

**STATE OF NEW YORK
PUBLIC SERVICE COMMISSION**

In the matter of the Advancement of Distributed Solar:

Case 21-E-0629

**Clean Energy Party Comments on the 10 Gigawatt Distributed Solar Roadmap: Policy
Options for the Continued Growth in Distributed Solar**

New York Clean Energy Parties: Solar Energy Industries Association, the Alliance for Clean
Energy New York, the Coalition for Community Solar Access,
and the New York Solar Energy Industries Association.

Dated: March 7, 2022

Clean Energy Party Comments on the 10 Gigawatt Distributed Solar Roadmap: Policy Options for the Continued Growth in Distributed Solar

I. Executive Summary

The New York Clean Energy Parties¹ (“CEP”) thank the New York State Energy Research and Development Authority (“NYSERDA”) and the New York State Department of Public Service (“DPS”) for its ongoing support of distributed solar in New York State and the publication of the “10 Gigawatt Distributed Solar Roadmap: Policy Options for the Continued Growth in Distributed Solar” (“Roadmap”)²

In brief, the CEP, a group of aligned commenters representing the vast majority of solar and storage firms operating in New York recommend that the New York Public Service Commission:

- Approve the overall budget and allocation of funds/capacity between Upstate and Consolidated Edison (“ConEd”) and authorize NYSERDA to finalize details of the blocks/incentive levels as part of its Operating Plan after taking stakeholder feedback into consideration.
- Conduct the NY-Sun Program Review (“Review”) after an initial 1GW_{dc} of capacity has been allocated not at Mid-Program as proposed in the Roadmap.
- Reconvene the Value Stack working group to consider proposals for Value of Distributed Energy Resources (“VDER”) tariff improvements and determine a long-term NY-Sun successor program for distributed solar.
- Expand and improve Cost Sharing 2.0 and the Distributed System Implementation Planning (“DSIP”) process such that distribution planning is more forward looking and the upgrade costs necessary to achieve the Climate Leadership and Community Protection Act (“CLCPA”) goals are not borne solely by distributed energy resource developers.
- Expand eligibility for NY-Sun to allow some projects to fully take advantage of the new funding, avoid project attrition, and help make faster progress toward New York’s CLCPA goals.

¹¹ The CEP is a group of aligned commenters including the Solar Energy Industries Association, the Alliance for Clean Energy New York, the Coalition for Community Solar Access, and the New York Solar Energy Industries Association. Our perspective is informed by on-the-ground experience developing community solar & other distributed energy projects.

² New York State Energy Research and Development Authority/New York State Department of Public Service, “10 Gigawatt Distributed Solar Roadmap: Policy Options for the Continued Growth in Distributed Solar,” December 17, 2021. Hereafter referenced as the “Roadmap” throughout these comments. Available at: <https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7B4C42AAFF-0EB9-4890-AA0D-21C70B088F4B%7D>

II. The CEP recommend the PSC approves the Roadmap without delay.

The New York Clean Energy Parties (“CEP”) thank the New York State Energy Research and Development Authority (“NYSERDA”) and the New York State Department of Public Service (“DPS”) for its ongoing support of distributed solar in New York State and the publication of the “10 Gigawatt Distributed Solar Roadmap: Policy Options for the Continued Growth in Distributed Solar” (“Roadmap”). The Roadmap’s proposed expansion of the successful NY-Sun program is an important step toward reaching New York’s ambitious decarbonization goals.

The CEP strongly recommends that the New York Public Service Commission (“PSC” or “Commission”) approves the Roadmap proposal without delay. Approving the NY-Sun expansion will allow New York’s more than 600 companies to restart project development for customers throughout the Empire State. Many firms have been effectively “on hold” since 2021 and approving the Roadmap this Spring will allow continued progress toward meeting the state’s aggressive clean energy goals.

The Climate Leadership and Community Protection Act (“CLCPA”) sets leading-edge policy on economy-wide decarbonization, climate resilience, and just treatment of disadvantaged communities in New York. As regulators are well-aware, the law requires the power generation sector to obtain 70% of New York’s electricity from renewable resources by 2030, and a 100% of the state’s power from carbon free resources by 2040 as part of the state’s overall carbon emissions reduction efforts. The expansion of the NY-Sun program proposed in the Roadmap will help maintain progress toward these goals and also achieve Governor Hochul’s goal of having 10 Gigawatts (“GW”) of distributed solar installed in New York by 2030.

The CEP strongly recommends the PSC approves the Roadmap total budget request, establishes an earlier program review that includes in its scope changes to the entire Value Stack and consideration of the NY-Sun successor program, expands and improves interconnection upgrade Cost Sharing and the Distributed System Implementation Planning (“DSIP”) process, and expands eligibility for projects to take advantage of the new NY-Sun incentives. While approving the overall budget and allocation of funds and capacity between Upstate and Con Ed proposed by NYSERDA and DPS, we recommend that the Commission directs NYSERDA to consider stakeholder feedback and certain adjustments regarding specific block sizes and incentive levels within the proposed allocation as part of the Operating Plan.

As we will explain in more detail in these comments, if history is any guide to the future, the incentives proposed by this expansion will be allocated quickly and how quickly will be impossible to predict. Consequently, at some unknown time during the proposed NY-Sun expansion policy makers will once again be faced with the question of how distributed solar will be compensated in the future. To avoid that crossroads occurring with too little time to explore more sustainable policy options, we strongly recommend that after approving the NY-Sun

expansion and upon allocating the first GW of incentive capacity, a formal Program Review should occur. Furthermore, the CEP recommend that discussions to consider potential improvements to the entire VDER tariff, should begin as soon as possible and the Value Stack working group should be reconvened.

