

EPIC POLICY+INNOVATION COORDINATION GROUP

EQUITY WORKSTREAM – MEETING #1

OCTOBER 6, 2020 4:30 PM – 6:00 PM

Welcome everybody. We are going to get started momentarily. Welcome everyone. I want to thank everybody for joining us today to discuss an important topic that is critical to the future of the state of California and that is how do we ensure the transition to clean energy is equitable and how do we ensure that our electricity RD&D investments are working to overcome the obstacles to getting us there. My name is Andrew Barbeau, President of the Accelerate Group, and I am the California Public Utilities Commission's consultant for the EPIC policy and innovation coordination group. We are working with the energy division of the California Public Utilities Commission and their role overseeing the Electric Program Investment Charge that the CPUC created back in 2012 and recently extended through 2030. The CPUC launched the epic policy coordination group earlier this year to gather insights and lessons learned from epic electricity and employment practices in this day and to identify new opportunities for collaboration to accelerate innovation. The policy in infinite innovation group is facilitating for Workstream for 2020 in areas that have been determined to be critical and timely. Equity, transportation, wildfire mitigation and public safety power shutoffs to go today is the first meeting of the equity Workstream want to acknowledge the other at the coordination group participants that are joining together including the epic program administrators California energy commission and staff and advisors, the utility PG&E, S G and EN -- staff I would like to recognize Rebecca and -- you will see providing helpful information in the chat and Q&A boxes and we go if you have any questions for us on this process P please welcome out to us reach out to us that PICG accelerate.com we will start with our sites and presentation momentarily. Couple you all can now see my screen. So, we are here today to discuss ensuring equitable access to clean energy prickled the overall goal of the equity Workstream is to create a framework for the upgradable engagement in our DND projects. This will be developed by gaining an understanding by presenters on lessons learned and best practices in our DND and pilot projects. Over the course of the next two months we want to gather information for projects we have been working for the past several years to advance innovative energy projects. The end goal is to be able to put together a framework for equitable engagement and RD&D projects that could be used for epic projects and programs going forward to ensure that community needs are identified first and that we are working to ensure actually address the obstacles we face in ensuring equitable access to clean energy and not disadvantage

partnership is not merely an add-on. We want this to be useful and hope to have a thoughtful process to gather as much information as we can. Some information will be gathered from projects and presenters like we have today. We are so working to ensure we hear from a wide array of voices in addition to these presentations. I want to thank everybody for joining and participating in this effort today's meeting number 1 and committee organizations that have been involved in epic projects. This Workstream will conduct three meetings between today and December third. The meeting today as well as next week on October 15th will include presentations tackling the same questions around equitable engagement in RD&D projects. We will have some time for an additional input and meeting on December third as well. We have several good presenters today here to talk about their research and their ongoing work. First, we will have an introduction from Amy with the California Post utilities commission, David Diaz from active San Gabriel galley Valley. We have sought Siobhan Meyer from UC Berkeley, Matt Belasco from Pittsburg unified school district, Daniel came in from UC Berkeley and Stephanie Burkland from TRC engineers. Hopefully a five minute on their topic will have a Q&A session at the end for about 30 minutes or so and we will talk about a plan for next meeting after that. We have asked the presenters today to address in their presentation some or all of the following core questions. For those that are community members and committee participants in epic RD&D projects we have asked them to address these questions here. First, what methods of engagement were used by that RD&D project leaders before, during, and after if it is entered, the implementation of the project? What aspects of a three project to committee members and community-based organizations want to be involved in? How did RD&D project leaders communicate technical concepts? 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 learn being involved with the RD&D projects in your community. For those that are E.P.I.C. the project leaders and RD&D project leaders we are asking them what methods of communication and engagement were used in this community prior to project deployment? How was the location of the project selected? What was the community involvement in this process? How were technical concepts communicated to the community? Also asking folks to describe the challenges and successes with community engagement. Then the presenters will keep their presentation short. If you have questions for the presenters or would like to provide a comment on the conversation, please include them in the Q&A feature on the right-hand side of your screen. You may have to click a button that says Q&A on the far bottom right

corner and it may be hiding behind three days that says more panels. Please use that as we go to submit questions for the discussion and we will get to as many as we can in this conversation. We want to note that there are one or more CPU CCN administration lot charges that may be attending today but no official commission action will be taking place. If you have technical difficulties, audio or video problems please contact Amanda at Amanda@ourgroup.com as we go. This meeting will be recorded and available online afterward at www.EPICpartnership.org. If you need a translation for this meeting you can find it by opening up or sorry there as a live transcription if you need a live translation you should find a link in the, or chat box for this meeting to a direct live translation. If you need a live transcription you can find that behind the multimedia button in the bottom right-hand corner of the screen.

Thank you again for joining. I want to push over to our first presenter a meme as well be in with the California utilities commission.

