Joe Indvik: Hello, everyone, and welcome to the 2021 Better Buildings, Better Plants Summit. This is Joe Indvik here, and I am thrilled to be your host for a session on emerging trends and hot topics in clean energy finance. I often like to say that, you know, financing is a necessary but not sufficient condition for solving the climate crisis. And I think for many organizations like yours that are set ambitious energy reduction targets, there's a lot of factors that need to align to realize those targets. But at the end of the day, if there's no capital available then the wrenches simply don't turn. But that being said, I would argue that clean energy finance can be a lot more than just capital availability.

As we're going to hear from our panelists today, Smart financing can transform the way that organizations get energy projects done in their facilities can help you deploy sustainability initiatives that scale and sped. So today, we're going to be looking at five key trends that kind of show how the market is rising to meet that challenge. Before we dive in, there's a couple of housekeeping points that I want to cover. First is, today's session is going to be recorded, and it'll be Posted to the Better Building Solutions Center for your future reference. We'll also let you know when it becomes available.

And next, everyone is going to be on Listen-only Mode, meaning your microphones are going to be Muted. So if you experience any audio or visual issues during the presentation, please send a Message in your Chat Window located at the Bottom of your Zoom Penal. And if you go to the next Slide, I'm Joe Indvik. Great to be with you. I'm going to be the moderator today. I lead the Clean Energy Finance and Carbon Solutions practice at RE Tech Advisors, which is a consulting firm her in the DC area. And also, along with my colleague, Kyle Saltzman who's running the Slides today, we're the co-leads for the Better Building Financing sector on behalf of DOE.

So great to be with you guys today. If you go to the next Slide, the agenda's pretty simple. I'm going to give some brief introductory remarks and background upfront. Then we'll move and spend most of our time in speaker remarks and then finally have a Q&A at the end. So if you go to the next Slide, we're going to be using an interactive platform called Slido for Q&A today, which you'll be familiar with if you've been to other sessions.

So please, right now, go to www.slido.com using your mobile device or by Opening a new Window in your Browser. And today's event code is going to be #DOE or, Pound-DOE if you're of older persuasion. And if you want to ask our panelists any questions please submit them in Slido at any time during the. Presentation and we'll be answering your questions near the end of the session. So we're going to go ahead and Open up Slido now, so

please do that on your device.

And we're going to launch a poll to get a sense for who's in the audience. So we can go ahead and launch that Poll. And please indicate what sector you're from in the Poll here. All right. Government out to an early lead. Higher education catching up. Give it a couple more seconds here. Looks like we have a good mix. Lot of folks from state and local governments, Wide range of contractors and service providers, it looks like. Good showing from high education. Lot of others. I'm curious to hear more about that, who those folks are from in the Q&A.

And then a good mix of nonprofits, industrial, financial services and – if we can Scroll down a little bit – see who else is represented here. That's all good. So yeah. Pretty good mix of folks. I thnk we can go back to the presentation. I think we'll have a little bit of something in here for everybody; for all sectors. So looking forward to diving in with you all. And just a reminder. Again, if you have any problems during the presentation technical or otherwise, just make a Note in the Chat in the Bottom of your Zoom Window.

If you go the next Slide, I'm excited to say we've got a rock star panel of speakers today with a wide range of backgrounds in clean energy finance. I'm going to introduced them more fully before each of their presentations. But we've got Brenna Walraven from CSS, Devesh Nirmul from Counterpoint, Donne Baird from BlocPower and Mark Orlowski from the Sustainability Endowments Institute. So welcome to all of them. And thank you for being with us today. Before we get started, I want t do a quick overview to kind of set the stage.

And I like to use this Slide to summarize the state of the clean energy finance market place and the financing options that are available. So on the Lefthand side, you've got traditional financing solutions like loans and leases that have been around for a long time and are of course also being used to facilitate energy projects. And then on the Righthand side, you've got more specialized financing solutions. So these are tools specifically designed to help you do energy efficiency in renewable energy projects in your facilities.

So that includes things like on-bill financing where the customer repays on their utility bill, property assessed clean energy; or PACE financing, where the customer repays on their property tax bill, various flavors of energy services contracts in which some sort of service is embedded within the financing arrangement; and the last but not least Up Top, we have various types of internal funding arrangements such as Green Revolving Funds as well as green bonds, which are a unique type of bond where the proceeds are used for sustainable purposes.

So our speakers are going to cover many of these different mechanisms today, and I think this is a helpful way to kind of see how they fit into the broader landscape of options. If you go to the next Slide. And, speaking of the landscape of options, I would highly suggest you check out the Better Buildings financing navigator. So this is a tool that we developed in consultations with other Better Buildings partners to help you understand and actually find its cure financing options for energy efficiency and renewable energy.

So this is a great way to explore all of the options available, find case studies and fact sheets and I think most importantly connect with the financial allies. So If you're not familiar, the financial allies are a group of about 50 financing institutions that have signed onto Better Buildings and are available to support projects in your facilities. So you could connect with them directly through the navigator as well. So you can check it out at the Link Below or just google Better Buildings Financing navigator, which is a little easier to be honest, and you can get to it that way as well.

If you go to the next Slide, I do want to also highlight the finance and resilience initiative. So this is a resource, a tool kit, specifically that we developed with Better Buildings partners that explores some of the financial implications of resilience and other – and climate change risks on buildings. So it outlines a sort of five-step road map to measure the financial risks of resilience-related impacts to your buildings and then leverage third-party finance to build a modern resilience strategy.

So highly recommend you check that out as well if you're in the process of developing a resilience plan. And if we go the next Slide, without further ado here's the five trends that our speakers are going to cover today. So there's a lot happening in this market as you can see. But these are the trends that we think represent some of the most important developments in clean energy finance over the past few years. So we're going to talk about how energy performance contracting – where it has been more common in MUSH – Municipal, University, School and Hospital markets in the past...is now increasingly breaking into the commercial sector. So Brenna is going to talk about that.

We'll talk about how PACE financing is rising to the dual challenge of COVID19 and increasingly aggressive carbon and ESG targets in the built environment. And Devesh is going to talk about that. We'll cover how efficiency as a service is providing full-service, turnkey solutions to an increasingly wide range of energy retrofits, including HVAC projects. So Donnel is going to talk about that.

We'll talk about how green bonds are becoming more commonplace and

also more accessible at smaller issuance sizes. So Donnel is also going to cover that one. And then finally, we'll explore how internal investment programs like Green Revolving Funds are unlocking measurable savings across building portfolios, enabling retrofits to happen at speed and scale. Which Mark is going to cover. So let's get right into the speaker presentations.

I'm going to hand it over to Brenna, if you go to the next Slide. Just for a bit of background, Brenna is an internationally recognized leader in commercial real estate and in the sustainability realm and also a dear friend and colleague of mine. She founded Corporate Sustainability Strategies in 2014, which is a firm dedicated to providing best practice solutions for organizations and helping them develop and implement business case-focused environmental, social and governance – or ESG – strategies. So, Brenna, over to you.