The CEP strongly support the NYSERDA/DPS Roadmap proposal to continue significant interconnection reforms. Interconnection improvements provide value not just to distributed solar development, but also to the broader electrical system and to ratepayers. Yet, hosting capacity bottlenecks and prohibitive interconnection costs may be the biggest threats to the success of the proposed NY-Sun expansion. Reforms are critical to ensuring there is enough distributed generation hosting capacity to deploy four more GWs of distributed solar. That capacity will not be constructed if the interconnection upgrade costs are borne solely by solar developers. We are confident that the upgrades necessary to create sufficient distribution capacity to deploy 10 GW of DG solar and reach the state's CLCPA goals can be built through improvements to the existing Cost Sharing 2.0 mechanism and to the DSIP process. Detailed recommendations are provided in subsequent sections.

This crucial work will build off the steps taken in the Roadmap to provide additional long-term stability to the distributed solar market, while furthering the state's goal of getting out of the solar incentive business once and for all.

III. The NY-Sun expansion results in significant ratepayer benefits, low costs, and will create billions in industry investment in NY.

The NYSERDA and DPS recommendation to continue the NY-Sun incentives is an expedient, low-cost pathway that gives the industry the certainty it needs to continue deploying distributed solar in pursuit of the 10GW goal. NYSERDA has successfully run the NY-Sun program, and it is logical and reasonable that a continuation of existing policies will provide the greatest administrative efficiency and least market disruption as New York's solar market continues to grow. As stated in the Roadmap, this pathway results in an estimated ratepayer impact of \$0.71/month, with a peak impact estimated at \$0.92/month.³

The ratepayer benefits obtained for this low-cost impact are great, and certainly weigh strongly in favor of implementing the proposed NY-Sun expansion. As stated in the Roadmap, the incremental 4 GW of solar that will be built results in 4,937 gigawatt hours ("GWh") of annual generation, which will reduce carbon emissions by an estimated total of over 64 million US tons over the lifetime of these deployed projects.⁴ As NYSERDA/DPS estimate in the Roadmap, those emissions reductions could be worth as much as \$4.5 billion in avoided social costs.⁵

³ Ibid, p.5.

⁴ Ibid.

⁵ Ibid, Table 9, p. 34.

Bill savings will be available to 127,000 new solar customers, and an estimated 6,000 jobs will be created statewide.⁶ Furthermore, the requested \$1.47 billion investment in ratepayer funds is expected to support \$4.4 billion in private investment.⁷ The collective benefits brought to New York energy customers, workers, and municipalities for less than \$1 a month is a great deal for all consumers.

Another benefit of the expansion of the NY-Sun program is the capability of NYSERDA and the DPS to adapt program incentive levels. As stated in the Roadmap, per the NY-Sun Operating Plan and current Commission orders, NYSERDA and the DPS will evaluate project economics and market conditions as a whole before adding additional capacity blocks.

This review and market check will be critical, as the pandemic impacts on the supply chain, and widespread inflation keep costs higher than they have been in previous years. The continued effects of these unusual market dynamics will impact development costs for an unknown period of time. It is unlikely the market can support further incentive reductions should current cost trends continue. Ensuring that any future incentive blocks are set considering the most up-to-date market conditions will be an important component of the NY-Sun program's success.

Although expanding the NY-Sun program does not represent the least cost option when compared to the other options evaluated, the Roadmap correctly points out that other policy designs such as creating an indexed Renewable Energy Credit would result in significant administrative delay or create other implementation problems.

As outlined in the policy review matrix, CEP also agree with NYSERDA/DPS's assessment that solicitations and auctions are incompatible with the current interconnection processes and requirements. Any model considering a solicitation or an auction would immediately inject a high degree of uncertainty into the market, causing damaging market disruptions that end up increasing the risk to ratepayers. Therefore, the CEP supports the low-cost, administratively efficient expansion of NY-Sun recommended in the Roadmap.

IV. Regulators should accelerate the timeline of the Program Review to avoid pauses in the distributed solar market.

The CEP recommend conducting a formal review before half the program capacity has been allocated. History has shown that New York achieves its distributed solar goals ahead of schedule. While that is a testament to the confidence NY-Sun has provided to the solar industry to continue investing in and deploying distributed solar, it signals that the NY-Sun expansion is unlikely to last until 2030. History has also shown that predicting when incentives will become fully allocated is impossible. Consequently, the state will not know exactly how much time it has

⁶ Ibid, p.6.

⁷ Ibid, p.5.

between Mid-Program and the end of the program to determine what comes next. It could be a very short period of time.

What is clear, however, is that when incentives are completely allocated before additional incentives are available or a successor program is established, the market pauses, and the state has little time to put a new program or policy in place before creating lasting market disruptions that put the overarching CLCPA goals at risk. That level of urgency will prevent regulators from pursuing a potentially more sustainable policy solution for the sake of efficiency. A Program Review that occurs when the first GW of capacity is allocated and considers the full portfolio of policy options for the future of distributed solar compensation puts the state on the best path to achieving market continuity until 2030 and beyond.

V. Regulators should begin work on needed, long-term Value Stack reforms and reconvene stakeholder working groups soon to consider improvements.

In anticipation of incentives expiring, the Commission should return to examining improvements to Value Stack tariff for adoption once the expanded NY-Sun program expires. The Commission has on multiple occasions recognized that the methodology for the VDER tariff should continue to be improved and ensure it provides the most accurate and effective price signals for all distributed energy resources (“DERs”). And the Commission has several outstanding activities related to Environmental Value (“E-Value”) and Demand Reduction Value/Locational System Relief Value (“DRV/LSRV”) which could inform reforms to VDER in time to transition off NY-SUN incentives.

