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BUSINESS MEETING
BEFORE THE
CALIFORNIA ENERGY COMMISSION

In the Matter of:)
) 21-IEPR-03
 2021 INTEGRATED ENERGY POLICY)
 REPORT UPDATE (2021 IEPR UPDATE)
 _____)

CALIFORNIA ENERGY COMMISSION

REMOTE ACCESS WORKSHOP: California's Evolving Economic and
Demographic Landscape

TUESDAY, FEBRUARY 2, 2021

1:00 P.M. Session 2 - Post COVID-19 Transportation Future
and California's Post COVID-19 Business Economy

Reported by:
Peter Petty

APPEARANCES

Commissioners

J. Andrew McAllister, 2021 IEPR Lead Commissioner
Patty Monahan, Commissioner
Karen Douglas, Commissioner

Staff

Heather Raitt, Assistant Executive Director, Policy
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Panelists - Panel 1

Giovanni Circella, UC Davis
Ellen Greenberg, California Department of Transportation
Austin Heyworth, Uber
Barbara Jacobson, CALSTART
Antoinette Meier, San Diego Assoc. of Governments
Mike Roeth, North American Counsel for Freight Efficiency

Panelists - Panel 2

Carol Zabin, UC Berkeley
Lance Hastings, California Manufacturers and Tech Assoc.
Bob Keefe, E2 (Environmental Entrepreneurs)
John Larrea, California League of Food Producers
Matt Peterson, LA's Clean Tech Incubator
Bob Raymer, California Building Industry Association

Public Comment

Steven Jimenez, American Lung Association
Robert Perry

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1 PROCEEDINGS

2 FEBRUARY 2, 2021

1:00 p.m.

3 MS. RAITT: Good afternoon, everybody. Welcome
4 to Session 2 of today's IEPR Commissioner Workshop on
5 California's Evolving Economic and Demographic Landscapes.

6 I'm Heather Raitt, the program manager for the
7 Integrated Energy Policy Report which we refer to as the
8 IEPR for short.

9 Today's workshop is being held remotely
10 consistent with the Executive Orders N-25-20 and N-29-20
11 and the recommendations from the California Department of
12 Public Health to encourage social distancing to slow the
13 spread of COVID-19.

14 This afternoon we have two panel discussions.
15 Our first will address the post-COVID-19 transportation
16 future, and the second and the last panel of the day will
17 concentrate on California's post-COVID-19 business economy.

18 For those in the audience who would like to
19 follow along, the workshop schedule, a copy of questions
20 that may be asked during each panel and biographies of the
21 panelists have been docketed and are available on the
22 Energy Commission's website.

23 Instructions for how to access that information
24 is on the meeting notice.

25 All IEPR workshops are recorded and both the

1 recording and a written transcript will be linked to the
2 Energy Commission's website in a few weeks.

3 Attendees have an opportunity to participate
4 today by asking questions or uploading questions submitted
5 by others through the Q and A feature on Zoom. You may
6 also make comments in the public comment period at the end
7 of the day or submit written comments and information for
8 how to do so is in the meeting notice, and written comments
9 are due on February 23rd.

10 With that, I'm pleased to turn the microphone
11 over to Commissioner Andrew McAllister. He's the lead
12 commissioner for the 2021 Integrated Energy Policy Report.
13 Thanks.

14 COMMISSIONER McALLISTER: Hey, Heather, thanks a
15 lot. This is Andrew McAllister here, and I want to just,
16 first of all, thank all of our panelists for this
17 afternoon. We had a great session this morning, very
18 interesting, looking at the econ demo kind of background,
19 and trying to get out the crystal ball and start to think
20 about trends, broadly speaking, and lots of interesting
21 stuff to chew on.

22 And transportation, which we're moving to now, is
23 obviously a huge part of our energy and climate picture
24 going forward, and we have an amazing team at the Energy
25 Commission doing transportation forecasting now, and that

5

1 work has just, I think, come matured very much over the
2 last few years, the last few IEPR cycles. So I'm really
3 excited for that team to really engage on these big issues
4 related to COVID, and our economy, and our settlement
5 patterns and all that that implies for transportation along
6 with technology development and all the many interlinking
7 topics that influence energy consumption in this realm.

8 So, I wanted to, again, just thank all of our
9 panelists. We're really looking forward to discussion. I
10 think perhaps, first, if Commissioner Douglas wants to make
11 some opening comments, I want to give her that chance
12 because I know she's going to have to be in and out here,
13 and out in a few minutes. And then also Commissioner
14 Monahan we have on who is the lead on transportation. So,
15 I want to invite either or both of them to give opening
16 comments. Thanks again.

17 MS. RAITT: Commissioner Douglas may not have
18 joined yet.

19 COMMISSIONER McALLISTER: Oh, okay. That's fine.
20 Oh, yeah, I didn't see her on the site here.

21 Okay, Commissioner Monahan, would you like to
22 step in? I know you have lots of deep knowledge on this
23 already, and I'm sure you're excited to engage.

24 COMMISSIONER MONAHAN: Well, I actually these
25 panelists, we have great panelists and so I would bow to

1 their expertise, and I'm really curious to hear what they
2 have to say.

3 You know, I think pre-COVID we had a sense of the
4 three revolutions really taking off, a lot more investment
5 happening in automation, electrification and mobility of
6 the service and the confluence of the three. And I'm
7 curious to just learn more about what the panelists are
8 thinking in post-COVID world what the future looks like.
9 I'm more in listening mode, my curiosity, and coming up
10 with a lot of answers here, so, looking forward to the
11 afternoon discussion.

12 COMMISSIONER McALLISTER: Great. So, Heather,
13 back to you and to Giovanni who is going to be a moderator.

14 MS. RAITT: Great. Thank you, Commissioners.
15 And just before I introduce our moderator, I'd just like to
16 remind moderator and panelists to please introduce
17 themselves. Say your name each time before you speak.
18 It's really helpful to those trying to follow along on the
19 phone.

20 And, so, I'm pleased to introduce Giovanni
21 Circella. He's the director of the Three Revolutions
22 Future Mobility Program and a Honda distinguished scholar
23 for new mobility studies at UC Davis.

24 His current research has focused on the impacts
25 and information and communication technology, shared

1 mobility, micro-mobility and vehicle automation, and the
2 evolving lifestyles and mobility patterns of various
3 population segments.

4 So, thank you, Giovanni. Go ahead.

5 MR. CIRCELLA: Thank you very much, and good
6 afternoon, Commissioners, and good afternoon everybody.
7 Thank you for having me here moderating this very
8 interesting afternoon session in which we will discuss a
9 topic, the impact of the COVID-19 pandemic on travel, which
10 certainly is very, very relevant for many important
11 questions that the Energy Commission is interested in like
12 energy consumption, but also environmental pollution
13 emissions and many other important planning processes that
14 are certainly very important in our society.

15 Already this morning we heard that during Session
16 1 there was a little bit of discussion on topics that
17 somehow touched on the transportation-related issues, and
18 so I think we will really dive into some of these topics
19 during this session today.

20 I'm very pleased to be joined by five great
21 experts in this session. So, the five speakers for today
22 will be Ellen Greenberg, who is the deputy director for
23 sustainability at Caltrans, Austin Heyworth, the senior
24 manager of public affairs in California for Uber, Barbara
25 Jacobson, the senior project manager of innovative mobility

1 at CALSTART, Antoinette Meier, the director of mobility
2 innovation at SANDAG, and Mike Roeth, the executive
3 director of the North American Counsel for Freight
4 Efficiency.

5 So, somehow it meets all experts from the public
6 sector, the nonprofit, the private sector, and really
7 bringing different perspectives to inform about how the
8 pandemic is really transforming our society and the impacts
9 on transportation and energy consumption.

10 With that I will really ask our panelists,
11 starting with Ellen Greenberg, to give brief introductory
12 remarks about how really the pandemic is transforming
13 transportation, in particular for your perspective in your
14 work and the priorities that you see we face.

15 At the beginning, I will remind all speakers to
16 please mention your name just for the sake of those
17 listening on the phone and for the record. Thank you.
18 Ellen.

19 MS. GREENBERG: Thank you, Giovanni. Ellen
20 Greenberg, deputy director for sustainability at CalTran.
21 That's the California Department of Transportation.

22 I want to thank the members of the commission and
23 commission staff for inviting us and getting this organized
24 today.

25 So, Giovanni asked us to speak very briefly about

1 our role and provide maybe some framing to the
2 conversation. So, I lead a small group in the director's
3 office at CalTran's headquarters. So, we concern ourselves
4 with sustainability issues as they relate to CalTran's
5 activities all around the state.

6 And some of the areas I am most keenly engaged in
7 are addressing the issue of the climate impacts of the
8 transportation sector, which is associated with about half
9 of the greenhouse gas emissions in the state, as well as
10 addressing the issues of resilience and adaptation relative
11 to climate impacts.

12 We have an increased focus on equity in the
13 department, and I suggest anyone interested in seeing what
14 we're doing go on to CalTran's website and look at our
15 recent equity statement. And the equity concern is bound
16 up in all of our sustainability work.

17 We have been really making a big shift from the
18 traditional CalTran's activity towards a focus on reducing
19 the amount of driving, reducing vehicle miles traveled and
20 supporting other means of travel and accessibility for
21 people all around the state, and that includes a big
22 emphasis on increasing active transportation.

23 So, all of those issues are bubbling up with the
24 pandemic. Personally, professionally I am a planner, so
25 I'm really interested in the connections to land use

1 change, and I'm thinking of this whole pandemic experience,
2 the phrase that I'm using is an "unwelcome natural
3 experiment," right. So, we have this natural experiment,
4 we have so much to learn. The glimmers of positive change
5 that we may be seeing, right, they're all connected to, you
6 know, really this set of larger calamities.

7 So, I think we have the real challenge of kind of
8 sorting out, are we seeing some positive opportunities?
9 How do we make the positive phenomena or opportunities
10 stick when we are past really the crisis that we're in?

11 So, just a few quick bullet points. One of the
12 things we've seen during COVID is an increase in speed, so,
13 among other things, we have safety concerns. We're seeing
14 changes in behavior. We'll talk about behavioral change,
15 changes in goods movement as well as passenger movement,
16 and I'll talk later about the whole big issue of how living
17 in an auto-dependent state and an auto-dependent society
18 influences what's happening during the pandemic.

