Please stand by for real-time captions.

Welcome, everybody. We will get started momentarily.

We will get started in about two minutes.

Welcome, everybody. We will get started momentarily.

Thank you, everyone, for joining us again to discuss how we make sure the transition to clean energy is equitable and how those investments are working to overcome the obstacles to getting it there. My name is Andrew and I am the President of the Accelerate Group and the consultant for the EPIC Policy+Innovation Coordination Group. This is the second meeting of the equity work stream of the EPIC Policy+Innovation Coordination Group. We are gathering insights and lessons learned from EPIC electricity research and deployment projects in the state and working to identify new opportunities for collaboration to accelerate innovation. I want to acknowledge the other policy participants joining today including the EPIC administrators, California Energy admission staff and advisors, utilities, PG&E SCE and CPU staff. I would like to recognize Rebecca gold and Amanda Fornelli who will be helping in the chat and Q&A boxes as we go. If you have any questions for us on this process reach out to us at the accelerate group and we will start by sharing a presentation for today. Again, welcome to all for joining us today and we are here today to discuss again ensuring equitable access to clean energy. The overall goal of the workstream is to create a framework, framework for the equitable engagement in RD&D projects. This is developed by gaining an understanding from presenters on lessons learned and best practices for community engage in in RD&D and pilot projects. We will be conducting three meetings as part of this work stream and we had one last week and this one today and a third one in December of 2020. Today will have presentations from EPIC project leaders and community leaders that have been involved in EPIC projects. As I mentioned we have three meeting scheduled as part of this work stream and we had a very productive discussion last week on October 6 and heard from excellent presenters talking about the challenges and opportunities and engagement around equity focus and projects related to involving disadvantaged communities. We have this workstream meeting today and our third workstream meeting will be on December 3 again from 430 to 6:30 PM.

As we discussed we will be trying to gain information directly from projects and community leaders that have been working to advance innovative energy projects and in partnership with disadvantaged communities and centering those communities as part of the conversation. As we discussed last time the end goal is to be able to put together a framework for equitable engagement in those projects that could be used for EPIC projects and programs going forward and to ensure the community needs identified first and that we are working to ensure projects address the obstacles and challenges we face in ensuring equitable access to clean energy and not merely viewing this advantage community partnership in RD&D is an add-on. I Thank you for joining us today and joining us over the course of these three meetings in this effort. Today, we have presentations from four different projects and efforts that have been going on and after those presentations, we will have a panel discussion with the panelists where you have an opportunity to ask questions and have hopefully a robust discussion on some of the challenges and insights and lessons learned that we have seen as part of these projects over the past few years. If you do have a question that you would like to ask as part of the panel discussion, please enter it in the QA feature that is on the right-hand side of your screen. If you don't see the QA input box on the right-hand side, you may need to click on a button that is on the lower right-hand corner of your screen. That button may be behind three little dots and look for the option that says QA. Please enter the QA questions as we go. We will look at them and prioritize them for the panel discussion as we go. If we don't get to the questions that you asked we will send those out to the panelists for their input in response after the meeting. And we will introduce briefly the speakers we have joining us today. First off, we will have Amee Raval from the Asian-Pacific environmental network and after Amee we have Ram Narayanamurthy and then we have Alexandria McBride from the city of Oakland and then we have Mack Knobbe and Prajwal Gautam talking about their smart city initiative. Again, once we're done with presentations which hopefully will be short and present some of these main topics we will have a panel discussion QA. Once we get through some of the questions on the presentation and discussion is a panel we will also be looking to have a group discussion where we post some of the same questions to others that are involved here today in the workstream. If you have a comment or would like to respond to some of the questions we are raising or insights that the presenters are sharing, please send me a comment directly in the comment box where you can pose it in the question box and mention where you can discuss this verbally and on camera so please send the comment directly if you want to do that at the end of the meeting. Ultimately, we have to pull together a framework and lessons learned from what we hear today and outside of this conversation today so we will talk a little bit about what will be happening at the next meeting in December as well as the plan for between now and then.

We have asked the presenters today to address some or all of the following core questions to tackle and get to the heart of what we are looking to gain insights on here. For those who are members representing communities and the community partnership involved in their EPIC project we pose questions including the following, what methods of engagements were used by the project leaders before, during, and after the implementation of the project? What aspects of an RD&D project to community members and community-based organizations want to be involved in? How did RD&D project leaders communicate technical concepts? And what resources and technical assistance to communities find useful. What was successful and what could be improved about the community engagement in the RD&D project? How do you identify your community's needs? How do you want to engage or be engaged with RD&D projects? What was the number one lesson you learned being involved with RD&D projects in your community? For those who the research are leads as part of the projects we have a different set of questions that we have asked them to address in their conversations today. First what methods of communication and engagement were used in this community prior to the project deployment? How is the location of the project selected and what was the community involvement in this process? How are technical concepts communicated to the community? And to describe the challenges and successes with community engagement.

The presenters will hopefully keep their presentations short and again we will have a panel discussion and a QA session after we finish the presentations. We do ask, again, if you're just joining us if you have any questions you submitted in the QA box on your screen and if you don't see it you may need to press the QA button in the lower right-hand corner of your screen that may be behind three buttons. As we go, if you have any technical difficulties in getting access to the Spanish translation or audio or video problems, contact Amanda Fornelli during the meeting and she will try to resolve it as soon as possible. You will also see a link to the Spanish translation that we have live in the chat box as we go.

