



# Briefing Transcript

## Financing Climate Mitigation and Resilience: Lessons from Hawaii

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Speakers:

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Moderator:

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### Daniel Bresette

Aloha everyone, I'm Dan Bresette, the Executive Director of the Environmental and Energy Study Institute, and welcome to my home webinar studio, which also happens to be my guest bedroom and storage area for wrapping paper and extra towels and linens and a rug cleaner, but today it's mainly a home webinar studio. Thanks for joining us today for a virtual briefing about coastal resilience in Hawaii, with a special emphasis on that state's approach to resilience financing. Even though we're not meeting today in person, I'd like to thank the office of Senator Brian Schatz for their support leading up to today. I wish we were meeting in person, and I wish we were under less difficult circumstances, I hope everyone joining us today is doing okay and feeling well.

If you're joining us today for the first time, we're engaged in a briefing series that looks at regional approaches to coastal resilience. Last week, we moved the first of several briefings to a webinar format so we could bring you lessons of coastal resilience from across the Southeast. In 2019, we brought together panels of experts, practitioners, and community leaders from the Gulf Coast, the Northeast in New England, Louisiana, and the West Coast. One month ago, we convened experts who discussed efforts around the Great Lakes, and of course last Friday we looked at the Southeast. Next up will round out our briefing series with panelists from Alaska and more. If you've missed one of our briefings on coastal resilience, or any other climate and clean energy policy topics for that matter, you can access briefing summaries and videos at [www.EESI.org](http://www.EESI.org), and when you visit us online please take a minute to sign up for our *Climate Change Solutions* newsletter to learn about other resilience initiatives, clean energy legislation, and to stay informed about all manner of EESI goings-on, including our briefing schedule. We're currently evaluating our briefing schedule and how this new online approach is working, I'm pretty sure you'll receive announcements and registration links for more briefings via webinar in the coming days

and weeks, but we might need a tiny pause to make adjustments and corrections as we master this new medium. I happen to think this online webinar based substitute for congressional briefings is working pretty well, but as you can imagine, I have a certain bias. It would help us a lot to know how to improve our webinars, if you would take a moment to fill out our survey at the bottom of the live cast page on our website, again [www.EESI.org](http://www.EESI.org).

Since last week, unfortunately the news of the coronavirus outbreak has only gotten worse, and the adjustment to teleworking and social distancing might already be taking a toll on some of us. The next few weeks will pose new challenges and cause us to make additional sacrifices as our public health professionals carry out their heroic work. But as we have since 1988, at EESI we're doing our best to stay focused on the threat of climate change and your need for timely and accountable information. It's still very much the driving force behind our work. That's why we'll continue to bring you opportunities to hear from climate, clean energy, and resilience experts viewing the webinar. You'll also continue to receive newsletters and links to fact sheets. Climate change just might not feel as urgent today relatively speaking, because of the immediate threat of the current virus outbreak, but it is, it's extremely urgent, and so we'll continue to be here for you as a resource.

One last bit of logistics before we turn to our panel. Because we're not in the same room today, I can't call on you if you have a question, so please follow EESI on Twitter, @EESIonline, and send in your questions that way. You can also send an email to [EESI@EESI.org](mailto:EESI@EESI.org), we'll draw from your question submissions after we hear from our panelists. All questions will be at the end of the panel.

And now on to our panel, and let me say at the outset, thank you panelists, it's just after 9 a.m. local Honolulu time, so thank you for getting up in the morning so early and being ready for us. We wish we could have hosted you in DC, but we really appreciate everyone's flexibility and accommodation as we want to bring this really important information to our audience, so thanks just at the outset for your flexibility. I love this topic, I love what Hawaii's doing, I can't wait to get started. And our first panelist is Alex Kragie. Alex is the Director of the American Green Bank Consortium, a project of the Coalition for Green Capital. The Consortium is a membership organization comprised of 15 green banks from across the U.S. Previously, Alex was the acting Executive Director of the Montgomery County Green Bank, the nation's first county level green bank. He's also led work on the Nevada Clean Energy Fund, and other coalitions for green capital initiatives. Alex, I'll hand it over to you, thanks so much.

### **Alex Kragie**

Hi everybody. Thanks so much for the introduction, Dan, I really appreciate it, and thanks for everyone on YouTube for bearing with my background here, which is better than the actual background I have, which is a somewhat messy apartment and my wife who is currently scowling at me, but we're glad to be able to have a chance to speak with everyone on this webinar today. As Dan said, we're dealing with an incredibly important subject that's being eclipsed for all the right reasons, for the current public health crisis that we're facing as the world, but we do want to keep progress moving. So I'm really glad that Dan has agreed to host and continue this webinar series.

So I'm the head of the American Green Bank Consortium, and as Dan said that's a collection of 15 green banks from across the country, from Hawaii to Rhode Island. The head of Hawaii's green bank, Gwen Yamamoto Lau is gonna present after me, and we are in 11 different states and the District of Columbia. 'What is a green bank?' You might say. Well, green banks are dedicated finance institutions, often public or nonprofit, that work to connect clean energy projects with capital. Green banks are not banks in the sense that they take deposits, so you're not gonna walk into Gwen's shop and come out with a toaster. Instead, green banks ensure that financing the lifeblood of any clean energy project is readily available to green initiatives in a green bank's jurisdiction. Often, green banks tackle the toughest problems in the industry, serving as the glue that holds together an otherwise unfinanceable project in the eyes of the private sector. So we in the green bank world are not in the business of competing directly with private capital in perfectly liquid markets. That's not our business. Instead, our business is expanding the pie of the financing market for clean energy projects across the country, so that we can continue to grow our clean energy economy in the United States, and around the world, as our international team works on.

So what are green banks doing in this time of crisis? I do want to have a special point out, and I think you'll get a little bit more information from Gwen when she presents as well. But green banks are really right now exploring all the ways we possibly can to help our partners in the communities that we live in. Such as, we're

exploring ways to use green bank capital to support supply chains and local economies through innovative solutions and partnerships, and we're also evaluating the parts of the financing market that are likely to be the hardest hit in the current crisis we're experiencing, and thinking about ways that green banks can help fill the gaps that are going to appear.

Now, we turn to another emergency, the climate emergency, as Dan referenced. In order to turn the tide in the battle against climate change, we really need to mobilize enormous levels of investment in a new clean power platform across the globe. In the United States alone, the cost of transitioning to a 100 percent clean energy electric grid over 20 years would require an annual average investment of \$225 billion per year, conservatively. That's according to a Wood McKenzie study that was released last year. And this is only talking about the power grid, never mind other sectors of the economy that will need to be decarbonized. However, in the U.S. in 2018, only 64 billion in new investment was put into renewable energy projects, which sounds good but in the grand scheme of things it's only marginally more than 2011, when 62 billion of new investment occurred. Beyond our shores, total investment in clean energy technologies slowed by 39 percent in the first half of 2019, and we're about to find out what the pace was in the second half of 2019. Much of that decrease was due to rapidly slowing investment in China, and none of these numbers take into account the cratering effect of the current global pandemic on clean energy markets. Growth in new investment in a clean power platform simply isn't where it needs to be here in the United States, or around the world, and clearly something needs to be done about this. It's our belief that one of the key moves necessary to combat this global crisis is to cause hundreds of billions of dollars to be invested in clean energy technologies rapidly and steadily, starting right now. The U.S. must lead the world in this initiative, and be prepared through trade and treaty agreements to compel the rest of the world to follow in a rapid reduction of emissions. We also must assure that middle and low income families do not bear the cost of the transition from carbon to clean.