Brenna Walraven: Awesome. Thank you. Let's jump into it. And really, I'm going to start giving a little bit of kind of level-setting with respect to real estate based on the experience of owners. If you can go to the next Slide. Which is really this concept of risk. I say newish 'cause COVID has reset what we really think about when we say risk. But long story short here, real estate professionals are really used to dealing with risk realm leasing and maintaining and managing real estate but are really not as sophisticated around energy retrofit parts; retrofit implementation.

Obviously, the most sophisticated real estate have well-capitalized real estate companies do it well 'cause they have internal expertise, capital. But those will truly represent a small segment of the entire market. You know, less than 15 to 20 percent. And as for most owners and real estate operators, the tools we're going to talk about today actually create more opportunities to get more efficient. Next Slide. The challenges for real estate owners and operators is often not only the lack of capital but this how to execute as I just touched on.

I think that we're increasingly seeing is the risk of doing nothing is real and is going to position buildings to be less competitive as the existing building stock ages. Which creates uncertainty and additional problems. So it's not just efficiency for efficiency's sake but for competitiveness. Next Slide. And so, how and why do owners and real estate operators consider third-party financing? You know, traditionally they looked at their normal lending sources like banks, mortgage lenders, insurance companies. But these lenders aren't really familiar with efficiency.

And really, unless it's part of original refinancing or financing of a project, harder to use as a tool. And that's really, to reinforce what Joe talked about, the DOE's efficiency navigator really helps give some focus and

qualifying process. Because we find often in real estate folks tend to ask questions like, "Well, what's the interest rate," or, "What's the turn?" And that's often not the most important question to ask. Next Slide. So often, the capital side of this challenge is, the concept here is capital's finite. Right?

If there was infinite capital, we would do every efficiency project that had a rate of return that was higher than the underlying cap rate of the asset, because it would be accretive to value. So unfortunately, there are limits. And that's when these third-party financing options come into play. So what I've seen often, though, is even if there is some capital available, if it's not underwritten I the original investment pro forma, they really don't want to go back and say, "Hey. Let's do this."

Because the question's going to be, "Did you miss something? You know, did you forget it? Why didn't you underwrite it?" And so, the other concern on capital is they're higher-priority capital demands. So if you want to do leasing, for example, you need capital-per-tenant improvements. You need capital for leasing commissions. And those are always going to take priority over efficiency.

And so, this becomes another part of the capital challenge. Next Slide. But what I find is getting to the right question when you have those challenges – and it's not, "What is the interest rate or term?" It's, "Does the owner or operator need a non-recourse or no-personal-guarantee requirement for the financing? Does the debt need to be transferrable or assignable on sale?" Which means for even a property that's not a long-term hold – let's say value-add strategy where you're making improvements and going to sell it in a relatively short window – these financing models that we're going to be talking about today can make sense because you're able to transfer them in certain situations.

So there's a whole host of questions here. This is something – if you go to the next Slide – that the efficiency navigator can really help you walk through. And based on how you answer those questions will help you determine, "Ah, this should be a C-PACE project," or, "Maybe this should be efficiency of service." Or, "Maybe we need to look at a Green Revolving Fund." So it's a great tool to align with that. And then, again, it helps you focus on the right factors for what's most important for the decision-makers. Next Slide.

So let's talk about specifically energy performance contracting and really, "What is it," is the first question. And it's really using a contract mechanism to pay for a retrofit project over time; paying for it out of the savings generated from that project. So the savings essentially pay for the project over time. There are benefits where you get to benefit from the

technical expertise of the energy service company, which is often really important. So you don't use an energy performance contract if you're going to do a lighting retrofit. Right?

Pretty simple, straightforward. But if you need a more robust, complex project – which I think we're seeing more and more of the opportunity today – that's where an ESCO can really bring creativity and expertise. There's no upfront cost typically in these models. And you can not only incorporate greening but like green roots, but certifications and also resilience. So a lot of opportunities. Next Slide. So this is a visual, 'cause I'm a visual person and I find this kind of helpful to really explain what the performance contract model really does...is, the big Blue Bar at the far-Left is your energy costs at day one, before you've done the retrofit.

And when you contemplate the retrofit, the opportunity here is, "Hey. My energy costs are going to get driven down significantly." And then, part of that savings I'm going to use to pay back and pay forward that retrofit cost over time." Which is those, you know, years 1 through 7 or 1 through 10. Something like that. And that's paid to the energy services company. But it's structured such that there's technically a little savings left over. So the net effect is, even without something budgeted, no capital upfront, you get savings in year 1.

And then once the contract is paid off, you get savings over the long-term. Next Slide. So a risk mitigator that I personally worked on closely is the BOMA Energy Performance Contract Model Tool Kit, or BEPC, pronounced like Pepsi but with a B as in boy. So what is it? It's an industry-vetted proven process to procure and implement proven risk energy retrofit projects. Actually, the picture there you see of the Empire State Building was actually...you probably have seen and heard about this over the last ten years or so.

But that retrofit project – we use the contract and process developed to do that project to develop BEPC. So we looked at industry best practices for our keys, our cues, how to develop scopes of work, et cetera. And really, the big thing that I want to share is it's a complete tool kit, not just a contract. So it provides a sample contract as well as an exhibit form contract. So you can use your existing contract document and then, as an exhibit, use the BEPC Template which has things for measurement and verification and tracking efficiency.

But it makes you an expert without having to have that internal expertise. The best part about it is, it is free at BOMA.org/bepc. So look for that. And if we go to the next Slide, the home stretch here for me is really what the guiding principles for BEPC are. It's to take owner's investment criteria and core goals to determine project scope. So instead of saying,

"Hey. I need a chiller, and I'm going to go have ESCO give me a proposal," you may say, "Hey. I know I need some equipment replacements, but I'd like you to use your expertise, creativity and innovation to come up with a holistic project."

And instead of just saying, "I want these three things to be replaced," I'd like you to meet a return on investment hurdle rate of 15 percent or better." Or 10 percent or better, which is often going to be higher than the underlying rate of capitalization that the property is valued at; which means it's accretive. And that allows your energy performance contract provider to really be creative and innovative. The good news is, BEPC provides third-party standards and transparency into the performance.

But it does allow you flexibility. Because if you don't want to performance guarantee for the entire ten-year term of an agreement or seven-year, you could have it for one year. So you make sure the equipment is installed and working and operating and getting the savings. And then, you don't need to pay for that M&V. Although I always recommend the M&V to make sure that those savings persist over time, BEPC is designed to give you flexibility.

And then, the last point here is that BEPC is financing agnostic, which means it can work with any of the processes and best practice trends that we're going to talk about today. So you can use your owner's capitals. You can work with CPACE. It's just designed to be a contracting Template and process that helps you get through the process and gives you that expertise to de-risk the opportunity. With that, I'll pause and turn it back to my colleague, Joe.

Joe Indvik: Wonderful. Thank you, Brenna. That was great. I see a couple of questions rolling in already. But remember. You can ask questions on Slido at any point during the presentation. If we go to the next Slide, I'm going to hand it over to Devesh here. So Devesh is Vice President of the Counterpoint SRE, which is a provider of turnkey solutions for property assessing energy or PACE for municipalities, program managers and administrators. He's going to be talking about some of the recent trends in the commercial PACE market. So, Devesh, take it away.

