Meeting Agenda (October 25, 2017)

1) Welcome/Introductions

2) Process/Procedural Matters

3) Update: NYSERDA October 20, 2017 Memo

4) Discussion:
   a) What is the most important thing for the working group to accomplish?
   b) What is the most important topic that was not discussed during the WG process?

   Overview of papers – Joint Utilities, The City of New York, Ecogy Solar

5) Next Steps/Next Meeting
   a) Action Items

6) Adjourn

Meeting Summary

Process and Procedural

There was a last minute addition to the agenda. Certain parties would like to share a preliminary consensus proposal that they recently drafted.

Update on the October 20th NYSERDA Memo

Parties can submit written comments on the NYSERDA investment plan by November 3rd. NYSERDA would like these comments to focus on the questions asked in the proposal relating to extended subscriptions and customer co-payments. Parties should send their comments to communitysolar@nyserda.ny.gov or simply reply to the original email that contained the memo.

Overview of Proposals

Parties presented their papers in response to the questions:

- What is the most important thing for the working group to accomplish?
- What is the most important topic that was not sufficiently discussed by the working group?

City of New York (CNY):

CNY proposes an environmental justice (EJ) adder. CNY believes that such an adder is the best way to incentivize low income uptake of DERs, particularly because issues of demography and income are highly associated with EJ issues. CNY acknowledges, however, that valuing or sizing this type of adder is, by its nature, an imprecise proposition.

The adder would be above and beyond the value stack and would recognize public policy priorities to guide DER deployment, similarly to how LSRV maps are a guide for utility preferred DER deployments. The main difference is that the LSRV map gets at utility avoided cost in a way that an EJ adder would not do. CNY commented that specific issues, such as avoided costs of local air pollution, could be worked through in detail in the value stack working group.

Initially, the EJ adder would start at a level sufficient enough to shift customer adoption decisions in the near term. The size of the adder would be fixed for the duration of other fixed elements of the VDER tariff, and then would be subject to periodic review. The size would need to be fine-tuned to make sure it is achieving the goal of remedying the historical inequities in DER penetration.

CNY also commented that due to credit risks, developers may have less interest in LMI customers. Both customers and developers need to see incentives to achieve greater LMI participation. It is important that the developers' incentives not come from charging qualifying LMI customers higher prices, thus reducing the benefits to those customers.

CNY suggested the LMI DER programs have protections in place to prevent actual (or the appearance of) abuses of LMI customers by developers. NYSERDA programs, including NY

Green Bank, can help ensure that developers adequately market and provide DER products to LMI communities. LMI programs would allow developers to see a track record of LMI customer payments. If the data reveal a higher level of delinquency for LMI customers, LMI DER programs (perhaps in conjunction with NYSERDA programs) could encourage developers to take on LMI customers by bearing some of the risk, e.g., by providing credit support.

Discussion and clarifying questions for CNY:

Chuck Schwartz from Green Long Island mentioned that there had been some consumer protection materials for CDG released recently. Ben Mandel, on behalf of CNY, noted that they were aware of this release of the Uniform Business Practices for DER Suppliers (UBP-DERS). Future UBP-DERS might provide for the protection of LMI customers from being charged a higher price.

Rob Crauderueff wondered how CNY foresees an EJ adder interacting with an LMI adder. Ben clarified that CNY is actually proposing an EJ adder without any LMI adder. Rob followed up asking how that plan would sufficiently address risk and how the LMI population would be targeted. Ben acknowledged that more thought is needed on the supply side of targeting LMI customers.

- Rob later suggested that the LMI population was the main target, so cautioned against cutting an LMI adder. Ben conveyed that CNY is open to considering a hybrid model where the project siting is determined by EJ principles but customer eligibility reflects LMI considerations.

Amanda Vanega from CCSA asked whether the EJ adder would remove the income eligibility verification piece from individual customers and be solely a geographic requirement. Ben explained that CNY envisioned geographic and demographic eligibility criteria for projects and subscribers to receive this adder.

