

2022 Financial Innovations Roundtable Summary

Advancing Clean Energy Equity

Executive Summary

Now in its 24th year, the Financial Innovations Roundtable (FIR), located at the Carsey School of Public Policy at the University of New Hampshire, has worked to address problems related to access to capital for low- and moderate-income consumers and communities. Since 2014, the event has been co-hosted by the Federal Reserve Board of Governors. The FIR works with a range of financial institutions, government agencies, foundations, and trade associations to access their expertise for problem-solving discussions.

This year's FIR (June 16-17, 2022) focused on advancing clean energy equity and was co-hosted by the Federal Reserve Bank of New York. Clean energy technologies are better than ever, with costs continuing to decline. Yet the low-income and under-resourced communities – particularly communities of color, Native communities, and other traditionally marginalized populations – that are disproportionately impacted by climate and severe weather-related events lag in clean energy investments.

Community Development Financial Institutions (CDFIs) have a long track record of providing access to capital to low- and moderate-income communities nationwide. Green Banks, established at state and local levels, use innovative financing to attract private capital and incentivize investments in clean and renewable energy. Together, the nation's network of more than 1,300 CDFIs and 21 Green Banks have the financing expertise and deep market understanding and relationships to finance a transition to clean energy.

This event explored how Green Banks and CDFIs can funnel creditworthy projects to market and efficiently raise capital for them. Building on the Carsey School White Paper, [Clean Energy Project Development for Low-Income Communities: Strengthening the Ecosystem for Delivering Solar Energy and Deep Efficiency Retrofits](#) (Hangen, 2022), the FIR sought to identify options and create opportunities for Green Banks, CDFIs, and impact investors to collaborate in offering a range of products, approaches, and tools to better serve communities and individuals who have thus far been left out of the transition to clean energy. The event had 101 participants from a variety of sectors including CDFIs, Green Banks, mission-driven clean energy organizations, government agencies, banks, and impact investment professionals.

Conversations focused around:

- Possibilities to communicate more clearly with communities and funders alike about why clean energy justice matters, portraying it as a way to pursue not just climate goals but also community development goals
- The urgency of engaging in policy advocacy at a variety of levels, but especially with federal agencies, to direct new and existing resources towards clean energy justice projects
- Mismatches between the pricing and terms of capital that are needed to make clean energy justice projects pencil, compared to what CDFIs can offer (and the terms of financing for CDFIs themselves)
- Needs for flexible and patient funding, including grants, to support mission-driven organizations developing clean energy projects, especially enterprise-level and early-stage project financing
- The needs to build “capital absorption capacity” – meaning investable project pipeline – through training, technical assistance, and workforce development
- Opportunities to connect with a wide range of impact investors – ranging from individual investors to corporate and banking sector investors – for clean energy project financing in low-income and underserved communities
- An exploration of whether and how resilience, fairness and other core community development outcomes can be achieved alongside the scale required to address climate change

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Introduction and Framing

Claire Kramer Mills, Assistant Vice President and Director of Community Development Analysis at the Federal Reserve Bank of New York, opened the FIR with a welcome and introduction. Small and ambitious, the Fed’s community development team supports the Fed’s mandate by working with partners to promote economic opportunity in underserved and marginalized communities. The team is focusing on access to safe credit and wealth-building financial services, neighborhoods that foster healthy people, and resources for equitable adaptation and resilience in the face of a changing climate.

The importance of the topics being tackled today and tomorrow can’t be overstated. Prompted by climate realities, technological know-how, investor interest, and nudged by policy carrots and sticks, the energy system is changing. The stakes for LMI families are profound: continue on a path of dirty, unhealthy, and increasingly expensive heating and cooling systems, appliances, and transportation – or move to cleaner and healthier energy systems, that entail significant upfront costs.

Kramer Mills shared that, a few months ago, her team partnered with New York State’s Energy Research and Development Agency (NYSERDA), CPC, and NYC Housing Partnership to address these issues. They launched a nine-part workgroup series that included many FIR attendees, including Atalia

Howe, David Davenport, Esther Toporovsky, Amy Brusiloff, Curtis Probst, Javier Silva and Jake Scott. They plan to release a white paper this fall that offers solutions oriented around overcoming four key barriers to decarbonizing affordable housing at scale: (1) reducing costs, (2) reducing risk, (3) improving measurement, and (4) promoting education and awareness. The New York Fed Community Development team is thrilled to partner with the UNH Carsey School and Michael Swack, Eric Hangen, and Tina Poole-Johnson on this year's Financial Innovations Roundtable, which dovetails so well with the workgroup series.

Michael Swack, Director of the Center for Impact Finance at the University of New Hampshire's Carsey School of Public Policy, welcomed participants and thanked Kramer Mills and her colleagues at the Federal Reserve Bank of New York – Edison Reyes, Kellye Jackson, and David Erickson – and thanked this year's FIR sponsors: Wells Fargo, MacArthur Foundation, Kresge Foundation, JPMorgan Chase & Co., Robert Wood Johnson Foundation, Schmidt Family Foundation, Deutsche Bank, Rockefeller Foundation, Goldman Sachs, NeighborWorks America, and Local Initiatives Support Corporation (LISC).

Swack reflected, "When we first started planning this FIR, we had fantasies of what the clean energy ecosystem would look like with the passage of Build Back Better and \$30 billion as part of that ecosystem." **[Note: On August 16, 2022, two months after the FIR, President Biden signed the Inflation Reduction Act into law. The Act includes a \$27 billion Greenhouse Gas Reduction Fund that will support competitive grants to national and local financial institutions to invest in projects and innovations intended to reduce or avoid greenhouse gas emissions and other forms of air pollution.]** "The goal before and after is, how do we encourage better collaboration among investors – public, private, and non-profit including Green Banks and CDFIs – to create a financing ecosystem that better serves traditionally marginalized populations and allows them to participate in a system of climate and energy justice?" As Jahi Wise from the White House points out, regardless of new federal allocations, there continues to be resources to address the problem throughout the Federal government. We need to maximize these and other resources.

Swack oriented us to the clean energy imperative: A couple of years ago, the Duke University climate scientist, Drew Shindell, testified before the House Committee on Oversight and Reform that the public health costs of air pollution were so high that a total decarbonization of the American energy sector would entirely pay for itself through the public health benefits alone. You don't even need to consider climate, in other words, for decarbonization and clean energy to make sense, even according to the strictest cost-benefit analysis. In failing to pass strong legislation, we are not just failing to realize those gains, but paying for the privilege – according to [The New York Times](#), the privilege of dying sooner and living less healthily in the meantime.

Clean energy investments are growing overall, driven in part by improving technology and dramatic cost declines. However, low-income and under-served communities – particularly communities of color and Native communities – lag in clean energy investments. Swack emphasized, "This is not just an

energy issue, it's a community development issue, because these same communities are disproportionately impacted by climate and severe weather-related events, as well as by high energy cost burdens."

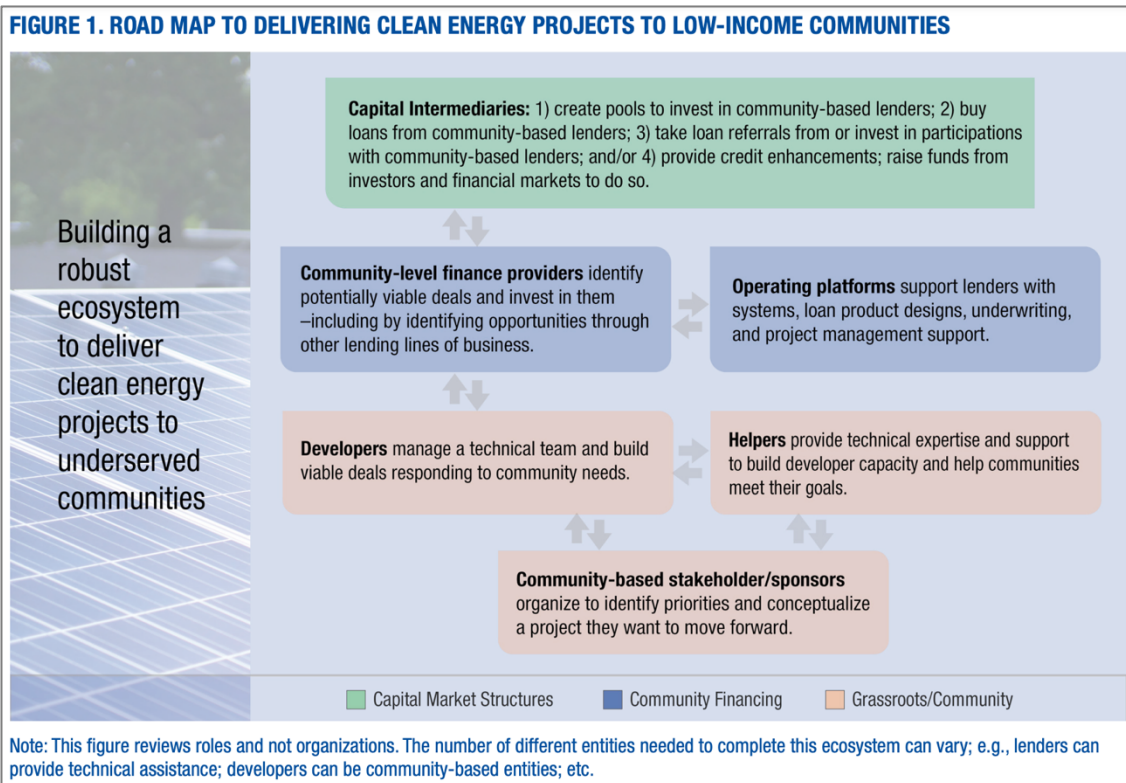
Our challenge and opportunity are to figure out a way to scale up access to clean energy for these communities, particularly in ways that create meaningful co-benefits such as:

- Reductions in energy cost burdens
- Jobs and workforce development
- Climate resilience
- Greater community control over energy resources and community wealth-building

This work will require a lot of capital – and, because the kinds of co-benefits we just listed are not free, it also will require a healthy investment of capital on concessionary terms. Raising that money is part of what we're here to talk about. But that's not all we're here to talk about. We also need to figure out what the organizational infrastructure needs to look like – the "ecosystem" of organizations – to carry out the work.

Swack noted that a recent Carsey School White Paper by his colleague, Eric Hangen, offers helpful framing of the clean energy ecosystem.

Eric Hangen, Senior Research Fellow at the Center for Impact Finance at the University of New Hampshire's Carsey School of Public Policy, presented his 2022 white paper, [Clean Energy Project Development for Low-Income Communities: Strengthening the Ecosystem for Delivering Solar Energy and Deep Efficiency Retrofits](#), as a straw man for this year's FIR discussion. The graphic or 'map' below depicts the different levels of the ecosystem necessary to deliver clean energy projects to low-income and underserved communities – a 'grassroots' or community level in *orange*, a community financing level in *blue*, and capital market structures in *green*. Investment at all levels of the ecosystem is needed to generate a pipeline of viable deals and efficiently finance them.



Hangen, E. (2022). [Clean Energy Project Development for Low-Income Communities: Strengthening the Ecosystem for Delivering Solar Energy and Deep Efficiency Retrofits](https://dx.doi.org/10.34051/p/2022.03). Carsey School of Public Policy, University of New Hampshire. <https://dx.doi.org/10.34051/p/2022.03>.

This year's FIR participants span the clean energy ecosystem. Hangen introduced the broad categories of participants:

- The emerging, entrepreneurial, and mission-driven clean energy sector – including developers of clean energy projects, technical assistance providers, climate energy advocates, and social justice-oriented green banks. (CDFIs who are concerned about greying leadership, your next leaders are in clean energy!)
- The community development industry, with hundreds of billions of dollars of assets under management, a portfolio including millions of affordable housing units, and tentacles into most communities around the country.
- A diverse investor community, including banks, corporate investors, and high net worth individuals. There's a lot of interest in the environment AND, separate from that, a desire to invest in social equity. What happens at the intersection? Are we going to make something happen at the intersection?
- Government, with real thought leadership coming from the current administration and with demonstrated innovation at multiple levels.

The overarching question is, “How do we work together?” Hangen encouraged participants to consider, “What are you willing to commit to other people in this room to help us get to climate justice? What do you want from other people?”

We need to build the ecosystem together. The community development finance industry has evolved over the last 50 years. With climate change, we don’t have another 50 years to build a parallel clean energy infrastructure. We need to take advantage of what exists already.

Opening Remarks

Jodie Harris has served as **Director of the Community Development Financial Institutions (CDFI) Fund at the U.S. Department of the Treasury** since 2019. In her opening remarks streamed virtually, Harris welcomed FIR participants to learn the benefits of working with CDFIs towards a shared goal of clean energy equity. CDFIs serve as a gateway to capital and credit in low-income communities that are not traditionally served by large banks and more traditional lenders, a collaborative multisector force to deploy capital where it is needed most. There are nearly 1,400 certified CDFIs found in all 50 states, Washington, D.C., Guam, and Puerto Rico. CDFIs offer a wide range of services and have leveraged billions of dollars in private sector capital. Created in 1994, the CDFI Fund's mission is to expand economic opportunity for underserved people and communities by supporting the growth and capacity of a national network of community development lenders, investors, and financial service providers.