Devesh Nirmul: Great. Thank you. Great to be here and excited to kind of join this panel and provide some company and protocol-based review of some evolving and trending opportunities for building ownerships and product developers to basically leverage, "What is a financial outcome of PACE," but also, "What could be the market transforming energy resiliency outcomes that come out of that?" Next Slide, please. So just to kind of review some of the buttons that are being used here with this discussion overall but also what hits PACE in particular.

Certainly in the capital markets we've seen some major increase in appetite for ESG. And, downstream, those impacts are driving a lot of investment in this direction. I can take a quote from, for example, Blackstone with their new investments having to be 15-percent reduction in carbon emissions within the first three years for that asset. COVID also has highlighted the opportunity to upgrade a building and make it post-pandemic-friendly.

And the trick is, "How do you do that in a credit-constrained, capex-constrained environment?" I think distrust assets have always been an opportunity for a financing tool that can come in and allow a property to be stabilized so the owner can actually, you know, make the investments without having to take on the burden of the initial payment through PACE. You can have a payment that comes on a bit later in the cycle – of the life cycle. And then, we see technology advancements.

And in public information, a lot of the grading that's going on of the public sector of buildings and their energy performance and sort of the push for audits and then of course upgrades...all that improvement from the audit, from the soft cost, to the actual hard cost can be also funded through commercial PACE. Next Slide, please. So then, the other key piece of Net Zero...and let me make this personal or myself. I mean, I know with COVID we all saw the amazing response of the national environment to recover when the lockdown went through.

The challenge is, "How do we maintain a productive society and still have those kinds of results?" And the answer is, you got to have market transformation. And we use that term over and over. But in terms of energy, that means something transformational that can really get those emissions down. And Net Zero is a great way to kind of have a good soundbite that has true meaning behind it in terms of the goal. It's very empirical. So that's that.

And then, you know, with the ESG push naturally we're hearing more and more it's the robust metric of, "How much kilowatt is being installed of solar," that is driving a lot of the ESG targets. And so, you know, certainly that's pushing the Net Zero case. Some other key observations in this market place. Certainly opex. You know, "How do you get – if you want to reduce op-ex, how do you do that in a way that you get positive or neutral net cashflows from doing that?"

And because of the long-term fixed rate financing that PACE offers, that's an opportunity. Business continuity. "How do you maintain operations when the power goes out," et cetera. "How do you view the idea of Net Zero as a combined cost-reduce mechanism – reduction measure

mechanism as well as revenue-generating potentially?" And then, CSR mandates. We have an industrial client that said, "Let's try out solar and see if that has an impact."

And because it did have an impact, they're more confident to say, "Now we can move forward the Net Zero as a publicly transparent objective and replicate this on other facilities." Next Slide, please. So just stepping back for a moment. If you're not fully aware of how PACE works there's a great – as Joe had mentioned – the financial navigator. There's a Link here particularly to CPACE handout/review on that. Here on the Bottom, it's kind of small. But if you go to the navigator, you'll be able to get to that.

And some key relevant points here. The repayment is through a non-Ad valorem assessment on the tax bill which kind of creates the opt balance sheet to the nature of this financing. No upfront capex required. If and when it is available, they can divert that owner to mission-critical investments. It's long-term fixed rate, as I said. It's non-recourse. Anyhow. But if you want to look now to how we would leverage this, the key decision point, if there's value engineering on the table this is a great way to mitigate that. And I like to call engineering de-value engineering rather than value engineering.

So if you have an opportunity not to de-value something, great. You know, go for it. Some of the other key pieces here with this would be certainly – I mentioned the capex constraint. And even if you were going to sell the property in a couple years, you can impact the NOI dramatically with PACE and extend out payments on the long run, it can be assumed, with the new owner. And spanning the scope of products, they actually include integrated measures that support each other and get you a better overall performance. Next Slide.

At the macro level on PACE trends, we're seeing an expansion across the country. We're also seeing a continued focus on new construction. Then within the sectors, multi-family and the affordable sub-category of that and progress with HUD is also noteworthy. And then for today's presentation, Retroactive PACE is one of the key subjects. And it has to do with the COVID period, with the constrained credit market. And the opportunity to continue our projects and not to de-value engineer, as I mentioned.

And then the Net Zero sort of aspirational piece. Next Slide. So Retroactive. So the idea here is that you certainly can look back at a project and actually pull capital out or, in the case of an example we have, make sure a project continues as intended. I know this is kind of small here in terms of the text. But the idea of the most states you can actually go back two to three years and PACE anything that was qualified and pull

cash out. And this is a good launching point for doing other work as well and doing more robust projects. Next Slide.

So here's an example of a mid-construction finance where this is exactly what happened in 2020. We had a project where there were cost overruns. The owner came to us wanting to be able to continue with their high-performance features. And instead of de-value engineering out that, they were able to do that with the PACE piece. In this case, $13.7 million over 30 years. That's the long-term nature of this. A lot of...let's see. Yeah. Obviously quite a few – a variety of improvements her coming together. Next Slide.

So overall, we think you've got a couple things going on. You've got the retro piece, as I mentioned. You've got – in terms of trend – de-bundling of ECM. So having the opportunity to bundle and not just do piecemeal. It's been there, and I think it's only...we've only seen that enhanced. And then Net Zero. And I think both the retro and bundling are good launching pads to get to Net Zero, the discussion on that. Next Slide. Here's an example of the bundle retrofit. This is a nursing home ALF.

Initially, the big point here...initial scope that the project provided was for about $1 million of improvements. They went to $3.7 million with PACE, which is a 3-times multiplier. And this was able to get to your standard burger, shakes and fries as we like to call it. Your HVAC, lighting an controls and some generator work. So let's go to next Slide, and I'm kind of running out of time. So I'm going to move ahead. I can come back. This is the actual Net Zero scenario. And I'd like to go ahead and play a video because I think the previous bundling scenario could've led to a Net Zero opportunity as well.

[Video Begins]

Male: CPACE and what, you know, you guys are doing is tremendously the thing that's getting us over the hump.

Male: What is the most common problem you see in the energy efficiency and renewable space?

Male: Fundamental problem is this; decision-makers are stuck. So the solution to that is to have a way to do the report, the technologically advanced stuff, and have a financial mechanism that – right from the get-go – shows the cash analysis that lets people see, to a CEO, a CFO-

[End of Video]

Devesh Nirmul: So thank you for that. And I do want to echo what Brenna was saying. So certainly, you know, in this situation a product developer approached the owner, and they were like, "Well, look. We don't have the capex to spend this couple-million to get this thing to be super energy-efficient." But when they realized that the value of the building would increase roughly about $3 million – roughly from about $7.6 to $12 million – they're like, "Great. This is – let's" – and without any capex, they're like, "Let's go ahead and do it."

And so, there's different paths to getting to the Net Zero goal based on different objectives that are both financial and resiliency-related and the market pressures that come from external, as I mentioned. So they were able to keep all of their utility incentives here, combined with tax credits and the tenants are happy and satisfied. They were getting a lower energy bill as a result. Next Slide, please.

