September 25, 2015

Honor Kennedy, Chelsea Kruger –

On behalf of the undersigned, we submit the following responses to the questions posed by DPS regarding the stakeholder collaborative on low- to moderate-income participation in Community DG. Please contact us if you have any questions. We look forward to continuing our engagement in this process.

Sincerely –

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Matrix for Organization of Issues and Identification of Solutions

Before we respond to the specific questions posed by DPS, we wanted to offer the below matrix in order to support productive conversations and inform an effective report on the key topics by the January deadline. Having previously heard a call for such a tool from participants in this collaborative, we are taking the initiative to offer this suggested matrix and hope that DPS and participants find it useful.

Removing Barriers:	Relevant Agency	Potential Programmatic Solutions	Potential Regulatory Solutions
Reducing Up-front Costs and Maximizing Financial Benefits	PSC, NYSERDA, Green Bank, NYHCR		
Securing Affordable Financing for Projects or LMI Customers	PSC, NYSERDA, Green Bank, NYHCR		
Educating and Acquiring LMI Customers Efficiently	NYSERDA		
Qualifying and Verifying of LMI Customers Simply and Inclusively	PSC, NYSERDA, NYHCR		
Ensuring Clear, Understandable Financial Disclosure for Consumer Protection	PSC, NYSERDA		

1. What are the barriers and technical constraints to low-income customer participation in Community Distributed Generation (CDG)? What mechanisms may be employed to remove such barriers?

There are many barriers to participation in the solar market for low- and moderate-income (LMI) customers. Perhaps the largest barrier to entry for potential LMI solar customers is physical. LMI families and individuals are substantially more likely to live in multi-unit buildings, rent their home or have roofs unsuitable for solar installation. The community DG ("CDG") program in New York will already remove this first barrier for all customers and open access to the solar market to more LMI customers.

A. Below are several other barriers that stand in the way of CDG adoption in LMI communities, though this is not an exhaustive list of all possible barriers:

Up-front cost. LMI customers generally do not have the necessary cash resources to outright purchase or put a large down payment toward participation in a CDG project. Although solar costs continue to drop, an adequate system for a family or even an individual is still generally several thousand dollars. Many loan or lease programs also require a substantial down payment that may be beyond the means of an LMI customer. This is especially true if a customer has other current or potential home improvement cost commitments.

Credit scores or debt-to-income ratios required for loan or leasing arrangements are too prohibitive. In order to reduce or remove the up-front cost of a CDG subscription, one would need a third party arrangement that either provides a loan for the purchase of the subscription, or a lease or power purchase agreement for the subscription. In order to be confident in the return on their investment, financial entities that provide and support up-front investment for these arrangements generally require a credit check and minimum credit score or debt-to-income ratio. According to the Federal Reserve, individuals in low-income areas have an average credit score 44% lower than those in high-income areas, thereby disqualifying many LMI customers for financing options.

Acquisition and verification of low-income customers is challenging. Most solar companies have built marketing and sales operations to reach moderate to high income individuals. Given the large number of such customers still available in New York State, there is little market incentive to specifically target LMI populations for participation, thus cost of customer acquisition is high. In addition, companies rarely need to verify individuals' incomes and have not developed systems to do that, therefore presenting additional cost barriers.

B. There are many programs and regulations that can help break down these barriers to entry and further open up the LMI market for solar. Below are a few broad categories to consider:

An incentive program for LMI subscribers to community DG projects. NYSERDA could establish a program through which eligible LMI households could receive a deeper discount on top of any existing discount the project provides to all customers in order to help overcome the cost of entry for LMI customers. This discount could be supported through NYSERDA funding to the community DG project organizer for every LMI subscriber as a performance-based incentive. Such incentives could be used to offer deeper savings or to increase the profitability of the overall project, thereby making financing both cheaper and less risk-averse.

Credit support for LMI customers. The New York Green Bank and/or NYSERDA, in coordination with financial institutions and charitable organizations, could work to support financing for low- and moderate-income customers who do not have the necessary credit scores to meet traditional underwriting standards. This credit support could be provided in several ways. It could be through a loan loss reserve or loan guarantee program. It could also go directly to projects with a substantial percentage of low- and moderate-income customers. Finally, it could go to LMI customers directly where there are community not-for-profit or agency partners that could conduct the outreach and financial education necessary to identify and prepare those customers.