How can we achieve this rapid shift? Can the federal government simply subsidize its way to the necessary level of investments? Clearly not, if we want to have a penny left over to deal with any of the other pressing issues that we face. Can private investors move more quickly and take the necessary risks and soldier through the ups and downs of financial markets without continuous support from the government? Probably not, as our current investment shortfall clearly demonstrates a market failure to address the climate crisis. The right solution is public-private investment. Public and private resources combine all the time, such as when a government pays for a highway but a private company builds the rest stop on the side. There are no shortages of public-private combinations, and what we need is a trillion dollars of such combinations invested in the new clean power platform, and fast. That's why in July of 2019, Senators Markey, Schatz, and Blumenthal and Van Hollen introduced the *National Climate Bank Act* and representative Debbie Dingell introduced a companion bill in the House in December, 2019. The *National Climate Bank Act* was also included in the House Energy and Commerce Committee Democrats' *Clean Future Act*. Green banks connect clean energy projects with capital in the most economically efficient manner possible, offering financing for these projects as opposed to one-off subsidies.

The green bank model has been proven in the states, the laboratories of democracy, where green banks have collectively caused over four billion in investment since 2011, with every public dollar at risk bringing along three dollars and 40 cents of private capital with it, and that's the number we expect to see increasing as the effects of capital recycling take effect. According to an analysis from my parent organization, the Coalition for Green Capital, this national climate bank, capitalized with \$35 billion, would cause over \$1 trillion in total investment dedicated to building out a new clean power platform. The *National Climate Bank Act* would do three things. First, it would do project finance directly at the federal level, investing in massive climate mitigation and climate adaptation projects that state and local green banks in the U.S. simply do not have the capacity to fulfill. Second, it would create new state and local green banks where they do not yet exist. And third, it would provide billions of low-cost financing to existing state and local green banks, like Gwen's which will allow them to scale up their existing operations. The climate bank is built to move at the speed of the private sector, the bank will be an independent nonprofit outside of government entirely.

The bank's overriding focus will be to maximize emissions reductions per public dollar at risk, which ensures investment discipline and doesn't overlap with the critical work that government and nonprofit organizations are doing to stimulate innovation in the industry. The bank will also only be allowed to invest in projects that provide clean power at the same or lower price that residents and businesses were receiving prior to the transition to clean power. Many customers will in fact be able to realize substantial savings due to the rapid

cost declines realized as a result of technology and manufacturing productivity gains. Since 2010, the cost of electricity from wind and solar projects has dropped by a 15 percent rate annually, with cost declines forecasted to continue. When cheaper technologies are combined with low-cost financing offered by the National Climate Bank, there's suddenly enormous opportunities for customers to lower their energy bills while transitioning to a clean power platform. The climate bank will also prioritize investment in traditionally underserved and vulnerable communities. Low-income residents devote a much larger percentage of their budget to energy costs, so we must ensure that the benefits of the clean energy transition make their way to these customers. In the realm of financing resilience specifically, the *National Climate Bank Act* would build off existing successes from green banks in the U.S., and also look to dramatically scale up the financing of these types of projects in innovative ways.

As many of you know, in the world of climate policy, there are two traditional categories: mitigation, and adaptation. Mitigation means proactively combating the causes of climate change, for example adding clean electricity generation such as wind or solar to the electricity grid. Adaptation means exactly what it sounds like, adapting to the changing world we live in to be better prepared to adapt to and recover from the consequences of climate change, and I'm sure Dan and the EESI team have a much tighter definition than that, but I'm giving you a general broad stroke here. When you think of adaptation, think of it as a seawall to protect the community from rising tides, or a microgrid that allows a community to keep critical services such as fire and rescue up and running when the larger electricity grid fails due to severe weather. Or think of natural solutions that some of my fellow panelists are going to be speaking about later today. Generally speaking, mitigation activities, such as deploying clean electricity generating resources are easier to finance because of the expected future cash flows that arise from these technologies. When you build a solar panel, it's going to generate electricity, which has value you can sell or use for your own to displace your current bill. A bank can feel confident lending to a solar project, because the project itself will result in the generation of this valuable commodity, the proceeds of which can be used to repay the loan. Now note that I said financing mitigation is easier than adaptation, not that financing mitigation is easy. Currently, even with the quintessential literal burning platform of climate change, new investment in renewables is nowhere near where it needs, where it's required to be in order to stave off the worst effects of climate change. Adaptation activities however, do not benefit from the same intrinsic cash flow generating characteristics as mitigation activities such as wind and solar.

Generally, adaptation projects provide less quantifiable financial benefits than mitigation, meaning that lenders are more hesitant to make loans to these types of projects. A seawall might save property damage for homeowners that live on a shoreline, but as far as the lender is concerned, this is a non-priced positive externality of the project, and unpriced positive externalities don't put food on the table for lenders. Safe to say, the larger nut of adaptation financing has yet to be completely cracked. This is where green banks are beginning to step into the void. Green banks have begun to apply themselves to the task of sniffing out quantifiable cash flows or savings associated with adaptation projects, and have already had some success. In Florida, the Florida Solar and Energy Loan Fund has created a program that takes advantage of the insurance premium savings enjoyed by homeowners that harden their roofs against the threat of hurricanes, and use that anticipated savings to help secure a loan provided by SELF to finance the upfront cost of the entire project. Green banks are leading the charge to find creative ways to capitalize on future cash flows, or else savings that adaptations projects produce. Gwen is also likely going to be speaking about a microgrid project that her organization financed, and a number of green banks across the U.S. have financed microgrid projects as well. So this type of financial innovation will require patience, creativity, and long term thinking, which green banks have in spades. And as more governments and financial institutions, especially in the insurance industry are recognizing the value of these types of adaptation projects.

More ways to bring expected future cash flows or future savings associated with these projects will be identified by green banks. The National Climate Bank would allow for these types of innovating financing techniques to flourish at scale. And Representative Chris Van Hollen introduced the *Green Bank Act* in the U.S. House of Representatives in 2009, he's now Senator Van Hollen, and was an original co-sponsor of the bill this past year as well. When he first tried to create a federal climate bank in 2009 and 2010, the concept was included in the House-passed *American Clean Energy and Security Act*, also known as Waxman-Markey, however the bill was a casualty when climate change legislation bogged down and eventually died in the Senate in 2010. Nearly a decade later, and with the green bank model successfully proven in states and cities across the country, we're more optimistic about this than ever at this particular effort to get the bill over the finish line, so that we can ensure

American leadership in the battle against climate change. Thanks a lot, and I look forward to answering any questions that folks have in the follow-up session here.

### **Bresette**

Thanks, Alex, that was a great presentation, and since you gave me an opportunity for a plug, and I'm never one to let an opportunity for a plug go past, we actually just did a new fact sheet on nature-based solutions, so a different approach to some of those adaptation strategies, if you go to EESI.org, under publications, it's the first fact sheet that pops down. It's great, it goes through all the federal resources that are available. And then also, you just mentioned questions, for those who might have joined us a little bit late, just a reminder we are going to have time for questions, the best thing to do is to follow EESI on Twitter @EESOnline and ask your questions that way, and we'll go ahead and ask those at the end of our panelists.