Given the current urgency now to provide clarity to projects in development, the NYSERDA and DPS Roadmap proposal to lock E-Value at its current value and expand NY-Sun is a reasonable approach. However, over the long-term improvements can be made in the E-value to more accurately quantify the value of avoided carbon emissions. As directed by the Commission in their 2018 Order on Energy Storage, the DPS should publish the whitepaper on a time and locationally-differentiated E-Value.⁸ NYSERDA and DPS staff should also further explore improvements to E-Value that track the marginal emissions rate over time.⁹

The CEP recommend that additional VDER improvements be considered. The CEP have outlined in the Marginal Cost of Service proceeding —on which DPS staff is also slated to release a proposal — improvements to DRV/LSRV.¹⁰ DRV value is currently fixed for a period of ten years, with a reassessment of the value at year 11 for the remaining years of the asset’s

⁸ New York State Public Service Commission, “In the Matter of Energy Storage Deployment Program.” Case 18-E-0130. September 12, 2018. p.30.

⁹ Additionally, CEP recommends expanding eligibility for E-Value to all distributed renewable energy projects.

¹⁰ Clean Energy Parties, “Preliminary Comments on Utility Marginal Cost of Service Studies,” Case 19-E-0283, November 11, 2019.

useful life (years 11-25). The current structure of this regulatory review of DRV creates finance risk for any entity developing a project, as financiers assume a zero value for DRV in years 11-25, despite that VDER projects continue to reduce load during their lifetimes.

Relatedly, short-run transmission congestion costs are included within the avoided energy costs through locational based marginal pricing. However, long-run avoided transmission costs have not been included within the current methodology and should be compensated as part of the Value Stack.

As the Roadmap illustrates (and the many years of work preceding it), compensation through the Value Stack that does not require NY-Sun incentives may take many more years to achieve. The CEP view further work on the Value Stack as an opportunity for the state to continue the good progress made in the Roadmap and avoid a future crossroads when incentives are exhausted with time constraints dictating which policy options can be pursued.

VI. DPS should expedite work on interconnection (“IX”) reforms that focus on improved and transparent planning and multi-beneficiary cost allocation frameworks and the PSC should initiate a new interconnection proceeding on cost allocation.

The CEP recognize that while Cost Sharing 2.0 is an important step towards a more equitable framework to assign costs, there is strong evidence that with levels of higher DER penetration and rising interconnection costs, cost sharing alone will not be enough to interconnect the next 4 GW, and that proactive grid planning and an expansion to a multi-beneficiary cost allocation framework must also support the goals of the state.

The CEP urge the Commission to reevaluate the existing regulatory framework given the transformative change our emerging high-DER future represents. The Commission should initiate a proceeding to update its cost allocation framework to reflect that the distribution grid has multiple beneficiaries beyond DER developers.¹¹ The benefits of grid enhancements and infrastructure that integrate distributed generation not only accrue to DER, but also to society, non-DER customers such as residential, commercial, and industrial customers, as well as new load that will connect to the network in the future.¹² In addition, the Commission should immediately require an expansion of utility-driven cost sharing beyond transformer banks and ask utilities to identify hosting capacity enhancing upgrades in alignment with utility work identified during ordinary course of business for asset condition, reliability, and load growth.

¹¹ New York Solar Energy Industries Association, “Comments of New York Solar Energy Industries Association Regarding Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Benefit Act” Case 20-E-1097, March 22, 2021.

¹² Northeast Clean Energy Council’s Alternative Cost Allocation Proposal, February 28, 2020 (DPU 19-55) p. 9-10.

As the roadmap suggests interconnection costs are rising, below Table 1 represents the average cost of upgrade *estimates* faced by the DER industry in recent years.

Table 1: CDG Standalone PV CESIR Upgrade costs based on Nameplate kW¹³

	National Grid	Con Edison	Central Hudson	O&R	NYSEG/ RG&E	Average
2019	\$138/KW	\$171/KW	\$170/KW	\$183/KW	\$158/KW	\$164/KW
2020	\$403/KW	\$125/KW	\$93/KW	\$163/KW	\$302/KW	\$217/KW
2021	\$850/KW	\$112/KW	\$639/KW	\$140/KW	\$525/KW	\$453/KW

In other large DER markets, significant investments need to be made to enable continued growth in areas of limited hosting capacity while coordinating for other critical system benefits. For example, in Massachusetts Department of Public Utilities Docket 20-75 *Investigation by the Department of Public Utilities On Its Own Motion Into Electric Distribution Companies' (1) Distributed Energy Resource Planning and (2) Assignment and Recovery of Costs for the Interconnection of Distributed Generation*, Eversource and National Grid provided estimated interconnection costs to enable queued generation in excess of \$1,000/kW-\$3,000/kW. In that proceeding, the utilities have identified revised cost allocation formulas that result in limited rate basing, which appropriately recognizes the benefits to consumers and future enabled DER capacity, including multi-value opportunities from system benefits that address asset condition, improve reliability, and enhance capability to meet future load growth¹⁴.

A robust distribution planning framework is foundational to achieving New York state targets and the ambitions of the roadmap. We commend the work New York state is undertaking to implement the Coordinated Grid Planning Process (“CGPP”) in Docket 20-E-0197 and specifically the creation of a coordinated, transparent, and stakeholder driven approach to transmission planning. While transmission planning is vital to continued DER growth, distribution planning remains an equally important pillar to facilitate CLCPA goals and needs to operate as an efficient *input* to the CGPP while taking into account the Roadmap and broader CLCPA goals.

The separation of transmission and distribution system planning is no longer appropriate, as issues facing one system are increasingly affecting the other. In fact, the challenges of interconnecting renewable generation to the grid are affecting both utility-scale and DER

¹³ Table 1 represents “estimated cost by utility” for upgrades, provided in utility queue data. Standalone PV was incorporated as hybrid nameplate rating could not be determined from available data. Depending on utility data, 2021 upgrade costs might or might not represent projects pro-rata share under Cost Sharing 2.0.

