CS Energy

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Via Board's External Access Portal only

New Jersey Board of Public Utilities

c/o Board Secretary Aida Camacho

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Re: Comments Regarding Docket No QO21101186 - IN THE MATTER OF THE COMPETITIVE SOLAR INCENTIVE ("CSI") PROGRAM

Dear Secretary Aida Camacho and Commissioners,

CS Energy is pleased to submit the following comments on the permanent Competitive Solar Incentive Program ("CSI"). We have first-hand experience developing and constructing projects for similar programs in other states and we are glad to see staff drawing on lessons from these similar efforts in constructing the CSI program.

Headquartered in Edison, NJ, CS Energy is a industry-leading development, engineering, procurement, and construction (EPC) energy firm that designs and builds optimized projects in solar, energy storage, and emerging energy industries. We have been a long-standing participant in the NJ markets since 2007 and have completed many flagship projects in the State including the largest single interconnection project under Subsection (r), multiple subsection (t) projects, along with an operational PY1 Community Solar Project, the Linden Hawk Community Solar Project. CS Energy has successfully designed and installed over 1.35 GW of solar projects across the United States, including nearly 300 MW's in NJ. We are proud to be a part of the fight against climate change and of NJ's transition to a cleaner future.

CS Energy is a participating member of the New Jersey Solar Energy Coalition ("NJSEC"), SEIA, and the Mid-Atlantic Renewable Energy Coalition ("MAREC") (collectively the "Joint Solar and Storage Parties") and has collaborated with these organizations in development of their comments. We are supportive of many of the joint comments submitted by these organizations, but our experiences and resulting opinions are in some cases different than that of the trade organization's consolidated comments.

Therefore, we are submitting separate comments to highlight our recommendations given our unique experience in NJ and in programs similar to CSI in other state markets.

I. CS Energy Responses to Questions for Stakeholder Feedback

Bid Tranches

1. Please comment on the proposed definitions of the different tranches. Do they clearly indicate what types of projects will be eligible, especially for the Grid Supply on the Built Environment tranche and the Grid Supply on Contaminated Sites and Landfills tranche? Are any clarifications needed?

   The Act allows the NJBPU to consider project size when establishing the bidding tranches. Section 4(2)(b) of the Act allows the board to "take into account the size of the facility" when establishing "distinct bidding categories" (called tranches in the straw proposal). From the discussion, recommendations, and the questions posed to stakeholders, it does not seem that implications were considered for project size when establishing the proposed tranches.

   Project size is an important factor that has significant implications for project development across New Jersey. The NJBPU should establish a sub-category in the Grid Supply tranche for projects less than or equal to 10 MWdc in size. We are concerned that the combination of PJM Queue reform, the unique project size constraints imposed by the various distribution and transmission system topologies of NJ's utilities, and the restrictions imposed by the County-by-County development limit will make it difficult for projects throughout NJ to compete equally in the Grid Supply category. Establishing a sub-category for projects 10 MW's and below will ensure that projects throughout the state can be part of the CSI Grid Supply program, and will help ensure that all of the economic development and clean energy benefits will not be concentrated in one part of NJ.

   Additionally, a primary goal of the Act is to encourage solar development on contaminated lands and landfills, and we think the definition of Tranche 3 strongly supports that goal. We do not see any need for further clarification on this definition.

2. Are the types of projects included in each tranche appropriate to compete against each other? Why or why not?

   We see value in floating solar projects and would encourage NJBPU to consider either including them in Tranche 2 or establishing a separate tranche specifically for floating solar. The floating solar projects that we are familiar with in NJ required rigorous review and study by NJDEP and local communities and occupy areas that arguably fit aspects of the Built Environment definition and even some aspects of the definition of

Contaminated Lands. Placing these projects in Tranche 2 to compete against rooftop and carport projects is more appropriate competitively.

See our comments in Question 1 recommending a sub-category based on project size. To ensure that the benefits of Grid Supply projects are available more equally across NJ, a sub-category within the Grid Supply tranche should be established for projects less than or equal to 10 MW in size. With no considerations for project size it is likely that projects in the Grid Supply category will be concentrated in southern New Jersey, where there are more areas suitable for very large-scale solar projects.