Great thank you so much. My name is Amy I am a provider in the energy division and the California Public Utilities Commission. Including research development such as E.P.I.C. and -- equity in our energy program. I am joined by my staff and my supervisor. The CJC has placed increasing focus on serving environmental justice and social justice communities. First by making our -- were acceptable accessible and to -- in early 2019 we released our first environmental official justice grant. It contains the goals in supporting these communities and identify specific questions the -- is taking in support of these goals. It is a comprehensive agency wide effort that spans other divisions besides the energy work that we do here. So, as we are trying to enter gate the equity considerations into our work it is really important for this work to better understand the implications in research development and deployment program. In addition to having this particular equity Workstream, this series of three meetings as part of our PICG process we are trying to into gray equity as a topic throughout the entire effort in the other three topic areas as well. Mitigation, public safety power shut up and transportation, we are trying to pull up the equity information in those areas as well. We are also trying to improve the access in a way that we are conducting these meetings, so Andrew was just discussing all of the meetings for all of the different topic areas have both English and Spanish simultaneous transcription. We chose this timeslot late in the day but not too late based on feedback that would allow people to potentially attend after they'd they just before dinner and disrupting family time. We are just trying to think a little bit more proactively about how our programs and policies and our processes and procedures can all outline a little bit better to put equity at the forefront of what we are doing. As I think about approaching research development and deployment equitably some

of the questions are how do we ensure diverse voices are heard and represented in the process? How do communities and -- that want to be involved in the process? When and what part of the particular RD&D project wants to be engaged? How do we balance reaching out to communities and getting their input without overburdening them? 02 better compensate certain individuals for their time and their value in providing. How do we define metrics and success in keeping RD&D projects equitable and what kind of data do we need to collect and track to help with that? Then the final thing is just understanding that different communities have different needs. That answers to all these questions are going to depend on the specifics of the community. What is the best way for researchers to start building relationships with the community and start building trust so that the engagement they do throughout the process is genuine. So, one of the outputs that we discussed for this series of equity meetings was in the policy innovation coordination group. Some kind of guy that researchers can use to help things be more --

We don't want it to be a checklist because there is no one-size-fits-all approach, but we want to get people more in the mindset of incorporating this holistically throughout the process. I'm going to kick it over to David.

Thank you, Andrew. Good evening everyone. My name is David DSM the executive director for active San Diego Valley Rica we are faith-based nonprofit organization in Eastern Los Angeles County. I started this work when I was -- but since then I moved over to active SUV and we are continuing to work on that method. Andrew, I know I only have six minutes, so we are going to skip through some of these lights. You can hit the next light. Some of our activities and I think what I want to really emphasis from the outset is that we were included in the development of the community outreach and engagement plan for this area. So, this area is an unincorporated area. Unlike incorporated cities you don't have a formal city government. The dynamics are different in that separate community. With that amount in mind we developed an approach that was more effective in that keeping a. Some of the things we did is we try to communicate visually through surveys, poster boards. Weight also met people with they were already at, at places they would visit. We heard a lot of distrust between energy companies and communities because of past or her experience so it was really important to meet people in a place they felt safe. We also partnered with the supervisor's office for this region to cohost first district meetings, focus goods, we did multifamily apartment outreach, we had a website that was available from folks that we also did some elected official engagement within the school district. Go ahead Andrew, hit the next one. Some of our outcomes here, we gathered 500+ surveys, went to 20 community events, we did a presentation and

really the opportunity of those surveys was to gather information and attitudes about what people knew about the grid energy, so we have a better understanding. Like more than 500, this is a survey that has more than 500+ conversations. It really came down to a simple question. Where does your energy come from? -- At Gateway and having more robust conversations about what percentage of it is renewable and you would be surprised how many answers we got. I plug in my charger to the wall and that's how I get my energy. End of story. So, we need more robust conversation around that. We also have project service learning opportunities. One is bigger youth engagement so making sure we do youth empower activities. Where trying to advance this topic to young people so they were actually able to create a video they would be able to communicate to their friends, family and other members in their community. Then, here of the thoughts that participated in the study 65% were renters, 35% were owners, 60% of them knew how much their last electricity bill was, 76% of them were interested in reducing electricity costs. 63% knew about insulation, 76% knew about energy star, 56% of them had a thermostat. Again, these are some of the behaviors. 91% of them had energy efficient light bulbs, 96% practice turning off the lights when they were not in the room. One of the biggest things for us is talking about extreme heat today's and home comfort. What people do and what extreme heat causes people to do. One of the things that you all know is that the number of days 95 to Greece is going to significantly increase. It is going to rise from 32 to 74 days. This was -- trying to understand the community of extreme heat. 74% strongly agreed that the information is believable, 71 agreed that is revel in and then 82% agreed that yes, the number of days above 95 does encourage them to reduce their energy use. So, this is the breakdown of the housing type. So, this is a focus group framework. We worked directly with property management owners to create a focus group with them that creates small groups. There are language barriers and some people are having more comfortable having small group session. We have smaller breakout for people who have other language needs. So, 50% participating in the program which will get to at the end. Average monthly utility bills reach from a low of 25 in the winter to a high of 86 in the summer for single-family residence. Over 6660% of apartment building residence at 37% of single-family residence that they would sometimes leave their home to conserve energy. Imagine not having central air conditioning or a place where you do not feel the safe of yourself or your family is not secure and so you are forced to go to another place. Going to all local part, maybe a cooling center or go to another commercial location. The number of folks say they would leave their home on purpose to conserve ages because some of the extreme heat. Next slide please. So, some of the challenges that we saw was a short timeline. We would have liked to have more outreach, but any

