

*Josh Geyer:*

Okay. Well, hello everyone and welcome to the 2021 Better Buildings, Better Plants Summit. I'm Josh Geyer, the Multifamily Executive Lead for the Better Buildings Challenge. And I will be your moderator for today's session called Unleashing the Power of Community solar in Multifamily Buildings. This session will survey the current regulatory landscape for community, solar and multifamily housing and explore promising strategies to overcome major barriers.

We have an exciting lineup of multifamily partners who will be presenting their experiences, partnering with local organizations to deliver community solar projects that result in utility savings to low-income residents while bringing workforce and economic development opportunity to the community. Next Slide. Following today's session, I encourage you to attend the Summit's workshop this Thursday called Balancing the Benefits of Community Solar in Multifamily Housing. The interactive workshop will focus on how to balance the financial viability of solar projects with meaningful, direct and/or indirect benefits to tenants. Next Slide.

Before we dive into today's session, there are a few housekeeping points I would like to cover. Please note today's session will be recorded and archived on the Better Buildings Solutions Center. We will follow up when today's recordings and Slides are made available. All attendees are in Listen-Only Mode, meaning your microphone's on Muted. If you experience any audio or visual issues at any time during today's session, please Send a message in your Chat Window located at the Bottom of your Zoom Panel.

We will be using an interactive platform called Slido for Q&A and session feedback. Please go to [www.slido.com](http://www.slido.com) using your mobile device or by Opening a new Window in your Internet Browser. Today's event code is #doe. Once you enter this event, please select today's session title, Unleashing the Power of Community, Solar and Multifamily Buildings, in the Dropdown Menu at the Top-Right. You can submit your questions for your panelists by – for our panelists by submitting in Slido anytime during the presentation. You can also Upload other attendee's questions.

I'll pause briefly now to give everyone a chance to Open up Slido and Select our session. Great. If you're having any issues, please Message our tech support team by using those little Chat button. We're delighted to have three panelists present their work to you today. Jenny Heeter, Darien Crimmin and Chris Jedd. Each presentation will be followed by several minutes of Q&A, we'll end with a group discussion with all of the panelists in a final wrap-up. Next Slide.

To begin, I'm pleased to introduce Jenny Heeter. Jenny is a Senior Energy Analyst at the National Renewable Energy Laboratory in Golden, Colorado. She has spent more than ten years at NREL researching state and local renewable energy policies, corporate purchases of renewable energy and community solar deployment and cost. Jenny has five years of experience managing solar technical assistance programs and, more recently, has focused on ways for low-income households to adopt on-site and community solar. Welcome, Jenny.

*Jenny Heeter:*

Thanks for having me, and it's a pleasure to join this session. So I'm going to be reviewing some of the market trends that we see in community solar and talk about roles for multifamily affordable housing facilities in community solar. I hope that this session will set the stage for our following presenters and give a bit of context to what's happening in the market. So next Slide, please. And just before we get started, I want to make sure everybody knows what community solar is.

So this can get a little bit tricky. But our general definition we use at NREL is that a community solar project is one that is a large array that has multiple off-takers. So multiple people getting bill credits for generation from that one facility. And we do generally see the off-takers as being ones who voluntarily decide to participate in that project. We'll talk a little bit more about definitional issues, though, as we walk through the deck.

So opportunity. Hopefully everybody knows it's quite large for community solar. NREL has done some work to understand that about 1/2 of households and businesses cannot host a PV system on-site that will meet their needs. So 1/2 of the market needs some other type of solution to help them take advantage of solar opportunities. In terms of where community solar is now, we know that solar overall is a little under 10 percent of US electric generation capacity. Of that, solar share – community solar – is less than 5 percent of that market.

And then, we get even more in the weeds when we look at low-income community solar. Which right now, the projects and programs dedicated to low-income customers are a little under 1 percent of that community solar market. So each of these slivers gets a little bit more narrow, and we're hoping to grow all of them going forward. Next Slide. So when we think about multifamily affordable housing projects, there are ways that they can participate in traditional community solar, which is that off-site project, and multiple off-takers.

But there are some sort of adjacent ways that facilities can participate. So when we have a project on-site – so on the building – of a multifamily affordable housing facility – that facility could choose to host a project. In

that case, you would see the utility paying for essentially access to install and operate a rooftop solar system. Or this could be a third-party instead of electric utility that is essentially navigating that hosting process. We do also see multifamily affordable housing facilities that have a behind-the-meter project.

So this is a project that is not traditionally structured like a community solar project. It really just serves the load on-site. And then, it can be up to that facility to decide how it handles the savings that it might be achieving because of that solar installation. Some folks would classify this behind-the-meter project design as a community solar project because there are multiple tenants that may or may not receive the benefits. So just a little bit of nuance in how we define this stuff. Multifamily affordable housing can also participate in off-site projects.

So this can look like a subscription to a community solar project that is not on their facility. I think we'll hear more about this structure where Master Meter buildings can sign up for bill credits from an off-site solar system. And I'll talk a little bit more in the next Slide about how bill credits can be handled. And then, the last role that we see is really with subscription aggregator role. So this is where the multi-meter building signs up for bill credits on behalf of the tenants and then distributes those credits accordingly.

So they're not just having credits go to their own common load or other load. It's really going directly to the tenants. Next Slide. So just kind of another way of slicing and dicing this. When you look at, then, the impacts to the tenants or whose bills are you reducing, you can think about it a couple of different ways. If you have your tenants participating in community solar projects, they may see a bill reduction if they're paying their own bills. If the building itself is participating in a community solar project, it can be either option. Right?

Depending on what that participation looks like, it might just be the tenants participating. It might just be common space, or it could be both of those things. And then on the Righthand side, we have the option with the building having on-site PV. Typically that's used for common space bill reduction. Next Slide. So understanding that there are lots of ways multifamily can participate. I also wanted to just share some trends overall in this space for community solar. This is data that NREL collects on a regular basis to understand, "How is the market growing? Where is it growing?"

So I'm just going to share a few things along those lines. The figure on the Right here shows annual and cumulative growth. So the end of 2020, we

were at about \$3,000 megawatts or 3 gigawatts of capacity. Almost 1,500 projects in a pretty wide distribution across the country, 39 states and Washington DC. The market is growing year-to-year, averaging about 120 percent year-over-year since 2010. And in 2020, we saw about 860 megawatts come online. Next Slide. One of the things we like to do, though, is look not just at how the community solar market is doing but, "How does it compare to other markets?"