So when you think of Net Zero drivers, initially this is going to be a spaghetti kind of diagram but linking all of these stakeholders to the different catalysts, et cetera. It really is spaghetti, 'cause there's all kinds of drivers. So an owner may have climate and environmental leadership issues. *[Alarm ringing]* Sorry. That was my alarm. Anyways. So I just wanted people to think openly about when we have conversations with owners – when we ask about Net Zero – they're not so much "why" – that they're, "How do we get there," is really what we end up talking about.

Joe Indvik: Amazing. Thanks, Devesh. Really appreciate it. So keep the questions coming. There's plenty in there already, but be sure to up-vote the questions that you want or add your new questions as well. I'm going to pass it over to Donnel next. So Donnel is the founder and CEO of BlocPower, a Smart buildings platform that brings innovative financing solutions such as efficiency as a service to underserved market segments.

You might recognize him from the round table after the Plenary session yesterday. So welcome back, Donnel. And BlocPower also has a unique model that leverages green bonds to raise capital for the efficiency projects that they install. So he's going to be double duty today discussing both efficiency as a service and green bonds during his remarks. So over to you, Donnel.

Donnel Baird: 17 minutes. We'll get it done. Glad to be here with all of you. We are here to talk about financing solutions for building retrofits. And in particular, building decarbonization and electrification. So I'm Donnel. I started BlocPower seven years ago; was fortunate to partner with the Department of Energy with an early contract that we won to help build a lot of the stuff that we're going to talk about today. Slide. So we're going to outline the challenge as we see it, which other have talked about extensively.

We're going to talk about the specifics of our solution and the solution that we think can create a lot of impact across the market. The specifics of the financing model and what we see as the road ahead. Slide. Slide. So the challenge. We all know that billions across the country are incredibly energy inefficient. They're also super unhealthy. So those are two great reasons to do upgrades. For small and medium enterprise buildings – we know there's about 5 million of them – their energy systems are old, outdated, hyper-inefficient. They consume 40 to 75-percent more energy than they should.

And as many as 30 percent of people experience sick building syndrome and the building is make the sick. It's a lot of people. Slide. So the other part of the problem in our view is when we provide services to building owners or try to. An individual property owner has to navigate anywhere between 6 and 12 different service providers in order to complete a deep decarbonization project of their building. So they have to talk to engineers of different kinds; whether it's mechanical or electrical, sometimes chemical.

They have to talk to a construction contractor to get to a scope of work. You may have to talk to multiple sub-construction contractors who specialize in mechanical or electrical or plumbing. You have to purchase the equipment. It needs to be the right size. Hopefully your engineers helped you with that. Then you have to access financing because many building owners around the country don't have hundreds of thousands of dollars or millions of dollars laying around. So that's why we're having this conversation today. Then you got to work with your utility company to access the range of incentives and permits that are needed or available. Then you got to get another permit from the government.

So it's pretty complicated to ask all of the building owners across the country to navigate this highly fragmented and highly inefficient matrix in order to figure out what the right thing to do with their building is and then implement the solution. And so, Brenna talked about the turnkey services of ESCOs. But they don't serve everybody. They serve bigger buildings. So what do we do with the remaining millions of buildings across the country? Slide. So we know that the cost of not upgrading these buildings is massive. And so, you can see energy costs rise as high as 30 percent of a small and medium building's budget; particularly in low and moderate-income buildings.

In buildings that are in communities that are financially underserved, where they've had lack of access to capital. You can see energy bills taking up an enormous share of overall building budget. And so, I started BlocPower because our first project was a pastor who 30 percent of the

total revenue for the church was going to pay for oil to heat the building and provide hot water. And that just didn't make sense to me. So it's a pretty big problem. Slide? So our solution, Slide, is – next Slide – when we look at efficiency as a service, the first of the two concepts we're going to talk about today...so efficiency as a service.

By that, we mean we pay for performance off-balance-sheet financing solution that will allow building owners and customers to implement energy and water and renewable energy projects with no upfront capital expenditures. We as a provider, or your existing provider is going to pay for project development, construction, maintenance as well as engineering analysis. So we're going to roll up all of the 6 to 12 services that you need to talk to as a building owner and provide a one-stop, turnkey solution so that the building owner only has to talk to one person.

And that one point of contact is going to help them make the decision, going to provide engineering, going to provide financing, going to provide construction, going to provide project management. That one-stop solution is going to solve the whole energy efficiency and decarbonization problem for that building owner. Next Slide. And in our view, we got to acquire customers and new projects; we have to analyze each and every project on an individual basis, 'cause they're all custom. We have to finance the projects. We have to construct and install the projects.

And of course, we have to measure and verify and monitor the performance of the project. So we believe that machine learning and the collapse in the cost of mobile computing, Cloud computing and machine learning as a new emerging computing platform this allows us to take all of the data from all of the Smart devices that are now in our buildings and do lots of the engineering analysis using computer software and data. And so, we can save a lot of time, money and friction by utilizing software technology.

And then, of course, zero-money-down financing is really important in communities that have been financially underserved where they don't have access to capital. And so, we look to lease equipment zero-money-down to building owners, particularly in low-income communities. So we stretch out the payments. As Brenna was saying, we're going to achieve a certain amount of energy savings. We're going to stretch that out. You're going to take some of your energy savings and repay your lease and your loan over time.

And because we're stretching that payment out, we're advertising it over 12 to 15 years, that's what make this affordable. Kind of like a green mortgage. Next Slide. So here, we talk a little bit about the way we think about software. Which is, we all need to be doing predictive modeling,

building archetype clean energy equipment; environmental justice is the project in a community that needs environmental justice.

If so, we know there's probably going to be mold, lead, Asbestos that's going to be in the building. "That's going to increase the project costs. That's going to stretch out your repayment period and your timeline. You need to be aware of that." so you can build a recommendation for each and every building in each and every market that's based on software and big data. Slide. So how do we finance this stuff? Slide. The fundamentals foo u model – and we've spent four years developing a plan to launch a new structured financial product with Goldman Sachs, which we're happy to share with all of you today.

So we think it's got to be zero money down, because we're severing low-income buildings. We think you got to stretch things out to about a 15-year-term. So mortgage-like. Right? You want to do the underwriting not based on the FICO Score but based on the history of payments that that building owner has made on their energy bill. There's lots of people who have bad FICO Scores because they got high credit card debt. So their FICO Score is terrible, but they are still doing a great job of repaying their utility bill every month.

So we want our financial underwriting to not just look at their FICO Score. We want to also incorporate, "Are they paying their rent on time? Are they paying their cable bill on time, cellphone bill on time? Are they paying their energy costs on time?" 'Cause that's the business we're in; energy. We want the customer payments to be lower than the savings that are generated, and Brenna outlined that. So we got this graph in the lower-Righthand corner that you can look at quickly.

We include all the costs of maintenance and repairs for the upkeep of that equipment and its proper performance over 15 years. We guarantee its performance. It's guaranteed to function for the full term, or we will replace it. However, we do not guarantee the savings. We predict the savings. We project the savings. We do not guarantee the savings. The equipment is owned by the customer at the end of the term; of the 15-year lease. The equipment is transferred into the ownership – so it's almost like a lease-to-own model.