19 So, let me stop there and there's some other
20 panelists.

21 MR. CIRCELLA: Thank you so much, Ellen, and
22 somehow you've touched already some of the topics that we
23 will discuss more in details in this panel.

24 Let's move to Austin. Austin, can you please
25 make your

1 MR. HEYWORTH: Sure. Can everybody hear me okay?

2 MR. CIRCELLA: Yes we can hear.

3 MR. HEYWORTH: Great. Good afternoon, everybody,
4 and thanks to the commissioners and staff for inviting Uber
5 to participate here. We're very eager to collaborate on
6 this issue.

7 To start off, the pandemic has brought in an
8 almost impossible to imagine amount of change for our
9 business. As one would expect with shelter orders in
10 California, our mobility business is down. At times it's
11 been down 80 to 90 percent, which is really remarkable.
12 It's also ushered in a pivot towards other businesses like
13 food, and merchants, and even, you know, pharmacy delivery
14 which has been a real learning experience in itself, and
15 it's really seeing this sort of hypothesis about how those
16 trends will interrelate as mobility rebounds.

17 It's not impossible to imagine that you could
18 save on vehicle miles traveled by having somebody deliver
19 you from the airport along with somebody's Thai food. You
20 know, it seems silly, but in a lot of ways that type of
21 proficiency is what our business is constantly iterating on
22 and getting towards.

23 I think the main theme I want to share and will
24 answer another question here is really the company, and not
25 just Uber, but I think others in our industry are pivoting

12

1 towards being more of a mobility aggregator. For those in
2 Sacramento, you saw, you know, shortly before COVID the
3 micro-mobility business, the jump bikes and scooters. It
4 was the healthiest market in the entire world, and it was
5 really exciting to see how that complemented our ride-
6 sharing business.

7 And we're also developing things like autonomous
8 vehicles, both of which we've divested from but are still
9 very much seeing those as part of our future business, but
10 not one which we need to control and operate necessarily,
11 but one in which we just need to kind of become the
12 integrator and consolidator for, for things like that
13 including transit, including delivery. Think of it as an
14 app that allows you to fly into a new city and get anywhere
15 you need to go and get anything delivered to you that you
16 might need, and do it in a way that, you know, advances,
17 you know, efficient use of vehicles and efficient use of
18 miles.

19 You know, one thing I try to encourage folks to
20 think of Uber as is it's really an experiment in creating
21 incentives that drive human behavior in the right
22 direction. I've driven for Uber. I'm also a new electric
23 vehicle owner, and so I've dabbled in this.

24 And it's really an interesting experiment in
25 trial and error where you learn, you know, new efficiencies

1 because an Uber driver knows that a -- you know, saving on
2 fuel means money in their pocket. And having a more
3 efficient route and optimizing your utilization, how often
4 someone is in your car, translates to your own economics.
5 And, so, it's sort of a hyperrational game of incentives
6 for both the rider and driver that, you know, we are
7 constantly trying to perfect and get better at.

8 And, you know, COVID has obviously made that very
9 challenging with things like, you know, pooling, which is
10 part of my alma mater UC Davis's and Professor Sperling's
11 push for the three R's. You know, Uber is really sort of
12 an embodiment of that concept. It's certainly not where it
13 needs to go, but it is -- it's trying to integrate, you
14 know, the idea of shared autonomous and electric.

15 But electrification is one area where we're
16 making serious investments. A couple years ago Senator
17 Nancy Skinner passed the piece of legislation SP-10-14,
18 which the Air Resources Board is now implementing, called
19 the Clean Mile Standard which is sort of the -- sort of
20 cutting-edge policy here which is really encouraging us to
21 use every tool in our toolbox to advance our sustainability
22 efforts. And that doesn't just come with electrification.
23 It also comes with, you know, the multi-mobile effort to
24 try to get people into transit, into micromobility, also
25 boost the utilization of vehicles, all of which, you know,

1 I think are very interesting tools that shouldn't be
2 discounted when you think about this. It's not just about
3 vehicle acquisition, but also something that there's a long
4 way to go on it, so it's about constantly optimizing
5 economics.

6 Some of the policies that I'd love to talk on,
7 too, that we think advances the narrative that still need,
8 you know, political backing and some wider adoption, even
9 in a place like California. Things like road pricing.
10 Road pricing or congestion pricing would really create an
11 environment in which the advancement of those efforts, that
12 optimization of those economics is given another layer of
13 incentives, right.

14 And, for example, if I open my Uber app and it
15 becomes very clear to me that not only is it the quickest,
16 but it's also the cheapest and most efficient way to get
17 from A to B is to take a transit ride. You know, having
18 the Uber app right in your face is exactly what we want to
19 be looking towards. And, so -- but that's not fully
20 operational in every place and, in fact, it's still in two
21 places, so there's one way to go on that front.

22 EV infrastructure and incentives that really push
23 towards utilization, right, not just, you know, how you use
24 in a consumer context, but, you know, how much can it be
25 used and how much can be shared with other people is

1 something that we can measure.

2 We have -- you know, one interesting thing we
3 haven't spoken a lot about is the technology available on
4 your cell phone today allows us to measure these things
5 with a level of precision that, you know, brings, you know,
6 policy that otherwise has a lot of gaps and implementation
7 to life in a way that's really exciting.

8 So, I will stop there.

9 MR. CIRCELLA: Thank you so much, Austin. Let's
10 move to Barbara, from your perspective, this pandemic and
11 all the big changes, and also I will remind the speakers to
12 please introduce yourself at the beginning when you speak
13 for the audience that is listening to us remotely.

14 MS. JACOBSON: Thanks, Giovanni. My name is
15 Barbara Jacobson. I'm senior project manager of innovative
16 mobility with CALSTART.

17 And I think one aspect of the pandemic that we've
18 all seen and are living is this shift towards remote
19 working, and really envisioning how we utilize
20 transportation during this time.

21 So, focusing in on the last mile piece is
22 something that I've been doing in my career up until now,
23 but it's really gained this acceleration, so thinking more
24 about bikes and scooters and their availability and how
25 they complement the pre-existing transportation network is

1 really essential.

2 And thinking, too, about the equity
3 considerations as transit gaps are becoming more prominent
4 due to a lack of funding and cutting bus lines, for
5 example. So, considering options like microtransit as a
6 supplemental gap filler for transportation modes in areas
7 that are predominantly lower income and hence be further
8 away from light bus and subway networks are things that I
9 focus on.

10 And then an emphasis on making sure that
11 communities have access to funding during this very
12 challenging time is really important.

13 So, a program that I manage is called the Clean
14 Mobility Options Voucher Pilot Program, and its focused on
15 providing capital for low-income communities throughout the
16 state of California to plan for and launch a variety of
17 different projects based on community transportation needs
18 assessments.

19 So, we're seeing this shift back to an equitable
20 inclusion of soliciting community feedback at the onset of
21 project design. So, I'll put that in as a pro of the
22 pandemic.

23 And we're seeing renewed emphasis on something
24 that's pretty interesting in my opinion, which is curb
25 space management and this notion of right sizing vehicles

1 for delivery. And I don't know about you, but I've become
2 like converted in getting my groceries delivered, and I
3 think that COVID accelerated these trends of getting
4 medical supplies and groceries delivered across a variety
5 of different ages and abilities. And that's a trend that
6 we're going to see continue throughout.

7 So, the real goal is how to ensure that these
8 things are done safely and more sustainably with the shift
9 to electric vehicles and then more creative solutions
10 focusing on human-powered vehicles like electric cargo E-
11 bikes, which a couple of years ago seemed kind of out
12 there, but now it's really taking off, and we're in this
13 very interesting period of creative ingenuity and,
14 unfortunately, we're here because of a global pandemic, but
15 recognizing that behaviors are changing and how can
16 transportation adapt to those changes are some of the areas
17 that I focus on.

18 MR. CIRCELLA: Perfect. Thank you so much.
19 We'll move to San Diego. Antoinette, if you want to
20 briefly give us your introductory remarks.

21 MS. MEIER: Thank you, Giovanni. Antoinette
22 Meier, director of mobility and innovation at the San Diego
23 Association of Government, or SANDAG, which is the
24 metropolitan planning organization and the regional
25 transportation planning agency for the San Diego region.

1 I'm thrilled that the commission is having this
2 panel today, and thinking seriously about the potential
3 long-term impacts of the pandemic on travel behavior.

4 At SANDAG I am responsible for planning for the
5 future of transportation, so, of course, I've been thinking
6 a lot lately about what we've learned and what we've
7 experienced during the pandemic that could actually lead to
8 a better transportation future.

9 Perhaps the silver lining in all of this is the
10 opportunity to recover in a much more sustainable way. So,
11 for example, while telework is certainly not going to solve
12 all of our transportation challenges, it is definitely part
13 of the solution moving forward and it's something that we
14 should promote.

15 More people than ever are walking and biking, and
16 this is something that's, you know, really wonderful, and
17 we want to last into the future, so we have an opportunity
18 to invest more in making biking a safe and comfortable
19 commute action for people.

20 We've also seen some really innovate partnerships
21 between TNC's and public agencies to provide more efficient
22 ways to move people and goods during the crisis. And,
23 ideally, we can help to facilitate these types of
24 partnerships moving forward.

25 So, I think we're at a really pivotal point.

1 Traffic is rising quickly. Car sales are going up, and as
2 more people are getting vaccinated and as communities start
3 to open, there will definitely be demand for mobility.

4 If we're strategic though, I think, and we act
5 now and we enact some of those policies that Austin was
6 talking about, we can ensure that we mitigate the risks of
7 returning to a transportation future with even more traffic
8 and emissions.

9 So, thank you very much. I'm looking forward to
10 digging into these topics with the panel today.

11 MR. CIRCELLA: Thank you so much. Last and not
12 least, Mike, you are an expert in freight, so that is
13 certainly a sector also that is getting a lot of impacts
14 curing the pandemic.

15 MR. ROETH: Yeah. Hello, everybody. Again, it
16 is nice to be here and good afternoon.

17 I lead the North American Counsel for Freight
18 Efficiency. My name is Mike Roeth, and I'm the executive
19 director, and we're 11 years old, and we do a lot of work
20 helping fleets be more efficient in their moving goods
21 around North America as well as moving the zero-emission
22 freight movement in that part of the transportation
23 network.

24 The pandemic has been really interesting for
25 trucking, and, you know, we studied small trucks and urban

1 delivery all the way up to class A heavy duty long haul,
2 and help the industry be better in those.

