

Mark Chambers: Good evening. Good evening and welcome. Thank you all for joining us. Of course thank you to the Department of Energy, the Better Building Summit for sharing the stage for this discussion, the first administration event focused exclusively on buildings. I know I'm excited.

My name is Mark Chambers, and in addition to being your moderator for this evening I am the senior director for building emissions here at the White House Council on Environmental Quality. And again, I have to say it: I am really, really excited about the program this evening and I think you should be, too.

Like many of you, I love buildings. You know, I'm an architect and so I love putting buildings together and understanding what they reveal about what we value and the power that buildings have to impact our lives for the better. As you know, over a third of our climate-altering pollution can be traced to the buildings where we live and where we work and go to school and raise our families, so as we continue the work to build back better and confront the climate crisis buildings will continue to play an incredible important role.

So I invite all of you to be ambitious with us, in this conversation and in the many conversations to come. And speaking of ambitious, we will shortly be joined by the National Domestic Climate Advisor Gina McCarthy, followed by the Department of Energy's own Secretary Granholm, who I'm sure you just saw in the opening plenary, then Acting Administrator Kale from the General Services Administration. And then – we're not done yet – we will also be joined by the Environmental Protection Agency's Administrator Regan, and finally Brenda Mallory, the chair of the Council on Environmental Quality.

Thanks again for joining us this evening. Thank you all for being a part of this. If everyone who's here in the Zoom, if you can please check your settings, make sure that you're all set and you're muted, I will be back to join you later on in the program. And with that I am going to turn the reins over to Gina McCarthy.

Gina McCarthy: Well, first of all, thank you, Mark. And the first thing I will note is that I had no idea you were an architect and you certainly don't get paid enough. I'll talk to Brenda about that as we move forward. But I guess none of us do because we're working pretty hard.

But I'm excited to kick off this discussion, and let me try to keep my remarks short because I know the discussion's gonna be fun.

But I just wanted to note that we recently passed the hundred-day mark of this administration, and I will guarantee you that we have spent every single one of those days working to make good on President Biden's pledge to deliver a whole of government response to the climate crisis. And as you will see from the folks sitting around this discussion table that I think we have the best cabinet, the best leadership in this administration, and that we're gonna deliver on that whole of government response.

You know, we recently celebrated a few of our early milestones. One was the President's Earth Day Summit with Secretary Kerry and a wealth of world leaders, and we delivered our Nationally-Determined Contribution, which is the fancy words for what Paris wants us to do to make commitments, and we have decided that we are going to achieve as a country a 50 to 52 percent reduction from 2005 levels of greenhouse gas emissions by 2030. And we are going to deliver it, but we will only be able to do it with all your help, and so it's so exciting. You know, the president has really all along said that we are making this commitment to tackle the climate crisis, but now everyone can see across the world just how serious that commitment is.

But while goals are good and commitments are fabulous, delivering them is what today is all about, and frankly what the rest of our days are going to be all about. And in the building sector we know we have our work cut out for us, because in 2020 residential and commercial buildings accounted for about 40 percent of the total energy use in the US, and 70 percent of all electricity generated in the country ends up in a residential or commercial building. So that really means we have a big footprint that we have to reduce here, that – and it also means that buildings is one of the best places for us to go to achieve important reductions, and one of the best places to go if you want to create really good, well-paying union jobs. So I'm enormously excited both by the challenge but even more so by the opportunities.

And as the president always says, when he thinks climate, he thinks jobs. So let's talk about what some of those jobs in the building sector might look like. How about an insulator who is making a home or office building more efficient or comfortable? And how about making sure that a glazer or a _____ is recognized as an environmental champion because they're installing new windows? How about an HVAC technician, patting them on the back because they're installing the latest Made in America heat pump? Or how about the plumbers and the pipefitters who are making sure that we fulfill our fundamental commitment to the

American people, which Administrator Regan will tell you is about clean water and about clean – and about addressing the challenges that we have to get lead out of our pipes because it robs our children of their future? They are the heroes whose jobs we are going to deliver.

You know, the president understands that this is not about saving the planet; it's all about its people. And it's not just about creating jobs; it's about good opportunities to actually join a union, because that's how we're going to grow this country: from the middle class forward. We're talking about the money that people will save on their energy bills. If we even just deploy what already is available we can grow the demand for those technologies and invest in the innovations of the future. It's a very exciting moment, and I know that you share that with me because people really need to understand that this is about reducing pollution, not just carbon pollution that fuels climate change, but also air pollution that robs our children today of their health and their wellbeing.

So this is about giving people a sense of ownership again of their new homes and their buildings, a sense that it's going to be healthy and safe for them as they move forward, that it's gonna be resilient enough and efficient enough that they're going to be able to own that home with confidence. You know, today I think you'll hear from my colleagues that they'll be leaving absolutely no stone unturned to meet these kinds of emission reduction goals, and I'm excited about the opportunity to work with them in this venture.

You know, we have to pass the American Jobs Plan if we really want to accelerate this work to the level that it demands. That's why the president has proposed it. That's why I need every single one of us speaking up for it, because it is about our people today. It is about our future. And we plan to retrofit two million homes and commercial buildings with the resources that come with the American Jobs Plan.

This is about meeting the moment, folks. We have such opportunity to put America back to work again, to fuel our economic recovery and put people first with this plan. And that opportunity will continue to grow if we meet this moment in time.

