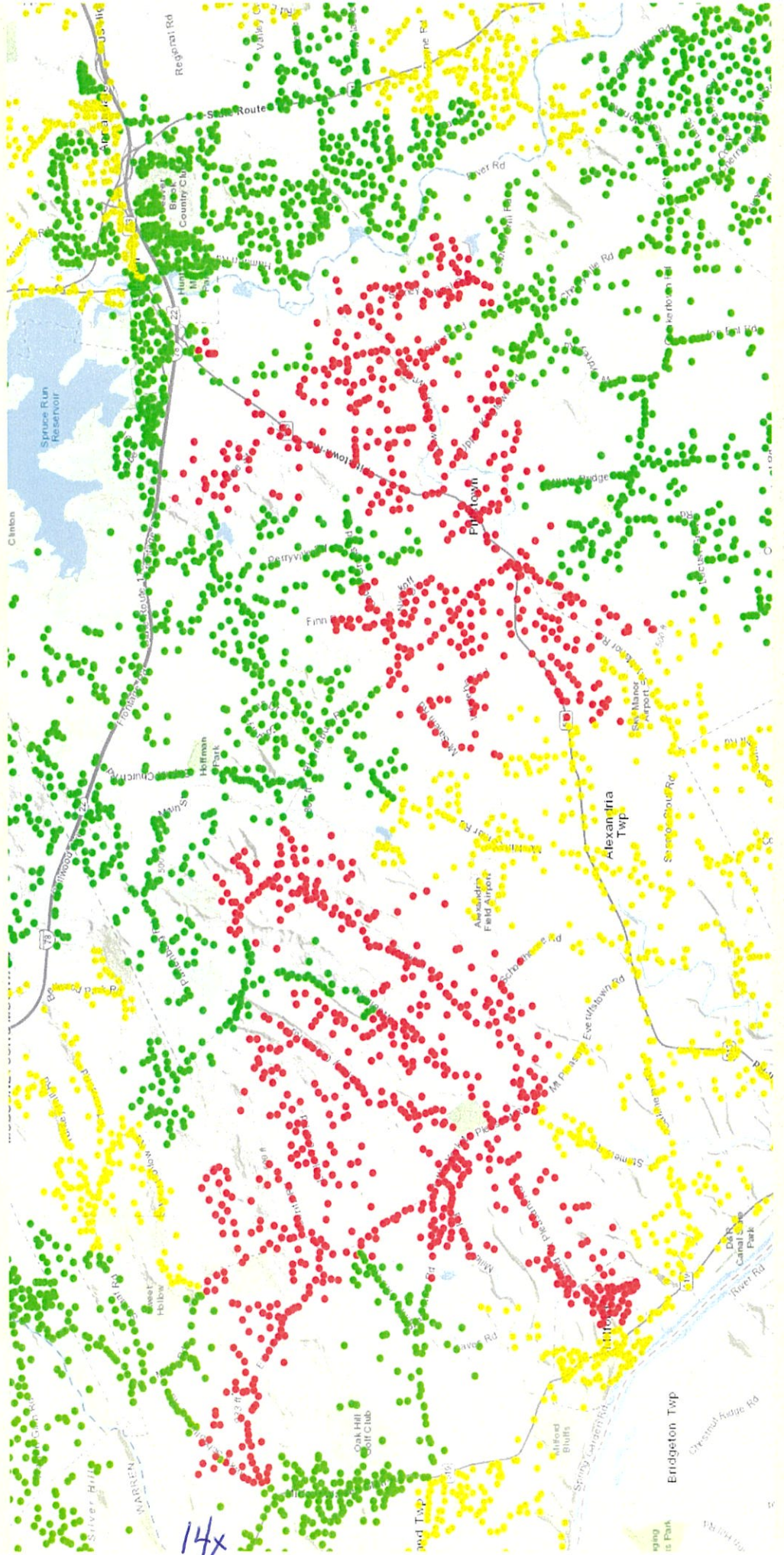
**Circuits closing or severely restricted – ACE**  
**(black is closed, red is restricted to <250 KW)**