3 And as we look at what's occurred during the
4 pandemic, I mean the first thing that comes to mind is, you
5 know, truckers kind of liked it because all that car
6 traffic was off the freeway. And, you know, in particular
7 corridors where, you know, truckers they are limited in how
8 many hours they can drive a day, so when they're in
9 congestion around certain corridors, that's really
10 difficult. So, they did see, you know, a real improvement
11 there, and that was really important for certain sectors as
12 we went through the pandemic. I mean we're short of hand
13 sanitizer and toilet paper, and all those things where --
14 you know, trucking really became much more appreciated in
15 the -- you know, in our consciousness.

16 Oftentimes when we worked in trucking and asked
17 consumers, you know, what do they think of trucks, you
18 know, all they want to talk about is how they get in their
19 way, and they're big on the freeways and in the roads, and
20 they're really in our way and more of a problem than help.

21 And, you know it's part of the -- coming out of
22 the pandemic where the, you know, truck drivers, delivery
23 people were looked at is really valuable to our way of
24 life, and so, that was I think a really good thing that's
25 helped the trucking industry perform throughout the

1 pandemic.

2 You know, other parts of the trucking industry,
3 you know, were really, you know, challenged with shutdowns,
4 so manufacturing shutdown, other parts of the -- changed,
5 and we're very much challenged.

6 As I look at what the trucking industry is kind
7 of learning and the changes that are going on throughout,
8 you know, 2020 and as we look forward we see a, you know, a
9 hastening or an acceleration of some trends that were
10 already occurring, you know, E-commerce, but not just the,
11 you know, the intracity or the urban delivery is the final
12 mile, but also a lot of changes in what many call the
13 middle mile or regional haul movement of goods. And that's
14 like, you know, warehouses to warehouses, or the
15 fulfillment centers at the stores where we've seen a -- you
16 know, a reduction in sort of the classic long-haul
17 disparate routes, you know, truckers sleeping in truck
18 stops.

19 We're seeing a growth in that regional haul
20 dedicated. And dedicated is a really good word for what
21 we're seeing, you know, a change in freight movement. It's
22 becoming more predictable, more dedicated which, you know,
23 is a real help to electrification, for instance, because
24 now we're more confident that those trucks will be on the
25 route where we can charge them at the beginning, maybe do

22

1 an opportunity or a charge in the middle of the route,
2 maybe timed with the driver's rest period.

3 So, we're learning a lot, and there is a change
4 in freight, maybe not as much as some people think, and we
5 may get into that here with these questions, but it's
6 exciting to be part of it, and I'll share more as we move
7 forward, but, you know, freight is a big part of the
8 transportation piece, and, you know, trucking is the most
9 obvious one. Thank you.

10 MR. CIRCELLA: Thank you so much. That was a
11 great round of interactions and a lot of great topics, and
12 we will come back to a lot of this stuff in the rest of the
13 session today.

14 Clearly, the pandemic has brought big changes,
15 and these are also continuing to evolve as the pandemic is
16 still with us and we move from the first stage, the initial
17 stages of the pandemic to the various other adaptations
18 that we're seeing in society.

19 And as many sources of data have shown, there was
20 a big, big reduction when it comes to the transportation
21 sector in pretty much all type of all the trips.

22 In the first stage of the pandemic there was a
23 reduction in car travel as well as the use of transit, as
24 well as the use of all other modes of short-distance travel
25 and long-distance travel.

1 But if we look at the data, after that initial
2 stage of the pandemic in spring, 2020, we have seen that
3 substantially there was a big rebound in car travel. The
4 use of public transportation, share mobility, but also for
5 the long-distance travel, air travel, is still remaining
6 much lower, so it's still way below the prepandemic levels,
7 but somehow even if many of us are instead of commuting
8 from home and working remotely we see already that car
9 travel and the use of personal vehicles has already gone up
10 a lot, and in some cases really getting close to the levels
11 they were before the pandemic.

12 And a lot of big questions when it comes to try
13 to understand future demand for transportation and energy,
14 it's also what component of these changes will continue to
15 be in the longer-term impact of the pandemic on society
16 versus what are only be temporary changes that the pandemic
17 has brought during the peak now of the epidemic, but those
18 will largely go away after that.

19 And it's very important for planning processes
20 but also for assisting the work that many of you here are
21 actually. And many of us are doing research on this. At
22 UC Davis we have a large project that we are working on. I
23 invite you to check also the information on this project on
24 the post-COVID-19 mobility.UCDavis.edu. I will pass also
25 the link in the chat box. And I think this is a very

1 important topic to discuss today, what component of these
2 changes are more temporary in nature versus longer term
3 impact of the pandemic has brought for our society.

4 So, I will invite the commissioners to jump in
5 the conversation any time with their questions. But we
6 will start digging into some of these topics now. And I
7 would say already this morning there was some conversation
8 in Session 1 about telecommuting, and we know that
9 certainly telecommuting is a very, very important topic.

10 Telecommuting was not largely adopted before the
11 pandemic. About five percent of Californians were working
12 from home before the pandemic, and it's really seen a boom
13 during the pandemic with also big equity issues. Many of
14 us, I like to call ourselves the privileged because somehow
15 we are those that are not that affected by the pandemic.
16 We can work from home. We are lucky we still have a job,
17 but many others are considered essential workers or they
18 were impacted in their ability to work either reducing the
19 number of hours, or they were failing, the business
20 completely go out of business. And, so, those are, like
21 you know, much more dire situations, and we really also
22 need to focus on that.

23 But when it comes to transportation, even the
24 large shift to telecommuting is a big question mark for the
25 future. Most likely many of the people that are

1 telecommuting today will go back to work in person at some
2 point, but some might continue to do it the longer term,
3 and so probably the post-pandemic level might be somehow in
4 between the prepandemic level and what we see now.

5 And a big question is what does this mean for
6 transportation? Do we -- can we see in the future of
7 transportation what are the impacts on this, also based on
8 what we know from the past that telecommuters, even if they
9 commute less to work, sometimes they do more discretionary
10 trips, sometimes by car, home-based trips to go to the gym,
11 or to go to the grocery, do other activities instead of
12 commute in person to work.

13 And are the new telecommuters somehow different
14 from what we knew in the past about telecommuting, and what
15 are the implications of this on vehicle travel, but also
16 the use of other modes, including public transportation and
17 all other modes of transportation.

18 And maybe we could start with Ellen and your
19 perspective from cultures, but I would really like to
20 invite you to speak and also to rejoin the conversation
21 after that.

22 MS. GREENBERG: Thank you, Giovanni. I think you
23 touched on a number of the key points in the discussion on
24 telecommuting.

25 So, one thing I would suggest is that we think

1 about essentially digital substitution more broadly than
2 just the commute. So, really important to keep in mind,
3 commute trips are between 20 and 25 percent of total trips
4 in terms of trip purpose, and usually between 25 and 30
5 percent of total vehicle miles traveled.

6 So, when we're talking about, you know, really
7 looking for really substantial change in travel patterns
8 from the entire population, we're talking about more than
9 the work trip. And there were some really good comments
10 this morning about the retiree population, so, you know,
11 keep in mind we have entire households that are not
12 concerned about the work trip.

13 So, I also just want to note that there's a very
14 interesting and somewhat inconsistent set of research
15 findings on telecommute prepandemic. And the key thing
16 that I think there is agreement on is that when people
17 eliminate the drive commute they're not necessarily
18 eliminating all the miles traveled. So, some of the
19 research even points to an increase in household VOT with
20 telecommuting. Some really interesting and complicated
21 findings as travel behavior research often gives us and we
22 have to kind of tease out, the important pieces of that.

23 But, to me, one of the important pieces, again,
24 is back to the idea that, you know, Californians live in
25 places that were largely built for dependence on using cars

1 to get around. And I think the school trip is a really
2 interesting one. We all hope that we're going to see
3 school openings and return to school travel, so wouldn't we
4 love it if the students of the state, if their parents
5 aren't driving to work, if the students would leave their
6 house and walk, or cycle, or scooter to school. And, so,
7 to the extent we can enhance those opportunities at the
8 neighborhood level we're going to be decreasing driving,
9 we're going to be increasing physical activity, get some
10 real public health benefits out of that as well as
11 environmental climate benefits. So, the relationship
12 between trips across the household is really important to
13 consider.

14 I do want to -- just two other quick things. So,
15 one is that weighing in favor of a more significant
16 long-term switch to remote work is the investments that so
17 many organizations have now made during COVID in the
18 equipment and the platforms, right, that we need to sustain
19 remote work.

20 So, CalTran, I think a lot of people think about
21 this kind of, you know, dinosaur organization. We have
22 about 22,000 employees. About half of that is workforce
23 that work in the field that are among our essential
24 workers, among our emergency responders. But we have
25 purchased between 5,000 and 10,000 laptops since the

1 beginning of COVID. Now that people have that equipment,
2 now that we've made that investment if, you know, we are
3 able to sustain a much higher level of telework and we are
4 intending to do that. So, capital investment is a really
5 important piece of the puzzle for a lot of organizations.

6 And other thing I wanted to touch on, but now,
7 lucky for the next panelist, I have forgotten what it is.
8 So, on to the next.

9 MR. CIRCELLA: Thank you, Ellen, and I see
10 Antoinette ready to bring her perspective on this topic.

11 MS. MEIER: Thanks, Giovanni. This is definitely
12 something we've been conducting a lot of research on, and
13 thinking about.

14 I think there are a lot of misconceptions about
15 telework and its impact on transportation. Unfortunately,
16 it's become a bit of a distraction for some policymakers.

17 So, there's no doubt that telecommuting can
18 reduce peak period congestion. But the data that we've
19 collected in our region through our regional household
20 travel survey and data that's been collected at the
21 national level through the national household travel survey
22 suggests that teleworkers actually make much more
23 discretionary trips, about 11 percent more, and those trips
24 tend to be longer, about 16 percent longer, because when
25 you're not chaining trips together with your commute, and

1 perhaps you just want to get out of the house. I think
2 we're all feeling that right now in the pandemic, a little
3 bit couped up and wanting to get out more.

4 So, that impact on VMT and GHG from telework
5 might not be as great as some might think.

6 We also need to understand that the ability to
7 telework is really limited to specific types of jobs, and
8 those are typically higher wage information-based jobs.
9 So, for just about everyone that works in industries like
10 hospitality, which is a sector that employs a lot of people
11 in the San Diego region, food service, healthcare support,
12 these are not jobs that can be done at home, and a lot of
13 these are lower wage jobs, right.

