CALIFORNIA ENERGY COMMISSION

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IEPR COMMISSIONER WORKSHOP ON CLEAN TRANSPORTATION FUNDING PROGRAMS

REMOTE VIA ZOOM

SESSION 1: CLEAN TRANSPORTATION EQUITY, JOBS, AND RECOVERY

WEDNESDAY, AUGUST 19, 2020

10:00 A.M.

Reported by:

Peter Petty

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 Monahan

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P R O C E E D I N G S

10:00 A.M.

WEDNESAY AUGUST 19, 2020

 MS. RAITT: Welcome to today's 2020 IEPR update Commissioner Workshop on Clean Transportation Funding Programs. I’m Heather Raitt, the Program Manager for the Integrated Energy Policy Report, which we refer to as the IEPR.

 Today’s workshop is being held remotely consistent with Executive Orders N-25-20 and N-29-20 and the recommendations from the California Department of Public Health to encourage physical distancing to slow the spread of COVID-19.

 Instructions for attending and participating in the meeting were provided in the notice and include both the internet and call-in options. And then notice is available on the Energy Commission’s webpage.

 I do have an important announcement. The Energy Commission is canceling the afternoon portion of today's workshop to conserve electricity in response to the Flex Alert issued by the California Independent System Operator. A Flex Alert is a voluntary call for consumers to conserve electricity, and has been called for 3:00 p.m. to 10:00 p.m. afternoon.

 So we anticipate sending out a public notice to reschedule the afternoon portion of the workshop at a later date. So Session 2 was scheduled to start at 2:00 and was going to be a panel discussion on Approaches to Assessing Funding Program Benefits. We apologize for any inconvenience that this causes. And thank you for helping us do our part to conserve electricity, reduce stress on the grid and meet the needs of this Flex Alert.

 But we are going forward with the morning portion of the workshop. And so this morning we will also -- we will be using Q&A function in Zoom with the capability to vote on questions posed on others. So if you did have a question for our attendees, for -- excuse me, for our speakers today, you may just use that Q&A function to write a question. And if you can take a look there and see if somebody else has posed a similar question, you can click a thumbs up to vote on that and that'll move that question up in the queue.

 And now we'll just go over how to provide comments on the material in today's workshop. There will be an opportunity for public comment at the end of the panel presentation. And so in Zoom you can click the raise-hand icon to let us know you'd like to comment. And for those on the phone, press star nine to raise your hand, and we'll open your line during the public comment period. Alternatively, written comments are welcome, and they’re due at 5:00 p.m. on September 10th.

 So -- and also another announcement is, unfortunately, Commissioner Monahan is not able to join us this morning, but in her place Ben De Alba is her advisor, and he will be -- he is with us this morning.

 So go ahead, Ben.

 MR. DE ALBA: Morning. Thank you, Heather.

 And as Heather mentioned, my name is Ben De Alba. I'm an advisor to Commissioner Patty Monahan. And I want to thank you all for joining us this morning, and send Commissioner Monahan’s thoughts about today's workshop. I know she was looking forward to it and she will -- I think she's watching though. So, thank you all.

 Again, as Heather said, we're not going to have the afternoon session of this portion of the workshop, but we are looking forward to this morning's conversation. And we are because we are focused on clean transportation, and particularly, equity, jobs and economic recovery, given the circumstances that we're all in here this year.

 I think the panel discussion that we're going to have going forward, as well as the presentation, are going to highlight some of these key things that we need to be discussing for our clean transportation goals and objectives.

 We, we have a clean transportation program that has about $100,000,000 annually every year to make investments in advancing clean transportation, and we want to know how we can really leverage those funds to achieve, again, equity, jobs and economic recovery. So we're hoping to hear from the folks participating in the workshop to really inform on how we can do that to the best ability that we can.

 So again, we’re really looking forward to the conversation. And I'm going to introduce our panelists, and see that we have Commissioner, Douglas, who's going to join, too, in part of the conversation.

 So without further ado, I would like to introduce our first speaker, Gurbax Sahota. She is the President and CEO of the California Association for Local Economic Development, where she is focused on creating strategic partnerships to promote the value of economic development and create a stronger voice for economic developers at the state and local level.

 She has, she also has a senior position at the California Academy for Economic Development, a nonprofit supporting education, research and innovation and economic development. She also fostered the growth of the California Enterprise Development Authority, where she builds and maintains relationships with strategic business partners to act on new business opportunities.

 Gurbax, thank you for so much for joining us and we look forward to your presentation.

 MS. SAHOTA: Thank you for the warm welcome, Ben. And, obviously, thank you to the Commissioners and the team at the Energy Commission for including me.

 Good morning, everyone. This morning's presentation, my part is going to be pretty fast paced. I appreciate the opportunity to talk to you about economic development. I'm going to take you into the weeds a little bit about economic development in the context of recovery, and what recovery looks like, and then pull back out and talk about the Energy Commission's unique role in this space.

 So, next slide, please.

 I will start telling you a little bit about us, more for context so you understand you know where I'm coming from. The California Association for Local Economic Development is a membership association. We have over 800 members. Now, most of those are city and county staff that work on economic development. They work with their businesses. They work on strategies to create an environment where businesses can thrive in their communities.

 Next slide, please.

 As part of that you heard Ben mention, there's a couple of different organizations that I participate in. CALED, as an organization, has to other entities that support our mission. One is the California Academy for Economic Development. We have a certification program for economic developers in that space. We also manage the State's Outsmart Disaster Business Resiliency Training. So, really important right now, and even leading up well prior to COVID-19, teaching businesses how to be resilient and prepare for interruptions, like we're seeing right now.

 Our California Enterprise Development Authority is another entity we have that helps further our mission. We have over 230 jurisdictions that participate in that. And it's about conduit issuance of bond so we can support manufacturing and non-profits. And part of that we also manage a Pace District, one of the largest ones geographically in the country.

 Next slide, please.

 A little bit about me. Obviously I'm responsible for all three of those organizations. I serve on the council development finance agencies, which is focused on what are the different economic development financing tools available. Some tried and true, some that are new based on what's happening in the environment. Also, on the California Community Colleges Economic Workforce Development Advisory Committee, seeing how education can play a role, not just in recovery, but in helping our State thrive and meet the needs of the jobs of the future.

 And then the NorCal Small Business Development Advisory Board, so we can see at the local level how businesses are being supported and what their needs are.

 Next slide, please.

 Okay. So today I'm going to talk to you, as I mentioned, a little bit about the weeds of what economic development is, lessons learned during recovery during the Great Recession. I think there were some important things that we learned about recovery. What economic development looks like, and then what's needed as far as next steps, or at least a program around what support can look like.

 And then in the context of that, talking about today's environment as it relates to equity, what recovery role that the Energy Commission can play as well.

 Next slide, please.

 So from a broad perspective, you know, we talk about economic development and we define it as the creation of wealth through which community benefits are realized. This is really important to us because we hear policymakers, elected and others, talk about economic development in the public space. Usually it's a conversation about jobs, but economic development is more than about jobs. It's a very broad view of, what do we want the future of our community, our State, our nation to look like, and how do we generate wealth across all income levels and increase prosperity? It's very strategic. It's not just the jobs agenda.

 And so from a practitioner perspective, and when I say practitioner perspective, I mean, the folks that are the boots on the ground helping businesses every day. Economic development really is more than just about jobs. It's about the future and what we want our future to look like.

 Next slide, please, Harrison.

 So from a public perspective, and this was really important to us and the lesson learned from the recovery process during the Great Recession, is that economic development, when we think about it, is very much uniquely public sector from the perspective that, you know, local Government, State Government, Federal Government is looking at, where can we intervene to help encourage investment? Where can we have influence? Where can we invest so that we can have a positive effect on the level of business activity, employment, income distribution patterns and fiscal solvency?

 That conversation was really important during the recovery through the Great Recession, and it's going to be important now as well, especially as we see more and more limited resources. Where are those game-changer moments where we can have influence, where governments can have influence, and make their investments count and their policy decisions count, where we can further the goals of recovery and what we want for a vision for our State for prosperity. So, next slide, please.

 We also talk about a distinction between community development and economic development. Some of these slides have provided for context, so I'm not going to go deep into detail because I know our time is limited, here.

 Next slide, please, Harrison.

 So continuing on the conversation about the public sector role, as I was looking at the investment plan for the Energy Commission, you know, I think it’s -- you're already doing some of this work, in terms of looking at, you know, where can you invest, what are the goals that you're trying to achieve with those investments?

But this constant conversation with Government, whether it -- regardless of what level it's at, when we talk about economic development recovery and the public sector role, it's -- you have you have the opportunity to have a carrot and a stick. And where we can help businesses thrive, businesses that match are consistent with our values and the vision that we have for our future. I can't say that enough, especially within the context of what we're talking about today, clean transportation.

 Our climate goals are important to California. Clean transportation plays an important role in that. So how do you look at -- what's your vision, and how do you operationalize that, and again, make thoughtful investments that aren't just, here's the regulation and now you have to eat it. Well, so here's the incentive. Here's the support that we're going to provide and the investment to help you get there.

 Next slide.

 And so again, as I mentioned, economic development, when we talk about it, we really talk about it from a practitioner perspective. And we created this graphic because one thing that we saw, we saw it back during the recession, we were concerned we’re going to see it now, is that as budgets tighten, it's very -- it's difficult as it is already for Governments to figure out where can you invest, but more so, how do you keep sustainable and maintain the programs that are important to you?

 And what we saw happening was governments to all levels saying, we're going to make a 10-percent cut across all areas, or we're going to make 15-percent cuts to this space. And what we tried to remind folks is that you can't, one, you can't cut your way through to prosperity. But two, you know, economic development is an investment. If you look at what you as a community, as a government need to provide for your residents to have a good quality of life, a lot of that is supported by the revenue and the work, the benefits of successful business. So how do you help businesses in a way that are thoughtful, but also meets the needs of your community and matches your core values?

 And that's where economic developers come in. They’re the implementation of those plans. And right now, as well as during the recession, they’re the first responders for businesses. So you've got hundreds of folks across the state, working for cities, counties, the state, they might be working for non-profits, working hand in hand with businesses, trying to get the resources, counseling them, helping them. Because while we talk about policies for recovery at a larger level, at the end of the day -- or at a broader level, at the end of the day, somebody is the boots-on-the-ground person that's helping operationalize that and support that with the business, more often than not it's an economic developer.

 Recovery is going to happen one business at a time and these people are very important in being part of that network and being part of that solution. So that's a broad view and really getting into the weeds of economic development. Next slide.

 Again, the goal being that the intention is to improve quality of life. It's not a jobs agenda, it's not a pro-business agenda. It's how do we get to the future that we want and the prosperity that we desire for our residents? What investments, what support is needed, what strategic decisions, help us get to that desired future? And, again, it's quality-of-life issue. Absolutely.

 Next step -- or next slide, please.

 The other thing that we talk a lot about as it relates to recovery, is that economic development is not a one-size-fits-all proposition. This is so important. We see it at the local level, we see the state level. Well, Texas is doing this. Shouldn't we be doing it? My neighboring communities doing this. Shouldn't we be doing it?

 That's not what economic development is. It's very unique to what your goals are. We know as the State, as I mentioned earlier, our climate goals are important to us. How do we reach those? So that may not be the same for Nevada, Arizona, or some of our neighboring states, but it's important to us.

 So as you're talking about this big picture, you know, this is the goal that we have for economic development, this is the vision that we want for our future, the next piece of that is, how do you make it specific and have practical implementation actions?

 And I say that because as you're looking at recovery -- and I saw the investment plan and the IEPR update from last year, and I think that the CEC in general does a very good job of getting into the weeds of where you want to invest, how you further your goals. But as it relates to recovery, I think that it's going to force you to get even further into those weeds, possibly, then you've been in the past, and talk about what practical implementation looks like Next step -- or next slide.

 I included this slide as well, because the other thing that's happening in recovery right now, as we all know, is that resources are scarce. Through the CARES Act we saw some business support networks get funding and others didn't get funding, but they might have programs, and they might have something else that they bring to the table, again, to help businesses thrive. A thriving business creates opportunity, and that's what our goal is, right? We want to help the right businesses thrive that match the vision and values of our State, of our communities, and we want to create opportunities for everyone across all income levels.

 The importance of this slide is not only do you see the amount of partners that are at the table, that independently work to helping business, and you'll hear from some of them on the next panel, a lot of them collaborate as well. But when -- on the Government side, on the planning side, as we talked about, we want recovery, we want to help businesses, one of the things that gets lost in that conversation is that, what does the business want?

 If you're an entrepreneur or a business owner, is your goal in life to hire as many people as you possibly can? Maybe if you're on the sales side, but I would imagine that your goal is to do well, be profitable, and then you get to a point where you reach capacity and now you've got to start hiring.

 So how do we create an environment where businesses can thrive, because they're the ones that are going to hire the jobs or -- and hire the -- create the opportunities. But in some cases, as we know, as we look at automation, helping a business thrive doesn't necessarily mean job creation. It might mean more efficient processes, so there's not official jobs created. So your metrics become very important in this space when you're talking about recovery.