13x

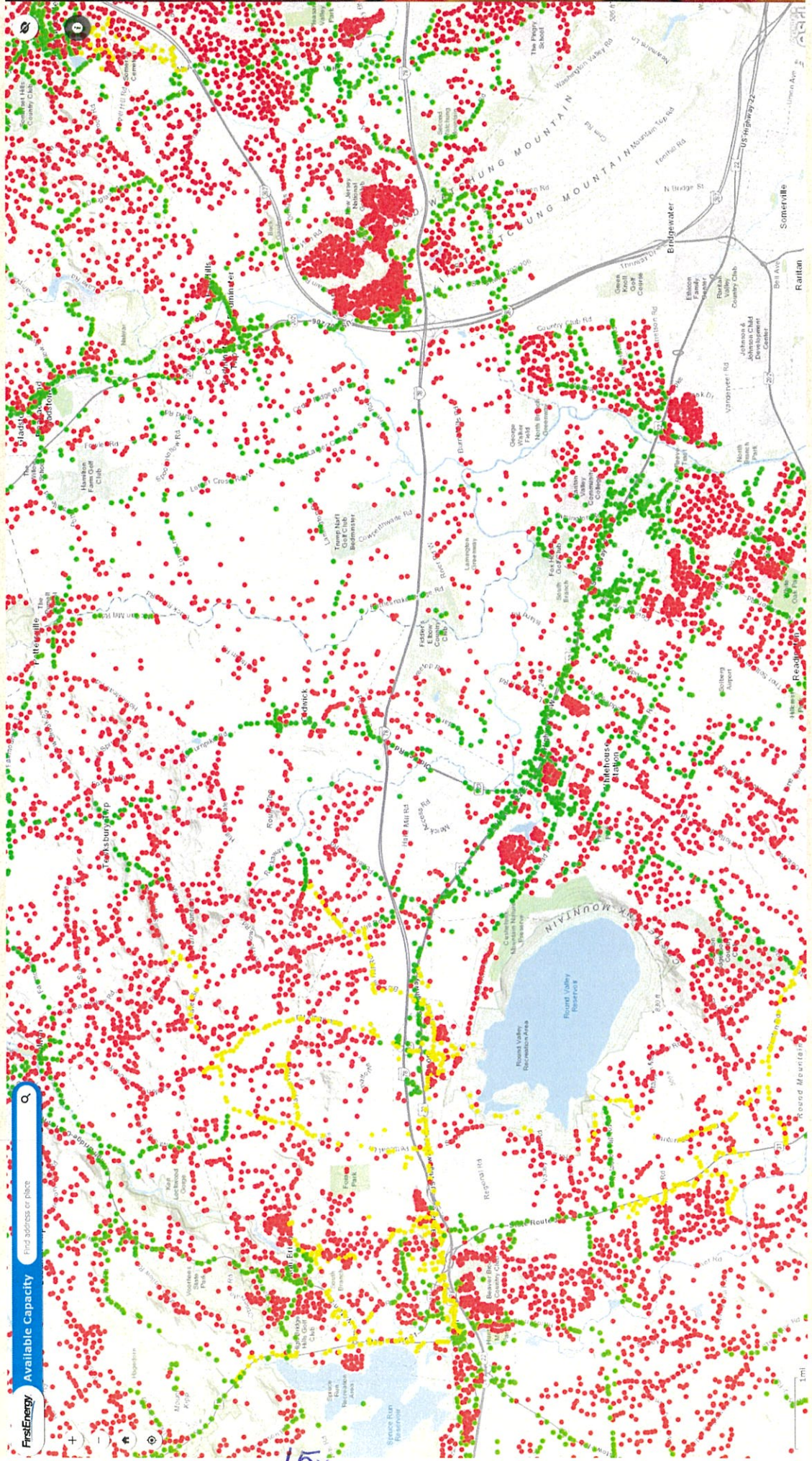
# Circuits severely restricted – JCP&L (red) is restricted to <100 KW