Harris shared two CDFI Fund programs of particular interest:

- (1) [CDFI Financial Assistance Award program](#) offers CDFIs balance sheet capital for them to use as best needed in their communities. These grants enable CDFIs working in distressed or underserved areas to expand their products and services, their communities served, and/or their number and types of borrowers served. The program awarded \$38.7 billion last year and has awarded over \$127 billion since its inception in 2010. Recently, there has been an increase in clean energy activity. Harris noted a range of ways that CDFIs may use a CDFI Financial Assistance Award to underwrite green lending of activities including minimizing the impact of climate change, reducing the carbon footprint of businesses, and restoring nature’s ecosystems.
- (2) [New Markets Tax Credit \(NMTC\) program](#) incentivizes community development and economic growth through the use of tax credits that attract private investment to distressed communities. Projects are selected based on expected community impact as well as on community need. CDFIs often creatively leverage several NMTC allocations to make a project financially viable. CDFIs work with community organizations and other funders to show, in

clean energy as in other community investment, “The need is great AND it is financially viable to get involved.”

The CDFI Fund will maintain and grow its role in facilitating clean energy projects and helping our communities transition to net zero. While the Build Back Better Plan would have directed \$250 million to CDFIs, even this sum would have left us a long way off from being able to provide the level of investment to fully support a global clean energy transition. Harris has been talking with Michael Swack at UNH about possible convenings to develop real solutions and tackle projects in clean energy.

Swack noted that the CDFI Fund is constrained by congressional directive and asked, “If you were to think beyond the constraints, what’s realistic in the short term for how the CDFI Fund would like to be involved in the clean energy transition?” Harris replied that the CDFI Fund can do a lot through its existing appropriations and statutory authority. The CDFI Fund can support technical assistance and other resources to CDFIs who want to learn more and work with partners to have projects come to fruition. There is also a need to move beyond anecdotal data in solar financing and clean energy development, to a more formal data collection system.

In the final minutes of her address, **Harris** encouraged participants to contact her with input on what data we should collect to support this work and to give CDFIs the data they need to get other funding. What are existing data on CDFI engagement in clean energy? Can we demonstrate a track record? Could additional reporting requirements increase our ability to access additional grants and investment, without significantly adding to CDFIs’ reporting burden?

What is the Ecosystem Needed to Deliver Clean Energy to Low-income and Underserved Communities?

Panel Moderator: **Eric Hangen**, Senior Research Fellow, Center for Impact Finance, Carsey School of Public Policy, University of New Hampshire

Panel Speakers:

- **Nicole Steele**, Senior Advisor, Energy Justice and Workforce, US Department of Energy
- **Ajulo Othow**, Founder and CEO of Enerwealth Solutions
- **Annie Donovan**, COO of Local Initiatives Support Coalition (LISC)
- **Bomee Jung**, Co-Founder & Co-CEO of Cadence OneFive

Eric Hangen, Senior Research Fellow at the University of New Hampshire, introduced the panel. He explained that, in this framing session, the panel will discuss the players and roles needed in a healthy

ecosystem to deliver clean energy to LMI communities – including roles Green Banks and CDFIs can play, but also the other players and roles that are needed.

Nicole Steele, Senior Advisor, Energy Justice and Workforce, US Department of Energy, leads the National Community Solar Partnership, a US DOE initiative led by the Solar Energy Technologies Office, in collaboration with the National Renewable Energy Laboratory and Lawrence Berkeley National Laboratory. The Partnership's goal is to enable community solar systems to power the equivalent of five million households by 2025, create \$1 billion in energy savings for subscribers, and enable communities to realize additional co-benefits and value streams from community solar installations. This target represents a 700% increase in community solar deployment, growing from 3 GW of community solar in 2020 to 20 GW in 2025. The Partnership prioritizes outcomes over business model, motivated by the meaningful benefits that community solar can provide.

How should the Partnership engage and knit together diverse stakeholders – government, policy, utilities, non-profits, and for-profits – into a system that can deliver on these ambitious goals? First, **Steele** prioritized extensive stakeholder engagement to dive into major challenges and barriers in community-led, community-deployed solar energy. They learned that access to affordable capital and tax equity is a major problem, especially serving LMI communities to reduce energy burden by the equivalent amount as rooftop solar and to support co-benefits including workforce development, community wealth, and community opportunity. In addition to a convening and funding role, TA especially can be leveraged in many ways to create the necessary ecosystem.

After nine months of research to understand what's going on the ground, **Steele** reported that the Partnership has launched a major initiative: the Credit Ready Solar Initiative (CRSI). CRSI will bring together lending institutions, philanthropists, and developers in a marketplace setting. In line with this FIR's ecosystem approach, CRSI has a number of different workstreams. (For example, UNH will provide developers training on how to access financing and work with community financial institutions.) It's not one bullet. It's not going to be one thing that solves this problem; we need many different types of stakeholders to commit to different roles, to really understand what these roles mean and to implement them in a very coordinated way. Steele referenced the White House's Proclamation on Earth Day, 2022, noting strong interest in the work in ecosystem-building and having everyone commit across many different kinds of distributed resources (wind, storage, EV infrastructure, virtual power plants, etc.).

Hangen observed that, using the framework of the white paper, CRSI is trying to build one particular vertical: community solar. He thanked Steele and said that the next speaker, Ajulo Othow, represents the type of mission-driven solar developer that FIR participants want to help support and grow.

Ajulo Othow, Founder and CEO of EnerWealth Solutions, said EnerWealth is an early-stage developer of solar and battery storage, with a particular focus on rural cooperative markets. EnerWealth makes utility-scale investments that offer meaningful benefit to households and families. They identify pilot

sites to develop community solar and maximize attendant benefits, e.g., through strategic site selection, they can help minority and small landowners to retain land from one generation to the next. Solar power stored locally in batteries can be flexibly deployed during times of peak demand to reduce electricity costs for all member-owners. EnerWealth funnels a portion of revenue into a local community development nonprofit controlled by member-owners that invests in remediation and deferred maintenance. Othow thanked Melissa Malkin-Weber of Self-Help for co-creating Enerwealth's business model.

Othow's background is in rural development. She loves small towns and open spaces. While the Southern region of the United States has a laundry list of issues, including investor-owned utilities in the region who capture politicians, it also has the power to lead the nation. It's where the action is, where we can push distributed generation going forward.

Othow offered three bold recommendations:

1. Take ten percent of funds for project finance and put it into policy. Clean energy development is stymied without a functioning and regulated marketplace.
2. Triage projects and use a blunt instrument: Grants. We need to pinpoint where the greatest need is (e.g., where there is persistent poverty, high energy cost burdens, and high cumulative impact of pollution); the EPA and others have maps. Currently, there is a huge leap between deciding where to put panels and actually getting them on the ground. Like an emergency room nurse, we should use a blunt tool to keep moving forward – “and this blunt tool looks, walks, talks a lot like a grant!”
 - A real-life example: A consumer's Duke Energy bill pegs saving based on the avoided cost rate (3 cents per kWh vs 10 cents per kWh). Because of the cost of development, if you sign up for community solar, you end up paying more. But what if the community solar array could be built for free and those panels allocated to LMI people? Consumers would save only 3 cents per kWh, but at least 7 is better than 10.
3. Public education and communication – especially through projects with demonstration value. In North Carolina and other parts of the Southeast, people either don't know [about community solar] or don't like it. They envision acres and acres of panels, or overhead wires that go past their home, with no meaningful direct benefit. That narrative is hardening.
 - Developers are part of this narrative, because 80% of the industry is focused on investor-owned, utility-scale solar. There are 167 of these utilities. The clean energy industry is talking to just 167 customers – which makes them even more powerful. This is the reason we're having rollbacks around net metering and a hard time getting community solar, and why many utility-scale developers are also in a race to the bottom.
 - The narrative is also related to coal: Men sacrificing themselves generation after generation to feed their family. Coal and this environmental/health sacrifice are seen as noble necessities.

We have to change the narrative in the imagination of the public, building a combined power to counteract the power of the utilities.

Annie Donovan, COO of Local Initiatives Support Coalition (LISC), served previously as director of the CDFI Fund. She has long engaged in field- and ecosystem-building, including at the first Financial Innovations Roundtable and many since. Donovan reflected that, back then, we talked about what would happen if CDFIs could get rated and get access to the capital market – then we said, that’ll never happen! Today, there are about a dozen S&P-rated CDFIs, accessing the holy grail of the capital markets: capital at scale that is flexible and less restrictive.

Donovan said, in building an ecosystem for clean energy finance, we should not repeat the experiences of our past because our experiences have not gotten us far enough. The ecosystem that we have built for CDFI abides by a few rules, including the ‘golden rule,’ “He who has the gold sets the rules.” Groups that intermediate between funders and communities, we have to do more; it’s not easy to access our resources. So, we can’t repeat, or build on, what we built. We have to start over. Donovan offered three pillars at the 30,000-foot level to guide this construction:

1. Community ownership and community power – in the political sense as well as energy sense. Donovan is on the board of Groundswell Inc., which does this well.
2. Resilience over scale. After 24 years of trying to get to scale, it’s still not enough, because we still have to apply that ‘golden rule.’ We are chipping away at community challenges, but using Band-Aids.
3. Diverse systems outperform. Use biomimicry – how do natural systems do it? Nature regenerates. In teams, individual parts may suboptimize so that the system can optimize. Let’s look to Mother Nature, who knows how to do this and is better at this than we are.

Donovan also noted that investment tax credits have driven us forward, but they’re very hard to work with. She introduced **Michelle Moore, CEO of Groundswell**, and asked her to speak further on this. Moore noted that our current system of using tax credits to finance projects serves to reward wealth with ownership; it subsidizes wealthy people to get rent in perpetuity. How to deliver clean energy projects and also meet the aspiration of community ownership? You have to fix the root (infrastructure) before you can build; “intervene at the values level.” Moore also agreed with Othow’s statements on the power of demonstration. It costs a lot to innovative, but it’s worth it to demonstrate community ownership. We need to reinvent our energy center in line with our values.

Hangen also asked **Jorge Gaskins, Director of Community Relationships of Barrio Eléctrico**, to describe Puerto Rico’s needs and progress related to distributed solar and storage. Gaskins reported that medically vulnerable and low-income households have been devastated by utilities’ power outages in the months following hurricanes Maria and Irma. Distributed solar and storage will provide greater resilience, as well as lower energy burden, for households.

Bomee Jung is **Co-Founder and Co-CEO of Cadence OneFive**, a public benefit organization in innovative policy solutions to accelerate building decarbonization in large cities. Previously, Jung worked for the New York City Housing Authority (NYCHA) to electrify the city's public and affordable housing as part of an Authority-wide 10-year plan that initially committed \$300 million. Currently, there is an electrification pipeline of well over \$1 billion, a real accomplishment that transcends administrations.

Jung began her presentation with a straw man: "CDFIs might say, 'Things are really tough right now, we must stay focused on housing and the job at hand.' But NYCHA embraced electrification. Why? Why did NYCHA, the largest apartment owner in the country, choose in 2015 to do big sustainability initiative?" Jung's answer: The organization was very publicly in crisis, e.g., in the newspaper for buildings with mold or without heat. NYCHA saw an opportunity in crisis. In line with its 20-year reputation as a leading professional management organization, NYCHA conceived climate-responsive construction as being about housing quality. They linked fundamental housing quality issues with environmental and climate issues. There's just one physical building, after all; we should pound the drum of housing quality when we do climate work.

One-third of all US houses need repairs affecting housing quality, of which 40% have mold/internal climate issues and 40% have structural issues. With a few exceptions, our housing quality is much lower than we could/should achieve with today's off-the-shelf products and existing technology. Two-thirds of rental housing with quality issues are occupied by low-income people, so housing quality ties in with health equity. Others have heightened vulnerability to health issues because of redlining, heightened exposure to climate-related risks. The rubber meets the road in being able to protect people in their homes.

Houses are for people. Housing must make up for other climate impacts, e.g., the folks who have the most damaging high-heat exposure at work also don't have air conditioning at home. Interrupt the cycles of poverty and low expectations for what we can and ought to deliver. Affordable housing emerged out a health movement and now is moving into a massive health crisis. More people in the clean energy conversation need to talk about housing policy and housing quality as vital components of clean energy equity.

Hangen transitioned the panel into Q&A and discussion, observing that community development impacts are not free.

Donovan said that, in the financial system, there are hierarchical, competitive systems, aligned with Darwin's 'survival of the fittest.' In contrast, Suzanne Simard's book, "Finding the Mother Tree: Discovering the Wisdom of the Forest," and other research show that there are ecosystems of communication and care that we don't see and don't know how to value. Traditional indigenous cultures see humans on par with nature. Environmentalists are trying to get legal rights for water and

other parts of nature on par with humans. There are cooperative as well as competitive systems. One isn't better than the other, but we've been out of balance. The winner/loser paradigm is not what nature does. How do we create nurturing systems for this work? Inclusion is a part of this too, as we learn about diversity, equity, and inclusion (DEI) in our organizations, trying to include diverse voices and make room instead of squeezing out. It's not about how much scale and efficiency can we build. That's not resilient in the long term, as we've seen with baby formula shortages.

Swack named a potential tension: 'Volume versus Fairness.' For example, when trying to solve humanity's challenges, Green Banks might respond, "It's the environment, Stupid! If we're killing the earth, stop doing that before we think about who benefits. The more volume, the quicker, the better." From the community development perspective, "It's fairness, Stupid! Inequitable distribution is how it's always been done, that model doesn't work, and marginalized people don't catch up later anyway. How do we get more volume AND make sure it reaches people who traditionally have been excluded?" This year's FIR planning group observed that organizations that *should* collaborate, often *don't* – and in fact often compete (for resources). How do we get better collaboration among those who we think have common goals but in fact may have these different starting points for their worldview and mission?