¹⁴ Responses of NSTAR Electric Company d/b/a Eversource Energy to the questions issued by the Department of Public Utilities on March 23, 2021 (20-75) filed April 6, 2021 and Responses of Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid to Information Requests EDC-1 through EDC-5 (20-75) filed April 6, 2021.

projects. The CEP believe that to comply with the CLCPA, New York should examine the state's electricity system more holistically. We therefore recommend that regulators enhance the existing distribution system planning processes to support the goals of the Roadmap in addition to creating a robust input to the CGPP.

New York has existing frameworks required by the NY Reforming the Energy Vision Orders, specifically the DSIP process, that intended to advance a more holistic approach to distribution planning and enhancements to grid capabilities to enable DER integration. This process benefitted from robust stakeholder engagement, an advisory group, and technical subgroups that produced vetted and thoughtful plans that could enable DSIP goals.

Unfortunately, the DSIP process has lost its original holistic focus and in recent years the process has been used as a mechanism to identify and report on grid modernization plans. While these plans are critical, the DSIPs lack the needed comprehensive focus on distribution system planning, grid operations, and market operations that can create a clear pathway to reaching the 4 GW goal. The CEP offer that the work of the NARUC Comprehensive Electricity Planning Task Force could be instructional in identifying enhancements that can be made, specifically the process outlined in the Jade Roadmap.¹⁵ At minimum, the CEP recommend embedding the following elements to reform the distribution system planning processes:

- **Embed forecast/scenario development into utility projections**
 - Much like the CGPP proposed by the NY JU in Docket 20-E-0197, the distribution planning process should include a transparent and collaborative forecasting and scenario process to identify critical inputs such as beneficial electrification, high DER saturation, asset retirement,¹⁶ etc. These scenarios and forecasts should be revisited frequently. It is imperative that a DSIP and corresponding CGPP process enable the identification of the upgrades needed for any new distributed solar targets.
- **Significantly enhance stakeholder engagement**
 - In the original DSIP-related proceedings the Joint Utilities retained ICF International to lead engagement efforts on their behalf. The Commission should require a third-party facilitator that reports directly to Department Staff to facilitate workshops and technical sessions required to support the goals of an enhanced distribution planning framework. This includes engagement to support

¹⁵ [Jade Cohort Roadmap](#) published by the NARUC-NASEO Task Force on Comprehensive Electricity Planning, February 2021.

¹⁶ For instance, New York has 1,378 MW of distributed hydro resources with a median capacity of 1.8 MW and a median in-service date of 1956 according to NYISO Gold Book 2020 Table III-2. Forward-looking system planning presumes that these resources will remain indefinitely. However, given that these are aging, independently-owned assets facing challenging market conditions and often in remote areas, this is not a safe assumption. The contribution of these resources to the distribution and transmission system, and the system upgrades that would become necessary if they were to retire, should be evaluated.

scenario/forecasting inputs but also to identify and prioritize areas of value, feasibility, technical alternatives, and implementation.

- **Creation of hosting capacity metrics**
 - Creation of metrics and performance indicators such as those proposed by NYSEIA in the form of a hosting capacity dashboard to accurately reflect the “DER State of the Grid.”¹⁷ This can be used as a tool to monitor progress against utility investment and renewable deployment in accordance with state targets. The creation of key metrics would also allow stakeholders to identify and address issues and trends regarding hosting capacity; and ensure that distribution plans adequately address those constraints and barriers that are most impactful.
- **Consideration of alternative technologies**
 - The layering of implementable distribution technologies to an infrastructure upgrade can provide greater incremental capacity and interim solutions to capacity constrained areas. In Docket 20-E-0197 the New York JU identified distribution technologies, including the “Flexible Interconnection Capacity Solution” proposed by Avangrid as an alternative to infrastructure upgrades. Infrastructure should be modeled comprehensively to meet the generation and load needs of the system and include opportunities for low-cost and implementable solutions that can be deployed on an interim or permanent basis to resolve a hosting capacity challenge.
- **NY DPS and NYSEDA should identify enhanced structure and accountability.**
 - An enhanced planning process alone may not provide the market enough certainty that certain infrastructure or technology deployments will be available. The NY DPS and NYSEDA should consider the creation of key targets or metrics to assure some level of accountability for grid modernization and infrastructure deployment.

The CEP emphasize that enhancements to the existing DSIP process and planning frameworks are immediately actionable and should not be delayed. This work can be performed concurrently with ongoing efforts to map and implement a CGPP and ultimately will serve as a robust input to this process. An expansion of Cost Sharing 2.0 and revamped DSIP together will create opportunities for all DER, not just distributed solar where there are currently prohibitive barriers.

VII. CEP recommends expanding eligibility for the NY-Sun program to include some projects that received partial incentives as the previous blocks closed.

As the NY-Sun program was winding down in 2020 and 2021 capacity blocks for the base incentive and the adders closed at different rates. As a result, some developers received a base

¹⁷ Joint Utilities of New York, “State of DER Dashboard Industry Initiative,” May 12, 2021. JU Hosting Capacity Working Group Meeting, slide 28. Available at: <https://jointutilitiesofny.org/utility-specific-pages/hosting-capacity>

incentive with no adders, or conversely adders with no NY-Sun base incentive.¹⁸ The CEP recommend that funding should be allocated to prevent project attrition due to the uneven closing of the previous NY-Sun blocks.

- a) Projects with previous base incentive but no Community Adder should be eligible for the new Community Adder.*

During 2021-2022, 251 projects, totaling more than 371 MW of capacity, received the previous base incentive of \$0.11/W but no Community Adder (“CA”) or Inclusive Community Adder (“ICSA”) These projects are in jeopardy. For example, the state’s own analysis shows that Upstate remote net-metered projects need \$0.17/W, so \$0.11/W is insufficient to bring these projects to fruition, effectively providing no path to commercialization. The CEP recognizes the importance of disallowing projects to drop out of the NY-Sun queue and re-enter to receive higher incentives. However, the state should make an exception in this limited case, otherwise viable projects with advanced development maturity milestones will likely be lost, along with the investment and contribution to CLCPA goals those projects would bring. Applying NYSERDA funds to mature projects is as good an investment for NY ratepayers than applying funds to newer projects that are not as de-risked. Projects that have only secured a portion of the applicable NY-Sun incentive because available funds were exhausted should not be assumed to be completed under the 6 GW, and without additional incentive support up to the amount that NYSERDA already acknowledged is needed for new projects, these projects are at risk.