 Next slide, please.

 And the next several slides really speak to that. I think one of the most important lessons we learned Over the last 20 years on the economic development side, is that you can't hang your hat on jobs.

 If during the Great Recession the measure of your work as an economic developer or somebody who is engaged in recovery was, how many jobs have you created, it would be very difficult, at best, to show your worth. Meet -- how many jobs have you retained? What new businesses have you helped seed and grow? There's other metrics that you can look at.

 And, Harrison, if you can go to the next slide.

 We're going to go pretty quickly through the -- and the next slide.

 So metrics beyond job creation. Again, I shared with you that there's a lot of slides on the deck. Some of them are just for context and your reference, and others we're going to spend some time on.

 Metrics beyond jobs.

 The next slide, please.

 Some of the ones that I thought might be of interest to you as you're talking about the equity space, you know, how -- we want to help disadvantaged communities. What do metrics around those programs look like if you're going to play a role in recovery?

 If I say to you, I'm going to make a difference. We're going to include equity in our economic development plan. I would expect that you’d look at me and say, what does that mean? You know, what is the metric of success there beyond just job creation?

 So I think we're all challenged right now to go that extra step and say, all right, let's define this tighter, and then let's all figure out what is the correct implementation to move the needle on that metric and that goal.

 Next slide, please.

 And here's some labor and workforce full examples or metric examples that we've seen used an economic development. Occupational distribution of women and minorities, number of job candidates with certifiable skills or college degrees. All of these are important factors in economic recovery, and where you choose to focus your resources, and you're in a unique place because you do have resources that you can put towards recovery.

 I think it becomes even more and more important that you get very clear on what it is you're trying to accomplish as it relates to the big concept of equity. You know, we want equity, we want recovery, we want more opportunity.

 Next step -- or next slide. Excuse me. And actually, Harrison, if you’ll go to the next slide, and then we're going to kind of back to this one.

 So forgive me for hopping around here. I want to talk a little bit about from a practitioner perspective, some of the themes we're seeing in recovery right now. The number one issue I think across the board is creating certainty for businesses around safety protocols.

And this is a huge issue. I know that there's a lot of pressure we hear the conversations about what's happening with the State's task force. What are we going to see around recovery?

 And I think that until we know that businesses can ensure the safety of their employees and their customers, that this is going to be an ongoing issue for us in the recovery space, and it certainly highlighted as one of the top priorities for economic developers that are working with businesses.

 The next one, preparing for the next wave. When I originally was on -- sorry, Harrison, pass that slide.

 Prepare for the next wave. Originally, we're talking about preparing for the next wave of closure, but as we see the wildfires, as we see the challenges around energy, it's really preparing for the next wave of business interruption. What does that look like? Is there a new way that we should be looking at doing business?

 When I talk about economic developers that are counseling their folks, they're counseling them on, how do you plan for partial? If your original business plan was 100-percent occupancy or 80-percent occupancy, what happens now when that drops down to 50? What happens when you have to reconfigure your spaces? So preparing for the next wave. Looking for opportunity, you know, getting back to better. We always hear the, the phrase, in chaos there's opportunity. I don't think we have chaos right now. I think it's messy and we don't have a clear path.

 That said, where in that can we find opportunity to get back to better, not get back to normal. This is a unique opportunity for us, if there's a reset that's happening across a lot of spaces. What can we do so that next time when we're, we are reopened, that we're in a better position than we were prior, also for our workforce? How do we help our workers get back to better?

 And then on the local level, there's a lot of pressure to create solutions and invest in economic development. Because of the (indiscernible) we see at the federal and state level -- and, Harrison, if you'll go back one slide to the, the one that has the chart on it, please.

 From a practitioner standpoint, we have shared recommendations with the Legislature and several others around what we think is needed for recovery. And the one that I've circled is the one where I think the Energy Commission has the most opportunity in the work that you're doing about clean transportation, and that's around manufacturing and critical supply chain industries. You know, how do we address the supply chain issues that we've seen?

 I don't think anybody expected that we'd be fighting for toilet paper in 2020, but it really did highlight some of the vulnerabilities that we have. And, again, this is such a great opportunity for the Energy Commission to make a difference. I'm going to talk a little bit about that.

 If we can move to the next slide, Harrison.

 I'm going to skip you through a couple of them. So COVID-19 is going to be a game changer. I think we know this. Broadly thinking about recovery from the Energy Commission perspective, what does density look like moving forward, and how does this change your planning around where you put charging statements -- are charging stations, excuse me.

 What about public transportation? If it turns out that folks are comfortable on public transportation, maybe you're meeting your goals and getting more, your emission vehicles on the road, but maybe there's also other vehicles on the road because people don't have the confidence in public transportation. Is that okay, or is that something broader that you want to incorporate as you're looking at your plan, moving forward?

 How will land uses -- land use change? If the goal in the past was to put charging stations at work, because we knew people would have an opportunity to charge there, or retail centers, if that's not happening and those land uses change, does that change your strategy around recovery and what you're going to do with those charging stations, where they’re placed, what they look like forward?

 The challenge for all of those right now is, where you get current data and what these things look like today might not be what they look like tomorrow, might not be what they look like when we get a vaccine.

 I know some communities are looking at mobile data, right, where your phone’s being used, and tracking people's movements -- it sounds very big brother-ish, but tracking movement throughout the jurisdictions and seeing if that's a way for them to figure out what's happening with data and movement.

 Next step -- or next slide, please.

 So the unique opportunity. This is where I want to spend most of my time, but I've been talking a lot, so I am going to obviously go kind of quickly through this slide.

 I think the unique opportunity that the CEC has right now as it relates to zero emission vehicles, is bringing manufacturing back to California. Whether that's incentivizing manufacturing that's already happening here or talking about the component parts, manufacturing is always been seen as a pathway to the middle class. So if we’re talking about equity, if we’re talking about helping disadvantaged populations, we think that this is a space that you could definitely make a difference.

 I know that there was a decision last year to focus on infrastructure. And so now your work, you hopefully have a chance to focus on manufacturing. And then the next piece that would be redefining the path and resiliency of the supply chain. Where are the component pieces of those vehicles, those charging stations coming from? Is it more efficient to have them be made in California, or is there something that you can do to have influence to ensure that as they're coming to California, they're sustainable and they're arriving here in a sustainable fashion? Next slide.

 And so I will close with saying that, again, as I said, we're not in chaos, but it is messy right now because we don't see a clear path. We're all looking for ways that we can make a difference. And I think the space where the Energy Commission, as it relates to clean energy can -- or clean transportation, can definitely make a difference, is that you already have networks, you're in a rare position where you have funding and influence, and you can incentivize partnerships. But you do have a broad opportunity to make a difference as it relates to recovery, and using equity as one of the guiding points of those decisions as you make them.

 So thank you again for including me. I know I'm at time so I will stop. Appreciate the opportunity.

 MR. DE ALBA: Gurbax, thank you so much for that presentation. I think we're going to spend some time now for a brief Q&A. And I'll invite Commissioner Douglas, if she has any questions for you.

 I have one while we see if there’s already any questions coming. You mentioned the importance of focusing on manufacturing and the supply chain. I just wanted to give you an opportunity to elaborate a little bit more on why that's critical for economic recovery and equity.

 MS. SAHOTA: Absolutely. Well, you know, again, that -- thank you for the question, Ben, and the chance to talk a little bit more about it.

 Manufacturing it's been the key to California’s success, and we've been at a large manufacturing state and one that had probably the most manufacturing jobs for some time. And as we see that, the industry cluster change, we see it become more efficient, the opportunity to bring more manufacturers in or encourage manufacturing is important, because you look at the multiplier effect.

 I think the Milken Institute had a study that said, for every one manufacturing job that was created, there were 2.5 created in other industry sectors. And they were looking at, I think it was, computer mechanics, in particular, for every one created there, the ratio was one to 16.

 So the multiplier effect of bringing manufacturing back or investing in manufacturing is really important from the economic standpoint, but it's also important because for many of us, you know, if you're not, if you don't have that college degree, the higher education degree, there's pathways to get you there in the manufacturing. Whether it's through the community colleges, obviously other programs like the career technical education training programs, it is a pathway for folks that aren’t interested in getting a four-year degree or don't have that opportunity.

 COMMISSIONER DOUGLAS: Hi. This is Commissioner Douglas. I'm not able to join with you at the moment but I'm listening. And I don't have any questions, but I appreciate your presentation. Thank you.

 MS. SAHOTA: Thank you, Commissioner Douglas. I appreciate the opportunity to bring you guys deep into our, our world. I know it's

not necessarily the same language that you guys speak, but obviously you're very important in economic development, and we appreciate the chance to talk to you about it.

 COMMISSIONER DOUGLAS: Absolutely. Well, thank you.

 MR. DE ALBA: I just have one more question for you before we move on to our panel discussion. And that’s, are there any major lessons learned from our most recent economic recession back in 2008? What worked really well then that we can maybe use, or should be thinking about now?

 MS. SAHOTA: Thank you. Thanks for asking that. I think that the notion of partnerships for solutions is really important. I think that we serious -- there's so many networks that are funded by different streams that still have that same goal of playing a role in recovery. How can -- whether it's jurisdiction at the local level, or the states say, okay, we know you're all working towards this goal, can we bring you all together, get focused on the same page and move forward together?

 And I, again, I think that the CEC, especially in your space of the clean transportation space, you have the ability to bring those partners together and say, look, this is the vision for the State. You all want to play a role in it. We want you at the table. Let's work together towards common goals.

 MR. DE ALBA: Okay. Thank you. And really appreciate your time, and I'm getting some -- hang on one moment while --okay. Go back -- so we’re going to turn to the panel now. And I want to, again, thank you so much and really hope you can stick around and watch the rest of the conversation, and look forward to engaging with you in the future on really deploying some of these strategies, as you mentioned in your presentation.

 MR. DE ALBA: Thank you.

 MR. DE ALBA: So with that, I'm going to turn it over to Heather and --

 MS. RAITT: Great. Thanks, Ben.

 Yeah. So we'll go ahead and move on to the panel discussion on Clean Transportation Equity Jobs and Economic Recovery. It's being moderated by Larry Rillera -- excuse me, from the California Energy Commission.

 And for the Clean Energy Transportation Program, Larry leads policy investments and teams for zero emission vehicle technology manufacturing workforce training and development and equity activities. So thank you, Larry. And we also have Michael Comiter available to help moderate the Q&A from attendees.

 So go ahead, Larry. Thanks.

 MR. RILLERA: Great. Thank you, Heather. Welcome, everyone. And just kind of off to the top with respect to this session. We did note that this afternoon’s session has been canceled. We will not have this afternoon's session on benefits.

 With that, I'm very excited to introduce a panel of esteemed community and thought leaders. I will introduce each panelist, provide a brief biography, and they will provide some introductory remarks.

 With that, our first panelist is Anne Hoskins. Anne serves as Chief Policy Officer at Sunrun, the leading distributed energy and battery company in the United States. Anne brings previous experience as a Public Utility Commissioner, utility sustainability and policy executive, and as a regulatory attorney.

 Anne.

 MS. HOSKINS: Larry? Good morning everyone. I think I'm unmuted now. I thank you so much for the opportunity to join your panel today. You know, when I was asked to do this last week, I thought, clean transportation. You know why, why does everyone want to hear about distributed solar and storage. And the truth is, I'm so glad you invited me because it's essential, in my view, to where we're trying to go.

 There's a lot of synergies between what needs to be done to reduce our climate challenges, between, you know, cleaning our electric -- clean our transportation sector, cleaning our energy sector, electricity sector, and also how the two are going to work together to help us with the ultimate goal of trying to electrify everything.

 And so I want to commend the Commission for the work on electrification and for seeing this synergy and interrelationship between what some people might view as silos, which, indeed they're not. But I think the reason I was asked to speak is because, you know, the solar industry, unfortunately, has a history of ups and downs with economic challenges. Sometimes people refer to it as a solar coaster.

 Sunrun has been very fortunate to have made it through the different ups and downs in the economy, including what we're going through right now with COVID, which has created a tremendous challenge to many energy efficiency and clean energy companies.

 And we've taken a lot of steps very quickly internally in our operations to be able to do that. You know, we changed the way we did our sales. We did a lot of communications to our customers. And we have been able to continue to operate with the support of the State as well, in recognizing that we are an essential service, and certainly we have to look no further than what we're experiencing this week to see how essential solar and batteries are. You know, our customers were part of a solution for helping to reduce demand on the grid over the last few days, and we've been really pleased to work with the CPUC in supporting that effort.

 But when I think about what lessons we have that could be applied to the clean transportation sector, there are a few that I think are worthy of discussion here on this panel.

 One is just been the importance of public incentives. You know, the solar industry in California really got its start in a lot -- in a big way through an important program called the California Solar Initiative. Quite sure that the Chairman and many of the Commissioners were involved in supporting that in their earlier lives. And, you know, it was really foundational as this technology was starting out, and you know, helping companies get off the ground. And so I do think there's an important role for public investment when we're trying to, you know, change the way that society views essential functions, such as transportation or such as energy provision.