Participants are generally muted on entry and there are some panelists and staff that are participating today, and they can respond and answer questions as well. Again, when we get to the group discussion question if you do have a comment would like to make a comment and speak send a direct message to me in the chat box indicating that you would like to speak, and you can join the discussion. Finally, I want to say this meeting is being recorded. You can watch the meeting afterwards online at our website, www.epicpartnership.org. There is also a live transcription of the event that will be available after the meeting as well on the website.

Thank you for that. That was our introduction and I will introduce Amee Raval from that Asia-Pacific environmental network who will start us off today with the presentation on their EPIC project they have been involved in. Welcome.

Thank you, Andrew. And good evening, everyone. Thank you for joining. And we want to share perspective about the program and I just want to say I am participating from Oakland in the bay area and trying to stay cool. It is pretty warm out and it feels like another heat wave is upon us so -- conditions. Next slide.

Just to give a little background, it is an environmental organization and we do organize particularly with Asian American immigrant and refugee communities so broadly around the environmental justice issues that impact them ranging from climate and air quality issues to clean energy to housing and everything in between. Our mission is that all people have a right to clean and healthy environment in which the community can live, work, learn, play and thrive.

To start to surface and answer some of the questions that were posed in the context of clean energy environmental justice communities have unique needs. That looks like disproportionate health burdens from living in close proximity to dirty energy infrastructure. In Richmond that is communities living on the front lines of the Chevron fires and leaving that solution for generations and impacted by high asthma rates and other chronic conditions. Communities have also lost disposable income which means they are more susceptible to energy security and utility disconnections. We also see distinct vulnerabilities of communities of color as it relates to climate disaster whether it be the impact of extreme heat where people have affordable air conditioning and during wildfires where there are people living in poor older buildings and have poor ventilation as well as power outages, so we are thinking about disabled folks and people with chronic illnesses.

And then broadly in terms of developing strategies, low income Californians, the majority are renters and live in affordable housing and many are linguistically isolated like [Indiscernible] refugees. Next slide.

In the context of the EPIC program we have always advocated across the many years we have engaged that the project needs to be designed to meet community identified needs and what can that look like? Well it depends on watching the community, but I wanted to offer a sampling of the power that we think clean energy can do in terms of the community whether that means local ownership and control of clean energy and access to distributed generation of storage and community health benefits. Good jobs, as well as economic benefits and improved air quality among many others.

While Richmond has engaged for many years with EPIC from legislative advocacy that created the targets to disadvantage communities in the context of the EPIC program to unsuccessful applications where we learned a lot about working with partners outside of that sector to the current EPIC project which we were successful in

part of and in the early stages so you won't hear too much about the details and I can't say so much about the experiences in terms of implementation but I can say that we are excited about the project for an advanced energy community enrichment which will create a virtual powerplant across over 130 points enrichment including the youth center that we have partnered with to get access to distributed generation and hopefully create replicable models with the project and just to name a few will be happy to share more during the discussion but it is an incredible expansion to really address the needs of youth in Richmond for mental health services and personal development and art and culture and we are trying to get a storage battery for backup so it can really be a community energy -- especially during an outage. Next slide.

So, I will close with when it comes to I identify community engagement is really critical and I want to name that community engagement is an authentic process and not a check box. Time and time again we work with partners and EPIC in particular where folks don't really understand, and I want to share some best practices and the first and probably most important is that early engagement is key, so other community partners can really cope create with project developers as it relates to the goals and divisions and really trying to move away from transactional relationships towards more transformational partnerships. And that takes time to build trust and relationships. So, listening and making spaces for all voices and really embodying racial justice values and these are all recommendations because there a lot out there on what is best practice. And really hoping to adapt them based on critical feedback and making sure that this partnership in the context of the project isn't creating unintended harm administratively. So to name sort of how organizations in the roles we had in project development, just because we are not engineered does it mean we have a range of expertise so for stakeholder outreach it is highlighted here so often with the CB a partner you often use stakeholder outreach and I won't go to the list but there is so much to offer beyond outreach as it relates to leveraging relationships and policy advocacy indication and strategically networking and materials and the list goes on and very creative about this so I want folks to open their minds on what community partnerships can look like and value that expertise so we can actually see it. I really close there and that is just a little sort of tease of some of the recommendations we offer in the experience but excited to be able again to do the discussion. Thank you.

Thank you very much, Amee. We appreciate the time.

Just to give folks a sense of community.

Thank you for presenting. If you have questions for Amee and any presenter, please use the QA feature in the box on the right-hand side or if you think of a topic for discussion, please send in the comment directly to me in that box as well. I will switch gears and we will have Ram Narayanamurthy from the electric power research

Institute talk a little bit about their project around affordable decarbonization. Welcome.

Thank you. Thank you, Andrew and everybody for the time.

So, I think it is a little bit of a different twist and a little bit more engineering oriented but what we also realized is that you work with many of the affordable housing communities, a lot of the work has been in the multifamily area and the role of the property owner and property managers becomes really critical in terms of community engagement. What I wanted to go through today was some of our experiences and how we approach the community before we get into the actual private part and understand the surveys and what the needs are and what is coming out of the work every day, so we will go through a few examples within these properties. So just a quick summary of the different projects under which we have been working in affordable housing and a few of them are new construction working on electric material construction and looking at storage plus energy management in affordable housing communities and work on mixed fuel and electrification parts and each of these are a different experience working with community itself. And if you want to go forward.