- b) Projects with adders but no base incentive should be eligible for additional funding.*

Typically, developers would take advantage of the NY-Sun base incentive and supplement the project with available adders to meet customer needs and cover additional costs associated with the project type. For instance, a carport project would apply for a base incentive and any additional incentive to help cover the extra cost of the carport.

Based on member feedback, projects only receiving a limited amount of adder funding without the base may also be in jeopardy. According to NYSERDA, 24 community solar projects (totaling nearly 124 MW of capacity) received either the community adder, inclusive adders, or a brownfield adder but no base incentive.¹⁹ The CEP recommends that funds be made available to support projects in this circumstance, with the funds coming from relinquished incentives. NYSERDA should report on the extent to which previously relinquished NY-Sun funding, or any remaining unallocated funds from the previous NY-Sun budgets could be used to ensure this pool of projects can move ahead.

¹⁸ In some instances, some community solar projects received a base incentive were able to access the Market Transition Credit and Community Credit, or were reconfigured to be remote crediting projects, ensuring the projects would reach construction.

¹⁹ NYSERDA response to SEIA information request, February 16, 2022.

- c) Projects eligible for expanded NY-Sun program should also be eligible for “locked in” E-Value.*

The Roadmap uses the current environmental value (“E-value”) of \$0.031/kWh as part of the VDER tariff in its underlying assumptions. However, approximately three months passed from the time the NY-Sun incentives were fully allocated in upstate New York – roughly in February 2021– and the decision to increase the environmental value component of VDER in April 2021. In that time, many projects that are now eligible for NY-Sun incentives under the program expansion had already submitted utility interconnection applications, which is the trigger for locking in a project’s E-value, before the new incentive amounts, or even the program design itself was known. As a result, some projects that will reserve future NY-Sun incentives have a lower E-Value of \$0.027/kWh than the one assumed by NYSERDA/DPS. That difference in E-Value roughly translates to a \$0.06 to \$0.08/W difference on an upfront adder equivalence. Thus, projects that continued through the interconnection process despite the pause in incentives are at a significant disadvantage.

The CEP recommend that given the higher E-Value is part of the assumptions around new project funding, that any project eligible for NY-Sun should be eligible for the higher E-Value. As part of its authorizing Order approving the Roadmap, the PSC should clarify this element of eligibility. Otherwise, these projects, simply based on the timing of their utility interconnection application, are being penalized and may fall short of the level of incentive needed to reach completion.

VIII. CEP recommends making “opt-out” community distributed generation eligible for the community adder, expanding the ICSA as part of SEEF, and supports the Roadmap’s recommendation to expand SEEF eligibility to new customers.

CEP agrees with the Roadmap’s support for the continued expansion of Community Distributed Generation (“CDG”) and prioritizing access and benefits to low-income customers and Disadvantaged Communities. As outlined in the Roadmap, the CDG market has evolved. New business models have emerged, particularly the deployment of CDG through a community wide opt-out model, with the incorporation of CDG into Community Choice Aggregations (“CCAs”). These new business models bring greater choice to New York customers that want to benefit from community solar and can improve access to community solar for low-income customers. The CEP provide the following comment in response to some specific eligibility questions posed in the Roadmap and to provide more feedback on the proposed CDG offerings through the expanded Solar Energy Equity Framework (“SEEF”).

- a) Opt-out CDG projects should continue to be eligible for the Community Adder.*

The CEP supports having the full Community Adder available for opt-out community solar projects. Opt-out CDG through CCAs may be a path to significantly reducing customer

acquisition and management costs for community solar projects, but those cost savings are not well known and may take time to materialize because the model is new and the state is still in the process of determining requirements for CCAs, some of which will dictate the ultimate costs to implement them. Furthermore, while customer acquisition costs associated with opt-out CDG models are lower than opt-in models, there are unique administration and management costs which add to maintenance costs. Not being able to access the Community Adder risks stifling this promising model. A lower, CCA-specific Community Adder carries the same risk if the state sets it too low (a higher likelihood given the uncertainties mentioned) while also making Program administration and industry adoption more complicated.

Under-compensating CCA projects and adding complexity to this market will disadvantage new entrant opt-out CDG providers, lower the amount of community solar provided to residents and lower the amount of solar available to low- to moderate-income residents and disadvantaged communities (“DACs”). It’s simply too early in the development of this new business model to develop a perfectly fine-tuned adder. Therefore, a unified incentive for CDG at the outset of the NY-Sun expansion will continue to support the expansion of CDG benefits to New York residents without inserting regulatory barriers between different community solar models. NYSERDA will have an opportunity to adjust during the program as the CDG CCA business model matures and after the rules that govern them are finalized.

b) The expanded SEEF should include additional funds for the Inclusive Community Solar Adder.

CEP recommends that the PSC approve the proposed SEEF budget and that NYSERDA use those funds to expand the ICSA program. As referenced in the Roadmap, one of the first major community solar initiatives implemented within the SEEF was the Inclusive Community Solar Adder (“ICSA”).²⁰ Since the ICSA was launched, NYSERDA has received applications for 538 MW across 173 community solar projects. The additional incentive provided through the ICSA, combined with the deployment of net crediting, will allow the market to directly serve low-income residents. The Roadmap currently proposes that half of the SEEF capacity be targeted specifically to “providing LMI residential customers with direct, guaranteed electric bill cost savings.”²¹ Eligible customers can receive their benefits through the installation of on-site solar, direct participation in a community solar project, or participation through an opt-out mechanism.