Speaking of panelists, let's go to panelist number two. Our next panelist is Gwen Yamamoto Lau. She was appointed Executive Director of the Hawaii Green Infrastructure Authority in January 2017. The Authority was created in November 2014 to administer the Green Infrastructure Loan Program which was capitalized with a 150 million dollar green energy market securitization bond issuance, and Gwen, Alex gave you quite a lead-in, really looking forward to your presentation. Thanks so much for joining us this morning.

### **Gwen Yamamoto Lau**

Perfect thank you so much. I'm going to share my screen, my PowerPoint, one second, there we go. Good morning and aloha from Hawaii, unfortunately I don't have that gorgeous Wisconsin farmland background that Alex has, you're looking at my kitchen pantry door how exciting. But anyway, in putting together this presentation, like any intelligent person would do, I confirmed the definition of climate change mitigation and resilience with a trusted source called Wikipedia. Well all kidding aside, you know unfortunately, as we all know, climate change and social inequity are major threats to community resilience and sustainability. HGIA was created by Hawaii's legislature to democratize clean energy by providing non-traditional and flexible financing to expand access and affordability to our most vulnerable populations and provide them an opportunity to lower their energy cost while going green. Leveraging our green energy money saver ongoing payment mechanism as a tool, we seek to attract private investments and reach new markets, and as a green bank, we are in the unique position to drive job creation, or in the case of today's pandemic, job retention, while being stewards of our precious taxpayer dollars by recycling, reinvesting, and relending that same public dollar over and over again.

Why was democratizing clean energy important to our legislature? It's because Hawaii has one of the highest energy costs, which ranges from 26.8 cents to 43.3 cents per kilowatt hour for residential repairs depending on which island they live on. Add our high cost of living to the equation and it's no wonder that almost half of Hawaii's households are classified as ALICE or below, ALICE being the United Way's acronym for Asset Limited Income Constrained Employed. And if that wasn't challenging enough, to make matters worse, with the median price of a single-family home on Oahu at over \$800,000, approximately 43 percent of Hawaii households are forced to rent, and renters are often locked out of solar options. Last April, we launched our Green Energy Money Saver On-Bill program, available to ratepayers over five distinct islands. One of the most important features of our program is our non-traditional underwriting, which means no credit scores or debt to income ratios. Qualifying for GEMS is a simple two-step process. First, the applicant cannot have had a disconnection notice from the utility over the past 12 months, and second, the energy installation requested must provide an estimated minimum ten percent post-installation utility bill savings, and this includes the repayment of our loan. This estimated savings, while not guaranteed, is very important as our goal is to help our most vulnerable ratepayers be in a better place financially after the installation of the energy improvement than they were before. With 43 percent of our households renting, it was important to our policymakers to ensure that the program was also designed for renters. We did this by tying the obligation to the utility meter, allowing the obligation to transfer from tenant to tenant and offering split incentives and creative terms to eliminate obstacles for landlords. Put very simply, the energy retrofit reduces the energy consumption, which lowers the repairs utility bill. GEMS utilizes this savings to pay for the installation, which is conveniently placed on the utility bill for one simple payment, and leaves a little extra disposable income in the pockets of our LMI households.

I'm excited to share the amazing Kahauiki Village or K Village story. K Village is an innovative and groundbreaking initiative, which under the leadership of local businessman Duane Kurisu, brought the community

together in a public-private partnership to collectively build a village for previously homeless families. This project did not rely on tax credits, HUD subsidies, or state housing financing. The first phase consisted of 30 homes with 153 homes planned for the fully built project. Duane was also committed to keeping the rents lower than what was allowable by half. However, as Alex mentioned, from the lens of an investor or lender for the microgrid, all of the elements that make a village exciting for everyone else made both investors and lenders very nervous. It was challenging because this project was the first of its kind, as such there wasn't any historical cash flows that could be used to determine the feasibility of the pro forma financial projections. And without the typical low-income housing tax credits or construction loans, there isn't any other party closely involved in the monitoring of the project's ongoing financial viability. And while the first phase of the project was only 30 homes, the development and construction of the microgrid infrastructure needed to be built out for the entire 153 units, front-loading most of the costs in phase one, which would initially only be supported by about 20 percent of the rental units. With a 60 to 40 percent split of private to public capital, phase one was completed, and the first 30 families, or 123 individuals moved into their new home on January 12, 2018. We were also excited to participate in the capital stack for the second and final phase of the project, which is almost complete. But the coolest part about this project is that on January 12, 2018, when the first families began moving in, the village was not yet hooked up to the utility grid. In fact, due to circumstances beyond the utilities' control, they were not able to connect the project to the utility grid until June, five months later. The microgrid provided all of the energy needs for these families, its community center, child care facility, convenience store, and Human Services office without a hitch. An amazing example of a resilient community.

Lastly, we are excited about the opportunities to leverage our on-bill repayment mechanism to unlock new markets for our low and moderate income population and renters via community solar and multifamily projects. As an example, we are working with an innovative and progressive local developer, [inaudible] Energy, to provide energy produced by solar into the individual units of low-income and workforce housing, multifamily rental projects. By leveraging their technology, they are able to adjust the energy supplied to the energy consumed of the individual units, and by leveraging our ongoing payment mechanism, we are able to lower the servicing costs and mitigate risks for the system owner and unlock solar benefits for a segment of our population previously not able to participate. Additionally, as these are PV plus storage projects, when the grid is down and other units experience a blackout, these technologies keep the light on for our participating families. Thank you.

### **Bresette**

Sorry I'm getting used to the muting and unmuting function. That was great, Gwen, thanks and congratulations on all the progress of the Hawaii green bank today, that's really, really impressive and you guys are doing really excellent stuff. I didn't know the part of the story where you went five months without them being connected to the grid, so good thing you did that right. Thank you so much, we're gonna move on, but just quickly the questions are almost literally pouring in, so if you have questions you can email us at [EESI@EESI.org](mailto:EESI@EESI.org), or you can also follow us Twitter @EESIonline, and submit them that way. So thank you for those, we are getting them and we'll save them until the end of our panel.

And that brings us to our third panelist. Anukriti Hittle staffs the state government of Hawaii's Climate Change Mitigation and Adaptation Commission, and an adjunct fellow at the East-West Center. Before, she was a climate change researcher with the World Resources Institute, an activist at Greenpeace, and a professor at Washington University in St. Louis, where she co-led the research and independent NGOs observer delegations for COPs 20, 21, and 22. Her background is in international relations and forest resource management with a focus on economics, policy, and law, and she included in her bio a quote that I thought I would pass along from Aldo Leopold, who said 'there are some who can live without wild things, and some who cannot' and for the record, Anu is someone who cannot, so Anu, I'm gonna turn it over to you, really looking forward to your presentation today, thanks for joining us.