Brock Gibian from Ecogy Solar supports both the facilities and subscribers being from the EJ community – was concerned that the facilities might be sited in an EJ community for the benefit of customers outside that community. Ben agreed, and suggested subscriptions could also be extended to similarly qualified residents in a different community but same utility service territory.

Brock wondered whether location alone is an appropriate criterion. Ben suggested supplementing a geographic screen with, e.g., the customer being recipients of assistance programs.

Ben confirmed that the EJ adder would be for the full term of the value stack tariff, not just the first ten years as with the LSRV.

Bob Wyman did not see why anything other than geographical presence would be sufficient for an EJ adder. Everyone in an EJ area, regardless of income or circumstances, suffers the cost of the siting and is essentially paying economic rent. Bob suggested that everyone in that area should receive the same benefit. Ben agreed that this issue should be studied, but noted that CNY's concern was primarily related to legacy considerations. Demographics of communities change over time, as has been the case with Gowanus, and the low income population within

designated communities are less mobile and thus less able economically to address environmental outcomes.

- Staff asked for clarification on the issue with Gowanus, and parties explained that Gowanus is a toxic waste site in the form of a highly polluted canal in Brooklyn, that is now surrounded by high income development.

Sara Margaret Geissler and Steve Wemple from ConEd inquired as to whether the EJ adder only relates to power generation and distribution, or if it is also intended to address other issues of environmental harm such as transportation systems or bus depots. Ben agreed that this was something to discuss further, and that they would need more refined criteria for more targeted investment.

There was a question as to how EJ zones were defined and how the radius of an environmental issue was taken into account. Ben explained that EJ communities are currently defined as adjacent census tracks from DEC mapping, and that community boards do not provide enough granularity for EJ zone definition. Ben agreed that there needs to be more thought on how the radius of an environmental issue affects the definition of EJ zones.

Bob Wyman proposed that the value stack is a place to look for better quantification and monetization of these costs. A number of serious environmental harms are non-GHG emissions, which have been given little attention in the VDER process, despite comments from DPS Staff describing that non-GHG emissions have greater current cost effect on communities than GHG emissions. To get a good measure of monetary effect of being in an EJ area, the value stack working group needs to go beyond discussion of GHG emissions and deal with other types of local air pollution as well. This is particularly important in places like NYC. Ben agreed with these concerns.

Amanda Vanega mentioned that the smaller the area of subscriber participation, the more difficult it is to implement. She recommended incorporating the largest geographic space possible, such as utility service territories. On a community level, Amanda sees difficulty in managing subscriptions and churn. Ben agreed, noting the difficulties around site acquisition in NYC. Bob Wyman believes that it might be hard to use large geographic spaces as the area of subscriber participation, especially in places like NYC. Certain areas of NYC are environmentally impacted much more severely than others, so there is a lot of geographic granularity to be accounted for.

Steve Wemple asked who would pay for the adder and what the budget would be. Ben admitted that CNY had not given too much thought to total budget, as they initially just wanted to establish a consensus that the adder is worth pursuing before looking at detailed issues. CNY is open to considering whether the adder is funded through the utility rate base or public sources, but believes the logical place to administer the surcharge to fund the EJ adder is the utility rate base.

One participant was concerned that the EJ adder does not address many low income customers in rural areas, and advocated consideration of other options besides passing costs to ratepayers. Steve Wemple noted that the ConEd shared solar proposal does not impose any incremental costs

on ratepayers, as the program will be funded with value stack credit and will not seek additional resources for subsidies or incentives.

Bob Wyman asked for ideas for how to remove the ambiguity developers may have regarding credit status and trustworthiness of LMI customers. Kelly Roache from Solstice suggested pilot programs that demonstrate that LMI customers do pay their bills. Bob thought it might be better to use historical data, or data from utilities or non-profits, to observe a larger pool than the result of pilot programs, since pilot programs tend to be anecdotal. Kelly emphasized that pilots could be designed to show a representative sample.