Steele said we must focus on resiliency AND scale. She has been in these arguments before, i.e., "Our goal is to deploy clean energy" versus "It's about people." If you're not centering people in this conversation, (1) You're not going to win hearts and minds, and (2) You're not going to be successful because you need all kinds of stakeholders to work together and commit to (embodying) playing their roles. **Donovan** clarified that she meant that resilience is a critical pillar (versus 'preferencing scale over everything else'). Otherwise, we lose the point.

Donovan continued that we all have to agree that our pathway to this new future needs to be inclusive. We shouldn't be surprised that it takes longer in the South. There is a fund in NY State called the New York Fast Forward Fund. Governor Cuomo used the bully pulpit to get banks to come to the table, 10 CDFIs that could move money fast. And the money moved fast. It has been replicated in the South, but in states where no governor has used the bully pulpit to get investors to invest, where there are fewer banks, many fewer philanthropists, higher poverty rates, and larger geographic areas for CDFIs to cover. So let's not have the same expectation for places that can't deploy at the same rate, because they don't have the same inputs to work with. Progress may not be as scalable or happen as quickly.

Keith Bisson of Coastal Enterprises, Inc. (CEI) agreed with Othow's three recommendations and asked where she would focus the 10% of project funds redirected to policy. In CEI's experience, poor policy can kill a project – such as with a resident-owned manufactured housing community in Maine with great demonstration value that had a grant lined up, but was stymied by an investor-owned utility. Maine voters are close to gathering enough signatures to trigger a referendum in November 2023 on replacing Maine's investor-owned utilities with a consumer-owned model.

Othow replied that, in the South, the biggest obstacle is restrictions against third party sales and power purchase agreements (PPAs). Because the investor-owned utility is the only one who can sell to a consumer, clean energy producers must sell their energy to the utility; and because the utility sets the price, you have to build it for less, which is devastating to new development. The policy priority should be to enable third party sales and create more competition in the market.

Steele agreed with the third party ownership issue. Her experience with GRID Alternatives was that they could leverage tax credits, etc. in states that allowed third party ownership. They simply did not go to states without this policy in place.

Melissa Malkin-Weber of Self-Help Credit Union & Ventures Fund added to Donovan's book recommendation with a [recent *On Being* interview](#) with marine biologist, Ayana Elizabeth Johnson, called "What If We Get This Right?" However, she waffles on the topic of community ownership. Community ownership can bring wealth-building, control, power, and autonomy – "but, what if my bright idea brings risk to the community?" **Steele** replied that she thinks of the word, 'Choice.' Some will want to own their asset and build wealth off of it. The important thing is to build a marketplace where that choice exists. For example, for seniors who didn't want to have to deal with maintenance, entering a PPA was the right thing. Others want to take advantage of solar renewable energy credits.

Doug Sims of the Natural Resources Defense Council (NRDC) resonated with the narrative of coal connected with hard work and sacrifice. In South and in rural areas, clean energy seems to be connected with privilege. NRDC has resources but can't seem to get traction in the South. What should be the narrative, backed by facts and business models? And what are the levers to change? **Othow** replied that this is a live conversation for her. North Carolina new clean energy law (formerly HB 951) requires that Duke Energy decarbonize by 70%. But how do we do this? We could decarbonize in a range of ways that has no impact on people's lives. Despite the new mandate, how the utilities decarbonize will depend on how much influence people have on the decarbonization plan due by the end of the year. The key is helping people understand what this means for them in their pocketbooks, and for communities dealing with coal ash clean-up, biowaste, and potential for nuclear exposure. We are pushing to actually make this a participatory process, rather than scheduling meetings during the day in far-flung places.

Jung noted that New York's 2014 launch of the 'Reforming the Energy Vision' regulatory proceedings and policy initiatives failed to communicate with the right messengers about what was at stake. We talk about governance in community development, but we don't understand how decisions happen in utilities. Could we mobilize community development corporations (CDCs) and community-based organizations (CBOs) to have kitchen table conversations, get more people on Public Utility Commissions (PUCs), and talk about governance and autonomy in a radically redesigned grid?

Hangen added Shalanda Baker's book, 'Revolutionary Power,' to our emerging reading list and noted that, while some community leaders may not be politically progressive, when you go without power for a year and you're under the thumb of a corrupt and inept utility, they may nevertheless be willing to devote substantial time and energy to developing community-controlled clean energy initiatives.

John Moon of Wells Fargo said technology is probably a big part of our transition pathways, more than what the community development field is used to. What do we need to think about to adapt in a building and housing context? **Jung** said that her current company, Cadence OneFive, helps people get the most out of the technology we have today. The building/housing sector has perverse satisfaction in closing complex deals. Can we let go the macho attitude and streamline? Go from the mentality of 'compliance' to 'solving a common problem.' If information about real-time pricing is no longer helpful for your project, but would be helpful for the next project, how can you share it? We don't yet have a closed information system that allows and rewards this. Cadence OneFive is working to solve these commons problems across the market.

Swack asked about panel's experience with rural electric cooperatives and commented that they should be in this room. **Donovan** said that there are about 900 rural electric cooperatives in the US, mostly serving persistently poor counties. For example, North Carolina has 26 rural electric cooperatives. Sometimes rural electric coops are not run democratically, sometimes they are overly focused on electricity when their mandate is much broader, but overall there is much potential in this model.

Hangen thanked the speakers. He closed out the panel and the formal portion of the FIR's first day.

Funding an Equitable Energy Transition

Panel Moderator: **Doug Sims**, Senior Director, Resilient Communities at the Natural Resources Defense Council (NRDC)

Panel Speakers:

- **Jahi Wise**, Senior Advisor for Climate Policy and Finance, White House Domestic Climate Policy Office
- **Cathie Mahon**, President/CEO, Inclusiv
- **Kerry O'Neill**, CEO, Inclusive Prosperity Capital
- **John Moon**, Vice President Climate Aligned Philanthropy and Partnerships Lead, Wells Fargo

Doug Sims, Senior Director, Resilient Communities at NRDC, leads NRDC's Green Finance Center. Sims noted that Green Banks weren't initially focused on equity, but that has been changing, with an increasing focus on delivering results to low-income, low-wealth, and BIPOC communities –

communities seen as ‘vulnerable.’ There is the potential for CDFIs to expand into the clean energy justice space, in particular to address some of the challenges Green Banks continue to face: Inadequate scale of investments; lack of access to low-cost, long-term capital; and chasing foundations’ program related investment (PRI) capital. However, while CDFIs can access more capital, it is often not the right kind. CDFIs also require much more exposure to the green sector in order to demonstrate leadership in this field and develop appropriate products.

The panel is of pioneers and early adopters, playing different roles in the ecosystem that we need to create a fulsome sector. We will discuss how Green Banks, CDFIs and others can collaborate in leveraging and deploying capital for clean energy projects in LMI communities – and what sources of public, private and philanthropic funding can be brought together to ensure that clean energy is inclusive.

Jahi Wise, Senior Advisor for Climate Policy and Finance, White House Domestic Climate Policy Office, said that environmental justice has been a key focus for the Biden administration. We need to center the communities most impacted, including those impacted by the clean energy transition. The administration is looking to level the playing field.

Under-deployment of distributed energy resources is not happenstance; it is the result of a long history of decisions by the financial and political system. This is why we established the Justice40 Initiative, in which at least 40% of benefits of climate / clean energy investments must go to disadvantaged communities. The Office of Management and Budget (OMB) announced that \$29 billion of federal funding has gone out under Justice40 so far.

But also we need mechanisms in place to deploy these funds. That’s where Green Banks, CDFIs and Credit Unions come in, as well as efforts such as the Credit Ready Solar Initiative that Nicole Steele mentioned. Infrastructure bill programs such as FEMA STORM and BRIC, State Energy Efficiency Revolving Loan Funds, and numerous other programs can be used to support clean energy and climate equity. And we need more than just private debt. We need working capital, sponsor equity, and R&D investments.

Cathie Mahon, President/CEO of Inclusiv, said that Inclusiv has 450 credit union members in 48 states, Washington, D.C., and Puerto Rico. We come at this work from the financial inclusion and equity space. Our members have served low-income and communities of color for decades, delivering basic banking products and services – including small dollar loans, credit repair, small business loans, and home loans. Our members lend very deeply in their communities.

Initially, clean energy had not been a big part of what we did. Members involved in green lending viewed it as a boutique product / not core focus of business, as it was driven more from demand by higher-income members of their community. We began to center our resiliency and clean energy into the core mission of our work and network in the aftermath of hurricane Maria and our work in Puerto

Rico. Our Cooperativa Members had to scramble; they had to figure out how to run without energy (manual ledger entries!) to get cash out to members in their moment of need. We worked with members to try to move towards rebuilding. A lot of them started helping their customers access FEMA funds and started recognizing the importance of rebuilding with resiliency. It crystallized for us the importance of connection between financial inclusion and climate action around resiliency and the greening of the economy. A community asset owned and controlled by that community – we need to help communities be more resilient.

Working with UNH's Carsey School, we've created an [online training program](#) for CDFIs, community banks and credit unions to learn the basics of solar finance and energy efficiency. Eight cohorts, totaling 173 individuals and 96 institutions, have completed our eight- to nine-week training, with support from the DOE's Office of Energy Efficiency & Renewable Energy.

Kerry O'Neill, CEO of Inclusive Prosperity Capital (IPC), explained that IPC was created out of the work of the Connecticut Green Bank. We had innovated a number of programs, structures, and strategies that have mobilized \$2 billion of investment in Connecticut. Connecticut is a small state with a lot of inequality, so that naturally led us into underserved markets, even before Justice40. We innovated an unsecured personal loan product with credit unions; partnered with CDFIs around a predevelopment and mid-cycle term loan program for affordable multifamily; and developed a small commercial and industrial scale (C&I) solar ownership platform.

In 2014, we saw that we had awful penetration of rooftop solar for single-family homes for LMI and underserved communities. We came up with strategies, including partnering with PosiGen which focuses there, and worked with the broader market to try to educate lenders / investors. We reached parity of market penetration for LMI and BIPOC communities within three years. It can be done.

We spun out a national program that would take these programs and structures to scale, working with partners. We view ourselves as a piece of infrastructure for the industry who can bring these tools to those who want them. We've invested a lot in technology to serve our partners as well.

On the CDFI side, it can be different for CDFIs to get comfortable with the collateral requirements and with the longer loan terms of including solar in affordable housing projects. IPC seeks to create investment platforms that can help on that trajectory – making it easier for CDFIs to deploy capital into this space, on the terms that are needed, by providing them with a combination of credit enhancement and technical support for project review.

John Moon, Vice President Climate Aligned Philanthropy and Partnerships Lead at Wells Fargo, said we have real urgency to act to hit the 1.5°C pathway, the target goal of the Paris Agreement. At Wells Fargo, we are moving rapidly to mobilize sustainable financing. From a large commercial bank perspective, the potential to move climate financing to support our transition, is substantial. By various consensus estimates, we have to increase by 590% in sustainable financing from \$682 billion in 2020.

Increasing 590% by 2030 means financing \$4.3 trillion annually [source: Climate Policy Initiatives]. We have to keep the scale in mind while still centering people and communities.

Wells Fargo has made a series of commitments, including \$500 billion in sustainable financing by 2030 and net-zero greenhouse gas emissions (including financed emissions) by 2050. We are a member of the Net-Zero Banking Alliance, a United Nations-affiliated organization that is developing a road map to hit those targets. So, we have these very real commitments, we are mindful that we seek to make real-world impacts, and we are motivated to deploy sustainable finance capital.

The question is, how can CDFIs and Green Banks align with the sustainable finance that will be deployed? On the philanthropy side – how can we provide support so that we can integrate a focus on LMI communities of the \$500 billion that we deploy, and not treat it separately or as an afterthought? That’s the opportunity and challenge. We also need to think about how greenhouse gas accounting standards like PCAF (the Partnership for Carbon Accounting Financials) that are in development can align from banks down through CDFIs.

Sims asked **Wise** to comment on recent federal initiatives to support solar deployment, including use of the Low Income Home Energy Assistance Program (LIHEAP) program for community solar.

Wise responded that the federal government is working on creating the demand signals for financing to happen – whether through appliance standards, building codes, federal procurement power, or programs like LIHEAP. The community solar / LIHEAP program is about building the subscriber base, using LIHEAP to help low-income folks who are overpaying for electricity to get access to community solar. **Wise** commented that “we have a profound sense of urgency” in the current administration to address challenges like these.

Sims commented that he found the LIHEAP / community solar program exciting because it leverages public sector resources to bring solar to underserved communities. He also noted the recent use by the federal government of the Defense Production Act to support the solar industry – a first.

Wise responded that “there’s been a real crisis in our solar industry as a result of trade issues. Two weeks ago, the President took a series of unprecedented actions to solve for that – using the Defense Production Act to help ramp up domestic production of clean energy technologies including heat pumps.” **Wise** further noted that DOE has an initiative to provide R&D support for cold climate heat pumps. With \$10 billion of appliances purchased every month, **Wise** commented, “if you think about equipment turnover there’s a huge opportunity to shift.”

Sims asked **Mahon** and **O’Neill** for their thoughts on how to expand the project pipeline.

Mahon stated that for credit unions, their “bread and butter” is to make loans to households for basic household needs – like appliance loans. She noted that, in the Inclusiv / UNH training program, “we are

also seeing participants working a lot on creating a whole array of projects, not just solar, to improve energy efficiency and generate savings for households,” and highlighted EVs as another opportunity that is here now. The question for credit unions is, how do we use the products we are developing to also engage in member education and build demand for these products and services? Inclusiv delivers a consumer finance coaching platform called Pathways to Financial Empowerment and has been working to incorporate conversations around energy efficiency and household savings into that platform.

