In The Matter Of:

COMMUNITY SOLAR ENERGY PILOT PROGRAM

July 24, 2018

JH Buehrer & Associates

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STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

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IN THE MATTER OF THE COMMUNITY SOLAR ENERGY PILOT PROGRAM	BPU DOCKET NO.: QO18060646 STAKEHOLDER MEETING

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BEFORE: KENNETH SHEEHAN, ESQ., DIRECTOR,
HEARING EXAMINER
MICHAEL WINKA, SENIOR POLICY ADVISOR
ARIANE BENREY, PROGRAM ADMINISTRATOR
EMMA YAO XIAO, ESQ., DEPUTY ATTORNEY GENERAL

TRANSCRIPT of the stenographic notes of the proceedings in the above-entitled matter, held at the Rutgers University College Avenue Student Center, 126 College Avenue, Multipurpose Room, 2nd Floor, New Brunswick, New Jersey 08901, on July 24, 2018, commencing at 10:00 a.m.

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I N D E X

SESSION I: SITING AND PROJECT SIZE

I N D E X

SESSION II: LOW- AND MODERATE-INCOME ACCESS

MR. SHEEHAN: Good morning, ladies and gentlemen.

My name is Ken Sheehan. I'm the director of the Office of Clean Energy for the New Jersey Board of Public Utilities. And I do want to welcome you to today's stakeholder meeting for the Community Solar Energy Pilot Program. This meeting was noticed under Docket No. QO18060646.

That stakeholder meeting went forth and included a number of issues, most notably it reminded us that under Public Law 2018, Chapter 127, the Clean Energy Act, decided into law on May 23rd. It directed the BPU to adopt rules and regulations establishing a Community Solar Energy Pilot Program within 210 days.

It's an ambitious timeline, but that's why we are here. We appreciate that everyone is here to do this process.

Following this initial stakeholder engagement, the Board will be presenting -- staff will be presenting proposed rules to the Board. If the Board adopts those rules, they will then be published in the New Jersey Register. A 60-day comment period will be offered. And during that time, much like we're doing now, public comment will be taken and included into the process.

That rule will then be brought back before the Board for its approval; and if so approved, the final rule will be published in the Register and that will be full implementation of the rule for the state.

Our stakeholder meeting today is broken up into five sessions. Session I, which we will be starting immediately after this, is Siting and Project Size. Session II at 11:45 is Low- and Moderate-Income Access. Not a session, but a lunch break, very important, it is at 1:15. At two o'clock, Session III which is Value of the Credit. Session IV, Applications and Interconnection. And, finally, Session V, Customer Subscriptions and Customer Protection.

This room holds 150 people and we're darn close at the moment. So during the comment period, we will not put any restrictions on how long anyone can speak, but we would ask that you be cognizant of the fact that there are other people here. Me too is an acceptable answer if your answer is me too to something someone else said.

As many of you are aware, we had requested those individuals who wished to speak file something by July 19th. We have those individuals listed and they will speak first. That being said, anyone who wishes to make comments afterwards is absolutely welcome to do

so.

During the sign-in process, you should have indicated whether or not you wished to speak and during what session. We will address those in the order that we received them, with the exception of elected officials. If there are any elected officials who have to get back to the process of running their county or municipality, please let us know and we will allow you to jump the line.

Everyone was required to sign in. That's for us to keep track of things, to put you onto our service list and to make we have the ability to get everyone involved in this process.

Written comments, if you wish to make them, are due to the Board by July 31st, 2018, and need to be sent to the secretary by 5:00 p.m. You are absolutely welcome to both give oral comments here and written comments. If you wish to give written comments only, they all carry the same weight and they will be reviewed and integrated into the record fully.

We will be calling the speakers in the order in which they signed up.

Please speak for as long as you'd like, again within the confines of an understanding of what we're doing here.

This may be a little unusual for some of you, however, that there may be some questions from the dais, we would look forward to understanding what's going on, what your thoughts are. So if we ask you a question, I'd ask you to answer to the best of your ability. If you need to say, hey, listen, I'll deal with that in my written comments, that will be fine. It's not a criticism. It's not a complaint. It's actually an engagement from us, and I'm looking forward to the process. It's something that we haven't done a lot in the past, but we're hoping to see if it's beneficial to us as we move forward.

With that in mind, the truly important things, the men's and women's room is right out the door, to your right. There is a coffee place out the door and across the street. We will be taking breaks during the process.

This matter is being recorded by a court reporter, as you can see. With that in mind, I would ask you to speak as slowly as you can.

Upon introductions, please state your first name, last name, please spell your last name, and indicate any organization that you may be representing. This will ensure that the record is full and complete during the process.

Finally, I would like to welcome two individuals here. We have Commissioner Chivukula from the Board here to keep an eye on us as we go through the process. And Governor Florio, thank you once again for attending. We look forward to your involvement in the process and appreciate you being here.

SESSION I: SITING AND PROJECT SIZE

MR. SHEEHAN: With that in mind, we're going to go ahead and open up the first session on siting and project size. And the first speaker will be Atlantic City Electric.

For ease, we would ask you to come up to the dais to use the microphone and that way we can catch your full comments.

Thank you.

MR. SUNDERHAUF: Yes, good morning. I'm glad I sat in the middle of 150 people, come up here.

But, yes, so it's Steven Sunderhauf, can you hear me?

Steve Sunderhauf, for Atlantic City Electric.

Do you need me to spell my name?

THE COURT REPORTER: Yes.

MR. SUNDERHAUF: S-u-n-d-e-r-h-a-u-f, first name is Steve, from Atlantic City Electric.

Just some general opening remarks that we

had. We wanted to mention that ACE looks forward to working with the entire stakeholder group to make community solar a success in the New Jersey market and look forward to the legislation that is passed.

I think it offers opportunities for a variety of groups that didn't have the ability to easily participate in the PV arrays in the past, low- and moderate-income, customers with routes of properties that can't ventilate and accommodate PV, and customers located on some are concerning feeders that otherwise couldn't install PV.

And one of the issues on this area is setting up optimization. We note that there are optimal places to install systems on our circuits and our feeders and one of the things that we do, as proof, is begin to look at those locations and identify where they are. We do have locational maps currently available.

But, again, given the size of these projects, up to 5 megawatts in size, it's important to get them sited to the right locations so that the cost for interconnection can be as low as possible and can be as beneficial as possible for the grid.

We think that we are not only for streamlining the administrative process and lessen the risks of ability areas. And one of the things that we

have to bring to the table is the experience with community solar in the other utility jurisdictions in District of Columbia, Delaware, Maryland, and the State of Illinois.

And we plan to respond to the questions in detail.

Specifically on siting, we want to work with the players to identify the prime locations. The larger the size of the community solar array, the more difficult the siting options are. So we are cognizant of that. We recognize that that large scale is offset by perhaps lower administrative expenses per megawatt installed and perhaps a lower cost per kW.

Again, we've developed hosting maps where available in identified locations where solar might be optimal.

Considerations should also be given to the integration with battery storage goals of the statute. It's possible that battery storage could basically be joined with community solar projects to basically, not only meet New Jersey's energy storage goal, but optimize the use of those community solar projects and lessen the distribution system impact at the same time.

There was a question related to preferences of sites on brownfields, landfills, and historic fills.

We, as a utility, believe -- on questioning the local land use issues and state and local policymakers and we don't have a position on that either.

But, again, we're looking forward to working with each of you.

We have a team of folks that can help with the interconnection locations. It would be mindful that as we work through the process to take some time through identifying those sites that would be best for community solar activities.

Those are my remarks.

I'd be happy to answer any questions.

MR. WINKA: So one question just, and maybe for all the EDCs, is the Board just recently passed infrastructure investment plan regulations.

Do you see a match-up or an ability to think about community solar and the hosting maps that you put together within the context of that?

MR. SUNDERHAUF: Yeah, absolutely.

I believe there's a linkage. We just need to get it right.

Community solar, if we get it right, offers a number of advantages. When you do it in a less optimum way, the distribution system cost in design. So we just need to be cognizant of what we're doing and the

cost on our system because we want to get it right as we go forward. Okay. Thank you.

MR. SHEEHAN: Thank you.

Next up would be Melissa Kemp from the CCSA.

And just for ease, behind that would be Vote Solar, Pari Kasotia and UU Faith Action, Carol Hemington. Just to let you know you're on deck.

Additionally, we're going to be opening the back door because we have additional seats. So for those people standing, we'll have you seated in about 10 minutes.

MS. KEMP: Good morning.

We have a few slides.

Do you guys have the clicker?

Very good. I'm all set.

Hi, everyone. Good morning.

I'm Melissa Kemp, here on behalf of CCSA, Coalition for Community Solar Access nationwide. I myself am the Policy Director for the Northeast Region for Cypress Creek Renewables, the largest developer, owner, asset operator, solar resource.

So to get into substance here, I need a little help with the. . . Aha, wonderful.

We're obviously very excited about this program in New Jersey, looking forward to this day of

discussions on these very important topics.

The first topic I'm going to deliver comments on -- initial comments today is on program size and siting.

So program size, we represent a large number of companies across the country, many of which work in New Jersey, in the northeast for some time.

The program size that we think is absolutely essential for this program is a minimum size of around half a gigawatt, around 450 megawatts, which is about 150 megawatts per year.

And I just want to quickly walk through kind of the rational for that. We didn't pick that number out of a hat. We don't think it's a scary number. We think it's a number that makes a lot of sense and has a lot of really positive outcomes associated with it.

So, number one, rational for it is what we continue to call equity. So it's consistent with what we have going on, on the behind-the-meter -- in an annual deployment rate not too different. And that this entire program over three years would be about 20 percent of the behind-the-meter deployment to date.

So in the overall construct of community solar as being an alternative for those folks who don't have on-site access, trying to begin to give them the

opportunity to actually have that access, some kind of commiserate scale, it's still 20 percent of the overall, current market today for behind-the-meter. Seems like a reasonable starting point.

Well, let's go further because that's not the only important factor here.

The other pieces that put this in context, one, this program size of 450 megawatts would be about 1 percent of New Jersey's current electrical consumption. Pretty small number.

Number two, if you look at the 2030 RPS that was updated in April or created in April, if you look at what controllers are going to be needed for that, we're talking about this pilot program being less than 4 percent of what New Jersey is going to need by 2030. So by no means is this going to be the be all end all for solar, but it's a really positive step in the right direction, towards the important goals and the benefits that those goals bring.

Three, and probably most important for a lot of folks in this room, is cost. Like, this can be done really cost-effectively. And so a program of this size is not scary from a cost perspective.

We'll be filing a full analysis next week when we put in our formal comments. But we're looking

at, you know, costs when paired with the compensation and siting proposals are critical in calculating that cost.

We're looking at a program that has less than half a percent rate impact for all customer classes and potentially less.

And, yeah, I think -- I guess those last two bullets really focus on the possibilities. This can be cost-effective. The scale when done cost-effectively does not have a big scary impact and the scale is still a small, small piece of where New Jersey is going in the next 12 years.

The next slide.

Next slide.

Thank you.

So just to finish out the two additional reasons for the program size being proposed as we have here. One is driving investment. Like, not only is this not scary from a cost perspective and not only is it just a small step towards what New Jersey actually needs, but this kind of scale at minimum is really what's needed to get companies to invest here and save. And invest meaning see enough ramp of where they can deploy capital and work with communities to make it worth their time and energy.

And we'd love to see that kind of investment, and we think it's essential to some of the more tricky problems. Right? How do we really serve urban areas? How to do we really serve the LMI components?

We'll talk about that a bit later.

But how do we do those community resources to brainstorm and implement those solutions is going to require investment. And like being here and seeing a market signal that we're wanted here. So that's an additional extra point.

And last point on the program size would just be when you look at other states, which is not always the be all end all comparison, but this program is smaller than most of our neighboring states, whether it's New York or whether it's Massachusetts, this program size is, you know, a little smaller than New York and quite a bit smaller than Massachusetts.

And so those are states that, you know, in some respects are less mature than New Jersey is in terms of solar. And so they're doing larger things. They haven't had problems. You know, they're having the same kind of arguments here or discussions about how this can be done really successfully. It's something for us to think about here as well.

Next slide.

So a few other just key kind of details about program size or program details. One, you know, we're recommending that the capacity be allocated with the EDCs percentages state load. Some of it's been done in many states across the country and it seems like a very logical approach and not going to be too controversial.

Number two, we'll talk about later, the only kind of carve-out provided by -- we're recommending I think is appropriate is in the LMI piece. We think that that requires its own focus and attention. But in terms of otherwise divvying up this program into blocks and requirements, we found like in other states, like Maryland, that has been very, very challenging. And said, you know, if there's certain things we want to meet, let's meet them through market signals and smart program design without unofficially parting other programs to way, way too many little pieces that don't end up driving investment or being usable.

Three, co-location. You know, while we, you know, don't think there are fundamental limits, you know, to suit project size and find a location be sized, distribution per structure and local land use property, we recognize that there is typically a standard. And so, you know, 5 megawatts per parcel and allowing things on adjacent parcels seems like a pretty

standard thing that's been done across the northeast that hasn't caused problems and allows us to deploy projects, you know, at scale. And then they also need to comply with local end use and infrastructure requirements.

And the last point actually kind of ties up to the first one. When we allocate off the capacity by percentage of load, if we do have unused capacity, we recommend that it be reallocated, that some type of process be put in place so that it is used where needed. And for some reason we have less in a certain territory, but if it's not going to be used, let's make sure it does serve other businesses and residents across the state.

Next slide, please.

Thank you.

So siting, the second topic that's bundled into the first session here. I'm going to start with what we have seen worked really, really well in other states and then kind of go forward from there.

So our recommended approach for New Jersey would be to take a step forward, use this pilot program as a way to do that toward diversifying our siting options in the state. And this means moving beyond landfills, brownfields, parking lots, and rooftops,

although still very much encouraging us to talk about in a second.

And some of the lands that we like as we've seen done in other states would include former agricultural land, ag land, other types of open land, even forested land in the right situations.

All of it's being done in other states with best practice requirements that really ensure that responsible development is done. And these run the gamut from how much concrete can be used on-site or how soil can be graded or moved to how wiring and conduit would be allowed to be buried, how much trenching would be able to be used.

One, it could be a single trench in a clearly easily removable place versus spreading across the site; or it could be things like decommissioning, not decommissioning plans, but actually bonding, site-specific reuse re-establishment.

We've seen this work really well in Massachusetts, in New York.

From all of the work that we're doing ourselves using our companies within CCSA, using these best practices, we're actually finding that sometimes -- a lot of times we can do -- not only do no harm, but we can actually do good.

A colleague pointed out to me this morning that actually when the New York -- the New Jersey DEP updated its solar setting analysis, they found it was 27,000 acres of land from the last time they did it five years ago had been converted from more open space into now their urban preferred lands.

And so we are losing in this state like open land, farmland, every day similar kind of run of the mill houses and corporate parks and parking lots and whatever else.

And so, you know, one additional underutilized piece here besides restoring soils or having complete removal, having other positive ecological services, we can use solar for test land in a way, not only through the decommissioning bonds and plans and what happens after the project is done, just preventing something else from being developed on it that doesn't have any of those pieces and will never be reclaimed from.