So the Lefthand Slide here is looking at just residential solar installations per...I'm sorry. Giving – yeah. Residential installations. Sorry, the heading disappeared Residential installations of solar per capita. And the Righthand side is looking at community solar capacity per capita. So you can notice a few things here. One is that the mix of states looks a little bit different. And some of our states that are leaders in community solar per capita are not necessarily leaders in residential on-site per capita.

And a lot of that is driven by, "What are the supportive policies and programs in place to help move these markets?" Next Slide. As I mentioned at the beginning, there are programs in community solar that are dedicated to serving low and moderate-income customers. This map shows in the Green states that have a low and moderate-income-focused community solar program. These are commonly structured as a target of capacity that has to serve LMI customers. Usually we see that target being around 20 to 50 percent of the capacity.

Other programs are structured not as a percent target but as an additional financial incentive to enroll LMI customers. And outside of these Green states, we also see some utilities focused on developing their own LMI-serving community solar programs. We have seen that most notably in Florida with Florida Power and Light and Duke Energy proposing for a carve-out approach to their larger community solar programs. Overall, you know, we track progress in these different environments and do see that we expect continued interest in LMI community solar policies.

Most recently, back in April, New Mexico passed a new community solar program. It has a 30-percent LMI provision. And we hear interest by other states who have community solar in better understanding their LMI provisions as well as from states with no community solar-enabling policies wanting to get a better handle on it. Next Slide. So when we look at capacity installed through those programs that I just highlighted on the last Slide, we see that right now there's not that much capacity actually installed; about 30 megawatts that is dedicated to LMI customers.

That's about 1 percent of the community solar market. There is quite a bit in the queue. So in the Blue Bars, there are projects that have been

approved in one way or another; whether that's given in interconnection approval or approved for a state grant program or some other process, those Blue Bars are projects that we feel pretty confident will be developed. And there are about 225 megawatts there. So we wanted to look at, you know, "What does that mean for LMI community solar?" If all of the Blue projects and the Red projects are installed in 2022, that means LMI community solar would be about 4 percent of the community solar market if the market grows at 50 percent annually.

So some assumptions there but just trying to get some general context of community solars increasing and LMI community solar increasing as a share of that. Next Slide. So I wanted to talk about two examples of LMI community solar. So when we're looking at intersections between multifamily and LMI community solar, there are a couple of different connection points. So one can be that the affordable housing building or a 30 is considered an LMI Subscriber itself.

So this can look like, instead of a carve-out with 20-percent LMI requirements, instead of fulfilling that carve-out by subscribing individuals, you can subscribe the building itself with the kind of mindset that, "Okay. That building is going to be occupied by LMI tenants." The other piece that I wanted to highlight was incentives specific to solar on multifamily affordable housing properties.

So this could be different from traditional community solar but is in that bucket of, "If we want to install on-site on a multifamily affordable housing property in Massachusetts, they have a program called the Smart program" – which I think we'll hear more about – "that does provide essentially an add or additional incentive to projects that are located on multifamily affordable housing. Next Slide.

So I just wanted to wrap it up with this and a small plug for the NCSP, which is the National Community Solar Partnership. You'll find the Website at [solarinyourcommunity.org](http://solarinyourcommunity.org). This is a partnership led by the Department of Energy's Solar Energy Technology Office. And we'd invite you to become a partner. It is a free registration, and the Link is there and allows you to access our platform to Chat with other folks in this space and become aware of technical assistance opportunities. So with that, I will end there. Thank you.

*Josh Geyer:*

Thank you so much, Jenny. So I'm going to throw some questions at you. So the first one came through the Chat and I just put it in Slido. It's from Julie Klump. She says, "Can community solar be used to fill gaps in projects that are close to Net Zero but not quite there?"

*Jenny Heeter:* Yes. So Net Zero is one of those things where there are lots of folks who have their own definitions. But depending on your framework, community solar can be, you know, tied to a bill – electricity bill. So it's a very firm commitment that can be tracked and quantified. So I do believe there are programs that in their Net Zero definition allow for off-site renewable energy use. And in that case, yeah, community solar would be part of that framework. Or you could be hosting a community solar project on site and use part of that facilities generation to serve your own load and use that towards a Net Zero designation.

*Josh Geyer:* Another question is, what if anything is NREL doing to nudge or incentivize other states to implement LMI community programs? As in the states that are not currently running programs.

*Jenny Heeter:* Yeah. That's a great question. So NREL does facilitate that national community solar partnership. And as part of that program, we do provide technical assistance at no cost, technical assistance, to states, utilities, other entities that are interested in LMI community solar. Specifically, there is a collaborative, which is a two-year effort to engage municipal utilities. Many of whom are located outside of the states highlighted on that map.

Or I believe most of them are. But if not, often those state regulations don't apply to the municipal utilities. So basically, providing that technical assistance, making sure people know, "Here are the best practices. Here's what can be done if you're looking to launch a new program," and helping folks learn from their peers is all stuff that is done under that national community solar partnership umbrella.

*Josh Geyer:* So there's a question here that's, "As a Texas resident, the state of Texas gov is an obstacle. How can this be overcome?" Let me take a little bit of the heat off you, Jenny, here. So first of all, I don't know whether gov is government or governor. I think this question is complicated, and it's also basically more complicated since that huge disaster that happened recently where a lot of Texas's generation got cut down and like – renewable sources were like unfairly blamed, and now they're being like – now the legislature is like, "Go after them."

And it's very, very complicated. But the other thing to start out with knowing is that...and this is something that former DOE secretary Rick Perry pointed out in a previous Better Buildings challenge Q&A...that the State of Texas actually has an enormous amount of solar capacity already. So the State of Texas has actually been very aggressive at developing solar generated capacity. So, Jenny, I'll let you take anything I didn't get.

*Jenny Heeter:* Yeah. I would say, you know, some of the entities we've provided technical assistance to are trying to figure out models for community solar in Texas. A couple of the challenges in Texas are the restructured electricity market and the lack of net metering policy. So restructured markets in and of themselves are not necessarily a barrier. In fact, Massachusetts – which is one of the leading community solar states – has a restructured market. But there is no state-mandated metering framework in Texas.

So that makes for some challenges when trying to figure out, "Then can you do a virtual net metering framework, and how do you essentially get the credits to people from subscriptions?" So I would say, yeah, it's kind of in pilot stage right now or, "What are some of those work-around models of making it work?" And some of that can be hosting an on-site project and providing alternative ways to get bill credits. But it is a complex environment. So maybe I'll just leave it there. And that person can feel free to E-mail me if you have more questions.