²⁰ The Con Edison territory has only had a 21% ICSA subscription which has remained at that level for all of 2022. With a submitted ICSA adder amount of ~21,000 kW as of March 2, 2022, if the average system size is 8 kW, then only 2,625 residents are benefiting from this program, while the Con Edison territory serves 3.4 million customers in total across NYC and Westchester County. Estimating that about 9,000 of those customers as of October 4, 2021 participate in all community solar systems in its territory, this serves only 0.26% of their utility service area population.

²¹ Roadmap, p.40.

While not explicitly stated, the PSC’s approval of the NYSEERDA/ National Grid petition for an Expanded Solar For All program²² can only cover up to 300MW of the 1,600 MW targeted by the Roadmap for the SEEF, and the Roadmap states that half of the SEEF capacity, 800 MW, must provide direct, guaranteed bill savings to eligible customers. As the Roadmap considers multiple ways of supporting clean energy access to low-income customers, the CEP strongly supports a healthy expansion of the ICSA from the proposed SEEF budget, which brings direct savings to participating customers. Multiple workable paths to providing greater benefits to low-income customers will help achieve the Roadmap’s, and the CLCPA’s, requirements to equitably sharing the benefits of clean energy with low income customers.

c) The expanded SEEF should make funding available to public and private schools and school districts that serve primarily DAC communities and LMI households.

The CEP supports the recommendation in the SEEF framework that would make public and private school districts eligible to participate in social equity programs so long as the institution primarily serves a DAC or LMI community. The Roadmap recognizes that these larger customers would represent a “lower cost path” to achieving the goals of the CLCPA, but must be balanced with measures to ensure individuals receive direct savings benefits.

IX. CEP accepts the Roadmap’s prevailing wage requirements for projects greater than 1 MW in size but recommends robust financial support along with delaying implementation of the requirement to the Order’s effective date.

The Roadmap proposes applying prevailing wage (“PW”) requirements to all solar projects that are equal to or greater than 1 MW_{ac} in size. In addition, the Roadmap budget includes \$239 million to offset the cost these new requirements. Furthermore, the Roadmap recognizes that many projects in advanced stages of development before the proposal was released had not accounted for the increased labor costs associated with prevailing wage. Therefore, the Roadmap proposes applying the new prevailing wage requirement only to projects that have submitted an interconnection application after the Roadmap release date.

Our organizations appreciate the Roadmap’s well-reasoned approach to applying PW. Providing state incentives to offset the cost of implementing prevailing wage is consistent with many of our organizations’ previous recommendations. Furthermore, the CEP understands the thoughtful application of these new requirements and agrees with the proposal to apply the prevailing wage requirements on a forward-looking basis. Projects that have already submitted interconnection application documents or are nearing that stage of development would have a difficult time absorbing new costs and would likely no longer move forward.

²² New York State Public Service Commission, “Order Approving the Expanded Solar For all Program with Modifications.” Case 19-E-0735, January 20, 2022.

However, the CEP believe the underlying PW cost assumptions NYSERDA/DPS used to allocate funds to offset the higher costs of PW are outdated (i.e. \$0.125/W_{dc} Upstate and \$0.20 W_{dc} in ConEd). A recent survey of thirty-two NYSEIA members reveals anticipated average costs \$0.20-\$0.25c/W_{dc} for 1 MW projects and \$0.15-\$0.20c/W_{dc} for 5 MW projects.²³ Notably, the cost of implementing PW is likely higher than the base incentives recommended in the Roadmap. Although it is helpful that NYSERDA/DPS recommends additional state incentives to offset the cost of implementing prevailing wage, if those incentives are based on outdated costs they will be insufficient and will result in an increase in net project costs. If all other factors remain equal, the higher net project costs will result in fewer projects built.

Additionally, the industry needs time to administer PW. Setting up apprenticeship programs take significant time and commitment, which should be considered in implementing any penalties or fines relating to PW. Given the significant change proposed by applying these requirements to projects larger than 1 MW_{ac}, we recommend delaying the implementation of this provision to the PSC's Order's effective date. A slow and thoughtful rollout that is very mindful of impact on industry is crucial to preventing market disruption. This additional time allows industry more time to prepare the administrative apparatus for implementing the new requirements.

Furthermore, we recommend that the NY Department of Labor, in consultation with NYSERDA, issue a new schedule and/or rates specific to general solar labor per county, creating a set rate to understand for bidding or forecasting. Updated schedules would help to make financing simpler as the industry adopts these new requirements.

Consequently, we strongly recommend that the PSC direct NYSERDA, in development of the Operating Plan, with gathering additional stakeholder feedback and explicitly stating in the Operating Plan what level of per project incentive from the \$239 million budget will be available to projects covered by the PW. Notably, the \$239 million budget does not seem to include support for ongoing operations & maintenance (O&M) expense for projects once in service. The CEP recommends clarifying and exempting O&M work from a prevailing wage requirement until additional support mechanisms are established.

CEP is aware that across-the-board solar project costs look very different in 2022 based on Federal legislation, trade policy, supply chain disruptions, labor shortages, and other impacts related to the recent pandemic. As a result, the CEP recommends NYSERDA and DPS regularly review their cost assumptions and be prepared to adjust the size of the PW pool of funding and per project incentive level based on changing conditions.

²³ The NYSEIA survey did not break out costs by region, but Con Ed prevailing wage costs would be significantly higher than the reported averages.

X. CEP supports the capacity allocation and overall funding allocated to projects in Con Edison but recommends NYSERDA makes cost neutral adjustments to the specific incentive levels in its Operating Plan.