### **Anukriti Hittle**

Thank you and aloha everyone, thank you Dan, EESI, and my fellow panelists for putting this together, I think it's a really interesting panel because my two colleagues who went before me have a lot of experience and focus on the mitigation side, and are also looking at basically they're on the front lines, Gwen is on the front lines here in Hawaii to put packages together for our small businesses and so on. So I like to think of sort of the work

that I do, I kind of liken it to a water column, and I think of sort of our elected leaders at the top in the pelagic level, where they are tossed about by storms like the coronavirus, I think of Gwen as sort of in the middle level where you have the demersal layer, which is you know sometimes rocked by the storms, you can get some light but you're also looking down to the benthos and also working on the benthos, on that foundational level. For me, I'm right at the bottom of that water column, and I'm where the one-eyed fish roam, and I'm in the dark, and so we have to create our own light and our own work in some ways. But I'm also here sort of with my catcher's mitt, just waiting to catch as we build into the future and go past the storms that rock us on a daily basis. So with that caveat, I will share my screen and start explaining what it is I do down at the benthos level. Are you able to see my screen? Okay good, all right.

Okay, so basically what we're trying to do, I staff the state's Climate Change Mitigation and Adaptation Commission, and I will talk about that in a little bit, but we're essentially trying to figure out how Hawaii can be climate ready. So a quick overview of what's happening in Hawaii right now, which is that we're experiencing hotter days, we've had a two and a half degree Fahrenheit increase between 1950 and 1980, and it continues to get hotter and hotter as you all know. We have fewer tradewind days, that gives us even hotter days here in paradise, overall our precipitation has decreased, and when we do get rain it is heavy, and creates situations like landslides and so on. We are also looking at some projections for Hawaii, which basically things are not going to get better for us. We're in the unique situation here of being a completely, fully island state, so we are an archipelago here as everyone knows, and so for us the mitigation side, the decreasing emissions and so on, of course we want to do that and decrease our carbon footprint, and that also means we will be more resilient, but for us adaptation is a big deal. So as you can see, we've been focusing on sea level rise at coastal properties, but also inland flooding. So we're looking at just even high tide flooding, what we're calling sunny day flooding, nothing's happening here except that the water goes up and down twice a day as the ocean does, so that's your tides, and this is not a canal, this is actually a street, and this is an industrial area, Mapunapuna, if you are planning to come to Hawaii, which please don't for the next 30 days or more, but when you do plan to come here, if you land in Honolulu Daniel K. Inouye Airport, you will see on your way to Waikiki, you can ask your Lyft or Uber driver to take you by Mapunapuna, and this is what you'll see. That's not on your standard list of tourist attractions by the way, but this is what we are seeing. So we're seeing contaminated waters.

Now Hawaii has a lot of goals, and I'll just quickly mention that we put all of these on our website, but we put it all in one graph, so you can see we have a lot of goals. The one that I really like to point out here is the one where we're trying to achieve carbon neutrality by 2045, and then the one that I will go on to is this one which talks about in 2015, when the Paris agreements happened and then shortly after the Act 32, which laid down the framework for the state and its climate change work. And I like to put the Eiffel Tower and Aloha Tower together, because this is Hawaii's response to what happened in the Paris agreement, which of course we did a lot of things as you can see from those goals, but one thing they did was to put into statute the Hawaii Climate Change Mitigation and Adaptation Commission. And so the Commission was established about, this is its third year, I like to say we've gone past our terrible twos, and now we're in our hopefully terrific threes. Here are some mandates, so you can see that it's got, you know it basically needs to provide policy direction around climate change, provide strategies and goals and help to establish those, help guide the planning and implementation, also identify the vulnerable people and communities, industries, ecosystems, so you can see it has very broad ranging mandates. And so what we're trying to do is figure out where do we start. First though, who is on the Commission? So it's the highest level policy recommending body in the state. So it's a high level, multi-jurisdictional commission, it's got 20 members and shared by the Department of Land and Natural Resources where I am based, and the Office of Planning, which is under the Department of Business, Economic Development and Tourism, which actually I believe Gwen, the GEMS program is also based under that I think, state government is pretty big. We also have four legislators, so again it's multi-jurisdictional, executive and legislative branch of government, county planning directors, so we have our county directors on there, and then the rest of them you know, our executive branch, cabinet, and so on. So we have Department of Transportation, Department of Education, all the biggies are on there. Okay, that doesn't mean that's all who we work with, we work with many more folks than that.

The Commission basically came up with a mission statement that includes that a Climate Ready Hawaii should be clean, equitable, and resilient, and so we really focus on those three things, which we believe cover a lot of ground. So on the mitigation side, just really quickly, this picture kind of tells you everything we've been trying to look at, and I'm not going to go into everything here because I'd like to focus more on the adaptation side of

Climate Ready Hawaii, but this is where all our conversations about electric vehicles, conversions of state fleets, looking at other modes of transportation, encouraging multimodal, V2G, all of those kinds of things. So this is what we've looked at, we are in various stages, piloting various things. So that's on our mitigation side, where the Commission decided it wanted to look at reducing emissions from ground transportation, that was its focus within that large bucket of mitigation. On the adaptation and resilience side, the Commission's been looking to support agencies and departments, and we've got a four-point program, I know it sounds a little Stalinesque, you know, a five-year plan and a four-point program and so on, but it's basically the ones that I wanted to bring to your attention are the last two, the bottom two, which is to engage our communities to help determine those priorities where we will be looking to find funding to support our various vulnerability assessments for our infrastructure, for our investments and our assets.

So that's really where Climate Ready Hawaii and my work with Gwen comes in. We're looking at this point to work on, basically looking at climate change induced risk, looking at how risk of what's happening currently, but also what our projected climate change impacts will be to our roads, our bridges, to our pension funds, and really just looking to find community engagement and to help determine those priorities, and then to go out and find the funding for those things. When we talk with our sister states who are working on such things, California, Delaware, Massachusetts, they have other instruments than we do, so we're looking to finance in some other innovative ways and that's where our green banks come in. And I think that's you know, I just wanted to segue into my next speaker, my panelist colleague who will talk more about these kinds of projects, but we're also looking at how do we when we when we look at moving or shoring up infrastructure, I know that there's some talk of seawalls for Hawaii, you know we always shudder when we think of seawalls, because seawalls for us means there are no beaches left, so that's a really tough decision. Do you keep your roads and your private property and your seawalls? And what do you do then with the public beach which is accessible in Hawaii, the beach is everybody's property, it's the public trust, so those are the questions we're dealing with. This is a project that we are proposing to do, we have secured some funding to begin the planning phases. I should add it's not just the Department of Transportation and DLNR, but it's also the City and County of Honolulu. And we're looking at Punalu'u Beach Park, where there is a road very close to the beach and we're looking at coastal erosion. The structure there are comfort stations, and we're trying to figure out that with this kind of a scenario of three plus feet likely in the second half of the century, or if you're looking at the extreme scenario of three and a half feet by even as soon as 2060, how do we continue shoring up our roads and our essential services in view of this slow and sometimes faster march of climate change.

So I will leave you there with some contact information, and take you over to my colleague who will follow up next. Alright.

#### **Bresette**

Thanks, Anu, that was a great presentation, thanks so much and I didn't realize the Aloha Tower, it's pretty tall, yeah Eiffel Tower's a pretty tall building, that's pretty cool. I've been to Honolulu, I just don't know.

#### **Hittle**

I think we made it taller than maybe it is. It's not to scale.

#### **Bresette**

Oh so not to scale, not to scale folks, no fair enough, it's the Hawaii webinar, we can take some liberties that's fine.