An extended discussion followed about risk, finaceabilty, and whether credit checks should be a requirement.

- Kelly Roache stressed the importance of actual data on the level of risk, suggesting that it is not different from non-LMI large in practice, explaining that credit scores are generally not based on utility payment histories, but studies show that low income customers pay their utility bills before their other payments.
- Another party stated that there is a project in development that is moving forward without checking credit scores.
- Amanda Vanega argued that reluctant financiers are the majority right now, and that it may not a realistic to assume developers will not rely on credit checks.
- Another party stressed the importance to developers of sufficient participation, regardless of demographics.
- Ben Mandel suggested the EJ adder (which incentivizes customer interest) could be addressed separately from efforts to address developer concerns.

Another discussion followed regarding access and benefits for low income customers participating in solar. Parties mentioned that taking a potentially valuable benefit to low income customers and making it more valuable with an adder does not necessarily help them access it, as fundamental barriers may persist (such as customer acquisition costs and customer credit scores). It was suggested that a more effective way to increase low income access to community solar is by incentivizing developers to put together projects that include a high rate of participation of low income customers. Parties agreed that for any adder scheme, there should be oversight to ensure the customers actually get the benefits.

A participant brought up a study from Berkley Lab on bill impacts from CDG. The study showed that you need to get close to 10% of total capacity CDG penetration before seeing significant bill impacts. NY currently has less than 0.5% installed CDG penetration, and even if all the projects in the tranches get built we will only be at 2% penetration.

Joint Utilities (JU):

The JU laid out a set of criteria that they envision for the goals of this working group:

- Any solution coming out of this group should be cost effective relative to other proposed mechanisms for involving low income customers in CDG projects or VDER markets.

- The net financial impact on participating low income customers of any adopted mechanisms must be at least neutral.
- Any solution must have the underlying goal of cost effectiveness relative to other options for broadening low income access to renewables and clean energy.
- Cost effectiveness relative to other programs designed to reduce low income customer bills.
- Minimal-to-no incremental bill impact on all non-participating customers, especially non-participating LMI customers.
- Any solution should not conflict with other REV policy goals or principles established in Phase I or Phase II, particularly with respect to valuing injections to the grid.

Additionally, the JU noted that it is hesitant to pursue adders because adders tend to have a lack of focus, particularly with regard to the conflict of delivering benefits to customers versus delivering benefits to developers. It was noted that there are one or more developers currently working with ESCOs to reach customers. In general, the JU is confident that NYSERDA and NY Green Bank are well positioned to help low income customers with CDG. Going forward, the JU would like the group to further develop the record about how to measure credit risk, and would like to investigate the current state of customer demographics in CDG projects.

Discussion and clarifying questions for JU:

Brock Gibian from Ecogy Solar asked if the JU believes that the ConEd shared solar program that is funded by all ratepayers should be on the same playing field as private development. Sara Margaret Geissler from ConEd clarified that the shared solar program is funded by value stack revenues entirely. Steve Wemple from ConEd added that the low income customers participating in the shared solar pilot will get the MTC related to the tranche the project goes into – the pilot is targeting exclusively low income customers so everybody should get the MTC. Steve also explained that the value stack should fund the revenue requirement for the program's invested capital and provide customers with net bill savings. The hope is to learn from the shared solar program and show financiers that such a model is replicable.

Brock asked if the JU had any proposal to track the relevant characteristics of the LMI customer segment in the shared solar program. Sara Margaret thought that using the shared solar program to survey customers and to collect income related data and sensitivities about paying bills is an interesting idea, but the program is at least a year from being up and running and may not be able to provide viable information for this working group. Furthermore, surveying LMI customers about how they pay their bills at the beginning of the process could be detrimental to selling the programs, but ConEd may be able to get some data and information from research they have conducted online related to customer interest in CDG.