environmental justice system is going to tell you they need more time. Engagement is not finite. We are not doing engagement to build this finite plan where we then do not have to have subsequent engagement go it is an ongoing process where it serves as an opportunity for us to have ongoing conversations. The energy organization for -- I can't tell you how many times got into PPA. Target about that I can sit on the news, it is a real thing. I think one of the icky things that we work with the local community-based organization that is trusted and recognized. It looks like the people who work are from the center baseball the valley. That builds trust among the community. That is really important working through that piece. So, for our future work we are engaged in the early stages. We want to make sure that is then iterated of, inclusive engaged process. It is not just about our outcomes. So, for example within this next scope we are going to have a certain amount of homes that participate in the community. Solar programs we are also going to have 50 homes that participate in the -- network. Makes sure that there are other things that are addressing some of the harm in our community, shifting the conversation. We know we have to do resiliency measures but how can we get a regenerate system. For us it is important that on an ongoing basis it is part of this process, we build trust, we build community capacity. We are able to address the harm that has occurred so that people can have an improved quality of life in an area where we know there's been a lot of harm. Another really cool pieces are the local workforce development. It is real principles. We're going to be able to it could to you to demonstrate best actresses here in the community. That concludes my presentation, Andrew.

I have a quick clarification question. What was the timing? How much time are you engaged in the project?

Roughly a year.

A year, okay, excellent. We will get to questions at the end. We are going to have hopefully a very robust Q&A panel. If you have questions for David please put them in the Q&A box that you will see on the right-hand side. If it is not showing up for you can look in the lower right-hand corner. There will be buttons that say chat and possibly Q&A. It might possibly be hidden behind the three buttons and three dots down there next, we have Sasha to talk about the Oakland eco-block. Thanks, Andrew. I am Sasha I am in electrical engineering at UC Berkeley and direct the electric grid research group at the California Institute for energy and environment at UC Berkeley. Let's jump right in. The Oakland eco-block is a zero net energy low water use retrofit neighborhood. The idea here is to build a block scale community and oh retrofit using existing homes existing building stock to turn it into a 100% solar micro grid that is capable of -- we shared ownership of

the assets among 25 to 30 households that previously did not have any particular connection with each other than being neighbors. Do name that a scalable model that could be applied at reasonable cost to other blocks for resiliency, the idea is also some of these technologies like having the solar and battery storage are not presently affordable for people on an individual home bases, but the hypothesis is that the scale of the block would bring those down just enough to bring that within reach. As you can see it is a large project with many partners. But we have been we have been in phase 2 now, phase I was the design and resiliency study. When we learned that we were and parking on phase 2 last year really the first step was to talk to the phase 1 block that had been the guinea pigs for the academic study to see what the real interest and commitment level was to actually do this. By that time for a number of reasons there wasn't really a level of consensus and enthusiasm, so we decided to reach out to really have a design saying this is what we propose to build on your block to see that plots would come forward and self-nominate. So we had a process starting with an opportunity notice and outreach to a number of community organizations to make sure word would go out and then just had a process of screening looking at a number of criteria defined the block that would be the best fit for this pilot all the while keeping in mind this should apply to other blocks as well we learned a lot in the process. We completed a cool word in the outreach coordinator, Kathy D was a long time Oakland local and had the creditability to talk to these organizations. We learned a lot about pre-existing social dynamics on the block from phase 1. Certainly, there was an issue of trust not just between the blocks residents and property owners and the research time but also the residents amongst themselves and that it takes a certain degree of confidence about just who you are working with to work on this [Captioners transitioning kind of venture. Ultimately, I think the social dynamic was the most, the single most important thing. There's likely to be an appetite for adventure really since the first of its kind. Interesting tension between on the one hand wanting to go to a community that most deserves funds spent on them with the community that couldn't afford to do those kinds of things on their own time. And at the same time recognizing there's some amount of risk involved in participating with such a thing and the product leads we consider this our responsibility and an ethical obligation to make sure after you -- UC Berkeley walks away in the commission walks away that these are left whole and we want to make sure that -- in the past. It's a trickier bar to clear. Next slide. This is a quick summary of the community outreach that we have done. All the different organizations on this list. Next slide. A quick picture of the map and where this is approximately. Next slide. We have ongoing engagement. Of course, Covid-19 has turned many things upside down. Where this would have been much more hands-on working more closely in

person or face to face, we cannot do that. We are still having socially distanced outdoor meetings. We've really focused on the digital communication, a newsletter, and website. Partly public facing and also to the participants themselves. Next slide. There are a number of design decisions that we really solicit feedback from the block residents and property owners, we are laying groundwork by giving them technical focused tutorials on different particular topics. They will be able to choose certain items from a menu of what goes into their homes to make it more energy efficient. Then there is block level decisions that the team will make in consultation. Next slide. They will take input with ultimately, this will be, you know there will be the executive decision so the product team about the design details of the shared assets in the micro grid. An important piece of this is to establish the organization and governance rules going forward so that the 20 or so household on the block could have the framework for collaborative cooperative decision-making after we walk away. We really want this to be a durable model of organization and cooperation. Next slide. Ultimately, as well with -- to have a technical framework. The biggest hurdles here we have some regulatory issues with regards to making sure this fits in with the strategy for the state of California to increase resilience and be able to utilize solar energy in the event of grid disturbances and so forth. Really, the social dynamic and the self-governors will be the biggest success, really at the end of the project to have a recipe for how other blocks could self-organize. I know that I'm overtime, so I will stop there.