Our fourth panelist is Adam Borrello. Adam is a lifetime surfer and lover of the ocean, he's committed to preserve and protect the unique and special characteristics of his island home. His studies in Political Science and Environmental Law, together with early experience in local politics, inform and guide his approach at the North Shore Community Land Trust, which strives to protect, steward, and enhance the natural landscapes, cultural heritage, rural character of the scenic landscape of the North Shore of Oahu, which I'm sure is a gorgeous place. And Adam, sounds like you're pretty lucky to get to work there, so no further ado, we'll turn it over to you, really looking forward to your presentation, thanks so much.

#### **Adam Borrello**



Good morning, happy Aloha Friday from Hawaii, really appreciate all the effort by the team at EESI to organize and make this happen in spite of the many challenges. So really I just want to get into kind of for us at the North Shore Community Land Trust, where the rubber kind of meets the road. Again, my name is Adam Borrello, I'm Executive Director at the North Shore Community Land Trust, and today I'm going to share with you one of our successful projects that effectively leverages resources and expertise for resilience and mitigation through the lens of habitat and species restoration and preservation. Prior to discussing the details of our Kahuku Point project, which I feel will kind of shine a bright light on some of the opportunities, I'd like to give a little bit of background about the organization itself and how we work.

The mission of the North Shore Community Land Trust is to protect, steward, and enhance natural landscapes, cultural heritage, and rural character of *ahupua'a* from Kahuku to Ka'ena. As you can see on this map, this is our mission area, it's a large pie piece on the northern, going back into central Oahu, but from the northeastern most point and northwestern most point of the island of Oahu. For those of you who don't know, an *ahupua'a* is a land division, it's a traditional Hawaiian land division, and as you can see from the lines on this map, the Hawaiian culture and people were really ahead of their time from a standpoint of resource management. These land divisions run from mountain to sea, and the idea was that these gave individuals or communities living in these *ahupua'a* access to the various resources you need to survive. But it also gave them something that is very important also in the Hawaiian culture, which is *kuleana*, or responsibility to take care of and maintain these land divisions. So really that's what we're all about, we're about trying to identify opportunities to preserve land in our mission area on the North Shore. What we've learned in several years of being around, we were founded in 1997, and together with our community partners, we've learned that if we dream big of course and work hard and do all the legwork and in between, big things happen. So the North Shore Community Land Trust was born out of a need to find solutions for a lot of these potential development, or failure to identify in some instances, opportunities to preserve land in this special mission area. And as is the case around the nation, you know a lot of these manifests themselves in legal battles etc, and the North Shore is not unique in this sense that we've had our fair share of struggles out to protect and preserve land. However, what didn't exist in the minds of a lot of community members was an entity, body, or vehicle to find a solution. And the North Shore Community Land Trust was born out of a previous property struggle called Hobie Oshi, it was Hobie Oshi development above Pupukea Paumalu, that was really our first major success. The work to get there started right after our founding, but it took almost 10 years to get to the solution. In 2007, Pupukea Paumalu, which is over 1,200 acres, was protected in perpetuity. Fast-forward, you know there's a lot on this slide that really... you know my understanding is that this will be shared through EESI, so I wanted to make sure that there's information that can recap and don't want to get bogged down in it, but in between we've done a lot of different community outreach and other efforts to try and make sure that we're continuing to dream big and striving to protect various special properties along the North Shore.

So moving on from that, at the end of the day, how we work is by really the grace, the involvement, and the passion of partners throughout what we do. So first we need to identify willing landowners, structured land transactions that allow for the placement of conservation easements, which place development restrictions or preserve land in perpetuity. So what we've learned, not on the island of Oahu especially where our land is at a very high premium, is that even traditional land management mechanisms, for example having something be the various zoning laws, having something be zone agriculture, I live and I'm reporting to you from a home that sits in Mililani Town, which used to be when I was young, all pineapple land, and so these zoning changes can and do and in some instances need to take place to accommodate the natural evolution of what's going on on our island, and yet we feel it's vitally important to also protect and take steps to preserve where we can. So how do we do that? We do that through healthy and effective relationships. These relationships are built on mutual respect and trust. We regularly reach out to the community, engage the community, try to provide opportunities for community input, and really at the end of the day most of what we do is informed, guided, and driven by the community input. Again, we work together with landowners, I'll get to the specifics of the the project we're going to talk about today, government, NGOs, community volunteers, and importantly as it relates to our Kahuku Point project, which we'll talk about, we worked carefully and closely with the environment, talked a little bit about the community engagement. And something that wasn't initially as strong of a piece for us but has evolved to be a very important part of what we do is the stewardship and education.

So I'll just continue on taking us to the Kahuku Kawela Forever, which is kind of the introduction to our Kahuku Point project. This project was born out of a long time struggle between the community and various owners of the once [inaudible], now Turtle Bay Resort on the North Shore of Oahu. Basically, there was an approved and entitled development plan, which was approved many, many years ago in the 80s, and then in more recent times, new owners got engaged with the property and wanted to pursue those development plans. Since their approval, a lot has changed on the North Shore. There was a photo I believe in one of Anu's slides that showed some of the houses along the North Shore where coastal erosion and sea level rise is very real, where we've got parts of neighborhoods or selected homes within neighborhoods falling into the ocean after large swell activity, and so in addition, we've got a very real pressure from tourism on the North Shore. And so the community pushed back against those originally approved development plans, and the typical battle if you will or struggle ensued with lawsuits etc. What we try to do at the North Shore Community Land Trust is find a workable solution. And so with tremendous support and effort from other community groups, we were able to work together with those community groups and others to get to a place where now if you look at this map, over a thousand acres have been preserved and will not be developed at the Turtle Bay Resort property. If you look at the brown piece there, that's what we call the *mauka* or mountainside land, which is ag, preserved for agriculture, consistent with our mission. And on the *makai* side, which is largely the pink side, or the oceanside, all of the salmon area, and the areas furthest to your left and right of the slide are also preserved as open green space and preservation or park. Conservation easement is placed over the hole of both the ag lands and preserved areas on the *makai* side. And so how do we do that? Oh before I skip from that, because what's also very important for us is that we are there and working to both preserve the environmental integrity, and where possible restore it, but we also are vitally interested in preserving recreational opportunity for our surrounding community, our island community as a whole, and whether it be my family and friends that happen to go down there, visitors from our neighboring islands that come, we are very proud of the fact that a part of our conservation easement and the effort is that all of the trails throughout this property are open to the public, they are set aside parking etc for access, so that's an important point for us as well. And before I leave this slide, the stripes up to the right, part of the colored area are Kahuku Point property, which is what we're going to talk about specifically now, approximately 39 acres.

So how do we get there? We got there through basically bringing the community together and then identifying with the huge support of the Trust for Public Land, different funding sources in order to make the acquisition happen. Included in those, where the state Legacy Lands Program, which is housed within the Hawaii Department of Land and Natural Resources, a percentage of conveyance tax goes into this fund and it's set aside for these types of purposes. Similarly, for the City and County of Honolulu operates very similarly, in that instance it's a percentage of property tax, and finally with the help of Trust for Public Land, we were successful in securing federal funds through the compatible use buffer zone, which is through the U.S. military. And this is why. What you're looking at here is Kahuku Point, and if you look out to the tip, this is the northeastern most point of the island, and as you come back in, what you'll see, and apology guys, it's a little dark as you get into the right, but what you'll see is the restoration of this intact coastal strand ecosystem, which I'll have our staff talk about in this next video slide, but what's important to know, the most pervasive and difficult invasive species is ironwood. The ironwood is both heavy and hardy, and so clearing them out is not easy, and what they do over time is they lay a meaningful layer of their needles which really choke out a lot of the native species. So we've systematically in the five plus years that we've been out there, have been working closely with our partners to make progress and restore what you see in the first part of the green which are natives crawling, and we'll get to some of those specifics shortly.