14 We've done an analysis and determined that
15 there's about 39 percent of jobs in the San Diego region
16 that are considered teleworkable. This is slightly higher
17 than the national average at 34 percent, but there's a cap
18 on the amount of telework that can be done in the region.

19 Just because a job can be teleworked does not
20 mean an employer will allow it to be teleworked. We
21 surveyed employers last summer, about 150 of some of the
22 largest employers in our region, to understand how much
23 telework was occurring during the pandemic and perhaps what
24 their plans were for the future, and while more than half
25 of them had most of their workforce working remotely, they

1 did not expect that that was something that would continue
2 much in the future, about a quarter of the employers that
3 we spoke with, so that they would have a portion of their
4 workforce telecommuting in the future on a part-time basis.

5 So, we still need to be investing in
6 transportation because people are going to be traveling to
7 work in the future, at least on a part-time basis. And
8 it's an equity issue, as mentioned before. Those jobs that
9 can't be teleworked are lower wage jobs, folks that depend
10 on public transportation, so we need to ensure that we are
11 continuing to invest in public transportation for their
12 needs.

13 MR. CIRCELLA: Austin.

14 MR. HEYWORTH: Sure. This is jumping really
15 quickly here. I think from the perspective of private
16 industry here, in at least the services we enable in most
17 communities, I think it's important to realize that not
18 every California community is the same. Downtown San
19 Francisco is a mobility market, really where Uber was born.
20 It's a whole lot different from even a community like San
21 Diego or certainly the suburbs of San Diego.

22 And, you know, I think getting back to my point
23 about being a mobility aggregator and sort of what we're
24 able to enable, we're not just competing against taxi.
25 We're competing against people's or individual's otherwise

1 ability or desire to drive themselves, right. And I think
2 there's an element of remote work that is going to stay. I
3 think we're seeing, you know, certainly a desire at least
4 in a lot of our market research to travel for personal
5 reasons. All of us I'm sure want to get out of our homes
6 and go explore the world, but business travel may lag for
7 some time. And what that's enabled is two things.

8 One, it's allowed families to move into more
9 remote areas than they otherwise may have, right. I think
10 the desire to live in, you know, the housing bubble of San
11 Francisco has definitely been depleted a little bit by this
12 phenomenon. And the housing issues that the state is
13 facing, you know, no doubt led to some of the congestion
14 challenges that we have. And, so, that's led to sort of
15 contradictory themes here. As people are moving to the
16 suburbs or moving to, you know, Tahoe, for example, that
17 comes with sort of a natural reliance to own personal
18 vehicle, right.

19 So, a lot of the trends that, you know, we think
20 that our industry was helping in terms of making car-free
21 life styles more realistic in some ways can be enabled by
22 teleworking, but also by these other behavioral patterns
23 where families are choosing to relocate, it may set us
24 back, you know, significantly. And, so, it will be
25 interesting to see how that trends over time because

1 there's sort of I think counterbalancing in facts we're
2 seeing.

3 MR. CIRCELLA: Excellent points. And you somehow
4 touched on some of the points topics we were planning to
5 talk very soon in this panel, and so I would really like to
6 link this telecommuting topic also to public
7 transportation. So, you had mentioned how you're
8 increasing telecommuting might actually mean lower volume
9 of travel during the peak time, but also more discretionary
10 trips in other times of the day, and there might be also
11 some other longer-term impacts with people that decided to
12 relocate in some more suburban locations. All these might
13 actually seem to be a sign that public transportation might
14 continue to suffer.

15 Public transportation ridership right now is
16 very, very low, and public transportation is majorly better
17 suited to serve trips that go towards the central core of
18 the city usually, and they actually work better during the
19 peak time, and they are not very well suited usually to
20 serve trips that have been during other times, so that they
21 all for destinations that are outside of the central core
22 of the city or more central destinations.

23 So what should we expect in the near versus
24 median future in terms of the future of public
25 transportation, and this is also a question that many are

1 asking also because many agencies in California are really
2 promoting large investments to promote public
3 transportation, to also increase capacity, like in the Bay
4 Area, for example, the BART system and the public
5 transportation has been operating at capacity during some
6 of the peak hours before the pandemic.

7 And there's been now also some questioning about
8 like, you know, what demand will be in the future and how
9 we can support the public transportation, but eventually
10 also creating a way of modifying the service or integrating
11 the service.

12 What is your view on this, and maybe we'll start
13 with Ellen, but also we would like to hear the opinion of
14 Barbara and Austin in the new technology space?

15 MS. GREENBERG: Thank you, Giovanni, and thanks
16 for the comments.

17 So, first, I want to repeat something we heard in
18 this morning's session, which is to recognize that lots of
19 people are using transit, and those people are people who
20 don't own cars, you don't have enough cars in the household
21 to get everyone to work.

22 So, we want to recognize that while people with
23 choice, we've already talked about, you know, the bias
24 towards information sector jobs being jobs that people can
25 do remotely. You know, people riding transit, yes, we have

1 seen a very drastic drop.

2 So, in terms of, you know, what's the future of
3 public transit, which was part of the question that we
4 looked at in advance, you know, to Austin's point of about
5 not every place is different, you know, in our core, in our
6 downtown cores in the state, and I think San Francisco
7 financial district is probably the prime example. If we
8 see a resurgence of downtown employment, those places
9 require transit. The only way we can deliver that
10 workforce to that kind of physical environment is with
11 rail, the capacity of rail is what enables our densest
12 employment locations nationally, internationally.

13 So, we have the future of transit intimately
14 linked with the future of our densest and high value real
15 estate, commercial real estate. So, it's really important
16 to keep that in mind.

17 The other thing, back to the point about peaking
18 that Antoinette was mentioning, the peak period is the most
19 expensive to serve. It's the most expensive for transit to
20 serve. It's the most expensive to provide roadway
21 capacity.

22 So, if we have a leveling off of peak demand,
23 that BART may become a lot more pleasant to ride. The
24 labor costs that are associated with peaking may be
25 moderated somewhat. So, there are some scenarios where

1 there could be some benefit, and I think that, you know,
2 there's much to be seen.

3 I definitely want to point out that
4 internationally there are transit services that have seen a
5 much greater recovery, a much more substantial recovery
6 without health impacts having been demonstrated even during
7 COVID because there are, you know, many particularly the
8 larger cities internationally where people are simply
9 dependent on transit and don't have the option of not
10 using it.

11 So, I think there's a lot of opportunity. I do
12 think it's going to be a rough road. I'm hoping we're
13 going to see a lot of support for transit recovery from the
14 Federal government. I think we will. And I'll be
15 interested in hearing the perspectives of others.

16 MR. CIRCELLA: Barbara, your job really works
17 with innovating mobility. So, how can we see this new
18 public transportation, and what do you think the
19 perspective can be?

20 MS. JACOBSON: Yeah. Thanks, Giovanni. So,
21 Barbara Jacobson with CALSTART. I tend to think about bus
22 rapid transit being part of the recovery effort for public
23 transportation in general. Making the bus more
24 approachable and building in that reliability that people
25 associate with rails could be a really viable opportunity

1 now with a post-COVID world.

2 And then, thinking about how public
3 transportation will need to be more adaptable to meet
4 people's more customized times of day needs, so be it early
5 morning commutes for people working in cafes, or for the
6 night owl service for people working in restaurants. I see
7 the micro-transit sector in a public/private partnership
8 model really being a key component to help unlock some of
9 the gaps that public transportation will need to solve for,
10 and then the pieces pertaining to active and human power
11 transportation with bike share and micro-mobility as
12 service options playing an integral role.

13 But with a lot of these innovations there's the
14 technology front, and then there's the infrastructure
15 piece, and the redistribution of roadway space for these
16 types of modes is something that I'm optimistic that we'll
17 see those changing demands being designed in the
18 streetscapes of cities throughout the country and here in
19 California with curbside pickup zones, and then like the
20 parklets for outdoor dining.

21 So, thinking about how the curb can be leveraged
22 with public transit as an economic generator is an
23 opportunity for enhancement down the line.

24 MR. CIRCELLA: I see Commissioner McAllister.

25 COMMISSIONER McALLISTER: Yeah, Giovanni, thank

1 you very much. This is a super interesting discussion,
2 and, you know, I overlap somewhat with this, but not
3 entirely, and you guys, so bear with me if I'm a little bit
4 off base here with my question.

5 In terms of planning, transportation planning, as
6 a practice, you know, whether it's sort of the regional --
7 we had SANDAG on in the morning, you know, the metropolitan
8 planning organization and transportation planning
9 organizations across the state. Do they have all the tools
10 that they need? I mean, you know, access to data. You
11 know, what challenges are really out there and kind of not
12 fully addressed that policy could help sort of find
13 solutions for support?

14 So, it's a general question, but as choice -- as
15 marketplaces go in lots of different directions and this
16 choice increases, and, you know, we want to go and support
17 our public transit and also, you know, embrace new
18 technology, wondering sort of how blind you think you are
19 as planners or not and how we can help.

20 MS. MEIER: I'm happy to address that question,
21 Giovanni. That's a really good question, and, you know,
22 data is critical to understanding the problem that we're
23 trying to solve, right.

24 So, we just developed a vision for our 2021
25 regional plan that was very data driven. We started from

1 scratch. We didn't assume that any of the projects in
2 previous regional plans were the right projects, and we
3 looked at data on how people need to and want to move
4 around the region, to identify what those critical
5 connections are that need to be made.

6 And the data availability is a huge challenge.
7 You know, there's some data that we collect. Penn State is
8 available, for instance. There's census data, LEHD data
9 that's available, but we can also acquire data through
10 private sources, but this is expensive for public agencies.

11 Survey data is another, you know, great tool for
12 collecting data during these regional household travel
13 surveys, but again, expensive.

14 Data collected from cell phones is another source
15 that we're using, but again, really expensive.

16 So, yes, if there is a way that we can pool our
17 resources across the state to start to acquire some of the
18 data that we need to make sure that we're planning for
19 transportation in the right way.

20 I don't want to throw my friend Austin under the
21 bus, but there's been a lot of challenges with getting TNC
22 data, and that's really important. So, we had to spend a
23 lot of money collecting data that Giovanni has been
24 analyzing for my team on TNC travel behavior in the region
25 to know where should we be making investments for perhaps

1 pickup and drop off zones and things of that nature.

2 So, yes, there's a lot of opportunity to improve
3 access to data so that we're developing the best possible
4 solutions in our plans for transportation moving forward.