thank you. I've seen some good questions coming in. I know that some people are sending them to me directly. If you could please use the Q&A feature you can find it on the lower right-hand side, so the panelists could also see these questions in the discussion. There's one clarifying question I have for you, which neighborhood was chosen? I will pull up the map really quickly.

oh, so that's in the area, we had a number of different hoods across the city of Oakland. This red dot off of Fruitvale Avenue, the exact addresses were not publicized to protect people's privacy for now.

okay, excellent. All right, thank you. We look forward to your discussion. I want to introduce Matthew Belasco. Director of maintenance and operation and transportation.

thank you everybody. We are an urban school district located in the East Bay of California. One of our slogans for energy program is are we being good ancestors as an educational entity? It's very important for us to take the lead and show our scholars and our staff as well as the community that indeed it is not only our

opportunity but absolutely our responsibility to ensure that we are doing our best leading this world in a better way. Next slide. So, we took on very -- well, here are our stats. We have 14 school sites in total. 11,500 students in total. Squarely in the socioeconomic disadvantage community with three quarters of students qualifying for a free or reduced meal. Next slide. So, we started, I started in my role with the director of maintenance operations and transportation about 3 1/2 years ago, formally one year before that. One of the things that I assessed right away is that we had significant deficiencies in our existing -- there were old processes they were eliminating, and I knew that we had to make some changes. We had already taken on a project called idle free where we were encouraging any parents or staff and the school sites and school buses to turn their motors off if they were going to be parked in front of the school for longer than 30 seconds. We started to develop a plan to install electric vehicle charging stations throughout the school district. We also included some charges here as the plan was to integrate electric school buses along with other lower admissions school buses then replace the fleet. The way we would fund this was through a COP certificate of participation with funding mechanisms that schools could use to fund projects such as this. It's just a loan that you could take out based on the premise that we will get some of that money to pay it back through savings with our energy reduction. We were also able to get some grants to get the infrastructure installed. Something that was extremely important for everyone to know is that, the public entity is allowed to let our officials and employees and even students charge without a cost. Without trying to get a public fund so that was important for our students and employees. Next slide. We took on a pretty comprehensive look at the facilities starting off with some vehicles. Some used for the courier and other for department supervisor. And other vehicles used by - - to deliver mail and students from one side to the other. We really doubled down and went to had to purchase two full-sized electric school buses and you will see those in the pictures there. The district did use HVIP money. We also had money to put in our position as well as well as other organizations such as PG&E that we had skin in the game and we were really ready to take this to the next level. Next slide.

starting our full renewal project, we started nine chargers with the assistance of PG&E including that was the upgrade in our switchgear. This was all tied in with a renewable farm that we had on site, 188 solar panels and four wind generators on our site placed on a plot of land that didn't really have any use so there wasn't any loss of revenue or anything from purchasing the land. The total value was \$2 million of infrastructure that PG&E supplied. We are fortunate that they did that, but they had commitments from the district and communities as well as the board that was really behind us in the next. Next slide.

you could see the solar panels, the red solar panels allowing the electricity to be generated and then they allowed the UV light to pass through in order to keep the -- developed for farmland. One of the requirements was to put this on top of - to filter the water. It was important for us to utilize this space. Next slide. So, this is just the project as it's moving along. Next slide. The wind turbines here, we are extremely proud of that. We are one of the only public-school districts in the nation that has these here. We did get a little pushback from some of the community but after meeting with them in understanding these benefits, we really felt -- they really felt supported and we brought people into actually toward these facilities, so they could continue to get that support. Next slide.

in addition to the renewable farm that we have there we also are -- we have planned before covid to do an integrated solar and energy renewable project for our scholars and students. They would come out and actually see hands-on learning. We had that all in place, all the slides and the panels and everything was in place. It was really cool to encourage anyone who is interested to come out and see the project that the E.P.I.C funds could do, to see what could actually be done with it. So, we are proud of that. Next slide.

We are also very proud of our commitment to be as close to a zero carbon as we can be. We don't have gas. It is all electric. It fortifies the solar panels. Last slide. This is just some of those facilities there you could see. Next slide. So, we really had to think about those investments we were making in the community. Are they making it a better place for students? As I mentioned we were in a lower socioeconomical community, some had upper respiratory illnesses amongst the students and in the county, so this is something that is very important, and we are very thankful to our partners and again anyone who's interested in coming out to see firsthand, please drop me a line or give me a call. We would love to have you out. Thank you. Spec you will see at the bottom of the screen you can ask him questions. We ask the presenters to share the contact information for direct follow-up questions as well. I'm going to go over to Daniel to give our next presentation. Daniel, are you ready? You are muted.

there we go I'm just sharing my email address. I want to thank all of the organizers for this. It's great to hear about these other projects because if you will here in a second, what we are doing in this project is really an amalgam of a number of features. I was one of the leads on the eco-block phase 1. This project really brings together a number of these elements. I appreciated seeing that, the pictures of the solar panels. We were at a decision point for some of those right now. I run the renewable and appropriate energy laboratory where one of our

efforts is actually something that we run together is an internship program and that will come up at the end as well. Next slide please.