 But coming -- you know, with that, if you look at the solar industry over the last decade or so, there have been a number of other important incentives. At the federal level, the Federal Investment Tax Credit, obviously, is very critical, but here in the State we have a few now, net metering is as a foundational regulatory rule, I guess, or system, that without net metering I don't think where we would be where we are today.

 And this policy is about to be reviewed again. And I do want to turn to that, just as an example. That, you know, one of the lessons I've learned, both as a regulator and now you know in this role at Sunrun, it's just the importance for new enterprises in particular, that we don't make our regulations too complicated. That we try to keep them as simple as possible, so that customers can understand them and so that new companies can have the apparatus and develop the to ensure compliance with them.

 And so, already in California we have a fairly complicated net metering system that, you know, that is connected to time-of-use rates, which I think have been very -- has been very important. But, also, you know, what we're seeing as we barely had this time-of-use-rates implemented, and now again we're looking at, should we change this?

 And whenever you make a change to regulation, it really does require a lot of work on the part of -- you know, particularly, again, the newer companies. I mean, companies like Sunrun have me and have a team, but if you think about the new entrants that you're continuing to try to encourage, new storage companies and the like, you have to be really careful about changing policies that are foundational to make that, you know, enterprise work and that sector work.

 Some other examples of really important policies have been the Small Generator Incentive Program, which we call SGIP, which has really incentivized the development of a market for batteries. This has also gone through some recent changes. I think they've been good changes, a lot of focus on really trying to get those incentives out to low and moderate-income customers who are in fire challenged areas.

 One of the things we've been working on with the Commission is asking that we can sort of move forward the timing of the incentives. It's not changing the amount of money, but recognizing the challenges of COVID and the fact that these are very capital intensive investments, can we just try to expedite getting those incentives out so we can keep that market going.

 On the low-income issue, I do want to touch on that, because it's so critical, particularly now, you know, with the challenges people are facing with COVID, with unemployment. You know, what we -- we are very active in trying to support multifamily solar through a program called SOMA.

 Again, I have to give a lot of kudos to the Legislature and to the State for having the foresight to realize that if they want to encourage solar and clean energy for all Californians, we need to have some targeted programs to do that. We have the same issue. We've got to make sure once you create these programs we can make them easy to access and that we can get that funding out.

 But when we focus on low income, which I think is, you know, low income communities and people, we also have to realize, particularly, I'd say in the transportation sector, but also in storage, that we still have to make a market. You know, we want to make sure that we have a range of customers who can participate, and really drive down -- and by doing so, we’ll continue to drive down the cost of electric vehicles, of solar batteries, et cetera.

 And right now, we still have a ways to go on a cost curve. And so I think that's another thing for us to keep in mind. Let's expand access, but let's also try to get the mass market really engaged in these important initiatives. And I know I'm running out of time. I wanted to touch on one last item which I think will also affect the transportation community, and that's permitting. One of the big initiatives we have been working on during COVID has been to try to work with local permitting agencies across the State to expedite permitting and make it more automated.

 Many of the permitting offices had to shut down initially COVID, so we worked with them to ask them to accept e-mails, instead of in-person applications. We worked with them to allow permitting that would then be checked after the product is up, put the risk on us that we have to follow the rules, and then they can check.

 And we made a lot of progress, but there's still a long way to go. And we have an initiative that Sunrun has been working with ENREL on called, “Solar App,” and I hope some of you have heard of it, which would automate the whole process. And in doing so, we would save money for the municipalities, which are all struggling right now, because they would have, you know, maybe have less of a need for as much personnel and time on each permitting application. Save money for the companies that are out there trying to work with customers, and also get the projects through a lot faster.

 We have places right now in the Bay Area where there's over 30 day delays in getting her storage projects permitted. And, unfortunately, we have people who are calling today, because of the wildfires that are spreading around the Bay Area, and because of COVID, and because of the rolling blackouts, who want batteries, and we are sending people to try to provide that, but we, you know, we can't afford in these times to have these kind of delays.

 So I think that's an area where the Commission and where stakeholders and where municipalities can all work together and say, we have the technology. Let's try to make this easier and let's get our technologies out to the people and meet our climate goals.

 So thank you for the opportunity.

 MR. RILLERA: Okay, thank you, Anne. Appreciate your comments.

 Our next panelist is Jannet Malig. Jannet is the Advanced Transportation and Logistics Statewide Director for the California Community Colleges Workforce and Economic Development Division.

 She oversees efforts across the State to create relevant career pathways and foster a 21st Century workforce.

 Jannet works with industry and professional associations, Government organizations and colleges to provide direction for curriculum development, Expand industry certificate programs, determine short and long-term industry training needs for high school and college career technical education programs.

 Before entering higher education, Jannet was senior marketing manager for Hitachi Automotive Products, where she led the company's sales strategy for all markets and analyzed new products and channels for expansion. She also held marketing and product management positions for Zyliss USA and DENSO Sales California.

 Jannet holds an MBA from Chapman University and earned her Associate Degree from Cerritos College. She currently serves as co-coordinator for the Long Beach Clean Cities Coalition, and serves on the Board of the Southern California Regional Transit Training Consortium.

 Jannet.

 MS. MALIG: Thank you, Larry. Thank you, everyone, for having me. You know, we, as community colleges, are excited at the opportunity or the opportunities that we've had with the Energy Commission. I think you've heard from Gurbax, and even -- and about the opportunities that we have. And, you know, specifically we're working in developing a workforce ready for these, especially in the ZEV categories.

 So we're excited at the opportunities to build a pathway to look at the high school level and the community college. And I think our relationships that we can been move us forward at the opportunity, especially in the areas of equity and building it in regions.

 We know that there’s zero emission vehicles, that opportunities starting from manufacturing to the end user and supporting it, our sector in the advanced Transportation and Logistics, you know, plays a key role in developing that and helping build up economic prosperity for us.

 We are thrilled with the opportunity that the CEC has given us, workforce development grants to work, to grow these workforce developments, or these pathways that start all the way down for economic prosperity.

 So thank you very much.

 MR. RILLERA: Great. Thank you, Jannet.

 Our third panelist is Tyrone Roderick Williams. Tyrone is the Deputy Executive Director at the Sacramento Housing and Redevelopment Agency. He provides visionary leadership and directs the affordable housing community development and project financing activities for the Sacramento Housing and Redevelopment Agency, and the Sacramento Housing Authority for the City and County of Sacramento.

 Tyrone also directs the activities of the Sacramento Promise Zone, where he coordinates partnerships with over 160 non-profit, Governmental and local organizations to expand services to underserved neighborhoods.

 In 2018, he was appointed to the California Energy Commission and the California Public Utilities Commission's Disadvantaged Communities Advisory Group. Tyrone received his Bachelor of Architecture Degree from Prairie View A&M University, holds a Master of -- City Planning Degree from the Massachusetts Institute of Technology, and is an esteemed holder of a PhD in the school of hard knocks.

 Please, Tyrone. Thank you.

 MR. WILLIAMS: Thank you, Larry. And to all of the Commissioners, thank you for the opportunity to participate in this very important topic.

 My role really is at the agency, is my department oversees all of the affordable housing financing for both the City and the County in Sacramento. We're also the agency that oversees all of the public housing for both the City and the County.

 My work as the Director of the Promise Zone, has -- in some of Sacramento's most challenged communities, looking at increasing opportunities for access to education, health, jobs, economic development and sustainable community development, including housing.

 So this topic is very pertinent to the activities that I'm engaged in on the day-to-day basis, and then being part of the Disadvantaged Communities Advisory Group gives us an opportunity to see not only what's going on in Sacramento, but throughout the whole State. And there are different regions and sub-regions of activities within the State, but we're all engaged and connected in the energy and transportation arena.

 So, I just, I think the opportunity that we have in today is to really for me, is to share what is it like at the neighborhood level. You know, they are -- most people in communities of color don't even know that the California Energy Commission even exists. There is such a gulf between what's happening at the neighborhood level and what's happening at the State, that most people are clueless to how the Commission has the ability to positively impact their lives. And I think as we are grappling with how to deal with the here and now, I mean, we first have to understand, you know, what is the state of things at the neighborhood level. And throughout disadvantaged communities they have been hit the hardest with the issues related to COVID-19.

 We already, we've heard all the statistics and so I won't use this time to rehearse those. But one thing that I think is so important for everyone to understand is the impact of unemployment, because a lot of people who aren't on -- who are unemployed, you don't see them. They're at home. They're in their apartments, and they are challenged beyond anything they could have imagined.

 The number of unemployed people who’ve never ever had to worry about being able to take care of their needs, whether it's their housing expenses or food or any of the normal day-to-day expenses, have just been shaken to the core. We've got an whole new pipeline of poor people who’ve never been in the category of poor before just due to the fact of their jobs.

 Some of them are waiting for jobs to -- businesses to reopen. Some of them, they will never reopen. Some have lost jobs that will never, ever exist again. And they're challenged with how do you pick up the pieces of your life and of your family and try to figure out what the new normal is.

 So I think that the role that the Energy Commission plays -- when we talk about workforce development on the Disadvantage Advisory Committee group, I am really focused on workforce, because everything and everybody I deal with are people who are either unemployed or underemployed. Whether it's through the Housing Authority and the people that we serve through public housing or Section 8, housing choice vouchers, or whether it's in the Promise Zone, the majority of people are struggling with the economic impact of how to put their lives back together.

 And from what I understand, the latest unemployment numbers for Sacramento, as of the month of July, it's about 13-percent. Well, but we know in communities of color, were always undercounted. So if the general population is at 13-percent then the realities of Brown, Black and other people of color is much higher.

 And so you know that's the challenge. But the good news is because of the work and the position that we have here at SHRA, the Sacramento Housing and Redevelopment Agency, one, we are about partnership. I've heard that mentioned with each one of our speakers. We’re about partnership, partnership, partnerships, because those -- that is the strategy for changing the game.

 And I think you have an opportunity to be a game changer here. One is that, you know, we've seen through working with the Strategic Growth Council, and the impact of creating new neighborhoods that are energy conscious. We're developing the largest green, sustainable, mixed-income neighborhood, not just one project, neighborhood in Sacramento. And we've employed charging stations and zero emissions vehicles. We've taken advantage of the whole opportunity through Electrify America, and have become the first housing authority in the nation to be able to talk about providing housing and cars at zero emissions for our residents.

 So when it comes to doing things, we are looking at opportunities to partner, and I think the Energy Commission, I will be well served and looking at strengthening their relationships with community-based partners and getting the word out about the opportunities that exist in training, as well as energy efficient zero emissions vehicles, and improving quality of air by enhancing the quality and -- of large transportation systems to be more energy efficient.

 So that's who I am. That's what I'm about. Glad to be here with everybody else.

 MR. RILLERA: Great. Thank you, Tyrone.

We will be coming back to visit some of those elements, great elements you pulled out in your introductory remarks for discussion after our panel introductions. Thank you.

 Our fourth panelist is Jessica Ku Kim. Jessica is the Senior Director of Workforce Development with the Los Angeles Economic Development Corporation, and is a member of the Los Angeles City and County Workforce Development Board.

 Jessica brings strategic direction and leads collaborative efforts to strengthen the alignment of L.A. County's workforce and education systems To industry workforce needs.

 Jessica has intimate knowledge of the programs funded on state and national levels. She has demonstrated success in developing, implementing and managing workforce development programs for targeted populations, including incumbent workers, new hires, disadvantaged youth, veterans, homeless, individuals with disabilities and reentry.

 Jessica received her Master of Public Administration from CSU Dominguez Hills, and her Bachelor of Arts in Criminology Law and Society from UC Irvine.

 Jessica.

 MS. KU KIM: Thank you, Larry for the introduction. And, thank you, Commissioner, for this opportunity.

 The LAEDC vision is a reimagined Los Angeles regional economy, growing, equitable, sustainable and resilient, that provides a healthy and a high standard living for all.

 In alignment with California’s regions Racing Together Initiative, LAEDC believes is that we must lever our region's productive advantages in order to grow both our industrial demand and supply side capacity.

 To this end, I have the privilege of leading LAEDC’s Workforce Development Initiative, which includes our Center for a Competitive Workforce Partnership with our region's 19 community colleges that exploit LAEDC’s research, industry cluster work, business assistance and intelligence, as the locus of our strategic programmatic public policy and transactional activities, to strengthen our region's talent development ecosystem to meet our changing labor market demands.

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 As we now know, the stakes are too high and the suffering too great to wait until mass worker dislocation occurs. And only then try to retrain, reabsorb and redeploy millions of workers affected by a pandemic, a global financial crisis, or by longer term capital labor substitution, such as automation.

 The COVD-19 pandemic and its secondary economic impact has leave bare how fundamentally inequitable our economy has truly become, and exposed how disconnected individuals are for really penetrating and accessing our education and workforce system as the frontline means for resolving this and any quality.

 No doubt our economy is bifurcated and becoming increasingly more so. It is an economy that separates those with the requisite education and skills to obtain and succeed in jobs that pay family-supporting wages with career ladders.