The Roadmap proposes approximately 450 MW of distributed solar project incentives in the Con Edison service territory to support a mix of residential, non-residential, and commercial and industrial (“C&I”) projects. As noted in the Roadmap, solar “development in Con Edison territory has distinct cost, revenue, and siting constraints that are significantly different from upstate development.”²⁴

Also of note, “many of New York State’s DACs (as identified in the State’s interim criteria for DACs) are located in the downstate region,” presenting significant challenges in meeting the State’s goal of bringing 35-40% of the benefits of clean energy programs to DACs.²⁵ As recognized in the Roadmap, CDG plays a unique role in serving DACs, and the Roadmap anticipates that 70% of projects developed through the proposed incentive structure will be CDG.

The CEP agree with the Roadmap’s assessment of siting constraints in the Con Edison territory along with the importance of CDG in serving the territory’s DAC. As such, we support regionally separate rates for Upstate and Con Edison customers and agree with the total budget and capacity allocations to Con Edison proposed in the Roadmap (~\$420 million in Con Edison territory for 450 MW of capacity). However, we disagree that the proposed incentive structure (i.e., specific blocks and incentive levels within the overall ConEd budget and capacity allocation) will lead to the anticipated 70% CDG and 30% remote crediting split.

Until October 2021, CDG projects in Con Edison territory received a Community Credit valued at \$0.12/kWh. The Community Credit encouraged robust CDG development in Con Edison territory, such that ~71% of the C&I capacity for 2019-2021 applications were CDG. The proposed \$0.10/W CDG adder will not adequately replace the \$0.12/kWh Community Credit nor will it make up for the unique challenges of developing CDG in the Con Edison territory, and as a result, the vast majority of projects would be configured as remote crediting projects rather than CDG, leading the State to fall short of the 70% CDG goal and jeopardizing the State’s DAC target.

We propose that in implementing the NY-Sun Operating Plan, NYSERDA make several adjustments to the MW Block and Adders proposal for ConEd to better support the solar industry and to better align solar development with the equity objectives outlined in the CLCPA. These adjustments will not increase the Con Ed budget or divert resources from Upstate incentives.

²⁴ Roadmap, p 7.

²⁵ Roadmap, p35.

In brief, we recommend NYSERDA consider the following adjustments to the NY-Sun MW block program in the development of the Operating Plan. These proposed incentive levels are based on input from several NYC solar developers as well as a payback period analysis, whereby we adjusted adders to ensure that prototypical residential, low-income residential, affordable housing, mid-size commercial, onsite large commercial and CDG projects are all economically viable.

Our proposal (see Appendix A) includes three key elements. First, we recommend breaking the NYSERDA proposed C&I MW Block into three tranches including a category for projects a) 50 MW tranche for project less than 200 kW in size b) 100 MW tranche for projects between 200 kW and 1,000 kW and c) 150 MW tranche for projects larger than 1,000 kW. Creating separate tranches allows NYSERDA to better define appropriate incentive levels for small and large projects and to protect the multifamily/small commercial segment from the risk that a few large projects will take all the capacity.

Second, the CEP propose a significant increase in the CDG adder to \$0.80/W, principally paid for by reducing the base incentives for C&I projects above 200 kW. With the expiration of the Community Credit there is limited incentive for developers to create CDG projects and serve mass market customers. In addition, we propose creating stackable adders for Canopies, Affordable Housing, CDG, and ICSA. Stacking adders and increasing the CDG adder in this way allows projects to become economic and encourage the continued development of CDG versus remote crediting projects expanding clean energy access to more Con Edison customers.

Third, we propose increasing the Residential base incentive to \$0.30/W and maintaining its 150 MW tranche, as well as increasing the Residential LMI adder to \$1.20/W. Increasing the residential incentive will help reinvigorate the Con Ed residential market and offset some of the losses associated with the establishment of the Customer Benefit Charge. Furthermore, a \$1.20/W adder for LMI homeowners will bring the payback period to below 10 years without tax incentives and encourage residential solar finance companies to offer competitive offerings to low and moderate-income customers.

This alternative proposal will provide increased support for the residential, multifamily, affordable housing, and small commercial market segments. The proposed CDG Adder is at a level that would be sufficient to encourage more projects to serve mass-market and LMI customers rather than serving onsite load or remote crediting, which will primarily benefit corporate energy users. This alternative proposal will improve the program's alignment with the equity goals of the CLCPA while deploying the same amount of solar capacity and at no additional cost to ratepayers versus NYSERDA's proposal.

XI. LIPA should take steps to encourage distributed solar and should also start discussions on tariff reform.

Because Long Island Power Authority (“LIPA”) customers do not pay into the Clean Energy Fund, which provides funding for NY-Sun, the NYSERDA/DPS plan does not support solar incentives on Long Island. However, the CEP recommend LIPA should take further steps to encourage increased solar deployment. First, the CEP recommend NYSERDA undertakes a “missing money” analysis for solar projects on Long Island, similar to the analysis it performed for the rest of the state. Based on the results of that analysis, which we believe will show a revenue gap for Long Island projects, we encourage LIPA to consider improving LIPA’s value stack tariff along the lines of the recommendations describe in Part IV of these comments; improving time-of-use rate tariffs that encourage paired storage and solar and do a better job of meeting Long Island’s unique distribution system needs, or petitioning for incentives paid for from other more flexible funds under NYSERDA control. Additionally, LIPA should consider interconnection reforms that can improve integration of solar and DER to the Long Island electric network.

XII. Agricultural protection and land use.

The solar industry looks forward to continuing our collaborative work with the farming community in New York State to advance the objectives of the CLCPA while preserving the State’s vital agricultural sector. Responsibly sited solar projects offer farmers a steady revenue stream for decades, allowing their farm enterprise to continue production and to better endure market volatility and economic disruptions. Moreover, with partnership from the agricultural community, solar projects can be designed as a form of medium-term conservation with strategies to improve soil health, protect pollinators and other species, and reduce runoff and erosion, all of which are essential for the continued production of food.