*Josh Geyer:* So thank you so much, Jenny. So I'm going to move – there's another question that I'll let Jenny take up if she wants to, and let's move onto our next presenter. So next, we have Darien Crimmin. As Vice President of Energy and Sustainability for Winn Companies and a co-founder of Open Market ESCO. He's responsible for managing a range of energy efficiency and renewable projects across Winn Portfolio of residential properties. These projects include solar PV, HVAC and insulation upgrades, water conservation improvements and innovative energy financing demonstrations. Most recently, Crimmin has pioneered the application of community solar to benefit low and moderate-income households. Welcome, Darien.

*Darien Crimmin:* Great. Well, happy to be here. Thanks so much for the intro. And, Jenny, great job. Glad to be part of the panel and share some thoughts on community solar and really some experiences in the field. And thanks to everyone at the Department of Energy also and everyone working at the National Community Solar Partnership. It's a great organization, and I know I've gotten a lot out of it and suggest if you're interested that you participate more.

So big picture, we are in the middle of an energy transition. Right? And we know that we have to decarbonize the grid. And we have to make our buildings more efficient. And with the cost of solar and wind continuing to decrease, renewables are becoming more cost-competitive, and that renewable, clean energy transition is happening. And yet, we know the grid is expanding, and the grid of the future is going to need more electricity as we electrify transportation and we electrify our buildings.

And so, we have to think about clean energy powering not only today's grid but the grid of tomorrow as well. And so, there's not going to be just one solution. And as Jenny's Slideshow...we live in a country with a very decentralized approach to energy. And so, energy decisions and regulatory decisions are made at the state or local level, maybe regional level with an ISO. There's some federal oversight, but most decisions and most regulations have been locally at the state level. And so, it's very decentralized. And that means there's going to be a lot of solutions.

And I think if done right and where it's done right, community solar is an effective solution. And it really has incredible potential. The idea of community solar I think is so powerful because it empowers people to participate in this clean energy transition. And I think empowering people into this clean energy economy is super important. And it's especially important for renters or people that don't have access to their roof to actually put on solar themselves.

And it's especially important for low-income or moderate-income households or also renters. So I think that's really the context for my Slides here. And first, just a quick background on Winn Companies. So Winn is a private developer and manager of mixed income and affordable housing. We've been around for 50 years – much longer than I've been alive – and continue as a family-run company based in Boston. But we're in 23 states and the District of Columbia. We have 3,500 employees and some 100,000 apartments under management.

And we're actually the largest private manager of affordable housing in the United States. Over the past 15 years, Winn has become really a leader in sustainability and our commitment to sustainability from energy efficiency to deep energy Retrofits to demand management and co-generation. We've tried to do it all. We've invested tens of millions of dollars into real projects and continue to learn and continue to install new technologies.

And on the solar front, we've installed over 3 megawatts of solar on our rooftops and over 10 megawatts of off-site community solar. So for today, my plan is to present two case studies on community solar for low-income communities. The first is a property in Washington DC. And that one subscribes low-income residents directly. It's a roof-mounted project. The next second case study is a portfolio of off-site solar projects serving a portfolio of low-income properties.

And those are located in Massachusetts. Next Slide. First, though – and Jenny did such a great job. Just really quickly, community solar 101, I think we have to emphasize efficiency first. And whether we're like Julie



Klump and pushing for Net Zero or we're just starting efficiency projects, we have to make sure we do efficiency first and do it well before we consider solar. And then as Jenny said, it's important to note not every roof is a good candidate for solar.

And there's a lot of reasons for this. The orientation of the building, competing space on the roof, HVAC equipment, shading, the age of the roof. You never want to put solar on a roof that's over eight or maybe ten years old. Potential interconnection restrictions, structural limitations. The list goes on and on. But clearly, off-site solar is possible. And it's possible where the regulations allow for.

Not every state has enabling legislation for community solar. Jenny mentioned this also. I think it's important to emphasize, just as we're thinking about solar, the difference between behind-the-meter solar and ahead-of-the-meter solar. So ahead-of-the-meter solar really means the solar is interconnected to the electric grid independent of any building load. It's a straight connection, a lineside top into the electric grid. A new electric meter. That's the solar meter.

Whereas, behind-the-meter you might have a building or some other load and you're installing solar that reduces – that interconnects on the building side of the existing meter, and it reduces the amount of electricity that building or load needs to purchase from the grid. And that's really the start of community solar. I think it happened in Massachusetts by accident; where behind-the-meter installations were going in and producing more power than that load needed.

And the legislation caught up to it and realized, "Okay. We should allow those building owners producing more solar than they need to carry forward and basically net-meter that extra power. So the solar power would...if it exceeds the load, gets into the grid and then the owner would receive a credit for that. And then, that was expanded to say, "Well, why not allow that solar owner to send that credit, that bill credit, to another customer?"

And so, you can imagine that sort of splintering off into 100 different directions. We basically have 100 different...or maybe not 100, maybe 25 different solar policies guiding community solar. So it's very decentralized. And I suggest that everybody really understand wherever your properties are or wherever you're located, really read the regulations. You know, really dive in, roll up your sleeves and understand what the current enabling policy is, what the restrictions are, what's required of the utility company, who is advocating for what.

And we'll talk a little bit about that in a following Slide. Next Slide. So this property here that's pictured is our property in Washington DC. It's called Atlantic Terrace. It's 185 units redeveloped in 2017. It's certified through Enterprise Green Communities. And we use about 650 kilowatts of solar on the roof. Each of the buildings is its own standalone solar installation. So again. This is solar interconnecting ahead of the meter independent of the existing building loads and the existing apartment loads. And the solar is allocated to 150 subscribers. Next Slide.

A CREF in Washington DC stands for Community Renewable Energy Facility. And really, the reason this project was a success is because Washington DC has incredible solar policy. And I would say it's the gold standard in the country right now. And specifically for LMI solar. And in particular, there's solar for all programs. It's basically a grant that is competitive but it allows for the credits to be allocated to qualifying low-income customers for free.

It's a subsidy that goes to the solar developer in exchange for promising 15 or 20 years of subscriptions to be sent to these eligible customers without any bill collection or any payment in return. So think of that as 100-percent discount for these subscriptions or these net metering credits flowing from the host customer to the subscribers. And really just want to give a big shout-out to everyone at DOE – Tommy Wells and the whole group over there. They've done fantastic work building this program and the capacity specifically to support low-income community solar.