So, we will take an example of a few communities that we worked with pretty closely and one of the earlier pieces of work was something very collaborative with Southern California and the Department of housing and urban development and the focus was how do you go in and what makes sense for upgrading existing affordable housing. We do know that the goals for that have to be retrofits of existing housing but what is really taken more importantly, what measures are for the community and stakeholders. In this case what we did is we went in and conducted an added insulation and put in solar thermal and added in -- so a pretty comprehensive retrofit but it is pretty interesting.

So, what we did is we worked with them and interviewed some of the occupants at the end of the project. So, when we did the project, part of the learning was we had to have more people out for a few days and we had to have access to mitigation and you wanted to see how more people felt at the end of the project. And how it turns out is it is about the quality of life and not just economics. For example, people are more comfortable now. They turn on the air conditioning and the house gets cold familiar air conditioning is not running this long and we people who came in and said now my house can actually stay at 76 degrees, so my kids don't have nosebleeds and it is the quality of life that comes from these energy efficiency retrofits that we kept seeing over and over again.

Within this project, of course, there were some job benefits and we had the training of some of the tenants, so I could the, do these deep retrofits and we could see what other additional benefits we could provide them in addition to the energy retrofits.

Another example is from Ontario in Southern California and they were looking at how you get to net zero in low income up the housing and there were about 80 units and the approach we took here was how you combine things like community solar and electrification and how do you do light retrofits. So this is an approach with the building retrofit that was comprehensive and even before we started the process of the retrofits, yes, we had a set of measures and energy efficiency measures we wanted to do but we started and before that we had town hall meetings in the common area of the apartment complex and talk to the tenants and try to understand what their real concerns were and what repeatedly came back was things like air quality and things around the Windows or people were complaining about they were getting secondhand smoke from the next department over so what can you do about it. So, when you try to do these upgrades you really want to also try to get that quality of life issue as well.

So these are some of the technologies that is part of it when you try to address this retrofitting in affordable housing you have challenges like this and just not enough electrical capacity in the building so when you try to electrify it gets very expensive because the transformers and etc. so part of this work is also looking at new technologies that can provide the comfort and convenience for the tenants in these communities.

So this is my last technical side, what we found is doing that deep energy efficiency along with electrification meant that the annual energy consumption for this community actually has been down and that is because the deep efficiency and the insulation in the roof and the insulation in the walls and the placement of the Windows and all of that provided that in the summertime the electrification of the heating even though you get more use your net was lower and why does this matter? Because in many of these properties the tenants pay the electricity and the landlord pays the gas which means if you are electrifying these properties now you could potentially increase the energy burden on the tenants of the properties.

So, this is kind of what we found doing customer surveys on what residents really liked and wanted. So after the retrofit this is what the residents liked, the better Windows was a big deal for them and they liked the fact that the air conditioner and the heating system was working better and they liked the cooking ranges and they had newer appliances like refrigerators and dishwashers etc. so for them it is about the quality of life improvements and the energy bill was not a factor in what they really wanted and of course the bills matter but when we do these comprehensive retrofits, it is all about improving their quality of life.

I will quickly go through it and what we found is that during these energy efficiency retrofits the satisfaction the community was significantly higher mainly driven by things like Windows and HVAC systems.

One of the big things that we find from the property manager's point of view because if you have to do this retrofit you have to engage the property owners and that biggest difficulty in being able to implement these comprehensive retrofits and existing buildings is the fact you have a lot of different programs focused on affordable housing populations and multifamily upgrade families and utility programs and state programs and property owners play a big part in being able to implement all these measures and they really struggle with how you actually put these pieces together and in one of these cases the property owner we worked with they had solar and at this point they're going upside down and they are upside down on the solar PPA because of program regulations, etc. Batteries, for example they find it is more a cost than the savings from batteries because the cost of the batteries make the economic scripts id. but there are things like heat energy efficiency that they do find useful both for themselves and for the tenants. So, when you take a customer centric approach, repeatedly the measures that keep coming back and up quite a few times in terms of how they help improve the quality of life. But I think that is the last slide in my presentations with that, I will hand it back to you.

Thank you. I appreciate it. The next one is coming from Alexandria McBride who is an officer with the city of Oakland to talk about the project which we heard from the other side of the equation as a RD&D leader now hearing from the community and seeing if there is different or similar or comparable perspectives on this project. Welcome.

Thank you, enter. Again, with the city of Oakland and I'm actually in Oakland right now and I want to take a quick moment to acknowledge the lonely land we are currently on in Oakland. As you mentioned your little bit about eco-block in the last workstream and I am here to give some more perspective from our role here in the city and with some of the committee members.

I will start with this definition and as chief resilience officer the term means a lot to a lot of people in this is the definition that my fellow chief resilience offices around the world used to define our work and what we call urban resilience. I would say the unspoken thing here is a critical component is equity and we understand that every community is not hit the same and we are dealing with shocks and stresses and because of that we should be designing these solutions with the individual communities and institutions and businesses we are trying to target.