If you think about going out and buying a new Tesla, you want to lease it, you want to lease-to-own. That's what we're doing with our heat pump and energy efficiency and building decarbonization equipment for low-income communities. You lease it till you own it. So you buy it out at the end of the term for $1, it's yours. And so, we call this an energy services agreement legally. But effectively, it's an operating lease. Slide.

So those are the fundamentals of how we look at it. With Goldman, we have a debt service that covers ratio of 1.2X; debt equity, 80 percent or less. No major bankruptcies, judgments or liens. And we're looking to serve multi-family buildings, houses of worship, community buildings, schools, churches, synagogues, mosques, restaurants, small businesses. Some single family homes. Our other major partner is an incredible firm called Inclusive Prosperity Capital. They're amazing. I'd strongly recommend you reaching out to us and to them if you're interested in putting together a financing program. Amazing folks. Next Slide.

This goes through a little bit of the unit economics. But I think Brenna's Slide was much better than mine, so we'll just keep moving. This is just a quantitative version of the great bar graph she presented about capturing savings and spreading them out and using a portion of it to repay the cost of the lease. Next Slide. So the point is, now that we've slashed all of the friction and hyper-inefficiency of building owners of America accessing green equipment and energy efficiency and electrification upgrades, we've been able in New York City at BlocPower to reduce some of the soft costs of green buildings projects by up to 90 percent.

And we think that's exciting because it means that these kinds of models, particularly in low-income communities, now mean that the millions of small and medium-enterprise buildings that traditionally aren't served by ESCO's can now get that kind of service and have it financed by Wall Street. And so, we're excited because these millions of community buildings and medium-sized buildings can now access financing and the software and construction and the engineering that they need in order to reduce their emissions by 70 or 80 percent. Next Slide.

The road ahead. Slide. For us, this all culminates as we're going to launch the first-ever BlocPower Climate Justice Bond. We're going to be working with big corporations. I think I can name one of them potentially; Microsoft. People like that. We're going to raise what is in effect an environmental justice financing green bond. We hope all of you can join us. Or if you're interested, let us know. We'd be happy to set you up.

Or if you'd like to raise your own local green bond, the way we think about it is green bonds are one of the most exciting financial products on the market today. They are like conventional bonds except that the issuer promises to use 100 percent of the capital that's raised for green investments, for green projects or eligible green assets. And so, 100 percent of the capital from this climate justice impact green bond is going to be invested in building electrification and heat pump projects in low-income communities across the country.

And that's going to help us with environmental justice, racial justice. It's

going to provide flexible capital for green projects. We're going to be investing in low-income communities across the country. And we're going to be generate lesser carbon offsets, which are going to be cool because they're generated not in some forest – often the Amazon Rain Forest or whatever – but right here in America in Detroit Or better yet, in Flint, Michigan because we're going in and we're electrifying buildings, and we're also removing the lead out of the building. So we're going to be creating jobs reducing greenhouse gas emissions and creating carbon offsets to quantify that.

And that's going to be an environmental justice carbon offset that comes out of the environmental justice green bond. And so, we think that corporate partners like Goldman or Salesforce or Microsoft, some of our existing partners, are interested in these kinds of things. And for those of you who have great corporate partners in your local communities who are concerned about climate, who are concerned about racial justice, a green bond model and environmental justice impact bond might be a great thing for you to consider. Next Slide.

So we're going to raise like, you know, $50 to $100 million. It's going to produce the carbon offsets and the environmental justice credits that we talked about. And it's going to offer people a 4.75-percent rate of return on the capital that they invest. And so, we'll be using the model that we've described here to help allocate financing to low-income communities across the country. And so, we want folks to join us in figuring out how to bring clean energy to low-income communities. Next Slide.

So what's left as we round the bend here? We got to electrify the 5 million buildings soon. I think it's great that people are talking about commitments 15 years from now, 20 years from now. We need cities to step up and say that they're going to go 100-percent green within the next five years. We need four, five, six American cities. We need some mayors with some political courage to stand up and make this commitment publicly. Maybe one of you is out there today as part of the audience. We know that we have to expand accessibility through cost reduction to serve low-income customers. We need a bunch of data for that.

So we need to aggregate from local municipalities. We need financial partners to provide 15-year loans in order to pull this off. Folks like to do five-year loans. We need 15-year loans. And that's what it's going to take to electrify these budlings across the country and help President Biden reach these goals. Next Slide. So with that, I'll wrap up and just say a lot of the financing solutions and needs are encapsulated in the climate accelerator bank; the innovation accelerator. That's part of the President's infrastructure plan. I hope that we all take a look at that, because that kind of policy is critical to expanding capital to low-income communities.

Joe Indvik: All right. Thanks, Donnel. Great. I think we're actually going to start with Mark's slides here, if we could go to those. So if any folks have questions for Donnel, feel free to enter them in Slido. Lots of great questions coming in; keep up-voting. I'm going to kick it over to Mark Orlowski next. So Mark's the Executive Director and Founder of the Sustainability Endowments Institute, which is devoted to helping organizations, particularly colleges, implement seeping efficiency improvements. She's going to be presenting SCI's GRITS tool, which is designed to assist with tracking Green Revolving Funds and other internal investment programs. So, Mark, over to you.

Mark Owlowski: Great. Thank you, Joe, and good to be with all of you this afternoon. Really appreciate it and excited to be sharing a little more about our work. SCI is celebrating its 16th Anniversary this year, which we're very enthusiastic about and continue to work a lot with higher education institutions and with a variety of others across local, county and state governments, cultural institutions, healthcare institutions, K-12, sort of corporate sector and elsewhere. I'll be talking a bit about Green Revolving Funds today and also about our GRITS tool in a minute.

Some of you might be already familiar with the Revolving fund model either as it relates to energy or as it relates to other topics. For those of you who are not familiar, next Slide – next Slide – the Revolving Fund model is basically pretty straightforward. It's an internal funding or financing mechanism where essentially you're capturing either all or a portion of the savings in reduced utility costs that you achieve from implementing a project and returning it back to the same fund. Thereby, using the same capital over and over again. Recycling or revolving the same capital.

This can be for a very small project as little as $1,000 or less or a multi-multi-million-dollar project. Revolving funds come in many shapes and sizes, and they can implement it with different focus areas around efficiency, around renewables, around water, waste transportation and fleet. They have been implemented by hundreds of institutions over the years. I'll be talking about that more in a minute. Next Slide. Back. There we go. So why would you want to do a revolving fund? Right?

We've heard just a number of great sort of financing models and mechanisms out there. Revolving funds are a little bit different than sort of going outside...they're typically sort of turning inward in terms of setting up your own fund. You potentially can sort of bring in outside capital through a variety of third-parties. But Revolving funds in essence are typically an internal tool used by universities, by hospitals and healthcare systems, by governments and corporations and others.

And essentially, they're helping sort of pull out this type of work from the typical sort of capital expenditure budget where you're engaging and having to sort of fight a budget battle year-after-year to get reasonable budget allocation to keep doing more of this work and sort of setting aside the capital to a separate fund within your existing organization or company or institution. It's falling out of that budget process. It's institutionalizing the mechanism for reinvesting. It's also sort of, obviously in doing it, forcing a certain level of performance-tracking because you need to be able to track performance and return savings back to the fund.