So with that, let me conclude by thanking you for all of the work you're doing but also by reiterating what brings me to this work, especially at this moment. It's President Biden's unwavering commitment to the people in this country. His focus is directly on the air that people breathe, what it means for their health, what

opportunities we can provide to them, how we rebuild our communities, how we advance environmental justice, and about the dignity that comes with good work and the jobs that we create. And lastly, I'm here because this is the best cabinet ever in the United States of America, and it starts with Jennifer Granholm, our great Secretary at the Department of Energy. Take it away, Jennifer.

Jennifer Granholm: I am so glad to be part of this cabinet, too! And really, do you not just love Gina McCarthy? I mean, really, how can you not adore her? I just – I love her enthusiasm, and I really love, Gina, as you know, that you are all in on the jobs piece of things. So we all are. This is our mission.

I want to thank you all again for joining us today, and let me just say a couple words quickly about what the Department of Energy's been working on. One is for years researching and developing and deploying innovative technologies to make buildings more efficient, right, and then collaborating with our industry partners to make sure that they can run with them in the real world.

But the realm of what's possible has expanded so much just in the last few years alone. We've driven down, for example, the cost of renewables like solar. We've made them easier and more affordable for homes and businesses to adopt, and we're well on our way to doing the same thing with hydrogen and batteries and carbon capture. We've begun to unlock massive potential presented by connectivity technologies, you know, not just increasing efficiency but helping buildings to integrate their energy resources with the grid. And more and more we are seeing companies and organizations from every sector of our economy who are eager to share in the solutions because they're seeing tremendous payoffs in the form of healthier environments, as Gina mentioned, and cheaper utility bills. So for example, just before this the DOE announced that we had more than 55 of our Better Buildings partners who have stepped forward to work with us on quickly getting their buildings and their housing and their manufacturing plants to low or zero carbon emissions.

So with momentum on our side, we want to double down. Today DOE is announcing several new initiatives that are gonna help us do that. I'm just gonna hit them quickly. First we're launching the Better Energy, Emissions, and Equity Initiative. That's E3, energy, emissions, equity, which is gonna focus on accelerating the adoption of one extremely promising technology, which is high-performing heat pumps. And these systems use electricity to

strategically transfer heat to make spaces cooler in the summer and warmer in the winter, and they're a cleaner and more cost-effective alternative to gas-powered furnaces and standard air conditioners. But under E3 we're gonna work with deployment partners to bring them to homes and to businesses nationwide.

The thing is this technology currently works best in moderate climates. So for Americans who live in colder regions we are pairing this E3 with the Cold Climate Technology Challenge, because we want to research and develop solutions that are specific to cold climates. So we're all gonna work with our national labs on accelerating the commercialization of low to no global warming potential refrigerants, which are refrigerants that currently release emissions thousands of times more punishing than carbon dioxide, so that's exciting.

We're also announcing today that we've created a national roadmap for making our buildings smarter and better integrated with renewable resources, which promises to give consumers and businesses more flexibility to, you know, procure and store cleaner and cheaper electricity when it's abundant, and then send back the stuff that they don't need to the grid, which will in turn help them to save lots of money on their energy bills while making our power infrastructure more resilient itself to the ups and downs of overall demand.

Of course, we also know that deploying these technologies will only be possible if we have a strong and skilled and diverse and growing workforce right here at home. So the other thing DOE is announcing today is a \$30 million investment in preparing American workers to seize those opportunities, and that money's gonna go toward expanding our support for union and trade association and educational institutions and programs that are training American men and women for jobs in construction and retrofitting and code enforcement and more. We're gonna grow a world class domestic building workforce, one that provides good pay and good benefits and good worker protections for everybody and lifts these families into the middle class.

So that's a lot out of DOE to get excited about. I'm equally thrilled by all the bold plans and the creative ideas and powerful voices that are represented at this roundtable. So thank you all so much. Back to you I think – Gina? Am I going back to you?

Gina McCarthy: Yep.

Jennifer Granholm: Okay.

Gina McCarthy: Thanks. Thanks, Secretary. See, I told you they were awesome. The next awesome person is Acting Administrator Katy Kale at GSA. Katy, go ahead.

Katy Kale: Hi, Gina. Thank you so much. Hello, Secretary Granholm, Chair Mallory, and Administrator Regan. It is really great to be here with you today. I love buildings, too, and to everyone else who is joining us virtually, thank you for your interest in and your commitment to our climate goals. I really look forward to hearing from all of you and working with you to decarbonize the nation's buildings.

So at GSA we manage a federal real estate portfolio that includes close to 1,700 owned assets. These assets include office buildings, land ports of entry, federal courthouses, and a total of approximately 186 million square feet. That's just what we own. We also work with owners and facility managers to lease additional space for the federal government. We know that it is going to take bold action, ambitious commitments from all of us here today to achieve the president's climate goals, and at GSA we are going to do our part when it comes to the federal real estate portfolio.

This administration and GSA believes in leading by example, so we are not asking anybody in the private sector to do anything that we are not prepared to do ourselves. We have held and we will continue to hold ourselves accountable to very high standards. Last month GSA renewed our commitment to 100 percent renewable energy for 100 percent of our government-owned buildings by 2025. This is a substantial step towards the president's goal of carbon pollution-free energy for the federal government by 2023.

I'm also excited to share that GSA will be working with our partners at DOE, EPA, and CEQ to create federal buildings performance standards for the federal government. With our enormous building footprint, the federal government is in a unique place to lead by example. These building performance standards will establish metrics, targets, and tracking methods to reach federal carbon emission goals. We will also identify progressive performance milestones and the resources to assist agencies in meeting them.