O’Neill discussed a standardized but flexible home energy loan product that IPC and Inclusiv are working on replicating throughout the US. The terms on the loans have to be attractive enough to LMI homeowners so that the deals will pencil. But capital is not the only piece of the puzzle: “Then we have to make connections to the community – through contractors and credit unions but also through local initiatives like solarize and weatherize campaigns. This financing platform then has to build deep community ties. And we need to have the right equipment, that is vetted, and available, with attractive financing for customers backed by the right kind of capital.” That massive ecosystem-building effort would address only one sector (home energy retrofits), with similar efforts needed in other sectors.

Sims asked a provocative question related to the discussion of scale versus fairness – to address climate issues, couldn’t we just pave the desert with solar panels? Or just help high-income folks shift to EVs? What are the tradeoffs between equity and climate? Is this a false dilemma or a real one?

Moon responded that it really is a challenge. One challenge is that designers of climate initiatives may fail to connect with the deepest concerns of communities, citing one instance where a low-income local resident asked what a new initiative to address increasing flooding would do to help her with her utility bills. Moon’s takeaway from experiences like these are that “we need to build community power and voice in decision-making and equip communities with the capacity to make the case for themselves to drive the investment. We have to start with the community and then figure out the alignment with community needs to work back from there to connect with the capital systems. Are communities well-positioned to articulate their priorities and to ensure that capital is really delivered in a way that is community-led?”

Sims agreed that “if we can co-create policies with communities, we can accelerate progress.”

Wise commented that “climate is inherently an issue of scale, but there is no progress on climate without equity – for political reasons, moral reasons, and the sheer need for places to deploy. We have to do both and the question now is just how.”

O’Neill added that “it’s everyone in this room, we are the people best positioned to do that. We need to work together – not ‘Green Banks versus CDFIs.’”

Swack commented on investor pushback when we try to get to scale, around issues of risk, perceived risk, and standardization.

O'Neill responded that “we’re not going to take no for an answer,” citing in her case extensive data on loan performance that they have compiled. “We are asking the investors to trust the data we’re showing them,” she said, and educate people for whom it is new.

Mahon added a comment to reinforce the importance of presenting the empirical evidence. The Inclusiv network has over \$280 billion in community-controlled assets across the country – but “as regulated financial institutions, we have to demonstrate that we can do flexible lending while maintaining safety and soundness. That empirical evidence base when you are moving into new areas – to track, in a standardized and consistent way, the experience and performance of these portfolios, enables us to unlock more and more of these capital flows.” She further commented about the usefulness of credit enhancements and capital reserves, as a way of addressing regulator concerns when credit unions launch new products.

Swack asked, “so do we have to wait 10-15 more years to get ‘pilot’ data before we can scale?” **O'Neill** responded, “we don’t think we’re doing a pilot, we’re building a business.”

Moon discussed the importance of new carbon accounting standards that are being developed within the banking sector that will require them to account for emissions including financed emissions (emissions from borrowers receiving loans). These standards could become a pathway to drive standardization and scale. As banks disclose emissions and set alignment targets in line with the 1.5°C warming scenario, they will then have to develop methods and standards, all the way down to the consumer level. These requirements will likely mean that CDFIs and Green Banks will also need to track their financed emissions.

Wise commented that the DOE Loan Program Office “is supposed to be a mechanism for providing credit enhancement, that could prove at scale that these investments are investment grade.”

Frank Altman of the Community Reinvestment Fund commented on the importance of breaking down silos in the federal government and looking across different programs. He raised several possibilities warranting further exploration, including:

- Using the CDFI Bond Guarantee program, including reforming the program to provide access to the real capital markets instead of selling loans to the federal government.
- Working with SBA to enable use of SBA guarantees to finance community solar.
- Focusing on contractor financing as “the nexus between green and LMI communities.” Altman mentioned an example, the Motor City Contractor Fund in Detroit, that supports Black contractors needing working capital.

Bryan Garcia of the Connecticut Green Bank thanked the federal government workers at the event who are seeking to make change through the government. He praised the wisdom of including key climate technologies into the administration's recent use of the defense production act to help vulnerable communities who are feeling the impact of inflation.

Sims agreed that "this is an important narrative that energy security and energy justice can be linked."

Joe Evans of the Kresge Foundation asked, "what should we in this room be doing to help get closer to the administration's Justice40 goal?"

Wise responded that "Justice40 feels like one of the most complex undertakings we've done. It really is about re-orienting, at the program (not the agency) level, hundreds of processes – a really granular and dense process." Wise asked event participants for more engagement in this work at the program level. "There are tweaks to program design that can impact whether these programs are benefitting low-income communities," he said. "We need these suggestions incoming. Input like [Frank Altman's] is incredibly helpful. We are open to input about how we can make these programs more receptive to reach the goal."

Michelle Moore of Groundswell discussed how the Justice40 Accelerator has helped frontline communities to go after federal money. Fourteen of 52 members in the first cohort have received some form of federal support (some of that support is in-kind technical assistance, some is capital funding). The accelerator is preparing to roll out a second cohort with 49 more organizations.

James McIntyre of Inclusive Prosperity Capital offered a critique of HUD. "Every month HUD is paying people's utility allowances – paying for dirty, expensive fuel." McIntyre asked, "if [the federal government] is paying people's utilities, shouldn't we just require it all to go solar or require other measures?"

Wise encouraged more of this feedback and promised that "we can take them to the right people in HUD." Wise noted that HUD did issue some guidance six weeks ago, for Washington DC, that said that HUD-assisted residents accessing community solar will not see changes in the utility allowance calculation. "There are a dozen other good ideas that we should do with HUD," Wise continued. "We're pulling on every lever we can find."

Jorge Gaskins of Barrio Eléctrico described how his organization is a clean energy NGO in Puerto Rico dedicated to building community capacity to determine our energy future. He commented, "when your grid collapses and your state government collapses, it defies why any Puerto Rican believes in anything. The only thing that worked was helping your neighbor." He asked that the federal government make the Investment Tax Credit more available for projects in Puerto Rico, commenting that "there are not investors in the US willing to go through all the mechanisms and distortions to monetize the credits" for clean energy justice projects on the island. He further pleaded for the federal

government to help speed the flow of \$40 billion of hurricane aid, of which only \$1 billion has been deployed. “Dollars are not reaching local communities at all,” he commented. He raised the importance of building distributed solar to build resilience, and not solar farms that take away agricultural land.

Tamara Tozloff of the Environmental Grantmakers Association stated that “Folks in the territories will only cosign what Jorge Gaskins just said. We are talking about people who live outdoors when the storms come. The limbo legal status of places like the US Virgin Islands also creates so many problems in getting dollars to go to those places.” She further commented, “Communities need doors to access the work of the people in this room. What are we going to do to help these people? We need to come up with stuff that [connects] to the folks who are pushing the pretzel carts.”

Luis Aguirre-Torres of the City of Ithaca noted that they have received commitments from the investor-owned utility company to invest in the necessary upgrades to the city's electrical infrastructure. Aguirre-Torres noted challenges with city, state, and federal government definitions around “disadvantaged communities” not aligning.

Working Session 1: Reaching Low-income and Underserved Communities for Building Electrification

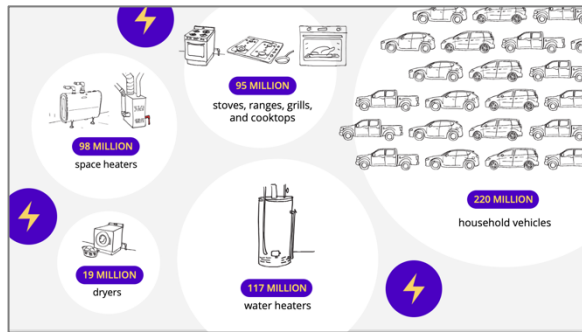
Panel Moderator: **Rachael Grace**, Senior Director, Policy, ReWiring America

Panel Speakers:

- **Curtis Probst**, CEO, New York City Energy Efficiency Corporation (NYCEEC)
- **Luis Aguirre-Torres**, Director of Sustainability, City of Ithaca
- **Mark Kresowik**, Federal Policy Manager, RMI

The three concurrent sessions were designed as applied working sessions in which a group could discuss and help think through an approach to scaling the capitalization and deployment of a particular clean energy project type in LMI communities.

Moderating Working Session 1, **Rachael Grace, Senior Director, Policy at ReWiring America**, oriented the group to the goal of economy-wide electrification. Electrification is efficient, saves families money, bolsters an equitable transition to clean energy, and is required to meet climate goals. Electrification creates hundreds of millions of jobs; installation and servicing jobs are local. As the 2022 Intergovernmental Panel on Climate Change (IPCC) report makes clear, electrification is a key part of any decarbonization strategy.



Grace noted that 42% of our energy-related emissions come from decisions made around the kitchen table: what kind of cars we drive, how we heat and cool our homes, heat our food, and dry our clothes.

Electrification is a climate justice strategy, at the nexus of environmental and equity goals because reaching our goal coincides with electrifying LMI households. The electrification of common household

machines (see figure) in turn will require another 405 million machines (vehicle chargers, breaker boxes, rooftop solar installations, and household batteries), a total of one billion machines in all. To reach our goal, 500,000 homes will need to be cleanly electrified every month for the next 25 years! (We're currently doing closer to 500 homes per month.) And while this may seem daunting, it also represents how large the opportunity is – not only for achieving climate goals, but also for helping reduce costs for households, increase community wealth, and improve public health outcomes, particularly for LMI families.

Towards electrification equity, we need grants and loans. LMI electrification should have as much subsidy as possible. For investors and lenders, electrification investments (1) support E & S goals within ESG mandates; fulfill Community Reinvestment Act (CRA) requirements; and reduce Scope 3 emissions. Federal policy support includes loans from the DOE Loans Program Office (LPO) and, we expect through the budget reconciliation process, continued or additional point-of-sale (POS) consumer rebates, tax credits for Sections 25C and 25D, contractor incentives, workforce development, and a new Clean Energy and Sustainability Accelerator program.

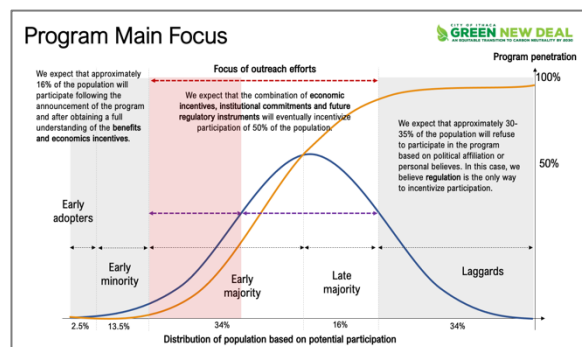
Curtis Probst, CEO of New York City Energy Efficiency Corporation (NYCEEC), explained that NYCEEC is the first local Green Bank in the US. As a 501(c)(3) mission-driven lender, all projects must have environmental benefits or reduce greenhouse emissions. NYCEEC fills gaps over multiple real estate sectors: affordable and market rate multifamily, commercial, industrial, and institutional. NYCEEC is a leader in green loans, having mobilized over \$430 million in capital for energy efficiency and clean energy projects and greened over 12,000 affordable housing units. While NYCEEC is not a CDFI, over 90% of its projects in the last three years have been in LMI communities.

Diverse Loan Products Cover All Aspects of Building Electrification	
Product	Affordable Multifamily
GREEN PREDEVELOPMENT LOAN	✓
ACQUISITION LOAN	✓
GREEN CONSTRUCTION LOAN	✓
EQUIPMENT LOAN	✓
ESA-BACKED LOAN	✓
PPA-BACKED LOAN	✓

Probst spotlighted four of NYCEEC's deals: Greenpoint Hospital Site – Residential (Passive House); Greenpoint Hospital Site – Shelter (All-Electric); Geneva Solar Village (Zero Net Energy); and Crescent Manor (All Electric). He concluded, full electrification remains costly, although incentives and a full accounting of benefits allows some projects to pencil. New construction is generally easier than retrofit and suburban/rural is generally easier than urban. Financing is typically from multiple sources and is needed at different stages of projects: pre-

development (project scoping), construction, and permanent.

Luis Aguirre-Torres, Director of Sustainability for the City of Ithaca, showcased the city's 'Green New Deal, an Equitable Transition to Carbon Neutrality by 2030.' Most emissions come from energy use inside buildings, transportation, and the electric grid. It is necessary to implement cross-cutting long-term emissions reduction programs consisting of: Energy efficiency (30% emissions reduction); Decarbonization (30%); Electrification (20%); and Carbon sequestration (20%). Ithaca developed its own definitions, complementing state and federal definitions, in order to consider climate justice while moving the whole city to carbon-neutral.



Aguirre-Torres has prioritized democratic engagement and creative solutions, e.g., talking with the utility company to propose sharing savings through a creative approach to energy storage. Drawing from diffusion of innovation theory, Ithaca targets its efforts on the middle 50% of the population for whom we expect that a combination of economic incentives, institutional commitments and future regulatory instruments will eventually incentivize participation

(and for now not pursuing to sign naysayers/laggards into the program, nor those who are already sold on the idea).

Aguirre-Torres identified ten keys to success of Ithaca's program:

1. Increase market sophistication.
2. Address industry fragmentation.
3. Create economies of scale to achieve savings in equipment/parts/labor.
4. Achieve bulk purchasing power.
5. Develop a skilled workforce.
6. Maximize efficiency and consolidate government incentives.

7. Develop mechanisms to unlock financial flows.
8. Risk mitigation strategies implemented at the portfolio level.
9. Achieve financial inclusion and climate justice.
10. Enable the aggregation and securitization of energy assets.