3. Is a maximum land area of 10% "Associated disturbed areas" for Grid Supply on Contaminated Sites and Landfills appropriate? Why or why not?

   Solar project developments balance many competing considerations and the certainty provided by the associated disturbed areas framework can allow viewshed and environmental concerns to be considered and may also allow projects to achieve the scale necessary to be competitive in the program.

   However, we have found that land contamination typically runs with the deeded tax parcel not historic limits of waste or contamination. For example, it would not be unusual for the 10% associated disturbed areas approach to result in a large portion of a deeded parcel historically associated with contamination being isolated and underutilized. We recommend that the NJBPU reconsider its approach here and take a more practical real estate-based approach. Using a one to one ratio instead of the one to nine ratio proposed (10% associated disturbed areas) while constraining development within the tax parcels affected by the landfill or contamination would be more efficient. Gaming of such a system could be limited by applying the standard to parcels that existed when the Act was passed. This type of approach will allow projects to scale and ensure that the practical limits of property re-development are considered.

4. What reforms would be most helpful to enabling public entities to participate in the CSI Program? Would bid process support or formalized bidding assistance be of use to public entities?

   No comment

5. The Straw Proposal does not currently envision differentiating between net metered projects based on location (that is, no special consideration for net metered projects on contaminated land, for example, or for rooftop as opposed to ground-mounted net metered projects). Please comment.

   No comment

STORAGE

6. Please comment on the proposed structure of the storage bid and incentive.

We would ask for clarification on the 4 hours of eligible storage. Solar industry practices generally pair 4 MWh of storage capability with 1 MWac of solar nameplate capacity. NJ's programs more typically functions on a MWdc basis.

Please clarify if the intention of the 1MW / 4 MWh definition is indeed consistent with solar industry practice of 1 MWac.

We would suggest that the NJBPU consider carefully the approach outlined in the recommendation for Tranche 5 that details how solar+storage projects will be compensated. We understand and support the dollars per solar MWh of generation approach. However, we think the limit under which a project can collect revenue should be set on an annual basis, rather than on a monthly basis. Solar production can vary significantly on a monthly basis year to year, and maintenance/casualty events can impact monthly production significantly. The solar industry typically assesses risks and underwrites projects with annual production variability in mind. Exposure to monthly production variability when determining the cashflows necessary over and above PJM market revenues necessary to finance the storage component of a solar project may lead many developers to increase their bids.

Additionally, the proposal does not include any guidelines for assessing PVSyst or similar production estimates. While it is likely that the NJBPU will review projects more closely as part of the full registration process under the program, we are concerned that this monthly settlement approach may result in the introduction of gaming behavior by bidders in the preparation of PVSyst or similar production estimates as part of their initial bids for Tranche 5 participation.

We would note that NY takes an annual approach with projects in their LSR program, although they enter into project-specific agreements.

We would encourage an approach where the revenue collected by a solar+storage project is limited on an annual basis by an annual solar production estimate, rather than for each modeled month in order to be consistent with solar industry practices and to lower the relative significance of solar production estimates submitted with bids.

7. Will the proposed storage adder tranche opportunity change bidding behavior? If so, how?

Our experience with similar bidding opportunities in other states is that the framework of independent solar-only and solar+storage bids result in no change in bidding behavior for the solar only offering for a project. PJM's interconnection study process would

appear to constrain developers from freely adding or removing storage from their projects. As a result, NJBPU should propose a framework that would allow projects to move forward if a project seeking to add dc-coupled storage to an existing solar only queue position is denied via PJM's Surplus Interconnection Request process.

8. Net metered projects are currently not recommended to be able to compete for a storage adder. Please comment.

   We agree with the proposed approach from the NJBPU and do not agree with the approach recommended by the Joint Solar and Storage Parties. An approach here that focuses on adding storage capacity in the Grid Supply program will help address some of the externalities created by incentivizing intermittent solar on the grid and create flexibility to allow delivery of energy during periods of peak demand. Storage at net metered facilities is often associated with solving problems related to resilience and demand charges, and arguably there are other approaches the NJBPU could take to help the market find solutions to those issues.

9. Do you anticipate that within the next five years, adding storage to a project will reduce the overall SREC-II support needed, rather than increase it?