I kind of put this slide into share that here in Oakland how we think about what we call shocks and stresses and acknowledging things like climate change and there are very hot days and one was today and there are a lot of things going on with the climate and we also like most cities are dealing with major economic and social issues as well and everything from chronic homelessness economic inequality and we are obviously dealing with Covid right now and the reason it is important to think about these shocks and stresses together is to ensure that we use the resilience framework we are designing solutions that really target and bring in an understanding that different communities in different solutions are required.

This is a quick slide to talk about how Oakland takes those and designs our goals and back in 2016 the city put out the resilient Oakland playbook which is kind of a North Star to how the city across all of our departments and all of our initiatives in the city of Oakland are the same time building a more responsive government staying rooted and driving especially for existing people in Oakland and we like most cities are dealing with lots of populations being pushed out due to forces like gentrification and we need to make sure you're putting measures in an address those issues and Odyssey building a more vibrant and connected city and that when this playbook was published in 2016 this was an idea that UC Berkeley had begun to discuss and I think was in the middle of applying for funding through the EPIC program for phase 1 met . So, this eco-block project has been on the city's radar for a long time and because of this the program is slowly becoming a reality.

Before I get in to that I want to share little bit about how we define community engagement here in the city and in addition to having a chief resilience officer the city of Oakland has a Department of race and equity and using those inputs are critical, we think, the policymaking decisions and policy work and it boils down to understanding that the problems are connected as well as the solutions. You know, can sometimes take more time or take a bit more effort to really think about or try to incorporate other issues and ideas into your planning but that work in the early phases helps to then come up with a stronger solution and it is something we are invested in and the city staff and only come to projects and work on projects like this we hope to bring that framework.

Again, just something briefly that this is again our Oakland styling like to make sure we acknowledge where we started and making connections to policymaking and redline communities and seeing that some of the same decisions that were made in redline and we see these impacts.

And we look at things like this and we see similar areas that were once sort of this and then stood, disinvest it and policymakers mostly by race and we are seeing those effects today we look at environmental harms. And this is from last year.

So, with all of that context then comes this important project and looking at existing housing stock and looking in this case how we work on a block level and provide unique features including 100% solar and are looking at shared mobility. We're looking at what it looks like to create a financial structure on that block, so the community can sustain it. And we're bringing together a ton of partners, so you see on the right-hand side a lot of logos and again, this project first was an idea and went through phase 1 planning process and I don't want to get the years wrong, but I am sure it was 2016 and we then received phase 2 funding last year from the California Energy commission. Again, I took this slide from a doctor who presented a few weeks ago and just again to show the amount of parties coming together.

This is the original model. This is where I will provide a bit of the city's perspective in some of the challenges. I know my colleague shared at the beginning, but we thought Interphase 1 we had a really great idea and we had spoken to some homeowners on the block, but I think we all realized the lessons learned and coming with the project without doing that deep community engagement first. I think it is the benefit and the blessing in disguise that we had between phase 1 where we actually had a block identified and we took a step back and realize that that intentional planning that we talked about, that framework we used in Oakland, and I think that UC Berkeley is also committed to, that there could have been more and could've been more input and opportunities for communities to shape the proposal and even though we had a block that was somewhat interested, we really challenged ourselves to really ensure that this project was in an area that was fully supported and codesigned with the community there in the area. So, the face 1 block was actually in a location in Oakland that now in phase 2 has changed. I can talk a little bit about the process and number one in terms of making sure we opened up the engagement very quickly, we first opened it up so that communities could compete for the block and we saw about 3 1/2 months had an Oakland source process for community embers to come up and put out an application and I think this was shared last week and we have since located a community in Fruitvale that is really excited about this and has the buy-in upfront.

And is talks a little bit again about the timeline. The face 2 process, which I mentioned was recently awarded last year by California Energy commission, we went through that reassessment of the phase 1 block and started this process of outreach to community members. I will say it is not perfect. I think the EcoBlock team would share that thought in that the processor ideas for the block are in some cases very complicated concepts, but we have had to spend a lot of time making sure we are challenging ourselves and making sure the solution we are coming up with make sense and we have community input and willing to change our minds and proposals. I think that has made our EcoBlock planning even stronger. Again, this new block we are selecting came in and is now working with us and the UC Berkeley team to make

the block a reality. I think, again, listen learned here would be, and Amee mentioned it earlier. I think we thought about the community a little bit too late in our face 1 and we are again about a checkbox which is why we had to take that step back and I do think there is probably lessons learned and how we might evolve our proposal. I know, for example, we do realize that we don't have enough funding, we think, for the community engagement to go deeper and we would like to see more people at the table and we are now fundraising externally to match that and to provide funding. So, we know takes that as well and this project is not just about the technical aspects which are very impressive in order for it to be successful and eventually scaled other neighborhoods. It also has to be and have residence on the block with had a positive experience with us and that is now been a priority for the team.

Just, again, have a quick story. Just to provide an example of what community driven planning looks like in the city.