You can start really small in terms of scalability. There's many revolving funds. They are $25,000 or less in size, and there's many, many millions of dollars or tens of millions of dollars. Next Slide. So just to give you a sense of the scale of these revolving funds, you know, we have a firm called The Billion Dollar Green Challenge, and it has a wide range of institutions. Everything from a very small community in British Columbia called District of Summerland, which has a $30,000 volume fund they've been running for the last four years or so.

There's a Cleveland Clinic, State of Vermont and Harvard...it was one of the largest revolving funds out there. It was actually in Texas. It's been around for about 30 years now. it's called the Texas Lonestar Program. It's done over $500 million in loans; $546 millions in loans and generated more than $700 million in savings over the years. So Revolving Funds definitely come in all shapes and sizes, different institutions. Next Slide. So in terms of metrics, these are a couple of screenshots from public Dashboards from different universities that are running revolving funds that use our GRITS platform.

We talked more about what the GRITS platform is and sort of how it works and sort of some key features as part of a quick tour in the next few minute here. But essentially, you can see where with these Dashboards a little bit about what kind of...there's a number of projects, each of these universities have done. How much they've invested. Their ROI numbers, their payback numbers, their carbon-saving figures. Other sort of key metrics. Next Slide.

Now, we don't have time to go into all of these details. But I did want to briefly highlight a little bit about the process that one goes through in setting up a revolving fund. It is fairly straight. Takes a little bit of work. It's not something you can do overnight. But it is sort of a well-developed sort of pathway or roadmap. At the Bottom – and we'll cover this in a minute with resources. But there's a couple of implementation guides. Joe is actually the lead author of this one, Green Revolving Funds: Introductory Guide to Implementation and Management.

And so, this guide sort of covers these ten steps to establishing a revolving fund. I think it's important to note that one of the key aspects around the revolving fund is, its' very flexible in terms of size as well as the types of projects you're funding but also the capital sources. So there's probably a dozen different easy capital sources that have been used by different institutions to seed revolving funds. Everything from endowment if an institution has one as an investment to cash reserves. University of Vermont runs a $13-million fund, borrowing from their own cash reserves, to philanthropic support from grants or individual donations, to third-party bond issuances or other third-party financing to a variety of other mechanisms.

So that's an important point. But we don't have time today to go into all of these steps. But that's sort of the quick roadmap, and I encourage you to check out both that in quotation guide and – next Slide – you can see more on sort of other resources. We have a whole set of case studies, trends reports, white papers, et cetera. There's also a great tool kit on the Better Buildings challenge, slash, Better Buildings Initiative Website which I would encourage you to include.

And I think we're going to be putting in a couple of Links here. Some other teams added a couple of Links here in the Chat if anyone wants to go visit a couple of these other Pages. There's two implementation guides that you definitely should refer to to initiate in sort of diving into revolving funds and considering setting one up in your own institution. One is this Green Revolving Funds: A Guide to Implementation and Management, which is the Bottom one, in the Bottom-Right corner of the Screen.

And then in the Upper-Right corner of the Screen is the second guide more recently published just in 2019 that was funded through some federal funding in partnership with Cadmus Group and Rocky Mountain Institute as the three of us teamed up and wrote this guide. Technically for airports. But about 80 or 90 percent of it's very relevant to any really sector from universities to governments to corporate to the rest of the sort of K-12 school world, healthcare, et cetera. Those institutions.

One other big piece of all of this, though, is the data side as you can imagine. You know, making the business case for tracking the impacts, figuring out the financial returns, managing these kinds of funds. And so, back in 2011, 2012 we received support from the Kresky Foundation and a bunch of other foundations and began work on building this pretty ambitious platform called GRITS. Which at the time stood for Green Revolving Investment Tracking System. But we just call it GRITS now.

And the idea behind GRITS is to make it really easy to manage and track all the kind of data related to tracking projects but also the revolving funds

themselves. And the tool has grown a lot over the years in its functionality, in terms of its capabilities. And now, there's over 800 institutions that use it. The majority of which find, "No, actually not have revolving funds." They're just using it to track projects regardless of capital source."

So I thought the last units here – before wrapping up – that I would take you through a little bit of sort of what we're working on and what we've been...developed with the GRITS platform. So if we can slip over to the Live Screenshare, that would be great. So this is a high wire act. We're doing this Live, folks. So this is the GRITS platform that we've built, a sample account. And just to give you a quick sense of it, we're looking at it from a university, a company and a hospital, a local city government.

You see the Dashboard View of your revolving fund and what you currently have invested and what you have available. Quick View, Invest and Save. A bunch of metrics around ROI and carbon saving sand water savings and other resource savings as well as data on your own sort of Account balance and rebates and other incentives that have been sort of achieved through projects that you funded. The project section shows you all of your own projects in terms of median figures, in terms of totals.

If you just want to look at your plant projects, you can go in here and choose Proposed Projects Only and look at that. If you only want to look at lighting projects or HVAC projects, you can go in and only choose lighting projects, for example, or just look up LED light projects. Just like that. We'll Upload any of the tools and so on and so forth. The Project Details Page is where you find sort of all the details about a project.

And this is where you can track through payments to the revolving fund, rebates, expenditures, take you through this brief where you can track a wide range of project types and subtypes. About 120 in all. You can track all sorts of different resources from electricity to scheme to other building-related resources, transportation-related resources, et cetera, et cetera. There's also the section on measurement verification. "How are you doing that?"

Annual tracking data. There's the billing office share projects, both individually and a sharable library so you can Open up that and you can easily see more – the Share the Link Format where anyone can look at this. A lot of universities and others like Cornell are very active in using that. They have a whole set of other Websites which shows you a Live Dashboard view of the GRITS activity. They've invested over $46 million in projects at Cornell. They spent over 234,000 metrics tons of carbon.

They're sharing individual graphs here, and they're sharing also individual

projects; all sorts of projects from different projects around the institution. So that's that. The Library is where you find other people's projects. This is a shareable-only for sort of nonprofit and governmental entities on the for-profit side. It's over 3,000 projects in the Shared Library right now. And this is Live data where 15 percent annual ROI with a median project size is just under $15,000.

And so, you can go look up by facility types. You can go look up by project types, by geographic area, by all sorts of other metrics. So that's that. There's also the Reports Features, where you can do charting and graphic based on impacts and based on carbon savings impacts or financial or energy. You can see here you can Mouse over anything you want, redraw these kinds of charts on-the-fly very easily and then easily sort of Download them as Image Files in a couple of seconds. And you'll be looking at what you just created, for example.

So that's very simple. You also, in the new features of GRITS goals – and thanks to support from the NYSERDA and the other supporters, we had funding to build out a whole scenario of funding Features in GRITS. We don't have time to go into all the details right now. But essentially, you can build out whole models around missions reduction or energy efficiency. You can see business as usual. You can see abatement curves, sort of Gantt chart timelines.

You have impacts on that calculated for you and all sorts of other abilities, just sort of interact with and plan out the missions reductions and energy efficiency targets; whether they be short-term – in the next few years – or maybe long-term Net Zero by 2030 or 2040 targets. You can plan all those out and figure out the financials, the energy and the carbon pieces, and bill returns. So I think with that, I will wrap up. I know we want to leave plenty of time for questions and discussions here. So I'll turn it back over to Joe. I'm looking forward to the discussion and the questions.