And finally, today GSA and the Department of Energy's National Renewable Energy Laboratory are releasing a blueprint for

integrating grid-interactive, efficient technologies into the building renovation and improvement projects. This is especially for federal energy savings and utility saving projects. The blueprint puts practical guidance and tools into the hands of the building operators to help them integrate the GEB technologies into current and future performance contracts.

Our success will depend on closely working with stakeholders across the federal government and throughout industry to reach these goals. GSA established a Green Building Advisory Committee whose members are federal, nonprofit, public, and private experts. They make recommendations for innovations in building planning, design, and operations with the goals of reducing costs, enhancing human health and performance, and enabling the occupants to achieve their missions. The recent recommendations have included practical ways to increase the use of solar electricity generation, and the initial work on grid-integrated buildings that has led to the blueprint is what we are announcing today. Just so you know, all of these meetings are open to the public. They recently established two task groups, one on environmental justice and equity and one on federal building decarbonization. And these will guide our planning efforts more intentionally.

Here at GSA in the Office of the Chief Architect, we're launching a climate speaker series with industry leaders in design and construction. We will be discussing a wide range of topics, from metrics and sensors to embodied carbon. The Office of the Chief Architect is also meeting with design and construction leaders to discuss how to advance diversity, equity, inclusion, and accessibility into the industry. We want to work with all of you to create new opportunities, educational opportunities, professional opportunities, and business operators for underrepresented and underserved communities. In the next month GSA's office of high-performing green buildings will be hosting a roundtable discussion to explore practical implementations of the recommendations of the Green Building Advisory Committee regarding embodied carbon and design and construction projects in an actionable and scalable manner and determine the feasibility of expanding upon these recommendations.

So in closing, at GSA we believe in the power of partnerships and we are excited to be part of this national conversation about building energy efficiency and clean electricity, and we're looking forward to the ongoing private-public dialogue and leadership. Back to you, Gina.

Gina McCarthy: Well, let me thank you for that, but also just make sure everybody understands that what you just said was that the federal government is putting its money where its mouth is. We are going to show you our values and we're gonna show you that it's gonna save us a ton of money so you can enjoy that ton of money savings yourself.

So let me now turn to Administrator Michael Regan at the great EPA. Michael?

Michael Regan: Well, thank you. Thank you, Gina, and thank you, Gina, for your leadership, and it's an honor to be on this panel with my colleagues from my sister agencies. As you can tell, if you want to be in this cabinet you have to love jobs, you have to love buildings, and you have to bring a lot of energy, and we're all doing that. So it's great to partner with our sister agencies as well as partner with the private sector, the labor community, local governments, and others who will help the United States lead the transition to a clean energy economy.

Decarbonizing buildings is a big task but it's an essential task, and we all recognize the benefits are worth the hard work it will take to get there. Decarbonizing our buildings means less pollution that fuels climate change, cleaner air and healthier communities, and a more livable future for our children.

Turning that vision into a reality will take the coordination and partnership of us at all, and EPA, well, we specialize in the power of partnerships. For the past 30 years we've worked with tens of thousands of partners and communities to accomplish more than we could through regulations alone. Together our partnerships have prevented more than six billion metric tons of greenhouse gas emissions, a total exceeding all of 2019 US carbon dioxide emissions. We've saved American families and businesses more than \$500 billion to date, created jobs for more than 800,000 Americans who are employed in manufacturing or installing Energy Star certified equipment, and over the past 30 years the Energy Star program alone has spurred the private sector to invest \$300 billion in energy efficiency.

These programs will play a critical role in helping to achieve the ambitious climate goals that President Biden has set for the United States. And today I'm announcing a suite of initiatives to expand EPA's climate partnership programs.

First, EPA is announcing updated Energy Star standards to advance energy efficient heat pump technology for residential water heaters and for heating and cooling equipment. These specifications, along with leveraging the Energy Star label and our extensive network of partners, will set the stage for providing every American household with access to clean, affordable heat and water heating, even when temperatures are very low. Folks, this is a really big deal. If all the heat pumps, central air conditions, and electric water heaters sold in the US met the new Energy Star specifications, the cost savings would grow to \$11 billion a year and avoid a third of all direct greenhouse gas emissions from American homes and apartments.

I'm also thrilled to announce that Energy Star is expanding its work on electric vehicle chargers to cover those used in commercial settings, known as DC fast chargers. Accelerating energy efficient EV charging is critical to achieving a clean energy future, and the EPA has developed the first credible energy efficiency test method for fast chargers.

But we're not stopping there. EPA is also committed to launching new and expanded partnership programs. For new homes, we'll be advancing Energy Star recognition to accelerate the clean energy transition and expand indoor air quality protections through our Indoor Air Plus Program. For commercial buildings, EPA will be launching a Zero Carbon Building Recognition to encourage early adoption of efficiency, electrification, green power, and more. And for state, local, and tribal governments, EPA will develop new tools and resources on building energy efficiency and decarbonization. We will analyze healthcare benefits, identify ways to ensure equitable outcomes for consumers, and advance new best practices.

And I'll conclude with an announcement that I'm really excited about. Energy Star is developing a new initiative to accelerate energy efficiency and electrification retrofits in existing homes. The Energy Star Home Upgrade program will focus on measures that offer the greatest potential to reduce fossil fuel use in homes and deliver significant energy savings. This platform will leverage the vast Energy Star partner network to quickly scale up effective programs. A key focus of this effort will be underserved households that suffer the highest energy burden. We want to accelerate emerging business models that can deliver at a scale to these overburdened communities, such as block power and inclusive utility investment approaches with robust consumer protections like pay-as-you-save programs.