5 MR. CIRCELLA: Ellen --

6 MS. GREENBERG: Giovanni, can I jump in?

7 MR. CIRCELLA: Sure.

8 MS. GREENBERG: Okay. Ellen Greenberg, deputy
9 director for Sustainability at CalTran.

10 So, appreciate all the comments Antoinette made.
11 I think that I absolutely agree with all the data needs,
12 but I think we also need to recognize the unprecedented
13 nature of what's happening now, and that's one of the
14 reasons why it's so interesting to us.

15 That's one reason it's interesting. The other is
16 that we want to do the best we can in helping people meet
17 their needs during the crisis and going forward.

18 So, we have various tools around, scenario
19 planning and testing and modeling tools, and I think that
20 we are going to be challenged to figure out how actually to
21 test out various ideas and keep part of that challenge.
22 It's another theme that was touched on this morning.

23 We don't know when we will be in recovery in
24 terms of, you know, any kind of steady or steadyish state
25 of a return to mobility or a new level of mobility behavior

1 post-pandemic.

2 So, one thing I'll note is that during the
3 pandemic there's been more kind of mini-phases of
4 transportation response than we might have expected. So,
5 in April we were at about 40 percent decline in VMT, now
6 we're at about 10 percent. So, we've had these, you know,
7 mini-phases.

8 Our recovery will probably also have mini-phases,
9 so the data need is going to be ongoing, and I think we are
10 going to need to really challenge ourselves in terms of
11 looking at solutions and changes to our system.

12 So, do we have all our tools? I don't think we
13 have all our tools, but we have a lot of really good
14 people, so that's going to --

15 MR. HEYWORTH: Just to jump in and address what
16 Antoinette had mentioned is we agree. I think data is
17 eventually -- is the answer to this and already is. We use
18 a tool called Uber movement which we've iterated on and
19 tried to build out which allows the sharing of aggregated
20 data to provide those kinds of insights. It's like any
21 data set, still needs to improve. It needs to kind of grow
22 in real time.

23 I also think COVID in the mobility market is
24 effectively almost freezing, preventing a new opportunity
25 to cut through this tension that had been growing. Uber

1 and Lyft collectively, including taxi, is still about one-
2 and-a-half percent of VMT in California, so I do think it's
3 not super wise at this point to, you know, shared rides as
4 sort of the answer to this when really it's all vehicles
5 going back to the sort of concept I started with, which we
6 are competing against people's ability to drive themselves.

7 And I think the truth of it is there's actually a
8 codependency here with transit that's actually quite good,
9 which is if you're going to -- like I do. I leave
10 Sacramento and go to San Francisco, or at least I used to
11 when the world was in a healthier state. It would be great
12 to press one button and have everything timed up, so an
13 Uber drops me off at Caltrain, and an Uber is going to pick
14 me up very efficiently when it gets there, right. That's a
15 better version of the world where that efficiency becomes
16 very, very attractive to people.

17 One way to bring that up on board is not to sound
18 too self-serving here, but is integrated of transit onto,
19 you know, apps like ours. And it doesn't need to be only
20 apps like ours. You know, there's other competing, you
21 know, applications that do this kind of integration, but
22 putting mobile payment and trip planning, or journey
23 planning as we call it, onto an app like ours kind of
24 naturally solves the solution. It appeals to the
25 behavioral sort of incentives of people. It also would

1 naturally share data by us quite literally pushing our
2 demand towards transit in a way that is, I think, you know,
3 mutually beneficial.

4 So, there are places like Denver where this is
5 working quite well. California is a very complicated
6 transit landscape. We've really invested in that. We're
7 the whole team of folks trying to get this right, but to
8 answer the commissioner's question, a little bit of nudge
9 from policymakers can help, I think, bring that, you know,
10 accelerate things, particularly with this sort of once in a
11 lifetime opportunity that -- I don't want to sound so
12 optimistic, but the disruption of the mobility market that
13 COVID has brought.

14 MS. JACOBSON: This is Barbara. I'd like to
15 address the commissioner's question also. So, soliciting
16 feedback from target community members and stakeholders is
17 an important component as well as the clean data pieces.

18 And then, also, putting into practice access to
19 like safety measures and protocols, because we're going to
20 be in this period of PPE, mask wearing, even bringing your
21 own handles onto transit. So, making sure that there is
22 the funding available for the operations, the increased
23 costs and operations from a public safety perspective, and
24 regaining the trust from the public through outreach, and
25 marketing, and educational campaign I think is an important

1 way to get people back onto transit that may have strayed,
2 and then building that reliability and trust that transit
3 will still serve them.

4 COMMISSIONER McALLISTER: I have one other
5 question. I don't know if anybody else wanted to tackle
6 that last one, but those were very -- thank you very much
7 for your answers.

8 I guess, so just thinking in terms of equity and
9 maybe building on that integration, Austin's point on
10 integration across, you know, platforms, TNCs and transit.
11 And then the equity lens that I'm thinking of is, one, you
12 know, people without a car, and then number two, elderly
13 people.

14 You know, we have an aging population. We have a
15 lot of communities that are retirement oriented. And as
16 people, for whatever reason, don't, or shouldn't, or can't
17 drive, you know, how can we sort of tackle several
18 conundrums, you know, with coherent policy? I think there
19 are a lot of potential to help people get where they need
20 to go so that elderly people don't have to just stick in
21 their homes all the time, and, you know, there's a broad
22 societal sort of public health benefit to getting out and
23 about, but in a way that's accessible to actual people,
24 given their constraints.

25 And so I guess I kind of came in thinking about

1 the elderly, but I think there are other populations that
2 we could be focusing on with concerted policy that can help
3 us with some of our, you know, recovery as we head out of
4 the COVID period.

5 Anyway, just thoughts on that. It's not really a
6 question, but maybe just a commentary. Love your
7 perspective on --

8 MS. GREENBERG: Ellen Greenberg, CalTrans. The
9 one thing that comes to mind is this very much cross
10 sectoral, as we were saying earlier. So, the issue of
11 whether healthcare is going to continue post-COVID to be
12 available to people in remote mode and insurance companies,
13 you know, continuing to reimburse providers for that kind
14 of care. You know, thinking about, you know, all of the
15 different access needs I think is important.

16 I don't know that we've mentioned broadband,
17 CalTran does have a role in broadband, so that's really
18 important, you know, getting broadband to all areas of the
19 state. There have been some great innovative efforts in
20 cooperation with the transit operators, some of who have
21 used their buses to provide neighborhood wireless, wireless
22 access. Great example there, collaboration across
23 agencies.

24 I want to say also, earlier in our lives when we
25 were taught in conversations, you know, back in time when

1 we started becoming aware of the opportunities for digital
2 connectivity, I mean, we used to hear sometimes, you know,
3 the fast trip is a trip not made. I think now we have a
4 greater sensitivity to the risk of social isolation and the
5 benefits. You know, to me, the best trip is a walking
6 trip.

7 So, you know, back again to the idea of the
8 benefits of walk, bike, micro-mobility and transit, because
9 transit is almost always linked with some level of physical
10 activity that is greater than a drive trip.

11 So, I think that active transportation
12 opportunities at all scale is key. The broadband
13 accessibility is key, and an economy that supports, you
14 know, appropriate digital substitution. So, you know, that
15 relates to education opportunities, not to the degree that
16 we're using them now remotely, and certainly to healthcare
17 as well as to work opportunities.

18 MR. HEYWORTH: I'll just throw in two bullet
19 points. One is I think understanding where there's
20 unserved demand. Since I've been with Uber and work with
21 some public transportation agencies there's lots of well-
22 intentioned programs that just sort of miss the mark about
23 how demand is evolving, and that's the kind of data types
24 that we can actually share, right.

25 Understand and start first with where there is

1 seniors that have a mobility need that's not being served
2 for whatever reason, or folks in a rural community and then
3 work backwards from there. I've seen that work well.

4 And then, secondly, I think what we refer to as
5 right sizing is I think an interesting concept where at a
6 time when, you know, San Diego, for example, it's going to
7 be tough to justify the investment of completely rebounding
8 fixed route bus lines while there is still struggling
9 demand. But there's still lots of areas in the state
10 where, you know, having your neighbor drive you to the
11 airport or drive you to an event is still going to be, you
12 know, much, much more efficient for the time being.

13 And I'm not just schilling for Uber. I think
14 there's a lot of ways to utilize under-utilized vehicles
15 that may be part of the public transit fleet, right, and
16 just connecting that to demand in a way that is a little
17 bit more flexible, a little bit more adaptive than, you
18 know, trying to go all the way back to the time of fixed
19 route public transit that, you know, we have during sort of
20 normal times.

21 MS. JACOBSON: This is Barbara. I have a couple
22 of points as well. So, addressing the question about
23 senior populations, may also be beneficial to include
24 immune compromised people as well in that bucket.

25 Leveraging paratransit as a more sustainable

1 option with lower price points could help supplement this.

2 And then thinking about how a lot of businesses
3 like pharmacies and grocery stores have a dedicated hour
4 earlier in the day for senior people to shop. Partnering
5 with that, private enterprise could be beneficial so that
6 way it's done safely and gets people to where they need to
7 go in a more sustainable way.

8 It doesn't address the active components, which
9 Ellen touched upon, which is really important from a public
10 health perspective. But I think we're going to start
11 seeing the notions of like more walkable communities, and I
12 just wanted to throw out that there's opportunities for
13 some synergies with private businesses on this front.

14 MR. CIRCELLA: I would like to chime in.
15 Antoinette, I see you're ready to comment on this topic,
16 but I also want to mention something. We talk about
17 public/private partnerships, we talk about promoting
18 alternatives to use of cars. But also, it's evident that
19 despite these efforts to try to promote public
20 transportation alternatives to the use of cars and so on,
21 there is a risk from everything that has been said so far
22 that will be increased car dependence in the next stages
23 during the pandemic and also in the post-pandemic.

24 And, so, maybe Antoinette, I see you were ready
25 to answer this question. Maybe we can join the question

1 also to are these interventions to try to support public
2 transportation, to integrate it through technology with
3 other modes, to give access also to those that do -- are
4 not able to drive, or do not have a car, or they have a
5 physical disability that -- an impairment that prohibits
6 them from driving. Are all these interventions, will this
7 be somehow enough to counterbalance the potential
8 increasing car dependence on society, or should we abate
9 our forecast and really get ready for a period of several
10 years perhaps of increased car demand and increased car
11 dependence in our society?