 From those who will either be relegated to a minimum wage jobs that have a high risk of becoming automated in the near term, or be forced to work in loss of sight, often contract structured and algorithm dictated jobs, just to make ends meet, but without the dignity, autonomy and opportunity that comes from productive work. We believe regional business and labor partnerships are essential to meet both the supply and demand sides of this economic transformation that embraces dignity resilience and equity, not as political punch lines, but as categorical socioeconomic imperatives.

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 California has developed deep, firm and worker concentrations and productive strengths, such as labor market polling, supplier specializations, R&D expertise, and knowledge spillovers in this fast emerging, innovation intensive industry.

 Home to nearly half of the nation's electric cars, 24-percent of the nation's charging stations, the most electric vehicle incentives in the U.S., and the nation's largest vehicle market, California has over 60 company headquarters related to the electric vehicle and charging industry and over 20 manufacturing sites.

 At every stage along the product service value chain, from idea to export, there different factors of production that are required, labor, space, capital, policy input. We need to develop those in-house, in-space inputs, so that firms from this industry will want to come here, remain here and expand here.

 Next slide.

 When we think about ZEV’s and economic recovery, we want to deploy more carrots rather than sticks, to avoid making it more onerous for businesses during a recession. We already have some of the most aggressive emission-reduction regulations and the nation, but this only ensures that we’ll be a consumer of clean, green technologies products, processes and services.

Instead, we want to ensure we're also a researcher, designer, creator, builder and exporter of them.

 We know that one of the best ways to build scale and, therefore, further efficiencies and productive advantages within this industry, is to build additional capacity within our own

consumer markets and open new markets. Let's continue to incentivize the Government, education and private consumer markets to purchase from the firms based here in California. As you know, having built-in demand is a powerful magnet for companies to launch, come and grow here.

 In this case, there's also, of course, an environmental justice component to growing this industry. Among the many benefits of expanding the use of ZEV’s, are the improvement linked to public health by reducing emissions, especially as those with the lowest income or 25-percent more likely to be exposed to particulate matter greater than 2.5 millimeters in diameter, than the state's most affluent households.

 Accordingly, one way accelerate these environmental justice benefits is to push for ZEV affordability by adjusting the rebates for low-income buyers, so that more these vehicles can be purchased by families living in these economically distressed community.

 In addition, we also want to grow the number of jobs associated with this industry. One of the best ways to do this is by exploiting our own skill, using our own local, County and State Government buying power and huge consumer base to ensure the jobs are located here.

 So, again, let's continue to push for Government-determined prophecies and incentives that provide local advantage, if not preference for firms here. This will also bring capital back into the region as these firms sell products and services outside of our region.

 L.A. County’s Sustainability pLAn and L.A. Mayor Eric Garcetti’s L.A.’s Green New Deal are two samples in our region that are supporting local jobs related to EV charging stations, infrastructure EV fleets and services and rebates.

 In terms of building supply side capacity within this industry, let's be sure to focus on both the middle school and high school workforce that is needed. At every stage along the product service development lifecycle associated with this industry, there are family-supporting jobs, from designers to skilled machinists to engineers to battery service technicians.

 A strategy in partnership with employers in the regions, towns, development systems is needed to ensure that we aren't waiting for Californians to be displaced and unemployed, only then to invest in their upscaling for the future, like our ZEV future.

 But as this economy continues to accelerate, from labor being the primary factor of production, an anchor of value creation, to where IP capital knowledge are the primary factors and anchors, we need to empower the current workforce.

 We need to adjust to this economic shift by accommodating these new innovation-intensive industries with competency crosswalks, from current occupations into future occupations, so that they are preparing for these opportunities now while employed. In addition, we need to map the occupational crosswalk to currently available training with the requisite resources and support for success.

 Particularly to L.A., we have the highest concentration of automotive design firms, and also great universities, foreign two-year colleges, with automotive design degrees that partner with these firms for internships and work-based learning opportunities. But in order to ensure diversity and equity for the high skills and, therefore, higher paying opportunities, we need to start younger, so that kids are excelling in the STEAM pathways required for work readiness and the cross-disciplinary work in ZEV related jobs.

 The glowing charging stations and intriguing design of ZEV’s have already brought the cool factor to students. Let's leverage this built in cool factor to excite students to pursue STEAM, ensure they have equitable access to STEAM pathways, and provide the resources needed for success.

 Thank you.

 MR. RILLERA: Great. Thank you, Jessica. Appreciate your time and perspective today.

 Our next panelist is Dr. Raquel Pinderhughes.

 Dr. Pinderhughes is a professor of Urban Studies and Planning at San Francisco State University, where she has been teaching classes on urban planning and environmental planning since 1991. An internationally recognized expert on sustainable development and environmental justice, her work focuses on improving quality of life for people and families living in low income communities.

 Much of her work has focused on providing individuals with barriers to employment with the knowledge and skills they need to benefit from an efforts to green cities in the face of neighborhood improvements that typically lead to gentrification and displacement.

 Dr. Pinderhughes conducted the first study on green-collar jobs for individuals with barriers to employment. She co-authored the first report on the greening of corrections, creating a sustainable system for the Federal Department of Corrections.

 The green job training program she developed informed the creation of former President Obama Administration's Pathways Out Of Poverty Program, and the development of hundreds of green job training and environmental literacy programs in the United States.

 She is the founder and Executive Director of Roots of Success, an innovative and empowering environmental literacy and work readiness program that is used in prisons, jails, job training programs, re-entry programs, schools, youth programs and other settings throughout the US. She is currently working on a paper focused on the degree to which California Assembly Bill 1839, previously known as the California Green New Deal, and now transformed into the California COVID-19 Recovery Deal, can benefit low-income populations in the San Francisco Bay Area.

 Dr. Pinderhughes, please.

 DR. PINDERHUGHES: Thank you. Thank you.

Thank you for including me in this important discussion. I’m already learning quite a lot.

 As Larry said, several years ago I conducted a landmark study in which I interviewed employers in 22 sectors of the green economy. I wanted to understand what qualifications they were looking for as they hired job applicants, and I wanted to understand what it would take for them to hire employees, or individuals I should say, that had multiple barriers to employment, including low levels of academic literacy and, potentially, criminal records.

 What employers consistently stated was that above everything else, they wanted applicants and employees who, one, understood the mission of their firms, and, two, had strong academic skills.

 Across the 22 sectors, employers were much less concerned about applicants having the hard skills. They stated that they could train most workers in the hard skills in a few weeks or a few months. And that actually many of them prefer to do so because they have their own protocols for how they want to get the work done in their firms.

 Employers in green sectors are looking for individuals who understand the field they're working in, who can talk with one another about the work, who can ask meaningful questions, who can respond to questions from clients when it's appropriate, and who contribute to the work over time.

 They emphasize that it was essential for workers to have strong academic skills across a wide range of skill sets. Basic math, reading, writing, of course, but also critical thinking and problem solving, including, and this is very important for people in entry level jobs, is to finding that employers want employees with strong academic skills, but as importantly, who understand the field in which they are working,

are critical for our conversation today. Because if we're going to meet the equity goal that we are concerned with in this hearing, we need to reach out to the youth and adults who've been failed by the education system, who don't have this knowledge, who don't have the skills, we heard what Tyrone was talking about, and we need to provide them with the knowledge and skills they need to access meaningful, dignified, well-paying jobs.

 So to effectively provide individuals that have been failed by the education system with this knowledge, with these skills to meet the needs that employers are requiring in the clean transportation sector, we have to have a pedagogical approach in teaching materials and a training that meets at least these six criteria.

 First, the pedagogical approach must immediately engage individuals who have been failed by the education system, who have not been successful in this area, and get them excited about life-long learning. And I emphasize lifelong learning.

 Second, the content has to be culturally competent and directly relevant to the lives of incoming from low-income -- adults and youth from low-income impacted communities. We have to front and center those experiences, which most programs do not.

 Third, the training has to be focused on educating people deeply and broadly to understand the complexities and the root causes that the problems of clean transportation address.

Not narrowly focused as almost all programs are, on a specific set of entry-level skills and on hard skills.

 Fourth, we have to prepare people for career pathways, not entry level jobs. The point here is that in the short term we're obviously preparing people for jobs that provide them with economic security. That's what they come to our programs seeking. But in the long term, we're investing in individuals who come from the most impacted communities, and we must prepare them not only for work, but also to engage in planning and colloquy discussions and decisions that address problems in the transportation sector and society more broadly.

 As I listen to this hearing and meet with you all, I think that the folks that were training today should be the people that are participating in conversations like this tomorrow. And that's the goal.

 But this -- to meet the equity goal, we need to train people for jobs in clean transportation in high schools and community colleges, but we also need to reach much deeper into the neighborhoods that Tyrone was talking about, and reach people who have not been successful in these educational settings, by working with job training and re-entry programs that serve youth and adults with multiple barriers to employment.

 And, six, from a very practical perspective, all of this has to be accomplished in a very short period of time because people want to get to work, and it has to be expensive -- inexpensive rather to implement, so that we can offer this training widely.

 This is why I created the Roots of Success Environmental Literacy and Work Readiness Program and course, which meets all these six criteria, and which, as Larry said, is taught in high schools, community colleges, job training and re-entry programs, jails and prisons across the country, to reach and prepare low-income youth and adults for good green jobs.

 Originally funded with ARRA dollars and now funded by programs themselves. We've had 25,000 graduates.

 I want to use this success as an example of what training programs need to do to meet the goals of giving people the skills that they have been deprived of by a failed educational system, and also the deep education they need to understand the clean transportation field. So I'm talking about educating the whole person. What does this look like? Well, Roots of Success strengthens academic and professional skills, it increases environmental literacy, which means people’s understanding of environmental problems and solutions and injustices. It inspires people to use what they are learning, not only to access green jobs, but also to improve conditions in their communities.

And it prepares individuals for 125 green jobs and career pathways in environmental and infrastructure sectors.

 The training includes 10 modules

focused on water, waste, transportation, energy building, health, food and agriculture, those are the green sectors which are interconnected, and also financial literacy, social entrepreneurship, civic engagement and leadership, so that people can take what they're learning on the job and use it to improve communities, and then, finally, application and practice.

 The transportation module prepares participants for 25 jobs in the clean transportation sector, including jobs specific to zero emission vehicles. Importantly, there are customized versions, in our case, 10 customized versions of the curriculum to meet the needs of different populations in different settings. Youth, obviously, are thinking about these issues differently than adults. People who are incarcerated or going to re-entry are thinking about them differently than folks who have not had that experience

 Typically Roots of Success is taught in the classroom setting, but we have an on-line version which is being used on computers, tablets and phones during COVID-19, when we have to have social distancing.

 My point is that to effectively address systemic structural inequality, and to do so in an enduring way, we need to go beyond training people in just the hard and soft skills, which is what most training programs do. We have to focus not only on critical thinking and problem solving, but also on providing people with an understanding of the transportation sector garages, of why clean transportation is vital. Of the problems stemming from a fossil-fuel-driven economy and society. Of the planning and policy paradigms and decisions that support on unsustainable development and infrastructures. They need to understand, for example, cost-benefit analysis, the precautionary principle.

 Doing so will greatly increase people's chances of being hired, it will increase their occupational mobility over time, so they're not stuck in entry level jobs, which most people are after these job training programs. It will increase their ability to be civically engaged, and to engage in policy and planning discussions and decisions that support clean transit, environmental justice and community wellbeing.

 As you move forward with this work, I hope you will see me and the Roots of Success Training Program as an important resource as you develop programs to prepare people for clean energy and clean transportation jobs.

 Thank you for this time today, and I look forward to talking with each of you more. Thank you.

 (Pause.)

 MR. RILLERA: Sorry about that.

 Thank you, Dr. Pinderhughes, and all of our panelists for those great introductory remarks and comments. Certainly, a lot to draw on for our remaining time together, but I would like to turn this over to Ben De Alba, if you have some comments or questions.

 MR. DE ALBA: Thanks, Larry. And I'll also invite Commissioner Douglas, if she has any questions as well.

 I'm going to be brief. I just have one follow-up -- actually two. And we heard this term, game changer. We heard it in our presentation this morning with Gurbax, and Tyrone as well.

 What are we talking about when we say a game changer and in the context of economic recovery here? And I'll invite all of the panelists to turn on their videos. There you go.

 With the -- in clean transportation program that we have here at the Energy Commission, you know, we have very, you know, finite resources. And what can we do to leverage those limited resources to do something like this, a game changer?

 And, Tyrone, you want to elaborate a little bit more? And this is for the whole panel.

 MR. WILLIAMS: From my perspective, what I see -- and we've heard so many great partners on the panel talk about their role and their components in really creating an environment that is a game changer. It involves operating out of silos, and I think that what we have to be able to do is to basically be able to write a new playbook.

 The way we've done things in the past can no longer be successful in the future. We have, you know, as Dorothy says, Toto, we are not in Kansas anymore. And we have to take an embrace that reality. And I think that a lot of the things that we talk about here, I think, one, the whole idea of starting in high school and a cultural relative presentation of opportunities that then lead to moving on to technical training at the community colleges or through sources is absolutely essential, and getting information and support from community individuals. It's one thing to be operating at a policy level. Well, I'm just going be honest. A lot of people at the policy level, and I'm at the policy level as well, have never operated at the neighborhood level. And so there's this gulf between what, you know, what you think at the policy level and what's happening at the neighborhood level.