So, this project has a preselected community partner and so a number of the questions around how to do outreach are ones that we are leveraging. Our team at UC Berkeley has this project called self-sustainable energy for localized futures where I have a director of energy systems modeling. A consultant with us from the past, she works both at LBL and on campus. She and I and a number of our students have worked on the system modeling previously. To doctoral students, one who has 10 years of experience primarily in Spanish and in the community and around justice issues in New Mexico and in Arizona and in Central America. Another student who has primarily worked on efforts to people leaving prison, both prison release and post incarceration to be engaged in learning how to do solar projects as well as planning with a large team of undergraduates and you will see some of their efforts going forward. On the partner's side we partnered with self-help enterprises. There is a large number of communities for data with state agencies and ongoing large survey projects with the CDC. For many of those, Abigail is the lead and Paul Boyer is the co-lead of the project. The goal here is to utilize a mixture of methods spatial analysis, grid analysis, as well as energy planning tools to provide resource space for the communities in selecting and understanding which of these solutions would work best for them so we would have launched a series and I will mention this in a second, but we have a survey team of six individuals. The plan to do over 1000 questionnaires in the series if all the communities over the coming years. This is a significant data-gathering project that is something that we relay with covid. The plan was to move through both surveys with a series of town hall meetings. Those town halls are likely to progress fairly un-delayed because this could be done outside but the service work has been delayed some extent. Next slide.

This summarizes self-help efforts working not only in one county but in the southern San Joaquin and more broadly. One of the key elements is that we have community selected both in PG&E and other territories. These are incorporated areas. We are focused on affordable and clean energy for households. An element around clean mobility that we will come to in one second. Next slide, please. Our effort is to utilize the multiple data analysis levels. Just adding a number of levels together. One of the other ongoing projects in my laboratory, a capacity model called switch where we model the energy systems to meet various clean energy targets combining that with a lot of work on the transmission and distribution networks combining that with mapping communities. Some of which are very much integrated in and around dairies and other commercial efforts in central valley. Others are more standard community. We have combined all of this

together to provide assessments of the resources from solar to wind to dairy and other agricultural ways and combining that with a series of modeling tools that we have used to assess community needs. These have become the basis of a series of word and image-based surveys the community survey team will do so that people in the community could conduct some survey work in Spanish, the primary language for the surveys and also then to use this by identifying devices that they have in their home from swamp coolers to kerosene lanterns or various technologies or images. We are at the final stage to get human subjects for these, so we could take pictures of some of these devices in and around homes with community members approval. All of this is designed to inform our efforts to assist the communities and also to interact with the town's efforts. Next slide, please.

Our efforts right now have moved from a group of 25 communities where she has already been doing survey work down to a group of six where we will be doing much more deep dives. Launching all of those, those are building models, the energy demand of household by household looking at home by home solutions and many grid solutions. In one of the communities in the city, it looks quite likely that the partnership would take place where solar would be installed at the same time or on the roof type on the rooftop. Others would be more distributed with very small communities, essentially wrapped in and around some of these areas, some agricultural areas. You could see the picture in the center here of some of your fruits done by our survey team. Getting people to assess what are their energy needs or the challenges that they face in terms of water and air quality and water is an equal challenge in the many of the communities that we are working in. The next and final slide please.

So, the effort here will result over the next three month's in building a series of many grid assessment models as well as some of these assessment models while we conduct this large survey. The goal is very much to make the data available, useful to community members to discuss which community decisions make sense. We have a powerful technical advisor many have been involved previously around gas and other issues. We are partnering with them to make this data available as they assess the clean energy. Most likely the clean energy options that most mask the community needs. The biggest lesson learned is that in this case by leveraging a long-term relationship, we've been able to jump to a stage where the communities are coming to us on a regular basis to ask questions about community-based solutions to energy needs and the liability and, in many cases, looking at approval for water quality as well. I believe that is the last slide and I want to thank you all and I look forward to this conversation.

Thank you, Daniel. And those who have opportunity or can connect and link to this. There are extra slides that he put in the presentation as well. Stephanie, I'm going to jump right to you. As a reminder, if you have questions please put them in the Q&A box on the right-hand side behind this button. Then we will begin gathering up the discussion. Stephanie, are you there?