Climate solutions fundamentally improve lives, and we want all people, regardless of the color of their skin, their economic background, or their zip code to reap the benefits. Throughout all of these initiatives partnerships are at the center, because this kind of economy-wide collaboration is exactly what's needed. So I look forward to collaborating with all of you as we deliver on these collective goals, and now I'll turn it back over to Gina.

Gina McCarthy: Well, Administrator, that's amazing. It's like [*singing*] money, money, money! [*Laughter*] Like, real money! But it [*break in audio*] really ticking me off because you can just show me up. I just know it. But I really – I couldn't be more pleased, so thank you to you and your team. And let me now turn it over to Brenda Mallory, our Chair of CEQ. Brenda?

Brenda Mallory: Thank you, Gina. Thank you so much. It's such an honor to be here today and to join my incredible colleagues on this critical discussion. And I do – I'm always energized when I'm with this group because there is just so much excitement and focus on what we're trying to do here. Seeing the resolve and the commitment they are bringing to this big challenge of how to electrify and modernize our buildings is inspiring. I am proud to do this work together with you all and thank you for your partnership.

Let's be clear. The commitments that have been made today are substantial, from Secretary Granholm's leadership on the Low Carbon Buildings Pilot Program to Administrator Regan's new and expanded EPA partnership programs to Acting Administrator Kale's work showing that the federal government is leading by example in sustainability. This is all really important and very exciting.

At CEQ, we are helping to tie all of these moving pieces together. As Administrator Kale pointed out already, there's gonna be a kickoff of an interagency Federal Sustainability Collaboration with GSA, DOE, and EPA to develop the first-ever Building Performance Standards for the federal government. This standard will establish metrics, targets, and tracking records to reach federal carbon emission goals. We will identify performance milestones as well as resources that agencies need to meet them.

But we know it's not enough to just set a new policy direction and announce new initiatives. We want to hear from you. We want to ensure our policy choices are making a real difference in people's lives. That is why we will launch the White House Building

Stakeholder Series. CEQ will lead stakeholder engagement roundtables focused on a national building modernization strategy. We want and we need to hear from experts like many of you at the event today. We need to hear from state and local governments who have already implemented successful policies, and we need to hear from communities so that our policies are creating real, tangible benefits for them. As we talk about modernizing our buildings, it's important to ask how will the humans inside those buildings be affected? And what will the impacts on surrounding communities be? We can't lose our focus on how these policies will affect people, and that's why this stakeholder series is so important to all of us.

It's also why you've heard all of us urge the passage of President Biden's American Jobs Plan. We know that there is a severe shortage of affordable housing options in America. Millions of families pay more than half their income on rent, and home energy costs are a significant concern for American renters as well. Moreover, across the country people are struggling to purchase their first home. That's why the American Jobs Plan invests \$213 billion to produce, preserve, and retrofit more than two million affordable and sustainable places to live. This will include more than a million affordable, resilient, accessible, energy efficient, and electrified housing units. And President Biden's plan will put union building trade workers to work to make these upgrades. That is why we need to pass the American Jobs Plan.

As you can tell, I'm excited, as are my colleagues, to get to work. And we are here, ready to roll up our sleeves and to do whatever is necessary to achieve this success. Thank you all for being here and I'm looking forward to our discussion. So back to you, Mark.

Mark Chambers: Thank you, thank you, thank you. Thank you to Chair Mallory, of course, and of course to all of the administration officials for those amazing comments. They're amazing. I mean, I don't know if it's just me. I'm looking around. Like, did you hear what we just heard? I mean, there's advancements in heat pump technology. We're talking federal building portfolio standards, workforce investments in American jobs, Energy Star updates, national building modernization campaigns focusing on people inside buildings – like, all of that is exactly what we all came here to do. This is fantastic. It's great, and I am, like – again, continue to be excited through this whole thing.

So of course with five administration officials, dozens here online, and thousands viewing the livestream, we have a packed house.

While we're only gonna be able to hear from a few people and a few of the guests, this is absolutely a preview of future attractions. This administration wants to engage on buildings, and we intend to keep this conversation going and keep our ambition high.

So now I would like to turn to a few guests that I have asked to introduce themselves to our administration officials. And what I'd like you to do is when I say your name, I'd like you to please unmute yourself, and in less than a minute – I'm gonna be timing – I'd like you to let us know who you are and the name of your organization, and then how your organization fits into this urgent work on building decarbonization. So that's the plan right now, and so first of all I would like to turn the floor over to Sara Neff. Can you unmute yourself, Sara?

Sara Neff:

I am unmuted. Thank you so much. So hi, everybody, Sara Neff from Kilroy Realty Corporation. We're a publicly-traded real estate investment trust. We own and operate about 14 million square feet of real estate, and as of the end of last year we have achieved carbon neutral operations. So we are proof that buildings – yeah! – can decarbonize in a way that makes financial sense for the owner, reduces environmental impact, and fosters social equity. Everything we did to get to carbon neutral operations had a strong business case, and our environmental impact has been the equivalent of planting a forest five times the size of Washington DC. In addition, our Green Janitors Program has combined workforce development, social equity, and environmental impact.