And the time it takes. It is a good story. In East Oakland we worked with about 12 organizations over the last three years on something called the transformational climate communities' program. It is a state program and I think more intentionally ensures all the applications for these projects are community led and community supported and partnered. In the city of Oakland we have been working with these organizations outside of the already East Oakland engagement that was happening before and they started partnering and we let a planning process that lasted about a year and a half to come up with a vision for five neighborhoods in East Oakland and actually back in July we received a $30 million grant to Clement that work which means affordable housing and increase transportation and biking and a bike share program and more trees. I think we tell the story and it was a competitive application process and it would not have been as competitive or successful we think without that time spent had so it is nice to share some good stories about community engagement and to share that once we got the money it does not end. It is a for your project in our community partnership continues and helps to guide her implementation that's another component that is critical and not just for input but also accountability and seeing her outcomes and making sure we are committed to the goals we set in the first place. I think that is my last slide. There is my contact information and thank you so much and I am looking forward to the Q&A.

That was fantastic. One thing I want to mention here is she has thoughtfully provided contact information on this last slide and grab it now. I will ask the other speakers when you have a chance if you are willing to put your email address in the comment box or chat box so that if people do have specific or clarifying questions for you they can reach out directly if we don't get to them today at this meeting. I really appreciate that. The last presentation we do have here is from Southern California Edison and we

have Prajwal Gautam and Mack Knobbe will talk a little bit out their smart city demo that they are in their planning phase of. Welcome.

Thank you for allowing us to present on our smart city demo. I am an engineering manager in our technology and innovation group and he is or technical lead on this program.

It is in EPIC presented project driven by the need of the city for adaptable energy sources to max mine usage and reduce emissions and improve outage resiliency. And what they're doing with the smart city demo is on the micro grid helping to enhance at the community level, so our target is to work with Ms. polities and local agencies to provide a micro grid that can operate during an outage and provide these benefits. And we will do this system for battery energy storage and couple that with the existing DER -- installed. And we want to leverage them more efficiently but achieve a cyber secure micro grid that can provide the benefits of [Indiscernible] enhance satisfaction and further coordination.

So, the technical concepts are there. And optimize with third party in her own to allow them to operate during an outage and some may know typically that a solar power may not operate during eight -- and Foreman Island where it operates and radiate energy evenly without that and we allow additional energy to go into usage. So [Indiscernible] and in terms of selection, I mentioned it is focused on that level that can serve the whole community so use our own public affairs and customer service division to create a list of those who can benefit from this and prioritize cities that have existing DER's and plan investment in resiliency and we prioritize disadvantaged communities and essential facilities and functional needs into that process we identify a local agency we are in the process of working with to come to an agreement and targeting quarter one of 2021 to pursue with the program and the application and roadblocks identified is [Indiscernible] and Police Department headquarters and [Indiscernible] system and provide targeting for this community center and we are allowing benefits to a broader community and not just the sun.

So as far as communications we are currently dealing directly with local agencies and we will work with them and city leaders as we move along to educate the broader community on concepts and the key challenges that we face in the project benefits that hopefully we will see.

And the key challenge we have already encountered is site selection and Edison have a largely developed an urban customer base so this type of equipment the large batteries for energy storage and the transfer equipment and the interface which is for a micro grid and finding a place that is flexible and where we can locate the equipment has been a challenge that we are working on. The local DR penetration as well and

getting the resource we can utilize but because of the communications and lack of grid [Indiscernible]'s we can communicate it and allow it to communicate with their micro control system so we have a secure connection that can communicate with the proper grid management and aesthetics is another important one that people are concerned about and you don't want eyesores so being able to communicate that we can do this in a visually pleasing fashion but not making his a full, physical security for resources is important so it is something we are working on and we will engage further in the future as we go forward to early product rendering so we can see how we can move forward. And then community resources have been a challenge. Money is always short for these types of projects. So, what we have done is coinvest with other resources that are already there. And utilize EPIC funds to generate systems in the project and we are also leveraging another project program which an energy storage integration program is. We are excited about this project and it is in the beginning phases, but we think it will provide benefits to the broader committee and create a model platform that we can go forward. With that I will bring it back to you.

Thank you very much. Is starting to see faces here rather than slides. So, we will start our panel discussion portion of this presentation today. I received a lot of questions in the chat function and none in the QA function. I will start going through the questions I have received directly in the chat. If you have additional questions that you would like to pose to any of the panelists please submit them in the QA box which is on the right-hand side of your screen and if you see in the lower right-hand corner and if you don't see that box it may be behind the button or the lower right-hand corner or button that has three dots on it. I will post the first question and it was a question of mine and anybody can tackle this if they want. My question is more from your perspective, what is the purpose of RD&D? What is the purpose of your work that you're doing right now? What you trying to most achieve here? Go ahead.

I will be happy to start. I think for us just thinking about the project that we are investing in and an exclusive concept and we have been talking a lot about advancing local projects to really show complete models of what it looks like and in terms of the clean energy investments and providing clean power and every day alongside that but [Indiscernible]

We did lose you.

Can you hear me now?

Yes. I think the angle of your computer caused a slight connection issue.

There is not a model we can point to in California as complete as the energy resilience community projects so in showing the model complete hopefully it is important to be able to do that across the state.

Excellent.

I think to second that we certainly don't have all the technology to get out but I think there is some technology we do know about already that is really exciting that for me has been how are we tailoring it and how are we capturing perhaps expertise in communities that we don't know of and maybe helping to enhance those technologies even more than that to me is what is interesting and I am an engineer by training and I get the technical stuff and it excites me but what excites me even more I think when designing a solution is to really make sure we are bringing in the input from the voices that are so often a part of the conversation and the sciences showing that some of these communities, low income, people of color, indigenous populations, are going to get hit first and hardest and that to me is the priority of how to take this technology that we know a lot about and tailor it to the community and I don't think we have gotten that input from in the past. That to me is the gap and that could play a great role here.