But what I'd like to do now is share a quick video slide where some of our staff and key partners are sharing what's going on at Cougar Point.

*"There's just a feeling that comes over you, just a certain serenity when you're out there." "Kahuku Point is really special because it's this community of native plants and animals that used to be one of the dominant habitat types in the Hawaiian Islands. But, because of the pattern of exploitation of coastal areas, there's very, very few intact coastal strand habitat types." "Through the concerted efforts of the North Shore Community Land Trust, Kahuku Point has been designated as an initial restoration site." "For all projects aim to provide a native ecosystem for multiple plants and animals, but the keystone species we're thinking of is the albatross." "Showing a child a yellow-faced bee, and seeing the wonder and curiosity that the next generation has, that's what gives me hope."*

So how do we do that work? Basically, when we get to the acquisition or the transaction, if you will, for the conservation easement, that's the first side of the funding, but how do we get there with regard to the work that we're doing out in the field now is through phenomenal funding partners like those listed on this slide, all of these funders are equally important, but I would be remiss if I didn't point out just how valuable, constructive, and powerful our partnership is with the Pacific Island Coastal Program through U.S. Fish and Wildlife. Our cooperative agreement with them has us the beneficiary of a phenomenal—and Sheldon was in the previous video—phenomenal field biologist who's able to really help guide and steer our team and our extended team to find success out there. National Fish and Wildlife Federation, Hawaii Community Foundation, the resort itself, so we're talking about public and private partnerships. The resort has really stepped up under its current ownership to get behind our work out at the focal point, and we appreciate that. The Cooke Foundation and Atherton Family Foundation, Musser Fund, Hawaii Tourism Authority, the Omidyar Ohana Fund, and Mohamed bin Zayed, now these are all just our larger donors and I don't want to bore everyone, but it truly is a community and team effort, both from the staff, from the other supporting partner agencies and organizations that we work with. So what does that result in? It results in this beauty that you see on the screen now. So on this screen, starting in the left hand corner and moving clockwise, we have *akulikuli hep mahina*, in the lower right hand corner *ilima*, next to that, the red plant is *akoko*, and the last plant is *oppo huihui*. All of these plants are native plants, and what we found as we peel back the ironwood forests and lift the layer of ironwood needles, is that there is an active seed bank underneath. Not all of these plants are coming out of the seed bank, but a lot of natives are. Tim Chelsky, our conservation director, and Alyce Terry, our volunteer coordinator, are busy at the task on the regular, engaging volunteers, getting out on the property to make this happen.

And what does this mean from a resilience standpoint? It means that species that otherwise are losing habitat are showing up and thriving on the project site and the surrounding area. So you have endangered monk seals that regularly are in the area, yellow-faced bees as well that are making use of this restored coastal strand habitat. More recently, and we're very excited about this in the last year, after a few years of our restoration efforts, after the decades long absence, albatross have been returning, a major favorite of our field biologist and partner Sheldon Plenovich, who's just a phenomenal resource to us as we go through this process. But what's nice is that talking about a resilience and mitigation standpoint, low-lying atolls, which are known to be important nesting areas for the albatross and other seabirds, are being lost to sea level rise, and the combination of sea level rise and an occasional extreme storm has some of these species' breeding and nesting areas being eradicated. So what's nice out at the Kahuku Point property is that we feel like we're preparing and restoring an opportunity, and we couldn't get a better endorsement than nature saying like hey, we feel you're doing a good job, and then albatross are back. We've seen the nest numbers increase, unfortunately this year we are down to three chicks, but we're hoping that all three of those chicks will fledge. We work closely with partner organizations to manage the effort around the species. The animal species, we have a comprehensive predator control grid around the property in order to try to maximize their success. And how do we do it? We do it with a phenomenal amount of volunteers, a passionate, engaged, and caring community, and with just amazing partners. So these are volunteer work days, here in the lower left-hand corner you see Surfrider Foundation, they do a huge amount of work together with us on the ocean side. We're out at that point where our trades do come through, so there's unfortunately a lot of plastic debris that comes up, so Surfrider Foundation and Plastic Free Hawaii have been phenomenal with that.

I'd be remiss if I didn't mention the Hawaii Marine Animal Response Team, who's really worked closely with us in monitoring the nest and other animal life in the surrounding area. And then also educational outreach. I'm sorry one other thing, another area where I'd be really making a mistake if I didn't individually identify and recognize the amazing support we've gotten from the military with regard to volunteer work days. The Army, Marines, Air Force, different groups have come out, and also surrounding universities, BYUH and others. But the final piece to what we do, and I like this photo because we've got the schoolchildren in the foreground, and if you look at the distance that is the Turtle Bay Resort, so it's not too far out. Most of our work days, the volunteers hike out to the site, we try to educate them on their way out, it's a beautiful hike, and it's a good way to start the day, but again this is a good example of a public-private partnership, and really the leveraging of these amazing resources that are available. And then just leaving, this is what it's all about. Young kids getting out there and people that are passionate about it planting the proper trees as we eradicate and move the invasive species. And

really at the end of the day just restoration success, to date over 3,500 volunteers, over 22,000 native plants now planted, those don't include those that are coming back out of the seed bank. Over 12,000 pounds of marine debris removed, to really appreciate again the help of the Surfrider Foundation in that regard. Over 200 tons of invasive plants removed, that's a big number, but ironwoods are very heavy, and so we're basically removing a 30 acre ironwood forest over time, and so that number will go up. And again I touched on it earlier, 9 albatross nests this year, we're hopeful and looking forward to three of those fledglings. To date, seven acres of dune habitat are restored, which is you know opening the door for all of this other wonderful activity out there, and a very major increased cover of native plant species.

One other partner I do want to touch on, because they've really helped on the educational standpoint especially with the young kids, is the Kokua Hawaii Foundation, who's been excellent in supporting the educational outreach, which we do with surrounding schools and interested schools across the island. So at the end of the day, through these partnerships and with the help of a phenomenal community and great network, we've been able to start the process of restoring what is a magical and special piece of land, and we're really excited that so far nature is endorsing our efforts, and we'll continue to try to work together with that network of people to make this piece of our coast more resilient, leveraging natural mitigation efforts to do that. So thank you to all our contributors, photo contributors, and everyone else, I also thank you again to EESI, to my fellow panelists, I felt like somehow we didn't quite fit, but I think at the end of the day we connect the dots and hopefully it all makes sense. So really appreciate everyone's time, and hope that if, once this COVID-19 situation is resolved, if you do make your way to the islands, that you'll visit our site and see firsthand what a magical and special place it is.

### **Bresette**

Thanks Adam, that sounds great. The photos looked awesome, and then congratulations on the albatrosses. Well now we have Q&A, so now is where we really get into weaving the four presentations, your different perspectives together, and like I said we've been getting some really good questions in, but I'm gonna start with one that I think will be a good one to kick us off.