12 MS. MEIER: I think that depends a lot on what
13 planners do in the near term.

14 So, one quick data plan I want to share with you,
15 Giovanni. We did a travel survey in the summer, and we
16 collected data from about thirty-eight hundred households
17 on how they were traveling during the pandemic and what
18 their expectations were post-pandemic. And what we learned
19 about transit was actually incredibly interesting and very
20 optimistic.

21 So, about 42 percent of the people surveyed said
22 that they took transit before and that they would continue
23 to take transit in the future.

24 But what we weren't expecting was about 18
25 percent of survey respondents did not take transit before

1 and said that they would take transit after there was a
2 vaccine. Only four percent of people who took transit
3 before said that they wouldn't take transit.

4 So, I think, you know, that this fear that we
5 think people have about sharing the ride and taking transit
6 might not be as profound, and as more people get
7 vaccinated, they're more likely to take transit.

8 But the problem is is that if transit is not
9 convenient, if it's not fast, if it's not frequent, if it
10 doesn't connect people to where they need to go, we're
11 never going to attract the ridership that we need to to
12 reduce VMT and GHG.

13 We also need to do a better job for the transit
14 dependent. In our region only seven percent of low-income
15 people are within close access to fast and frequent
16 transit. That's tragic, you know. We need to do a better
17 job.

18 Our transit dependent population doesn't have
19 access to a vehicle. They rely on public transportation.
20 They really can't afford services like Uber without some
21 kind of a subsidy or help from the public sector, and
22 that's an opportunity, I think, to address, you know,
23 mobility for that population.

24 But we need to do better to attract new riders,
25 but we also owe it to our residents who depend on transit

1 today and will in the future to make it better.

2 MR. HEYWORTH: I'll just throw in very quickly,
3 too, something I failed to mention in my first comment, is
4 safety has taken on a whole new meaning, obviously, in this
5 world. You know, we've done some market research where it
6 is significant that, you know, sharing the back seat of a
7 car with a stranger was something that was, you know,
8 unequivocally good for our business and something we were
9 trying to encourage every way possible. But there's just
10 going to be that, I think, lingering feeling even beyond,
11 you know the immunization effort for folks that are going to
12 be a little bit reluctant to do that, or to get into mass
13 transit, and that's something that we're going to have to
14 really work towards because, you know, I think people
15 feeling safe had already a significant meaning in,
16 obviously, how someone got in a car with a stranger. But
17 now it is something that, you know, I think is going to
18 have an influence for years after this unfortunate
19 pandemic.

20 MR. CIRCELLA: I don't know if the commissioners
21 have more questions.

22 COMMISSIONER McALLISTER: I wanted to pass -- I
23 saw that Commissioner Monahan was on and I wanted to pass
24 the baton to her if she has some questions to ask. I think
25 she just rejoined after a little while off.

1 MR. CIRCELLA: Okay. She might have, you know, a
2 conflict with the other meeting she mentioned, so maybe as
3 soon as she's back we can give her the -- perfect.

4 COMMISSIONER McALLISTER: Great. If you want to
5 go ahead, I'm good with my questions, so thanks a lot,
6 everyone.

7 MR. CIRCELLA: Perfect. Thank you so much. I
8 would like to touch another type of technology. We talk a
9 lot about telecommuting, about technology for the on-demand
10 passenger, ride industry with the ride hailing and Uber and
11 Lyft. We talked a little bit about micro-mobility, but the
12 other big sector that has been growing a lot is, of course,
13 E-shopping. And E-shopping has seen a big acceleration of
14 a pre-existing trend that was already like, you know,
15 growth in the voluminous sales on line that was happening
16 already before the pandemic. But during the pandemic there
17 was both an increase in the total volume, but also process
18 of democratization of shopping, if you want to say, survey
19 data, for example, that our team at UC Davis have been
20 collecting has shown that the population of uses of
21 shopping is somehow expanded also among those that were not
22 traditional E-shoppers, including elderly population,
23 nonurban residents and so on, even if there is still equity
24 gap with especially the low-income individuals that tend to
25 be less likely to buy on line.

1 But my question now is less on the demand side
2 and less on the user side, but more on the supply side and
3 the logistics side. And, Mike, you are an expert in the
4 freight sector, so certainly like, you know, the sharp
5 increase in shopping has brought to -- has brought a change
6 in the way we move goods around, also with a big increase
7 with the need for delivery services, fast delivery of
8 parcels at home, and this certainly is changing. The
9 industry with a need for more delivery balance, but also
10 medium, heavy duty trucks and so on.

11 How do you see this sector and what do you
12 expect, like you know, this -- the near future to be? Are
13 we going to see sustained trends in the growth of this
14 sector that will continue also in the future? And also
15 what are the implications for these for emissions and for
16 energy consumption for the sector? Also, when it comes to
17 the type of vehicles which are used there is a push to try
18 to move to zero emission vehicles, alternative vehicles,
19 and less polluting vehicles. Is this accelerating that
20 trend or might actually slow down that transition?

21 MR. ROETH: Boy, a lot of questions. I wish I
22 had written each one of them down, Giovanni, but let me
23 give it a shot, and if I ignore one, please call me out.

24 So, I think what we're seeing with E-commerce is
25 an acceleration of the trend. So, when we work with, you

1 know, the players in E-commerce, both, you know, large
2 companies as well as some of the others like Austin was
3 talking about, you know, we hear that we expected this sort
4 of increase, that we expected it over two, three, four
5 years, and so, it's hitting faster. So, you know, they may
6 not have been as prepared. We had hiccups at Christmas
7 with deliveries that didn't get there and a lot of, you
8 know, packages not making on time. So, I think we've --
9 but overall, you know, it's delivered pretty well.

10 So, the demand was up, and the systems that these
11 companies were putting in place to handle that demand years
12 down the road, you know, they were stretched hard, and, you
13 know, for the most part performed pretty well.

14 There are some outstanding questions, that, you
15 know, you and others study more than we do around will this
16 stick. I do think once, you know, vaccinations and we're
17 more safely considering shopping, that we will return some
18 of that shopping to, you know, in person delivery at home.
19 But, clearly, you know, a lot of people who didn't use
20 Ecommerce before and now are seeing how convenient it is,
21 and if it keeps them from -- you know, is time saving and
22 other things, I mean I do think we definitely have a step
23 change that's going forward.

24 Part of that trends that was occurring anyway is
25 in this middle mile or any bigger trucks, so the medium and

1 heavy and more of the tractor movement. We already saw
2 with a lot of technologies around, you know, GPS, you know,
3 things like the freight, and the driver, and the tractor
4 and the trailer, we know where all that is, and that's
5 helping to, like I mentioned in my opening, more organize
6 the freight, more dedicated routes, and that's helpful.

7 We see empty back hauls, you know, which is just
8 a measure of empty miles, the trucks traveling around have
9 decreased, you know, every year for 10 years. So, there
10 has been some efficiency and load matching, and, you know,
11 just more freight per truck, which is a very difficult
12 thing to study and to understand. But we do think that's
13 trended, and, you know, continues.

14 So, the last point, in your last question around
15 what kinds of trucks, and particularly zero emission trucks
16 and all fuel trucks, what's their, you know, their sort of
17 future going forward. You know, first of all I want to say
18 that, you know, with the pandemic came a lot of business
19 struggles, right, a lot of recessionary struggles. And,
20 so, you know, all of the manufacturers of trucks and
21 battery packs, and, you know, engines and all that that we
22 do a lot of work with, all of their product development
23 programs were quickly under study for budget cuts. And,
24 you know, which of those product development programs and
25 delivery programs needed engineers to fly around and be in

1 different places and locations.

2 I'm really pleased at the electrification of
3 transportation, particularly trucking, has done so well in
4 2020 and has not seen a fallback because of budget
5 constraints or that kind of things. You know, there's a
6 few deployments that are slowed down, but more importantly
7 is this more dedicated freight. You know, if it's more
8 dedicated the charging infrastructure will be more
9 confident in where we put these electric trucks and the
10 charging infrastructure. You know, we're starting to see
11 what some call urban ports or these locations where we do
12 much more mode switches.

13 So, you know, where the big truck maybe come to
14 the outside of the city, the freight is, you know, docked
15 or trans-docked from a big truck to a little truck, a truck
16 that's much more convenient and conducive to the congestion
17 of a city, and, you know, more oftentimes can be zero
18 emission with an electric truck in shorter miles where it's
19 inside the city.

20 So, a lot of good things, really most of which
21 were already happening prepandemic, so you might question
22 whether, you know, these are things that are coming out of
23 the pandemic or not, but definitely some comments there.

24 MR. HEYWARD: I'll just jump in quickly here.
25 One thing, it's been fascinating to look at the data within

1 my company. We run a side of our business which is called
2 Uber Freight which is exactly like Uber for them to find an
3 owner/operator. At its best it boosts utilization the same
4 way it does with the passenger vehicle. If an independent
5 operator is dragging almonds from the central valley to
6 Chicago, they're able to find a load that's going to take
7 them back so they're not deadheading and putting, you know,
8 empty VMT on the roads, and that's great.

9 Secondly, it's not a surprise that the pandemic
10 has been good for Amazon and not so good for brick-and-
11 mortar retail. And that's definitely, I think, going to
12 have a lingering effect where it's just harder to run, you
13 know, big investments in retail when, you know, it's a lot
14 more efficient to ship in your goods of all consumer types
15 from outside the city. But the delivery space within the
16 gig economy is helping merchants stay afloat by making it
17 more competitive, right.

18 If Amazon can get something on your door in a
19 day-and-a-half, you know, the retailer on your street can
20 drop it on your door in two hours if you have sort of
21 delivery from inside of the city. But also can have, you
22 know, negative effects on VMT if that's not done
23 efficiently, and so, I think there is, you know, frankly
24 some attention that isn't sort of appropriate in how
25 efficiently are these systems working. If we can bundle

1 two people on the way to the airport, we should be able to
2 bundle two deliveries in a way that reduces VMT in the same
3 way.

4 And, so, that is something our company is already
5 putting a lot of thought into, but, you know, like all
6 things, there's a right way and a wrong way to have this
7 done, and this has definitely accelerated the growth in
8 that space.

9 MR. CIRCELLA: Thank you, both of you, and Mike,
10 I'll say that you really pointed to one important point,
11 which is that increased volume seems to bring more
12 efficiency also because of the economies of scale and the
13 network effect can work more efficiently also for the
14 delivery of these goods.