## February 2020: Close-up view – very few “red” areas in JCP&L

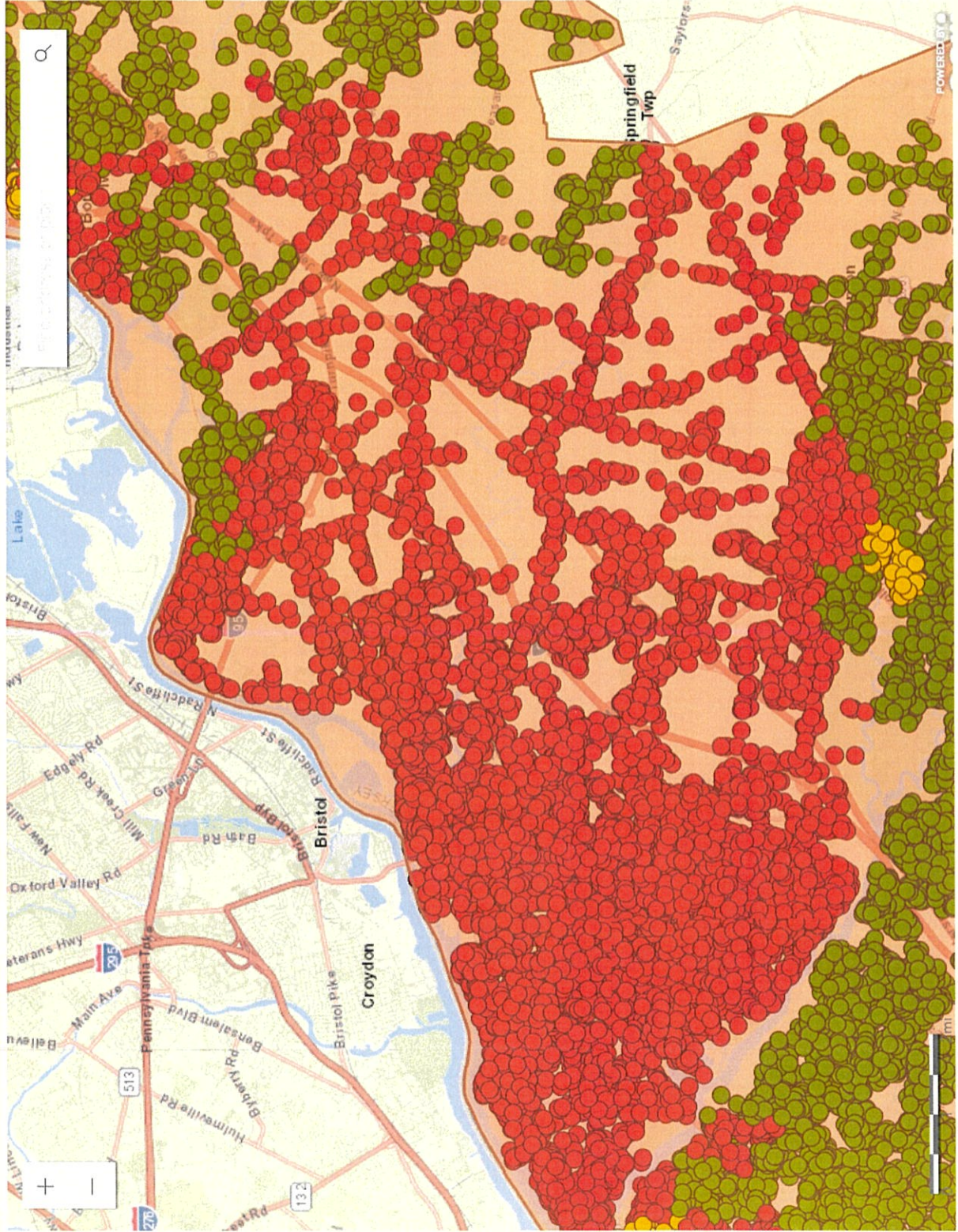


**Circuits severely restricted – JCP&L (red) is restricted to <100 KW**

**March 2020: Zoomed-out view - “red” areas are everywhere in JCP&L**



# Circuits severely restricted – PSE&G (red is restricted to <100 KW)



Hex

**MEMO OF SUPPORT**  
**S 431**  
**Senate Environmental and Energy Committee**  
**May 16, 2022**

The Solar Energy Industries Association (“SEIA”) supports S 431 and recommends its passage. This bill directs the New Jersey Board of Public Utilities (BPU) to update New Jersey’s interconnection standards.

The window to address the climate crisis is rapidly closing and outdated interconnection policies remain a significant barrier to achieving New Jersey’s ambitious clean energy goals.

Interconnection policies determine how efficiently distributed energy resources, like solar and energy storage, can connect to the electric grid. But the status quo of policies that were developed decades ago are failing in a number of areas, including interconnection timelines, compatibility with energy storage and smart inverters, distribution of grid upgrade costs, and lack of data accessibility. As a result, inadequate interconnection policies pose a major threat to New Jersey’s clean energy goals.

Based on SEIA’s extensive discussions with leading SEIA member companies, interconnection experts, and SEIA’s on-the-ground experience, three principles should guide all interconnection reform discussions:

- Interconnection processes must be detailed, transparent, and clear
- Interconnection rules must be rigorously enforced
- Infrastructure upgrade cost estimates must be reasonable, durable, and directly related to the connecting project

As a result, SEIA supports S 431’s directive that updated New Jersey interconnection standards conform to the model interconnection procedures recommended by the Interstate Renewable Energy Council. In particular, this includes a recommendation to include pre-application reports. As the name suggests, project developers would be able to submit a pre-application proposal to the utility that scopes out the project location, size, configuration, and interconnection point. For a modest fee, the utility would be able to give reasonable estimate of infrastructure upgrade costs up front, providing an early estimate of cost and viability. This is a no-regrets approach, employed by at least 12 states that could save project developers and utilities considerable time and effort later in the interconnection process.

While adopting IREC’s Model Interconnection procedures are a great starting point, the bill could also recommend that the BPU ensure that these updated interconnection standards incorporate recommendations from U.S. Department of Energy’s recent Building a Technically Reliable Interconnection Evolution for Storage (BATRIES) toolkit, which provides model guidance for the interconnection of energy storage and solar-plus-storage projects. Specifically,

this would include acceptable methods that can be used for controlling export of limited-and non-export systems in any updated interconnection rules.

S 431 empowers the BPU and utilities to come up with a better way to unlock areas of the grid that accommodate more distributed resources, like solar.

New Jersey has many closed circuits, where unless developers or a solar customer pays for an expensive upgrade that increases the capacity of a circuit, no one else can install solar in a particular geographic area. If upgrades are required to accommodate additional solar on a circuit, it is the unlucky project that “triggers” the upgrade that must pay the full cost, even if the upgrade results in benefits to several, subsequent interconnection customers and New Jersey ratepayers at large. These costs, often hundreds of thousands of dollars, can kill the economics of a project, which limits project development, delays needed infrastructure investments and leaves whole sections of the distribution grid closed to new solar development.

S 431 resolves this unfair cost allocation problem and advances a cost sharing methodology that equitably shares the costs of upgrading the electric power system across all customers who benefit from them, including ratepayers at large. This would be done by establishing a fixed fee schedule for interconnection, paid by the owners or developers of clean energy systems to electric utilities to defray the costs of interconnection, including administrative tasks or studies carried out by the utility, and the infrastructure upgrades necessary for the safe operation of the renewable energy system. It would also authorize electric public utilities to recover interconnection costs in excess of the amount recovered through these grid modernization fees, an innovative approach that distributes upgrade costs across multiple projects and ratepayers and enables the proactive grid investments necessary for New Jersey’s clean energy future, such as re-opening previously closed circuits.

S 431’s multi-beneficiary cost sharing approach is similar to Massachusetts, which is considering a model where developer contributions are capped on \$/kW basis, and the remaining costs are socialized among utility ratepayers. Moving to a system where a developer pays a percentage of the upgrade costs, and the remaining costs are socialized among all customer classes benefiting from that upgrade would help bring online much more clean energy on New Jersey’s grid.

Unfortunately, the interconnection paradigm designed for a by-gone era characterized by large, centralized generation facilities sending electricity unidirectionally down to load is incompatible with a sustained distributed generation industry. As a result, New Jersey must demonstrate leadership on interconnection reform to meet its ambitious clean energy goals.

For the above reasons, SEIA supports this legislation. For more information, contact Scott Elias, SEIA’s Director State Affairs, Mid-Atlantic at [selias@seia.org](mailto:selias@seia.org) or (516) 286-6473 or Doug Hritz, River Crossing Strategy Group at (609) 503-5375.