So just something to think about. I think there's a lot more to talk about here.

Our big focus is going to be working with New Jersey partners, land use groups, to really talk about this in general because we understand very well this has not been what's been going on for the last

five years and there's a lot of legitimate concern about how land is used.

Next slide, please.

I also want to just note before moving on to kind of an additional possible approach is just the use of adders.

So in that first scenario I just described, we put in special practice requirements. Really, really thoughtful, we needed to preserve land, restore land to an equal or better condition. You know, we still want to track development when we can on brownfields, landfills, parking lots. There's absolutely no reason that that shouldn't be done. That makes all the sense in the world. We just know that there are physical constraints and cost constraints of doing that.

So following the model of what some other states, including New York and Massachusetts have done, let's do use adders. In this program, it may be separate from this program in terms of the SRECs successor efforts, but something to actually say, please go and let's recognize there's a cost difference here, and please go and, you know, develop on these other more difficult, more expensive sites. So it's not just protect development on these open lands, but

also encourage continued extensive development on the lands that have these impacts already.

You know, we'll have more information on this next week, but the analysis that we're doing really does show, in addition to everything else that's played out about do no harm, you can help, you can encourage development still on these impaired sites beyond all that, like, to get New Jersey to where it needs to go just for 2030, then we're looking probably on the order of 10 to 12 gigawatts of solar. It's enormous. We're going to need more siting options. And that maybe isn't today. It's in the next few years. But it's something to think about.

Like diversifying our land options in a responsible and smart way will make it feasible to get to the goals we need to get to which have all sorts of benefits. And then, too, it's also going to reduce costs for businesses and residents, right, when we have additional competition for siting, we have a possibility for siting, that is going to reduce costs to people, ratepayers, residents, and businesses across the state.

Finally, the last point that I'm sure a lot of you have experience with and talk about frequently, you know, allowing more siting diversity, also helps

other types of folks in our state, helps landowners, helps farmers. You know, a lot of times farmers in New Jersey are having trouble making things economically incentful. And so we have so many farmers in this state and others who are excited about having another source of revenue. And if done responsibly, they would welcome it and it would really help that protection of land or farmland to continue.

Next slide.

So I guess we'd like to say, you know, that is what we think makes a lot of sense. It's logical and has worked well in other states. Not every state is the same. And I guess just to kind of put another bookend on it, what we would like to say, you know, at a minimum, at a minimum we'd strongly recommend that a marginal land category be added to the missing allowed siting uses that we have today under the SREC construct.

Now, that definition of marginal land, we would want to work on, but it would start with something like uneconomic and/or underutilized, you know, cash your land and do crop lands.

So maybe if we don't want to open it up in the way the state have used best practice standards and maybe we take our first step in a super positive but

more limited sense and adding a category like that and we're just calling it marginal land as a placeholder would be something that we would say is a minimum which is really, really needed to make this program -- community solar program successful.

And with that other kind of minimum option about adding that extra category of land, we would also strongly recommend, you know, adders for brownfields, landfills. And this fits into the compensation program which we'll be talking about later this afternoon and how we're, you know, because of the compensation situation current in New Jersey, we're looking at a much lower level of compensation, making the adders actually keep it reasonable and still much, much more cost-effective and less expensive than those kind of projects have been done in the past.

So the adder piece we'll save partly until the afternoon when it fits into the -- when all things kind of fit together.

One last point, I know one of the many questions in the document from BPU was about additional ways to reduce risks for brownfield, landfill development.

You know, we have been working very closely with our environmental expert and land development

expert on the recommendations. Just one example I wanted to mention. You know, it's like a pathway for comfort letters for brownfield sites that don't have full closure today. So there's a bunch of different ways, like, that to try to reduce risk earlier and make those sites more useful and I think it does pair very much with the outer piece as well. But we like really appreciate that thought and the idea of, like, let's reduce risk to make this more efficient, less expensive, more doable, as well as recognize the extra costs in doing so.

I think that is the last of the slides.

Next slide.

Yeah, that's it. Thank you.

MR. SHEEHAN: Does your pilot program size require land to be on the port that would support the proposal?

MS. KEMP: We will have a full analysis on that for next week, but it's a very good question that we're looking at.

MR. WINKA: One second.

MR. SHEEHAN: Nice try.

MR. WINKA: So since you raised that here, I'll just -- and maybe for others to think about.

So currently in a rate impact that we have,

so in the SBC, SREC program, Class I RECs, we probably spent about $1.3 billion annually.

So do you see community solar program as additive to that or in a zero sum gain?

And you don't have to answer now. You can answer in your written comments.

The other is we spend about between LIHEAP, Weatherization, Comfort Partners, USF, Lifeline about $400 billion a year, those are on the Energy Assistance Programs.

Do you see ways that other states have used those programs more effectively, more efficiently in the Comfort Partners Program?

Again, if you can't answer it now, if you can answer in your written comments. So just a way of being able to link those two things together.

MS. KEMP: Definitely on the latter, I think as we talked about a little bit, those type of organizations have been -- begun to be effective partners mainly on the subscription side of community solar.

I think it would be very wise to brainstorm additional ways that there can be partnerships or collaborative work.

Can you clarify the first question?

Was it whether the community solar program would be additive to any cost factor?

MR. WINKA: So we currently spend significant ratepayer dollar -- ratepayer impact to raise that, so about 1.3 billion, last number I saw from the comments DEP or RGGI, add all that up.

So would the additional cost of a consumer -- of a community solar program be rate impact additionally above to that or should there be some cap within the entire program? So should it be a cumulative cap?

MS. KEMP: I think I'm going to need some clarification on where that number is coming from.

I mean, generally, the overall point here, which I know Brandon will talk about the compensation, is finding a way to reduce the amount that it's spending.

So I think there are two issues. One, the resources can be valuable and it's not essentially a subsidy, but obviously anything that's not avoided in utility costs today does get passed over -- well, New Jersey utilities, that's evolving -- but in general -- in general the ratepayers end up paying for it.

The goal here would be to make this program so efficient that whatever it's adding to New Jersey's

current expenditure is very modest, if not almost a decimal point. And I think with the combination of program size recommendations from CCSA, the compensation proposal and the siting, all of that actually works really well together in an extremely cost-effective manner.

To put a number on it and clarify in the context of what you guys are already doing, we need to circle back for next week.

MR. WINKA: Thanks.

MS. BENREY: To push you a little bit further on the proposal to have capacity -- program capacity set at 450 megawatts, I understand what you're saying about it's 1 percent of New Jersey's annual consumption, etcetera. Flipping it, have you, as a speaker for CCSA, with your ear to the ground, do you know of sufficient pent-up demand to justify 450 megawatts for a pilot program that's three years long? And with the understanding that neighboring states have done more, I can also point to states that have done pilot programs with much, much, much less.

So I think we want to be able to size a pilot program as quickly, not just looking at what it means for the state, but also what it means for the community solar pilot program.

MS. KEMP: Given New Jersey's population density in certain areas, given the scale of overall consumption, and half of it, you know, being related to the sector would be most immediately served by this project, and folks that have been here longer than I can probably comment more, but what we have seen is a lot of demand interest.

As long as there's a value proposition and that value proposition definitely includes economic savings to those customers, it includes more than that, like economic certainty is the number one starting thing. If that is there and, you know, there's a good job in the state educating what this is and there is protection and it's done smartly, then the people are interested.

So, you know, in neighboring states who have done larger things and they didn't call them pilots and they were their first iteration. You know, we haven't seen a problem in customer uptake. The problems -- there are other things. There have not been customer uptakes. There's been evolution about certain protection and how that's communicated with people and how to reach different types of populations.

But, yeah, I haven't seen any problem with customer interest.

And given, you know, New Jersey is a little bit greater in consumption than Massachusetts, we're seeing many times this in terms of community solar and not get a saturation market.

So we can respond to that in a little more detail in our written comments. But we really have to be really positive to take over the market, as long as value proposition, people have been waiting for the opportunity to get involved in their own energy and they think its responsible and in their children's interest for a long time. And I think we'd love to provide that at a scale that, you know, begins to meet that need and then also brings development to drive down costs and makes this a success for New Jersey and other areas as well.

MR. SHEEHAN: Thank you very much.

Our next speaker is from Vote Solar, Pari Kasotia.

PARI KASOTIA: Good morning, everyone.

Pari Kasotia, Vote Solar.

Vote Solar is a national nonprofit organization that promotes solar friendly policies. And as part of our mission, we also promote equity and choice access for everyone.

So before I get into other aspects of siting

and project size, we actually do agree with CCSA and we are also advocating for 450 megawatt program size. Also, we also believe that provides market certainty to solar developers and also helps to reach the RPS goals, that regional competition in New Jersey.

And in terms of the individual programs sites, it makes sense to do 5 megawatt -- up to 5 megawatt of projects, but we also want to make sure that we are facilitating all types of project sizes. So there are projects that are 250 kilowatts that should be facilitated in a much easier way, 5 megawatt project to building in some flexibility based on the project size.

In terms of projects located on agricultural land, we recommend that those projects combine solar-friendly vegetation. We have seen somewhat success of that in other states like Minnesota and Maryland. So we want to be encouraging a good concentration of how to maintain that agricultural land, in addition to projects on brownfields and landfills.

And then siting of projects, as I mentioned earlier, ensuring that underserved communities and disadvantaged communities benefit from community solar. We encourage the BPU to support, prioritize, and

incentivize projects that are constructed in communities of color. We want those customers to not only benefit from clean energy access, but also benefit from the job creation opportunities that arise from community solar projects.

We encourage the BPU to partner with other agencies to see how we can prioritize projects that are located in environmental justice and communities of color.

Lastly, I think we also need to ensure that any community solar project that's developed is reaching all types of customers, whether they're in multi-family buildings, single-family homes, and those that are privately and publicly owned. So thinking much broadly in terms of projects that are sited and access to different counties and towns.

Those are the initial comments that we have on the siting and project size.

Thanks.

MR. SHEEHAN: Thank you.

UU Faith Action, Carol Hemington.

MR. GREGSON: Thank you.

Good morning, everyone.

It's a pleasure to be here. I'm part of the team. My name is Rob Gregson, G-r-e-g-s-o-n. And I'm

pleased to be with colleagues Carol Hemington, who filed the initial papers, and Reverend Ronald Tuff of Green Faith.

I am the Executive Director of the statewide public policy arm for all the Unitarian Universalist Churches and congregations in the State of New Jersey. And we have a program -- environmental program that has been in place for several years where we've tracked legislation and testified in Trenton and elsewhere advocating for justice on issues of environmental.

Because of that, because of a real commitment that we have to some of the same issues the last speaker brought up around low income communities and particularly a real attempt to change the way that racial bias is played out, we are very concerned, in particular, that LMI communities and urban communities benefit as much as possible.

So my responses will be on the siting piece of that. And later on, we have more specific suggestions my colleges will speak to.

First of all, we have a strong preference that the siting would be in those urban preferred areas. We understand that there may be some compromises that need to be made around farms, farmers. But we think that there should be plenty of sites, that

would be brown sites, that benefit low-income communities in a number of ways, both in terms -- and I agree, again, with the former speaker -- in terms of making good use of that and providing more of an incentive for LMI communities to actually participate in these programs; but, of course, there would be job training -- some job training aspects.

But even beyond that, I would ask the Board -- or we would ask the Board to think more creatively, if possible, about how to make this attractive for people who live in these -- near some of these spaces.

So, for example, we didn't mention this, but we were thinking something along the lines of solar cities where there would be a way to make this an attractive and a positive impact on cities that often don't have that reputation or that feeling in them. And that would take, perhaps, some additional resources and some creative thinking. We think that would be an important point to make.

We'd also be asking that -- and again I agree with the former speaker -- that everything be done to make these hard areas not be all concrete, gravel, another hard surface, and a possible heat pocket. So we would agree that those examples from Maryland and

Minnesota would be worth the Board's time to look at, not only in farmland places, but let's make these sites something you and I would like to live next to or at least not feel like it's yet another eyesore in our communities.

And sadly urban communities have lived with that and communities of color have lived with that as part of their neighborhoods for a long time, among other energy development plans.

Secondly, we would ask that as part of the environmental piece to that, that there be a decommissioning plan and escrow fund for mediation.

As we've seen in too many places -- and my colleague, Carol, has worked in superfund sites in her professional experience -- too often developers go bankrupt and disappear, leaving communities with serious health issues and nowhere to turn for help.

Secondly, we have some concerns that exemptions on groundwater, groundwater standards, I believe are in law right now for community solar. That was our understanding of the legislation. We would like the Board to ask that, in fact, stormwater coming from treatment plants be a part of any community solar so that we're not further impacting our waterways and certainly around the areas.

I guess, lastly, one piece I meant to say, a little bit earlier and is my last comment, is that there might be some concerns that we don't have enough brownfield or urban areas really adequately to develop.

I would just bring your attention to the New Jersey DEP's solar siting analysis update, which was included in our paper from 2017. That says:

Even 100 percent solar objective for the State's electrical consumption of 74,199,000 megawatt hours requires only 302 square miles or 4.1 percent of all of New Jersey's land areas, or 14.3 percent of the New Jersey's preferred urban brown site land area, well within this analysis' total preferred area calculation of 29 percent.

So we hope that you will land squarely on the side of really using spaces in urban areas that will benefit those communities.

Thank you very much.

Any questions?

MR. SHEEHAN: Thank you very much.

Next speaking would be Jeanne Fox.

MS. FOX: Thank you, Mr. Director.

Jeanne Fox, J-e-a-n-n-e, F-o-x.

My background is President of the BPU, Deputy Commissioner under Governor Florio, and EPA Regional

Administrator.

So this is what I know and also having done a community solar project in Princeton and I've worked with Governor Florio, there again, a business partner.

Talking on just this subject: The proximity of projects to subscribers is an important determinant of the extent to which a subscriber is identified with a project. They need to be perceived for the community. It can also result in an improvement in the health of project subscribers when community solar is deployed, instead of a traditional power generation facility. More proximate siting can also result in lower transmission line power loss and a relative lessening of the burden on grid distribution lines.

As you know, in South Jersey we have these problems because of these large sited distribution systems.

I favor requiring that the subscribers be located within the same service territory, and additionally, within the same or an adjacent municipality; provided that if the subscribers are in an adjacent municipality, they must under no circumstance be located at a distance of further than 50 miles from the project site. However, the Board should retain the authority to grant a waiver from the

proximity requirement for a specific project via board order if there are reasons that justify the project is in the public interest.

Since there is a pilot stage of the program, efforts should be taken to support the implementation of projects of varying capacity levels and any RFP should describe these size categories.

I recommend that neither individual projects or any co-located group of related projects be deployed with a capacity in excess of 2 megawatts.

Generally speaking, projects with such capacity require approximately 10 acres of service area. Projects with capacity in excess of 2 megawatts would be inconsistent with the need for New Jersey to preserve its limited open space, as well as site projects in close proximity to applicable subscribers.

As I think as most of us know, New Jersey is unique and we're the most densely populated for a long time. And in order to build out by 2050, the way we're going now, and yet routinely vote to preserve our open space and our farmland. So New Jersey is one for preservation of farmland.