Mark Kresowik, Federal Policy Manager at RMI, enthused that Ithaca can and should be the model for the rest of the country. Framing the challenge of building electrification, he said 34 million households reported experiencing energy insecurity in 2020; 40% of global climate pollution is from buildings; and 26 million households below 80% of their area's median income are burning health-damaging fossil fuels inside their homes. Currently more than 14.6 million properties in the US are at risk of experiencing substantial flood damage, with outsized impacts on historically marginalized and underserved communities. More than 5 million properties today face severe or extreme wildfire risks and another 20 million properties are at moderate risk. Delinquency and loan loss rates could skyrocket as the number of extreme climate events continues to grow. How do we ensure those facing electricity shut-offs and disruptions are the most supported? The risks are highest for those already struggling to make ends meet.

It is a mind-boggling task to align federal and state programs and have them work together. As more households switch away from gas, you have fewer households paying for that gas infrastructure. As that takes hold, gas prices quickly escalate. That's why we have to start with those households – else we exacerbate the problem that we are trying to avoid. Alluding to the Justice40 program, **Kresowik** emphasized, “We need ‘Justice100’ in order to make this work. Forty percent is just the percentage of low-income households in America; these households need MORE.”

Unfortunately, the current model for retrofits is ineffective. This is due to disjointed Federal, State, and Local programs; low rates of application and approval among eligible households; deferral rates as high as 50%; modest retrofits that lack health and safety and decarbonization measures; and programs that still financially support and subsidize fossil fuel systems and infrastructure. In an effective whole-house retrofit:

- Health and Safety measures include toxic chemical abatement, roof repair, wiring repair, indoor ventilation, etc.
- Weatherization and Energy Efficiency measures include building envelope improvements, air tightness, and sealing leading to a reduction in energy use.
- Appliance Electrification replaces fossil fuel appliances, like gas stoves and furnaces, with efficient, electric alternatives, like induction stoves, air source heat pumps, or geothermal heat pumps.
- Energy Assistance includes limits on energy burdens, utility bill assistance, rooftop solar, and/or community solar.

A whole-house retrofit needs to be done at no or very low upfront cost to LMI residents, requiring a complex stacking and braiding of funds. There are billions in federal dollars to leverage and unlock. With Fannie Mae and Freddie Mac touching half of all loan origination in America, the federal government is on the hook for significant climate risk. Fannie Mae's HomeStyle Energy® and Freddie Mac's GreenCHOICE® mortgages finance green improvements to existing homes at purchase/refinance

What's not working and what can the GSEs do?	
FROM	TO
<ul style="list-style-type: none"> ▲ Lack of information about risks or rewards ▲ Burdensome project evaluations and operational requirements for lenders ▲ Limited market of trained green appraisers 	<ul style="list-style-type: none"> ✓ Require home energy and climate risk data to increase visibility and drive demand ✓ Make electrification upgrades eligible given health/climate benefits ✓ Braid and stack incentives at point of transaction in underserved communities ✓ Ultimately require decarbonization and resilience in all mortgage transactions

rates, including renewable energy, cost-effective energy efficiency measures, and resilience upgrades. They are a trusted capital source that offers among the lowest cost of capital available for financing green home improvements. They and other government-sponsored enterprises (GSEs) can take meaningful steps to ultimately require decarbonization and resilience in all mortgage transactions.

State and local capital sources include utility programs, Green Banks and financing tools, and innovative state/local programs such as the Regional Greenhouse Gas Initiative (RGGI), California's Low-Income Weatherization Program, and Philadelphia's Built To Last Pilot. For ESG investors, unlocking the single-family green mortgage market can create significant ESG benefits.

An inequitable transition would devalue home equity in communities already struggling. Decarbonization and the mobilizations trillions of dollars need to be paired at point of transaction when they improve their homes, changing the equation in their decision. Prioritize these households; make them first. Make all levels of rules more flexible.

To open discussion, **Grace** shared the themes she had heard from the panel: (1) The challenge and the opportunity are both large, requiring creative, smart, flexible solutions; (2) Prioritize LMI households and communities; and (3) Tell the story better, draw pictures, make the table larger.

Aguirre-Torres agreed. In Ithaca, they face a few different challenges. First, of the 70% of residential stock that are rentals, half of owners live out of state – what will incentivize these landlords? Or, a property owner will have just invested in a natural gas furnace last year; they aren't going to change no matter what you tell them. Additionally, we can forecast savings for residences based on how old they are, but it's harder for commercial to identify what will be most impactful. For example, one of our goals was to electrify all restaurant kitchens. Chefs complained to city council that they don't want electric kitchens and opined that "this shouldn't be a priority for the government." We need to sell a clean energy narrative both to the community and to city government. **Kresowik** said the first thing is to avoid new gas structure investment; stop making the problem worse. The American Medical Association just put out a press release saying that breathing is four times worse with gas stoves than with electric stoves. Invest in heat pumps and induction stoves.

Frank Altman of the Community Reinvestment Fund asked what will happen to electric rates and observed that our electricity will also need to be carbon neutral. **Aguirre-Torres** noted that hourly demand-based pricing model is promising. **Kresowik** added two approaches to keep electricity bills affordable: capping electricity bills based on income and doing community solar. We need to dramatically expand percent-of-income payment programs and progressive rate design that is tied to energy efficiency and affordability.

In response to a question on how Ithaca decides what is a green job, **Aguirre-Torres** said that Ithaca's electrification will be the biggest job creator and attract the most investment in the history of the city. They are thinking carefully about how to target frontline communities and Black, Latino, and formerly incarcerated people, when unions are mostly white. They want to expand skills training to what the city needs, such as 'conflict resolution' for people from less privileged backgrounds, and to build a regional apprenticeship program.

A Cornell University student intern with the Wells Fargo Foundation asked what students (especially LMI students) can do to help Ithaca include non-Cornell-owned student housing in the city's electrification project. **Aguirre-Torres** noted that students should vote! Also, students previously have worked collectively to pressure landlords.

In response to a comment that incentives are lower than they should be, dissuading municipalities from participating, **Kresowik** said that the New York State Energy Research and Development Authority (NYSERDA) has been helpful. Technical assistance and trainings for building owners, lenders, etc. are important. We need more programs that reward excellence. With PUCs, we need to figure out how to align the incentives of the utilities with the incentives of the people in this room, including interconnection approvals, intelligent tariff design, and incentives. NYCEEC offers an incentive bridging loan.

Altman asked what politics the panelists face trying to bring new solutions to bear. **Kresowik** advised investing in local organizing organizations. Among such diverse stakeholders as oil and gas companies, realtors, and restaurant owners, we need to make climate risk clear and align the public and financial beneficiaries. We currently have this false narrative, 'The sticker price of a home is the only thing that matters.' But it's the total cost of ownership that includes total monthly payments.

Responding to a question about new technology and business models that could help retrofit legacy 100-year-old buildings, **Aguirre-Torres** pointed to a Dutch technology for new, insulated building walls to be installed on the outside of existing walls. However, this technology is most effective when there is standardization in low-income housing stock. Financing retrofits is really hard. If, because of landmarking and restrictions on siting batteries in New York City and not having enough roof space, a new natural gas-fired cogeneration plant were constructed, that would be a really disappointing outcome. Despite new technology and discrete initiatives, retrofitting still really hard. We'll work down cost curve and see more projects, but we'll see new construction before retrofit and we'll see

suburban/rural before urban. **Kresowik** agreed. New construction is easy; just regulate it. It's cheaper to build, since you don't have redundant systems.

Working Session 2: Productization and Capitalization of PPA-Secured Term Loans

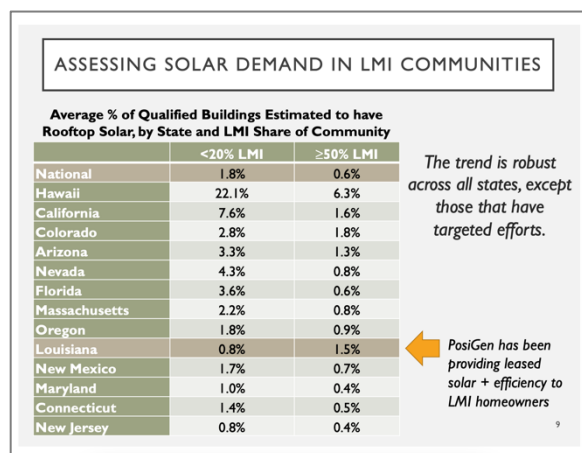
Panel Moderator: **Bert Hunter**, Chief Investment Officer, Connecticut Green Bank

Panel Speakers:

- **Michael Freedman-Schnapp**, Managing Director, Financial Advisory, Forsyth Street Advisors
- **Melissa Malkin-Weber**, Sustainability Director, Self-Help Credit Union & Ventures Fund
- **David Godschalk**, General Counsel, Urban Ingenuity
- **Musa Collidge-Asad**, Chief Investment Officer, Inclusive Prosperity Capital (IPC)

Bert Hunter, Chief Investment Officer of Connecticut Green Bank, kicked off Working Session 2 about the potential for Green Banks, CDFIs and other mission-aligned intermediaries to source capital by monetizing the debt portion of the capital stack more efficiently. Could 'productizing' or 'standardizing' these loans make this an attractive lending or investment opportunity for larger financial institutions, institutional investors, and the bond market?

Michael Freedman-Schnapp, Managing Director of Financial Advisory, Forsyth Street Advisors, shared framing slides on the broad mission and opportunity for clean energy investments in low-income and under-resourced communities as well as other traditionally marginalized populations that are being disproportionately impacted by climate change. He noted that presently there is a small subset of CDFIs that are engaged directly in clean energy projects but that, if we are to reach our national climate goals (particularly with respect to underserved and vulnerable communities), this engagement needs to be broadened considerably which will only exacerbate the funding predicament.



Rooftop solar penetration is significantly stratified by the economic status of residents. Cross-checking Google's Project Sunroof with census data shows that high-income communities (<20% of residents LMI) have an average of 1.8% of qualified buildings estimated to have rooftop solar; whereas lower-income communities (≥50% residents LMI) have an average of 0.6% of qualified buildings estimated to have rooftop solar. The trend is robust across all states, except those that have targeted efforts (such as Louisiana, where PosiGen is active, see slide).

Freedman-Schnapp noted growing demand for community solar. In 2021, 957 MW of community solar was installed, a 7% increase over the prior year. Nearly 4,300 MW of community solar are expected to be installed in the next five years. There are policies and programs active in 19 states plus Washington, DC, to promote community solar, with an additional 22 states having at least one community solar installation. DOE's National Community Solar Partnership is targeting 5 million households on community solar by 2025. The Solar PPA loan product could also potentially finance third-party owned commercial solar installations in LMI communities, or on NFP-owned affordable housing.

Freedman-Schnapp asked, where can we intervene along the path between capital markets, intermediaries (Green Banks plus a small subset of CDFIs and CDCUs/CDBs), developers, and site hosts? Possible interventions exist in aggregation, standardization, more efficient subsidy, credit support, and/or more certain utility tariff policy.

Following Freedman-Schnapp, the next three panelists representing intermediary organizations introduced their organization, what attracts each to clean energy markets, and what types of opportunities they see that excite them about the potential for scale and impact.

Melissa Malkin-Weber, Sustainability Director of Self-Help Credit Union & Ventures Fund, said that Self-Help Credit Union has 35 branches, \$1.5 billion in assets, and serves over 92,500 members through branches and offices in four southern states and the Self-Help Federal Credit Union has over 36 branches, \$1.7 billion in assets, and serves over 95,000 people in California, Illinois, Washington, and Wisconsin. The Self-Help Ventures Fund is a nonprofit 501(c)(3) loan fund capitalized with loans and grants from foundations, religious organizations, corporations, and government sources. It manages Self-Help's higher-risk business loans, real estate development and home loan secondary market programs. Self-Help launched the Center for Responsible Lending in 2002, which works to ensure a fair, inclusive financial marketplace that creates opportunities for all credit-worthy borrowers, regardless of their income.

Self-Help has a big toolbox. We are often in states where the policy environment is favorable for development. If you overlay persistent poverty and communities that are dominated by people of color and climate risk, then you see the overlaps are in states where the utilities are not favorable to communities. We need to monetize the co-benefits in some useful way, pulling in health benefits and health costs into something like weatherization.

David Godschalk, General Counsel for Urban Ingenuity (UI), introduced UI as a developer, financier, and owner of clean energy infrastructure at both the building and community scale. UI has overseen, advised, and directly invested in approximately \$100 million in equitable clean energy assets that provide deep community benefits while also meeting the needs of the investment community. Working Power is a clean energy community development and financing platform that was born from UI's experience in developing 15 MW of solar PV with community-based partners over the past five years. UI also developed, launched, and administers the Washington, D.C. Property Assessed Clean Energy (DC PACE) financing program, with over \$60 million of clean energy project debt financings completed across 30+ projects within the District of Columbia.

Godschalk offered four key points:

1. There is conflict between the efficiency of 'productization' versus variability in PPA-secured project opportunities. For example, there are significant variations based on geography/regulatory system, sector (utility versus end user), credit quality/efficiency, and terms. Diverse regulatory/policy barriers also exist, often due to regulatory capture. And equity opportunities in utility-scale projects are very different from small-scale commercial or community-focused projects. *Are we selling off-the-rack or made-to-measure?*
2. LMI and marginalized communities face additional hurdles in accessing capital and trusted technical partners. They often lose control and/or are forced to sell off projects to better capitalized, equity-backed solar developers.
3. There is a need for financing products responsive to the needs of these hard-to-serve communities: (a) Products at all stages – predevelopment, construction, permanent financing, guarantees; (b) Differing opportunities for standardization; (c) Impact investors and structuring fair returns.
4. "Productization" is necessary, but not sufficient. Our need to generate demand underscores the importance of capable and trustworthy intermediaries.