   As solar penetration increases, we expect that the benefit of having storage capacity to shift energy delivery to peak evening hours will increase. While forecasting overall SREC-II support needs is difficult, we expect market forces and technological improvement to apply pressure that will make energy storage an essential component of any grid supply solar project in the next five years.

PROJECT QUALIFICATION AND MATURITY

10. Please comment on PJM queue position as a pre-qualification requirement and the implications of PJM queue reform. If PJM queue position were not a requirement, what alternatives should the Board consider?

    We think it makes sense to require a PJM queue position (or equivalent evidence of being in the study process of a state jurisdictional interconnection process) as a pre-qualification. Allowing projects to participate in the CSI program without requiring them to demonstrate that they have started an interconnection process will lead to highly speculative CSI bids which will likely result in suboptimal program results.

    The PJM queue reform is creating significant delays and uncertainty in project timelines. We recommend that the BPU accommodate this uncertainty by providing schedule relief for projects that are awarded incentives under the CSI program but cannot meet incentive deadlines due to interconnection delays.

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Additionally, staff should clarify what having a "queue position" means. PJM will "requeue" all projects after AD2 that do not already have a WMPA or ISA when the new PJM interconnection process starts. Many projects in later queues have a queue position today but that queue position arguably goes away when the project is "re-queued". It is also unclear which projects will qualify for the fast-lane process when the re-queuing process takes place, as new network upgrade analysis work must be completed by PJM.

For at least the first solicitation we recommend that staff provide clarification on what projects are eligible based on PJM Queue Number. We recommend a position where projects in queues AD2 or earlier, or projects that have a WMPA and/or an ISA are eligible for the first solicitation. In subsequent solicitations, having a queue position will be clearer.

11. Under the proposed Base Case pre-qualification requirements, and given PJM's proposed queue reforms, the first CSI solicitation would be limited to projects already in the PJM queue. Staff requests input on how to interpret available information about the number and overall MW capacity of solar projects in the PJM queue. Is there any reason to expect higher or lower levels of attrition than were seen in the 2013-2019 period?

    We would note that the first and second Transition Cycles under PJM's queue reform are likely to be some of the largest cluster studies (# of projects and # of MW's) ever studied by an ISO/RTO. PJM is also proposing significant readiness payments throughout the study process (10% of network upgrade costs at Phase 1, and 20% at Phase 2). As a result, we expect to see a high level of project attrition during the transition cycles. Following the completion of the transition cycles we would expect lower levels of attrition due to the higher costs associated with initial project applications and the smaller size of the clusters (relative to the transition cycles).

    Additionally, we think it is important that the BPU allow for schedule extensions to the incentive deadlines for projects that are suffering delays caused by the interconnection process.

12. At what stage in the PJM queue process do projects typically secure project funding?

    In our experience project funding is secured for PJM projects coincident with a project entering into an ISA, and in some cases we see projects secure funding at the conclusion of a Facilities Study. While PJM is increasing the costs of seeing through its interconnection process to limit speculative development, we do not see anything inherent in PJM's new process that would result in a significant shift to financing commitments being made earlier in the interconnection study process or timeline.

13. Do PJM's proposed changes to the interconnection process change the relevant considerations around project queue position? If so, how?

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As discussed in our responses to question 10 and 11, we feel that the initial cluster studies under PJM's new process will be volatile. Once the transition cycles are completed, we expect the PJM process to be more stable and the inherent value to simply having a queue position to be increased due to the more predictable study times anticipated and the higher up-front costs.

14. Do developers expect to use state-jurisdictional interconnection processes or distribution-level interconnections to avoid the PJM queue? How should maturity requirements be developed for such projects? Are there other factors that the Board should consider?

    We see an opportunity for developers to pursue state-jurisdictional interconnections. Projects that are being studied under state-jurisdictional interconnection processes should be eligible to participate in the CSI program, on equal-footing with PJM interconnected projects. Staff should ensure that considerations are in place for these projects to be part of the CSI program under an index-REC framework.

    Please see our response to question 15 on what additional requirements we believe the NJBPU should consider for project pre-qualification. With these additional requirements imposed, we think having an acknowledgement of application for state-jurisdictional interconnection from the interconnecting utility is likely sufficient for projects to pre-qualify in order to be in-service within 3 years of CSI program registration.