Grants and technical assistance for not-for-profit developers and partners. Local not-for-profit and agency partners often have the exact customer acquisition and community knowledge to overcome the marketing, sales and verification barriers for entry into the LMI market. In order to assist non-profit organizations to develop or partner with for-profit developers to develop CDG facilities that are structured to serve LMI customers, NYSERDA could consider offering direct grants to help cover staffing to develop such projects and technical assistance to build organizational capacity. Such assistance to non-profit organizations will enable the creation of CDG facilities built in diverse locations and specifically designed for underserved communities.

Funding for pilot projects serving a majority of LMI subscribers. In order to figure out the most successful models for CDG projects that can serve LMI customers, NYSERDA could release a request for proposals for teams of developers and local not-for-profit or agency partners to develop projects serving a majority LMI customers. NYSERDA could provide grant funding for a portion of these projects in order to attract interest. A key eligibility criteria for pilot projects could be a commitment to building a self-sustaining business model for CDG projects that can serve LMI customers after an initial round of funding support.

2. Should there be a statewide standardized contract for all customers, including low-income, participating in Community DG? What components should such contracts contain, including customer disclosure information?

No, there should not be a standardized contract for all customers. Community solar and DG is a rapidly evolving sector and we should let the market innovate new products to serve different customer segments. A standardized contract would stifle innovation when we most need it. The Reforming the Energy Vision ("REV") effort is largely focused on driving more competition and innovative products in the marketplace; requiring a standardized contract for all organizations seeking to utilize the Community DG framework would run counter to REV principles.

While we do not support a standard contract, and indeed think a standard contract would severely cripple the CDG program, we do recommend that the Commission look to standardized disclosures as the best means of protecting customers. For example, the Minnesota Public Service Commission has a checklist of required disclosures that community solar developers must provide consumers, available here: *http://www.xcelenergy.com/staticfiles/xe/Marketing/Files/MN-SRC-CERTS-Disclosure-Checklist.pdf.* This robust list requires developers to provide plain language disclosures and actually walk the customer through the list of relevant issues and risks, and have both the customer and developer certify that that has taken place. We believe this approach goes well beyond the requirements of existing consumer protection law and practice, and would provide the extra assurance that the PSC and low income advocates appear to be seeking regarding protecting LMI customers engaging in CDG.

3. How can other existing weatherization and energy efficiency programs be incorporated with Community DG for low-income customers? Should energy-efficiency measures be required for all low-income members?

There are several reasons against making the offering of energy efficiency measures a condition for low-income participation in CDG programs. First, the Commission should be aiming program design at *reducing* barriers to entry for LMI customers – not making participation harder. Second, many (if not most) solar developers focus exclusively on the development and delivery of cost-effective solar generation; the offering of energy efficiency services is an entirely distinct line of business. The Commission should avoid creating new hurdles to solar developer participation in the CDG program, particularly as pertains to the already difficult to reach LMI customer segment. Third, split incentives may make the delivery of energy efficiency impractical for many LMI customers. A prime example is in the context of rental property where the landlord is responsible for elements of the rental unit that determine energy efficiency (building shell, windows, HVAC, appliances, etc.) but the tenant is ultimately responsible for the electricity bill. Fourth, the deployment of solar energy (or participation in a CDG project) is often a "gateway" to other clean energy measures. As consumers become more conscious of their energy use and enhanced desire to offset more of their bill, they often modify consumption behavior and look for other opportunities to conserve – without specific program mandates. Lastly, such a mandate would be inconsistent with the requirements of the NY-SUN program. Under NY-SUN, incentives are conditioned on the performance of a "clipboard audit"[1], however specific energy efficiency measures need not be undertaken. Indeed, for the aforementioned reasons, while we are generally opposed to the undertaking of mandatory energy efficiency measures as a prerequisite for participation in CDG, we do not oppose a requirement that specific information about NYSERDA, utility or other conservation programs be disseminated at the time of customer enrollment.