That's very rare, I would say, within the broader picture of the policy landscape. So we have 145 residents receiving about \$500 per year off their electric bill. And this dynamic where we receive the grant upfront and where we're basically enabled to give away these credits really, really was the driver for us to participate. We're not in the business of collecting utility payments from residents.

You know, our property management staff collect rent payments and lease the apartments, and we maintain the apartments and everything related to these apartments. But we are not – and I don't think we will ever really be in the business of – collecting utility payments. And so, solving for that is a major challenge. Next Slide. And so, I've listed a couple challenges here. But really, subscription management in this umbrella is a major challenge in addition to just billing.

So how do we enroll subscribers? How do we, you know, qualify eligible subscribers? Especially if there's a low-income criteria for eligibility that's different than the criteria that is required to live in a low-income property. And so, we worked closely with the agencies in the department and Pepco,

the utility, to figure out how to do that. One of the big things, though – one of the big challenges was this idea of a trust. You know, we would present this opportunity to eligible residents whether they're living in our properties or beyond.

And it was almost too good to be true. I mean, people didn't really understand it. You know, people didn't really understand solar, so we'd have to educate them about solar. But people didn't really understand how they could get something for nothing. And so, they thought it was a scam in many cases. And so, we really were challenged to build trust. And thinking it's a scam is not arbitrary.

There are a lot of, you know...call it shady practices within the deregulated energy contracting world where you could imagine someone signing up for an electric supply contract – which seems like it's a great idea but then has a clause in it where the rate escalates after six months and they're locked into some higher rate that they didn't expect. That's not arbitrary. That happens. So it's actually good that people are skeptical of something that sounds too good to be true.

But in our case, it was legitimate. So we had a hard time reaching out and actually enrolling folks. And we basically had maybe a 15-percent success rate. So to hit that 145 subscribers, we had to reach out to well over 1,000 individuals. And we did that within the properties that we own, the properties that we manage in the district. And we worked with a nonprofit to reach out into the communities, in the neighborhoods and basically table and canvas to sign up eligible residents and educate them about program.

Really quickly, the next challenge I'll touch on is the interconnection challenge. And so, I mentioned that this is a CREF – community renewable energy facility – and it's connected in the line side of a building meter. And it was one of the very first projects connected like this in the district. And so, utilities really had very little experience. They didn't really know how to treat it from a technical perspective, the actual physical work to get in the electric room and access the line side which didn't have a disconnect.

So you couldn't easily shut off the power. You had to go back to the street, and someone had to climb up to the pole mounted transformer to shut off the power. We ended up – we had to actually replace the lines going from the telephone poles of the power lines coming underground into the building. This picture on the Left was a complication. We had a contingency plan in case those lines and the conduit holding those lines failed.

Which it did, unfortunately, and we had to quickly enact the contingency plan and get crews of folks to help restore power to the building. And there's also complications, I'd say, around interconnection – you know, the application; how much the interconnection is going to cost, the procedure to follow, what's required of the customer versus what's required of the utility. And I would just say, again, familiarize yourself with the regulations.

Because the nuances of regulations really matter. If you have a utility interconnection agreement signed, it really matters compared to not having one signed. And so, in our case the utility didn't want to sign the interconnection. And we said, "Well, we can't build it until we have the commitment from the utility that if we build this, the interconnection is allowed and here are the rules that it's allowed under." So I would just emphasize that folks really should pay attention to the interconnection and the general policy rules. Next Slide.

*Josh Geyer:* Hey, Darien. Can you wrap up in the next couple minutes?

*Darien Crimmin:* Yeah. Sorry. So really quick now, we developed some resident engagement tools. This is one Slide. Next Slide, please. And another one, we had a marketing team. Next Slide. 'Cause I want to get through our second cast study. So this is a different approach. This is up in Massachusetts. Next Slide. And these are off-site community solar projects. So really, off-site projects in my mind mean distributed generation almost had a utility scale.

And DG might be between 1, ground-mounted between 1 megawatts and 10 megawatts, whereas a utility scale might be more than 10 megawatts. I don't know how you might define that. But these are major operations where we had to...you know, the developer, the owner, cleared the land – in some cases, cleared the forest – and prepared for basically a power plan. Next Slide. And so, we have these off-site solar projects creating power, Sending it directly to the grid and that electricity is credited to the host customer.

And the host customer allocates those credits to any number of customers. And in our case, allocating those credits to low-income multifamily properties. And in this one case, this example, \$250,000 a year in credits is created and Sent to offset the electric bill. And for that \$250,000, this property is paying \$200,000. And that's determined by a percent discount. So instead of 100-percent discount in the previous example, we have a 20-percent discount here. But that's real money. I mean, that really benefits these properties. Next Slide.

And so, what this shows is just rolled up at a portfolio level we have over 20 properties enrolled in Massachusetts in these types of programs with nine facilities, over 10 megawatts of solar. And annually, we're receiving \$1.3 million in credits and we're paying about \$1 million for those credits. And so, our properties are seeing tangible financial benefits from this solar transaction. And this is not an annuity, but it basically continues annually over time.

And I think this Slide is valuable because it really shows how powerful community solar can be not just for residents but for what I would call anchor subscribers. Larger commercial or low-income multifamily electric accounts. Next Slide. And really, the last two Slides here I just want to introduce for discussion, and we can take questions later or after Chris goes. But next Slide. I think challenges and opportunities are important to highlight just on a regulatory side, in addition to understanding the regulations, there's such a thing as poor program design.

And I see this because we operate in 23 different states and some say type 0 community solar policies. And some states are trying, but the policy actually is – it's sort of broken from the start. It's not really structured in the best way. It's either too small or it's maybe driven entirely from the utilities perspective, not really from a subscriber's perspective or a low-income communities perspective. And there's this idea of regulatory capture, I think, that's important.

And in addition, other challenges I mentioned – ongoing subscription management, utility complications. I'll throw out utility allowances and the complication of changing utility allowances for low-income residents. But that's balanced with the opportunities. Next Slide. And I think the opportunities are huge. I mean, we have this recent environmental justice awareness that's expanding. And that folds in really nicely with community solar and this idea of democratizing our electric grid; our energy policies.

Increasing incentives for low to moderate-income participation, replicating policy successes where they exist; like in Massachusetts or in Washington DC and in other places. And one example of that I'd just throw out would be consolidated billing. Right now, the utility companies collect bills – collect bill payments – from everybody. And there should be, and there are examples, where regulators instruct the utility company to collect community solar payments from community solar subscribers.