 And I think being able to bring more people in the room where it happens to have the conversation, brings a balanced approach, and that's where the game changer are really begins to happen in my opinion.

 MS. HOSKINS: You know, I'd suggest is, you know, I heard -- it was really interesting for me to hear some of the different workforce ideas and the different resource for that. You know, from here -- here I am at Sunrun, and last year, I'd say in the wintertime, just before we hit COVID and last fall, there was a lot of demand for batteries due to the wildfire shut offs. And we had a shortage of installers. We had a very difficult time in the Bay Area finding employees who we could train, who we could give these excellent jobs for, to meet this demand.

 And it just seems that there's a disconnect between training resources, the Community Colleges, the -- you know, we were reaching out to different organizations. Obviously, we do things like LinkedIn, but I mean, the whole time. I thought that there are people in our State who need these jobs, you could do these jobs. These are great jobs.

 So, to me, that's something that the CEC and, you know, the great work at the Public Advisor’s Office, could help with, which is connecting, you know, and really getting information out to people. Because I think it might have been Tyrone who mentioned earlier that, you know, people aren't aware of a lot of this.

 I think a lot of people in the public aren't aware that solar batteries area’s available, so there's that side of it, but there's also the companies that are just trying to get out there and do their business. They don't have huge HR staffs that are able to go and find every training program and find every expert, so there's a connection role here that should not cost a lot of money, but could actually help leverage the resources and investments that are already being made.

 MS. KU KIM: And I couldn't agree with Anne more. I think that's the locus of the work that I'm leading LAEDC is that center for competitive workforce that was funded by our community colleges to do just that,

 The notion that someone like Anne would go to 19 different community colleges to find the source instead of connecting with Jannet. Or the notion that across 100 colleges and universities in our area, they're going to reach out to all of them, or 81 K through 12 school districts, I mean, it's just a lot for employers.

 So the better that we can work across the ecosystem, regionalize that engagement, so when an individual like myself will talk with Anne, we’ll talk about her work up and down the scale. Work with the board, work with adult education, work with our community colleges. I think it's essential that we're thinking through this infrastructure, because like Dr. Pinderhughes said, it’s lifelong learning.

 If the -- employers are looking to access talents up and down the continuum of education and leverage all the resources across the system, not just work in one siloed region.

 MS. KU KIM: And I just want to add to that. You know, Dr. Pinderhughes and I are, you know, we're both of the educational system, so we -- and Tyrone's in the community, you realize that especially in the disadvantaged communities, there's a lack of interest, understanding of zero -- or clean transportation, and what that actually can do for you. What the jobs mean for that, how that means of cleaning your environment, and lifelong learning and opportunities to excel, or, you know, have a better life for yourself.

 And I think, they -- everyone on the panel, it's amazing to hear everybody's stories and where they come from, and the opportunity that we have to work together. That even for myself and education, you're right, we realize even now it's important to get down to the middle school, you know, middle school. So that by the time they come in the high school they have an idea and that they know where to go. And those who are left behind, like Dr. Pinderhughes had talked about, it's important to get them young, and to see what we can do to kind of develop that. Because it is a game changer with COVID. Everything we ever thought about how we teach, how we do things, what the job looks like, everything has changed. So the opportunity to think about what that really means for us in the future, and especially during this economic recovery time, it’s the game changer, like you said, Ben, and what does that mean for us?

 DR. PINDERHUGHES: If I may. I didn't use the term game changer, so I can't speak to your actual question, but I will say this.

 The funding that the Obama Administration provided for green jobs training, particularly to reach deeply into the community for folks with multiple barriers to employment, was a game changer. It resulted in 10’s of thousands of people who were chronically unemployed, who come from the neighborhoods that Tyrone was talking about, in being trained in green jobs and now working full-time. And what was important there was the way in which we developed that initiative, which required the kind of deep and broad learning that I'm talking about.

 So if you take the opportunity to use the dollars that you have to develop really effective, enduring training programs, it doesn't have to be something new and different, you can do again what we have done before and do it well, but the kind of training that you develop is what is essential.

 I think part of the reason that Anne is not getting the information that she needs about where to find her installers is because we don't have enough really good training programs to prepare people for the entry-level jobs that Anne is talking about. So developing those training programs, funding them is really important.

 MR. WILLIAMS: And I think what we found is also, was the ability to market those programs and training opportunities. I think that's also a real challenge, because people respect reliable sources in the neighborhood.

 But if they don't know about those sources, then you can have a training program going on in your very city, and if the marketing and outreach to credible community groups and organizations helping you to share the message and the opportunity with a broader group of the neighborhood, it still could fall flat. And what we've seen is connecting with community based-organizations as partners in marketing, and communicate and supporting those individuals. Because if you're not used to go into a training program, that's an emotional challenge for some. And having that stability and support to not only sign up, but to graduate with a certificate documenting your ability to move forward is so important, and that takes a support group as well.

 MR. DE ALBA: Well, it's great. And I think this revealed another important factor that we need to be considering here is, you know, the great program that Dr. Pinderhughes is doing in San Francisco, how do we make sure that other folks around the State are benefiting from those really important and training programs?

 So thank you all. I appreciate --

 DR. PINDERHUGHES: It’s going on all over the country.

 MR. DE ALBA: Go ahead.

 DR. PINDERHUGHES: It's all over the country. There are training programs all over the country. They're already in place. You can tap into them very easily. I could give you a list tomorrow. We don't have to reinvent the wheel here. These programs are just waiting to be better funded.

 MR. DE ALBA: That's what we want to hear. So, please feel free to send that list. We'd be happy to take it.

 And I'm going to turn this over, unless Commissioner Douglas has any questions, I'm going to turn it back over to our moderator, Larry.

All right. It doesn't sound like she may.

 Larry?

 MR. RILLERA: Yes. Great. Thank you, Ben. And thank you, panelists, for your introductory remarks and your responses to Ben’s question. If Commissioner Douglas does not have any other questions, I will go ahead and jump into some questions and follow-up from your presentations, and then we'll also look at questions that come into this workshop as well. One of the things I want to go into is, folks that are in communities that are sort of outside this institutional flow, where they don't have access.

 And part of this, Tyrone, is your reflections on the community, Sacramento Promise and the Sacramento area.

 Jessica, you can talk a little bit about this, if you will, in the Los Angeles area.

 And one of the images I have with respect to these communities is, Jannet, with respect to Cerritos College and your OEM’s, your dealership partners, where the students ride their bikes from their neighborhoods to their apartments to college and then to their employer. I think if you can talk a little bit about this discussion in these communities, if you will, with respect to not just recovery, but the opportunity to put clean transportation in front of them as an opportunity for either job growth, retraining, or perhaps longer-term employment.

 MR. WILLIAMS: Well, I don't like being the first one to start, because we've got some great minds and some great things going on here. But I have to just say that our work with zero emission vehicles has really been transformative for some. Because, first of all, in communities of color very few people have zero emission vehicles. That's just being honest. You’re happy that you have a car that works, especially if the transportation system is really not up to par, and whether that’s an urban area, or even more, in rural communities here in the State.

 But what we found is when people get access to the use of a zero emission vehicle, get in it and find out you turn it on and it doesn't even make noise, is life changing. And if not only begins to change people's perceptions, but it changes people's perceptions about what's possible for them.

 And then you look at the opportunity to get engaged in building the charging stations and supporting the kinds of technologies that's being used. Being exposed or even seeing a charging station and not being intimidated by going up to it and looking at it and using it, is really transformational.

 And so that's what we are supporting. That's what we are looking at, opportunities to broaden that. But I just think exposure of the opportunity and exposure to the technology is many -- in many cases, is the first step to drawing people's interest into what's possible for them.

 MS. MALIG: Yeah. I’ll address, you know, like Tyrone I talked about, it is. I think for us in the community college system, we have 116 community colleges around the state. So if you think about that, we're in the most rural areas and we're in the most populated areas. And I think we have the ability, especially like for myself, where we have industry contacts, whether it be the dealership, whether it be the transits, whether it be the independents or, you know, OEM’s general who build their own zero emission. I think the ability to develop a group, or develop and go out there and communicate with them, like Tyrone talked about, that it’s really important. I think we could build that, and we could build them early on to have to have the knowledge about it, and be able to get the access to be able to do that.

 And what we found is in our communities is, students don't want to be far. They want to come to their local community college because it's close to their house, because they don't always have the transportation, whether they're taking, you know, a transit bus or they're riding their bikes.

 And I think, you know, it's interesting that you see them come in, and as they come in they want to stay within their communities. So when you can develop a workforce and businesses like we talked about, manufacturing or supporting it, it will build -- bring in that economic prosperity in there. And I think zero emission has the ability. Anne even talked about it. As we move towards zero emission, up comes battery storage, solar storage. You have it all kind of builds together.

 To be able to build a workforce around that will bring -- it doesn't matter where you're at, because I think as we kind of build and think about what that means for us in the future, we'll have the ability to bring economic prosperity. And for us, we especially look in those communities, because when we go to a high school that is, you know, in a disadvantaged community, Tyrone talked about it, most of them don't even know what a zero emission vehicle is. They don't even understand what solars look like. They come to school and they see a car plugged in and there’s a solar system back in there. To them, it's never even crossed your mind that there's an opportunity for them.

 So we want to be able to use our resources that we have and work with the partners that I have, to be able to build that, and build it early on. And I think Jessica will have a chance to talk about it. We looked at some of the different things that are happening, like in Los Angeles with this Measure M and metro, and trying to build that first mile-last mile. And I think building economic prosperity would be pretty good for us.

 So, I mean, I think we have we -- we have the capacity to do that. It's building the relationships and getting out there. So, Tyrone, you're right. And we'd love to work with you to see what we could do.

 And, Raquel -- I mean, that’s imperative for us, especially in these disadvantaged communities, to really look at what programs we can implement quickly and be able to build those jobs and put them in jobs right away.

 DR. PINDERHUGHES: Yeah. If I may, just very quickly. Of course I agree with everything that you have both said, but I wanted to add that it has been my experience in the workforce field with folks who come from low-income impacted communities, that one of the fastest ways to get people interested, and I’ve tried to emphasize this in my remarks, is to talk about the issues that directly impact their lives. Which are not immediately the transportation issues, but -- well, of course they're important, but not zero emission vehicles, but the health and environmental justices that people experience every single day.

 And so to start by engaging people in discussions about where they come from, about what the problems are that they're trying to address, you immediately get into issues of health, money and environmental injustices. People don't call them environmental injustices, but that's what they're talking about.

 And once you engage people in a conversation about where they're, where they're at and what they are concerned in -- about, you immediately can get to the some of the solutions to those problems, which then organically get you to talk about the kind of sustainable initiatives that renewable energy and clean transportation sectors deal with.

 And so I just want to make the point, that I think rather than trying to engage people in discussions about the solutions, which are the clean technology and clean energy sectors, you want to engage them in a conversation about the problems and the injustices. And then allow them to build on that, because that's where they're at. And once you do that, they engage very, very quickly.

 Tyrone, it takes people five minutes in a Roots of Success class to be talking to each other deeply about the things that they care about, to be learning from one another. And then very quickly, within a couple of hours, we're talking about the solution. And then organically, the jobs that emerge as you put those solutions into place. And so people have an understanding of the entire A-to-Z experience, rather than starting with clean tech or clean energy.

 So I just wanted to say that that's what I mean when I say that we want to meet people where they're at. Give them a broader understanding of the issues, of the problems with the fossil fuel based economy, and then have them understand that the jobs come from the solutions that address the problem. That's how you turn people on in an enduring way.

 MS. KU KIM: I would build on what Dr. Pinderhughes said, and think, also, then what is the pipeline? What is the talent that's required? And I think in most communities, it's unknown, right?

 So are you saying this exposure, I’m really excited about this industry, what's the job then? Where do I go access that? What is the current pathway to that? Is it a living wage? Is it a living career opportunity?

 And I think that's a big part of the puzzle that I -- when I'm talking to individuals, I sit both on the city and the county -- L.A. City and L.A. County Workforce Development Boards. When I'm talking with people that becomes a big issue. So what are the jobs particular to L.A. County? So as we're investing, we have a whole group so excited. They’re community-based organizations, workforce development boards, Americans Jobs on Earth, community colleges training for these pathways. Who are the employers that are engaged to keep it updated? This is an innovation-intense industry.

 The notion that we're going to create one training pathway, one curriculum, it's going to be static, is going to meet the needs of industry will set folks up for failure in my opinion.

 I think we need industry also at the table, so it's both supply and demand that's coming together. It has to happen in partnership, especially if technology is driving. We're also talking -- when we’re about ZEV’s, we’re also talking about the displacement of individuals. A a normal car right now on the road requires, what, 2,000 parts? ZEV’s require in some cases 20 parts.