**MEMO OF SUPPORT**  
**S 439**  
**Senate Environmental and Energy Committee**  
**May 16, 2022**

The Solar Energy Industries Association (“SEIA”) supports S 439 and recommends its passage. This bill directs the New Jersey Board of Public Utilities (BPU) to establish a process to maintain supply and demand for solar renewable energy certificates (SRECs).

While closed to new participants by the BPU, the Legacy SREC Program remains in operation until 2035 and remains vital to the \$13+ billion in capital invested by New Jersey families, businesses, schools, and communities – who depend on a stable and balanced program to provide the opportunity to earn a fair return on capital and to sustain the confidence necessary to invest in the State’s clean energy future.

Over the course of several years, the solar industry has expressed its concern that the closed program requires timely and proactive oversight to meet the statutory language written into the Clean Energy Act of 2018, which calls for an “orderly transition,” and the Solar Transition principles to “protects investor value.”

S 439 requires a periodic BPU review of the SREC program to ensure that there is an appropriate and stable ratio between the supply of, and demand for, SRECs in the state and to make adjustments if necessary. This is a proven and effective approach that is easy to implement and administer, is consistent with best practices in other regions, and is consistent with the BPU’s solar transition principles.

While investors have assumed traditional solar development and construction risks, and continue to assume operating risks, they also depend on a proactive and predictable policy to ensure a balanced program with “no SREC left behind.” S 439 seeks to accomplish this objective.

For the above reasons, SEIA supports this legislation. For more information, contact Scott Elias, SEIA’s Director State Affairs, Mid-Atlantic at [selias@seia.org](mailto:selias@seia.org) or (516) 286-6473 or Doug Hritz, River Crossing Strategy Group at (609) 503-5375.

**MEMO OF SUPPORT**  
**S 2185**  
**Senate Environmental and Energy Committee**  
**May 16, 2022**

The Solar Energy Industries Association (“SEIA”) supports S 2185 and recommends its passage. This bill directs the New Jersey Board of Public Utilities (BPU) to develop a program to incentivize installation of new energy storage systems.

To maintain its position as a clean energy leader and achieve the Murphy Administration’s Energy Master Plan goal of 100% clean energy by 2050, ramping up energy storage in New Jersey will be critical.

Energy storage can smooth out the delivery of clean energy resources such as wind and solar, by storing excess energy when the sun is shining and the wind is blowing and delivering it when the opposite is happening. Energy storage can act as a backup power supply in the event of an outage, and increasingly energy storage is being used to feed the grid when demand for electricity is at its highest, helping to enhance the overall resilience of our aging electric grid.

While New Jersey has a statutory goal of 2,000 MW of energy storage by 2030, without a plan, New Jersey will miss its ambitious climate goals. S 2185 adopts best practices from other states and creates a smart and cost-effective plan to achieve New Jersey’s statutory energy storage targets.

SEIA supports the legislation directing the BPU to develop an energy storage incentive pilot program, with \$60 million per year for the duration of the pilot program, before creating a permanent program.

Specifically, SEIA supports:

- S 2185’s combined approach of upfront incentives to customers for every kilowatt-hour of energy storage capacity they install with performance payments, where utilities will pay customers to allow them to dispatch power from their energy storage systems when demand for electricity is at its highest, providing needed grid services that benefit all ratepayers.
- S 2185’s requirement that a third of the incentives for energy storage be reserved for low-income customers and customers in overburdened communities who are most at risk from storm-related outages. We also think that the BPU will need to embrace a system of incentive bonuses, or adders, for projects serving LMI communities.

- S 2185's directive that Electric Distribution Companies file tariffs and a new rate design for front-of-the-meter energy storage systems. Because energy storage is a dynamic resource that both purchases and sells electricity, traditional utility rate structures may not best accommodate storage and can render projects cost prohibitive.

Given that the objective of S 2185 is to normalize and expand solar+storage as a product offering in the market, one area where we think this bill can be improved is adding language to support customer and third party provided and owned meter collar adapters, deployed for the purpose of isolating a customer's electrical loads to enable the provision of backup power." Colorado recently passed legislation that did this, which will save customers installing combined solar and battery storage systems hundreds – if not thousands – of dollars by dramatically reducing installation times. Operationally, these adaptors also reduce installation times significantly which will accelerate the installation of the systems across the state.

States with successful energy storage policies have programs focused on both the deployment and optimization of energy storage resources. S 2185 a cost-effective way to encourage the deployment of capital and development of both behind-the-meter storage and front-of-the meter storage projects at the distribution and transmission level. This bill will foster a business environment that captures the benefits of energy storage on both the customer side and utility side of the electric meter, and signal that New Jersey is a place to invest in the deployment of energy storage.

For the above reasons, SEIA supports this legislation. For more information, contact Scott Elias, SEIA's Director State Affairs, Mid-Atlantic at (516) 286-6473 or Doug Hritz, River Crossing Strategy Group at (609) 503-5375.

## Introduction & Background

174 Power Global supports S2185 and recommends its passage. The bill directs the New Jersey Board of Public Utilities to develop a program to incentivize the installation of new Energy Storage systems.

174 Power Global NE is a developer of solar and storage projects in the C&I sector. We work across multiple states in the Northeast including New Jersey. We are currently in the process of developing more than 1MW of solar in the garden state alone and would love the opportunity to deploy capital and resources in New Jersey to develop battery storage assets.

New Jersey has been a leader in supporting renewable energy for decades. Given the Murphy administration's goal to achieve 100% clean energy by 2050, it is imperative that a robust network of energy storage is built out.