I am, thank you. Hello everyone, thank you for having me this afternoon. The study I'm talking about today is a study that was conducted in 2015-2017. The study is, we looked at cultural factors and energy patterns of multifamily tenants. I want to recognize PG&E For the partnership, can we go back to this slide? So, to frame a little bit of why this study came about, California has a changing demographic and you could see through this graphic on the left the change in the demographics are substantial throughout the last several decades and also what is projected through now to 2040. A big thing is, we plan for programs that serve multifamily residence and we also do energy forecasting, but we don't really consider the people that are necessarily living -- and some of the factors that would impact their usage. Going back to the second slide. Thank you. Perfect. So, we have three major goals of the study we were trying to achieve, understanding what the diversity is be across multifamily households. They're very dynamic with a lot of residence in them, a lot of turnover in multifamily properties as well. Also, we wanted to test the message to understand the relationship between cultural and demographic data. With that if you wouldn't mind going ahead into slides. Today I'm just going to be talking about the survey message. With property owners and residents on this site. One of the things that we did to understand the demographic of the residents in the study population is that we needed to design a survey that spoke to people, something that they understood and could also relate to. So, we try to replicate the survey questions and look after the U.S. Census. Surveys, we also asked residents about their household characteristics, their demographics, their behaviors as well as their attitudes as well as some of their physical characteristics for the residence. Of the residents, excuse me. With that, we wanted to make sure that this survey served a good purpose and understand that we are asking some questions. To do that we really had to look at our outreach plan and make sure that we were doing this in a strategic way and that we would earn the trust of the property owners, the site managers and this could then help us earn the trust of these residents. So obviously everything was -- what we did was we used properties that participated in one of PG&E's multifamily upgrade programs. At some point in the last 1-2 years I would say prior to the study. We conducted a property owner interview to understand what they have seen in the demographics of their properties and how we could do the most. We provided preset incentives, so we did include a small gift certificate for residence that did send back a completed

survey. The engagement for this is that we used both online and paper surveys. The most effective way we found was actually to do on-site door hangers with a little information about the requests and surveys. Pre-addressed and stamped envelope to send back. The survey was in English and also in Spanish. What we did is prime to the residence first to understand that the survey was coming. We would go on site at work with the property management staff to essentially post flyers in common areas so that they could post things on any online portals that the residents would engage with and also, you know, they would also have a flyer in their leasing office for when the residents would come in to turn in their rent or other information. So, the staff would be able to hand out a preview of getting the survey soon. Then we followed up and put those online, excuse me the door hangers on site. And again, provided those prestamped envelopes as well. We did do multiple follow-ups for these sites to ensure that they were able to help us leverage as well. There was a pretty diverse group of sites that we conducted. And also, that participated as well. I would say one of the major takeaways with this, perfect, Andrew. Thank you. Encouraging that relationship with the property owner was essential in determining what type of language we needed to provide the surveys into and also how do we effectively get the surveys out to the residents. I put in a few things if you want to understand the report here. There's also other things in the slide in the packet as well. Thank you so much and I appreciate your time today.

Thank you very much for those who don't want to type out -- you can find this in the presentation that has been linked. You could also find her email there as well. Thank you very much. I want to switch now over to the panel discussion and question and answer session. Thank you all for your initial presentation. We will have questions coming in during the Q&A box and I appreciate this. We will have responses and try to get those in verbally as we go. I want to pose a question to the panelists and maybe David, if you want to start us off again. So how did you identify throughout the course of the project the problem or issue and obstacle that you were trying to solve for which you engage in the project, where did you identify the problem and where did that come from?

so, that's a good question. One of the major changes that give us a lot of data, -- in that area. We know that the community was fighting that closure for a long time. I think for us we were familiar. The unique experience in that we are not only working on these issues but living them every day. I live in a community one of the top five disadvantaged communities. When you have this experience, for us this was about working with the public partners to work along with that community to come up with water potential solutions. So, from there -- we had over 1000 conversations. Meaningful conversations. While today having talked

about our other projects this was the healthy home study with a relationship between natural gas use within the home there's nothing like being in someone's home in a situation that's dilapidated seeing that they had these external outdoor air quality as well as indoor air quality. It's literally causing them -- as well. That's what we learned about. Identifying this and confirming this and working within these communities.

Solving the problems that are right in your face than going out. Others want to bring up or address this topic.

I will jump in for the project. A similar issue we have, a large number of communities that are very diverse, some are quite dense, and some are very spread out in the areas. So, the quality varies greatly. One of the big questions that has come back in the early survey one of the options doing the home upgrades it's very problematic and it's not possible for community use, topics where the community members brought up technical options that we had not hand with the initial database to look at. We expanded the range of technologies that we think would be likely to be useful now in this direct response. Back to one of David's points from earlier on, these are about the resources available that aren't always clear. We need to get into see homes that have a water pump or a filter to see what these options are.

Andrew, your question about the most effective strategies for communicating. And collaborating with the community. One of the things I didn't really get into in my presentation but I think has been quite effective has been identifying local leaders within the community who were kind of sharing this engagement with the research team and are sort of the go-between the Berkeley team and some of the residents who were making less dynamically engaged but were constantly checking in with the leads about what do they want to communicate and what should the Berkeley team communicate or some of the other contractors For instance doing the energy efficiency assessments and walk-throughs For the homes. So, we have really committed people on the block who see themselves as being in a leadership role.

I want to pose another question as we have one coming in here from Alexandra to see if I could elevate you up to ask questions verbally if I could find you on the list. Give me one second here. Alexandra, are you there? It's getting connected. All right, if she doesn't have the chance to come on, she asked a question. I think this was directed, I will ask about the one she directed at David. David I would like to hear more about the principles especially for the workforce development.