[1] NYSERDA's program manual specifies further that: "A clipboard energy audit consists of two components: an interview of the home/building owners to determine energy use habits and the age of the building, and an inspection of the building to identify energy saving opportunities. NY-SUN Program Manual for Systems Under 200 kW, Section 2.10.

4. What information is needed to inform low-income customers of Community DG opportunities and benefits? How should it be disseminated to potential customers?

As one idea, an opt in box could be included on applications and bills to low income HEAP, food stamps, public assistance or supplemental security income recipients. The opt-in box should have a short paragraph re: the potential benefits of signing up for low-income CDG programs, and checking the box would represent the recipient's acceptance to be contacted regarding low-income CDG opportunities.

5. Should other participation criteria be considered for low-income customers besides the participation in utility-administered low-income discount programs? If so, what participation criteria should be allowed and what verification process should be established? Should participants have to recertify and, if so, what happens to customers who are no longer eligible?

Low-income individuals who are currently eligible for, or have received within the past 12 months, services through: HEAP, food stamps, public assistance, or supplemental security income, should be eligible for any incentives available to encourage low income participation in Community DG. Award letters to the household from the respective aid agencies should satisfy documentation requirements.

6. Should a standardized statewide uniform process be established for sharing information, including credits, between utilities and project sponsors? If so, what would that process entail?

A standardized process for information sharing between utilities and project sponsors should lower overall implementation costs, and improve the customer, developer, and utility experience via greater accuracy and efficiency. We recommend an automated, electronic system that would enable, at minimum:

- Project sponsors to request customer information from utilities (with customer consent), such as usage history and verification of account information.
- Project sponsors to provide utilities with updated subscriber information on a monthly basis to facilitate bill crediting.

Information that will need to be shared includes, at minimum:

- Name of host organizer and contact information
- Address of CDG project
- Generating technology used and nameplate AC generating capacity of the project
- List of members, including, for each member:
    - Customer Name (as listed on the electric account)
    - Account number
    - Service address (Street, City, and Zip) and designated meter at the premise to which the membership is attributed

- Percentage interest of each member in the capacity of the CDG project.

Electronic information exchange should be required, utilizing a secure file transfer protocol (FTP) and standard file formats, e.g. CSV.

There are existing off the shelf software solutions that can provide this functionality at reasonable cost. Experience in other states has shown that such electronic integration is critical to timely, accurate bill crediting and an overall positive customer experience with CDG.

7. What consumer protections should be in place for low-income customers who participate in Community DG projects?

We believe consumer protections should exist for ALL customers who participate in Community DG, not just low-income customers. We do not see a need to have different protections for low-income customers. We outlined our recommendation for consumer protection in our response to Question 2, and have copied the most relevant portion again here:

"We do recommend that the Commission look to standardized *disclosures* as the best means of protecting customers. For example, the Minnesota Public Service Commission has a checklist of required disclosures that community solar developers must provide consumers, available here: *http://www.xcelenergy.com/staticfiles/xe/Marketing/Files/MN-SRC-CERTS-Disclosure-Checklist.pdf.* This robust list requires developers to provide plain language disclosures and actually walk the customer through the list of relevant issues and risks, and have both the customer and developer certify that that has taken place. We believe this approach goes well beyond the requirements of existing consumer protection law and practice, and would provide the extra assurance that the PSC and low income advocates appear to be seeking regarding protecting LMI customers engaging in Community DG."

8. What kinds of Community DG business and/or finance models would be expected (or should be encouraged) to serve low-income customers?

a. Should specific grant programs and technical assistance be established for non-profit developers and/or organizations? What types of programs should be made available?

Please see response to Question 1: *Grants and technical assistance for not-for-profit developers and partners.*

b. How can the NY-SUN and/or Green Bank programs provide additional incentives for low-income customer participation? Should a portion of the 2016-2023 NY-SUN Operating Plan provide financial support for pilot demonstration projects?

We believe that a broad survey of potential options should be considered for the objective of incentivizing robust LMI participation. In order to encourage developers to serve the LMI market and draw private capital into this sector, we support further investigation and scoping of options to answer this question. We note that currently, the only CDG projects serving low-income customers are those that are based on charitable giving. We posit that before significant funds are dedicated for low-income customer participation in CDG, a model must be developed and nurtured that offers a scalable market for the LMI sector.