Brock also inquired whether the JU would support funding an adder with the whole ratepayer base, and Steve answered that they would as long as the Commission approves it.

Staff wondered whether even successful pilot programs that showed low income customers paying their bills would convince financiers such accountability would occur outside of pilot programs. Rob Crauderueff, and Max Joel from NYSERDA, emphasized that there will be a

learning curve with financiers. The proposed low income community solar program and the affordable housing market is about engaging community development finance lenders that specialize in serving LMI customers and introducing these financiers to the solar market with the idea of reducing project costs.

Rob also commented that from a development perspective an adder is more useful than a grant program, such as the program proposed by NYSERDA. An adder has no uncertainty – you know what you are going to get and for how long, and it is easy to calculate. Rob advocated that an adder is an effective, long-term solution that should be implemented in the immediate future.

Ecogy Solar (Ecogy):

Ecogy believes that the best way to meet the goal of increasing low income customer participation in CDG projects is by utilizing a "carrot" model, which by its nature allows benefits to flow to both the customer and developer. Ecogy has seen this type of model work in many different states, especially in relation to housing authority and affordable housing development projects. Specifically, Massachusetts has incorporated a low income community shared solar adder with a 50% subscribership requirement that incentivizes developers to focus on the low income population.

Ecogy proposes an initial adder that is 20% of the full value stack tariff (20% because in a previous working group meeting parties agreed on a goal of 10% to 20% savings for subscribers to CDG projects). This adder would be split 50-50 with 10% of the savings going to the customer and the other 10% going to the developer. It is essential that the adder program is accountable to ensure direct benefits reach the actual customer.

The adder would last for the full length of the value stack, as Ecogy does not think a ten year term, as proposed in the NYSERDA plan, will sufficiently maintain subscribership. For efficient administration, on an annual basis developers would provide to the utility information on production, customer subscription lists, and the percentage of customers that are low income. The utility would check if these customers are low income and confirm whether the developer met its required subscriber percentage rate. Projects receiving the adder should also be required to provide data regarding payment, energy usage, etc., which could be used in the future to help reassess programs.

Ecogy thinks that this adder should encourage developers to prioritize and focus on the low income population. The adder could work in tandem with an EJ adder, where the project would be sited in an EJ zone while focusing on low income communities. Moreover, in conjunction with the NYSERDA program, Ecogy described the ideal project as having 80% subscribership from low income customers, with an additional 20% purchased through the NYSERDA program – but the adder would not be in effect for the percentage that NYSERDA purchases from the developer. Ecogy also noted that they envision the adder being financially supported by all ratepayers.

Discussion and clarifying questions for Ecogy:

Rob Crauderueff asked how the 20% incentive translates into a monetary value. Brock Gibian, on behalf of Ecogy, answered that in Upstate NY the incentive might be split into one cent each for customer and developer, while in NYC it might be two cents.

Bob Wyman noted that collecting names of customers and marketing directly to customers is a significant source of cost to the CDG developer. He wondered how a developer monetizes the knowledge of who the end customer is, and why a developer would care about who the end-use customer is, instead of just being concerned about being able to build the system and sell the power. Brock explained that developers believe these CDG projects should have other benefits besides monetary benefits, such as low income participation, a low income labor component, and others. Brock also clarified that developers generally do not sell lists of customer names to third parties, e.g., do not seek to benefit directly customer information.

Jessica Azulay, from Alliance for a Green Economy, inquired into how geographic inequities might affect the adder. Specifically, in regions where electricity prices are lower, the value stack is lower, and the adder will be smaller since it is computed as 20% of the value stack. It may be more difficult for the projects to pencil out in regions of lower electricity prices. Brock acknowledged that Ecogy is open to including a fixed component in the adder to address issues like this, but thus far had decided to include solely a percentage component for fairness reasons and ease for utilities to administer.