15. Please comment on the proposed pre-qualification requirements other than interconnection queue position.

    We strongly recommend that the NJBPU include pre-qualification requirements that require developers to demonstrate (i) experience in developing similar renewable energy facilities to those they propose for the CSI program, and (ii) contact with the local community or communities where the project is proposed.

    To maximize the success of CSI registered projects, the NJBPU should adopt minimum standards for relevant project experience for developers or principals within that developer's team. Relevant experience with energy storage is arguably even more important for bids considered for Tranche 5.

    The NJBPU should require developers to have relevant experience based on a combination of project size, interconnection process, and state permitting experience.

    We note that NYSERDA has been steadily increasing their minimum eligibility criteria for local and community engagement with each of their solicitations in order to maximize the likelihood of project success. Engagement at the local level at the onset of a project's development will help ensure the long-term success of the CSI program. Local

community leaders should not hear about a CSI program award for the first time when reading their local or regional newspaper.

The NJBPU should require proposers to submit documentation clearly showing that local political and/or administrative leadership is aware of the proposed project and that it will participate in the CSI solicitation.

We also support NJBPU's proposal to require projects claiming an installed capacity exceeding 300 kW per acre to obtain a statement from a certified engineer confirming installation feasibility.

16. The ADI Program requires that projects submit a Post Construction Certification Package prior to their registration expiration. Is this practice appropriate for the CSI Program?

    The scale and size of CSI projects warrants different treatment. We recommend that the NJBPU require that projects receive the equivalent of a utility permission to operate notice by their CSI program registration deadline and that compensation for any produced SREC-II's be held until the Post Construction Certification Package is complete and reviewed by the NJBPU.

17. Please comment on the proposed bid application fee. Should Staff consider capping this fee, or including provisions for returning the fee? Why or why not?

    We believe the proposed fee balances the interest in curbing speculative participation in the CSI program with providing an open opportunity to development companies of different size and experience levels.

18. Currently, Staff is not recommending per bidder award limits or project size limits. Should such limits be included? Why or why not?

    Please see our response to question 1 where we recommend a sub-category for smaller projects within the Grid-Supply tranche.

    Please also see our response to question 15 where we recommend that the NJBPU establish relevant project experience requirements for developers. Additionally, we believe it would be prudent for the NJBPU to consider the size and number of projects completed previously by developers in determining how many MW's of awards such a developer can register. Past success is a predictor of future performance.

19. What is the approximate size range of projects likely to be bid?

    As demonstrated by the diversity of project sizes within the PJM queue, the Grid Supply tranche is likely to see a wide range of project sizes bid. As discussed in our response to

question 1, we recommend that the NJBPU develop a sub-category for project size so that projects bid into that tranche compete equally for locations throughout NJ.

20. Would developers bid multiple projects on the same land? Should the Board allow developers to submit multiple mutually exclusive bids?

    Review of multiple applications by NJBPU staff for essentially the same project will result in additional burden for staff. We recommend that the NJBPU limit developers to a single solar-only proposal and for eligible projects for a single solar+storage proposal. Developers should be required to commit to a single conception of a project to ensure that the lowest $/MWh price is delivered as part of the project.

AUCTION PROCEDURE

21. Please comment on the proposal to conduct solicitations for all tranches in a single procurement.

    Please see our response below to question 32. We are concerned that developers be made aware of when the development thresholds are met as soon as possible to limit excess development spend on projects that will not qualify for waivers.

    If there would be a benefit to staff focusing on the Grid Supply tranche exclusively to ensure this time is minimized, we would be supportive of a stand-alone procurement for the Grid Supply tranche.

22. Are the proposed MW capacity targets for solar development appropriate for each tranche? Why or why not?

    We support the proposed Year 1 Target Procurements and would support the establishment of stakeholder engagement proceedings to adjust the procurements in future years should the NJBPU see fit.

23. Is the storage tranche appropriately sized in the proposal? Why or why not?

    We support the Year 1 Target Procurement of 160 MWh for energy storage.