And Alex, we're gonna go back and we're going to start with you, and we'll go through the order of your presentations. May have to answer the question differently depending on your perspective, but we heard at the outset lots about green banks. I'm wondering, Alex and Gwen, what are the next steps you foresee as far as green bank development goes? You can have a national perspective, you can have a Hawaii perspective, whatever works, and then for Anu and Adam when it comes to you, I'd like you to think a little bit about how the green banks might evolve to become a bigger resource for adaptation efforts that you're either managing yourself, or that you're seeing your partners manage? But Alex we'll start with you, and then we'll go through Gwen and Anu and Adam and we'll come back.

### **Kragie**

Sure, great, thanks Dan, and really lovely wonderful presentations from my colleagues who presented, thanks for all that, I enjoyed it. So I would say that in terms of where green banks are headed, like I said in the beginning, green banks are often in the business of tackling the toughest tasks in the financing of clean energy markets, or in this case adaptation markets, and so you know we're not going out and trying to offer competitive financing to a solar farm in the Nevada desert, there's plenty of money available for that at great rates, no need for us to compete there, that's not what we do. What we would do is if there's some added wrinkle to that project, for example an energy storage adder that might be making lenders nervous, we can step into the capital stack and play our role and to mitigate some risk. And that's the kind of example of where I think green banks are really going to be going, where you're going to find us, with a nose for the tough tasks ahead.

And I would sort those into three categories that are somewhat apples and oranges, but hopefully you'll bear with me. The first is energy storage, exactly as I just said the energy storage financing market is pretty much exactly where the solar energy financing market was a decade ago. You know it's a technology that's proven, it's commercially viable, but it's also not widely deployed, and it does kind of give lenders heartburn, especially if you're dealing more at the state and local level as opposed to a money center bank. Being involved in the financing of energy storage is I think a really important component of the future of green banks. We're currently in the process of creating a Nevada Clean Energy Fund, which is going to be Nevada's green bank, and they are likely to be focused on energy storage financing as much as possible. We also have a number of other green banks that

have started financing energy storage technologies as well. And the second one that I would describe is adaptation, it's resilience, I've hopefully got into sufficient detail in the previous talk on that, but that's really a next frontier for green banks. As I said, you know finding ways, sniffing out those cash flows and savings, so that lending becomes a more natural process with adaptation projects. And then the third area I think green banks aren't 100 percent sure if green banks are headed are LMI, these are the tough markets for a lot of lenders, and whether through just institutional inertia, or for whatever reason it's much more difficult to get a loan in LMI communities and communities of color specifically, and the solution that green banks are looking to provide is by putting a really strong focus on making sure that our activities are in this market. The green banks are supporting these traditionally underserved areas of the country, and that's something that we're really focused on. You heard from Gwen that the Hawaii Green Infrastructure Authority is already way ahead of the curve on that one, but I think you'll see more and more green banks really make a big pivot to focusing on financing clean energy and energy efficiency and adaptation solutions in LMI communities in their jurisdiction.

**Bresette**

Gwen, you're ahead of the curve, but what's the next leading edge look like for you all?

**Yamamoto Lau**

Oh yeah, where the different sources of funds for our green bank in particular would really benefit is right now our source of funds is very limited, we are limited to what we can finance. Primarily, we've got solar. If we were able to expand our funding sources and expand what we are able to finance in the short term, you know I think green banks as Alex said is not to compete with traditional lenders, that if it can be financed by a traditional lender, then it should be. However, we should be there to help facilitate new technologies until the traditional lender feels comfortable doing it by themselves in order to move the industry for it. I'll give you an example. Anaerobic digesters you know, if we were able to finance anaerobic digesters that can take the green waste and push it through a digester power-up say, our water supply or municipal buildings, maybe the byproduct will be fertilizer, that does a couple of things. It lowers the cost for the municipal buildings, but it also takes out of our landfills tons and tons of green waste. So that's one example. Many other examples, for us in the short term, it would be to finance things that are not able to be financed traditionally, but it's also to enable other ratepayers who are not able to get financing traditionally access to it.

**Bresette**

And Anu and Adam, sort of what needs to change in terms of green banks for them to be sources of funding for the kind of projects that you are working on?

**Hittle**

Yeah so I'll just sort of stick to the order of the panel, don't mean to jump in front of Adam, but so one of the things that we tackle, not very successfully right now, but hopefully that's getting better is for instance, the properties up on the North Shore or anywhere else where we're facing coastal erosion, there are in general perverse policy incentives to put things back in place when a disaster happens, rather than trying to find a better place for it. So people of course you know you've bought a parcel of land, something's happened to it and you want to go back and rebuild, and you get all kinds of money to be able to do that. But looking at coastal erosion, we're trying to move things you know, doing those dreaded words managed retreat, we're trying to do that and we haven't really begun doing that in Hawaii. But our sister states have been doing that to some varying degrees of success. So I wonder if there is a front here for the green banks, when they use for example Gwen, you know even when you have funding that is limited to rooftop solar, rather than the rooftop solar going where the houses are, could the houses go where the rooftop solar is? You know what I mean? So could there be incentives, or maybe there already are incentives, that make people go somewhere else when they rebuild, because there are these incentives from green banks that they can then put rooftop solar on their houses whereas previously maybe they couldn't, or maybe now because they've had a storm washout of a portion of their parcel, you know those kinds of things. So just looking at those, even the narrow incentives, when you're bringing those incentives in, can they bring in the co-benefits of not only mitigation, which is not just that 'only' but also bringing in that adaptation side, where you're encouraging people to come back here and say hey I got financing for you if you come back

here, that kind of thing right, so that's one where you're looking at the private property and parcel by parcel retreat. But when we're looking at public infrastructure, is there a place for green banks in there to help with green bonds, or I don't know private leveraging, private capital to help us bring those private and public funds together to make it more attractive to build somewhere else, and to build it stronger, higher, and more resilient. I mean sort of sounding a little bit like the Olympics here, but you know what I mean.

**Bresette**

Great, thanks. I think you get the award for the comfiest webinar position. Adam, what would it take to get a green bank listed in your list of funders at the end of your presentation?

**Borrello**

Yeah, you know I don't know, I guess what I've learned about green banks through Gwen and Alex, and getting to know them and I feel that they fulfill a very, very vital role, but they also have a very focused purpose at this point, and which makes it all the more important that the kind of vision necessary at both the local, state, and federal level with regard to all our typical funding sources, because unlike a microgrid or other things, where they can monetize at some level, yes they're taking additional risk, or they're doing something that a conventional bank might not be willing to do, because that's a purpose with regard to their green banking perspective, however they do need to get payback, and they will re-engage that money as a bank does. Our work is a little uniquely different, we've been unable in a traditional sense to monetize the good work that ourselves or our partner organizations or others like us do, that's it for some more like Hawaii, we do feel that it's a good sign in that both the city and state have seen the value of creating funds that can preserve such property. But yeah, we just don't have the financial resource as a small 501(c)3 to really, we kind of bootstrap it as it is, and the notion of having a bank loan is daunting for an organization like ours, but that's not to say that things don't continue to evolve, and Alex and Gwen continue to do wonderful things they're doing in it, some maybe new opportunities for them.