Jessica asked how the bills will incorporate the 50-50 adder split. Brock conveyed that Ecogy prefers for the customer's 10% split to go directly on the customer's bill. For the developer's 10%, Ecogy prefers whatever method is most administratively efficient. One method could be for the developer's 10% to be credited to the project's sponsor account. Another method could utilize the data from that the developer sends to the utility once a year, in which the developer could sum up its annual production and receive the 10% check straight from the utility.

Various Parties' Consensus (Parties):

The Parties believe that there is a role for both customer and developer incentives. In theory, the Parties foresee NYSERDA handling incentives for developers because they have mechanisms to do that, and foresee the value stack as a mechanism to get credits on customers' bills. However, since the NYSERDA investment plan does not substantially address incentivizing developers in EJ communities or low income projects, the Parties focus more on value stack mechanisms to incentivize both customers and developers.

The Parties propose two new value stack components – an EJ component and an LMI component. These additions to the value stack would not be adders, but would be long term pieces of the value stack itself. The two components would incorporate externalities, some of which ratepayers are currently paying for; some of which certain segments of the population are paying for; and, some of which are being paid for by society at large. The implementation of the two components would need to be discussed further in the value stack working group.

LMI component:

- Aims to provide benefits and affordability to LMI customers.
- Added to the value stack for any customer meeting the income eligibility requirements.

- Any LMI household participating in any CDG project should get this component added to the value stack as a credit on their bill.
- LMI households include metered affordable multi-family buildings.
- Open to conversation about whether this should be an LI component rather than an LMI component, e.g., apply only to low income customers.

EJ component:

- Aims to provide access to clean energy for individuals in EJ communities, to promote equity in deployment of renewable energy, and to mitigate human health hazards.
- Can utilize models that are already out there to help define EJ communities (starting point is the DEC mapping).
- Project based, with four criteria to be designated as an EJ project:
    - Project demonstrates that it will reduce toxic burden and air pollution from energy generating infrastructure in an EJ community – by the project coming online it would contribute to polluting infrastructure going offline.
    - Project is sponsored by a community based organization that is located in and serves an EJ community.
    - Project serves LMI customers that live in an EJ community.
    - Project is located in an EJ community and serves LMI customers that may live outside that EJ community.

The Parties recognize there needs to be transitional values for these components, since determining their long term values will require more research and time. The transitional values would try to quantify the value of the barrier to getting these projects off the ground. We could look at other states' examples as guides to set these transitional values.

The Parties acknowledged that they grappled with how to split the value of the two components between the customer and developer. They are open to sharing some of the incentive with the developer, with not all of it going to the customer, but are hesitant to do so. The goal of the two components is to quantify externalities borne by actual households and to compensate for them. Ideally, the entire compensation would end up with the households bearing the costs; however, the Parties are aware that without developer support there would be no compensation for the externalities.

The Parties' proposal involves assistance from NYSERDA and NY Green Bank. NYSERDA would help with pilot programs, and the expansion and streamlining of existing predevelopment assistance programs. The proposal would need a series of pilot programs to test everything being proposed. The pilot programs would help projects to get off the ground and provide data to guide further deliberations. Predevelopment assistance programs would be expanded to include engineering, permitting, and interconnection costs. NY Green Bank would help make LMI customers' credit scores irrelevant and help secure low cost project finance.

The Parties emphasized best practices for (and the restorative benefits of) outreach and community engagement:

- Utilize trusted community partners.
- Incorporate a meaningful benefit – minimum 25% discount on existing bill payments (percentage based on Massachusetts and Minnesota models).
- Appropriate outreach models and materials.
- Transparent bills and contracts.
- Strong consumer protections.
- Creation of regional, on-the-ground, one-stop shops for customers to understand the full range of programming available to reduce their energy bills and participate in clean energy opportunities.

Next Steps

The working group will next meet on November 6th. Staff will present an outline of the report (there will not be a draft out by then) and will take any feedback. The final report is due to the Commission on November 15th, after which it will be issued for comment and SAPA.