 We're also talking about a change in our economy, a change in the labor pool. And so, I think that we also need to, yes, train folks for the jobs of the future and that kind of notion, but I think we also need the broader community buy in. We don't want our gas station workers to be displayed, we want them to be a part of the solution. We don't want diversity as an end thought, we want to think about it ahead of time, and all the different occupations, both at the high skill, the middle skill and the low skill that will be impacted.

 And so I think the communities as we're also getting them, it is that lifelong learning. This will be an industry that will continue to change and change and change, and equipping them with the support the understanding about this industry is essential. Because when I talk to employers, they're constantly talking about cross-disciplinary skills. How do I bring these, the welder with the electrician with the designer all to the same table to rethink, redo, as well as, I want people passionate about this industry.

 So we need to help them understand this emerging industry, and make sure that that information is continuously updated where there's equitable access to that information. It's not because I have that relationship with these group of employers that I have the best program, it should be in a way that the information that the CEC gets about an industry trend, a workforce trend, is quickly disseminated across our education and talent system, so that they can lever that to grow the interest, to grow -- work with their communities and bring it down to the level that we need it to be.

 So we're not like other industries that are now thinking of diversity to be as an initiative, because they lack the diversity in their workforce, but in this emerging industry we're starting it at the beginning.

 MR. RILLERA: Great. Thank you, Jessica. Anne, did you have any comments, and then we can shift to Dr. Pinderhughes.

 MS. HOSKINS: Not really. I mean, I'm really focusing a little bit on what Dr. Pinderhughes said, particularly about the fact that these programs -- we already know what to do, we just have to do it. And I think that's such an important point in this, as we're going towards, you know, trying to support now a new industry is -- you know, I feel the same way right now in terms of with the wildfires. You know we have batteries. We have the technology.

If the State wants, we could put resources in and we can expand access to so many more people who would have support now when the power goes out, you know, either for a short period or even a longer period.

 And so sometimes I think we get, you know, stuck in a cycle where we feel like we have to keep coming up with something new or doing something different. And that sort of, you know, one, it just creates a lot of -- you know, takes a lot of money, it takes a lot of time, and then you lose kind of the momentum of people just understanding what is out there.

 And I keep hearing good examples of these discussions about how difficult it is already to communicate the opportunities, particularly to people who are in the most disadvantaged situation. So I would just emphasize, like if we have good models, you know, let's think about how we can, you know, double down on those and really get moving on making them available.

 MR. RILLERA: Dr. Pinderhughes, please. You might be on mute. There we go.

 DR. PINDERHUGHES: I want to build up on

Jessica’s point. I think the most important thing that I would like the panel to understand from my perspective, is that it is a mistake, a very big mistake to think that we need to educate people who have been failed by the education system about any particular industry or sector.

 What we need to do is we need to educate people. Give them the fundamentals that we all take for granted on this panel. The academic skills, the understanding of the world, the understanding of the root causes of the problems and the injustices, the way in which problems need to be solved. The approaches that we need to use, the technologies that are available, the basic ideas. That's what every single one of us has on this panel.

 Anne could hire me to be an installer tomorrow, and I could learn that job in a couple of weeks. It is not difficult. And I could rise through the thought solar company within a couple of years, because I have the fundamental educational requirements. And that all of us have on this panel, and that is what people who we are talking about and caring about are deprived of, the ability to understand the world. So Jessica, I want to say that I disagree. We don't need training programs that change all the time, that are specific to different industries and different sectors.

 What we need is to give people the general understanding of the fundamental ways in which the world works, the science, the biology, the social science systems, the system understanding. And then we can put them into training programs that actually prepare them for jobs in different sectors.

 And we are the examples of that. Those of us in this room, we can do any job once we understand the basics of it. I don't mean any job, because I can't be a physicist. But I can certainly enter the entry-level jobs in the transportation and clean energy sectors tomorrow and work my way through, because I know how to think, because I have fantastic academic skills, because I understand the world, because I understand the problem, and I can apply them.

 So I really want us to understand that we need to develop training programs that give people what they have been deprived of by the failed education system. And then we can move them into different sectors of the economy based on what's available and what their interest is. And we already know how to do this.

 MR. RILLERA: Great.

 MS. HOSKINS: Sorry. I think every -- you know, that's really, that is really interesting, and I think you're right in the sense that, you know, first, because things change so frequently in these industries right now, what you really need to do is be able to have people with the capacity to be able to change. So you don't want to train just a set-specific skill that you can’t adapt.

 So, you know, one of the examples I gave when I opened up my comment is, when we have a net class, that metering rule time-of-use rates were required for solar, also our customers, but they've all come in at different times and for different utilities. So our training is constant for salespeople to make sure that they’re telling customers the right information about what their value is going to be, right. And so it's actually quite complicated, right, for people to understand. So it's not as though you would have any changes.

 So, I agree with you on that, but I think that -- I think there is something though, and, you know, Jessica was on to, which is that you still have this challenge though, for startup companies in particular, that they don't have the training resources, right. They don't -- they're not a utility. They don't get to put this all through to ratepayers. And so, there probably is something in there, a bridge in there, where, you know, if we know that EV installation is going to be a growing area, and you could first of all have training that gives you those fundamental, basic education, which is really sad that folks are not getting in our education system, but recognizing that gap. But then also having something that can provide a service to those startup companies of doing a basic training, of like, what is -- you know, how does -- you know, for the safety issues around, you know, EV.

 DR. PINDERHUGHES: Of course. Of course.

 MS. HOSKINS: There’s a lot of specifics that could probably be done centrally and help these companies that are getting started.

 DR. PINDERHUGHES: That's where the high schools, community college job training programs and re-entry programs come in. You basically pair this idea fundamentals with preparation for the labor market, and the community colleges have been very good at doing this.

 MR. RILLERA: Great. Thank you --

 MS. MALIG: And I think --

 MR. RILLERA: Go ahead, Jannet, please. One last comment.

 MS. MALIG: No. I think that's something to be said that Dr. Pinderhughes, you’re correct. I think when you go into communities you have to understand, what are the barriers to entry. There's so many of them. And being able to understand what that means, and then being -- then taking it to the next level of letting them know that there is opportunities, and opportunities happen to be in green transportation. It's a market that's growing, it's where we're going to, and California happens to be the forefront. And the Energy Commission is right there along with it, saying, hey, this is what it's going to look like.

 And, yes, there is fundamental skills that we all have to learn. And as we go, Jessica talked about it too, we know that what skill sets were entry level, you know, a year ago, now have become what we need people to know today because the industry's changed so much. And I think that's where it is important for us to have industry people, like Anne, who tell us, this is what's changing, and that we have the upward mobility. Or we have the ability to move people around to be able to have a better position for themselves, especially under COVID that we've seen. And retraining and reskilling people who are out there, who have the basic skills already but can transition over to a different sector and look at what those opportunities look like.

 MR. RILLERA: Great. Thank you, Jannet.

 I want to shift gears a little bit and go upstream to our manufacturing sector, if you will, this innovation manufacturing sector.

 Gurbax, you had alluded to this a little bit in your presentation, about the value and the role of manufacturing. To this discussion, of course, we're looking at the ZEV supply chain and manufacturing in California.

 Just real quickly, the Energy Commission through the Clean Transportation Program, has as a hallmark of that program, investments in ZEV manufacturing and infrastructure manufacturing. And that has been a staple, a source of consistent communication, investments and partnerships with these emerging technology companies in the local backyards.

 And so one of the areas that you had mentioned, in addition of manufacturing, was this notion of permitting. And Anne’s remarks included permitting, but could you speak a little bit about the ZEV sort of supply chain, the value, and maybe some of those areas that intersect with the local governments and their ability to kind of move projects and move planning responsibilities forward? I think this is an area of workforce that we have paid attention to in the State. We have, of course, divide -- developed guidebooks on planning and permitting, and so I think this sort of conversation and this workforce, in particular, would be helpful. Thank you.

 You might have to unmute yourself, Gurbax.

 MR. REYNOLDS: Gurbax, it looks like your phone is still muted.

 MS. SAHOTA: It is.

 MR. REYNOLDS: Okay.

 MS. SAHOTA: I was listening so intently to you guys. It’s so exciting to hear your thoughts on what's happening and the potential solutions.

 I would say as it relates to permitting at the local level, one thing we are seeing is fast tracking and the ability to move different projects forward, different programs for.

 And I think in particular in the ZEV space, I think, GO-Biz has really done a great job in laying out what would be a framework for helping getting some of the permitting through. What's difficult, obviously, is now where we were expecting folks to come into the counter and do their permitting, it has to be on-line. How do we do it virtually? We're seeing that we're seeing it quickly.

 And I don't have examples on the manufacturing side of how quickly that's changed, but I can absolutely say that we're seeing it on the project side. Obviously, when we're looking in the service sector as it relates to restaurants, retail businesses, how do you get them open quickly. But that is a place that local governments in particular are focused on, how do we move -- how do we make those processes more efficient? Because time is money, and they need the ability to be nimble now.

 So I think that's a broad understanding that we've heard consistently from City and County Government in particular.

 Larry, does that address your question? Is there something else you'd like me to talk about?

 MR. RILLERA: No, that's good. And I think, Anne, if you had any reactions to this. And then the other part of the question of course, is the role of this development in the maturation of this emerging ZEV manufacturing and production space. We have lots of participants and companies in our portfolio alone. We're almost 30 companies, if you will.

 So how at this time, can we help support, not just the setting them, but helping them achieve scale as well?

 MS. SAHOTA: So one of the things I think has become important across all sectors, and, Anne, you might be able to speak to this specific to yours. Is that understanding where your supplies are coming from, one. You know, are there potential challenges where you can't get those supplies, there's going to be an inventory issue.

 So understanding the entirety of that supply chain, the component parts, whether it's building a charging station, whether it's -- whether you're a manufacturer of large pieces of the vehicle itself, you know, what is the entirety of that supply chain? Where those pieces coming from, and not just where they are coming from, how are they being manufactured? Is it in an energy-efficient facility that further the goals that we value?

 Is it is it done in a way and transported in a way that's energy efficient? If we're saying that that ZEV, these vehicles are important to us, but they're being made out of state and then driven with big rig trucks into the State, is that energy efficient? Does that further goals?

 So it's not just, you know, where are we investing with what's already there, it's tracking that pipeline and seeing where are they coming, how are they be made, how did they get here? Is there a way to incentivize that here in California so we can create opportunities for Californians?

 MS. HOSKINS: Larry, can you just repeat what you asked me to comment on?

 MR. RILLERA: I think it was this intersection, Anne, that you had raised about how you want to bring some battery projects and others across the planning counter at the local agencies, and where that is right now, under COVID-19 conditions --

 MS. HOSKINS: Sure.

 MR. RILLERA: -- COVID-19, but perhaps some solutions you might offer as well.

 MS. HOSKINS: Right. So we've approached it in two ways. One, we have this project underway with the National Renewable Energy Lab.

And I think it could be really interesting for the EV industry to also follow-up with them. We were able to support DOE, Federal DOE funding, to basically create what we're calling Solar App. And it's a automated solar permitting process tool that will be available for free to any -- which we call aged days, right, the municipal permitting offices around the country.

 And so what they basically did is, you know, there's a lot of different requirements when you submit a project for approval, lots of different standards and codes that have to be met.

 And so we did a whole survey to find out what are all those codes and requirements, built them into -- and NREL did, built them into this tool, and so that when a solar company, you know, want -- is putting a project together, before they submit the permit, they basically do, check off all of the items. It was sort of a pre-approval of sorts. And then it's sent in automatically. There's no paper copies. You know it's done electronically.

 And so the goal is to, one, make it similar across these permitting agencies, so you're not facing different, you know, slightly different requirements in every municipality. But also have to take some of the burden off of municipalities, because then they know that if you've checked all of this off, that you've already gone through and made sure. And obviously, it's up to the installers to be

correct on that. But it gets checked up to the -- you know, it gets checked through some types of audits, you know, on the process.

 So the whole idea here is to automate. So the exciting news is that it's been developed. It's been beta tested, and we're right now for the next half of the year, we are out aggressively trying to recruit municipalities to participate, with a goal that starting in 2021, you know, we will have gone through this, you know, done our testing, and we can get this out to the thousands of municipalities around the country.

 So for purposes of, you know, ZEV’s, I would say, why not follow-up with that? I mean, we started with solar. Now we're working with NREL to add storage to that. And I think, you know, for municipalities, they would probably love, you know, once they get used to this, why wouldn't they want to do it when adding any requirements that you would need for a car charger in a battery, just like they're looking at requirements for batteries, you know, in a garage, I mean.

 So that's where we are. But during COVID, since we're not -- you know, we're sort of right in the middle of this. We have DOE support, we have NREL, but then COVID happened and everything shut down. So we just, you know, started reaching out to all these permitting offices and said, look, we need to keep these services going, especially because we have wildfires coming up. We want customers to be able to have their projects installed. And we had a pretty good response. You know, I mean, basically some then opened up and were willing to do e-mails some, you know, agreed to do sort of

automatic permitting with a check later. And, you know, it's not perfect. As I said, it's a lot better for solar only. We’re able to get through on a lot of HJ’s right now. Storage, not as much. And I think that's what you're going to find with EV’s as well, right, you know, the permitting offices, you know, don't understand. They're concerned, and this might be an important role for the CEC, you know, to help us.