Not so the utility keeps those or is the gatekeeper but just as a pure bill collection function that's regulated from the state level. And something

like that, they're doing that in New York State and hopefully in other states it follows...would dramatically expand the potential for low-income community solar. Because it would solve the bill collection/credit risk barrier as it is right now. So I went a little long, but I'll stop there. Thanks.

*Josh Geyer:* Thanks, Darien. So just right to questions. Someone from Brooklyn Mass says the inconsistency in high costs of interconnection is a major hurdle. How are you negotiating this with Eversource and national grid to maximize the benefit to the community?

*Darien Crimmin:* Good question. So interconnection costs are unique to each property. And whether it's a roof-mounted project or a ground-mounted project or wherever the solar project might be located, you need – a solar developer needs a clear path to interconnect the solar project. And part of that is clear definition of how much it's going to cost, what the equipment is, what the metering configuration needs to look like, et cetera, et cetera. Now, in an ideal world all that would be super transparent and vetted and clear, and ideally in favor of us building more solar.

Now, the reality is it's largely not transparent, not clear and the utilities have outsized control over what those costs are and what the nuances are that determine those costs. And so, the short answer is case-by-case. You have to understand what the costs proposed are and what the allowable costs are in the regulations. But more broadly, I think it's a major challenge that the industry continues to need to work through to increase hosting capacity.

*Josh Geyer:* So I'm just going to give you one more question, Darien. This person says, "Can you provide an example of an ideal community solar host site? Is it most common to see community solar directly on a project that will be benefiting from energy credits?"

*Darien Crimmin:* Well, I think the magic of community solar is that the solar project can be located anywhere. And so, an off-site facility that's not on prime farmland and not cited near a wetland, and you don't have to chop down a whole forest to build it...an abandoned landfill, for example. Prime solar potential there if it's next to a utility connection. And the larger a project is, the cheaper it costs to develop it. So solar doesn't have to be located on the roof. We know that.

And siting the best possible solar project I think is a great discussion point, and a lot of folks are in different markets running around trying to do just that; trying to develop solar projects that interconnect easily, that have relatively low acquisition costs for the land and can be developed and provide that power for a low cost. So I don't think the best scenario is a

roof-mounted solar array to serve that property. I mean, like I said. We're developing solar on our roofs, but it's relatively limited.

*Josh Geyer:*

Great. Thank you. So we're going to – then we'll go onto our last speaker, Chris Jedd. Chris is a Senior Development and Energy manager for the Denver Housing Authority where he provides oversight to the development of sustainable and portable housing. He has over 18 years combined experience in real estate development, renewable energy and energy conservation. Chris has a BS in Construction Management from Purdue University and MS in Real Estate Development from the University of Denver and is a lead APBD+C-certified and is a certified energy manager. Welcome, Chris.

*Christopher Jedd:*

Great. Well, thank you for HUD and the DOE for hosting this and always good to be at the Better Buildings challenge whether in person or in Zoom. So yeah. Also, great presentation by Jenny and Darien and happy to follow them. And as they both kind of set the stage for community solar and different approaches to community solar. I wanted to share a third approach that the Denver Housing Authority did a couple years back that was really successful for us when we were trying to replicate again.

So before I get started, DHA, we're a public housing authority in the City and County of Denver. We develop, own and operate affordable mixed income housing. And we also are – we really have strong sustainability goals as well as renewable energy goals across the portfolio, which is about 12,000 homes. Either housing choice vouchers or public housing or low-income housing tax credits or a combination of all those. So over the past years, we've really dove into really trying to figure out how to deploy solar across the portfolio.

And I think we look at it as three things. One, first you need a place. "You know, where are you going to put the solar? Is it a rooftop? Is it somewhere in a field?" Two, you need policy. And fortunately, we're blessed in Colorado to have Excel Energy who has really good community solar policy as well as LMI community solar policies. So we're excited about that, which makes my job much easier. And then, three, needs some sort of financing; whether you bring it yourself or third-party.

But that's kind of what we look at. And I guess to go back in policy, it's not only renewable energy policy that we look for. It's also affordable housing policy. And we're going to touch on that later in this conversation. But whether it's for public housing versus a LIHTC deal versus housing choice vouchers...depending on what bucket of affordable housing we're talking about often dictates the approach and the deal structure of the solar programs we have.

So we've tried quite a different combinations of solar. We started with rooftop mount solar either funded through grants or construction costs and new developments if the budget allows for it. And that's what Darien described behind-the-meter. So it's on top of the building. And it doesn't really go to the grid. It just offsets the electricity that we take from the grid. So it's pretty clean. It's pretty simple. And it's nice 'cause you own it, and it's pretty straightforward.

And it just directly offsets your utility spend. We've tried power purchase agreements with different programs either on-site and off-site; as well as we dabble with community solar with a third-party developer too. So you can go to the next Slide, please. So out of all the stuff we tried, we've been doing this for about 15 years now trying to get more and more solar. And as Darien pointed out, eventually you're going to run out of roof space to do it.

And either your roof space is shaded or your roof is too old or you have development plans for that property over the next five to ten years. So, you know, the last thing you want to do is invest in solar if you're going to be knocking it down. And so, we were starting to face the challenge, "Where do we go? What do we do?" And so, you know, we started to look at community solar. And fortunately, we got approached by some community solar developers who do all this.

So, you know, you certainly don't have to develop your own community solar program like Darien did or I'm going to share. But if you can, there's a lot of pros and benefits and good ways to do it. But the good news is, there's community solar developers that also can do this for you and make it a little easier and less of a heavy lift if that's what you're looking for. So community solar overview. We really touched on this quite a bit with the past two presentations.

But in Colorado, essentially it's the same thing as Darien mentioned with the credit. So if you subscribe to a community solar garden, you get a bill credit on your bill, and that offsets your utilities then essentially. So a couple ways you can do it. You can buy into community solar gardens. You can just, you know, buy a portion of that solar array with either equity or cash or however you can finance it. Two, you can work with a subscription agreement or power purchase agreement to tie into one.

Or, three, you can just develop your own, which a lot of people do. There's a lot of benefits for it. Why do we like community solar at DHA? Really, it's great for multifamily buildings that don't have a lot...they're pretty high-dense buildings. So it's often difficult to get a lot of solar on the roof



to make a huge impact on the utility bill. So you can really scale up your community solar program or your renewable energy program.