However, not all pathways to decarbonize have a short-term business case that real estate can embrace. In most buildings the landlord operates the property, but the tenant pays the energy bills. This creates a split incentives that often prevents landlords from investing in energy efficiency. Kilroy has solved this program through green leasing; that strategy doesn't yet have wide market adoption or federal support. Also, there's not currently a financial payback to convert a building that uses natural gas to one that only uses electricity. We've had a lot of success in all-electric new construction, but retrofits are more difficult to justify financially. And current incentives are not always well-shaped. For example, the only federal program that incentivizes energy efficiency does not work for retrofitting older buildings and relies on tax breaks that real estate investment trusts like Kilroy cannot use.

All of that just means, though, that the federal government has a crucial role to play in decarbonizing the building sector. There's a major opportunity for workforce development and a potential

urban retrofit division of the climate corps, working with the Labor Department and our unions to expand Green Janitors and veterans into building engineering. The GSA can prove the commercial viability of a host of existing energy efficiency technologies which will speed private sector adoption.

So as Advisor McCarthy mentioned, real estate – we contribute 40 percent of US climate emissions. But that represents a huge opportunity. We are at the table for tackling climate change and we look forward to working with you all to decarbonize. Thank you so much.

Mark Chambers: Thank you, Sara. Thank you, Sara. Little bit longer than a minute, but you know, we'll let that go for right now. I'd like to now acknowledge Kyle Bragg to join us and unmute yourself.

Kyle Bragg: Well, thank you. Good afternoon, everyone. I'm Kyle Bragg and I'm president of SEIU 32J and we're a property service union representing approximately 175,000 essential workers who maintain, clean, and provide security services in commercial and residential buildings, airports, universities, government buildings, and other facilities across the East Coast.

Our members are and have been for many years now on the frontlines of reducing carbon emissions from buildings. I want to thank my friend Mark Chambers and CEQ Chair Brenda Mallory for inviting _____ into this space and this discussion this evening. Thank you. How's that for a minute?

Mark Chambers: That was fantastic, Kyle. I appreciate it. Next I would like to acknowledge Paul Camuti.

Paul Camuti: Hey, Mark, thanks a lot. This is Paul Camuti. I lead the development and execution of the strategy – both technical and business strategy for Trane Technologies. Through Trane we heat, cool, automate, and decarbonize buildings. We also keep transported food, pharmaceuticals, and perishables safe.

I'm thrilled by the energy of the administration today and we're also passionate about building a better future and our commitment to sustainability. As a leader in sustainability we think there's a few things to keep in mind. One is what you're doing with equipment and system-level efficiency goals are good for business, the consumers, and for the health of the planet. We think and agree that we need to transition away from high global warming potential refrigerants by 2030, couldn't be more happy with electrification of

heating as the future. Heat pump technology will dramatically reduce emissions, and the technology is largely available today. And lastly, digital optimization of buildings is critical, and we appreciate the focus on metrics.

In short, there's a lot to do in decarbonizing the built environment. We're all in with the energy and passion and we're looking forward to working with the administration and others to make this a reality. Thanks.

Mark Chambers: Thank you, Paul. Appreciate that. Next I'd like to turn the floor over to Leticia Colon de Mejias.

L. Colon de Mejias: Hi, good afternoon. I'm Leticia Colon de Mejias. I'm the CEO of Energy Efficiency Solutions and the policy co-chair for the Building Performance Association, president of Green Eco Warriors, and I'm a Latina minority Home Performance awarded Energy Star contractor. I've had the honor and privilege over the last ten years of serving over 12,000 single family homes and over 10 million square feet of multifamily housing with comprehensive energy efficiency retrofits. And my state of Connecticut Energize Connecticut program has drawn down the equivalent of two energy plants of the equivalent of taking 11 million cars off the road.

I believe that this plan can help put Americans to work, and I know that these are really good jobs for real people. I myself employ 22 minorities at my job, and we've watched them grow over time and had the pleasure of serving the communities that we live, work, and play in. I'm honored to be here with you today to work on this plan together. Thank you.

Mark Chambers: Thank you, Leticia. That was fantastic. And I would now like to acknowledge Donnell Baird.

Donnell Baird: Hi, everybody. This has been such a fun meeting with so many inspirational announcements. It's great to be here. My name is Donnell Baird. I run a climate tech company called BlocPower. We're a startup, and we focus on analyzing, financing, and installing heat pumps and electric hot water heaters and energy efficiency technologies. We focus on doing that in low-income buildings that traditionally have been redlined, that are located in communities in need of environmental justice, buildings that have lead, asbestos, mold. They do not have a chief sustainability officer in these buildings. They do have a lot of indoor air pollution that's making kids sick. They are wasting fossil fuels.

We've built software to analyze these buildings and target them all over the country. We've borrowed \$50 million from Goldman Sachs to finance these buildings so that we can make heat pumps affordable for everyone, particularly low-income communities that need them the most. And we are working with labor unions and community colleges to train the workforce of the future so that we have skilled technicians that can not only analyze and install heat pumps, but that can also install community wi-fi to make buildings smart so that we can do the monitoring and quantitative analysis of the heat pumps post-installation. We know we're gonna need a new labor force for that and we know these are gonna be great jobs.

So we do all of the analysis, financing, project management, and workforce development needed to install heat pumps. We've got projects in LA, Portland, Milwaukee, Philadelphia, Brooklyn, DC – coast to coast. Super excited about all of the great energy coming out of the Biden-Harris team. Thank you.

Mark Chambers: Thank you. Thank you. That was exciting. I think all of you guys represent, you know, just a sampling of some of the amazing and innovative work that's happening all across the country. And so again, given the limited time I've decided I'm gonna kind of flip things around a little bit, and what I'm gonna do is I'm now going to ask our administration officials to potentially pose some questions to some of the guests we've asked. And so I'm going to acknowledge Gina McCarthy to see if you have questions you want to ask.