24. The proposed tranche evaluation order (see Discussion: The order of tranche evaluation and provisions for projects to compete in multiple tranches on page 37) is preferential towards the procurement tranches for Grid Supply on the Built Environment and Grid Supply on Contaminated Sites and Landfills, even if procurement in these categories is above the initial targets. Please comment on this approach.

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We support the proposed tranche evaluation order.

AUCTION PRICE RESULT

25. Please comment on the proposed adoption of a pay-as-bid auction price.

We support pay-as-bid and think this is the right approach for NJ. PJM's annual capacity auctions and daily dispatching follow the clearing price approach, that requires market participants to manage/anticipate both windfalls and negative market swings as they operate their facilities. Under an indexed-REC scenario, the proposed 15-year term of the SREC-II award allows for bidding for the revenue certainty necessary to facilitate construction and cover operating costs. This stability reduces risk to allow for the lowest bundled bidding possible.

SREC-II PAYMENT STRUCTURE

26. Please comment on the relative advantages and disadvantages of Indexed SREC-II versus Fixed SREC-II.

We encourage the board to offer the Indexed-REC approach. We have seen first-hand the benefit to project financing arrangements for our developments in NY as NYSERDA has adopted this approach and think it would likewise result in lower financing rates, and thus lower bids in NJ.

27. Please comment on the risk to ratepayers for Indexed RECs related to longer term price volatility in the Energy and Capacity markets.

We were pleased to see the thorough analysis by Daymark that identifies savings for ratepayers in the majority of modeled cases where Indexed-REC's are utilized. Energy and capacity prices tend to increase over time, and an indexed REC structure means that the cost to rate payers decreases as energy and capacity prices increase. As New York has found, an indexed REC structure will almost certainly result in lower rate payer costs than a fixed REC structure. In fact, REC prices can be negative if energy and capacity prices increase.

28. Please comment on the risk to ratepayers for Indexed RECs related to market structure evolution in the Energy and Capacity markets.

Change in PJM administered markets, particularly the capacity market, is constant. However, the indexed-REC structure forces developers competing for limited capacity to bid the lowest bundled-rate they think they can deliver.

29. Please comment on the proposed qualification life of fifteen years.

We support the Joint Solar and Storage Parties' position advocating for a twenty-year term.

PROCUREMENT FREQUENCY

30. Please comment on the proposed annual procurement.

    We support Joint Solar and Storage Parties' position.

31. How much time should there be between the Board authorizing the CSI program, and the first procurement?

    We think there should be sufficient time for bidders to digest the final CSI program rules and ensure their projects are set up for success in advance of the first procurement. On the other hand, we think there is value in moving forward quickly with the procurement to ensure the program gets off the ground. We would recommend the first procurement occur within 3 and 6 months of the final authorization of the CSI program.

32. How many months between notification of the results of one year's procurement and the due date for bid pre-qualification for the next procurement would be optimal?

    Our primary concern in pursuing projects that will be part of the Grid Supply Tranche are the state-wide and county development limits. Sunk spend on Grid-Supply developments that can no longer be pursued as the development limits are met represents a significant risk. Ideally registration for projects in this tranche are released publicly as soon as possible to limit sunk spend. If registration will take significant time and must be closely held, the NJBPU should also consider notifying the market of when projects are being considered that could exceed thresholds or should consider publishing information on project registrations to inform the market.

    In order to obtain the requisite PJM queue position, and the public engagement pre-requisites we are recommending in our response to question 15, a period of at least three months is required before the next procurement starts.

33. Would it be beneficial to "time" the procurement with regard to the PJM queue? If yes, how?

    Yes. PJM is proposing a 3-month application review period on the front-end of each of its transition cycles and in subsequent cluster study cycles. Procurements should be timed to coincide with the closing of whichever phase of PJM's new study process staff concludes should be a pre-qualification requirement.

Conclusion

As a leading developer and EPC of solar projects throughout New Jersey and many surrounding states we appreciate having the opportunity to provide comments as part of this stakeholder process. The competitive solicitation framework included in the Act and described in this straw proposal will create significant opportunity for the development, construction and operation of many new solar projects in New Jersey. We believe that many of the recommendations we mark here, which are based on related experience in New Jersey and in other markets and programs, will further the success of the CSI program.

We look forward to continuing engagement with this and other stakeholder processes brought forward by the NJBPU.

Sincerely,

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