And then obviously, there's energy savings, and it's off-site. Which our maintenance teams like quite a bit. 'Cause once you put solar panels on the roof – we have hundreds of homes with solar panels on the roof. And they all work good. It's just when they're on there, it presents its own challenges essentially. And then, some of the other challenges community solar were facing right now are just long-term – like the term of the contract. Like, we're seeing 20 to 25-year contracts now.

Which is a difficult thing to sign up to as well as some of the terms that Darien mentioned as well, which we'll talk about in a little bit. So all this said, we said, "Okay. You know, let's – we don't have any more viable roof space. We definitely want to do more solar. We're blessed to live in a state that has community solar policy. So let's go build a community solar garden." So next Slide, please.

So this is kind of an overview of what we set out to do in terms of what we're looking for. DHA wanted to be an owner, developer and operator of it for various reasons. We wanted to be 100-percent low-income. So, you know, that's 80-percent AMI or lower. We wanted not just to be for Denver Housing properties but other neighboring cities, other communities, other affordable housing developers, affordable housing residents throughout the city and Denver – Denver Metro area.

We definitely wanted to offset utility bills, reduce emissions. We wanted to have a robust workforce training program, and we had to do it through Excel Energy's – which is our utility here in Colorado. It's our community solar program for Excel. And it's called Rewards Community – Solar Rewards Community program. So that's kind of the framework of what we set out to do. We started this in 2018, I believe.

And the first thing we did is – I just set up a meeting with our utility and said, "You know, we're looking to do community solar gardens, and how do we get started?" So I encourage folks that are interested in community solar, don't be shy and just reach out to your utilities, reach out to some developers and try to figure out, "What are the first steps here to get it done?" So next Slide, please.

So like any good project, you definitely need a project team. In DHA, we have a real estate development team in-house with about nine folks that I sit with. And our thought was, we'll treat it like a LIHTC development. So, you know, for any construction development where you need land, you need a builder, you need money, you need an engineer and you need some

consultants. And so, this represents the project team. Unfortunately, I don't have enough time to go through them all.

But DHA was the developer and owner of the project. Namaste Solar, they were the EPC contractor, which is different than energy performance contract and which I didn't know until then. But this is engineering, procurement and construction contractor. Grid Alternatives, they were our workforce development partner as well as our policy partner in terms of navigating the different policies and trying to work this out. National Housing Trust helped us finance the deal.

And then on the Bottom there, we have enterprise. They were the equity investor. So we did leverage the renewable energy tax credit which I'll talk about in a bit. And then, Monarch Capital as well was the equity investor. And excuse me. Enterprise was the lender, actually. I got them crossed. But this is kind of the project team. It took a while to pull this team together. We're a housing authority, so we had to do requests for proposals for all these team members. And at first, we didn't know – it was our first one, and we didn't know what we needed.

So, you know, we kind of learned as we went. But we definitely brought a lot of experts along with us to get this deal done. Next Slide, please. So as I mentioned, it was kind of like a LIHTC investment, and we leveraged the investment tax credit. And to do that, since DHA doesn't have a tax appetite or a quasi-municipal organization, we had to set this up identical to what – if those in the audience are familiar with low-income housing tax credit deals, this is how housing authority would typically do it; where we set up an ownership structure, which is Denver Metro Solar, LLC on the Top.

And then, there's two partners within an LLC. One is the equity investor, and they bring the tax credit investment equity to the deal. Which essentially, the more tax credit equity you get, the less debt you have to take on. And the less debt you take on means the less debt service you have to pay, which means the deeper service you can provide the residents in the buildings.

So in this case, it was Monarch Private Capital was the equity investor, and they – essentially, we signed the tax credit to them. And then, Denver Affordable Energy Inc – which is like the DHA has an independent board. They're the 1-percent owner of this deal. So 99 percent of the tax credits went to the equity investor. I think it was like 99.9 actually. And then, Denver Affordable Energy Inc is the managing partner, and it has its own board and then it goes to DHA as well. So this is how we leveraged it, how we set it up.

And then, the nice thing is, once the compliance period is over for the tax credits and the appreciation – excuse me, depreciation – the equity investor generally exits the deal and then Denver Affordable Energy Inc would be the main owner of it. And the equity investor could exit in totality, or they could drop down to 1 percent. There's a couple different exit strategies they can have. But at the end of the day, once the equity investor leverages all the benefits of that tax credit, they want to get out of the deal and take their money and move somewhere else.

So it's a really good opportunity after year six or year five to take advantage of that equity. So next Slide, please. So this is – can you advance it one more time? I think I got to pull some numbers. Sorry. Go back. One more. So this is really similar to what Darien presented of how the financial and economics work of a community solar garden. So on the Bottom-Right there, you have a DHA solar garden.

And it's connected to the grid, or Excel Energy's grid. Which is in the Upper-Righthand corner. And the solar panels produce energy, and the energy goes to the grid and to Excel's grid essentially. And in return, Excel pays us renewable energy credits or REC's, which we call them...sometimes they're X-REC's. Here, they're just REC's. So for every kilowatt hour that that solar garden produces, the solar garden gets a REC. And so, that's one stream of revenue to finance and underwrite the deal to the solar garden.

And in return, what the...not only do we get a REC but Excel Energy, if you move to the Left – Globe Ville Homes, which is a tax credit partnership with DHA – they buy electricity from Excel there, and they get a bill credit from Excel because they're part of the solar garden subscription. So let's say they get a 5-cent bill credit on every kilowatt hour on their bill. So Globe Ville Homes wins because they get a bill credit for 5 cents.

In return, Globe Ville Homes – because they're a subscriber to that solar garden...let's say they pay us a 2-cent subscription fee. So they get a 5-cent credit. They pay us 2 cents. So Globe Ville homes saves 3 cents a kilowatt hour. And that's important that whole circle there you see...is that Globe Ville Homes gets a discount. They pay for that discount, but it's less than what they get. So if they get a 5-cent discount, they pay us...or a member of Metro Solar 2 cents.

And so, for every kilowatt hour that solar garden generates, it gets the renewable energy credit from Excel, and it gets a 2-cent payment from Globe Ville Homes. And that's essentially the key underwriting factor of

this deal, is that you're getting two revenue streams that help finance this. So again. We had a place for it. We had a good policy with Excel Energy, and we had the financing or money for this because of those two streams.

And then, Globe Ville Homes receives a discount on their bill. And often times, Globe Ville Homes isn't a tax credit partnership; it's a resident. It's a family, as Darien said. So there's a lot – it could be a Master Meter building. It could be a single-family home. It could be a resident. It could be a lot of things. The important thing is the subscriber there, or Globe Ville Homes in this picture – they are getting the benefit of the community solar in a reduced utility spend. So next Slide, please.