Excellent.

Did you have something to add their, Ram?

May be a little bit more and I think of okay, we have these huge targets and in our communities. And I look back to what we have done from 2000 through 2020 and we do know that we have to do a lot and we have to do it quickly. But also how do we do it so the natural technology progression goes from high affordability to other economic versions of society but how do we look at it there addressing the most vulnerable populations first in a very comprehensive manner and why you do the decarbonization work and figure out solutions that can go from there and look at it upside down from the way you normally think of technology progression and I think if you solved it that way you could actually get to that much faster and it gets to the vulnerable populations much better than going the other way.

It is my understanding all of these technologies and what we need to do considering the people within that technology context.

The next question then is what does success look like? What does success look like for your community in having a successful project? Are there things that come out of it?

I will take a shot. For me if I look at it from -- for me, success is a viable business model for affordable housing that produces sustained decarbonization while improving the quality of life. How do you mix-and-match technologies and the business models we can achieve that target? So, what you look at is all of these different communities that work together, and they take different approaches to create a scalable business model that works for everyone.

I do agree. I think one other success to me is like having maybe a land use attorney in the room with an energy, person designing the energy-efficient systems. We have to bring together sectors and particularly the policymaking side and have them come together and the first question we got was will this raise the property value which will raise my rent and that is a very real question if we are talking quality of life. So that means well what kind of legal and policy considerations do we have to put in place to make sure this model can be scale without pushing out the people we are hoping to keep these places, so success also means bringing other voices that may not necessarily be in the room outside of the community but also policymakers.

Yes. I would add to that and I think about how the work is so deeply relational and -- and it is not always easy so even if we have been able to build more trust and relationships, I think that is really critical and the other thing I would add at least on this project, we talk a lot about that success can look like operating in providing services and [Indiscernible] and the heat wave but it is also meeting people every day and not just addressing during climate disaster but also the everyday economic and health and social needs of people every day and that I think is more than just infrastructure but really is a process and targeted to that point and in particular we have a really innovative community government model that is all about this for the project.

Excellent. I do have a question here for maybe Mac and Prajwal and Ram. And I think you guys had them correct me if I am wrong concepts and structures of what you wanted to do and are looking or have looked for communities in which it may be more impactful or provide learnings and how did you seek to identify those communities that you wanted to engage with? What it looks like at the early stages?

Do you want to take that?

Sure. Sorry. I've only been here for two months so the project started before me.

It took a while to figure out. When we started looking at this project and looking at where we wanted to be we started looking out various aspects of what exactly we need as part of the project and what are things that can be contributed from the EPIC project and what exactly we need from other projects in our communities so our target

customer was [Indiscernible] as he put in the slide deck and then started filtering the list of cities that may have been interested in the past so from our perspective we discussed with our local target areas in business customer region and we did this to identify different cities who are interested and that is very filtered down from 120+ cities all the way down to about 20 cities and at that point we have to start looking at the technical things and do they have existing DER's because as Mac mentioned this project here we want to develop something managing only certain energy resources so without customer DER's we won't be able to enhance the resiliency's when we look at those and we see about in areas of one data two days so noted improve the number of hours of resilience we need to partner with customers so be able to control and that was one of the keys and installing the micro grid area where the technical resources are so when we looked at all of the different variables I think we had about 17 different variables and we were able to filter down to five cities where we had to do technical evaluations to come down to one. Do you want to add anything?

Yes. I can figure out how to unmute this.

I am David Taylor from the asset strategy and integration group and I am a project manager and I support him on the project. And I think you encapsulated it pretty well, Prajwal. We started off with a list of 120+ local agencies and worked it down from there.

I know that you may have wanted to jump in as well, Ram, but one of the things you mentioned there kind of brought up a criticism I think we often hear about the ability of RD&D projects that are more technology focused readily get in and provide benefits to disadvantaged communities and looking at pre-requirements so you're looking for communities who will test something out that already has significant solar penetration or electric vehicle adoption and you're looking at disadvantaged communities where they are already behind in that's are we just reinforcing that lagan disadvantaged communities by creating these pre-screenings or how can we complement these efforts with other investments that may be complementary to not just test out of technology but hold up that entire environment? Are there ways that that is worked or are there methods or that is learned, and can you complement and bring these different resources together we are not just trying to filter a list but build a list. I know you found six project sites over time I think based on different projects. So, I don't know what resources use.

We definitely had as was mentioned we thought the disadvantage communities still left us a large list in our territory and definitely has a large list and affected by omissions and freeways, so we do have a lot to benefit from this. We did have a bigger list then we needed with disadvantaged communities early on, but we had it filtered down from there and we were focusing on it at community level and we

provided the most benefit to the most disadvantaged customers so after individual residence at the community level provided the most benefit for service area.

There's a clarifying thing there. And the project, do you know where it will be located in anything you guys can say at that point or is it stay tuned?

In Montana we do have [Indiscernible] so it is still in that phase.

Okay. Somebody else ready to jump in there for that bigger pool?