Gina McCarthy: Just one, thanks. But this is getting more fun instead of less, so this is really cool. But let me just ask Leticia Colon de Mejias a little bit of a question here because I'm just amazed at the work you've done in Connecticut and just how many families really are better off because of the work you've done, and the folks that you've put to work. It's just – it's really cool. But my question is this: We all sort of dwell on what do we need to do to get people over the hump of wanting to look at energy efficiency and investing in that. And, you know, it's hard work to understand what these barriers are as well as to figure out how we get over them. Can you give me a little bit of your lessons learned in how you've managed to get through these barriers, as well as what the federal government might have available, should make available to help expand the work that you and others are doing?

L. Colon de Mejias: Thank you so much. So I really love energy efficiency, and I did 16 years in healthcare prior to working in this industry. And the connections between energy efficiency and health are just really

underrepresented everywhere. And we have found that when we explain to people how connected human health is to how we use energy or how we conserve and reduce our consumption, we find we have a much higher uptake for services.

The other thing that's really helpful besides educating is having workforce training programs. So we're really blessed in Connecticut that we had a lot of ERA training programs going on and we trained a lot of local people for jobs in our industry. And I think that legislation like the Blue Collar to Green Collar Act, for example, or Hope for Homes could be really useful in helping to break down barriers in getting into communities and training people for these jobs, because the thing that we're finding most difficult now during this pandemic and after the many shutdowns that happened across our nation is that it's difficult to find skilled workers. And so I really would love to see workforce programs to start up again to train people for these jobs. Sometimes people don't know how great these jobs are.

And you mentioned my staff, who came from at-risk populations and were underemployed or completely unemployed, in some cases for years, who now have been gainfully employed for over 12 years at Energy Efficiency Solutions. To watch an entry-level employee join your team and grow from an entry-level tech into – for example, the person who runs Energy Efficiency Solutions on a day to day basis was an entry-level technician ten years ago. These are the stories that really warm your heart and bring joy.

But we've also seen real benefits to stopping carbon leaks in homes, high CO leaks or gas leaks, CAS failures. We've found barriers to upgrades such as mold, asbestos, and vermiculite, and in Connecticut we've found ways to start addressing those issues so we can ensure that low-income households have access to comprehensive retrofits, whether it's a single-family building or a multifamily building. This makes their health better inside their home, but it also simultaneously draws down pollution in the atmosphere, making everyone healthier at the same time and making our infrastructure stronger.

I know that investments in energy efficiency have high return on investment, but many Americans are unaware of the way that they could draw down their bills and consumption just by putting in insulation, new windows, air sealing, and even upgrading water measures to draw down their use of domestic water and heating hot water.

The other thing we've seen real successes in Connecticut is in installing electric heat pumps. And we have found that by handling the thermal boundaries and upgrading the building's structure that those heat pumps actually are effective in cold climates, and they really do help in the summer, which unfortunately have become much warmer in the New England territories.

So I hope that that's useful information, but I'll be here and I look forward to providing more information as the conversation continues.

Mark Chambers: Well, thank you. Thank you. I think that was exactly the kind of response we're looking for and I think it's really helpful for everyone to hear that. So again, keeping with the same kind of game plan, I would like to now kind of move on and acknowledge – let's see, who are we gonna go to next? Let's go to Secretary Granholm. Let's see if she wants to pick someone to have a question.

Jennifer Granholm: Just quickly, I know we are a little bit behind but I just am curious. From Paul's perspective at Trane – we've heard Donell talk about workforce. We've heard Letitia talk about workforce. I'm curious from your perspective at Trane what advice you would give us regarding what we should be pursuing to create the most opportunities for American manufacturing and benefit both business and workers?

Paul Camuti: Yeah, thank you, Secretary Granholm. Well, first of all, we're excited about the E3 initiative. I mean, as you pointed out, decarbonizing a built environment really – it creates opportunities for innovation and really creates durable jobs across the whole value chain, from design and innovation to manufacturing to installation, commissioning, and the ongoing support of the technicians that were just referenced. All these things really are what help to create great opportunities, and much of that technology if not all of that technology is right here in the United States.

I think the Heat Pump Challenge is gonna stimulate innovation. We think this phasedown of FHCs is stimulating innovation. We're developing common metrics and making sure that our spaces are healthy, efficient, and decarbonized.

And lastly, I think it would be helpful and accelerate what we're doing to provide some market signals, including some carbon

prices, in order to be able to make the economics work and push more innovation out to market.

Lastly, I would say, you know, we can't wait to get started. We are incredibly enthused about the American ingenuity that we bring to decarbonizing the built environment, and it will create a lot of opportunities across the value chain.

Jennifer Granholm: Great, thank you.

Mark Chambers: That was really helpful. Thank you for sharing that. I'd now like to turn over to Administrator Regan for his question.

Michael Regan: Well, thank you, and my question is for Donell Baird. You know, we know that if we want to reach our carbon goals we have to deliver energy efficiency and clean energy solutions for every single American family and not leaving anyone out. But we also know that many of these transformative technologies that we're talking about, like heat pumps, can have large upfront costs. So for people struggling to pay their energy bills, many of these advancements are very difficult and we'll need innovative strategies to finance these investments. We'll need new program models to exponentially increase in scale to reach millions of homes. I'm really inspired by your approach to these challenges, so could you tell us a little bit more about BlocPower and how you seek to overcome these cost and financing barriers to drive clean energy for those who actually need it the most?