I've heard them say that we're restoring group -- to focus. We have tons of parking lots, big box stores, and parking, etcetera, etcetera.

In order to obtain the most benefit from the pilot, BPU should create categories for participation in the program based upon the siting of projects and provide incentives for project development where appropriate. Certain categories would have standardized approval requirements, while others would be authorized via an RFP process.

Categories for deployment should include brownfields, government building rooftops and parking facilities, low- and moderate-income, and other multi-apartment facilities, building rooftops and parking facilities, warehouse rooftops and parking facilities, and other commercial building rooftops and parking facilities.

We should attempt to avoid as much open and undeveloped land as possible, again, because we don't have enough of it and, clearly, New Jersey residents want to maintain that land.

So I urge that especially that landfills improve quite differently. I think it was a mistake and I thought it at the time when landfills were included. I know from my experience in the EPA and BPU and having been in solid waste at the BPU, that landfills settle. It's garbage, it's junk, and it settles. It's planned to settle, the collection

system. They're very expensive and the most expensive solar facility in the state is the one up in the Meadowlands. It cost a fortune. And you know better than I of how much that would be. But solar on landfills is the most expensive solar to put in because of that settling. It's very expensive. It needs an infrastructure, a very strong infrastructure to be built to actually support the weight of the PV.

When I was at EPA, they looked at -- dumps were being closed down. And they were looking at different ways to make use for it. Skiing, solar, all kinds of stuff. It is not possible do to that. It's too expensive.

So possibly tax incentives to be given to old landfills. I would not have it in any way, shape, or form though that ratepayers would cover any additional landfill costs that went above the typical brownfield costs because of that issue. It's a cost factor. And, as we know, ratepayers are paying a lot of money.

And based on the community subsidy bill, the offshore wind, going back in RGGI, the $2.5 billion infrastructure that Public Service filed, and other rate cases, our working class is growing because the middle class is decreasing. And I think a lot of them are -- have to be concerned about ratepayers, either

through the SREC process which we have now or certainly through utilities base rate solars, specifically not good for the ratepayers.

I suggest that the pilot do some community solar competent with the systems that we've been working on. My personal belief is that such arrangements will be part of our New Jersey energy future.

When we had the microgrid and these micro-storms and all that come up, it might make sense to have some of the pilot be in communities with microgrids, where you have that involved in the microgrids in this pilot.

In fact, in schools and government roofs, parking lots and garages are likely to be prime locations for community solar.

I also think that possible consideration should be given to LMI community solar projects. We've talked about that for a couple years now. I would suggest at least 15 percent to 30 percent of solar capacity be allocated to LMI solar for both single- and double-family housing, as well affordable public low- and moderate-income housing, both private and publicly owned. And, of course, these projects would require something like a 40 percent allowance for accurate

subscribers -- the accurate subscribers.

Bottom line: Because of those extra costs that have now been put into effect through legislation and through rate case filings, the Board really needs to avoid as much as possible the unnecessary cost to ratepayers or utility rate basing or by other means in the process. Incentives, such as tax credits and partnerships, should be utilized, possibly working with the EDA to get some money for RGGI, those types of things.

Possibility that if there are areas where no other developer would put in community solar, maybe some downtown urban area that is not exactly a money-maker in their minds, utilities possibly could be involved in that. But we ask you to look seriously at that issue.

So thank you for prioritizing community solar in New Jersey. I think it is part of our future.

Any questions?

Michael, no?

MR. WINKA: So since you've been a preacher of this for a long time, you mention a number of standards. You said at minimum 15 percent within 50 miles to 2 megawatts. This is a three-year pilot.

MS. FOX: Right.

MR. WINKA: And a lot of things will possibly change and the legislature had said you have to do this by rules. I would prefer to do it by order, but our friends at the end of the table say we have to do it by rule.

MS. FOX: This is the DAG. I was wondering who this young lady was.

MR. WINKA: How would you see -- would you see us being able to build in flexibility into that rulemaking structure for some of the things that you raised?

MS. FOX: First of all, the rulemaking proposal, I personally think was not a good thing to do because the rulemaking takes a year typically and then you have another year to start working on it and then another year proposing the rule.

So I don't know how the heck you're going to do that. But good luck.

I would suggest the rulemaking begins as broad-based as possible. That will give the Board authority to have some results. One year of results that you can do to then do a somewhat better broad-ranged rule. And then you have to do it for a couple more years to do a pilot. And then actually have more hearings in getting down to the pilot.

I think you need to give the Board as much discretion as possible to do it by board order.

So you can try to be very specific on some of them. But especially with the LMI, I think you really need a broad way of LMI now. If this is universally thought in this state that you need to include that -- the underserved.

So possibly looking at areas in the most congested areas of New Jersey, up in North Jersey, ratepayers pay higher rates because of that -- people cover to low-income community members.

I would also suggest energy efficiency and other things where you're charging at least initially, and look at that to see if that works out.

It's going to be tough because you really don't -- doing the regs is just taking away too much time. You're going to have to do them again in another couple years.

Does that answer your question?

MR. WINKA: Thanks.

MS. FOX: Okay.

MS. BENREY: Just as thoughts moving forward, two points that were brought up for speakers who are coming next.

One of the questions that we're grappling

with is: What is community solar? What does community solar mean to you in terms of one of the issues that was brought up? What is the distance -- maximum distance that we're going to allow between subscribers and the site in order to maintain the definition of community solar as we understand community to be?

So that is something I would encourage speakers to continue to reflect on. And then something that I would also enjoy hearing more about is the issue, if anybody has any expertise on landfills specifically and solar on landfills that can be heard.

One very strong opinion, if there are developers in the room who've had experience of building solar on landfills, I would encourage you to make that note and share that with us.

MR. SHEEHAN: Thank you.

Our next speaker is from Pine Gate Renewables.

I'm afraid there's not a name attached to it.

Okay. We can bring you back around.

Next up would be New Jersey Resources.

MR. BARTH: Good morning, everyone.

Larry Barth, Director of Corporate Strategy with New Jersey Resources.

Pleased to be here.

We've installed about 200 megawatts of solar in New Jersey. We've been in the market for the past eight years.

I really want to thank the BPU for holding this proceeding. And the questions that you put out were great and really got us thinking. And this is a terrific opportunity that we're all talking about today.

Even though you guys put out great questions, I have got a question.

And this is one that we really couldn't answer which was related to the capacity, the program capacity here which was, you know, from our perspective, if we're going to have a diversity of projects in the state here in this pilot program to really figure out what makes sense and to be able to test a number of things out, we're going to need incentives for some of those projects.

Unless you're building a 5-megawatt project maybe in PS territory with one or two or two or three corporate off-takers, all other types of projects, smaller projects, projects on rooftops, projects with different customer bases are going to require incentives, and where are we going to get those incentives from.

I mean, the SREC program has been a terrific program and has really supported instate development. The BPU has really been instrumental in the connect to distribution. But as we see it, that program is pretty much getting maxed out.

If the BPU were to look at community solar programs, in terms of these, would need to be approved by the Board as being designated as connected to distribution. And one of the things that you would need to look at in that context is whether or not this will impair the SREC market. It would, based on the numbers that we're seeing, you know, tracking from the BPU in terms of what's installed, what's in the pipeline, and what the ultimate goal is.

So back to our view, these are questions for the BPU.

As we look at the statutes, we see that the statutes encourage the BPU to consider opportunities to increase the RPS as they see fit with stakeholder input.

The BPU also, as we interpret the statutes has authority to do so. And so this is something that we would suggest that you look at, here, particularly, as we're bridging between, you know, the world of today and the future world that we're looking to create with

some structure which is to-be-determined. So figuring that out will help us answer the question.

There may be other things that the BPU is thinking about in terms of where funds can come from, like rejoining RGGI, there may be some funds. There's a Class I market. There's some authority you have over the EDCs. But these are all things that we need to understand from you in terms of what's feasible.

We can probably spend hours today talking about each of those, and I don't want to start that discussion here.

But answers to those questions would help us inform what a reasonable target is.

In terms of project size, you know, the statute is pretty clear on 5 megawatts. The only thing we would add to that is that we think in the pilot we should limit the size of the projects to some level within the annualized load of the off-takers so that we want to avoid oversizing the projects and getting into excess credit generation. So 80 percent, 90 percent of the load, it should really be treated like a -- you know, like when you sized projects for the net-metered projects. You're ultimately building to serve the customer needs. So we should keep that discipline in the sizing.

We agree conceptually with some of the discussions earlier about using adders rather than be overly prescriptive about certain market segment sizes. We agree that does need some basic allocation between the EDCs, but to the extent possible, as a design principle here, we would lead with providing proper incentives for different types of projects and then let the market find the path to least resistance.

We also feel like, you know, the way when we talk to the value of the credits, you know, we believe that you should be paying an EDC for moving the power and using their lines. So we feel that siting the project within the EDC territory is fair game anywhere within the EDC territory. I understand, you know, that you want it as close to the customer as you can, but given land constraints in this most populated state in the country, it would need to be a little bit flexible on that one.

With respect to low- and moderate-income folks, again, we would also go down the path of let's define perhaps even a sliding scale for an individual project, what percent of the project off-takers are LMI and then, you know, provide an additional adder for that, as opposed to again a prescriptive segment target.

As we're looking at some other states, we're seeing that there is a little bit of a challenge in customer acquisition for that segment and a lot of these projects fall into corporate customers. So that's something that we need to be aware of.

I think the only thing -- the only other thing I would add is we have built projects on landfills. We do believe that those are technically feasible. We do understand that there's settlement and there is some concerns about -- different than just putting it on a greenfield project, but we do feel those are feasible.

We think that, you know, large scale projects built on landfills can deliver some of the best economics and result in the lowest cost incentives to the state, if we can do that.

One thing that would be helpful is we've seen a lot of time wasted in discussing limitation of liability when we're involved in a landfill project because of all the history of landfills and what possibly could happen. So the more the state can help in setting up rules to avoid that, the faster we can go with landfills and brownfields.

So those are all my comments.

Thank you.

MR. WINKA: So in the statute there was increase in the solar RPS. So there's something around 600 megawatts of incremental load between this year -- well, yeah, this year.

So your comment was you've seen impact of this program on that. So if you can submit those calculations and that sort of modelling that you've done, we would appreciate that.

I can answer your question on the incentive.

So the answer is: What do you think?

So the good thing about sitting up here is I don't have to answer those questions. And I'm not being rhetorical. We asked that question earlier. We're spending $1.3 billion. Where do you see -- and to other folks, where do you see that sort of -- and there's other things we're going to be doing and other things that are going to be good for society, but where do we sort of -- how do we balance out all those issues?

So it's not a rhetorical question. It is we'd like to hear your comments on how do we break out those things.

MR. BARTH: The thing that we would be leaning on and thinking about is, you know, an SREC is very important in terms -- I think part of our

objective here in community solar is we're trying to build projects here in New Jersey to build-out distributed energy resources in the state, employ people here in the state, and create benefits for people in the state.

SRECs have been instrumental in helping us build a large, robust, in-state market, and I'd be looking for ways to continue to leverage that for this pilot.

So if there was a way -- and I don't know if there's a way, if there was a way that the BPU could adjust the RPS for whatever it would add as a result of this pilot in the context of, you know, we're going to 100 percent clean energy so what adjustment we need to make here in the bigger picture would be a minor one. That's the direction I'd be thinking of.

But, you know, I don't know all the details on what you guys are having with that.

MR. WINKA: And we're not looking for your answer here; but if you can put it in writing, that would be helpful.

Thank you.

MS. BENREY: Right before we let you go.

Sorry.

Very small point.

You mentioned that the maximum subscription size or a project should be sized at about 80 or 90 percent. Do you have any suggestions, should there be a minimum; and if there should be, what should it be?

MR. BARTH: A minimum size for the entire project or a minimum size for the --

MS. BENREY: For if it's a subscription or whatever business model the community solar array is pursuing, should there be a minimum imposed on what an individual subscriber's load is being?

MR. BARTH: I would need to think that through. Off the top of my head, I would say no. I would say that's up to the developer. I think the developer, from an efficiency standpoint, would want to be signing up as many high-load factor customers as they could and they'd be targeting those folks appropriately and messaging that the more the better.

So I have to think further about that.

Thank you.

MR. SHEEHAN: Our next speaker is from Direct Energy Solar. It's Daniel Schneider.

Okay. Jonathan Ratner.

All right. Well, that was the people who had pre-signed. So we're going to take a look at the

people who have signed up at the front door. So some of these might be duplicative. So I apologize.

Carol Hemington, you've already spoken.

Right?

That's what I thought. Thank you.

Ryan Marrone from Solops.

MR. MARRONE: Yes.

MR. SHEEHAN: Thank you.

MR. MARRONE: Thank you.

MR. SHEEHAN: And you can go ahead and spell your last name for the court reporter.

MR. MARRONE: Sure.

Ryan Marrone, M-a-r-r-o-n-e. I'm the President of Solops. I was most recently the Chief Operating Officer and the founder of Blackstones Renewable Energy Company.

Just a couple comments, first, I want to thank Larry for his comments. They were right on point. And it's been a pleasure working with him in the pre-legislative process. And I think he touched upon some very good points.

We've developed or I've developed over the past 10 years around 320 megawatts of projects across the United State in the C&I space, 40 megawatts of those have been on landfills sited throughout

New Jersey, Massachusetts, New York.

And I would submit and concur with Larry's comments with respect to development on landfills. They can be very beneficial.

And in the work that we did in conjunction with a lot of the stakeholders and the legislative process, the concept that we were really focussed on was factoring on how to reduce the cost overall in development projects.

Part of the reason we suggested larger scale development on brownfields, landfills of the sort is to reduce the cost overall so that it could provide more savings to the consumer, less cost and burden on the ratepayer so you can develop those projects.

The idea is to preserve the SREC market for the legacy projects that have been built and operational in the state and provide a path forward for new opportunities.

One of those was to talk about a carve-out or an increase of the RPS associated with the community solar and the remote net metering piece that, that can operate independently with a secondary SREC market perhaps that can subsidize and provide support to those particular projects at a lower SACP factor. And if you establish all those rules ahead of time so that legacy

SRECs, the original SREC I program cannot be utilized to meet the RPS requirements of the community solar or the remote net metering program, you can create a secondary SREC market.

This is similar to what was done in Massachusetts. We were part of the rulemaking process over there when they were doing their various programs, and it really looks to factor in the consideration of the hundreds of millions and billions of dollars spent over the years in getting the market established in New Jersey without jeopardizing those projects. It allows a nice path forward as we transition.

When we talk about the siting locations, which was the primary point of this component, Larry was right on point with respect to the EDC.

We looked at the underserved markets of the LMI community in the urban areas and it's critical to being able to provide a growth and meeting objectives of the State of New Jersey.

The issue you have, right, is to give them the savings that you want to be able to meet, perhaps, an SREC II with reduced SACP factor, you need to be able to build scale more efficiently. The utilization of urban areas is more costly in building those particular projects. So being able to establish and

get scale of 2, 3, 4 megawatts and be able to serve those communities requires that they be sited further out from those urban areas. Typically because you don't have the scale squats of land to be able to do the scale and efficiency and construction of it. So it's certainly I think a benefit of balance to be able to establish that.