In addition to the 100% clean energy goal, New Jersey has a statutory requirement to reach 2000MW of energy storage by 2030, as well as a statutory goal that has already been missed of 600MW by 2021. S2185 would provide a mechanism, based on best practices from other states, for New Jersey to achieve its statutory requirement and deliver benefits to ratepayers as well as program participants.

Battery storage is the missing piece in the New Jersey's clean energy future. We are all familiar with the famous Duck Curve for solar production. We can generate electricity with solar while the sun is shining but in order to have a fully green grid, batteries must be deployed to the greatest extent possible. Batteries allow for solar energy to be stored so that it can be tapped when demand is highest, which may not correlate with when the sun is shining.

## 174PG Supports Bill 2185

S2185 is the perfect vehicle to send the correct signals to developers and allow customers to fully benefit from energy storage. 174 Power Global strongly supports the model laid out in the bill through a combination of upfront and ongoing performance-based incentives. For performance-based incentives these should be run by the utility and should be based on a certain number of events that are called by the utilities with advanced notice so that the battery can be charged. The incentive should be paid based on the capacity of the battery during a given event measured in kW's. The upfront payment would speed up deployment especially in the face of supply chain pain and rising costs. Upfront incentives also make financing these projects much easier due to the reduction in upfront capital.

174 Power Global has experience with batteries storage programs across multiple states and the things that we have found to work best for these programs are as follows:

- **Upfront Incentives** – as noted above upfront incentives in other states like CT and NY have speed up deployment of battery storage systems.
- **Ongoing revenue through demand response through the EDC** – having a clear market signal with runway for making sure batteries are being used to their greatest potential. Allowing the EDCs to send signals for when they need support makes it so they get the most out of the batteries that are deployed and that benefits are going to the grid and therefore all ratepayers.
  - o It is important the compensation for these events be fixed have a clear runway so that developers can model revenue and secure capital for these projects.
- **Allow for flexibility for how the batteries are used by customers.** In New Jersey for instance when customers exceed a certain amount (based on their service class) of electricity demand at a given moment, they are charged for what are known as demand charges. This is a \$/kW charge that appears

on your bill, less common for a residential customer but very common for a commercial or industrial customer. Energy storage allows you to manage the amount of electricity you are demanding from the grid. When your need goes up you can tap into your battery which can make up the difference, saving the customer money in bill savings but also providing relief to the grid during peak demand, outside of set call windows for performance-based incentives.

Lastly 174 Power Global strongly supports the proposed section that stipulates that 1/3rd of all incentives go toward low-income customers and customers in overburdened communities.

#### Conclusion

174 applauds the Authority's attention on removing barriers to electric storage in New Jersey. Creating 'pay-for-performance' programs that compensate storage for the value it brings to the distribution grid, and that promote least-cost deployment via a robust, competitive, and stable market for storage developers, will help New Jersey achieve its grid modernization goals towards a more dynamic, resilient, efficient, and clean electricity system.

Based on storage programs and tariffs in neighboring jurisdictions, there is a solid blueprint for New Jersey to follow and adapt to achieve its own storage objectives. Our comments are intended to highlight the basic elements that underpin the blueprint for a successful program. We look forward to seeing the passage of this bill and further participation in relevant stakeholder proceedings with the Board of Public Utilities.

Thank you for taking the time to review our comments.



State of New Jersey  
DIVISION OF RATE COUNSEL  
140 EAST FRONT STREET, 4<sup>TH</sup> FL.  
P.O. BOX 003  
TRENTON, NEW JERSEY 08625

PHIL MURPHY  
Governor

SHEILA OLIVER  
Lt. Governor

BRIAN O. LIPMAN  
Director

May 13, 2022

Members of the Senate Environment and Energy Committee  
Statehouse Annex  
P.O. Box 098  
Trenton, N. J. 08625

**RE: S431 (Directs BPU to update interconnection standards for Class I renewable energy sources & develop a fixed fee structure for interconnection costs.)**

Members of the Senate Environment and Energy Committee:

I write on behalf of the Division of Rate Counsel regarding S431 (Directs BPU to establish the State's interconnection standards for Class I renewable energy sources and develop a fixed fee structure for interconnection costs), which is up before the committee on May 16, 2022. I regret I am unable to attend the meeting, but hope you will consider our comments. We have concerns about this bill, especially its modification of a longstanding ratemaking process that would have significant financial impacts on ratepayers.

As you are aware, Rate Counsel represents and protects the interests of all utility customers – residential customers, small business customers, small and large industrial customers, schools, libraries, and other institutions in our communities. Rate Counsel is a party in cases where New Jersey utilities seek changes in their rates or services. Rate Counsel also gives consumers a voice in setting energy, water, and telecommunications policy that will affect the rendering of utility services well into the future.

This bill would require the Board of Public Utilities to establish maximum “grid modernization fees” and allow electric public utilities to pass onto their ratepayers any interconnection costs in excess of those fees. The fees would only be adjusted every three years and exempt from the Administrative Procedure Act. We have concerns about this bill.