Donell Baird: Thank you for the question, Administrator Regan. I, like so many Americans, are inspired by your work and by your announcements today.

Financing this stuff is complicated. It's gonna be important. And so it's critical that we've had the chance to learn some lessons that I hope are useful. We actually spent a lot of time studying the mortgage industry and thinking about the ways that the banking industry and the mortgage industry provided access to capital so that Americans can buy homes. And when you think about buying something as important as the house, what kind of financial analysis and collateralization have to happen? What kind of structured financial product needs to be there in order to have Americans of all different kinds of credit score and FICO scores to be able to access those mortgages?

We studied that. We studied the way that people issue loans to rural women in India, in the countryside, through microfinance and

the way they use reputational risk and local relationships. So we really did a deep dive to figure out what kind of financial tools and products would be available to help low-income families across the country access heat pumps.

We know this is so important because there's tens of millions of unemployed Americans that have high energy costs and high energy bills. Some of their homes aren't safe. They have lead. They have mold. They have asbestos that needs to be removed. And we need to put in heat pumps to improve comfort and air quality and reduce emissions.

And so we've been working with Goldman Sachs for about three years to take all of our learnings and find ways to extend capital to cover the upfront costs of analyzing and installing the heat pumps, making sure that Mitsubishi and Daycon and other folks are willing to provide a warranty for 12 to 15 years to guarantee that heat pump's performance, and making sure that the cost of that heat pump is amortized or spread out over 12 to 15 years, over a long period of time, just like a mortgage, so that we can make heat pumps and all of their benefits affordable to everyone across the country. And we would not have been able to do it without support of the New York State Green Bank that was put in place in the state of New York, and that's why it's so important, as Special Advisor McCarthy said, that we pass the infrastructure bill and get the National Climate Accelerator Bank up and running, so that we can extend this capital to the millions of Americans who need it. Thank you.

Mark Chambers: Thank you, Donell. That was also very interesting and I think we'll probably kind of set a handful of other questions in motion. And so now I would like to acknowledge Chair Mallory to ask a question.

Brenda Mallory: Thanks so much, Mark. My question is for Kyle Bragg, and, Kyle, I have to tell you I pick you out because I'm a proud member of a union family. My husband just retired from as general counsel from the Machinist Union and previous worked with SEIU. So I know a lot about SEIU and the work that you do and in particular your union. So I'm interesting in the training program that I know you all have worked on for floating managers and trying to establish kind of best practices in sustainability. Can you just tell us a little bit more about how that program came about, and then share some of what it's like for the apprentices in those programs to have the opportunity to be part of the program and then to get positions afterwards?

Kyle Bragg:

Well, thank you, Chair Mallory. I think it's important to start with emphasizing the key role of buildings in achieving our climate goals. In major cities like New York, buildings can represent upwards of two-thirds of the total emission, so transitioning our building stock is enormously important and it's gonna require a huge investment from both our private and our public sector. Investment in workers much be part of this transition, both in terms of training so workers are equipped with the skills they need to retrofit and maintain buildings for energy efficiency, and in terms of job quality so there's long-term career opportunity, better workforce retention in our industries, and the ability for workers to support their families.

Our union has been at the forefront of training in the building sectors both for janitors in commercial buildings and workers in residential buildings. SEIU has partnered with the US Green Building Council to develop a Green Janitor education program, a program that trains janitors in energy efficiency practices, water conservation, green cleaning, and recycling practices. A study in LA showed that on average, a building using the program was seeing a five percent reduction in energy costs, so we know it's effective.

Meanwhile, the Green Residential Training Program through our Training Fund, a labor management partnership between Local 32BJ industry, have given 32BJ members the skills to improve the performance of multifamily residential buildings. The training fund offers 22 courses in green building skills. The courses cover everything from basic upgrades that can improve energy efficiency to analyzing building systems and identifying projects that can induce larger savings, as well as keeping up with the new green laws that impact building operations. As technology like heat pumps become more available and buildings are more fully powered by electricity, it'll be essential for our members to have the skills to operate and to maintain these systems as they'll be crucial in achieving large emission reduction from the sector.

I think it's also important to note that our Training Funds Green Program would train those who intents began with a \$2.8 million grant from the Obama administration under the American Recovery and Reinvestment Act. It has now trained more than 2,000 32BJ members. So as investments are made in upgrading our buildings, there must be an investment in expanding workers' skills, and this has to go hand in hand with strong wages and benefits standards, as I'm sure and I know that the Biden administration understands, and is fighting for.

When the federal government provides funding to support the transition of our building stock, which we think is vitally important, wage and benefit standards must be attached to make sure workers are benefited. And this can't be just in construction, but in the workforce that will maintain properties for years after they're built or retrofitted. We know this workforce that employs large numbers of black and brown workers in these jobs are located in major urban areas that have been hit hard by the covid pandemic. Boosting service sector jobs in these areas is gonna be crucial for an equitable recovery in our country. We cannot leave black and brown workers behind in the push for greener buildings.

So I want to thank you for your time and just thank this panel. I want you to know that we're 100 percent all in on the Biden administration's American Job Plan. It's a real reversal and departure from the denial and inaction of the previous administration, and we look forward to working very closely with the administration. Thank you.

Mark Chambers: Thank you, Kyle. I appreciate your comments. I'd now like to turn it over to Acting Administrator Kale.