So this is – on the Right there, you can see a little map of Denver there. We're just South of Denver International Airport, so we're about 40 minutes South-side. This is where this is located on a company...or, an area called Solar TAC, which is solar technology and Acceleration Center. And then, our community solar garden is in the Blue little Square Up there. This is actually before it was built, so you can't see it yet.

So it's definitely...it wasn't farmland. It wasn't for sewage. It was an area that was designed for solar technology and testing. You can see some different arrays being tested there. It's a really interesting facility. But it was nice. We found a good spot. We did a 21-year ground lease, and the deal's for 20 years. But we figured we'd need a year to figure out what we're going to do with it in year 20. So the options after that are to de-install it, upgrade it with new panels or just let it be.

And I think that really depends on where policy is and where technology is in 20 years. So we allowed ourselves one extra year to kind of figure that out. So right now, it's build and operate, but it would be where that Blue little Rectangle is in the Upper-right there. So community solar garden economics. And this is not for the subscriber now. This is for Denver Metro Solar, the owner of the solar garden. There's two revenue streams like that previous Slide illustrated.

You get the renewable energy credits from Excel Energy, and you can sell the – or, your electricity, you get payments from the subscribers too. So those are the two revenues. Like any project, we have debt service and expenses. So the first and biggest is the debt service. We have a ground lease on land. We pay O&M providers on an annual fee to make sure it's running as designed. And then, we also have a replacement reserve for replacement equipment as equipment ages.

And then, the financing Down Below in the Lower-Left, those are the three sources we use to source the deal. One was tax credit equity, which

was Monarch Private Capital. That was at 99-percent owner. Two is, we had debt into the deal, which was Enterprise Communities. And then, three was DHA put a small portion of equity into the deal just so we had some skin in the game. So that's essentially how it was financed and how the annual operation and maintenance and expenses looked for this.

So next Slide, please. So this is a picture of when it's completed. You're looking Northeast right now. So DIA is just off to the – in the background there. And this array is 2 megawatts, and it currently subscribes three different organizations, DHA and two other affordable housing developers and owners in the City and County of Denver and the Denver Metro area as well as it serves low-income residents around the Denver Metro area as well.

So it's been up and running for a couple years now, and – knock on wood – it's all operating as performed. And we haven't had many issues with it. And we're definitely interested in developing more. But as Darien said, there's a lot of challenges and what worked in 2018, 2019 is not necessarily the same scene and ecosystem as it is today. And we can talk about that a little bit later as well. So next Slide, please.

So that I guess – to wrap up, that case study or project we just went over – that was one example of a community solar program. Darien gave you two other programs. And there's probably various different programs you can do that we're not talking about here today. And as I started, everything we just talked about doesn't necessarily have to be done by the housing authority or the developer or the town. There's a lot of benefits for it.

And if you have the capacity to, I encourage it. But if you don't, there's other ways to do it too. So a couple questions I wanted to go through quickly is, you know when community is right for you. Well, first, it's right when it's in your state. If it's not, then you got to...not saying it won't get there, but you may have to wait a little bit or be an advocate for it and help propel those policies across the nation.

But if it is in your state, I would definitely look at it. It gives you flexibility You don't have to put it on your rooftop. It doesn't matter where your building is. And often times, if you subscribe and you're not sure if you're going to have that building in ten years and you're signing a 20-year contract, the contracts do allow you to switch meters. Or they should allow you to switch meters. And so, it's fungible – and you could put it on two buildings in 2021 and then in 2025 you can move it to two buildings.

So it's a beautiful thing that it's agnostic to location. It typically doesn't matter if it's a public housing property or a LIHTC property or housing

choice vouchers. I say that, you know...all those have different policies you need to adhere to. If it's public housing, you have the procurement issues that you can work through. But how does working on policies – and they have policies in place to put that through. So it's just a very fungible, flexible, nice program out there. Especially the majority of the time you don't have to put up any money either.

So you're committing to pay utility costs for that bill subscription for 20 years, perhaps. But it's no out-of-pocket capital. It's off your balance sheet. It really works well, I find. And we're looking to do more in Denver. How to find developers. So option one is, you know, to do what Darien's stories are or what DHA did. But, you know, if you just want to go with a developer, there's plenty of developers. There's for-profit developers. There's nonprofit developers. Your utilities you can work with in terms of seeing who can do it and what they can do. And there's a lot of options out there. So I'm sorry. I'm reading Comments here. *[Laughs]* A lot of options-

*Josh Geyer:* Can you wrap it up in like the next minute?

*Christopher Jedd:* Yeah. No. I'm done. So anyways. We can talk about some of these in a little bit too. But, you know, which buildings in the portfolio you want to pick...it depends. Master Meter buildings are nice 'cause there's one meter to subscribe, and you can take down a lot of solar. But if you have resident-paid utilities, that's a great thing too because then your residents can benefit directly; in that it often depends if you have utility savings, utility allowances and how your rents are structured. So a lot of things to consider, and we can probably talk more here in the Q&A and all this. But I think that's the last Slide I got. And yep.

*Josh Geyer:* Great.

*Christopher Jedd:* Thank you.

*Josh Geyer:* So let's get ready to do questions. So there's one question that's like specifically for you, Chris, and then I'm just going to throw the rest of them out to the full panel so you guys can chime in as needed. So the question is, "What did Grid Alternatives add to the Denver project?"

*Christopher Jedd:* So Grid did a couple things for us. They were one of the consultants, and one of the things they did is the workforce development. So we did a robust workforce training where not only did we train a lot of residents...and they don't have to be DDHA residents. But they trained a lot of people in solar. They also gave jobs to people that had solar. And not only Grid but the EPC contractor Namaste Solar – they hired someone.

Or, I don't know how many people. So they helped orchestrate the whole job training and solar development. And that whole arena is important to our board. It's important to DHA. It's important to Grid, and I think it's just a great thing to do. So they spearheaded that. They also worked on the policy in terms of helping us navigate our utility policy.

'Cause we're used to developing low-income housing tax credit deals, which there's a whole plethora of policy around that and dos and don'ts and rules. And we're new at this, so they offered us the local presence and the local policy as an advocate and an expert in navigating the policy. So they're really strong at that as well. And then, they also helped just general with helping the lift with project management. You know, someone to call; someone to kind of help me walk me through all this down the road.