15 And it seems like, you know, that E-shopping
16 probably will remain like, you know, it's a more permanent
17 change in society. Sure, maybe people will shop a little
18 bit more in the shops again, but also somebody that started
19 to do E-shopping during the pandemic might like to have it
20 and continue to do it so after the pandemic.

21 But there is another type of service that I would
22 like your opinion about, which is more like, you know,
23 deliver your meals and that type of delivery that has
24 really boomed during the pandemic, also substitution for
25 traditional trips to restaurants, for example. And that is

1 something that is becoming today very, very important. I
2 think, Austin, for your company it is actually becoming a
3 very, very important line of business.

4 But also, a lot of the studies that we are doing
5 at UC Davis, Antoinette, I will be interested to see your
6 data in San Diego, show that in many cases are the same
7 customers that now are buying with Uber Eats or they're
8 getting this delivery of meals are also those that are not
9 going to the restaurants any more, and that probably is not
10 a permanent trend, so most likely when these customers
11 return to restaurants there will be a drop in these
12 services.

13 Do you agree with the assessment, or do you see
14 these as a more permanent transition that society will
15 maintain over longer term?

16 I guess it's mainly for Austin, the questions
17 from the company perspective about the longer-term vision
18 for the delivery of meals and these nonpassenger services.

19 MR. HEYWORTH: Yeah. We expect it to grow. I
20 mean you may have seen this morning that we acquired a
21 company that primarily focuses on alcohol delivery. You
22 know, we are certainly going to invest in that. We think
23 it also is not sort of a standalone effort, right. As I
24 mentioned I think in my introduction, if you consolidate
25 these things and integrate these things, there's an

1 opportunity to capture efficiencies you may not consider,
2 right.

3 I think a futuristic view of Uber, Lyft and
4 companies like ours, it is an electric vehicle picking
5 somebody up from the airport and having a drone drop a hot
6 meal on top the vehicle because it's being dropped off to
7 your neighbor, right. That requires a whole lot of real
8 time logistics work, but it is -- is definitely an exciting
9 tool in terms of the way cities can plan around being more
10 livable, right. It's taking meals off the road by really,
11 really just hypercharging the utilization of these more
12 efficient vehicles.

13 I haven't spoken much about the -- sort of our
14 perspective on electrification, but it's really just that.
15 It's that there's a lot of evidence, a lot of it coming out
16 of UC Davis that, you know, a zero-emission vehicle on ride
17 sharing platform can have magnitudes more impact on
18 sustainability just because of the level of utilization,
19 right. Unlike a second vehicle in a family's vacation home
20 that's sitting still, these are driven in an almost
21 commercial sense where you're getting, you know, not just a
22 lot more miles.

23 I like to joke that Uber and Lyft drivers are
24 really good at running a used Prius into the ground and
25 making sure it's no longer usable. The same may be true

1 for an electric vehicle as well.

2 And, so, we're very excited about sort of
3 integrating these things where these are not two separate
4 conversations anymore. It will become closer and closer to
5 sort of the same.

6 MR. CIRCELLA: Very good point. Ellen, I see you
7 want to make a comment, and then I see Commissioner Monahan
8 is back and probably wants to ask a question to the
9 panelists.

10 MS. GREENBERG: Well, I would be happy to defer
11 to the Commissioner and hear what direction she'd like the
12 conversation to go in.

13 COMMISSIONER MONAHAN: Building off this topic,
14 so, Ellen, if you want to elaborate, and then I'm going to
15 ask a question specific to this topic of which -- which
16 modes are kind of best primed for electrification.

17 MS. GREENBERG: Okay. So, I share the enthusiasm
18 for the idea that there's a benefit to a certain amount of
19 travel transitioning from individual travel to fleet travel
20 because I think we're going to see a much faster transition
21 to electrification in the fleet environment. It just, you
22 know, seems intuitive, so I think that is really positive.

23 I want to come back, though, to the broad
24 question about the VMT trends during the pandemic. So,
25 many of us, and Giovanni and I have had repeated

1 conversations about how surprised we are at how little the
2 reduction in VMT has been for the past few months, right.
3 We're at about a 10 percent reduction despite the fact that
4 there is no soccer practice, that, you know, between 30 and
5 50 percent of working people are working remotely. There
6 are no movies. There is no in-restaurant dining. There is
7 no professional sports, you know, et cetera, et cetera, et
8 cetera. So, it is a surprise to many of us. I don't want
9 to put words in Giovanni's mouth.

10 But one of the things I want to highlight and I
11 think relates to these other points, particularly the
12 liquor delivery made me think of it, is that I think we may
13 be collectively undervaluing the transit commute, and in
14 particular the transit commute to conventional mixed-use
15 cores, or historic mixed-used cores. Because when people
16 take transit to work, A, they can't drive for the whole
17 day, and, B, they very often can't buy that bottle of
18 alcohol in a shop during their day. They can go to a
19 restaurant. So, this ties into the question of
20 restaurants.

21 You know, lots of us used to go for a drink or
22 out to dinner, right, from our workplace. And, so, the
23 efficiency of the places really has a huge impact on the
24 demand on all different modes of travel. And, you know, I
25 suspect that some of what we're seeing in increased VMTs,

1 like that population that's working remotely, that wasn't a
2 population that a hundred percent had a drive alone
3 commute. That includes, you know, I would say a
4 disproportionate number of transit riders, because so many
5 transit riders were going to office jobs.

6 So, that group of people that used to take
7 transit to their office job and go out for a drink, or
8 dinner, or buy a bottle on the way home is now at home with
9 access to a car all day, and they either drive or call
10 Austin for their drink. So, you know, that's a big change
11 and I think it's just very valuable for us to appreciate
12 the extent to which, you know, somebody is taking light
13 rail and work in downtown San Diego can walk to old town
14 San Diego or walk to little Italy, you know, and have
15 dinner, rather than, you know, drive to a restaurant or,
16 again, ask Austin to deliver their dinner.

17 So, we do have a look at that whole spectrum of
18 activities that is supported and that is efficiently
19 supported in those (indiscernible) environment.

20 MR. HEYWORTH: I'll just add two points here. I
21 mentioned congestion pricing earlier, but, you know, we've
22 seen this in London where they actually have sort of car
23 exclusion zones. You can't come into the central city
24 without a certain type of vehicle type. And where
25 congestion pricing has worked well think about, you know,

1 an example, there's certain areas of the city where you
2 simply cannot drive.

3 We've seen small, small experiments with this in
4 San Francisco. It creates a real incentive to plan around,
5 you know, some other means of mobility where it doesn't
6 create these sort of wasted or just miles because you have
7 a car sitting around. But also, if you have congestion
8 pricing for the trips you do need to take a vehicle you see
9 those sort of in-built incentives in real time, right. If
10 I see it's all of a sudden much more expensive to travel
11 during the most congested period, the most congested
12 places, you know, the Uber app at its best if it's built
13 into the policy you can see that incentive in real time and
14 respond to it in a way that the policy would hopefully, you
15 know, change behavior.

16 So, that's the kind of vision that I think we
17 want to kind of row the boat towards.

18 MS. CIRCELLA: Very good points, and I will add,
19 actually, that it would be very nice to see in the policy
20 environment that actually like, you know, the ability of
21 modes, including public transportation, but also share
22 mobility and ride daily or micromobility can really combine
23 with each other to promote a non-private mode trips let's
24 say. So, tourists, as Ellen was saying, that really allow
25 to travel around during the day, organize activities

1 without a private vehicle, which would have a lot of
2 benefits for society from a number of points of view. And
3 it will be nice to really see this very well embedded into
4 the clean air standards or other policy frameworks really
5 is a promotion of alternatives to car product, car trouble.

6 Commissioner Monahan, I know you want to bring
7 the topic to a --

8 COMMISSIONER MONAHAN: Yeah, I actually -- I
9 really appreciate what Ellen just said, that resonates a
10 lot with me, and this whole panel has reinforced this idea
11 that whatever VMT reduction we've experienced, it's less
12 than we would have thought because people are still driving
13 because they love cars, which we know. Anybody who works
14 in transportation knows it's really hard to get people out
15 of their cars.

16 We talk a lot about transit, which is critically
17 important, especially for low income and disadvantaged
18 families, but really for a lot of families who -- but it's
19 still a very small percent of VMT, and in terms of
20 greenhouse gas emissions it's all about cars and it's all
21 about trucks.

22 So, this conversation has really reinforced to me
23 this imperative that we have to electrify as soon as
24 possible. We have to do a lot of other things. We have to
25 have smart planning. We want to get people out of their

1 cars. We want to make it convenient. We want to make sure
2 it's nice. We want to do all sorts of other
3 transportation-related planning activities, but in terms of
4 global warming solutions, we've got to electrify as soon as
5 possible.

6 And we already had a discussion about fleet
7 electrification. I'd be curious, Austin, if there's
8 anything you would add in terms of the electrification of
9 TNCs that you think would be important for us to consider.
10 And, Mike, I'm really interested in this middle mile. I
11 mean, the Governor has a goal of having all drayage trucks
12 be zero emission by 2035, and that's the existing fleet,
13 not just new vehicles. So, it's a very strong target.

14 So, what you said to me in terms of -- what you
15 said to everybody in terms of this opportunity, that seems
16 like a huge opportunity to electrify that middle mile. So,
17 for Austin, Mike and whoever else wants to chime in in
18 terms of city planning relating to electrification.

19 MR. HEYWARD: I'll go really quickly. Thanks for
20 the question. I think that's a great sort of segue. And
21 as I often do, I'm plagiarizing Adam Coromas on my team who
22 used to work at CARB and is really brilliant on this stuff.

23 But, in short, we see sort of three sort of
24 economic like disadvantages for an EV driver currently.
25 One is charging, simply put. You know, someone in that

1 Prius can stop at a Chevron way, way quicker than somebody
2 can charge. So, downtown curbside available fast charging
3 is just going to help chip away at that sort of
4 disadvantage. In a way it's going to make it much, much
5 easier to see that breakeven point of, look, I have to plan
6 around charging for a little bit, but it's not going to set
7 me back in terms of earning potential.

8 Number two is vehicle acquisitions. We think
9 that the secondary market for EV's is going to get better
10 with the technology.

11 And third, not a lot of Uber drivers, or even
12 people doing delivery now, go and buy a vehicle with the
13 intention of just doing this work, right. It's a lot of
14 folks that are working part time but using a vehicle they
15 may already have.