**Bresette**

Thanks, alright well we have some questions that are coming in, and I'm keeping an eye on the time. So the first question I mentioned at the outset that we're almost done our coastal resilience briefing series, but we have a few more and in one of those areas that we're looking at that we haven't studied yet involves Puerto Rico and the Virgin Islands, and this next question specifically addresses Puerto Rico, Virgin Islands, and also Guam, and the question is how can lessons of Hawaii, with respect to the green bank, the improving access to affordable capital, the climate resilience financing, how can the lessons of Hawaii be moved around to other island communities, other coastal parts of the country? There are parts of the country with coasts that are dealing with some of these resilience challenges that don't quite have the green bank resource, how can we make sure that these are more widespread? And Alex, that's sort of a national policy question, we'll go down through the line again but we'll start with you.

**Kragie**

Sure, so that I think the way that green banks can get more resources is through the *Climate Bank Act* that I was referring to earlier, I think that's going to be the way that we take this movement to scale. In the interim period, we're making do with what we have on hand, but the leaders of my 16 green banks are essentially driving Lamborghinis that are stuck in second gear, and until there's a way to help them access the full range of their automotive performance, they're just going to be doing what they're very able and do very well, which is continued day-to-day operations. But the National Climate Bank is definitely the path. We're also raising a fund right now that's going to provide low-cost, long-term capital for green banks, but the National Climate Bank is ultimately the solution.

**Bresette**

Gwen, you're welcome to substitute an EV metaphor for the Lamborghini, or maybe a Ferrari metaphor since this is Hawaii focused, go ahead.

**Yamamoto Lau**

I just want to add, so you know the Green Bank Consortium, under the leadership of Alex, has been a very collaborative organization, so you know lessons learned not just from Hawaii, from all green banks, we are all very willing and able to share and help and assist existing green banks, or new green banks you know, so for Puerto Rico in particular, if they don't have one and they're looking to start one up, there is a lot of support available for them, not only in helping with setups or that type of things, but lessons learned you know, getting on a call with another green bank, finding out more about the program if you want to emulate it that way, so you know we're here to help each other and others that are considering to be born.

**Bresette**

Anu, do you have any thoughts about how replicable the work you're doing in Hawaii is for other island communities, or other coastal parts of the country?

**Hittle**

Well, I'd like to say that I have some lessons to share, but I think because we're still in the toddler phase with our Commission that I'm actually learning from my more learned colleagues on this one, and that resilience to disaster events is always on the top of our minds, even though we are working at the benthic level, but it's also something I think that doesn't just happen in a day, so an event can happen in a day, but then the response to that, and then there's shoring up and gearing up for the next one, and then being able to bounce back is really what we're trying to figure out. And the role of the green banks, if they're at least you know at the national level, I know there is all this you know, there's the *National Green Bank Act* and so on, but in Hawaii I just wonder and sort of keep throwing it back to Gwen here, but it's almost like we're having a conversation with each other, but you know it's just I wonder if there's a place for our legislature to expand that role and so on at some point.

**Bresette**

Adam you work in a pretty unique place that's a pretty unique part of the world, but what of your work could be replicated in other island communities or other coastal parts of the country?

**Borrello**

Well, I think tying in to it what Anu was saying, you know we're certainly still learning, but as I mentioned with regard to acquiring funding from both the state and city level, I think what other coastal areas and island locales around the world can learn is that it needs to be a priority, there does need to be a funding mechanism of some sort. So where maybe green banks are not the fit for us in the here and now. Fortunate for us here in Hawaii, that there is some effort, I'd love to see it increase. We did host recently a contingent from Jeju Islands National Heritage Site in Korea, and you know we kind of just found ourselves talking about a lot of the similar challenges with regard to funding, and making sure that it is a priority. Their structure, for example, is very different than ours, but nevertheless it's a priority. Much more of their money comes from the private sector. But again I think most important is that these kind of efforts, projects like Kahuku Point and others, we do some dune restoration down the road at Sunset Point where city bike paths fell into the ocean a few years back after a big swell event, you know these are priorities, and they do have a very real impact. So I would say that that's what they can learn from Anu what the work that they're doing at DLNR, from green banks and the priority they're making to up the level of resilience elsewhere, is again that it's a priority.

**Bresette**

Thanks, we're gonna wind it down now, but does anyone want to take a shot at handicapping the prospects of the climate bank legislation? Yeah Alex, sounds like Alex has an opinion.

**Kragie**

Yeah am I on there? Okay great. So yes I do have an opinion. Here's how we're approaching this collectively. The first priority right now is in finding out ways that green banks can be of assistance to their communities and specifically the companies and their companies' workforces that rely on them for normal course of business, and are really struggling right now. What we're seeing is a lot of contractors that are laying off folks, and so green banks are currently looking at ways that we can help mitigate the impact of what is certain to be a

real rough blow for the industry right now. But as the secondary focus for us is to make sure that folks realize that the points to make the transition from carbon to clean has never been better than right now, you know we have interest rates at 25 basis points, we can do large-scale borrowing essentially for free, which is I know but casual way of saying it, but it's true at the end of the day, and we can do a lot to help communities rebuild in the wake of this by getting people to work. And we see at the Coalition for Green Capital and the American Green Bank Consortium, the construction industry is really well suited to be part of the great comeback that we're all going to have to make together. And you know why not fight climate change while we're at it? Let's get two birds with one stone, so that's all to say that we do feel strongly that any eventual stimulus legislation, beyond what needs to be done immediately for health care workers, let's prioritize that, that's job number one right now for healthcare workers and for the afflicted. Beyond that, including money for climate banks in any stimulus package is kind of a no-brainer too, so we can build our next clean power platform and put a lot of people to work while doing it. So that's it, and we also feel very good about if in the absence of stimulus inclusion, next year, we think we see a real window for a climate change package passing, and we intend to be right.

**Bresette**

Gwen, you're welcome to have the last word and then we'll end there.

**Yamamoto Lau**

Great, just a real quick thing. So everything that Alex said, but I do want to say that definitely we need to deal with the pandemic as it is now, but we also need to keep our eye on recovery because we will get past this, and funding the *Green Bank Act* will be, it's the ultimate impact investment. We're talking about people, private, prosperity. And one last thing is we are helping especially our low moderate income households put a little bit more money in their pocket, thanks.

**Bresette**

Thanks so much, and sorry for interrupting it was a glitch but thanks so much. This is the point in the traditional briefing where there is an eruption of applause for our wonderful panelists, so you'll have to use your imaginations for that, and I'm not going to clap because it'll freak out the microphones, but thank you so much Alex, Gwen, Anu, and Adam, this was a tremendous panel, and such great stuff being done in Hawaii, and while I wish you were here in DC with us, I also kind of wish I was there with you, because it is really nice there.

We'll go ahead and wrap, the materials that you've seen, the written materials, there'll be a webcast as well and all be available on EESI.org. While you're there, please sign up for *Climate Change Solutions*, our newsletter, please also take a moment to fill out our survey, we're still new with this webinar thing and your feedback will be really, really helpful to us, so that the next couple that we do, however long this lasts. Thanks to the EESI team, specifically Amaury, Anna, Amber, Ellen, and Dan O'Brien for all the work that went into today, and thanks again panelists for being so flexible and for being willing to be with us remotely today. It was a really great panel, really, really appreciate all your time, thanks so much, we'll go ahead and end there, thanks everybody, stay safe.

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