One of the components with respect to the CCSA, and I thought they were very good, I wasn't sure where they were going to be going, but I commend them with their comments.

The only thing I would touch upon, as well as Ms. Fox, in which she had indicated about the greenfields, is an added benefit of solar development is that it enhances value. If you're a real estate owner and you have static revenue you're receiving for commercial rooftops or a warehouse, you can add revenue by leasing your roof.

One of the other things about this opportunity with brownfields, landfills, and one of the things that wasn't included that we think should be, there is a need of redevelopment to receive blighted designations, is putting fallow or underutilized land back to work and utilizing private dollars to be able to clean up those particular circumstances.

So rather than utilize public dollars or grant dollars or tax dollars to improve a brownfield, improve a blighted area, close a landfill or complete a landfill closure, utilize the private developer investment through renewable projects to be able to clean up those projects, clean up those properties that benefits the community and the state by putting them back on the tax rolls for the townships. So there's an added benefit with a focus on the development of those projects, whether it's done through an adder, as some others have suggested. It certainly is one of the things that is really important to focus upon with respect to those properties and those types of projects used for siting.

Parking lots are great. Carports, we just finished 50 megawatts of carports for public entities in California. They're great, but they're more expensive.

So when it comes to reducing that cost for the ratepayer, reducing the benefit with respect to the off-takers for the property, that's the only downside with respect to the carports. Certainly, we don't have objection to utilizing them, particularly in hot areas in the state. In southern states, we did them a lot because there's an added benefit with respect to

covered parking and factor in the charging stations.

That's all I have.

MR. SHEEHAN: Do you have a sense of scale and scope of blight redevelopment areas in the state?

MR. MARRONE: You know, I would say yes. It's rather significant, but it is municipal limited. Certain municipalities have virtually none. But the ones that have it are prevalent with it. And even if you talk about bluefields areas, like the City of Rahway, that has it. You know, we've looked at their bluefield designated areas and figure is there a way to be able to capture those properties so that you can actually repurpose them.

Those unaware of bluefield areas are areas that were subject to flood zones and basically designated you can't development anything else because of the likelihood that they're going to re-flood.

So the towns in a sense have been forced to take over ownership of those particular properties at their own cost, but now they can't do anything with them. So they're off the tax rolls and they had to acquire the property.

So perhaps to re-purpose those lands by putting solar. They'd be small arrays, but they would serve that benefit. And if there was an upside or

cooperation with the EDA or some other grant associated with it, it might be a better utilization of the public dollars that are allocated or required to be spent with the bluefield program, to put them to this use to work together.

It's really that focus of utilizing private dollars to assist and help with overwhelmed public. Because private developers have the wherewithal to pool what levers are appropriate from a financing perspective to make things work. If the rules are such that we know what the rules of the game are, we'll work on the private side. And financing projects on brownfields and landfills, we've never found a problem with it from all of the Wall Street partners and banks that we've utilized, whether it be through debt for tax equity facilities. It may be more complex and a little bit more difficult from a documentation perspective, but it's certainly out there.

MR. WINKA: You started to touch on the question that was raised. So Mr. Barth raised a liability issue on landfills, a liability issue on brownfields.

So is there any other cost in there?

And does the DEP -- or is there something we should be talking to DEP about in the same vein that

Mr. Barth raised on landfills?

MR. MARRONE: There absolutely is. There's an added cost from a legal perspective and an engineering perspective in putting the documentation that are going to coverup that liability risk. There's policies that we can also purchase which offset it.

One of things that's somewhat helpful is if you use a friendly, through a senior property, I'm here talking about land and redevelopment of land, then that can clear the title and clear liability issues. And I think it's something we actually have to look at.

The problem you have is when you talk about strict liabilities under Circular ARICRA (phonetic), you're dealing with the federal regulations. If we talk about things like PCBs which are under federal TSCA regulations, a little bit less enforcement. But there has to be a cooperation between the DEP and the municipal property owner and the federal government, the EPA, in order to try and work through that.

But there's absolutely a benefit to it if you can streamline or reduce the regulatory process to provide some protections so that that liability cost is either reduced or at least the timeline for clearing it out for the documentation, the insurance, and the engineering that time period is strong.

MR. WINKA: Thank you.

MS. BENREY: I forgot my question.

Yes.

So based on your comments, it sounds like you're saying -- so we heard from previous speakers that ideally we want to locate projects in cities next to the people that they would benefit, potentially withdraw benefits, etcetera.

It sounds from your comments like that may be a little bit difficult from a sizing and economic perspective. We'll get into the finance at a later session.

Do you envision a path forward for perhaps smaller scale projects in urban areas that would be -- and perhaps some returning to -- which is what is community solar, but that would be directly embedded into a community in which they would benefit? Is that something pursued? Is that something you would consider pursuing, and under what conditions?

MR. MARRONE: I like to look at a community as all the people in the State of the New Jersey are one big community, and the renewable portfolio objective it's statewide. It's not municipal-wide and of the 535 municipalities and the 20 counties.

I would certainly look at, as a developer, at

urban development opportunities that are smaller scale. The issue we run into is: What is our average cost of capital? What does the financing mechanism look like for that based upon the scale that we get to build it?

And with the ever-changing landscape of the ITC and where it's at and you have now rising debt markets and with the longstanding current projection is for the debt to offset the decline of the ITC which is the balance of how you're going to actually finance these things over a long period of time and what the future markets are going to look like.

So getting costs down is tremendously important. So it doesn't exclude them. It just doesn't make them the ideal optimal opportunity.

So I would leave it to the private developers and all my colleagues that are in the development of the solar space to be able to determine what those economics are and whether they work for them. And there are certainly in the private sector going to be companies that can focus on serving those markets, just like there are companies that focus on building residential for the LMI community with the lower FICO scores.

So I think it's absolutely an opportunity. I think it's something you should consider. I just

don't.

Think it should be exclusionary.

Thank you.

MR. SHEEHAN: I'm going to apologize for this one, Royal (sic) Tuff.

Is that somebody who signed up from Green Faith I believe?

REVEREND TUFF: For the next session.

MR. SHEEHAN: Got you. Okay. Very good.

Thank you.

Would you like to speak for this session or next session?

REVEREND TUFF: Next session.

MR. SHEEHAN: Gaylord Olson.

MR. OLSON: Hello.

My name is Gaylord Olson, O-l-s-o-n. I'm not representing any specific organization. I'm a semi-retired engineer, and I've been looking into some of the real numbers, comparing small rooftop solar with much larger scale solar. And there's at least one member of the audience who was part of the rural group where we kind of met informally in Mercer County, and we would talk about one of these factors that should be looked at to prepare it, you know, the economy of scale.

And we've heard a few times the mention of it as the economy of scale. But I'd like to put out some real numbers for you.

And we're going back to four years ago, the research that I did, indicated that you could buy about twice as much power from a large scale array per dollar. Twice as much, as compared to small rooftop array. And I think that's probably pretty close to still true.

However, another factor coming into play in recent years and that is large utility solar arrays incorporate what's called one access tracking where the arrays can be -- I see people nodding. If you don't know what that is, Wikipedia will tell you.

But, anyway, the arrays can rotate slowly so that they face the sun at all times so that gives a significant extra benefit.

As a matter of fact, the National Renewable Energy Laboratory once a year puts out some comparative numbers and the most recent numbers I have right here.

They actually separated four different categories of solar electricity. One being residential rooftops. And the average cost -- and this is going to be in terms of energy, not power. There's a difference. And in terms of energy kilowatt hours

selected per year, the cost for residential rooftop is 14.8 cents per kilowatt hour.

Now, there are three other categories. The larger size category, being the one access tracking systems, utility scale. The cost for those averages out to be 5.25 cents per kilowatt hour.

You can take the ratio of those two numbers, it comes out to 2.8. In other words, you can buy 2.8 times energy per year if you're a part owner of a large array, hopefully, community solar.

And so this is pretty significant. I hope you can all keep that number in mind: 2.8 times more power than a very large array, as compared to a rooftop array.

A couple of other factors that come into play in this comparison are if -- if you happen to have a home with trees, large trees in your yard, that home is more valuable than a home without the trees.

And I've seen various numbers between 4 and 15 percent. Now, the most recent numbers for that indicate the value of the home is increased between 7 and 19 percent. That is an increase in the value of the home if it happens to have large trees around it.

Of course, rooftop solar would not encourage anybody to have large trees there because then it

wastes their money for the rooftop solar.

A third factor, which is harder to quantify, would be lower air conditioning bills, if you can keep the home in the shade of trees. And people are nodding yes to that.

So anyway there are these three factors that I think we should all keep in mind to help us encourage the promotion and discuss it with your neighbors and try to convince them that they should pursue this concept as rapidly as possible in my opinion because it makes pure sense to have people to be encouraged and allowed to be part of a large array rather than on the roof.

One other factor, which is something that is happening around the world, not so much where we are, but it's happening in Italy and Japan, Korea, and that is putting solar electricity on bodies of water. And if you want to see some of the specifics, go to Wikipedia, type in floating solar. It's another way to avoid agricultural land being taken up for this purpose.

So, again, I would encourage you to look at it also, but I'm really happy to see such a large number of people in the audience here. And I hope we can pursue this concept as rapidly as possible.

MR. SHEEHAN: Thank you very much.

MR. OLSON: Okay.

MR. SHEEHAN: Next up is the Director from Montclair State Program. I'm sorry. I'm going to have trouble with that name.

MR. LAL: L-a-l; first name, P-a-n-k-a-j.

A lot of stakeholders here. I thought -- me I'm stakeholders at the center, again start by the university. Just like a few months ago and some of the BPU. So we have primary research of the state.

Again, we're moving on the clean energy for quite a bit and in terms of the past research.

And one of the things that we got modelling where it was the requests of these stakeholder meetings, I see a lot. Some were like Newton in a way, like with vehicles, between university, as well as the private parties.

We have objectives. We do research. And that is our way, like every question that I have. I see a lot of research, also from the private sector, the EDCs and others. We talk about costs. We talk about incentives. We talk about access.

But what are we lacking? Are we moving too fast? Are we moving too slow?

We see that this side that we are university

and this makes sense, economy costs. But on the other side, we say, fine, it's like we have enough.

So those are -- and bring it up here in terms of that, that BPU, and other agencies are appreciative university's role and community solar, as well as larger indicators that the state is moving on is always larger in the segment. But also a lot of partners between the private sector, as well as the university, as well as the regulators and the government.

And I wanted to highlight some of the questions. I'm also a professor, but we learn a lot from our opportunities from the society from things that are happening, and these stakeholder meetings is a lot of learning, from me, as well as my students, but also some of the analysis and other data is lacking.

And we said that -- has but how we are moving forward? Those kind of analysis and my in terms of modeling and analytics so we have more quantitative side and in community costs, economy costs. But how do we design and how do we design for this and what impact it has?

And as modelers, it's complicated, the economy margin, the energy sector does not operate inside. That came out in CCSA when they talked about how they would define marginal lands.

I think that is what we economists have been grappling for a long time and because like one land moves to another in different crops because it is not beneficial. If it is underutilized, it can be underutilized based on the market.

And when we are investing in these kind of pilot programs, we go on marginal land and also the conservation. Like I heard, I might -- I heard two different sides, like forest lands for sale or underutilized. We have so much open space, need to be looked at. And these stakeholder meetings look at it.

We can take a lot of opportunities to learn from each other and what we have been doing and it is our business or do we do our business modeling for teaching and research. But we see that we learn a lot, we adapt.

And I thank you all for this opportunity and we look forward to working with you all.

Again, thank you for the opportunity. That is what I was here to say.

MR. SHEEHAN: Thank you, very much.

Next up would be Ross Abbey from US Solar.

MR. ABBEY: Ross Abbey, A-b-b-e-y, US Solar.

Thanks for having us.

US Solar is, I would say, a small sized

developer. We've got about 20 employees. Our corporate office is in Connecticut, just across the border. We've got developers and projects in Connecticut, Illinois and Minnesota and New York.

I want to speak to three issues.

One, the definition of community, how do you define community.

A couple others have said this, in terms of flexibility and allowing every market to work, I think it's important to allow these front-ends to be sited anywhere in a utility.

And the programs we're most active in community is really defined by this penalty that is assessed against the developers for unsubscribed energy.

The deal is no fair penalty about 2 megawatt or 5 megawatt array, calling it community, unless you're actually subscribing 100 percent of your project to the community. And that puts the onus on the developer to go out and cobble together, you know, approach to churches and approach to the large employees -- employers, approach cities and water utilities. And unless we can convince those members of the community to sign a long-term contract with us to join us in envisioning and development of new projects,

you know, we're not going to be able to build the projects and make a profit.

So I'm not sure at what point today if you guys are going to talk about unsubscribed energy penalties, but I think that is an important argument.

In terms of market and project size, we support CCSA's proposal of 150 megawatts per year. As a 5-megawatt project size, that should lead to at least 30 projects a year. I mean 150 projects over the course of the pilot.

The truth is we see project attrition in a lot of markets, especially a new market. A lot of the proposed projects maybe never go forward. Even from an interconnection perspective or renewable lighting perspective or perhaps we can't get to that 95, 100 percent subscriber level that they need to get the financing. So be ready for a fair amount of attrition.

And the reason we really like the idea of 150 and 5 is that does allow, call it, 20 or 30 projects a year. You start to get a big enough scale where you've actually got a real market and competition among employers. Competition is I think should be a primary goal because that allows subscribers to look at multiple offers and pick the best offer. They can shop around in price. It puts developers in a position of

also competing on price and competing on quality.

So if you go in a smaller project where there's other projects less than 150, I would say maybe consider scaling down the maximum project size so you maintain that 25, 30 projects a year so you do have that competition.

Obviously, smaller project sizes maybe you have less economies of scale so you have higher costs in the system. But the key is to turn on that market competition and it will drive down costs.

And then, finally, in terms of siting, I think folks probably know this, but developers we really are constrained by the great infrastructure. There's a lot of places, a lot of landfills, I think maybe 90 percent of parcels out there are just not good sites for solar from an interconnection perspective. Either the facilities aren't currently there so we need to pay a lot of money to upgrade it or if a substation capacity is limited. And so it's somewhat unfortunate, but that combined with local land use zoning, we're already very much constricted.

So that's why I support the idea of adders, or brownfields and landfills and some of these preferred areas; but if you limit the program to that, then you really I think risk having enough projects to

turn on that market competition.

Adders are great, specifically if you're increasing the subscription to the subscribers because then that drives subscribers to prefer those brownfield projects to higher grades. Maybe you're increasing ratepayer impact with that. So an alternative may also take into consideration would be instead of having a financial adder, you could maybe have a differentiated project maximum size.

So, for example, in Illinois, Minnesota, we are doing a lot of projects with soy and corn growers. They actually love these projects because it allows them to take maybe a fourth or fifth of their acres, put into solar. They give us their worst acres where they're not making much money on the corn. And then plant it with pollineer prevalene (phonetic), all of a sudden they've got kind of a wildlife refuge that draws pollineers and benefit, well, vegetable growers and other types of growers around them.