*Josh Geyer:* Great. So here's the first question for all of you all. Oh. Okay. Good. Does the panel have any suggestions for a situation we'd run into, presumably a partner, where market multifamily solar only pencils with LIHTC which our investment partners cannot use?"

*Darien Crimmin:* Well, I could try to answer that. I mean, I think what you're asking is, "How can you combine LIHTC – low-income housing tax credits – with the solar project?" And that is, from my perspective, driven by the LIHTC investor. So if you have a LIHTC investor that doesn't, you know...isn't interested in solar, then I think that's your answer. You might want to find a new investor or partner with someone else.

If you don't have a LIHTC property and you're saying that, for whatever reason, your solar tax credit investor doesn't know anything about LIHTC, I think that's a different question. But we've found with a little support, a little support, a little prodding, the LIHTC investor will take the solar investment tax credits; especially if it's planned early-on and it's not an afterthought. But that's all defined in the partnership agreement.

*Josh Geyer:* Great.

*Christopher Jedd:* You know...

*Josh Geyer:* Go ahead.

*Christopher Jedd:* We usually do an RFP for our LIHTC investors. And that's part of the RFP, is obviously we're looking for a LIHTC investor. But if we have other tax credits – whether it be solar tax credits or often times it's historic tax credits – we look for a partner that could capitalize on all that and purchase all those...is what we try to do. And if they don't, you could always get another investor and – but that may be a lot of work for not a

lot of tax credit if you're going to do a whole another partnership agreement. So that's kind of the things we've seen.

*Josh Geyer:* So this person says – they're currently a university researcher. And they ask, "Why is a lot of DOE grants prescriptive-based directing solutions instead of a performance-based results requested?"

*Jenny Heeter:* I'm not sure if I really understand...yeah. Maybe folks have other insights.

*Josh Geyer:* Okay.

*Darien Crimmin:* I think we're talking about...

*Josh Geyer:* Go ahead.

*Darien Crimmin:* Sorry. I don't think we're really talking about DOE grants within this community solar space. I mean, I'm not familiar with the federal Department of Energy grant related to the projects I've presented on. Or, Chris, I don't think you have DOE money. And as far as prescriptive versus performance-based, I mean, I think both are valuable, and it really depends on what the objectives are. I've definitely seen both in different contexts. But not necessarily for community solar.

*Josh Geyer:* Okay. Fair enough. So another one is, "Since large community solar systems require large areas dedicated to solar panels, what are some suggestions for onboard potential hosts in order to minimize negative impacts to the natural environment and avoid deforestation?" This is definitely something you alluded to.

*Darien Crimmin:* I talked about that a little bit. I mean, I think good siting is required. And like any power plant, you'd want to make sure that the location of the power plant is vetted through a thoughtful process and it's not completely unregulated. And you can just imagine if it was completely unregulated you might have, you know, *[laughs]* an oil well next to a kindergarten next to a neighborhood.

Which we have in some parts of the country, and I don't think that's good policy – good land use policy, good energy policy. And so, I think you would not necessarily see that today. Policy's evolved since then. But yeah. I do think there's a process to site power plants; whether it's solar or any other generation; that that should be carefully thought through and respectful of different property rights.

*Jenny Heeter:* Can I just add – that there's also some research on land use for solar projects. So making sure that solar projects could be collocated with



agriculture or de-pollination or other ancillary uses. So there are some best practices around just how to use the land that the solar is sited on as well.

*Christopher Jedd:* I think the local – I mean, the zoning of that land, I would hope, would kind of offer some guidance of that. And I think, one, you need equity zoning and then, two, you need to be near a power line that has adequate capacity. And then, three, it just has to be in the right context with the land owner.

*Josh Geyer:* So I want to give you one last question that's mostly for Jenny and then we're going to wrap up. So looking toward the future, is there any way that community solar projects can be brought to Native American reservations? So where should we start when approaching that idea?"

*Jenny Heeter:* Yeah. It's a great question. Community solar – yeah – could definitely be used on tribal lands. A lot of tribes have taken an interest in developing solar projects already. And a lot of – there's a lot of interest in understanding the community solar model in that context. So this could be something where essentially a solar project is installed on tribal land and bill crediting is instituted for residential customers within that tribe. In terms of where to get started, I'd encourage you to join the National Community Solar Partnership to get some additional questions answered.

There is also a DOE technical assistance program for solar and other renewable energy on tribal lands they could connect you with. But fundamentally, yeah. Working with the tribe itself and understanding what the needs of that community are and what their interest is in terms of solar project or solar paid with efficiency and getting into some of the questions around what we've heard from Chris and Darien, actually – who might own the project, who might develop the project, "What's the regulatory environment" – those are all kind of key first questions.

*Josh Geyer:* Great. Well, I just want to thank all of you for contributing to this discussion. It's been really informative and I think probably people are going to continue to be engaged with this for the foreseeable future, hopefully. So as a reminder, please join our community solar workshop on Thursday at 2:00 PM Eastern called *Balancing the Benefits of Community Solar in Multifamily Housing*. This workshop will focus on how to balance the financial viability of solar projects with meaningful, direct and/or indirect benefits to the Presidents. Next Slide.

We'd like to highlight some of the resources briefly mentioned today by our panelists as well as some of the additional resources available on the Better Building solutions Center. When the Slides are made available, please Click on each resource to learn more. The Better Building solution

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Center has over 3,000 solutions to help you find proven and cost-effective strategies to help you reach your energy, water and waste reduction goals.

Please, let's check out this video to learn more. *[Video begins] [No conversation, 1:15:45 to 1:16:30] [Video ends]* I feel more optimistic already. With that, I'd like to thank – oh. So we'd like to invite you to attend our Better Buildings Summer Webinar series starting in June. Partners will discuss some of the most pressing topics you're facing and share best practices in innovative, new approaches to sustainability and energy performance. To register, go to the Better Buildings solutions Center and Click on Events in Webinars.

With that, I'd like to again thank our panelists – Jenny, Darien and Chris – very much for taking the time to be with us today. We have launched a short feedback survey on Slido and ask that you please take a couple minutes to give us feedback on this session. Your answers will be totally invisible to other attendees. We rely on your feedback to design Webinars' future Summits and more. The poll will be open until tomorrow morning. Finally, if you'd like to learn more about the resources discussed today, please check out the Better Building Solutions Center or feel free to contact me at the E-mail shown. Thanks everybody. Have a good afternoon.

*Jenny Heeter:* Thank you.

*Darien Crimmin:* Thanks.

*[End of Audio]*