I will give a little preview of how we do the process we tend to work more with the property owners in the center Valley in Southern California and we work with organizations for affordable housing who work with all of these different multifamily properties and we work with them to identify the appropriate place to evaluate the technology or business models. Because the goal is how do you come up with a scalable model for decarbonization? Approaching it from a very technical perspective but then you bring in the community once you start to figure out which community will work with us on that case for example we look at who is doing metering and gas versus electric because all of that impacts with the scalability of the model you come up with in the technical model you come up with. So we use all this consideration so for example in Ontario there is gas master meter and electric meter and everything is master meter and it is very different business model and people who get the benefit, the property owners are also the ones who pay for it so it gets rid of those issues so we consider all of that in choosing it and of course building on top of that when you going to community we want the property owner to reach out into the program because there are a lot of other programs and you go into the community and we try to help them get access to all of these other programs too so they can get easy charging for example and it has been really hard to get into these communities. And there are a lot of programs that how are they actually going to make it affordable? We have not figured that out yet and how do you get this, and the communities and we try to help the property owners with other things they can do whether it is solar, and we help them bring those as well.

I have a quick in addition to his point and then maybe a question as well, but I think one thing, community can sound elusive, community input. What we are in the middle of in the state, there are a lot of community plans now that are being written by community leaders that you can access online and basically see and read and map some of those needs like the West Oakland climate mandated plantar California [Indiscernible] and Richmond will have a similar plan coming soon and most of the disadvantage communities are going to come up with these community plans for their talking about the stuff they want so also being more open source as your mapping out and there are more and more of these communities in different plans now where

you're actually hearing communities say what they want and it doesn't take away our need to do more engagement but it can help to shape it. And I also have one question for you, Ram is your point about property owners was and your engagement with them versus tenants and something we are experience with EcoBlock we are dealing with property owners and the residents of the building and I am curious if you had conflict and maybe with the residents or tenants and maybe what the property owner was willing to do and how you settled up am curious if you ever had any conflicts between getting input or shaping your proposal around the property owner and the tenant needs?

I think the biggest challenge we ran into is just privacy issues because when a property owner takes the onus to do something and then you go to the tenant and say they're going to work on this and especially for research projects you need the sharing of data and those things do get tricky and we don't do things that the tenants don't want to do for example if they really like their cooktop, right? We don't want to override them of the cooktop if they really like it. So that is something you always have to consider in the property owner gives you access, and they give you in effect they are spending their eco-capital to do this, and they have to be driven to do this, but the new stuff to make sure that you consider the tenants input and the requirements. And that is the way we look at it.

Thank you.

I just wanted to add one thing. I will say sometimes the primary objectives within the limitations of the EPIC program is the scalability and research and carbonization and these are the primary reasons EPIC exists and that maybe odd as a priority and not really about scalability but going deep and authentic engagement process about economic and workforce development and sort of what people think is a nonenergy benefit and social services etc. so the way we reconcile that across partners is different and partnerships. So, we are really clear about what we want out of our EPIC project and when we work together through others and funding and grants [Indiscernible] with EPIC for us really it is for infrastructure pieces and all of the other pieces that are more about going deep and really investing in our community process and perhaps together with other resources.

Yes. Thinking about how you pull all these things together. I think she brought up around this community engagement and really gathering input from the communities and the effort that communities are putting in and all of these plans and are they good models or have you and your projects done anything with regarding compensation to committee members for the labor or their input our time are other models out there for word has been done before? Any thoughts on that?

Lots and lots of models. Often times we do hear from partners about what does that look like or how and after partnering with community-based organizations and, you know, when we say compensation we don't just mean stipends for community members we actually mean doing deals like paid consultants as part of a project that is more than just a few thousand dollars for a meeting but actually paid hours for a project over three years which is the trend so there are some good materials out there particularly from our partners of how maybe A will be will as well as [Indiscernible] around community engagement so there are a lot of toolkits you can look on the website and there is a lot of research and more of a process to find materials and again [Indiscernible] is a great model for how to embed that in the actual [Indiscernible] but I could go on about that for hours.

Excellent.

I could add and I'm not sure if you see this question and I see a question in my Q&A from Daniel.

It thinks it is for you specifically. I don't see it.

Hopefully this is the question because it was as similar, and can you elaborate more about the challenges regarding engagement earlier in the process? And was the not enough? I think I would answer your question with my question to Danielle. I think there's a difference between knocking on the door and saying hello I am from UC Berkeley and we have this really cool idea and you want to try it and I think people don't want to have you knocking on the door versus perhaps bringing on a community organization that already has deep ties there that is helping us to shape that ask or introduction and acknowledging that and I know working for city that has done harm to a lot of people there is inherent distrust when I come to the door versus my partnering with the well-established community organization and we are making that together. I think those are some examples of trying to find champions before you make that literal ask of knocking on the door and it raises some challenges and questions and doubts and that is sort of why to her point having compensation with expertise in building those committee relations and I think it helps with these engagements.

Excellent. We are now entering our group discussion phase so if anybody wants to come in and make a comment or ask a question verbally or answer question, feel free to chat with me directly and I will get you up to the panelists to speak and I did elevate up Danielle but since was the question I wanted to know if you to follow up to that or if that was responsive or did that answer your question, Daniel? There you are.

Hello. Can you hear me?

Yes.