Godschalk concluded that the Working Power platform is focused on (solving items #1-4 through) financing and developing renewable projects in partnership with communities and nonprofits, to create local ownership and deliver local benefits.

Musa Collidge-Asad, Chief Investment Officer, said that **Inclusive Prosperity Capital (IPC)** is a spinoff of the Connecticut Green Bank. IPC has a goal of scaling nationally and also scaling across a range of product lines (productization). IPC has completed \$30 million in investments across the US, much of

which focuses on LMI communities, and is on pace for an additional 2x-3x that amount through 2023. They often do projects with blended capital; it's the expectation, unfortunately. For the purposes of solar financing, he believes that Solar PPA platform does not always work (though sometimes it does). IPC has developed Smart-E, a clean energy lending operating platform that is focusing on underserved communities and markets.

Malkin-Weber introduced the Willard Street Apartments as a replicable example of multistakeholder community partnership and a feasible capital stack. The project has 84 units of affordable housing in the transit center of a small Southern city in the Black Wall Street tradition (Durham, NC). The stack that worked used the Low-Income Housing Tax Credit (LIHTC). Self-Help's role was to create the overall platform, facilitate, and become the development managers for the construction; we also own the commercial space to lease out. Our community partners brought to the table the political know-how and how to get the work done. The takeaway is that you need the right pencils and the right partners. The project is solar-ready, but rooftop installation has been stymied by utility issues. Malkin-Weber also described projects in Nashville, TN, that used the Solar Investment Tax Credit with LIHTC under the innovation category – and in Buffalo, NY, in partnership with PUSH Buffalo, where a historic tax credit needed to be supplemented by another tax credit.

Collidge-Asad noted a couple of cases where projects are located in Opportunity Zones and he is seeing some blending. But the big challenge is, how do you productize and standardize everything without having to re-do everything?

Hunter pushed the panelists to examine closely the potential for sourcing capital by monetizing the debt portion of the capital stack more efficiently. Is “productizing” or “standardizing” these loans that provide 50-70% of the capital for these solar projects possible? Summarizing what some Green Banks and CDFIs have been exploring over several months, **Freedman-Schnapp** described the Clean Energy CDFI project and outlined at a high level the “two approaches” of (1) “loan purchase” OR (2) “senior secured facility” – both of which require both “standardizing” loans and pooling loans to achieve scale.

Collidge-Asad noted high levels of vulnerability and said he looks for intermediaries that can push through the financing; if the risk level flows to the right level, then the aggregation can move to the right level. **Godschalk** asked whether IPC's PPAs are standardized. **Collidge-Asad** replied that it would be great if they were, but we are seeing that each is different because of stipulations from geographies, regulations, sectors, and credit quality (not to mention the terms). It is challenging to reach any efficiency around any individual project. PPAs work best when you have big buyers. What becomes very critical at the intermediary level is that capital sources flow to the intermediary in a way that maximizes flexibility for the intermediary.

Collidge-Asad said that something similar to program-related investments (PRIs) would be helpful, something that is flexible and that the intermediary can deploy. Lines of credit that do not come with

bells and checks nor with full recourse. The moment you turn on full recourse, there is a tendency to look at everything; it often takes time.

Godschalk reflected that we are putting a lot of weight on the homeowners. Somehow, we've convinced ourselves that this is an individual issue, but it is not – it is a systemic issue. **Collidge-Asad** said that a single large equity partner is needed. Our loans/construction loans have terms of 15 or 20 years. If we are just talking about a Solar PPA, if it's too small, then it becomes challenging to justify coordinating of the different players in this complex project – sponsor players, tax players, debt players, etc. If it were large enough (one singular tax equity partner), then it could work. Even without a tax equity partner, he would advocate for looking beyond just a Solar PPA since, at end of day, you are looking to expand.

Working Session 3: Building a Green Bank and CDFI Lending Platform for Multifamily Clean Energy

Panel Moderator: **James McIntyre**, Chief Strategy Officer, Inclusive Prosperity Capital (IPC)

Panel Speakers:

- **Esther Toporovsky**, Executive Vice President, NYC Housing Partnership
- **Atalia Howe**, Assistant Vice President, Initiatives and Impact Investing, Community Preservation Corporation
- **Oswaldo Acosta**, President and CEO, City First Enterprises
- **Abigail Corso**, Chief Strategy Officer, Elevate Energy

James McIntyre, Chief Strategy Officer, Inclusive Prosperity Capital (IPC), asked the panelists to start with the basics by describing affordable multifamily housing and how their organizations work to provide clean energy to those buildings.

Esther Toporovsky, Executive Vice President, NYC Housing Partnership, noted that there is both regulated and naturally occurring affordable housing. Her organization works with regulated affordable housing and nonprofit developers who build it. The NYC Housing Partnership does not do direct lending but works with state Housing Finance Authorities. “There is a huge ecosystem,” she commented, of ‘energy’- and ‘housing’-related organizations.” Her organization does a lot of translation to help these two sides of the coin to understand one another. A priority for the space needs to be finding strategies to bring in non-traditional capital into the space, such as clean energy incentive money.

Atalia Howe, Assistant Vice President, Initiatives and Impact Investing, said that **Community Preservation Corporation (CPC)** has invested \$11 billion around New York State to support 220,000 units of affordable housing. CPC lends both to regulated and naturally affordable housing, coming in as private debt. It has financed efficiency retrofits in over 8,000 units. “With efficiency, there are clear savings you can underwrite in a first mortgage,” she observed. “With decarbonization, savings are not always clear – that can be a challenge.” Howe is seeing housing agencies adopt stricter standards to push decarbonization but, with the unregulated stock, we are asking building owners to take steps voluntarily. Howe believes that the space presents a huge opportunity for CDFIs. “We have a sustainability team and have integrated it into our operations,” she said. “We expect loan officers and equity teams to think about building decarbonization.”

Oswaldo Acosta, President and CEO, said that **City First Enterprises** is a multi-sectoral loan fund, with loan programs for affordable housing, small business, community facilities and residential mortgages. City First Enterprises has established partnerships with the DC Green Bank and Montgomery County Green Bank. “We use our existing loan administration and underwriting infrastructure to help these newer green banks that don’t have technical ability to do the finance side of the lending, but they have the voice and the platform with communities plus the technical clean energy expertise,” he said. “It is a natural alliance.” City First Enterprises also provides debt servicing for the DC Green Bank.

Abigail Corso, Chief Strategy Officer, described her organization, **Elevate Energy**, as “where the rubber hits the road. We are actually in the buildings – we work with building owners, residents and contractors to get mainly existing buildings upgraded.” Elevate has a heavy emphasis on efficiency retrofits leading to decarbonization (such as heat pumps) and coupling those measures with solar. Doing the design work to figure how to get these buildings upgraded. We spend a lot of time in the unsubsidized stock. We are losing that stock quickly and it’s not getting replaced. The organization does the design work to get buildings upgraded and then “spends a lot of time braiding money together – utility incentives, loan products, grant money - to fill gaps.” Corso noted challenges working with both CDFIs and Green Banks to finance these projects. “We are at the point where we maybe need to bring our own dollars to projects where we can be more flexible than the local CDFI or Green Bank,” she stated. **McIntyre** asked **Corso** to affirm that there are building owners “out there with their hand out looking for money – and there’s a gap?” “Yes,” Corso replied. McIntyre observed that his organization, Inclusive Prosperity Capital, finds itself in the same spot.

McIntyre asked the panelists to describe the funding gaps in more detail.

Corso related that “in our experience, there’s plenty of capital out there – but it is not often the right money for the solution. There’s a disconnect [around needed pricing and terms of funding]. We often end up in a situation where we’ve braided all these funding sources together and there is still a gap there.” In small building, Corso felt gaps were small, often \$35k or less. “But if you can’t find the funding,” she noted, “you won’t put the heat pumps in, which means the solar will not go on the building. Often a small amount of money is preventing the project from going.” Corso noted that

financing has to be tailored to the ownership and the building stock. “It really has to be a very low-interest-rate product that has an off-ramp for the owner or resident,” she said. She added that it was important not to put a lien on the building, instead using a UCC filing or a non-recourse loan.

Acosta agreed with Corso’s observations, then added that “the missing link for us as lenders is the work that Elevate and others do in customer acquisition, enabling the deal, and helping everyone understand the math of the problem.” Acosta noted that customer acquisition for green lending is still a critical challenge. Acosta felt that local Green Banks have the capital and the willingness to take the risk, but just don’t have enough volume. “We need education and technical training [for building owners] that is not happening,” he said. “People outside of our little bubble don’t know that [decarbonization] is actually a possibility. Our lingo and jargon do not connect to them. We need to make products more ‘consumer-like’ as opposed to ‘project finance.’” Acosta concluded, “we are in a Kafka-esque universe with project finance. You shouldn’t have to go through the headaches of monetization of tax credits and SRECs to make a \$3 million (or smaller) deal happen.”

McIntyre asked Howe about CPC, which has perceived financial resources plus project pipeline. Where do gaps still exist in CPC’s experience?

Howe responded that mortgage capital doesn’t fully address climate change or resiliency and is not required to. The scalable solution to addressing climate change, Howe felt, is mortgage capital beginning to require energy efficiency and decarbonization. While GSEs require environmental assessments for projects they fund, she noted, “if there are fossil fuels burning on site you are not currently required to address that.” Finally, Howe agreed with Acosta that capital is part of the solution but not the only solution. The supply of available financing must have more amenable terms for LMI-serving projects, but also on the demand side she described needs to build the “capital absorption” capacity through education, technical assistance, and workforce development.

Toporovsky noted that the financing landscape for affordable housing is “wonky,” “complicated” and “crazy.” The variety of capital stacks in place means that we have to think hard about how best to get capital to building owners for clean energy as a part of their “business as usual” process. One strategy Toporovsky recommends is to work with state housing finance agencies and energy offices to provide soft, subsidy-like 0% money that can be a part of the capital stack, and flow on a per-unit basis directly to developers who are already coming through housing agencies. “Stop bifurcating the money,” recommended Toporovsky, “and let the housing agency administer it. If you are able to take some of that energy money, then you can start to create an ecosystem with HFAs where they can learn how to do this stuff.” Toporovsky acknowledged that this strategy may be best suited for regulated affordable housing.

More generally, **Toporovsky** observed, it is critical to think about how to describe the value proposition for the developers / owner. “Think about their business mentality,” she said. “A lot of times it does not come from an energy or climate perspective at all.” With solar projects, Toporovsky has worked to

create business structures that look like real estate deals more than “clean energy deals” in terms how they are structured and what the business model is. In her experience, creating this similar “look and feel” has helped to drive adoption.

McIntyre agreed that “a lot of the work of our panelists is based on listening” and focusing on the primary concerns of developers. For them, he said, “the dog is a building, the tail is the energy.”

Corso agreed that “you have to meet developers where they are at – they are real estate people.”

McIntyre added, “but if you can show them the impacts on operating and maintenance they will care.”

Toporovsky added, “they are thinking about income – more sources of income.”

McIntyre cited data that homes with lower energy burdens back had lower foreclosure rates in the 2008-2012 housing crisis, which he felt bolstered the arguments around project economics.

Corso turned back to the question of what kind of capital is needed in the space. “The lowest cost money is needed, grants and incentives are our ‘go to’,” she said. “The next source to look at is low-interest loans or flexible capital. Maybe owners have reserves or capital magnet funds. And then we need a gap financing product. There could be some kind of PPA financing if you are doing solar, some kind of non-recourse loan product.”

Acosta turned back to the ecosystem question. “As a sector,” he predicted, “we will soon be faced with a policy or market decision: do we have a duplicated distribution system of capital through Green Banks and we keep the CDFIs as an island? I’m biased and think we [CDFIs] do well as a lender. Do you use Green Banks as a local Elevate – an educator as well as a capital provider? We need a framework of absolute trust between the Green Banks and CDFIs. What is that framework? What are Green Banks doing in local markets and how should they work with CDFIs?”

Toporovsky underscored the importance of Acosta’s questions. How does Green Bank infrastructure fit within the CDFI world? She noted that Green Banks have ability to underwrite clean energy, while many CDFIs can underwrite multifamily housing. Toporovsky suggested that Green Banks should be wholesale capital providers, “another source that is comfortable looking at energy,” and develop a structure to work with CDFIs as retail lenders. She cited Inclusive Prosperity Capital and the Connecticut Green Bank as a good model: “they sat around the table with CDFIs and others to figure out their strategy. The CDFI industry is so well-versed in LMI communities, so let them do it, but have more capital to do it well.” Toporovsky added that “CDFIs need a certain level of training and understanding and they need to be less risk-averse on the clean energy side. Too many CDFIs are requiring to collateralize a solar asset, for example. So, there is a need on both ends.”

Acosta felt that “there is a coalition in the making,” but also noted that Green Banks are starting to realize they could maybe take the whole deal, which could generate tension or competition between the sectors.

McIntyre observed that such a trend would create a lot of duplication of cost structures. “We should all be in the business of trying to put ourselves out of business,” he urged. “How can Green Banks empower CDFIs? What are the best examples we can follow?”

Acosta felt that while the outcomes will be unique to different markets, it “would be great to have an infrastructure of Green Banks being educators, providing first loss money and technical assistance work, and letting CDFIs do the actual lending work.”