Also, solar projects can be designed to meet the power needs at a farm such as refrigeration systems for milk cooling, and water pumping and irrigation systems. With proper planning and input from stakeholders, solar development offers our agricultural community the chance to reinvest in their operations, remain in farming and provide benefits for their community.

Furthermore, solar developers are already adhering to New York State Department of Agriculture and Markets mitigation guidelines for solar projects on agricultural land, serving to protect topsoil and prevent any permanent loss of farmland as New York farmers make the choice to take advantage of new opportunities to harvest the sun with portions of their land. Agriculture and renewable energy working together can advance many shared climate and non-climate objectives.

In addition to continuing to develop traditionally designed solar projects on agricultural land, New York has an opportunity to more actively promote the development of dual-use solar plus agriculture, or agrivoltaics, which allow for agricultural production to occur on the same land as the solar array. These projects have the unique benefit of allowing the land to serve two

simultaneous uses and achieve multiple policy goals, including agricultural land preservation, rural economic development, and clean energy deployment. As such, the CEP is supportive of the State's Agricultural Technical Working Group exploring a pilot program for dual-use incentives for solar sited on agricultural lands, as well as continued discussions around appropriate agricultural preservation and mitigation requirements and practices going forward.

XIII. Conclusion and Recommendations.

Thank you for considering these comments. We look forward to continuing to work with NYSERDA and the DPS to create a strong distributed solar market in New York State. Please contact any of the parties listed below with any questions about these recommendations.

Respectfully submitted,

/s/

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Appendix A

Alternative Proposal for Con Edison Blocks

- **Break the C&I MW Block into three tranches by creating separate tranches for <200 kW, 200- 1,000 kW and above 1,000 kW**
 - Allocate 50 MW to the <200 kW tranche, a proportionate share based on the last 3 years of development, and 100 MW to the 200-1,000 kW tranche.
 - Creating a separate tranche for smaller projects will allow NYSERDA to define appropriate incentive levels for small vs large projects and to protect the multifamily/small commercial segment from the risk that a few large projects will eat through the MW blocks quickly.
 - Based on NYSERDA's application data from 2019-2021, commercial projects <200 kW in Con Edison territory had an average turnkey price of \$3.45/W. Meanwhile, projects between 200-1,000 kW during the same period had an average price of \$2.39/W. This price delta demonstrates the need for different incentive levels for small and mid-size commercial projects.
- **Create generous stackable adders for Canopies, Affordable Housing, CDG, and LMI CDG (ICSA)**
 - Without the Community Credit (\$0.12/kWh; Net Present Value of \$1.41/W), there is limited incentive for developers to create CDG projects and serve mass market customers (i.e. renters, many of whom are LMI). NYSERDA could offer a significant CDG adder (e.g. \$0.80/W_{DC}) to help tip the scale from onsite and remote crediting to CDG, expanding access to clean energy among LMI renters and better aligning the solar industry with NY's CLCPA goals.
 - Increase the Canopy Adder to \$0.40/W_{DC} and eliminate the system size cap for rooftop solar canopies. Steel prices have increased significantly in the last year, and a higher adder is required to support parking lot and rooftop solar canopy projects.
 - Remove the 200 kW cap on the affordable housing adder. This change will increase the amount of solar energy that gets built on affordable housing while staying within NYSERDA's proposed Solar Energy Equity Framework funding.
- **Increase the Residential base incentive to \$0.30/Watt_{DC}**
 - Growth in the residential solar market in Con Edison has been relatively flat in recent years. The CBC threatens to slow residential solar adoption, and a modest increase to the incentive will help offset that impact and support continued growth. Similar to the Upstate offset that went into effect January 1, 2022, the current Con Edison residential block should be increased with existing funding to \$.30/W.
- **Increase the Residential LMI adder to \$1.20/Watt_{DC}**
 - Low-income homeowners face significant barriers to solar adoption, including the high upfront cost, the need to complete roof repairs, and their inability to benefit from income tax incentives. A \$1.20/W_{DC} adder for LMI homeowners will bring the payback period to below ten years without tax incentives (enabling cash

purchases) and encourage residential solar finance companies to offer competitive PPAs and leases for LMI homeowners.

- **If necessary, pay for expanded CDG, canopy and residential incentives through base incentive reductions for the 200-1,000 kW tranche and >1,000 kW tranche**
 - Strong base incentives are important, however, if the PSC does not want to increase overall spending in Con Edison then we recommend reducing the base incentives for the >200 C&I projects to pay for incentives that either offset real costs (such as the canopy adder based on increased steel prices and the residential incentive based on the newly imposed Customer Benefit Contribution) or help achieve the policy goals outlined in the CLCPA (CDG). This also fits with the goal of the State to step down and ultimately phase out incentives in any market segment where project economics are adequate.
- **Create 50 MW blocks at the proposed levels and do not decrease the incentive levels until all funds are exhausted or congress enhances the federal solar tax credit**
 - Based on the interconnection queue, we anticipate that a lot of the C&I capacity in this program will be allocated toward projects quickly once the program begins accepting applications.
 - Creating larger blocks of incentives will provide greater certainty to solar customers and developers, helping to stabilize and energize a market that has been relatively dormant for the last 6-12 months.
 - While the MW block program normally has incentives that decrease over time, the federal tax credit is scheduled to decline over the next 3-years so we propose that NY-Sun incentive levels hold steady unless/until federal incentives or market conditions materially change.

NY-Sun Incentive: Alternative Program Design

Size Range (kW)	Base Incentive (\$/W)	MW
<200 kW	\$ 1.20	50
200-1,000 kW	\$ 0.80	100
1,000-7,000 kW	\$ 0.40	150
Residential	\$ 0.30	150

ADDERS	
Con Ed CDG Adder	\$ 0.80
Affordable Housing Adder	\$ 1.20
Residential LMI Adder	\$ 1.20
Canopy Adder	\$ 0.40