 In fact, I think the CEC is supporting some of this work on the storage, so didn't want to slight you on that. I'm pretty sure that you're supporting that work that we're trying to do with the Solar App.

 But I, you know, I think it's, you know, when you look at any new technology and you figure you've got local government staff who already are probably overwhelmed with all the different project applications that come in, we want to make it as easy as possible, and we want to make it as uniform. And I think there is a role for the State, even though, you know, the State doesn't control permitting offices, you do have a voice, you have the expertise. You can lend credibility and say, hey, municipalities, this is actually really consistent with what we're trying to achieve in our clean energy goals. Let's work together, and maybe if there's extra money out there through stimulus funds, throw a little their way if they need some for their own setting up of systems, right, if they are -- if they're not, they don't have the right computer or software or something like that. But it's a huge opportunity for, you know, just to put some costs on it.

 You know, and we got this idea really from Germany and Australia, where the cost of installing solar is like 30-percent less. And it's because of what we call these “soft costs” that are identified, and it's because they have automatic permitting.

 So we've been trying to find a way, that you certainly want to ensure safety, you want to get the rules in, but you want to do it in a way that you're not like -- like almost like we talked about with the labor issues. You don't want to keep recreating the wheel. If we know that it can work in a certain way and we have the requirements, let's just automate that and make these projects cheaper and easier to put in place. Sorry I was so long, but --

 MS. KU KIM: Thank you, Anne.

 MS. HOSKINS: We’re kind of excited about solar --

 MS. KU KIM: No, I love what you said, Anne. I think, too, what you're saying, and we’ve done this before, is create standard policies and procedures that we can then, you know, present to municipalities to adopt.

 Or there's a best practice in terms of that, that's laid out for a city to evaluate because they need, but to see if we can get folks to adopt, so that businesses can navigate the permitting and that whole process in a more seamless fashion, so that we're getting more companies attracted here. But I think also to what Anne was saying is, in manufacturing we not only want to manufacture here, like we want to research it here, all that research, we want to here in California. We want it designed here. We wanted it built here, and we want to export from California. So, I think, to that extent, too, in the manufacturing process from EV’s, and to kind of mass replication and production, how do we ensure that that whole market is here in California and growing and thriving? So that when there is a new redesign, when there's a new marketing campaign, when there's something new, that these are California companies.

 And so to Dr. Pinderhughes’ point, like the understanding across the whole ecosystem. You know, just understanding this industry, where our economy is going, these things that are fundamental to success, I think it is important that we're not just looking at manufacturing as the job creator, but we're looking at the entire kind of product line.

 MR. RILLERA: Great. One of the other areas, Jessica, I would like to explore with the rest of panel, we've heard this in different parts of this conversation this morning, and that is, how the Energy Commission can get deeper into new partnerships, new conversations at the neighborhood level, and where you reside, those communities that perhaps were not able to participate today, to, one, introduce clean transportation literacy, the ZEV sort of space, if you will, put some context to that. And then, perhaps other parts of the communities that may already have an indoctrination into ZEV technology because the California Energy Commission, other state agencies, such as CARB, have deployed these technologies, and perhaps they can leverage what they see and they sort of move that forward.

 So this is kind of a partnership question, and kind of what's next for -- as suggestions to the Energy Commission, if you will.

 MS. KU KIM: I would like to see (indiscernible) go first. I’m happy to jump in, in terms of, definitely that type of partnership, getting down to the folks, creating content. You know, what I consistently hear from employers is, we want innovative curriculum, innovative ways to showcase competencies and things of that nature that aren't the traditional textbook courses that we’re used to.

 And so I think any resources that we can take and build upon and use and leverage across, but also then strengthening those grassroots consortium. There's a lot going on in each of these regions. And so it’s not building something new, identifying what are those consortia within each of these regions, and how to better strengthen those partnerships. So then all this new information, a new resource pops up, whatever it may be, is quickly disseminated across the region I think is critical.

 So I know in L.A. we have those, and there's a consortium of employers, educators, incubators, thinkers, that are easily -- that someone can easily come in and kind of plug and play, but we have to be more intentional about the diversity and the equity within this. Because, like many technological innovation industries, it's usually you're pulling top talent to get it off the ground. And so, oftentimes unfortunately, we don't see the diversity that we're looking for.

 And so I think we do need to, and any support that we can get from CEC to fund the bringing in of partners and the intentionality of going into these communities, I think would be extremely helpful. Because I know just even within L.A., if I were just to kind of look around and see what's going on, we need more diversity, we need more intentional outreach, more intentional infrastructure building, so that it sustains the funding. So any type of support to do that I think would be critical to the diversity component of this industry.

 MR. RILLERA: Anne, did you have a comment? MS. HOSKINS: No. No, I'm sorry, not really, although I would echo, you know, Jessica. I think that's a really important point that we didn't really talk to in this time here, which is, you know, what can we do, you know, in creating opportunities?

 And it's creating them both at these entry-level jobs, which is a lot of what we seem to be talking about initially, in that job training, but also in the leadership, you know, of these companies, and, you know, making sure that they use new industries that are being created, you know, are representative of all of the people that we want to belong, you know, want to be part and participating in electric vehicles and solar and batteries, because that really is a future of where we need to go, and I think it's important to have those viewpoints and the leadership, as well as through all levels of jobs in these companies.

 DR. PINDERHUGHES: I think we have a lot to learn from the American Resource and Recovery Act work, which was extremely effective and moving people from low income communities into the green economy and dignified, meaningful, well-paying jobs.

 In that instance what we did, and what I would recommend here, is we created a training program model. In this case it would focus on clean transportation and clean energy sectors, particularly. We provided -- we created an RFP through the ARRA funding for that training model. We required programs that receive that funding to implement that training model. And that training model included all of the components that a group of people, wise council, understood, where the necessary components of a training program to prepare people for jobs in clean tech and clean transportation and clean energy.

 Which, for success, I want to say, Jessica, is available. It is a curriculum. It's the only curriculum I know of in the green sector that prepares people from low-income communities and front and centers their experience for work in the green economy. So we do have curriculums and resources that are available and can be used.

 And then we need to roll that RFP out for highly -- that are reaching kids in low-income communities, in community college systems that Jannet is talking about, and then in existing job training programs and re-entry programs. We already have an infrastructure, into which to, into which to drop, if we will, a really good model for training with an RFP that provides people with funding.

 The reason that programs were not doing this as much as they need to, especially in the job training or reentry space, is because they don't have the funding.

 So again, just to summarize, we need to come up with a training -- I think, humbly, we need to come up with a training program that meets the needs of the clean transportation and clean energy sector jobs, including the flexibility that Anne is talking about. It gives people the deep understanding and academic skills as the fundamentals, and then gives them the specifics of the sector itself.

 And then we need to embed that training program, funded through the RFP, in the existing places and spaces where people are getting an education, which is the high schools in disadvantaged communities, the community college system, the job training programs and, potentially, the re-entry programs. And, again, with the success would be a great resource for part of that program. The program is multifaceted. It includes, you know, multiple sectors.

 And, by the way, everybody who goes to these kinds of training programs get OSHA certification. You know stacked certifications in training and safety. Roots of Success obviously has a certificate as well. And then specific certifications in clean transportation and clean energy. So the fundamentals are built into the training program, which has multiple components. And most of these programs, Larry, are about four months to a year in duration.

 MS. KU KIM: I would add, the RF funding is spot on. I think I was fortunate to work with the Utility Workers Union of America, and work with utility industry to not only bring new entrants from diverse communities, but specifically, I was co-located out of L.A. Trade Tech College.

 And to your point, Dr. Pinderhughes, it was embedding these skills into existing courses. So the electricians, and embedding solar into it and technology. Plumbing, embedding the green plumbing aspect to it, each facet, so forth and so on.

 Also in water distribution treatment and reclaimed water, but -- wastewater. But also it was, in addition to that, it was also the retraining about the meter readers that were being dislocated because of technology and the advancement. So it also focused on incumbent workers, and the need for them to skill and remain employed in our economy.

 So I think it's I think it's, I think it’s both. I think we have to think about the folks who are going to be displaced, which is a natural byproduct of technological innovation. We see it happens again and again. So we do want to focus on both our incumbent workers and we don't want dislocated workers. We want folks to continue to stay in place, but we also do need to think through how are we creating this new type of learning.

 To Dr. Pinderhughes, for you -- where we have these best practices that can be embedded, so that every student, every learner coming out is aware of this and has that built into their skill set and can translate that to social capital, which we know is really needed for the job market, and we're providing these opportunities.

 But employers also need to be a part of the solution. We need regional employers to be a part of this. To do those tours for kids who have no idea what your company looks like, has no idea what a shop floor looks like, has no idea what an office setting looks like, we need these -- and right now, virtual, it's even easier. A virtual tour. Someone from your staff that looks like the diversity that you're trying to recruit, that looks like the kids you're speaking to, that can speak their language, speak to them, get them excited about these opportunities.

 Work-based learning in this industry should abound. It’s always innovative, it's new. I mean, I'm fascinated by charging stations. They look cool as I'm driving along the road and I see the road light up, it looks different than a traditional gas station. I find it interesting. Kids are constantly being exposed to it, but we have to get them excited to pursue their education and their learning, but employers are key to being a part of the solution.

 MR. RILLERA: Great. Thank you, Jessica. I appreciate your comments. We have a couple of minutes left.

 Anne, if you wouldn’t mind, there's a question I think that's a little more appropriate to your space, if you will.

 And then with the next couple of minutes, I'd like to give each one of you a chance to provide some final remarks, and then we'll shift over into the public comment period.

 Would you like to start the Jannet? Thank you.

 MS. MALIG: Sure. You know, we realized that in this case, there's lots of opportunities for us. I think Jessica mentioned it, that we would like the OEM to play a role in promoting the technologies and using it in their communities. That way when we go out to the communities, the kids that are much younger, middle school, high school, are thinking about their careers. What does that really mean?

 Especially in disadvantaged communities, be able to know that there’s support, there's available programs, like Dr. Pinderhughes has talked about, about learning these lifelong skills that they need, so that they know that there's an opportunity to be able to do that. And that we at the community college level, you know, we can design. We have done that. We've done that with the OEM’s. We've been able to look at, at what does the job market look like and where do we think. And with all the work that the Energy Commission’s been doing, I think it's going to move us forward.

 Again, we’re the forward thinking State.

Everybody follows us in terms of what we do. We have the opportunity to be the good examples and to use like the relationships of everybody that's on this panel, to be innovative, be creative and think out of the box, and think about what that really means for us.

 And, you know, we look forward to the opportunity to work with people like Anne in private companies, and working with Jessica and everybody on this panel to say, hey, what can we do together? Let's look at the relationship that the Energy Commission has had, that we could continue to build on that and use those as resources for us.

 But I know at the community college level we are -- we really want to know and show that zero emission, that this is the future. There is great opportunities for us and there's great job mobility. Because we see that for our students, even at the high school level, they're getting jobs even before they've done graduating high school to move into a dealership. And they're getting picked up by people like Anne’s company, who become their technicians because they have the skill set.

 And, you know, that's what we're looking for and that's what we want California to be, especially in the areas, the rural areas where there are manufacturing company, but they don't always promote their company, and that they're tied to ZEV, and that we could show that, and that there's a future for that and there's upward mobility for us.

 MR. RILLERA: Great. Thank you, Jannet.

 MS. HOSKINS: Larry, did you want me to respond to that question or do it on-line?

 MR. RILLERA: Yes. Could you respond online, please.

 MS. HOSKINS: Sure.

 MR. RILLERA: Thank you, Anne.

 Tyrone, did you want to make a quick final remark?

 MR. WILLIAMS: Sure, very quick. Thank you for allowing me to be on the screen. This has been a phenomenal opportunity. I think the next 18 months are really going to be challenging for everyone. Until we are able to identify what the new normal may be, everything is going to be in a state of flux.

 I think all of the forces of the Energy Commission and the partners that will be connecting, to the degree that we can do things on-line and that we can communicate throughout the communities, through social media, are going to be absolutely essential.

 For those who are unemployed now and whose jobs have disappeared, I think all of the training programs at the community college level and through all the other sources should be advertised and promoted. We're going to need a whole retraining of a lot of people whose jobs will no longer exist. And we’ll be able to see zero emissions and energy as a new opportunity, and they're going to need that kind of support. So out -- the California Disadvantaged Community Advisory Group is a resource to the Energy Commission and to others who are looking to seek our input and our experience across this State, and we're happy to be a part of not only the conversation, but a part of the solution.

 So, thank you.

 MR. RILLERA: Anybody else with a very brief remarks before we shift to public comment?

 DR. PINDERHUGHES: I would just say that I really hope that I can continue working with each of you and with the panel more broadly. And that I hope Roots of Success will be used as an important resource. We have an online version for COVID, and I think it should be implemented. Thank you for this opportunity.