Katy Kale: Thank you, Mark. So Sara was nice enough to call out GSA during her remarks, and so I would love to ask you a question, Sara. As I mentioned, we've been thinking a lot about how to integrate carbon reduction into our energy efficiency goals. And just like you at Kilroy, GSA also requires at a minimum LEED gold certification, so we're right there with you. What I'd love to hear is maybe a success story or some of your success stories or possibly obstacles and challenges that you have overcome as you've been trying to deal with your energy efficiency goals at Kilroy.

Sara Neff: Absolutely. Thank you so much, Acting Administrator Kale. I was also gonna talk janitors. I love talking green janitors. We got those results you heard about previously. Our janitors go through this 30-hour program developed by SEIU and local nonprofits, and we see the – a one percent energy savings and a five percent water savings every time we have janitors go through that program. I love going to the graduations and hearing about how the janitors are implementing the practices that they learned about in the program, both at work and at home, you know, improvements in air quality because they're learning about green cleaning chemicals. So that's been fantastic.

But since that thunder got stolen, I'll talk challenges. Innovation technologies can be hard. That's a difficult thing when you don't know how they work and how to implement them and are they disruptive. So at Kilroy we actively addressed that. We launched the Kilroy Innovation Lab, so we are specifically focused on trying to adopt new technology that's going to help drive down the carbon footprint of our buildings while at the same time always implementing more proven technologies: lights, HVAC, VFDs. So we do both at the same time, and I think that's really important. It can be really easy to pick all the low-hanging at the beginning, and then, oops, what are we gonna do in year three? And so I think focusing both on innovation and on more proven technology is a really great recipe for success for decarbonization. So thank you so much.

Mark Chambers: Thank you. Thank you. Thank you all. I mean, I think this was exactly the type of both innovation and kind of just like clear articulation of both the challenges as well as the opportunities that we're hoping to hear and we're hoping to be supportive of through all the programs and the announcements that have been happening today. So thank you to Letitia. Thanks, Kyle, Donell, Paul, Sara for your comments and answers, and of course thank you to our administration officials for the excellent questions.

We are kind of like rounding third on this conversation, and so I want to make sure that we have an opportunity for our principles to give a few kind of closing comments. I recognizing that Gina McCarthy had to step out, so we're down to four amazing people. And so I will do my best to kind of make sure that everyone can kind of continue with this program. So I'd first like to acknowledge Administrator Regan for some closing comments.

Michael Regan: Well, thank you all for this opportunity. It's been great to be here with my cabinet friends and family, and it's great to be here with all of you out there who are really pushing the envelope. Listen, as a regulator I'm so excited to see the market at work, to see technologies being put to use, and to see all of this innovation. We have to demonstrate that we can do things through nonregulatory activities just as much as through regulatory activities, and the combination of both will get us there. So I think you all for all that you do and please keep up the good work. Thank you.

Mark Chambers: Thank you, Administrator. I'd now like to turn to Acting Administrator Kale.

Katy Kale: Thank you, Mark, and thank you, team, for inviting GSA to this incredible event today. One thing that my GSA staff know about me is that I am GSA's biggest cheerleader, so I know that you all want to know more about GSA and the things that I talked to you about today. So if you're interested in learning more about GSA and working with the federal government, please visit us as GSA.gov. You can hear more about the things that we are doing specifically through the Federal Acquisitions Services and the Office of Small and Disadvantaged Business Utilization. Both are offering trainings and information sessions about how you can work with the federal government. The Green Proving Ground is always looking for and evaluating the latest building innovations and technologies. You can find out what we're testing and we're piloting all of our new technologies online. And then of course, as I talked about, the Green Building Advisory Committee and their task group meetings are all open to the public. Every meeting is announced on the federal register and posted on GSA.gov. So I really enjoyed this conversation today. I look forward to working with all of you as we engage together on this great big goal.

Mark Chambers: Thank you, thank you. I'd now like to acknowledge Chair Mallory.

Brenda Mallory: Thank you so much, and thanks to everyone who's participated in this today and who's come out to hear what we're looking forward to doing in this area. As someone who's in an office that spends most of its time just trying to connect people together, both internally and externally, an event like this and really the words stakeholder and partnership and collaboration and innovation and ingenuity that are, like, running through everybody's remarks is just music to my ears. And so I'm grateful for being able to participate and I look forward to working with all of those out there who are listening who are going to participate in our stakeholder convenings that are coming up. Thanks so much.

Mark Chambers: Thank you. I'd now like to acknowledge Secretary Granholm.

Jennifer Granholm: Great. Heat pumps! Roadmaps! Energy Star! Leading by example! Equity, equity, equity! Jobs, jobs, jobs! Now we just have to get it done. So talk is one thing, goals are great, but now we have to achieve. I think Franklin Delano Roosevelt said once that happiness lies in the joy of achievement. Well, amen. We have 926 days left in this term of the Biden administration, so let's achieve, achieve, achieve, and spread the joy. Thank you, everybody.

Mark Chambers: Thank you so much. Thank you all for those amazing words and for kind of leading by example. I just kind of want to say while I

have all of you here, one thing that's also important to know is that your teams are equally as amazing and they have been working nonstop to be able to deliver these incredible announcements, and we are just getting started. So we're super excited to keep pushing forward, not just on behalf of all of our agencies and not just on behalf of everybody watching at home right now, but on behalf of all of the American people to make sure that we put a lot of this work front and center in how we build back better. As I always say, we're at a critical time in the story arc of our species, so what we do now will definitely determine a lot of our future.

So I'm excited. I think that all of you should be. Thank you all for coming. Thank you for joining us this evening. Thank you for being a part of these announcements. Let's get to work.

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