But if you want to avoid your solar project taking up the entire farmland, you can do, for example, a 2 megawatts cap on greenfields and a 5 megawatt cap on brownfields and that would be one way without increasing the financial payments that you can kind of steer more development activity.

That is going to lead developers to at least strongly consider those brownfields in developing that parcel.

So, yeah, I appreciate being able to speak to you.

MR. WINKA: So thank you for you comments. We appreciate that.

So we're here because we don't have all the answers and we're trying to put together a program and spitballing some ideas and your sort of throwing some things out there.

One of the things we've been thinking about, and you raised this with the interconnection issue, is so where are those locations?

Would it benefit the State of New Jersey to do some along the lines about hosting capacity statewide or is that just should we leave that on to the private sector and say you find the best locations?

MR. ABBEY: Yeah, it's a great question.

I think the utilities are going to be faced with this question from the private sector regardless, where the developers come and say can you share basic information about your voltage on this line and your conductor width on this line and your association capacity.

So what we've seen is developers, utilities in those states kind of want to get in front of that and provide you with some base level of public information, that way not answering a hundred e-mails.

But, yeah, typically, I think it's going to be a combination of the two.

MR. SHEEHAN: Thank you.

MR. ABBEY: Thank you very much.

MR. SHEEHAN: Lena Smith from Food and Water Watch.

MS. SMITH: Good morning.

MR. SHEEHAN: Good morning.

MS. SMITH: My name is Lena Smith. I am from Food and Water Watch. We are a national advocacy organization that champions healthy food and clean water. I also am representing a coalition of over 50 organizations today that come from faith, labor, environmental, community, business, and political communities.

And we agree that -- that we only have about 20 years to address the urgency of climate change and that we need to cut our emissions to zero before we reach key climate tipping points and see that a robust and a charity community solar program with meaningful LMI access will accelerate a transition to renewable

energy and address the climate crisis.

We also see that community solar is a program for people who -- without rooftops, develop solar, and can get the benefits of renewable energy and that the participants receive a share of the utility bill credits, tax incentives, and production incentives when implemented in a way that ensures low-income household participation. Community solar programs can be spread into either rural communities that may not otherwise be able to afford distributed renewable energy.

So we primarily are concerned with low- to moderate-income access, but also the urgency to swiftly adjust the transition to renewable energy.

Regarding the siting and project size then, the program should be robust enough to ensure a variety of scenarios that are considered for all low-income housing types. So those efforts should be made to serve multi-unit apartment buildings, multi-family homes, and single-family homes. And then when serving multi-apartment buildings, the community solar pilot program should also seek to serve those buildings that are run by housing authorities, privately-owned buildings, and cooperatively-owned buildings.

The program should also be developed in conjunction with institutions that have ties to the

communities and where community solar projects are truly sited. This would include community development corporations, nonprofit organizations, and/or county or municipal governments.

So the question of capacity, excess annual capacity should be utilized to generate electricity and the electricity generated by this project should be sold into the grid and credited at a retail rate. Those proceeds from the sale should be placed into a fund administered by the BPU to support the development of Clean Energy programs in low-income communities.

And regarding the geographic limitations for community solar pilot projects, we are advocating that community solar projects be located primarily in urban areas and be placed in underserved areas.

The projects can include incentives for projects to be developed in environmental justice communities and preference should be given to projects sited in environmental justice communities.

We also are encouraging the BPU to work in conjunction with the DEP to reinstall the cumulative impact tools and help identify environmental justice communities and prioritize community solar projects in DEP defined environmental justice communities. This is typically a census plot group for which 30 percent or

more of the population consists of low-income persons who are not institutionalized and self-designation as an environmental justice community should also be allowed.

That's it for now.

Thank you.

MR. SHEEHAN: One question.

There's siting in SJ environments or is it serving environmental justice environments?

MS. SMITH: Siting in EJ communities?

MR. SHEEHAN: Yeah.

Is it siting or is it serving or it's both?

MS. SMITH: Both.

MR. SHEEHAN: Okay.

MS. SMITH: The project should be located as close to the communities they serve as possible.

That would also allow for workers to be workers from those communities to be employed at the projects that are being built.

MR. SHEEHAN: Thank you.

Those are all the speakers that we have listed.

Is there anyone else who would like to speak on Topic I, siting and project size?

Please come on up.

MR. BRADY: Good morning.

My name is Mark Brady. I'm with Pravco, Incorporated. We're an EPC. We do the entire State of New Jersey solar development.

Just a couple of comments on placing the sites. I hear a lot of talk about landfills, greenfields, bluefields, any land development is going to take a lot of time. The fastest way to get the pilot off the ground is rooftops. Permit-wise it will be the most expedient. This will also allow siting within the urban district and can be coordinated with your energy efficiency program as far as if you could offer incentives to commercial rooftop on roof replacement.

This would allow for siting in the urban centers, allow for green minority participation into the project, not only for building the project, for doing the O&M on maintaining the project. So it would be a long-term employment opportunity for the minorities in the neighborhood.

So really it's just to consider the commercial rooftop as a quick alternative or actually the quickest way to get your program off the ground and keep it moving forward.

MR. WINKA: So how you would you see building

scale?

So in the Statute it says up to 5 megawatt. So I'm not aware of commercial roof space that are larger than a megawatt.

MR. BRADY: Surprisingly, there are a number. A lot of warehouse facilities or commercial facilities in the urban areas often are in need of roof replacement. Such a large roof is very expensive to replace. So a lot of the owners will only replace part of it at a time; whereas, if there was an incentive to do energy efficiency or some other type of incentive to enable them to replace the entire roof, you could very well easily fit 5 megawatts on quite a few commercial buildings.

MR. WINKA: And the other part, since you're an installer, what would you -- what would you need -- and you said hiring from the community, what would you need to see to be able to hire those folks from that community? What would be in your sort of hiring employment structure?

MR. BRADY: The commercially -- on the commercial structures, that would be -- we deal with Local 3, the IBEW. So really we get involved with the unions.

MR. WINKA: So it would come through the

union internship program or something --

MR. BRADY: Yes. On the construction of the site, as far as the O&M, that's a little more flexible.

MR. WINKA: Okay. Thank you.

MR. SHEEHAN: Do we have anyone else who wishes to speak on Session I?

MR. WALLACE: May I speak?

MR. SHEEHAN: By all means, sir.

MR. WALLACE: Good morning -- good afternoon. What is it, morning yet?

My name is Rob Wallace. I'm with -- CEO of Power52 based out of Baltimore, Maryland.

We have two sides of our business. One is a foundation which does workforce development and job creation for average individuals. Where they get their NSEP, OSHA, NCCER, construction training, and that they actually build projects for us. And then on the energy solution side, we are a financier, developer, construction company.

I've been in the industry 12 years, done a lot of work with Miller Brothers there and CORE, Washington Gas, a lot of folks in this room.

I wasn't going to say anything about the whole LMI piece, except that some of the stuff that I was hearing in the hallway was like.

One of my concerns with the siting size is most urban centers don't have the money. All right. They don't have roofs that have a 20-year warranty where you can put 1 to 2 megawatt size systems on that roof. Right.

Number two, most low-income communities don't own the house that they're renting; what they're renting is multi-family units.

So one of things we've done in Maryland is we are siting the systems within the state utility, but outside of Baltimore City, for example. Right. So we trained 100 and something -- 150 people, 87 and a half percent placed in solar jobs.

The advantage there is really getting them out of the communities they're in. It's not keeping them in the community. So the goal is to teach and train so we put our training locations in their urban centers, but then we transport them out to do the construction. So they go to New Hampshire, like they go to North Carolina where they can build.

And so what happens is it just doesn't just change them from a technical perspective, but it changes them spiritually, physically, and mentally. Right. So they go from three cigarette packs a day to two, two cigarettes because of lack of stress. Right?

And so my point is I think the goal here is to really get them out of these urban centers. How do you do that? You make sure they're skilled. You make sure they have potable skills that they can take and get a job in Baltimore. They can take a job in New Jersey and go to Chicago. And so those are the types of systems that we look at.

We just signed a 14 megawatt deal in Maryland specifically for LMI; 51 percent are applicable with the LMI communities. They are all based with in BG territories and surrounding territories and the graduates from our program build the projects.

And so from our perspective, we don't want to be in the urban centers, we don't want to be in the land that's more expensive. We're not going to be able to produce projects that are going to provide no savings for the people that we're trying to serve.

So my recommendation is to be able to surround it with an outside community utility.

That's it. Thanks.

Until the next topic.

MR. SHEEHAN: Thank you very much.

Okay. Last, last call for speakers for this session.

Please come on up.

MR. MCAULIFFE: Hi, everybody. My name is Dylan McAuliffe. I'm with Solar Landscape. We build around the state.

I just wanted to follow-up on the gentleman, two speakers ago, was talking about siting on rooftops. I agree that from a permitting perspective and, you know, the infrastructure in place already, there's a lot of rooftop spaces that we can take advantage of and be less complicated than on the ground, and so we should be trying to incorporate that into community solar as much as possible.

And also in agreement that there are a lot of very, very large roofs that are being underutilized, particularly in the warehousing sector. They don't have on-site load and -- or in addition to taking their entire roof. So community solar is a type of opportunity that would work really well for them. And there potentially might be some cost upgrades if they've sited their building considering smaller load and they're going to be adding, covering every inch of their roof with solar so they might have some infrastructure costs, and they might go into sort of any adders that would be involved.

And, additionally, working in New Jersey in the past few years, we've seen is cost come down in the

overall cost-per-watt to build. We've seen some buildings move into, you know, they're marketable in the 20, 30, 40,000-square-foot range. They're actually really good buildings. They're very well distributed throughout the states. So if you can make something work for, say 400 kW, 500 kW, community solar systems, it will look like in Illinois, they were kind of doing size sequencing and a few extra pennies if you were in that 200 to 500 kW range, something like that.

Obviously, you know, we want to reward sort of scalability too and those projects that are cost-effective, but being able to add a few pennies for, say, per kWh, something like that to 300 kW, we might have systems throughout the state which might involve a lot more property owners, rooftop stations. So I think that's an area you want to look at.

Thanks.

MR. SHEEHAN: Thank you.

Anyone else?

With that in mind, I think we will go ahead and close Session I. Session II is supposed to start at 11:45, which was 4 minutes ago. I think we could all use a 5-minute break, however.

So my watch says 11:52. Everybody be back here in 5 minutes at 11:57 and we'll go and get started

on Low- and Moderate-Income Access.

Thank you.

(A short recess is taken.)

SESSION II: LOW- AND MODERATE-INCOME ACCESS:

MR. WINKA: Our first speaker will be Pari Kasotia, Vote Solar.

MR. SHEEHAN: Welcome back, ladies and gentlemen.

This is Session II, the Low- and Moderate-Income Access.

I want to thank everybody for that first session. I think it went extraordinarily well. I'm looking forward to that process continuing.

We're going to go ahead and get started once again with the pre-registered list. And at this point, we're starting off with Vote Solar.

PARI KASOTIA: Hi, everyone.

Again, Pari Kasotia, Vote Solar.

We have been having some discussions with other environmental and equity groups in New Jersey so some of this may reflect their viewpoint but not all of them.

So, first of all, for low- and moderate-income access and a few other -- to talk about during the program carveout of 15 percent of the total

capacity for underserved communities. And we propose that goal. I think it's important to have a clear direction on how we're addressing low- and moderate-income customers. So by doing some carveouts, you get to that.

We also recommend the BPU to explore programmatic support and incentives and consumer protection measures will ensure that low-income customers have access to community solar programs from the outset and then the markets will develop to support their robust, long-term participation and benefits.

We also want to touch on how we define low-income customers. We want to make sure that if we're using the income definition, which is 80 percent of the income, that could serve as a baseline for low-income definition, but we want to make sure we are not excluding other criteria, for example, environmental justice communities or communities of color.

So I think Lena from Food and Water Watch earlier mentioned what an environmental justice community is. One definition is using the U.S. census log group which is at 20 percent of the population come from low-income people who are not institutionalized or a community which themselves, as an environmental

justice community for reasons including, but not limited to race, color, national origin, or income.

We think the community will impact too based on the feedback that we have gotten from, including partners in New Jersey, is a good tool. So we encourage BPU to explore the cumulative impact to identify communities that prevent them most from the community solar projects.

We also feel strongly that the low-income and other underserved customers, for them to participate, they must experience tangible economic benefits for the value of the credit they receive for their community solar subscription must be at least equal to their retail electricity rate. So when we say support retail electricity rate, we ask the BPU to explore avenues somehow to make that happen for low-income customers.

We also encourage BPU to create incentives that would encourage the siting of projects and low-income communities of color and environmental justice communities so that these customers benefit from the entire realm of economic and social benefits. Affordable housing facilities, low-income service organizations, and disadvantaged business enterprise, and central projects should be offered incentives under the program.

Long-term funding to support low-income participation and ensure benefits for low-income customers are maximized under the program is essential. So we encourage BPU to explore long-term strategies on how to support low-income customers, as opposed to just looking at the pilot program.

We recommend exploring the Clean Energy Program funds as one of the revenue sources, as well as proceeds from the RGGI funds. We recognize that at this point we don't know how the new SREC program will shape up. That will be another area for funding for low-income programs.

Financing for projects that are located in low-income communities can be challenging. So we encourage the BPU to explore methods for overcoming those challenges related to financing by allowing an appropriate percentage of any given project to be dedicated to a large, creditworthy off-taker, or anchor tenant, and then allowing certain entities to serve as backup to subscribers. So that there are entities who are willing to buy risk for low-income customers, BPU should look into that.

In terms of the low-income verification process, we want that process to be as seamless as possible. In order to do so, we are asking BPU to

explore how the subscription and customer participation in other programs can be used as a criteria to automatically qualify for community solar programs. For example, Low-Income Home Energy Assistance Program or the LIHEAP Program can serve low-income customers; and how can we use those definitions and that structure to qualify individuals for community solar programs.

We also encourage BPU to look beyond the FICO scores and credit requirements as a measure of creditworthiness of low-income customers. I think it should be also acceptable, a utility bill payment could be one of the criteria that can be used, as opposed to just looking at the credit scores.

The ultimate success of the community solar pilot program will hinge on customer participation, especially the low-income customers. We have observed that without any concrete plans and funding to work with trusted community-based organizations, participation among these customers and other underserved communities will be difficult to achieve.

So we are asking BPU to establish a process that periodically seeks input from underserved communities. The regulatory process can be challenging and time-consuming for a lot equity partners and we need to ensure that we are reaching to them in

different ways and different mediums.

So in order to do that, I think forming of recurring low-income, slash, and underserved communities stakeholder working groups will be useful as it will allow feedback mechanisms over time to incorporate any new changes or any new ideas that could make the program better.

We also encourage BPU to provide technical assistance and training to community organizations and individuals that are in these low-income communities.

Community solar may still be a very new concept for a lot of ratepayers in New Jersey; so without having a well-defined training program, their participation is likely to lag.

And we have to also recognize that New Jersey is a state with different ethnicity and different backgrounds. So you would think other languages, in addition to English, should be options to use.

And that's all I have on this section.

MR. WINKA: So you talked about training programs. And we've done some of those during the ARRA days, the American Recovery, whatever --

MS. KASOTIA: Reinvestment Act.