 MS. KU KIM: I would just quickly say for this innovation, technologically like intense industry, we’re focused both on the supply and demand. Let's not only focus on low wage,

low skilled jobs without career pathways, but really think through our middle school and high school occupations, and how do we either retrain, redeploy, reeducate, both for this industry and for success. And bring in the talent ecosystem, leverage our community colleges or universities, their research, our K through 12, for this type of partnership, in addition to all the community based organizations, the unions and other folks that are essential to growing this and having a strong, competitive workforce so our companies come, stay and grow here.

 MR. RILLERA: Great. Thank you, Jessica. I also want to thank all of our panelists for your participation today. Your thoughts are certainly helpful to the Energy Commission and to the State as we move forward under these conditions for clean transportation advancement and a zero-emissions world.

 Right now I’d encourage you to go ahead and set your -- go off video, set your microphones to mute, and we will shift to public comment. Thank you.

user avatar

 MS. RAITT: Thank you, Larry. This is Heather Raitt. Thank you, Larry, and thank you again to all the panelists. That was really a great discussion.

 So if -- for the attendees, if you would like to make a public comment, if you're on the Zoom on-line platform, go ahead and use that raise hand function, and that will let us know that you want to comment.

 And if you're on the phone, you can just press star nine, and that will let us know you'd like to comment. And so we have -- we’ll go ahead and get going.

 And RoseMary Avalos from the Public Advisor’s Office is here today to help us with those comments. Thanks so much, RoseMary.

 MS. AVALOS: You’re welcome. Thank you, Heather.

 Our first call-in attendee using the raised hand feature in Zoom, please state your name and affiliation, and also spell your first and last name. Also, do not use the speakerphone feature because we may not be able to hear you clearly.

 Okay. Chris Peeples, your line is open. And you may need to unmute. Okay, thank you. Go ahead.

 MR. PEEPLES: Thank you. My name is Chris Peeples, C-H-R-I-S, P-E-E-P-L-E-S. And I’m a member of the Board of Directors of the Alameda-Contra Costa Transit.

 I would like to ask a question about the possibilities for partnership for public agency training on green technology.

 AC Transit has set up as ZEV University, zero mission bus university, focusing primarily on hydrogen fuel cell electric buses, but also on battery electric buses. Our friends and partners down in Southern California, the Sunline Transit Agency, has set up a center of excellence together with -- I forget the name of the community college district, but it’s the community college district down there in Palm Springs.

 Both of us are training both our existing workforce, all 400 or so of our diesel mechanics have been trained, at least in the basics of hydrogen fuel cell buses, and are providing training for people from other agencies.

 The first folks who have really come into our training program is Urbana-Champaign all the way from Illinois, who are getting some new flyer hydrogen fuel cell articulated buses. But it would be interesting to hear both what the panel has to say about partnerships with public agencies, and also what the Energy Commission has to say about the possibility of partnerships in terms of funding those training programs. That's it. Thank you.

 MS. AVALOS: Thank you, Mr. Peeples.

 And I did provide a reminder to the audience that this is the period comment. Questions won’t be answered at this time. The Go Freedom gives you public comment.

 Williams Sobel, your line is open, and please spell your first and last name and if you affiliated with -- and your affiliation. Thank you.

 MR. ZOBEL: Good morning. William Zobel, W-I-L-L-I-A-M, last name, Zobel, Z, like zebra, O, B, like boy, E-L. I’m the Executive Director of the California Hydrogen Business Council. Appreciate the opportunity to comment today. I enjoyed the panel discussion. I thought it was it was enlightening. A lot of great ideas, and I hope to see many of those thoughts and ideas get put into practice.

 And I will say I was particularly moved by Mr. Williams’ comments regarding getting to know your neighborhood. I think that's exceptionally important when we're talking about transportation programs and where to direct transportation funding. In particular, and we've pointed out these comments in the past, but I'll reiterate them here because there's a pertinent. Is that a high percentage of the population in the very neighborhoods that we're talking about today, these disadvantaged and low-income neighborhoods, have renters versus homeowners. These folks don't have good access to garages. Many of them park on the street or park in carports that often aren't their own, may be shared, and access to battery electric vehicle charging can be very difficult, and as the panel described today, very expensive. Permitting processes can be very long, and it can be very difficult to put in hundreds of charging posts to serve a particular neighborhood.

 By contrast, I would raise the point that single hydrogen fueling station that really fuels hydrogen fuel cell electric cars, can service a broad swath of a neighborhood. And you can typically put these things at a refueling center that's available today, which minimizes permitting constraints and the installation of a single refueling center versus hundreds to service a particular neighborhood.

 Would have been great to have, I guess, the panel's thoughts on that relative to a lot of the discussion that took place today on electric vehicles, which seems to be what they wanted to talk about. But I think as we, as we explore, really what Mr. Williams pointed out, which was the nature of these neighborhoods and the way these people live their lives and how they live, that fuel cell electric vehicles are very good fit for them.

 So, thank you very much. Appreciate the opportunity to comment. Thank you.

 MS. AVALOS: Thank you, Mr. Zobel.

 Now we’ll move on to Stacey Reineccius. I’m sorry if I’m not pronouncing your name correctly. Your line is open. And please spell your first and last name and if you are affiliate -- your affiliation.

 MR. REINECCIUS: Certainly. Thank you. My name is Stacey Reineccius. I am founder and CEO of Powertree Services. Powertree Services specifically designs and manufacturers electric vehicle charging and control equipment and solar energy routing equipment for multi-family properties.

 So a couple of my comments in regards to this one is, that it's great to hear more discussion about multi-family, but multifamily being 42-percent or more of our population is -- has historically received an extraordinarily low penetration of actual deployments and support in either solar or electric vehicle charging.

 And electric vehicle charging is a great way to go for tenants because it saves them significant costs. And people tend to be at their homes, especially these days and for the likely future, much more than they are remote. And so the access to electric charging at these properties is essential.

 And there are ways to do this to save money for the drivers and to build equity for the property owners. And attention must be made, in my opinion, to educating and bringing property owners to an understanding of the benefits of providing charging access on a shared basis within their properties.

 It’s not -- you know, electric vehicles are the dominant vehicle format. They're starting to show up in the used market, which means that they're going to be much more likely to be adopted by people who are in middle and lower income. And we have an infrastructure and an ecosystem that can be leveraged to save the tenants money and to build equity for the buildings at the same time.

 And there's all sorts of benefits to that, especially given the current economic environment, as higher equity while lowering tenant expense can result in fewer properties being stressed or being challenged in their loan-to-value requirements. And it brings a level of interest and access to hundreds of billions of dollars of potential capital from property owners to help get this deployment done. Thank you.

 MS. AVALOS: Okay. Thank you.

 Our next commenter is David Park. And please state your name and affiliation, and spell your first and last name. Thank you.

 You may need to unmute on your end.

 MR. PARK: Thank you. Good morning, Commissioner Douglas, esteemed panelists. David Park with the California Fuel Cell Partnership. D-A-V-I-D, P-A-R-K. I am the industry liaison to our membership.

The California Fuel Cell Partnership of which CEC is a membership organization. We’re state agencies, federal agencies and then manufacturers of fuel cell electric vehicles and hydrogen, hydrogen manufacturing and hydrogen distribution companies.

 I just wanted to point out that fuel cell electric vehicles are an electric vehicle and they’re a ZEV option. I didn't hear this recognized by the panel. I might have missed it, but we would be delighted to provide resources and dialogue with the panel members. The sessions were incredibly interesting, and I think that they would find fuel cell electric vehicles really do fit where battery electric vehicles might not fit the needs of populations.

 As Mr. Zobel pointed out, in terms of high density housing, fuel cell electric vehicles can serve those populations were fueling is centralized and more like a gasoline experience, as opposed to a, perhaps a paucity of charging points for battery electric vehicles.

 Not to say that we don't support them. We do support battery electric vehicles. We think that the two technologies are extremely complimentary. But in order to tackle the issue of fossil fuels, it's important to meet all the needs of society.

 The technology is commercially available in here. The market opened up in 2015. We're seeing vehicles returning in this their second life as used vehicles. They're more affordable.

And it's, the market is on an upward trajectory. We're working on accelerating the market out of the linear growth phase and into exponential growth.

 And on the topic of economic stimulus, and Green New Deal and workforce development, we think this is a massive opportunity, given the worldwide pandemic, to train the workforce in new job skills that will, you know, that they can carry into their future and into future generations.

 As Mr. Peeples mentioned, Sunland Transit (sic) has their West Coast Center of Excellence. That's you're in Southern California. That's certainly a really good starting place just to see what is happening in this new technology space.

 We'd be happy to establish dialogue with any of the panelists. Jean Baronas of CEC is our liaison to CEC. And I thank you very much for this really informative session.

 MS. AVALOS: Thank you.

 Our next commenter is Tim Carmichael. And a reminder to state your name and affiliation, as well as spell your first and last name. Thank you.

 MR. CARMICHAEL: Thank you. This is Tim Carmichael with Sempra Energy Utilities.

And my name is T-I-M, C-A-R-M-I-C-H-A-E-L.

 Just a few brief comments for San Diego Gas and Electric on the importance of infrastructure. And a quick thank you to CEC for hosting this and for all the panelists comments.

 San Diego Gas and Electric thanks the Energy Commission for ongoing leadership in the zero emission vehicle market. The Energy Commission will have some significant decisions ahead with infrastructure policy. It will need to balance implications of increased load on the electricity system with cost effectiveness and economic recovery, as well as job creation.

 For example, 11 -- a Level 1 workplace charging system will likely be the cheapest and least grid-impacting infrastructure solution, while a DC Fast charging system will have the greatest economic and job creation impacts, but could also be a challenge for an already stressed electric grid.

 The State of California has made great strides in deploying zero emission vehicles due to incentives and due to Californians’ support for ZEV’s with their own pocketbooks. Unfortunately, infrastructure has lagged considerably behind. About half of the 1.5 million zero emission vehicles targeted for 2025 have already been purchased and deployed by Californians, but only about one-sixth of the 250,000 electric vehicle chargers needed by 2025 have been deployed.

 It is imperative to make a strong push now and in the near term to close that vehicle and infrastructure gap. It is important that the CEC develop a strategy for deploying infrastructure, so we aren't short electrons to power our zero emission vehicles.

 We are hopeful that the Public Utilities Commission will not micromanage deployment of ZEV infrastructure going forward. San Diego Gas and Electric looks forward to an opportunity to partner with the Energy Commission in deployment of the CALeVIP Program in San Diego County at the end of this year. We appreciate the Energy Commission's leadership here. Thank you.

 MS. AVALOS: Thank you.

 Our next public commenter to is Kristian Corby. And again, a reminder, state your name and affiliations, and spell your first and last name. Your line is open.

 MR. CORBY: Hello. My name is Kristian Corby. It’s K-R-I-S-T-I-A-N, C-O-R-B-Y. And I am the Deputy Executive Director of the California Electric Transportation Coalition and I just wanted to, I wanted to really thank the panelists and the Energy Commission today for putting together this panel. I've thought I heard the most constructive ideas for bringing low income and disadvantaged communities into the, just kind of the great opportunities that are going to be provided by our transition to electric transportation. So I really wanted to emphasize how important I thought this discussion was today.

 And I think the panelists really identified one of the big problems -- or the big problem, is that we need to be able to bridge the gap between the neighborhoods that need to see these opportunities, and the State agencies and policymakers that are making the decisions, and often time -- and have the funding.

 So I hope that some of the ideas that were shared today, including partnerships and training programs, can be made into concrete policies and programs that the CEC can help California meet its goals of electric transportation and bringing in disadvantaged communities to this, to this revolution. Thank you.

 MS. AVALOS: Thank you.

 And I'd like to give a reminder to the folks on the phone. that you can dial star nine to raise your hand. And are there any other commenters?

 Okay, seeing that there are no raised hands, I’ll go ahead and hand the meeting over to Ben De Alba.

 MR. DE ALBA: Great. Thank you for those comments. I'll make some final thoughts, but I will also give Commissioner Douglas, if she has any final thoughts as well, to give those now. If not -- okay.

 Hearing none, from the Dais, I just want to say thank you to everybody for joining us today. It's been a real informative conversation. I want to thank Tyrone, Jannet, Dr. Pinderhughes, Jessica and Gurbax, Larry and the entire Energy Commission team working behind the scenes to make this workshop happen.

 The Energy Commission’s Clean Transportation Program has a real opportunity to make a positive impact on economic recovery, and I think today's discussion has been so informative in helping us understand where to focus our investments to maximize the greatest benefit.

 The partnerships at the local level and regional level will be so vital for us to not only reach those in most need and to understand their needs, but to help us advance clean transportation in a fashion that creates jobs and graces equity across the State.

 So with all that, I want to thank again everybody for joining us today. The afternoon session has been canceled. We will not be having that. And that will bring our meeting to a close, and it’s adjourned. Thank you.

 (The workshop concluded at 12:32 p.m.)

**REPORTER’S CERTIFICATE**

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were reported by me, a certified electronic court reporter and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 6th day of October, 2020.



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  October 6, 2020

 MARTHA L. NELSON, CERT\*\*367