This bill would modify the long-standing “but for” principle of utility ratemaking. Rate Counsel believes that “the beneficiary pays principle” is foundational to good grid planning and cost allocation. The beneficiary pays standard for new resources incents efficient siting decisions. If the project is no longer economic with the costs of siting included, then venture is most likely under-capitalized and investing in that project is not the best use of limited ratepayer dollars. The risk is better handled by the interconnection customer than end-use customers, because Class I renewable energy developers can build the cost of upgrades into their projects or choose a different site for development. Ratepayers do not have that same flexibility. Therefore,

Tel: (609) 984-1460 • Fax: (609) 292-2923 • Fax: (609) 292-4991  
<http://www.nj.gov/rpa> E-Mail: [njratepayer@rpa.nj.gov](mailto:njratepayer@rpa.nj.gov)

New Jersey Is An Equal Opportunity Employer • Printed on Recycled Paper and Recyclable

24x

Rate Counsel asks that the Committee fully consider the implications if the discipline of efficient project siting is lost. Avoidable and expensive electric system upgrades will be foisted onto captive ratepayers. This risk is compounded because the administrative decisions will be made without the customary protections afforded by the Administrative Procedure Act.

Shifting the risk of siting a project from Class I renewable developers to ratepayers will affect more than utility customer rates. It will upset the delicate balance of incentive policies from which Class I renewable developers already benefit, such as net metering and Renewable Energy Certificates. Given this additional shift in risk, it may no longer be reasonable for Class I renewable developers to receive these other subsidies when they are not contributing to the cost of system capability from which they benefit.

Administratively setting a max interconnection fee every three years also means that the fact-specific circumstances of each project will not be properly accounted for or given accurate price signals to Class I renewable developers. As circumstance changes, the administratively-set fee will lag behind, possibly for significant amounts of time. Ratepayers may also end up paying for upgrades for projects that never get built. Further utilities may not be able to recover those costs in rates if the equipment for an abandoned Class I renewable project is not used and useful. Based on the foregoing, any changes in the current paradigm must be based on transparent data and include greater opportunities for competition and innovation.

This means that, with regard to interconnection costs, Class I renewable developers should not be allowed to site projects without any consideration of the project's effect on the electric distribution system. Instead, Rate Counsel recommends building on the initiative to have the utilities determine the best, most economic locations to include solar on their systems. To do otherwise could result in significant utility rate increases for projects that are simply not economic.

For all of these reasons, we urge you to not pass this bill out of committee.

We hope you will consider our comments. Please let us know if you have any questions. We very much appreciate the opportunity to share our comments on behalf of the State's ratepayers. Please feel free to contact our office if you have any questions. Thank you for your attention to these important matters.

Sincerely,

s/s Brain Lipman,

**Brain O. Lipman, Esq.,**

**Director**

**New Jersey Division of Rate Counsel**

- c: Kevil Duhon, Deputy Executive Director at New Jersey Senate Democratic Office
- Matthew Peterson, Democratic Aide Services, Senate Environment and Energy Committee
- Eric Hansen, OLS Committee Aide
- Christine Denney, OLS Committee Aide
- Rebecca Panitch, Republican Aide, Senate Environment and Energy Committee
- Christine Mosier, Chief of Staff, Senator Bob Smith
- Pamela Cocroft, Committee Secretary
- Jessica Murray, Chief of Staff, Sen. Greenstein
- Erin Rice, Chief of Staff, Sen. Codey
- Tina DeSilvio, Chief of Staff, Sen. Durr
- Brian Woods, Chief of Staff, Sen. Stansfield
- Maura Caroselli, Managing Attorney for Gas & Clean Energy, Rate Counsel
- Sarah Steindel, Attorney for Rate Counsel
- David Wand, Managing Attorney for Electric, Rate Counsel



State of New Jersey  
DIVISION OF RATE COUNSEL  
140 EAST FRONT STREET, 4<sup>TH</sup> FL.  
P.O. BOX 003  
TRENTON, NEW JERSEY 08625

PHIL MURPHY  
*Governor*

SHEILA OLIVER  
*Lt. Governor*

BRIAN O. LIPMAN  
*Director*

May 13, 2022

Members of the Senate Environment and Energy Committee  
Statehouse Annex  
P.O. Box 068  
Trenton, N. J. 08625

**RE: S439 (Directs BPU to establish process to maintain supply and demand for solar renewable energy certificates.)**

Members of the Senate Environment and Energy Committee:

I write on behalf of the Division of Rate Counsel regarding S439 (Directs BPU to maintain supply and demand for solar renewable energy certificates), which is up before the committee on May 16, 2022. I regret that I won't be able to attend the meeting, but hope you will consider our comments. We have concerns that this bill will increase the financial burden on ratepayers as it perpetuates continued over subsidization of legacy solar.

As you are aware, Rate Counsel represents and protects the interests of all utility customers – residential customers, small business customers, small and large industrial customers, schools, libraries, and other institutions in our communities. Rate Counsel is a party in cases where New Jersey utilities seek changes in their rates or services. The Rate Counsel also gives consumers a voice in setting energy, water, and telecommunications policy that will affect the rendering of utility services well into the future.

This bill would require the Board of Public Utilities (“BPU”) or (“Board”) to manage the market for Solar Renewable Energy Certificates (“SRECs”) that were issued under the legacy SREC program. The Board would be required to establish a process to assess the legacy SREC program and adjust the renewable portfolio requirements for legacy SRECs in order to “maintain an appropriate value for SRECs, which is consistent with the historical relationship between the value of the SREC and the value of the solar alternative compliance payment, as determined by the board ....” This process would continue through Energy Year 2035. Rate Counsel has several serious concerns about the bill.

First, it is important to recognize that this bill would not lead to a single penny of new solar investment. The legacy SREC program that is the subject of this legislation has been closed to new entrants since the end of April, 2020. No more solar will be built under this program. This bill is about providing a guarantee that the owners of the legacy solar facilities will recover the compensation they desire for solar that has already been built, a guarantee they explicitly did not have at the time they chose to build.