When solar is offered to residents through a no-up-front cost arrangement (i.e., lease or PPA), there are three sources of capital that can support each project: (i) federal tax incentive, (ii) state rebates or incentives and (iii) project debt/backleverage. Although federal and state incentives, combined with an elevated LMI incentive, can help encourage LMI participation in CDG, these remain insufficient for a developer/financier to cover the cost of project construction. Access to project debt/backleverage is crucial and without this ingredient, a developer will lose money on each subsequent project and therefore undermine the ability to scale or service the market. The collateral available for project debt/back leverage is a customer's obligation to make lease/PPA payments for an extended period of time, usually 20 years. As previously mentioned, the traditional solar market has historically only serviced customers with excellent credit, high-income levels and favorable debt to income ratios. Lenders have not been willing to loan against down market customer's payment obligations, at least not at advance rates and interest rates that allow developers to effectively serve the LMI market in the same manner as they service the upmarket customer.

We believe there are several ways that programs such as NY-SUN and/or the Green Bank could provide credit enhancements for pools of LMI leases/PPA in order that developers could source debt with advance and interest rates that allow them to serve the LMI market at scale. One example of how capital costs for LMI CDG projects could be brought in line with the rest of the market is for the Green Bank to provide subordinate backleverage on terms that are typical of upmarket facilities. This would allow a private financier to come in on top of the NY Green Bank debt with a cushion that would provide greater comfort with advance rates and interest rates that are in line with current facilities for solar portfolios. This approach has recently been used by the CT Green Bank. Though the NY Green Bank would be in a more risky, first loss position, than in private market that would command much richer terms, this option could prove effective if the objective is to truly establish a scalable market for LMI participation in CDG.

9. Should incentives be established to ensure low-income participation goals? If so, how?

As mentioned in response to 8.b., incentives could prove useful for encouraging LMI participation, however, there are deeper systematic issues with project finance that require attention to enable a scalable market. Nonetheless, DPS and NYSERDA should consider an incentive regime that is scaled based on the percentage of the overall subscriber base made up of LMI customers, and that incentivizes developers to maintain this focus over the life of the project.

10. Should other utility customers and/or subscribers subsidize, in whole or in part, low-income customer participation in Community DG?

If the state makes the policy decision that low-income customers should be incentivized to participate in CDG, incentives should come from the whole utility customer base and/or taxpayer base, not solely from other community DG subscribers. If LMI participation is viewed as a policy goal that is worthwhile, then it is worthwhile from a statewide perspective and should be supported by the entire state, much like many other state programs encouraging participation and investment in clean energy. Placing the burden on other community DG subscribers is not fair to those subscribers and could make the value proposition for them unattractive.

11. If a Community DG project sponsor/developer receives additional benefits based on low-income membership at the time of project development, should there also be the reporting requirements over some or all of the life of the project? Should there be a requirement to maintain the level of low-income participation over the life of the project?

We are unclear as to what the DPS Staff is referring to by the "additional benefits" of serving a LMI membership base. Further, we are unclear as to what objectives the DPS Staff hope to achieve through a reporting regime, and its intended scope and frequency. We are concerned that a reporting requirement not have unintended consequences by adding cost and burden in serving the LMI population. That said, we reserve judgment on whether a reporting requirement is advisable until such time as the details can be further discussed.

While we believe that every effort should be made to maintain a subscriber base of no fewer than 20% LMI customers for any individual project, we do not believe there should be a requirement to maintain this level of participation over the life of the project. This issue must be viewed in the context of the risks/rewards of serving the LMI population. On the one hand, sponsors projects meeting the LMI threshold are rewarded through eligibility to participate in Phase I of the program – a 5 month head start on the market more broadly. On the other hand, it is unclear what the consequence would be of falling below this threshold at some point over the life of the project. If DPS Staff is contemplating the project would lose its CDG status, we believe this poses an untenable commercial risk and project developers would be leery of serving this market. Rather than serving the LMI population, such an extreme penalty would deter developers from addressing this market.

12. What requirements or guidelines should Community DG products (and/or the marketing of these products) for low-income members be subject to? Should these requirements differ from those for "market rate" customers?

No comment at this time.