Yes. That answered my question and where it was coming from is on the other side I work at a public a advocates office and we are interested in getting and hearing about projects engage in an equity we hear about the need for these engagements that could mean something different depending on where you are so thank you Alexandria because that is a question I was asking which is are you knocking on doors and how does the partner add value and, yes, that is what I was looking for.

Excellent. We did have a few more questions but that person has dropped off, so I will ask it on her behalf and she asked the question how to do you measure diversity and thought to substantiate what is constituted as equity using EPIC. And does anybody want to tackle that one?

One thing I would say for my experience in EPIC , is we have a lot of anecdotes along forming teams that again to me a reflection when a team is diverse because you come in with different values and it happens many times and it can be frustrating where we have to assert our expertise the we shared today and hopefully open people's minds in the same way that we are doing all the time about technical expertise that are partners have and what they can offer and that are mutually beneficial as far as relationships. We talked a lot about how conflict is generated and so we can have a healthy struggle together and a few things across those perspectives and it is a beautiful thing and while it is hard [Indiscernible] and that has how I would answer that question.

My point is has your mind been changed? Showing that I came in here and the proposal has been changing in this way because of this.

Following up on that, I think, Alex, he said it clearly, this is where we failed in our project in phase 1 and he said doing a project without deep community engagement first was a failure and it is okay to have failures and I think part of this process and we what we want to gain out of the experiences is where things have not worked out so well. I think the question that I will post others are Alex if you have more, are places where things didn't go right but you learned something good from it. What stands out? Or maybe, Amee, talk about your previous submissions and maybe what changed or what you think really changed this time the made it a viable proposal or made it more successful.

It is a great question. I think to put it really like -- we learn to be intentional and screen the partners that approaches around collaborating in our efforts. We were really attentive and the application process to how we are being treated and what is happening with our voice and one project is fully proposed [Indiscernible] and some

of those early markers again deeply relational how that interpersonal dynamic is going and gives us an assessment of whether it is worth our time and energy to collaborate because it is hard to work with folks that don't listen or have their own agenda and sharing resources. So, we screen, and we are intentional. And we have to we bring our CEC staff as advocates to mediate sometimes.

I will add, failure, it happened a little before me but I do want to say that, yes, I think it is a constructive process for us and I do want to respect, obviously, the work that happened under advocates on the block and we had an opportunity to do it a bit better so I want to clear that up.

I know you guys are so at the beginning stages and you have only been here two months, but any thoughts on what the people before you did?

In reference to the diversity of thought I do know that being new, it definitely had an active diversity program and cross metrics across the company we are very diverse and who we are and as far as diversity of thought I'm actually coming in tonight although as far as diversity of thought I represent that we are trying to bring in more people from the outside and I come from a clear startup companies so chemical engineers instead of electrical so I was brought in as a different perspective on a lot of things and different background from a traditional utility perspective.

A traditional utility.

And in a non-pejorative sense I assume. Yes. Any thoughts there, Ram? From one project to a next, you guys have done quite a bit.

Yes. I don't know if I have much to contribute there. I think the biggest thing is you just have to treat everybody as their own person because they all come in with a different perspective and something that is really attractive to somebody in the same community, somebody else may feel like I don't even want to be part of it and for example questions about secondhand smoke because they are improving their quality and some people did not want to do the survey. So, you have to be considerate of those things as we do each project.

We are wrapping up here and I want to briefly say thank you to everybody who has participated today and these questions that I tried to relay, hopefully, faithfully over chat that we are sending over chat to the panelists. If you have additional questions you can send them to us or the panelists individually as follow-up and I hope this is a good discussion and conversation. I have learned some things in there are a few big takeaways that I have seen and I think doing eight project without deep community engagement first is a big one and when I think about this I will think about

community-based organizations and outreach versus leadership that is a big take away here and understanding and looking at where you are trying to dry your lessons and understanding your outcome and understanding what are the things we need to achieve this vision of the future we want and lifting up community voices but from your perspective the last thought like a quick main take away for the future of EPIC and RD&D projects ? What needs to happen here and what we need to ensure that the people who are coming and following in your footsteps, what should they know first and foremost?

I will go technical on this one. Don't think of electrification but understand what the needs of the customer and how you provide those needs and how you provide both economic and quality-of-life benefits. Don't try to push a solution but understand the needs and find them appropriately.

Like you said, outreach versus leadership and I would almost extend that whereas the difference between outreach versus ownership and I think that is what we are really pushing for and community ownership models and [Indiscernible] and that may seem like a radical approach in a project like EPIC but I think the more that we can [Indiscernible] fundamentally we're talking about communities targeting disadvantaged communities but fundamentally and most important thing for my perspective as I think we just have more [Indiscernible] projects.

Mine is simple but always asking who else should be at the table and community leaders and outside of the sector that you think cares most about this and constantly ask how you may expand your thinking and bringing more thought into the solution part.

Excellent. Thank you, everybody. Thank you for joining us today. If you have any comments or questions you would like to pose to us as part of the Equity Workstream , you can send them to us and we will have another one of these in December and you will hear more soon about how that will take shape and probably have some additional surveys and additional response questions that we want to pose out to folks who participated and I want to give a give a special thank you to the commissioner who joined us today and she said thank you to every buddy in the comments and really appreciate everybody's time and effort that you put in here this evening and sweltering hot in some locations. But we really appreciate the time. Thank you, everybody and we look forward to talking to you next time. Thank you.