The idea of just transitioning, particularly for communities that have been harmed. When we think about various --. And so, I think for us looking through how we could make climate and how could we have jobs? We have this conversation and it's like jobs or climate. We have those conversations but only talk about regenerative principles in particular, we invest in the economy. How hard is it to invest in green technologies and have local funds in our communities? We are really excited to work alongside another nonprofit or grid alternatives as well as maintenance around that. I'm sure everybody is always calling you about the work that they do. With the regenerative economy with these extracting principles we make this more regenerative. We need to create climates and adaptive strategies for them. I know it's in my experience and my neighbors that our community has been assessing this. These things just keep coming but we have resilience. It's exhausting. It's exhausting. We really want to work within the community to invest in renewable energy. The healing of people as well as our planet. That's what we need with respect to our regenerative range.

Alexandra, welcome. I see that you are up there. Do you have a follow-up question or a few questions to choose from if you would like to pose a similar one or another? You are currently muted at the moment.

how about now? Six months of this and you would think that I would get this right. Thank you for bringing this together. I couldn't help but ask everyone questions because there's so much interesting work happening. I work at the community choice program in the bay area. It I've been doing a lot of work, well work that we have been calling it resiliency and virtual power plants trying to figure out how to do this while building regenerative workforce development as well as training partners and connecting them with the existing labor pool to grow these pathways toward green jobs. I'm trying to find solutions for all of that and it's generated a lot of good ideas so bringing everyone together, thank you.

Excellent. I have a question because you brought up a few different things. I will talk about this one first. It's two similar questions related to covid. What adjustments have you had to make in regard to community outreach in the age of covid and what adjustments do you have to make because of covid? So how do you do the process differently and what other new demands are being posed on these projects and initiatives? Dan, I don't know if you are talking but you are muted. Still muted. Muted.

One of the changes we had to make is the plan to have the education learning center up and running. It was supposed to kick off this year. We worked

responsibly for-year with our partners, putting together a very aggressive and well-founded curriculum. Not just coming out to the site and letting the kids run around the solar panels to see how cool they are but the actual curriculum is embedded into this, and to their science classrooms at the high schools and elementary schools. We had to figure out how we would pit it and make this online, so this has definitely been a challenge because the whole purpose of developing this was to support the next-generation science standards and this is for the real-time, hands-on, all of those things. This has definitely been a challenge on how we will continue to remote this within our schools and at the same time not have the ability to actually come out and utilize the facility and what this was designed For.

Daniel, I have a muted you.

So, one of the big pictures was that we plan to have these dialogues between the surveys and these town hall meetings and actually the surveys we had done so far in person had often been through a door. Someone sits outside talking to someone inside. This could be a challenge for a variety of reasons, but this is why we developed the survey methodology using iPads. They pass the iPad in and take a picture of a couple of devices which is a planned route which requires an approval to do that. Only the home owner does it. We don't take the pictures out, but this has been very interesting because this has allowed us to build up a bigger data center with various appliances and a picture of panels. This has allowed us to build up a picture more quickly for what the energy demand would be. We are hoping over the next stage which would be a series of technology Expos where we would sit down in communities showing various technologies about what the costs are, the issues, the opportunities to utilize state funding for these cases. It's slowed our process down. We are about six months behind for these surveys but hopefully we will get sort of better data to add to this as a result of this process.

I know that we are on the topic of engagement and we have a question. Danielle, I don't know if you would want to ask that in person. I will see if I could get you on and around the most effective engagement strategies. It will take a second for you to come on. Danielle, are you there? I can ask the question. So, what was the most infective effective engagement.

Hello this is Danielle Dooley with the public advocates office. So, my question was directed to the final panelist. When you talked about assigning residents to participate in the survey and that he would work with property owners

beforehand to say the survey is coming, you know be prepared. I'm wondering what your most effective tactic was to engage the property owners?

Sure, this is Stephanie. So, one of the things that we leveraged is first the relationship that we implemented the multifamily upgrade program at the time so we had an advantage there where we would use those existing relationships and that's something I would encourage in any study there, working with the existing communities or programs, working with the implementer or the people who would frequently interact with those individuals at those sites. What we did in terms of -- we asked a series of questions to understand, what is the most effective way you would reach your residence is that through a community event because we could host a little pizza party to go over this and administer surveys but what that really result in a lot of attendees? Do you do door hangers? Do you interact through email? So, I have to say by far the most effective was using those door hangers and the sites were just spectacular in wanting to help support the project. Mostly because these are projects that had been received through the PG&E program and they also said if you are able to offer a small incentive to residents, to participate, you would have a much higher participation rate. It was over 25% so we consider this a pretty good win. And also, you know, we understood that we might have to do surveys in multiple languages as well and also post the flyers for the primers that I was talking about. Those were all print, so we posted those in just English and Spanish that's all that was needed at these sites these were residents that did speak different languages, but we found the majority were English and Spanish and this was pretty effective at the time. Does this answer your question?