Second, the objective appears to be to direct the Board to maintain legacy SREC prices at or near the SACP. These prices are higher than necessary to compensate owners of the legacy SREC project for their investments. The owners of these projects never had any guarantee that they would receive any specific values for SRECs. Therefore, the SREC values that were assumed by investors when the projects were built were heavily discounted from current SREC prices. In other words, investments were not made based on the assumption that SREC values would remain high for the life of the project. While the legacy project owners may desire SREC values at or near the SACP through 2035, they can be fairly compensated at lower SREC values.

A 2018 decision of the United States Court of Appeals for the Third Circuit is relevant here. That decision held that the property rights of holders of taxi medallions issued by the City of Newark were not violated when an agreement with a ride-sharing provider reduced the market value of the medallions. As the court explained, the value of the medallions was subject to the expectation that there could be regulatory change, and therefore an action that reduced the value of the medallions was not a "taking." Newark Cab Ass'n v. City of Newark, 901 F.3d 146, 153 (3d Cir 2018). This same principle applies to legacy SRECs. The owners of the legacy solar projects have been aware from the outset that there was no guarantee that SREC values would be maintained at the levels they preferred.

Since this bill would perpetuate ratepayers' historic over-subsidization of the legacy solar projects, we urge that it not be passed out of committee in its present form. If the Committee wishes to consider this bill, it should be amended to direct the Board to set SREC values that will provide the legacy projects with reasonable, but not excessive compensation. The following is suggested language in lieu of Section 1 of the bill:

The board shall adopt, pursuant to the "Administrative Procedure Act," P.L. 1968, c.410 (C. 52:14B-1 et seq.) rule and regulations to establish values for SRECs that will provide fair compensation for the investments in the solar facilities generating the SRECs. No later than 270 days after the effective date of this section, the board shall file, with the Office of Administrative Law, a notice of a proposed rule to establish the process required by this section.

As the Committee is aware, there are many New Jersey residents and businesses that are struggling to pay their electric bills. The COVID-19 pandemic has been especially financially challenging to many households and families. Although the moratorium on utility shut-offs was recently extended for households that are seeking financial assistance, there are nearly 1 million utility customers in arrears on their utility bills. It is clear that many ratepayers will face the real threat of losing utility service at some point. Rate Counsel urges the Committee not to add to the burdens already faced by the State's electric utility ratepayers to fund additional subsidies that are not needed to fairly compensate the owners of the legacy solar projects, and that will do nothing to advance the State's clean energy goals.

We hope you will consider our comments. Please let us know if you have any questions. We very much appreciate the opportunity to share our comments on behalf of the State's ratepayers. Please feel free to contact our office if you have any questions. Thank you for your attention to these important matters.

Sincerely,

*s/s Brian Lipman,*

Brian O. Lipman, Esq.

Director, Division of Rate Counsel

- c: Kevil Duhon, Deputy Executive Director at New Jersey Senate Democratic Office
- Matthew Peterson, Democratic Aide Services, Senate Environment and Energy Committee
- Eric Hansen, OLS Committee Aide
- Christina Denney, OLS Committee Aide
- Rebecca Panitch, Republican Aide, Senate Environment and Energy Committee
- Christine Mosier, Chief of Staff, Senator Bob Smith
- Pamela Cocroft, Committee Secretary
- Jessica Murray, Chief of Staff, Sen. Greenstein
- Erin Rice, Chief of Staff, Sen. Codey
- Tina DeSilvio, Chief of Staff, Sen. Durr
- Brian Woods, Chief of Staff, Sen. Stansfield
- Maura Caroselli, Managing Attorney for Gas & Clean Energy, Rate Counsel
- Sarah Steindel, Attorney for Rate Counsel
- David Wand, Managing Attorney for Electric, Rate Counsel



State of New Jersey  
DIVISION OF RATE COUNSEL  
140 EAST FRONT STREET, 4<sup>TH</sup> FL.  
P.O. BOX 003  
TRENTON, NEW JERSEY 08625

PHIL MURPHY  
*Governor*

SHEILA OLIVER  
*Lt. Governor*

BRIAN O. LIPMAN  
*Director*

May 13, 2022

Members of the Senate Environment and Energy Committee  
Statehouse Annex  
P.O. Box 068  
Trenton, N. J. 08625

**RE: S2185 (Directs NPU to develop program to incentivize installation of new energy storage systems.)**

Members of the Senate Environment and Energy Committee:

I write on behalf of the Division of Rate Counsel regarding S2185 (Directs BPU to develop a program to incentivize installation of new energy storage systems), which is up before the committee on May 16, 2022. We have concerns about this bill's impact on ratepayers. I regret that I am unable to attend the meeting, but hope you will consider our comments.

As you are aware, Rate Counsel represents and protects the interests of all utility customers – residential customers, small business customers, small and large industrial customers, schools, libraries, and other institutions in our communities. Rate Counsel is a party in cases where New Jersey utilities seek changes in their rates or services. Rate Counsel also gives consumers a voice in setting energy, water, and telecommunications policy that will affect the rendering of utility services well into the future.

This bill would require the New Jersey Board of Public Utilities (“Board”) to provide subsidies for energy storage systems. Rate Counsel has substantial concerns with this bill. It would impose significant costs on the New Jersey’s electric ratepayers, while impairing the State’s ability to leverage other sources of funding for energy storage. In addition, it encourages the siting of potentially hazardous battery storage facilities in disadvantaged communities.