Bomee Jung of Cadence OneFive observed that, when it comes to affordable housing, “capital subsidies are needed to keep buildings standing and operating subsidies are needed to help with affordability. We pretend that is not what is going on. But there are no returns in affordable housing – you are essentially just providing capital and operating subsidy through whatever financing instruments. In the climate conversation, not only is the building in need of continual maintenance, but it also has to respond to changing environmental conditions that we haven’t accounted for.” If needs for capital subsidies are only going to get bigger, she asked, where is that money going to come from? Jung suggested an analogy: “When you look at the utility system, they rate base their stuff needing replacement. How can we ‘rate base’ the fact that our buildings will always need some capital improvement money? Is there some way to amp up the amount of capital grant money, conceptually?”

Acosta felt that only the federal government can resolve that issue, and to some extent local and state dollars. “This is an intractable problem otherwise,” he said. “Banks do not have the shareholder mandate to just give away enough money to solve the problem.”

Jung wondered, “are we giving the wrong impression by being super innovative about how to finance things?”

Annie Donovan of Local Initiatives Support Coalition (LISC) agreed with Jung. “The issue comes down to our tax structure and what we use it to support,” she felt, citing the importance of the CDFI Financial Assistance program to the growth of that sector. “What CDFIs have been able to do,” she described, “is to make the case to Congress – and we have bipartisan support – that if you give us \$1 we will leverage it 12x to create social good, and we can show you how that translates in your community. It is a powerful formula that has staying power.” She continued, “But now we need to absorb clean energy and climate resiliency into our space. For example, we must support a loan product that is unsecured, longer term, and lower-interest-rate. The CDFI industry started around creating products to fill the gaps. We need to meet this problem where it is, but we need the support of Financial Assistance-like dollars to do that.”

Toporovsky argued that “we need a CRA-like mandate to help drive this,” prompting **McIntyre** to note that CRA is out for comment. **Donovan** felt that the sector needs not only CRA, but additional

government dollars. She further clarified that “we need to create an FA-like instrument,” referring to the CDFI Financial Assistance awards, “and not another tax credit instrument to address this.”

Toporovsky agreed – “what we need is something at the top that pushes this.” **McIntyre** added that “the industry also lacks what the mortgage market has, which is long-term credit enhancement.”

McIntyre then observed that our panelists are from “have” states [places with strong supports for clean energy], such as NY, DC and IL. “What about the rest of the country?” he asked.

Corso suggested that “you have to think locally. Elevate does work in Wisconsin and Missouri and Michigan. In the Midwest, we find we have great CDFIs but they stay in their lane. If there were a vehicle to get them to broaden [their focus to do more clean energy work], that would be a game changer. Maybe that is where the Green Banks come in, maybe the Green Banks can take a little more risk,” she wondered. Corso observed that “the CDFIs do have the infrastructure but, where I work, for the most part they don’t want to do clean energy finance, don’t understand it, and don’t have the expertise.” She expressed a resolve to “push our CDFIs to do more, and to help start Green Banks.”

Toporovsky commented, “that’s where Green Banks should be, in markets where there isn’t capital.”

Acosta turned back to the government funding question – “I’d like to have something more like the CDFI Financial Assistance (FA) program instead of Capital Magnet or New Markets, and a lot more of it. There has been a conversation recently about having an FA-like facility for green lending. That would be a catalyst for the rest of the country.”

Acosta then questioned whether the notion of “demonstrating” success in a financing space to bring in bank capital is a viable strategy. “It hasn’t worked,” he said. “We’ve proven that small business lending is doable and scalable, but banks have not emulated us. ‘Demonstration’ is an intellectually flawed concept. How many years do we have to demonstrate that this lending works? Big financial institutions make money so easily in other spaces – why would they bother with this?” **McIntyre** added that bank “management committees can be disconnected from communities, and even from their own banks’ community development and sustainability wings.”

Beth Bafford of the Calvert Foundation joined the conversation: “the unit economics on a lot of Green Bank and CDFIs loans do not work, which is why we have to leverage subsidy on every deal. That is the role of this alternate financial system – to pool subsidy to be able to make those loans. The question is aggregating and organizing what we’ve done to make others pay attention. The answer will never be to get Wells Fargo to start making these loans.”

Michael Lent of Veris Wealth Partners asked about how to create efficient systems to deliver capital to CDFIs and Green Bank, wondering if there could be some aggregated solution. He felt that among impact investors, there IS an interest in below-market-rate investments if we can create a more efficient mechanism for the delivery. He also suggested that community-based lenders themselves need to look at how to become more efficient in their lending – using technology, and creating more

efficient capital-raising mechanisms rather than needing to braid together so many sources at the entity level, in order to lower the cost of operations.

Discussion with Shalanda Baker and Otho Kerr

Discussion Moderator: **Beth Lipson**, Chief Financial Officer, Opportunity Finance Network (OFN)

Discussion Speakers:

- **Shalanda Baker**, Director, Chief Diversity Officer, and Secretarial Advisor on Equity, Office of Economic Impact and Diversity at the US Department of Energy
- **Otho Kerr**, Director of Strategic Partnerships and Impact Investing, Community Development Unit at the Federal Reserve Bank of New York

Shalanda Baker, Director, Chief Diversity Officer, and Secretarial Advisor on Equity, Office of Economic Impact and Diversity at the US Department of Energy observed that, for 400 years, our country relied on enslaved labor to create wealth – and that part of that wealth sits in the vault beneath this building right now. What are we really solving for in this work together?

Baker relayed her origin story that shaped her interest in the equity dimensions of society's transition to clean energy. As a project finance lawyer, she initially thought economic development was the path to prosperity. A pivotal experience was meeting an indigenous group fighting against a wind farm. "It looked a lot like fossil fuel development, extractive in every way – but it was clean energy." Baker realized that we must interrogate our processes, or we will replicate the inequities of the past and present. Following her time in Mexico, she started organizations in Hawaii and Boston focused on bringing communities into policy debates over the energy transition, to avert catastrophic environmental change. The market is moving. How do we ensure that new voices become a part of that conversation?

Otho Kerr, Director of Strategic Partnerships and Impact Investing, Community Development Unit at the Federal Reserve Bank of New York, noted we are entering the Juneteenth weekend, with celebrations throughout the city. Initially an investment banker, Kerr co-founded an impact investing firm, EKO Asset Management Partners, to deploy a blend of capital to address environmental issues. They created the first investment program focused on carbon credits in anticipation of a national cap-and-trade program. In addition to helping the environment, they wanted to help indigenous communities – for example, supporting an Apache tribe to raise \$40 million in revenue to develop their carbon offset projects. Later, Kerr became CIO at Acumen, focusing more on adaptation and resilience. There are communities of color and developing countries that are bearing the burdens of our excesses.

Kerr joined the Federal Reserve Bank of New York in 2021 to lead impact investing efforts focused on how we can drive private / impact investing capital towards climate resilience, health equity, and financial wellbeing.

Lipson asked what is driving the convergence of environmental justice and community development.

Baker replied that, with respect to environmental justice – when the National Environmental Policy Act (NEPA) passed decades ago with bipartisan support, communities of color were watching this movement unfold. In the early 1980s, they said, ‘that legislation has not impacted our communities positively.’ Their communities were still more likely to house power plants and toxic facilities, suffer higher rates of asthma, and have worse air quality. A group of folks got together to talk about environmental racism. The highwater mark came in 1992 with Executive Order 12898; the federal government realized that decisions it made had disproportionate impacts on minority and low-income populations and required consideration of environmental justice impacts. But in many ways, we are still in the same place. BIPOC communities still have higher levels of pollution.

Fast forward to 2020, when we were all becoming aware of racial injustice. In the Biden administration, the DOE has \$62 billion to spend, more than it has had since inception. Normal appropriation is around \$42-44 billion. This is a huge influx. But that money is development money. Development historically has not served communities of color. In order to tackle economic injustices, we have to infuse these concepts of justice within this development moment right now. We have to return to first principles and understand what we are solving for. The world has inequality built into it that we have to grapple with. We have to put the best instruments we can out the door that incentivize people to engage communities, hire diverse suppliers, and create a more diverse workforce. There’s a legacy of inequality we are trying to undo.

Baker underscored, “We need your help, we need CDFIs to rewire the way you do business. The development and climate stories are intertwined.” We also need convergence from an investor perspective, getting rid of the ‘corporate/climate’ and ‘philanthropic/racial equity’ silos.

Kerr said that, at TED Countdown’s recent Dilemma Session (‘Is there a role for carbon credits in accelerating a fair, net zero future?’), the concern was raised about how developing countries are being taken into account. We’re having the same experience here in the US: the folks facing the biggest brunt of the problem are the low-income and vulnerable communities. Clean energy is important in every community – but are we allocating and deploying capital in those communities where they are really feeling the need? And are we meeting the other concerns they have, e.g., around affordable housing?

There’s also a practical imperative, not just a moral one. Many banks and corporate businesses are short on climate; they need to de-risk their portfolios.

Baker noted that her journey to environmental justice really started when she was teaching law at the University of Hawai'i with a blank slate to "start an energy something." She spent six months learning about domestic energy regulation and interviewing people: environmental leaders, utility executives, the governor's office, regulators, community leaders, everyone in the energy landscape. Hawaii was hitting the limits on rooftop solar; state passed a 100% renewable portfolio standard. But when she would ask, "where do communities fit in?", to a person, her interviewees described this as purely a technical issue; they felt that all communities care about is whether the lights go on or not.

Wai'anae is the lowest-income part of Oahu. All the dirtiest stuff is there as well, e.g., incinerators, power plants. Hawaii pays three times the national average for energy (34 cents per kWh). People in Wai'anae were the backbone of the energy system, but also faced extraordinary energy burden and were on the front lines of climate change. They needed to be at the table as the state was reshaping its energy system. There was an enormous opportunity to create wealth in those communities – energy as a pathway to wealth creation. Baker started the Hawaii Energy Justice program to engage communities in energy planning and regulatory proceedings, i.e., the architecture of the transition. The complexity and obfuscation in that system exclude people. Baker felt isolated at times in this work, since many of her environmental colleagues were worried that engaging communities would "slow us down."

Baker co-founded the Initiative for Energy Justice at Northeastern University in 2017 in order to bring what she did in Hawaii, to scale. She feared that all states were going through this transition without involving communities, yet we have an urgent need to build capacity now. Then she got the call to help the Biden administration with the Justice40 Initiative – which brings her to her current work.

A member of the audience raised the topic of workforce development, referencing their work with Green Opportunities (GO) in Asheville, NC. In the last recession, there was a call for green jobs and a juicy vision that seemed almost in reach – but then it didn't realize the way we wanted. It didn't gel. How do we get it right this time?

Baker acknowledged that "not all of it gelled," but noted there are still strong invisible networks in communities. Groundswell is a part of funding these organizations. In the last four years, there has been a lot of organizing to prepare for this moment. Community organizations now have some capacity to be a part of this. In order to build infrastructure towards workforce development, we need community colleges, utilities for placement opportunities, and other partners. If you have communities that have been underinvested in for 100 years, jobs will be created – but where? Identify the dry places. Bring together local CBOs that have been organizing around the pandemic and environmental justice, with state leaders that will be receiving these funds; start a conversation on how to maximize use of these funds in communities that are dry. "Set the table" to be ready when the funds arrive.

To a question about her "top priority or most exciting thing now," **Baker** said she is building out the ground game for DOE. We're not the USDA or the EPA, we haven't had people on the ground, so we have to figure out how to work with agencies that do have a ground game. But we also want to build

our own, especially around “what tables need to get set” and what are the funding and other mechanisms for that. We need investment, plus philanthropy to reduce risk. Communities must be part of the vision, the erecting of the architecture. “I can help facilitate the architecture for that ground game.” It quickly becomes very granular. Block grants go to states, but there also needs to be someone on the ground.

This is an energy justice moment. Rising gas prices, driven in part by the war in Ukraine, is disproportionately affecting communities of color. This ‘energy security moment’ must become an ‘energy justice moment.’

John Joshi of NYSERDA asked Baker to consider the opportunity for reforms to the DOE Loan Programs Office’s Title 17 governing documents, especially related to environmental justice.

Engaging Investors in Clean Energy Equity

Panel Moderator: **Amir Kirkwood**, President and CEO, Virginia Community Capital

Panel Speakers:

- **Maria Gotsch**, President and CEO, Partnership Fund for New York City
- **Danielle Burns**, VP, Head of Business Development, CNote
- **Erin Horleman**, Director of New Product Development, Environmental Markets, 3Degrees
- **Michael Lent**, Partner and Chief Investment Officer, Veris Wealth Partners

Amir Kirkwood, President and CEO of Virginia Community Capital, welcomed the panelists and asked them to introduce their organization, what role they play in clean energy finance, and why equity is important.

Maria Gotsch, President and CEO, said that the **Partnership Fund for New York City (PFNYC)** channels corporate money of New York to create jobs, spur new business creation and to expand opportunities for all of the city’s residents and neighborhoods. Structured as an evergreen fund, PFNYC is unusual blend of community development and economic development, whose portfolio ranges from legacy industries to emerging technology. PFNYC is now investing in climate technology, with a focus on climate resiliency in LMI neighborhoods. They have identified both a capital gap and a need for stronger corporate sector / technology relationships.

Danielle Burns, VP, Head of Business Development, said that **CNote** is a women-led, women-founded certified B-Corporation that uses the power of technology and a community-first framework to help individuals and institutions invest in products that advance racial justice, gender equity, climate justice, and other causes that matter to them. CNote’s work includes educating investors about economic

justice and sharing opportunities to invest capital into under-resourced communities at scale. CNote uses technology to partner with some of the community organizations that are in the room today.