Joe Indvik: Awesome. Thanks a ton, Mark. That was great. All right. So we're going to get into Q&A right away. So we have about 15 minutes here. So again. If you haven't already, please go to slido.com, enter the event code #doe and Select Five Key Trends in Energy Finance from the Dropdown Menu on the Top-Right. Go ahead and submit your questions or Like any of the existing questions. We've got way more than we're ever going to get to in 15 minutes already. So thanks for all the great questions.

We're going to go through a few for each individual panelist, and then we'll have some general questions for the whole group as well. So maybe starting with Brenna, a good question here about the energy performance contracting model. So they asked, "How would retrofit project returns be determined under an EPC or ESPC model? For example. If you were to

add, you know, air handlers where they don't exist, how would the return be quantified in contract terms?"

Brenna Walraven: Yeah. Great question. And amazing presentations today, so thanks everybody for putting this together. So the way to think about it – and I'm going to give you a tool as part of this – is that you really get a look at performance of your costs. So energy costs. There could be some maintenance costs. All the costs associated with operating the property that might go down because you're adding variable speed drives on these air handlers. And you want to look at that delta between cost before the air handler at the VFD and after.

And that savings plus – 'cause I just saw another questions on rebate. You can include rebates as part of this and require the service provider, the ESCO, to secure and include rebates as part of your project. And then, you get to a net cost. And that's essentially what's going to be in the contract, is, "Here's the project we're going to do. Here's the cost we expect to save." You could have a guarantee or not. That's up to you. You have flexibility using the BOMA Energy Efficiency Contract or the BOMA Energy Performance Contract model or BEPC.

And so, how you calculate the returns is savings divided by that cost...gives you a return on investment. But there's a tool that I'll just point you to, and then I'll turn it back – is on US EPA's Energy Star Website. You can look for the building upgrade value calculator. BUVC. And that will actually be an Excel-based form that you can plug in the numbers and it'll calculate it for you. Boom.

Joe Indvik: Great. Calculators. Thanks, Brenna. Questions for Devesh. So we had a couple of questions in here about commercial PACE eligibility and what types of organizations it can apply to. And you touched on this a little bit. But if you go a little bit deeper into particularly what sectors of organizations can make use of CPACE...and we had a specific question in here about whether a municipal government could make use as a borrower in CPACE financing.

Devesh Nirmul: Sure thing. Thank you for the question. And predominantly, it's privately-owned property. And that could be private business or nonprofit. I know that-

Joe Indvik: A little bit of echo here. If everybody just make sure you're on Mute please. Except Devesh, obviously. Thanks.

Devesh Nirmul: Okay. Yeah. I hope it wasn't me. So once again. Privately-owned property, nonprofit or private businesses are able to pay the non-Ad valorem assessment on taxable. There's some innovation on Ohio where

municipalities are being able to sort of use case – there's a particular law firm involved in the neighborhood of transactions. And so, they have a way of doing assessment. So that has sort of had...yep.

Joe Indvik: Got you. You still sound a little bit like you're on a sports arena announcement system to me, anyway. And I think that's just on my end, but I can still hear you though. So thanks.

Devesh Nirmul: Sorry about that.

Joe Indvik: No worries. Donnel, a question for you. So folks sort of at BlocPower – interesting concept. I think particularly on the efficiency as a service work. What's the sort of average deal sizes that you've been doing, and sort of how many deals have you done so far? Just some statistics there would be helpful.

Donnel Baird: Great. We've completed projects in about 1,150 small, commercial buildings. So mostly apartment buildings. A lot of churches, synagogues, mosques, some nonprofits; some schools. We always love doing schools where we can. Dela size can range. If you have $50,000 in single-family homes...we're in New York City, so these are New York prices. But $50,000 for heat pumps in a single-family home to $2 to $3 million for apartment buildings.

Joe Indvik: Great. And then a quick follow-up. I think a really interesting question is, could a council of government organizations serve in the same role that BlocPower has served in order to facilitate efficiency as a service project kind of demand aggregation and market development, that sort of thing?

Donnel Baird: Well, I cannot advise you to try and replace BlocPower. But absolutely. You technically can fulfill that role. You can serve as, in fact, a building decarbonization intermediary that's going to analyze data, aggregate financing, perform construction project management. And you can play that role. We think that governments and nonprofits should play that role. And we are certainly willing to provide guidance as best we can to help folks do that. So just shoot us a note and we'd be happy to walk you though how we think it might work.

Joe Indvik: Thanks. And, Mark, a question for you about kind of the process of managing a Green Revolving Fund. Kind of what have you learned over the years of working on GRFs in terms of what skills are required, how much time it takes, who needs to be involved? Those sorts of considerations.

Mark Owlowski: Yeah. It's a really good question. So, I mean, really it's being spearheaded by a single individual. Many institutions, there's one sort of champion.

That could be someone in the sustainability role, the energy manager-type role, a facilities person, some kind of other sort of programmatic or other sort of stakeholder. Typically either a single individual or. Small group sort of works on this for maybe a few hours a week for a few months. You're not talking about needing hundreds of hours to get sort of this model off the ground.

There's a lot of sort of example guide documents and sort of charters that you can put together just two or three pages long that explain how these funds work and how it'll run. You do need, you know, buy-in from obviously a number of key stakeholders on the facility side and on the finance side to just sort of make this all work. But you don't need any kind of special extra fees. I mean, there's even students at some colleges involved with leading the effort to set up and man-run these funds. And many committees that run these funds involve students and other stakeholders in the higher education sector or other sort of different stakeholders in other sectors.

Joe Indvik: Awesome. Thank you, Mark. A couple more rapid-fire questions for each person and then a couple general ones. So, Brenna, a question here for you about...let me just make sure I understand the question. So what about sort of commercial real estate investors that want to plan on doing energy efficiency capital improvements as part of sort of the acquisition of a new asset? Can you talk more about how the BEPC model or inter-performance contracting can sort of fit in there in the commercial real estate world?

Brenna Walraven: Yeah. It's a great question. And I think we're seeing this more and more, and we help real estate owners and operators basically embed retrofits into their underwriting and, "How do they do that?" And one thing is, they look at their property condition assessments providers and look at what they're including in those reviews of the asset. And asking those or requiring those PCA providers to look at more efficiency and retrofits.

And then, you can plan for it using an EPC on the other side so that you don't adversely affect you returns. 'Cause I think that's part of the issue that comes up for investors. They say, "Hey. If I put in a bunch of capital in my model, I can't pay as much. Won't get as good a return." So this is a way to not impact your returns and yet still get those retrofits done. And we're seeing that more and more through just embedding it in the due diligence process.

Joe Indvik: Awesome. Devesh, a couple of questions here about kind of some of the variation in PACE program design across states. And since the PACE model does sort of require legislation to be passed at the state level and then individual programs to be adopted at the country or municipality

level, sort of how do you all think about the diversity of programs that are out there and standardizing the – like from a financial markets perspective, how do investors and lenders sort of get comfortable with PACE given its diverse sort of profile across the country?