The bill directs the Board to implement a pilot program, and subsequently a permanent program, to incentivize the installation of energy storage systems in New Jersey. The legislation mandates multiply overlapping layers of incentives for both behind-the-meter storage systems, and “front-of-the-meter” systems located on the utility side of the meter. Both types of systems would be eligible to receive “performance incentives” provided through the State’s electric distribution utilities, and designed to compensate the owner for the “full value” of the services provided by the storage system and to meet other specified objectives. In addition, for behind-

the meter systems the Board could consider allowing the net metered solar installations to have capacities larger than required to meet the owners' annualized electricity usage if such installation are paired with behind-the-meter storage, thus increasing these systems ability to receive subsidies in the form of net metering credits. For front-of-the meter systems, the State's electric distribution utilities would be required to adopt tariffs that provide these facilities with compensation for their value to the grid. Finally, during the pilot program, and potentially beyond, energy storage system owners would receive an "upfront incentive" funded through the societal benefits charge ("SBC") and designed to fill the gap between the available revenue streams and the "all-in system costs" for these facilities.

The amounts of all of these subsidies would be determined administratively by the Board. There are no provisions for the Board to utilize competitive processes to minimize the costs of the energy storage program.

The proposed legislation would impose significant costs on New Jersey's utility ratepayers. Although the total costs of the mandated incentives is not specified in the legislation, the Board would be required to allocate at least \$60 million in SBC funds annually to fund the "upfront" incentives during the pilot phase of the program. To place this amount in context, the approved budget for Fiscal Year 2022 the New Jersey Clean Energy Program and State Energy Initiatives includes an estimated \$344.665 million in SBC collections from ratepayers. The \$60 million required to be allocated the "upfront" energy storage incentives amounts to 17.4 percent of the total collections from ratepayers. Since the other incentives required by the legislation are intended to compensate storage owners for the value they provide to the State's electric and transmission systems, ratepayers in effect would be funding \$60 million in subsidies to pay storage owners in excess of the value they provide. The legislation makes no provision for refunds to ratepayers in the event these facilities receive more revenues than anticipated from other sources.

Further, at least \$20 million of the \$60 million is allocated to "upfront" incentives for "customer classes or deployment scenarios that face greater economic hurdles, including, but not limited to low-to-moderate income customers, customers sited in overburdened communities, and owners of stand-alone energy storage systems who do not qualify for federal investment tax credits." Thus, ratepayers would be paying at least \$20 million in above-value subsidies for systems with the highest costs.

At the same time, the legislation would compromise other potential sources of funding for storage. As noted, the legislation contemplates providing subsidies to projects that do not qualify for federal investment tax credits. This provision would, in effect, require the Board to forego a source of funding that would mitigate the cost of the program for ratepayers.

In addition, the subsidies provided in the legislation could impair the ability of storage system owners to receive revenues from the PJM capacity market. The legislation includes a provision that the Board's program may not prohibit energy storage systems from participating in the wholesale market, and thus appears to contemplate this as a source of revenues for these systems. However, the PJM's Minimum Offer Price Rule ("MOPR") established bidding "floors" for subsidized facilities participating in the PJM capacity market. Storage facilities

receiving subsidies under the proposed legislation would be subject to this rule, which would reduce their ability to successfully bid into the PJM capacity auctions.

Finally, the legislation would incentivize the siting of storage facilities in the State's low- and moderate-income communities. As noted above, the legislation reserves a portion of the funds allocated for "upfront" incentives for facilities located in low- and moderate-income communities, and the legislation also allows the Board to include bonuses in the incentives for such projects. Siting large battery storage facilities in these communities would expose the residents of these already overburdened areas to hazards including fire and releases of toxic gases.<sup>1</sup> This seems contrary to the State's environmental justice goals.

The proposed legislation is problematic for all of the reasons cited above. Moreover, it is unnecessary. The federal Infrastructure Investment and Jobs Act P.L. 117-58, includes funding for energy storage to enhance grid flexibility (Section 40107) and for battery processing and manufacturing (Section 40207). Given the federal initiatives to facilitate the development of cost-effective energy storage, there is no need to increase New Jersey's already high energy costs to achieve this objective.

Thank you for considering our comments. Please let us know if you have any questions. We very much appreciate the opportunity to share our comments on behalf of the State's ratepayers. Please feel free to contact our office if you have any questions. Thank you for your attention to these important matters.

Sincerely,

s/s Brain Lipman.

Brian O. Lipman, Esq.

Director, Division of Rate Counsel

- c: Kevil Duhon, Deputy Executive Director at New Jersey Senate Democratic Office
- Matthew Peterson, Democratic Aide Services, Senate Environment and Energy Committee
- Eric Hansen, OLS Committee Aide
- Christina Denney, OLS Committee Aide
- Rebecca Panitch, Republican Aide, Senate Environment and Energy Committee
- Christine Mosier, Chief of Staff, Senator Bob Smith
- Pamela Cocroft, Committee Secretary
- Erin Rice, Chief of Staff, Sen. Codey
- Tina DeSilvio, Chief of Staff, Sen. Durr
- Brian Woods, Chief of Staff, Sen. Stansfield
- Maura Caroselli, Managing Attorney for Gas & Clean Energy, Rate Counsel
- Sarah Steindel, Attorney for Rate Counsel
- David Wand, Managing Attorney for Electric, Rate Counsel

---

<sup>1</sup> B. O'Connor, "Battery Energy Storage Hazards and Failure Modes," NJFPA Today (Dec. 3, 2021), available at: <https://www.nfpa.org/News-and-Research/Publications-and-media/Blogs-Landing-Page/NFPA-Today/Blog-Posts/2021/12/03/Battery-Energy-Storage-Hazards-and-Failure-Modes>.