MR. WINKA: -- Act.

So do you have examples of training programs

today in place, or that's things that we should put in place, and the entities that we should work with?

I'm assuming the Department of the Labor. But if you can provide those examples, that would be a helpful thing.

PARI KASOTIA: Yes. I mean, there are a lot of -- you look at mayors in different cities and there's local neighborhood associations on just educating consumers on how to participate in community solar programs.

In our low-income coalition, we also have a number of organizations that are presenting different areas of the state that would be worth reaching out to. Melissa Miles from Ironbound Community Corporation is here so that would be one entity that would be useful.

And in terms of the outreach part, the, you know, the modus for this docket, how do you make sure that it's accessible in different mediums.

So all of this is online. And we should not necessarily assume that everyone is subscribed and has access to Internet. So things like that, and speak English so.

MR. WINKA: You're right. We should have posted it in several other translations.

That's something we can do to update that.

You mentioned the definitions for, you know, low- and moderate-income and using some of the existing definitions. But I want to go beyond that.

Do you see how we can use of some of the existing programs actually in USF and LIHEAP and Weatherization, linked to having a definition for low- and moderate-income within the community solar program?

PARI KASOTIA: Yeah.

So the LIHEAP Program and Weatherization Program -- utilized for low-income customers. There is criteria. And we don't need to duplicate that criteria, just to look at that checklist and make sure that customers fit that definition.

I guess the bigger point about what definition we use is when we talk about low-income. It doesn't necessarily include other underserved communities.

So in New Jersey environmental justice communities or communities of color may not fit the definition of low-income but may not have access to clean energy, economy -- so how do you reach out to those communities so that they benefit from a community solar program.

So I think that's what we're getting at: To be more broad in our thinking of who are the

underserved customers.

MR. WINKA: Thank you.

MS. BENREY: With regard again to definitions, do you have an idea in mind of what it is that you understand by an LMI, and speaking only about LMI project, by which I mean, do you have in mind or could you provide at a later time a specific breakdown of, well, you need X percent of LMI participation in a project in order to qualify as LMI an project? Do you include in that participation, for instance, only LMI residential households or do you include, say, an affordable housing owner?

PARI KASOTIA: I mean, I don't think we should make the program too restrictive in terms of who participates in an actual community solar project. But we could look at what constitutes LMI versus commercial customers versus public housing. So I don't have that breakdown with me right now. But that's one way to look at it.

And then we're also saying that as a program overall, dedicating some capacity of that for low- and moderate-income customers.

Thank you.

MR. SHEEHAN: Our next speaker is from the Center for Urban Environment, Nicky Sheats.

MR. SHEATS: Good morning or good afternoon. I'm not sure what time it is.

Nicky Sheats. Last name is spelled S-h-e-a-t-s, and I'm actually here representing two organizations. I'm Director of Center for Urban Environment, which is part of the John S. Watson -- long time -- which is part of the John S. Watson Institute of Public Policy, and actually I think you'll be talking to a sister policy center is the Urban Center Associations and I think you'll be talking to them also. But I am also representing the New Jersey Environmental Justice Alliance. I'm Chair of the Board of the Alliance, God help us all.

The Alliance -- let me say a few words about the Alliance. The Alliance is the only statewide organization in New Jersey that focuses on environmental justice issues, and we're the only statewide organization of the trusted environmental issues which is a majority of color in both leadership and membership.

We're a small organization. We're well integrated, a majority of color. Small organization, but we've been known as an excellent -- leader in developing public policy from an environmental justice perspective.

We have done a lot in climate change policy which has been mostly ensuring -- trying to think of ways to ensure reductions for environmental justice communities. So we're gaining expertise. So we're glad to have an opportunity to talk to you.

Let me start by saying this, in general, we worry that the climate change policy would include renewable energy, will perpetuate or exacerbate those that are currently existing in our country based on race and color. If you do business as usual, you have a good chance to perpetuate or exacerbate those inequalities, becomes business as usual, has produced those inequalities.

So we're glad that the energy legislation specifically says that there has to be access to low- and moderate-income folks in community solar programs.

One thing we want to say is partly from both is that you can't leave the racial part out. Several people talked about definitions from environmental justice communities. Our definition which follows -- we're part of the national environmental justice movement. Our definition follows most of our colleagues nationally, talk about low-income communities, communities of color, and distance communities.

I think we all know that there have been barriers to access renewable energy and energy efficiency based on both income and race.

So there are two things I want to say about that in New Jersey. We do support and we think it's important for the panel to set aside I think in mine what I said 16 percent, it may have been 15 percent, but at least 15 percent set aside for low-income -- for low-income residents. And once you add the moderate-income residents, and you don't work as much with that definition, then it should be higher.

But in the filing that -- for individuals -- for low-income individuals, what we would support is that you look at various definitions used by the state, by federal government, and use the definition or combination of definitions that yield you the largest number of people eligible by income, but also captures a significant number of people of color. Because even though race is not explicit, we think it should, but we are not here to argue that, for capacity reasons. We think you need to bring race into this picture. And you can't bring it in by trying by -- people of color, do your definition of low income. That's through your definition of low-income for families and individuals. We also think there needs to be a definition of

low-income for communities. And, again, I think that definition can capture communities of color as possible. And the institutions that serve the public in those communities that have been defined as low-income should be eligible for a program.

So the institution we're talking about -- schools, public care centers, senior citizens, senior citizens centers, day care centers, community centers, not-for-profit organizations that are serving those communities, and we would argue they should be eligible also.

And your definition for the neighborhood, you know, could be basically geographical definition and in a certain percentage within that geographical definition impact would be low-income folks. And geographical definition you could go with that based on probably historical recognized neighborhoods. It could be based on the census tracks and multiple census tracks that create or they're recognized or part of the historically recognized neighborhood.

Our vision for urban areas is with respect to renewable energy and energy efficiency, and the gentleman from Green Faith, which is part of the NJ EJ Alliance, by the way, talks about solar cities and I liked that.

Our vision is that urban areas in New Jersey will become centers for renewable energy, energy efficiency, that for urban areas become known for producing young people and old people like me that are -- that, you know, converse in energy policy and energy experts.

You know, our urban centers are now known for producing good basketball players and sports players. And that's good. I play sports. When I was young, I was a baseball player so I appreciate that. I think I should be playing for the Phillies, but the Phillies didn't agree with me. So, you know, it's no pejorative to produce good sports folks, but it would be nice if our urban areas became known for producing energy -- energy experts.

The last thing I want to talk about is that -- and we segway that into, you know, to make that connection that you're going have to connect renewable energy, energy efficiency projects to schools.

And so let's talk about the community aspect of this. And you asked for this definition of community solar.

First of all, let me just say -- and when you say something negative, we say it with love. This process is not a good one. It's definitely not a good

one for getting input from the environmental justice communities, people that live in environmental justice communities, and the people that work in those communities. It's a rushed process. We know why it is. Because this is -- the time limitation and place for all you so you have time constraints. But this process I doubt is going to yield too much input from environmental justice community members.

What we would suggest at this point and know it would be difficult -- and we have a lot of suggestions -- but one that we have regional meetings. We could have meetings in South Jersey, North Jersey, Central Jersey Central, on the coast. And you could have these meetings specifically for environmental justice communities, communities of color, not only advertised as a general public but reach out to groups, maybe groups of justice groups, housing groups that are working in those specific regions.

One thing you should also consider as a way to kind of yield the process would be to form stakeholder groups, so by rule you could form a stakeholder group.

And someone else -- I think Jeanne Fox said this.

Did you say this, Jeanne.

-- to have the rules defined as broadly as possible.

MS. FOX: Yes.

MR. SHEATS: So you could define that a stakeholder group can say by rule you can have a stakeholder group to look into these issues that are difficult, like the definition of low-income and other issues that might take longer to address, longer to define and that stakeholder group can get more input for the issues.

When I think of a definition for community color, the community -- whenever you say community to us, that implies that community members are part of the decisionmaking process. The community members are not just consumers of the program.

So you don't just say, well, we have a program and you can sign up here and you will benefit from the program. And that's good. That's part of it. But somehow you bring community in and have them be part of the decisionmaking process about how the project works. We're talking about siting. Should there be siting in the community? If so, where? And have a process that includes community.

So we want to bring new ideas to the table called community energy planning. It's actually an

idea that comes out of an organization in Minneapolis, Center for Urban EJ Environments. And they serve for the -- for the National Environmental Justice Community, they serve as an expert center in the area of energy efficiency and renewable energy. And they come up with a concept of a community energy plan where you actually do involve the community in what needs to be done to meet the energy needs of the communities that you're talking about. When we say community, we're usually in a smaller, a municipal level. But we can talk about that.

The normal energy planning involves utilities, it involves businesses that provide energy services, city staff, and all that's appropriate and necessary. What a lot of times is missing are community members, community groups, environmental justice groups. So we want to bring a lot of the groups into that community energy planning process.

And then the other thing is at the center of the process would be a focus on the environmental justice inequity. So when we bring community members in that you can let them decide what are equity metrics that you want to reach with this particular community connected to, for example, community solar. Is it that you want job training? Is it that you want

entrepreneurship opportunities? Is that you want the community solar project to be connected to the school system so there's a part of the educational system in that community?

And you can think of other ways that community itself might decide what they want with respect to equity.

You also talked about, well, there are barriers to low-income folks and people of color accessing community solar energy efficiency. You know, a novel approach might be to say, well, ask those folks who live in the community, what are the barriers? And what do you think the barriers are to participation in from your community and what mechanism should we implement to overcome those barriers.

So that would be a good way to get -- I'm impressed by the number of people in this room. I didn't expect this many people to be here when I came in.

Wouldn't it be nice to have a community solar project in a community in Newark or Trenton that you have a room full of people like this from the community giving you input and having a stake in the decisionmaking process and saying how the project should look.

So thank you for the opportunity to comment. And we hope -- we also hope that -- how do I say this -- the environmental justice community's relationship to BPU in the past, it has not been an unfriendly one, it's been one kind of people passing in the night. When we submit comments -- we submitted comments on the Energy Master Plan. We've had friends in the BPU, but we've never -- we haven't talked as we have in the last week. So we hope this is the beginning of a relationship for years to come. And we really do think that partnering with community and a process like community energy planning would put New Jersey in the forefront of thinking about energy policy and environmental justice and equity.

MR. WINKA: So you said put the community or the low-income community solar stakeholder in the rules that sort of locks things in.

So I just want to -- we run stakeholder groups all the time and we keep -- we manage them on an ongoing basis.

So we have an energy efficiency committee meeting, a renewable energy committee meeting, they meet all the time, once a month, an interconnection work group. So within that concept, we may think about how we -- and we do this to microgrid, CHP. We

build-out a stakeholder group for community energy and that sort of community energy planning with low-income community.

So we can do that, but we don't have to do that within the rulemaking process. So that sort of locks us up, to the point I made to Ms. Fox is that building that flexibility.

So would that be within your concept or are your comments that it should be built into those rules?

MR. SHEATS: So the reason I say to build it into the rule because I'm just trying to give you -- how do I put this -- trying to give you broad flexibility in defining hard topics that you're going to have to define by designating a stakeholder group. So if you're going to put in the rule, you're going to create a stakeholder group that will come up with the final definition of low-income within six months of creating the stakeholder group, whatever, you effectively can extend the time that you have to define low-income. And with that when I say it, we don't think this process is -- environmental justice communities, you effectively spend your time and you go out to environmental justice communities and other communities to get more input and, you know, to get a wider variety of people coming in, saying this should

be the definition. If you don't think you need that, maybe not, but I guess from our point of view, we think extra time is needed.

And one thing I didn't say is that -- so we're dealing with a lot of rules. We deal with a lot of rules. And I think this has become recognized that the general rulemaking process, public participation process, even at its best, and this is a hurry one, is usually not a good one for environmental justice communities because folks in environmental justice communities are facing social probabilities that make it difficult for them to find time to come to meetings and give testimony to address these problems.

So in general we have to be more -- to environmental justice communities. We are severely underresourced. Of the money that goes to environmental issues -- EJ organizations. So we're dealing with a whole lot of different issues, and we don't have one person just dedicated to energy efficiency.

So the normal process is difficult for environmental justice community members to keep up with the EJ organizations, and one that's more rushed like this is even more difficult. So that's why I'm trying to find ways to extend the process a little bit so we

can get more input from these communities.

I wanted to make one more -- I always forget something. Some of the folks mentioned cumulative impact tool. And the folks that don't know, that's a tool that identifies relative level of cumulative impacts in basically every community in New Jersey. And we think that tool needs to be revived and substantive policy needs to be attached to that tool to adjust cumulative impacts and it might be of use in defining low-income and environmental justice communities here. But we have to be careful about how it's used.

And, again, you know, I talk about stakeholder groups and we really talk to each other about that because the environmental justice community is usually defined EJ communities based on race and income.

The cumulative impact tool tells you how much a pollution burden there is. Would that be part of the definition? That is something we have to talk about and go back and forth on.

MR. SHEEHAN: Thank you very much.

MR. SHEATS: Thank you.

MR. SHEEHAN: Next up will be UU Faith Action.

REVEREND TUFF: Good afternoon.

My name is Reverend Ronald Tuff. I'm with the Unitarian Faith Action, but I'm also representing Green Faith. I am the Director of Energy Services for Green Faith.

But this afternoon I would like to address the accessibility of the low-income environment.

I would like to start with Question No. 9 and the question is: Provide recommendations on the definition of low- and moderate-income community pilot project.

In a low and moderate community solar pilot project at least 20 percent of the subscribers must be low and moderate households. A low- and moderate-income household should be defined as eligible for low- and moderate-income Home Energy Assistance Program, which known as LIHEAP, as a household with income below 200 percent of the federal poverty level.

Also, workers from the low- and moderate-income household should be involved in the construction and installation of the solar project. There should be a trained and a certification program available to the community, such as those provided by Isles, which is located in Trenton. They are the certification people for the Weatherization Program.

And trainees should be preferred -- or preferred for working on a project in some capacity.

There should also be a requirement that 5 percent of the developers total subscribers be low- to moderate-income households. And, basically, what I'm saying is that those that develop the project, a portion of those people should be from the community.

If many of those low- and moderate-income workers are involved in construction and installation of the project, say more than 20 percent, other requirements on the developers could be relaxed or incentives could be provided, such as allowing a project to move ahead of projects with fewer workers in the connection queue.

Before a community solar project qualifies for any certification, it must be registered with the BPU, including information about ownership, site, and financial and technical ability to manage this project.

The justification for this is that a low- and moderate-income project will receive special incentives not available to other projects, such as moving ahead in the interconnection queue. The 20 percent subscriber criterion is the same as the criteria used in New York for moving ahead of other projects in the interconnection queue.

We propose in New Jersey, to encourage projects to include more than 20 percent of low- and moderate-income subscribers, a project that moves ahead of all projects with a low -- was a lower percentage of low- and moderate-income subscribers.

For low- and moderate-income communities, jobs and job training will be even more important than lowering energy bills. And so we include requirements on providing jobs for low and income moderate communities and to provide incentives for that as well.