Erin Horleman, Director of New Product Development, Environmental Markets said that **3Degrees** is a sustainability consultancy and environmental commodity provider that helps corporations around the world achieve renewable energy and decarbonization goals through the voluntary purchase of renewable energy, carbon, renewable fuels, and other products. 3Degrees has built a mission-based/impact-based product line, focusing on accessing corporate funding for investment into underserved communities, both in the US and globally. Instead of leading with renewable energy solutions, we flip the thought process to begin with ‘what impact do we want to have and what will that cost,’ so we actually back into the renewable energy requirements.

Michael Lent, Partner and Chief Investment Officer said that **Veris Wealth Partners** is an impact wealth management firm, 100% oriented towards impact investing. Our top priority is finding investable opportunities in four themes: (1) climate solutions and the environment, (2) racial and gender equity, (3) community wealth-building, and (4) sustainable and regenerative agriculture. We believe in investing in early stage / early founders. Veris currently places assets with 13 approved CDFIs. We thoroughly research the EDI (equity, diversity, and inclusion) practices of the managers and funds that we work with: who are the managers, what are the communities we’re investing in? The clients are there. They are thinking broadly about multiple issues. They know there is no way you can have climate change without climate justice; the people who are impacted need to be part of the solution.

Kirkwood said he has heard FIR participants emphasize a need for capital, a need for partnerships, and a sense of urgency and action. He asked panelists to drill down on their preferences in Environmental, Social, and Governance (ESG) investing: Is your priority capital investment versus offsets? Product offerings? Point of access within an organization? Return assumptions? Scalability of investments? How we measure impact? These are all factors that drive the investments we make. Tell CDFIs how these things play out in decision-making.

Horleman replied that, for a while, unbundled carbon offsets and renewable energy credits were less attractive. Investors’ focus was on PPAs, DPPAs, and tax credit equity investment. We are currently seeing a shift back towards unbundled attributes, because of cost and also because we’ve figured out a way to make the attributes really flexible related to the dollars they’re spending. We separate energy procurement goals from DEI goals, then we highlight that there is value in recognizing potentially overlapping goals that could be met purposefully through RECs alone. So far, we’ve been able to push that narrative.

Gotsch took a step back to frame ESG investing. There have been so many groups working locally for many years. Only recently, the big capital markets showed up – ESG got on their priorities list only two years ago. ESG is finally on the screen as an asset class where investors can make money. An important

question is, how do we link to environmental justice (EJ) projects that are a bit more difficult to do? The answer is, we need data and a consistent way of measuring ESG; large investors struggle here, despite recent innovation in the collection, standardization, and measurement of data. There is also an interesting divide between the US and Europe regarding ESG funds. Europeans have been more prescriptive in what percentage goes to ESG, whereas US regulators have been much less prescriptive, preferring to let the big banks figure it out a bit.

Burns said her origins are in impact investing in public markets. She transitioned to the community side of the house to more deeply align her work with her personal desire to support LMI communities – but wondered at first, “There is so much capital in public markets, why is community investing so difficult?” The answer was access. Institutional investors have additional requirements (reporting, maintaining fiduciary responsibility to clients, etc.) which made working at limited scale so difficult that fewer were willing to do it. At CNote, we are community-first and help corporate partners look at investing through a social and racial justice lens; they want to move dollars off of their balance sheet and also do this work in a meaningful, scalable way. It all comes down to education and understanding where opportunities are and where and when capital is needed. CNote provides investors access to opportunities when they are ready to invest. Community-first means centering the voices of the people who ultimately benefit from this work.

Kirkwood challenged **Lent**: “Amy [Brusiloff] from Bank of America is sitting right in front of you. What would be your elevator speech?” **Lent** improvised: Focus on community responsibility. Corporations face significant reputational risk around Black Lives Matter, gender equity, etc. You make money off of these communities; be accountable to your depositors and reinvest in their communities in a responsible way. Your shareholders want this too (as evinced by the shareholder resolutions that Veris co-sponsors). On top of the Community Reinvestment Act, being a good corporate citizen is simply part of who you are as a corporation.

Kirkwood asked **Gotsch** and **Horleman** how they measure impact. **Gotsch** said that impact measurement has been the bedevilment of our field. Lots of foundations have put a lot of money into this, but ‘impact’ means so many different things, from keeping someone out of prison to a greener environment. In green energy, there are some promising approaches with sensors and artificial intelligence, but this is far from settled. **Horleman** reiterated that 3Degrees defines a project’s impact first, then backs out of that to define technical requirements; “that’s the way to have accurate, bulletproof stories.” 3Degrees works extensively with corporate investors’ marketing and communications teams. Storytelling is easier if you start with the impact first. Ask the people on the ground what it costs, what are the soft costs involved, capture all of this up front.

Kirkwood next asked **Burns** and **Lent** whether they thought lending would continue as the main vehicle for clean energy projects, even as institutional and private equity investors step forward. **Burns** replied that she likes to meet investors where they are in this work; don’t assume they’re further than they are, but also don’t handicap them. There is a huge opportunity to educate investors on what

CDFIs need to be successful. Additionally, CDFIs need to understand how corporations try to create impact with their board and employees and with the communities they serve. For example, employee engagement opportunities can help corporations demonstrate their commitment to their workforce. CDFIs should partner and identify opportunities for employees to show up in a meaningful way and for the corporation to report on that.

Lent differentiated between low-return (concessionary) and market-rate investments. If the real need is for low-return capital, if you make the impact case for why, there are investors willing. Multiple CDFIs could pool their efforts and create a fund; this kind of collaboration also makes a powerful case that this is worth investing in. Regarding impact measurement, **Lent** pointed to reporting systems like IRIS+ and the Impact Management Project (IMP). Target rate funds pool capital to reach scale and also can have clear climate/EDI goals. An increasing number of opportunities are community-led, which is of great interest to Veris' clients. A community could come together to define a project's or program's impact goals, e.g., dollars placed and number of homes built towards wealth-building in a community of color.

Kirkwood said a CDFI sector challenge is that the work we are trying to do is hard to scale. Must we reach a certain level of scale, in order to do this work? Or is the quality of the impact really the important thing? **Gotsch** observed that community development is hard and, by definition, local. The technology sector has a hard time understanding this, since they operate globally without borders ("I can build a piece of software and impact the world – why won't that work in community development?"). **Horleman** noted that aggregation is really important. 3Degrees tries to do smaller projects with local impact, then aggregate these into an investment portfolio of RECs that helps corporations meet their public commitments.

John Joshi of NYSERDA asked, what is the deployed cost of capital? CDFIs need at least 150 points of margin to cover their cost. **Lent** replied, it depends. The spread is defined by the fund managers we work with. We're not defining it; we just try to work with it. A first-time fund manager might do 2.5% on management fees, a venture fund might have a 2.5% management fee plus 20% carry fee, a CDFI would have its operating cost baked in; the range can be large. **Horleman** added that most companies 3Degrees works with are not looking for a financial return; they're looking to meet a variety of non-financial goals, though many initiatives also have indirect financial benefits. They know that, by investing in a project of this kind, they are paying extra premium cost for education and other programming, fully funded by RECs through their renewable energy procurement budget.

Next Steps & Closing

Eric Hangen, Senior Research Fellow at the University of New Hampshire, thanked all of the panelists and participants for their insights towards building an ecosystem that prioritizes clean energy equity. He noted that, typically, Financial Innovations Roundtables catalyze partnerships/initiatives that may emerge after the event or as part of targeted conversations; he encouraged participants again to consider what they can commit to and what they need, to center climate justice during the energy transition. To wrap up this year's in-person event, Hangen solicited participants to describe their commitments to action and to invite others to work with them:

- **Hangen** offered ways to engage with the University of New Hampshire (UNH): (1) UNH is very interested in supporting organizations that are trying to build connective tissue in the ecosystem, i.e., "if your business model is trying to build *other* people's business." UNH can help with business planning, financial planning, convening, and more. (2) Building on existing online, cohort-based trainings in solar lending, UNH and Inclusiv would like to develop trainings in other types of clean energy and efficiency, e.g., electrification, carbon accounting. (3) Hangen personally would appreciate recommendations and connections in Puerto Rico to support cooperatives, lift up community leaders, and strengthen the policy ecosystem for clean energy justice.
- **Cathie Mahon of Includ** said all of us need to be engaging with regulators, individually and in shaping regulatory frameworks, in a way that recognizes that climate-vulnerable communities are not necessarily riskier financially; most simply need financial inclusion and focus.
- **Michelle Moore of Groundswell** announced that graduates of Groundswell's Justice40 Accelerator will be looking for financing and other support. After the current cohort graduates, there will be ~200 graduates in total, of which 16 already have received federal support through Justice40.
- **Melissa Malkin-Weber of Self-Help** plugged the CDFI Climate Crisis Working Group, an informal network of CDFI staff and stakeholders who are deeply interested in promoting CDFIs' responsiveness to the climate emergency. The working group is hosted by OFN. There is not a specific working group web page; to get involved, join through OFN's CDFI Connect forum or contact Malkin-Weber directly.
- **Malkin-Weber** also reported that the North Carolina Clean Energy Fund is very close to getting up and running. She would appreciate introductions to get over that hump.
- **Maria Gotsch of the Partnership Fund for New York City** is always looking for projects and is happy to partner. Our capital is not free but can be very flexible. We do everything from project finance debt to interesting tech companies.
- **Nicole Steele of the US Department of Energy** encouraged participants to join the Credit Ready Solar Initiative. There's a role for you in this ecosystem. Through specific commitments and standardization, everyone can know their place in the puzzle.

- **Franz Hochstrasser of Raise Green** is working deeply on community ownership models. He is looking for capital and credit enhancements to support these non-accredited investors.
- **John Joshi of NYSERDA** made a strong case for credit enhancement capital. If you want to deploy something in New York, NYSERDA is here to help. It doesn't cost you anything. De-risk your portfolios, serve as a market catalyst, and help us show the Governor's office and others what impact we can have.
- **Doug Sims of NRDC** requested originators and creative ideas for the group they've convened to bridge gaps between CDFIs and Green Banks, including modeling.
- **Frank Altman of the Community Reinvestment Fund (CRF)** had three recommendations: (1) Engage in policy. The more voices that come together around policy, the better the opportunity to make change. (2) Deploy underused recovery funds. Altman plugged Connect2Capital as a way for customers to connect to CDFIs; Connect2Capital recovered \$300 million in loans that CRF had helped matchmake. (3) Add a green component to community development policy and funding sources.
- **John Moon from Wells Fargo** invited participants to talk with him about integrating racial equity into (1) infrastructure resiliency; and (2) climate technology, especially at the accelerator stage.
- **Andreas Karelis of RE-volv** is raising capital for BIPOC-led houses of worship around the country to go solar. He would like to know success stories and lessons learned in this area that he can share at ribbon-cutting ceremonies and other community celebrations.
- **Luis Aguirre-Torres of the City of Ithaca** offered the opportunity (also a "cry for help") to invest additional capital in Ithaca's electrification program. Things are getting more expensive, plus we have new unanticipated, expensive opportunities such as integrating undocumented and formerly incarcerated folks (in addition to people of color) into our workforce development programs. We hope to take Ithaca's model of city-wide transformation to the 90% of American cities with populations of <100,000 people.
- **Bomee Jung of Cadence OneFive** would like to connect with others interested in climate technology and, in particular, anyone whose building projects involve short-shelf-life information that could benefit others (but who don't have a way to share these data with a useful beneficiary). Her startup is building a platform to speed up the pace of climate-responsive construction by reducing these information asymmetries.
- **Aimée Christensen of Christensen Global** is looking for thought partners to help support the Sun Valley Institute for Resilience (SVIR), an organization in her portfolio. SVIR advances community resilience in Idaho's Wood River Valley region, helping to diversify the economy from food and agriculture to housing and energy, in the face of increasing fires and droughts. SVIR is in the process of moving from zero-interest loans to reasonable-interest loans. Help us think through next steps, e.g., become a CDFI or remain a nonprofit?

David Erickson, Senior Vice President and Head of Outreach and Education at the Federal Reserve Bank of New York, reminded participants that the Community Development Unit that he heads has “no money and no power – which puts us in an important position to convene.” He is thrilled to continue co-hosting the Financial Innovations Roundtable along with UNH. He encouraged all participants to partner with the Federal Reserve Bank of New York, to come back again and help flesh out this ecosystem – from large capital markets to boutique projects on the ground.

Erickson reflected that scale and responsiveness do not need to be at odds with one another. His book on the history of community development, titled *“The Housing Policy Revolution: Networks and Neighborhoods,”* includes a story about architects who were working with CDFIs to build affordable housing for Japanese families after internment. Initially, the architects held preconceptions about the kitchen design that the families would prefer. However, when they asked the community directly, the Japanese women said that what they really wanted were kitchens modified to fit their smaller size; “we can’t reach the higher shelves!” Isn’t it incredible that this project, which tapped global capital markets through Bank of America financing and tax credits from Chevron, was also tailored just right to the people on the ground? How can we marry scale and responsiveness in all of our projects?

Erickson quoted General Dwight D. Eisenhower: “Whenever I run into a problem I can’t solve, I always make it bigger. I can never solve it by trying to make it smaller, but if I make it big enough, I can begin to see the outlines of a solution.” What are the themes and patterns in a larger-scale version of the problems we face now, e.g., the money on the books that we can’t deploy, or the gaps in the clean energy ecosystem framework that Eric Hangen presented? We really need to think differently about how to create communities that are climate-resilient and opportunity-rich.

In 18 months or so, the New York Fed’s Community Development team, in partnership with Enterprise Community Partners, LISC, and RMI will publish a new “What Works” book with case studies of some of the participants in this room. Their models and experiences can help answer the question of what we need for that “10X system.”

Then **Erickson** closed out the formal part of the FIR, thanking panelists and those who made the event possible.

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