It did, thank you. And For a quick clarification, the incentives you talked about the participate, was this from the previous PG&E program or was this where you are offering additional incentives for participation?

Thank you for this clarifying question. So, the building had participated in the energy program so the building owner received an incentive prior to the study in order for the tenants to participate we did offer them an American Express gift card, I think it was. So, this was a separate incentive that was used in this particular study.

Thank you so much.

You're welcome.

I want to pose for the panelists for engagement incentives where their lessons learned there?

Some of the things that I looked at within the presentation, between the community and energy related companies, they felt safe. Our general approach to the outreach and engagement were capability related. It was not to get everyone's opinion but there was a frame. For us it was meeting people where they were. One of the other tools were the behaviors and interests in participating in future activities preferred methods of communication. If you were to show up at my house I wouldn't open the door, right? However, because I mentioned the event within the incentive. So, they really do tell us, if you came to my house I wouldn't open the door for you, so the data collected through the survey allows us to engage those. So, one of the things that we are doing right now currently is helping people engage with different energy efficiencies, various programs. As needed we do the follow-up whether it be a phone call or in-home visitation where it allowed before covid. Being able to work with them through programs that require more work. One of those is a program. That's been our method. There's the direct mailing program. Rolling out an aggressive phone banking program. It we ask if they have taken the census and if not, we encourage them to do so and doing wellness checks. This was made on a number of different challenges for people. So, this isn't just about -- and the other thing was making sure that we are uplifting and doing the coordination with partnerships so again in unincorporated areas, the school district is like the local governance body. They really look to the supervisor and their field, leveraging those relationships and being able to work with them. We've been able to work and make sure -- that also includes community-based organization. So, I cannot stress enough the power of relationships. That's been tremendous for us.

I would like to shift gears here because it's time to wrap up. If you have final questions or are on the panelist level, put your video on and I will try to call on you or raise your hand or if you're an attendee put your questions in the chat box. I have a question here, a little bit more about coordination. So obviously, looking at the need to identify having communities need to identify for themselves the issues they're facing as well as the obstacles they are facing in the future, you won't have a one size fits all across the state with a lot of different communities, there are community organizations working hard. How could we best coordinate or share lessons learned among those different entities that are working? There are existing structures that work well. Matt, you like to do show until a lot would you like to maybe talk about this regarding the schools?

So, what's the premise of the question, tell me again?

How do we share these lessons learned are these best practices?

So, one of the things like you said, I really like the show and tell model, having people come out to see that indeed, these types of infrastructure projects are possible. A lot of the times in the school district we get watered down in the day today, just getting kids to school or making sure that the air-conditioners working. A lot of the times these projects are extremely beneficial for communities. So, I would like to bring this out. Also, we have started to work on a collaborative here in Contra Costa County to encourage other people in transportation and facilities to start to look at what this looks like as these things develop through other sites. We are more fortunate that we have -- were all of the buses and everything are at. So, we add the infrastructure with schools. Looking at these other energy options to communicate our carbon footprint. Looking at would've those opportunities create that for is here. Hats off to our partners in the community. We are really having that confidence. We start that perhaps. We are building this collaborative workspace around this field bringing in your peers as well as others. Indeed, this can happen, and you can get these projects done.

Great, yes. Are there other structures in place in other domains and sectors?

Our surveys are done but we are very much hoping the kind of visual data that we are collecting is something we could find a way to build down the road. Something from tables, technologies, not just hear something out-of-the-box but something that the cost of been for families to use this going down the line. And obviously we will write reports and do calculations on her own, but we are ultimately trying to make this available. One of the things that we tapped some of our members to help us to do. Muted excellent.

Any final thoughts here and the best way to ensure collaboration and coordination? That's the challenge that we have going ahead. There's a lot of work going on and we want to make sure that we are sharing these lessons learned across from each other. We are getting close to time. I would like to wrap up here. First, I would like to thank all of our presenters. I want to thank David, Matt, Dan, Stephanie, Sascha, those of you who spoke your today. Those of you who post questions here in the Q&A. I saw a lot of questions that were answered correct plea directly even if we didn't answer them verbally. There are other questions we will try to make sure that the people they are directed to will be able to follow up on line. I appreciate your time here. We will have another meeting next week on October 15th. We will hear from a community project

there and hear from the city of Oakland. I have a project that should be held in the section as well as well as interesting projects. This meeting has been recorded if you missed anything it will be available hopefully as soon as tomorrow. Up online at epicpartnership.org and if you need a transcript or translation of this proceeding here, you could find that hopefully as soon as tomorrow as well. I would like to thank everybody, the administrators, the utilities who have joined us here today. All of the attendants that we've had. I look forward to our discussions we have coming up. We have a lot to consider here. Thank you for your time and if you have any questions about this process or upcoming meetings please reach out to me. Visit epicownership.org For information there. Thank you again everybody. Have a great evening. Goodbye. [Event concluded] This message is intended only for the use of the Addressee and may contain information that is PRIVILEGED and CONFIDENTIAL. If you are not the intended recipient, you are hereby notified that any dissemination of this communication is strictly prohibited. If you have received this communication in error, please erase all copies of the message and its attachments and notify us immediately.