And, basically, what I'm saying is that in the Weatherization Program, once those people get certified, they can take their jobs and work in New Jersey and they can take their jobs and work out-of-state or they can set up their own businesses.

And in many instances in our community, we have projects that come in and say this is for you and they make a profit. So we are saying that the community should not only be in the construction part, but the community should also be in the profit part.

Now, how do we achieve this, is there should also be meetings within the community of various -- with various groups of those that live in the community. And you can do that by going to community action agencies, as well as other community groups that

meet or such as not-for-profits, such as the Urban Leagues, such as mayoral groups, but all these groups can be called together. And also there is fraternities and as well science groups, but all these groups work together within the low- and moderate-income communities.

But, again, the bottom line is that our community evolve, not only in the construction end, but also in the profit end.

And I'd also like to address No. 10. And the question: Provide recommendations on what low- and moderate-income eligibility criteria should be accepted to qualify a subscriber and/or a project as low- and moderate-income.

Our answer is 200 percent of the federal poverty level in 2016 was about two-thirds of 2016 New Jersey median income of roughly $76,126, and consistent with the level used in LIHEAP. The Woodrow Wilson School study, Solar Gardens in the Garden State, recommended a higher cutoff of 100 percent of the New Jersey median income, roughly 300 percent of the federal poverty level.

We rejected a strategy of combining a higher percentage of the federal poverty level to define a low- and moderate-income solar community pilot project,

say 300 percent, while limited access to the subsidies to those below 200 percent of the federal poverty level. Although this would include a number of households that are more financially stable and, therefore, potentially more attractive to developers. It might result in what we call cream-skimming.

So in conclusion, I -- we're suggesting that the low- and moderate-income community be involved, not only in the construction, but also in the decisionmaking, as well as the profit-making, and as well as the job training, and as well as the development process.

Thank you very much.

MR. SHEEHAN: Thank you very much.

CCSA.

MR. SMITHWOOD: My name is Brandon Smithwood. I am the Policy Director for the Coalition for Community Solar Access.

I'm going keep my comments brief because we have a lot of stakeholders here who have really covered a tremendous amount of ground on this issue.

We have support of the 15 percent program level carveout. I think that needs to be apportioned to the utilities.

Melissa Kemp from Cyprus Creek, who spoke on

our behalf this morning, referenced allocating the program's overall capacity, proportionately the load across the IOUs. The 15 percent of that program capacity that should go to LMI projects should be apportioned in the same manner across the service territories.

And I think heard from the groups. There was a lot of -- there's a lot of good ideas about how communities can be involved in project development and, you know, and community solar tariff can provide that foundation that communities and developers can then scaffold on to design projects that are needed for the communities.

I think that the one, the second bullet here that I'll just highlight is, you know, there should be some flexibility to accommodate some of those housing service entities. Their service organizations are -- to be creditworthy entities in anchor projects. In addition to requiring that projects are also serving low-income residents and not simply service organizations.

So there are emerging examples from various states around the country. And if 15 percent of a 450 megawatt pilot program was created, that would be the largest dedicated low- and moderate-income program in

the country.

So I'm happy to answer questions. But I figure there's a lot of people who are going to speak to this issue.

MR. SHEEHAN: Thank you.

MR. SMITHWOOD: Thanks.

MR. SHEEHAN: Jonathan Ratner.

MR. RATNER: Jonathan Ratner, R-a-t-n-e-r.

In the past I have served as a pro bono advisor to Grid Tri-state, but today I'm speaking on a member capacity.

I think it's -- everyone in the room understands that public policy argues for strong resource deployment, strong government resource deployment in support of an LMI program is the right thing to do.

For the fundamental fairness perspective, others far more knowledgeable than I have spoken about the facts in terms of LMI and EJ community residents have been finding themselves in living in areas that have more than the typical exposure to carbon change, weather events, find themselves living in areas that find themselves exposed to health hazards of fossil fuel plants. And, typically, in the meantime arguments have not gotten communities very far.

And, of course, the SREC program being funded by ratepayers has not benefitted to any significant extent this community and that has been across the bases.

It would be great if we could put in place a very secure and ample long-term program of funding for LMI participation, for instance, its RGGI funds, that BPU will start to receive an allocation within the next year or two.

But, you know, we live in the real world where there's tremendous pressure on ratepayers as a result of other ongoing matters, like nuclear plants, the need to pay for upgrading of distribution -- distribution grid.

So in addition, in addition to trying to have the best possible secure funding, secure funding for LMI participation, there are a number of other structural elements that should be given careful consideration and also other potential sources of funding that may not necessarily be new sources of funding and potential sources of funding that can be used with particular efficiency.

Everyone knows that if the program -- LMI program doesn't have stable support, the damage to it can be long-term. But the developers need to know that

there is going to be support in the program.

So very briefly, it's alluded to in the legislation, particularly everyone understands, and that needs to be expressed that the utility companies will need to bill on behalf or as the people engaging bo-bo for -- to subscribe to projects.

There is a need -- I believe the person from Vote Solar spoke to it -- to take a much more expansive view of the way credit is evaluated and the risk of LMI subscribers needs to be evaluated. Because of the lack of information, there's going to be a tendency for project owners, particularly of profit-making type to excessively judge the risk of these customers.

And we're not going to be talking about for the most part folks that have a FICO score, it's not the low FICO score. We're talking in many cases about people who are just underbanked, not in the bank. So they don't even show up at the credit reporting agencies.

Now, I think most utilities around the country do not engage in credit reporting, at least for a variety of reasons, they don't want the liability and compliance requirements of participating. I think actually a solution is an exception to that. And they do, across-the-board though, there should be steps

taken as part of the program to ensure that subscribers have the ability to instruct, demand that utility provide information to a project owner seeking subscribers. There would be adverse inference drawn if that information is not provided, but they should have the ability to do it.

Because, obviously, very few things more important than keeping the lights on, and many, many LMI subscribers would come to a project with very, very strong history on their utility bills.

I think what would also be important to provide that LMI participants, subscribers have greater flexibility to enter and exit the program for a particular project, shorten the minimum subscription period that might otherwise apply. Perhaps have a shorter initial subscription period, than committing them to the month-to-month.

Another way to really lessen the risk of LMI participation in a profit-oriented project also is to make sure that the pipeline of potential LMI participants is very strong. So market average is extremely important, but of course has to be coupled with consumer education, and the market has to be carefully, you know, monitored and regulated so that people understand what they're signing up for.

And others have suggested that it can be more helpful to have utilities and project sponsors jointly maintain LMI customers so that the amount of time when a subscription may not be taken up by somebody could be minimized.

Finally, I think that it would be sort of a structural area is possible to use -- and I think somebody else alluded to this -- to effectively underwrite risk and to step up to larger than the otherwise highest level of participation in a project, if it's necessary, to fill a gap caused by subscribers leaving the market.

I think it's also important for the staff and the commission to try to be as creative as possible about use existing sources of funds.

For instance, people talk about the fact that eligibility for LIHEAP and USF would be a good basis to find somebody eligible to participate as an LMI subscriber. Well, what about the possibility of seeing if any of those funds can be repurposed. LIHEAP funds are federal or not repurposed, actually multi-purposed, so that, in effect, somebody would receive support in the form of subsidized subscription to a project.

You could say that that is just smoke and mirrors, but one would hope that the person ultimately

is no longer eligible for that assistance because they have encountered more success financially but to have somebody who's familiar with -- you have with a solar program and hopefully continues to be a participant in.

One other area where it's possibly likely to use government funds is trying to essentially smooth the path towards educating project developers as to the real, as opposed to imagined, risks of LMI participation in a project by having the government provide a reserve or, basically, a partial guarantee of subscription payments by LMI customers.

The thing being that there will be a tendency to assess and elevate the risks when there's a lack of information that over time that kind of process will get developers to come through with the participation of LMI subscribers.

And, finally, I think a lot of the focus this morning has not expressly, but implicitly talked about projects that would have a strong element of support from, say, a mush tenant or would be of housing or social service organization. But the fact is I think it's important for us to develop a program where LMI participation is part of the strategy and requirements potentially for a profit-making project or a project that is sponsored by a profit-making enterprise.

So to that -- to that end, you know, other states have per-project-basis, that every project must have its set-aside, just like developers of real estate sometimes would pass incentives, require that they have a certain proportion of tenants be low- or moderate-income.

I don't think that that's the sort of the direction that it's going in here in New Jersey.

One last thing I just wanted to toss out is something that could be considered for the longer term is the idea of having what would effectively be a set the floor in trading program where basically every project will be required to essentially have a certain level of LMI participation or otherwise purchase the credits or accounting for that participation from other projects that had more than the standard level of requirement would be sort of like the cap-and-trade, but just as a floor on the cap. And if nothing else, that type of approach could actually lend itself as sort of a broader economic efficiency the way the market develops.

That's all I have.

MR. SHEEHAN: Thank you very much.

New Jersey Resources?

Okay. Thank you.

Have our friends from Pine Gate Renewables arrived yet?

In that case, I will go ahead look and take a look at the list of people that have signed up afterwards.

Mr. Marrone from Solops.

MR. MARRONE: Good morning.

Just a couple comments on the LMI component with respect to the financing world of things.

I would strongly encourage not having any requirements associated with direct project LMI in corporations.

Certainly, a carveout of 10, 15 percent of the overall program could make sense.

Part of the problem is for those not familiar with it, LMI residential right now in the overall RGGI market seems to tend to fall around the 650 FICO score, doesn't necessarily factor in the economic conditions.

So one of the considerations certainly that we're proposing is beyond the FICO, the economics based upon the breakdown utilized on for housing support in the state would be something that's considered so that there isn't an additional disenfranchisement of those people that, perhaps, don't have any sort of credit score and might otherwise qualify.

But with respect to putting a requirement on individual projects, that they have an LMI component, it becomes very complex. The LMI community is largely served in the RGGI space through the Sierra and the Community Reinvestment Act from 1977. It's an additional obligation on lenders and banks to give back to the communities and creates a different tax incentive that they can utilize and it provides a solid base for the tax equity participation in the RGGI space, currently for the LMI community. That's completely different than the tax equity markets that we utilize in the C&I spaces and the utility spaces. Bundling those together can be very difficult.

So to the extent we want to put more burden on the private sector to figure out ways to fill these projects, to provide these services to benefit the community -- the underserved communities and the public, creating further constraints on the financing limitations, we just hamper that process.

So I think the carveout is important. I support it. I agree with it. I think it makes a lot of sense. But on per-project-basis, I think you can find it to be too limiting to the abilities of the private developers to be able to fund the projects and be successful in doing so.

You may find circumstances where they can create a blend, but let the private developer determine that based upon who their financing partners are, what the risk tolerances are in order to create that financing structure and leave that to private lenders.

MR. SHEEHAN: Thank you.

MR. MARRONE: Thank you.

MR. SHEEHAN: Nataoa Castle (phonetic).

I did that so badly, they left.

I'm sorry. I apologize.

Ross Abbey, US Solar.

MR. ABBEY: Ross Abbey, US Solar.

I promise, I didn't sign up for all of the sessions, but I want to say a few words about LMI because I think, as you're very aware, a lot of states -- every state up until now has kind of struggled, and yet getting this right is also I think important to filling the promise of community solar.

So I've got three thoughts. They all kind of go to workability.

You know, community solar is already quite complex. You work with a two-party transaction to a three-party transaction with many, many subscribers and you have a separate landowner, third-party finance, it starts to become very complex.

So any time we have requirements or at US Solar we want to be mindful about workability. So with that in mind, I want point to three things.

The first is the product design. Specifically, what is the product that the subscriber is going to be receiving on their utility bill, the bill credit. And the key thing is to have enough certainty in that bill credit value that the subscriber, specifically residential, specifically LMI feels it's a good product and that's it's worth signing that contract.

Ideally, they're going to see bill credit savings. Ideally, they're going to have the confidence to say, let me commit to making monthly payments, year after year, knowing that there is that value there.

Another example is something like on-utility bill repayment. Have that be an option for low-income customers.

When we talk to low-income customers, a lot of times they're not excited about getting another monthly bill in the mail.

As a developer, we look to set up an auto-payment scheme with them. So we're not seeing them every month and they're not writing checks every month. But low-income, not everybody has ACH, access

to those mechanisms.

Having an on-bill repayment option for those LMI customers, specifically, I think would also mitigate concerns around the terms of the agreement. I mean, if you're an electricity customer, as long as you have a meter, you're going to be buying electricity for the next 10, 15, 30 years so it's not crazy to say would you like to have bill credit savings for that same long-term period. But combined with a utility bill repayment, then that's more comfort in their links together and that they're not going to be stuck holding contracts beyond.

The second thing -- and other folks have mentioned this -- is the ease of identifying and pre-qualifying these customers. So, ideally, from a -- if we're going to do 15 percent across-the-market, ideally from a developer perspective, it's a geographic prequalification.

If you could point us to the census blocks and zip codes where 80 percent or some threshold number of low-income residents reside, that becomes very easy for us to market to those zip codes and to those geographical areas, without having to go through a purpose or process of trying to learn the household's income status.

I understand that folks that are already on LIHEAP or Energy Assistance, it makes all the sense in the world that they would be pre-qualified. But we'd hate for someone that is not LIHEAP qualified to have to go through process just to become eligible for community solar LMI, at least in states where I've worked with the documents, it seems like sometimes that qualification for LIHEAP can be very burdensome. You have to reveal a lot about your household income. And maybe that's justified because they're getting sort of subsidy or some sort of benefit. But here I don't think we're talking about giving these folks any special benefit. It's just saying, we got a goal to service. We want to identify them as easily as possible.

And then the third piece is financeability. I hope I'm not giving away any secrets, but for a lot of developers, especially small, medium developers, when we go out to build a $3 million or $6 million solar plant, it's not our own balance sheet. You know, if not for ITC finance and third-party local finance, you know, we couldn't bring in the capital that allows us to build plants, allows us to serve customers.

So in order to have a financeable program, what we need are a good utility contract, good utility

tariff, get governing rules, get subscription agreements, get packaged together all that paper, and then you bring it to a financier and say take a look at this, we think you'll agree that these documents are tight enough that you guys can put in $3 million into a project and you'll get a profit out of that. And that's where subscriptions are challenging because, you know, we can sign a 10-year or local subscription for contract, but the financier is going to ask themselves on their side, what's your default rates.

And, again, if we have a mechanism like on-bill repayments on the utility bill, I think that takes that issue of high-risk off the table for a lot of third-party financiers.

It would be great to have a low loss reserve fund, maybe pointed to RGGI or some other public money, specifically to enable LMI participation. And then over time, I think we are going to generate the data. We'll learn more about attrition rates. We'll learn about default rates. And the hope would be within the next five years, we have the data about this LMI demographic that the third-party financiers can be comfortable with the risk levels and they quantify risk levels. And once you can quantify it, maybe there's 2 percent default, maybe it's 5 percent default, once

you quantify that, then you can actually build into the financial models and allocate that risk in the financial contracts and then on a go-forward basis it's pretty straightforward.

It's just this kind of three-to-five-year kind of startup period where there is not a lot of market experience serving LMI.

So I would say keep those three things in mind.

Thank you.

MR. SHEEHAN: Thank you very much.