Devesh Nirmul: Well, I think organically is...there are programs as the market fields are working well. They want it. Their volume is there because they're designed correctly. And I think, you know, we kept a way for some market to have a better approach. You know, fundamentally when you think about the retrofits, if I've gotten a new HVAC to put in a building that has a 20 year old system, by virtue of making that improvement – by mitigating deferred maintenance – I'm going to have an energy efficiency improvement. So, I think some common sense to be bult into how these things are designed. When you get too aggressive on performance standards...you know, you have to be balanced with that reality, I think.

Joe Indvik: Awesome. Thank you. Donnel, I want to dive a little bit more into the green bond model specifically. So you mentioned that you guys are using a green bond yourselves. But I think there's probably some folks in the audience who aren't quite familiar with what a green bond is, how it's different than a traditional bond and sort of why you would want to do one of these things in the first place. So if you maybe start with how you selected the green bond model and kind of why it made sense for you. And then kind of corollary to that is, "Can anybody invest in a green bond?" Your green bond or other green bonds. And how does that sort of – how does that sort of work?"

Donnel Baird: Yeah. So one of the things that's been really fun for us is, you know, we were fortunate to win a department of energy contract like six years ago when we were a new startup. I don't recommend doing Department of Energy contracts if you're a new startup to anyone. But the contract was to create a crowd funding or a crowdsource model for financing for energy efficiency in low-income communities. And so, it took us a long time.

But what we were able to do is eventually create a new financial product that anyone – whether it's Goldman Sachs or Barclays Bank or a grandma who wants to invest $50 in helping to put solar panels and heat pumps in the local library where her grandkids study – anyone can invest in building electrification. And so, the idea of a green bond is, we believe that green infrastructure is profitable. We believe it is the future. Wall Street already knows that. So they're going to finance it and make 6, 7, 8-percent returns. We want regular Americans to be able to make 6, 7, 8-percent financial returns.

And we also want them to be heavily involved in greening local buildings in their local community. And so, now if that grandma's an investor in

green bonds on a grandchild's library, she might go to church that Sunday and say, "You know what? I just invested $50 in greening the library. Why aren't we greening this church, or why aren't we greening the senior citizens community center or whatever?" So we want regular Americans to participate as investors in a green bond, which is a financial product where 100 percent of the investment is going to be used to green low-income or underserved buildings.

So we're really, really excited about it. We just raised $1 million in the month of March for the initial green bond investments. So something like 400 regular Americans invested, they're going to make 5.5 percent-related return. It's pretty good in this environment. And they're going to create a bunch of greenhouse gas emission reductions and local jobs. So that's what the green bond is bout. And Corporate American seems really excited about it. And so, we want to take that excitement and bring it to energy efficiency. Green and sexy like Kermit. Green and sexy.

Joe Indvik: Love it. *[Laughs]* Great. And a couple folks asking about getting in touch with BlocPower. We will have the E-mails on the very last slide so folks can get in touch with Donnel and his organization. And then, Mark, one final question for you...is, given that you have this sort of wealth of data in GRITS from projects that have been completed both as part of Green Revolving Funds and otherwise, what are some of the insights that have come out of that in terms of how to set up a good, effective Green Revolving Fund? Or what are some of the best practices you've been able to identify?

Mark Owlowski: How much time do we have left? Right. So it's a great question. And it's – I think it's complicated to sort of provide a quick soundbite answer. I will say, you know, if you looked at sort of where projects are being done – these 3,000-plus projects that are in the GRITS Library at this point – a good majority of them are, as you might expect, lighting-related and HVAC-related. That seems to be the sort of two, right, main areas where people are really concentrating their efforts.

But definitely a great amount of the work on water-related projects, waste reduction projects, renewable's and others. But at least as it comes to sort of use of the GRITS tool, that seems to be sort of the two sort of spaces that really draw attention. In terms of sort of size, it's really all over the map. You know, there's lots of multi-million-dollar projects that are really aggressive and ambitious, and there's lots of really multi-modest projects that are $5,000 just upgrading one set of lights to LEDs or something simple like that. So it really kind of comes in all shapes and forms.

But we'll say in terms of an overarching theme I think is that people are excited to move forward and excited about the idea of tracking and sort of

demonstrating the impacts of this work so that you can sort of accelerate and sort of build on the momentum that you're generating rather than having to sort of start from square one with each project and starting all over again. So I think that's probably one of the those key things to take away from all of this.

Joe Indvik: Okay. That's great. Thank you for just filling that. And then, one final question for everybody. Just a quick rapid-fire lightning-round question. So please answer in one sentence. And the question is, "If you could change one thing about the world to accelerate deployment of clean energy financing to more people, more businesses, what would be the thing you would change to enable clean energy finance to grow faster?" And I'll just let you popcorn. Whoever wants to-

Brenna Walraven: Remove people's fear about it. Educate them.

Mark Owlowski: I'll go the other direction. I'll say implement sort of mandatory building energy performance standards for all existing buildings in the US and internationally.

Brenna Walraven: That's a good one.

Mark Owlowski: Thanks.

Donnel Baird: Ban fossil fuel, gas and oil in buildings since it's given everybody asthma and making us sick and killing the planet.

Devesh Nirmul: I would say build the potential for, you know, Net Zero and overarching types of – how to say this – go-to-the-moon-type goals into the standard analysis at the economic, you know, system training 1:14:05start as an introduction.

Joe Indvik: Nice. Love it. Good answers ranging from strategic to the technical. So thank you all. We just have a couple of final Slides to wrap us up here. But thank you all for a great discussion. I wish we had a couple more hours to have it, but we'll have everybody's E-mail at the end so you can Follow up directly. If we want to go to the next Slide, we do want to highlight some additional resources that are available on the Better Building Solutions Center.

And so, when the Slides are made available later on you can go ahead and Click on these to View these resources related to the presentations today. Then if you go to the next Slide – actually, I think we have a video for you here. So we want to highlight the Better Building Solutions Center which 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.

So let's go ahead and check out the Better Building Solutions Center video. *[Video begins] [Music plays] [No conversation, [1:14:53 to 1:15:44] [Video ends]*

Joe Indvik: All right. Love it. Also want to highlight the Better Building Summer Webinar series. So we'd like to invite you to join us for this pretty awesome Webinar series. AS you can see, there's a couple of sessions on there that touch on financing, including financing and higher education coming up. Partners are going to be discussing all of the issues that you care about and some of the major challenges that they're facing around energy performance and finance. So to register for that, go to the Better Buildings Solution Center and Click on Events and Webinars. And if we go to the final slide, I just want to take a minute to thank all of our excellent panelists. Here are their contact information as promised.

We're also going to launch a short feedback survey in Slido, and please take a couple of minutes to give us feedback on this session. That's how we get better and make sure that we continue to develop programming that's the most useful for all of you, including stuff like this excellent panel. So please go ahead and fill out the feedback form, and that'll be Open until tomorrow morning. And if you want to learn more about any of the resources discussed today, go ahead and visit the Better Building Solutions Center or shoot me an E-mail at the contact information Below. So, Brenna, Devesh, Donnel, Mark, thanks again and see you all through the rest of the Summit.

Devesh Nirmul: Thank you. *[Music plays]*

[End of Audio]