MS. BENREY: Sorry. Wait.

Specifically on the issue of the on-bill finance and limiting for the fact that community solar is two bills, as I understand currently, do you have an example where this has been done successfully?

Because on-bill crediting, on-bill financing is, at least as far as I know, would be ideal for community solar, is very difficult to implement.

MR. ABBEY: Yes. I think we need the utility's cooperation and I think that's appropriate if we're going to serve this whole community. It's going to take many folks working together to get there.

I can try to pull some examples from our written comments. I believe there are at least a

couple utilities that are providing on-bill repayment versus financing. Certainly, the utility wouldn't be putting up their own capital. No risk to them.

But, yeah, I can get those examples.

MS. BENREY: Thank you.

And second question, with regards to the contract, one thing that we note statistically is the return rates tend to be higher for LMI population.

Do you have -- have you seen in the market and the way subscriptions are being offered, just in the market generally, tending towards shorter term contracts? Are those sufficiently attractive to both financiers and LMI communities who might not know if they're going to be in the same place four, five, ten years? Is the market following enough or is there enough of a convergence happening in contract terms to make these sustainable?

MR. ABBEY: Yeah. You know, the forms I'm most familiar, the utility contract between the operator and the utility might be 20 or 25 years. And so initially these markets are starting off with that same term length for subscribers.

For C&I or local government maybe that's not too hard to swallow. For residential customers, that's kind of a strange thing.

How we've been able to get over it with our residential subscribers is by giving them easy outs. So if you move out of the utility territory, the contract self-terminates with no penalties. If you move within the utility service territory and you maintain and you have a meter at your new location, then the subscription is portable.

So, usually, by doing education and outreach to customers, we can help them get over that initial shock of, you know, a long-term contract.

With that said, if we get our financiers to commit to a five-year contract or an annual contract, that is going to be part of a level sellable. And I think that's what the market working toward, but I wouldn't say we're there yet.

Thank you.

MR. SHEEHAN: Robert Wallace from Power52.

MR. WALLACE: So I made some brief notes, real quick notes to kind of go over with regards to LMI communities served.

One of the points I always make when we have these kind of hearings, discussion is if you look around the room, there's no LMI folks in here. Right?

So we're sitting here making policy and assumptions on folks that have no voice potentially in

this room. And it amazes me because if you get down in the weeds and you talk to the individuals and you hear their concerns, a lot of the stuff that you look at and credit risk stuff goes away.

So versus me attacking other perspectives in the room, I'm going to say what we did in Maryland and what's working thus far. We did 51 percent LMI. Right? So 68 percent of all households in the country are owned by households. So why there's only a 15 percent carveout in the program, I have no idea. Maybe the numbers make sense to you guys, but for me it doesn't make sense.

Number two, in terms of the benefit, the LMI folks are going to receive most of the savings from this program, more so than anyone else in this room. So why would we cap it at such a small percentage doesn't make sense.

Like I said, in Maryland our projects are 51 percent LMI, 49 percent other.

How do we get there?

Boom. You build cheap.

Right?

The days of getting like 30, 40, 50 percent fees, make a million dollars on 2 meg projects are over. Right?

Key is how do you take that savings and make sure it's passed on to individuals who need it.

You build cars. You get down to a 6, 7 percent per kilowatt BPA where you can baseline or hedge it in against the community cost of electricity and that's your base. So if a customer defaults, you roll it to the next one. If that customer defaults, you roll it to the next one. Worse case scenario, you get SOS. You cover your debt. So that's one thing we did in Maryland.

Number two, requiring job training. So many cases you have developers -- I've done this for years, I'm guilty of it also -- where you bring outside resources from the communities you serve to come in and build. There's no economic stimulus for the community. There's no job creation. And then all the resources leave the community when they go, when the project goes.

So writing into the program where there's a job creation or training component that gives that developer a bonus, you're going to give incentives if they use blah, blah, percent local resource training, we will give you this SREC, we'll give you this whatever. So that incentivizes them to pour into the communities they're coming to build in. So that's

number two.

Number three, the last gentleman who was here was saying, well, let's wait three to five years to see what the fall-out rate is going to be for LMI. What happens in three to five years? The ICC goes to what, 15 percent, 10 percent, whatever it is. So the value proposition at that point in time is gone. You can't offer someone 10, 11 percent power at 25 percent savings three years from now. I can guarantee it.

So if we don't move now and at least be progressive in how we structure these programs, they're going to miss the boat, just like they missed the boat with the internet revolution, just like they missed the boat with the coal revolution, and industrial revolution. And so that is the motive of power.

Look, I'll be honest with you guys, I've done it for 12 years. I know everybody in this room. How it works so on and so forth. I was on the other side; made a lot of money. I understand that. But when I saw the impact they were missing and the generation impact that I've seen because of results like the riots in Baltimore, right, because of all these guys and girls who don't have a vote. It's crazy.

Even down to our vets. A third of the graduates in our program are veterans. They just want

another shot. So you've got to carveout these type of programs where they get a shot. Otherwise, it's the same guys and you're building for the same 20 or the last 15 years, getting the benefits. The vets don't get served. The returning citizens don't get served. The people who've been in prison for 10, 15 years, they can't benefit from this. High school guys and girls who may not want go in engineering. If you notice that all the vo-tech programs, you can't be a mechanic anymore, you can't be a carpenter anymore. You're now an engineer, software designer, or write an app. What do you do? Right?

And so that's why it's so important that we expose the communities that we're talking about to the opportunity. And I think if we do a good job as a country now to do that and it will propagate itself over the years. And now those individuals have an opportunity to build themselves out of their current situation.

Thank you. Appreciate it.

MR. SHEEHAN: Thank you.

Is the other completely unrestricted?

MR. WALLACE: So we're doing residential, in one scenario Under Armour is taking 49 percent. They're paying a little bit of a higher rate just to

guarantee the low-income side. But honestly their risk, I mean, the LMI folks who came, so they give them a 25 percent savings, there's an incentive there. We're also talking about 6 point contracts. So it's a lot different than signing for 20 years. No one has credit. No education to say, hey, this makes sense.

And they've been -- excuse my language -- bastardized so long that there's this huge degree of distrust when it comes to any type of energy measures. So giving them three- to six-month contracts and say, hey, look, you pay for a year straight, we'll walk you down every year 5 percent, 10 percent. And that would -- not only see the benefits of it, but they also see the impact that it has on their family and many families so on and so forth.

MR. WINKA: So the contacts, we do a lot of work with Maryland. We're in the Mid-Atlantic -- MACRUC, State Energy Offices. For contact folks that are running the program for the Maryland would be helpful, if you could do that.

MR. WALLACE: I will send his information to --

MR. WINKA: Yes. Thank you.

MR. WALLACE: -- Mary Beth.

MR. WINKA: Yeah, Mary Beth in the State

Energy Office.

MR. WALLACE: Cool. Thanks.

MR. SHEEHAN: Lena Smith from Food and Water Watch.

MS. SMITH: And again from Food and Water Watch and also the Off Fossil Fuels Coalition, which coalition I didn't mention before.

And also would like to say that we are in agreement with those comments, particularly around LMI Access and UU Faith Action and New Jersey Environmental Justice Alliance testified so some of this may be repetitive, but wanted to make sure it was on record.

So we -- as far as the definition of LMI, we believe it must serve a majority of low- and moderate-income individuals to ensure the benefits are realized in low- and moderate-income communities at a rate that is at least equivalent to the development in non-LMI communities.

Part of this is we recognize that the low- and moderate-income communities have significant barriers to obtaining solar electricity through distributed generation. These include lack of access to capital and technical issues, such as having properties that are not well-suited for solar panels. So due to these barriers, LMI individuals are unable to

access credit, incentives for production, benefits that are available for those with access to capital, and installation of solar panels. Therefore, we should allow access -- the majority of the access to be to low- and moderate-income individuals.

So low- and moderate-income community solar pilot projects should have at least 20 percent of the subscribers be LMI households. There should be also a requirement at 5 percent of a developer's total subscribers be LMI households. And LMI projects should be encouraged to provide jobs with instruction and installation to LMI workers. This training should be available leading to certifications of organizations with experience in job training programs and trainees would also work in the project in some capacity as part of 20 percent of the workers.

In addition, preference should be given to minority-owned community solar projects.

Regarding eligibility, proof of eligibility in other low-income programs should be enough to qualify someone as a low-income subscriber. And the BPU should facilitate an automatic enrollment from these programs into any benefits that are provided to support enrollment of the LMI individuals into a community solar program.

Once enrolled, the individual should be allowed to remain in the program until they move or voluntarily leave the program.

Regarding the definition, at a minimum, low- and moderate-income should be based on area median income, using the HUD definition of 80 percent of area median in terms to be considered low-income and using 120 percent of area median income to be considered moderate-income. But we also agree that the definition should be broad enough to pasture as many communities of color as possible and environmental justice communities.

The percentage of low- and moderate-income people served by a solar community project should be at a minimum proportionate to the number of low-to moderate-income people in a given service area. And the service area for purposes of the project should be given to an area served by a utility.

The project should be initially developed in municipalities that have a higher percentage of low-income people relative to other communities in that county.

And then the final part about eligibility is the targeting outreach to multi-unit apartment buildings can quickly and easily result in community

solar programs serving low-income residents. However, the benefits of the community solar program should be passed on to residents and landlords should be required to document how these benefits are passed on to residents.

To the questions of dedicated capacity, we agree that there should be a dedication of at least 15 percent of the program capacity to low- and moderate-income customers for the development of low- and moderate-income projects as defined above, but that the program minimum target should not preclude incentive of their mechanism to encourage robust low- and moderate-income participation outside of the low-income program.

There should be no limits on the percent of overall capacity that can be devoted to LMI community solar projects.

We agree regarding the procedural, the recommendation or the example given that LMI projects would receive preference in the solar interconnection queue. This is good policy and should be implemented.

And there should be -- set the minimum percentage to -- queue at least to 20 percent of LMI subscribers and jobs with LMI workers who have the highest priority in the queue.

Regarding financial incentives, it is essential that low-income programs have dedicated long-term sources of funding to ensure program goals are achieved and benefits for low-income customers and environmental justice communities are maximized.

Low-income customers pay into solar incentive pools as ratepayers and taxpayers but are typically barred from accessing these funds due to additional financial barriers.

We're recommending the financial incentives are important to ensure the community solar project. Utilizing a bill credit is a good use of incentive, as would be a reduction or elimination of the subscription costs to LMI subscribers.

Resources should also go to offset capital costs for projects supporting LMI communities, as well as technical assistance and training for community organizations that are developing LMI community solar projects.

That's all.

MR. SHEEHAN: Thank you.

That concludes the number of speakers who have previously indicated a desire to speak.

Is there anyone else who would like to step up?

MR. MCAULIFFE: I was up for the last one.

So it's very great that New Jersey is doing a new solar program and they're trying to expand solar.

No matter how we implement this, we're going to have renewable energy that reduces our CO^2. But the way we implement this one particular element in the program has the most potential to improve the quality of life for people in New Jersey. So this is very, very important to get this part right here.

I think what everyone is saying here, the points I more or less agree with, there's nothing I openly disagree with.

The subscriber -- getting the subscribers for a length of time that investors can feel comfortable with and also enabling flexible for them is important.

I like the idea -- again, a few speakers ago mentioned about moving out of your subscriber area, certain established criteria, you know, that's verifiable, that can get a person out of the commitment, but enables them -- the subscriber, the customer, acquisition people sort of have a stable source of revenue they can rely upon. So having that clear-cut criteria is very important.

The Reverend mentioned having sort of a database of certified people and their work experience.

As installers, our company had, even though we're pretty stable with the work we do, there are gaps between projects which is the nature of the contracting business and large projects like this. So worker flexibility, being able to take people on short notice having that resource to pick up workers and sort of verifies them and is useful for the worker, the employee, the installer, and the contractor.

But -- and also for this rate structure, I'm not sure how you can do it, but I guess consumer protections, I think Illinois has a certain percentage that the value has to reflect based on what it's going to cost the subscriber and what kind of credit they're going to get on the bill is maybe a specific percentage, it's a minimum amount, that you might be flexible with that because some projects can give deeper discounts and other ones might have to get higher for that amount in order to fund them.

So even different customers could get a bigger discount if they happen to be in the right area. I mean, that's just the nature of being near a good energy location and things like that.

But I think that the single biggest thing that maybe we haven't really talked about too much is in the customer acquisition side because this has a

double set of both bringing in these customers. And if we can include LMI people in the job training for customer outreach, this is a way to not only -- we wanted to train installers to become good construction workers, good electricians, all the skills you can get with these vocational skills. But we can train a very, very large amount of, you know, future business people by helping them reach out to people in their community again working with someone they trust, the salesperson is getting them subscribed, but they're also from that community, having an incentive that if you have sales force from the low- and moderate-income community, as well, your project gets better consideration or potentially better, you know, value, something like that. I think that can be an element that has a double sort of effect.

And that's all I really wanted to add.

MR. SHEEHAN: Thank you.

MR. WINKA: Nonspecific question, but it's a general question to the folks who commented on the LMI.

So, as I said in the beginning, we spend probability about $400 million annually on USF, Lifeline, Weatherization, Comfort Partners, LIHEAP. And there's got to be creative folks that are out there that can figure out ways that we can use those funds,

matched up with community solar.

The New York State Department of Public Service just came out with an order on looking at how to link up energy assistance. There seems to be a lot of back and forth. So folks can comment on the benefit of what New York State is doing. That will be helpful to us. And if you've been playing in New York, we would like to hear those comments on that specific order that just came out.

And then there's the California Multi-Family Affordable Housing Guidance Document.

So if you can link those two things together and see how we can move in this sort of area.

What are the good things in that California Affordable Housing Multi-Family Program that we bring into New Jersey will be helpful?

So thank you very much.

MR. SHEEHAN: Okay. Ladies and gentlemen, that concludes our Session II.

We have some quick reminders before we send you off to lunch.

Those individuals who wish to submit written comments may do so by sending them to Aida Camacho, Secretary of the New Jersey Board of Public Utilities, 44 South Clinton Avenue, Third Floor, Trenton,

New Jersey 08625. They can also be e-mailed at rule.comments@bpu.nj.gov.

That information is available on the stakeholder community agenda that hopefully you picked up on the way in.

We will reconvene at 2:00 p.m. to work on Session III which is Value of the Credit.

There is a food court on the first floor of this building. As you head out the front doors, I'm sure you'll find something to eat.

We look forward to seeing you in a half hour.

(Session I and Session II concluded at 1:30 p.m.)

CERTIFICATE

I, Lorin Thompson, a Notary Public and Shorthand Reporter of the State of New Jersey, do hereby certify as follows:

I DO FURTHER CERTIFY that the foregoing is a true and accurate transcript of the testimony as taken stenographically by and before me at the time, place and on the date hereinbefore set forth.

I DO FURTHER CERTIFY that I am neither a relative nor employee nor attorney nor counsel of any of the parties to this action, and that I am neither a relative nor employee of such attorney or counsel, and that I am not financially interested in the action.

Lorin Thompson

Notary Public of the State of New Jersey
My commission expires July 26, 2021

Dated: July 24, 2018

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