16 But one entry point we've seen have high, high
17 uptake is short term rentals and leases. General Motors
18 had the Maven Program for a while that was very, very
19 successful. We saw almost 200 percent growth in the number
20 of EVs in the Bay Area and Sacramento market because of
21 that being available, right.

22 So, you think of the individual who decides I
23 want to go out and make some extra money, but I don't have
24 a car for this. That entry point of connecting that
25 somebody they can get for 250 bucks for the week is the

1 best way to get uptake I think that we have right now, and,
2 so, you know, kind of lowering the price point but not
3 having that total cost of ownership that is so daunting to
4 so many that are already doing this circumstantially iFEs a
5 big, big deal.

6 And I mentioned utilization, right. Programs
7 like CVRP, they incentivize just the purchase of the
8 vehicle. We think there is a lot of good to come from
9 incentivizing the utilization. The Clean Mile Standard
10 Program that I mentioned earlier does that in some ways,
11 but, you know, being incentivized to drive it a whole lot
12 and share it with a whole lot of people is obviously better
13 than just incentivizing the purchase of the vehicle

14 MR. ROETH: Mike Roeth from NACFE on the second
15 question around fleet electrification around trucks. I
16 think there's -- you know, building off Austin, first of
17 all, is the urban package delivery. You know, I think
18 there's a couple of things there. One, it's a really good
19 application for these early electric trucks. Relatively
20 small battery packs, return to base every day. They
21 actually -- you know, we don't want them in our
22 neighborhoods in the evening and overnight, so slow
23 charging overnight, I mean they just make so much sense.

24 And then the last point on the little trucks, I
25 call them little trucks, is Austin's point around, you

1 know, also where are these -- where can we get electric
2 rental, you know, pickup trucks, delivery vans for those
3 people who want to augment their, you know, their day with
4 delivering, you know, beds from Ikea or other places where,
5 you know, we've already had an industry sort of grow up
6 around diesel and gasoline delivery of things. So, those
7 are kind of on the smaller trucks.

8 And then, you know, the one thing that we've
9 really felt like we've kind of figured out and has a huge
10 impact on the greenhouse gas emissions are these DACAG
11 regional haul middle mile tractor trailers. You know, they
12 can be 500 miles a day. I mean just think about the impact
13 on emissions and fuel use when you're looking at 500 miles
14 a day. Or let's just step back and maybe it's 200 or 300
15 miles a day beverage.

16 You know, when I first thought about electric for
17 beverage trucks and tractors I thought, well, it will be a
18 later adopter because of the weight. You know, they go out
19 really heavy. But on the other hand, they go out and with
20 all of the huge skew explosion with all the kind of
21 flavored waters and the beer, microbrews and all that,
22 those trucks end up spending a lot of time at the -- sort
23 of at the delivery point, and so they don't really get a
24 lot of miles. So, this regional DACAG, whatever we can do
25 to understand those routes and encourage charging and

1 infrastructure at those sort of hubs where these, you know,
2 either distribution centers are or fulfillment centers, all
3 of that.

4 You know, and then the last point is they do
5 become very dedicated, and they're pretty predictable
6 routes. They go from a manufacturing plant to a
7 distribution center, and that gets the confidence at the
8 fleet level that they know if they put an electric truck in
9 that freight will be there, so the truck will be there, and
10 the infrastructure to charge, they'll have a lot more
11 confidence to do that rather than, you know, stick charging
12 somewhere and then the freight goes away and the truck goes
13 away, and now they've got a landed asset they've got to
14 figure out where to move.

15 But, yeah, a few thoughts there.

16 MS. JACOBSON: Hi, this is Barbara. I just
17 wanted to add a couple of additional pieces for
18 consideration.

19 So, the infrastructure components are essential.
20 Getting businesses on board with utilizing electric trucks
21 is important. And then also the transition from the
22 industry that makes these vehicles, itself, is an essential
23 component of this. And, you know, we've just heard about
24 GM transferring to all electric production by 2035, and so
25 thinking about how this can also be extended to the truck

1 sector as well. And with these three points of the
2 triangle it really drives it forward. So, it's a good
3 synergy of effort at this point.

4 MR. CIRCELLA: Commissioner Monahan, do you have
5 more questions that you'd like to ask the speakers?

6 COMMISSIONER MONAHAN: Well, I have a -- I don't
7 know if this is a provocative question, but the
8 micromobility issue, I've heard different reports about
9 whether this keeps -- siphons away from public transit,
10 whether it actually increases emissions, whether it reduces
11 the time that people spend walking in zero carbon mode to
12 -- just any data on the impact of micromobility on
13 emissions?

14 MR. HEYWARD: I'll jump in first, because there
15 was a lot of exciting work going on before, unfortunately,
16 this pandemic set it. Yeah, there was some obvious, and
17 just laying it bare, kind of honest trends that were not
18 great just when the market was getting off the ground, like
19 having a big roll around and have to pick them up and
20 charge them every day. But there was new innovations like
21 swappable batteries that was making that DMT imprint a
22 whole lot more exciting.

23 And so we had sort of a vision of, you know,
24 those jump bikes that are now owned by Lime, they have a
25 big swappable battery about the size of an old VHS tape

1 which is great. But you still need to bring them back and
2 charge somewhere, but, you know, there was interesting
3 innovation with some of our retail partners like a
4 McDonald's or a Starbucks where it almost looked like an
5 old Redbox where you used to rent movies in a grocery store
6 where you could actually plug the batteries into there and
7 have those like a swappable charger. So we would encourage
8 the riders, themselves, to actually swap up those
9 batteries. So it would be kind of a more self-sustaining
10 system.

11 So, I think there's a potential for it to get
12 better, but again, the market was really just in its
13 infancy.

14 We did see a lot of linkage, though, between
15 micromobility trips and transit, certainly not as perfect
16 as it was going to get, but there was just starting to be
17 conversations about how we really more purely incentivize
18 that in a way that, you know, you get a dollar off, if you
19 end it within a transit hub, because that means it also
20 leaves it for the next person that's getting off, you know,
21 getting off the train.

22 And, so, I think that work can pick up again,
23 hopefully, but there was certainly -- things were turning
24 in that direction.

25 MS. MEIER: I would just -- go ahead, Barbara.

1 MS. JACOBSON: Oh, sure, thanks. It will be
2 really fast. So, with like Bikeshare, for example, walking
3 to said bike and then riding, and then docking or locking
4 it up at a transit (audio skips), building in that walking
5 aspect. And there are some platforms where there was a
6 unification element for, you know, you get more points or
7 financial incentives if you put it in a specific place, so
8 it tends to create that impetus for building and walking.

9 So, Antoinette, I'll turn it to you.

10 MS. MEIER: Thanks. I just wanted to build on
11 what Austin was saying, and I think that public agencies
12 and the operators were just learning how to work together
13 when the pandemic hit, right. So, we were all taken by
14 surprise when overnight scooters and bikes showed up all
15 over city streets, and it was pretty chaotic.

16 And we all saw the potential for those services
17 to be first, last mile connections and to be alternatives
18 to the private automobile, but it was very chaotic in the
19 early months. But, you know, through partnerships with
20 companies like Uber we were able to figure out how to make
21 the services work, where to station them so they weren't a
22 public nuisance or safety issue, you know, for people. And
23 things were going well and there was just a lot of
24 potential, so I'm actually looking forward to getting back
25 to a point where we can revive some of those efforts and

1 pilot projects and we do start to see micromobility being
2 used more as a viable kind of transportation connection.
3 Whether it's to and from transit or, you know, just getting
4 people out of their car in general, it was serving a
5 purpose.

6 MR. CIRCELLA: Ellen, I see you.

7 MS. GREENBERG: Thank you. Ellen Greenberg,
8 CalTrans.

9 I think the commissioner's question was about the
10 broader TNC impact on modal choices, although there was a
11 little blip in my audio.

12 COMMISSIONER MONAHAN: Well, it was actually --
13 it was about micromobility, but happy to expand to that
14 bigger issue.

15 MS. GREENBERG: Okay. So, I think that there
16 was, you know, some really interesting survey data,
17 particularly from some of the denser urban environments
18 where the TNCs operate prepandemic, you know, showing a
19 fairly strong tendency of people to move, walk, bike, short
20 transit trips to TNCs.

21 And I will say there's some really positive
22 things about that because some people had poor service.
23 You know, they were substituting a lousy transit trip to a
24 good TNC trip.

25 But there was also definitely reason I think for

1 concern about a reduction in walk trips. Again, there's
2 always the possibility that they were unsafe trips, or
3 uncomfortable walk trips. Some of that substitution I
4 think is really positive, like the 2:00 a.m. bar closure,
5 you know, explosion of TNC trips. But it is, I think, kind
6 of a complicated universe of services out there and
7 definitely worth, you know, kind of further investigation
8 as things -- I don't want to say normalize -- but, you
9 know, as things evolved postpandemic.

10 I know that the long-term aim is have the TNCs
11 influence auto ownership, like that's kind of the prize at
12 the end of the day. If having the availability of a ride
13 share service can enable households to own one fewer car or
14 zero cars, that's where I think we would see the really big
15 reduction in our VNT, and I think, you know, that's still
16 -- that's a hope.

17 MR. HEYWORTH: Three things I --

18 MR. CIRCELLA: I want to say we're starting to
19 run out of time, so maybe, Austin, a very brief answer to
20 this question and then we have -- we have, I think,
21 moderator's question from the audience. Austin, go ahead
22 briefly, please.

23 MR. HEYWORTH: Yeah, very quick response here
24 just to kind of link all the things all together here. I
25 was mentioning aggregation of all mobility in one app and

1 the kind of positives that would come from that.

2 For one, just from a business perspective, if we
3 had every possible transit option within the public sector
4 on our app, as well as all the micromobility, even if it's
5 not generating revenue for the company, it's good for our
6 business because it's more time where people are looking at
7 the app to try to find their best option from A to B. And
8 that's a good thing, I think, for all parties involved.

9 Two, the addition of walking and active mobility
10 is also good for a lot of things, and we can be pushed to
11 do that.

12 We had a product called -- God, it's been so long
13 since I've talked about it -- but it was express pool. We
14 encouraged people to walk half of a block to a place where
15 there was open curb space which prevents, you know, cars
16 needing to do that extra VNT, extra three blocks to loop
17 around an area like downtown Sacramento, for example, where
18 it's just more efficient.

19 And third, by adding a little micromobility in
20 all the transit you're actually doing something that's
21 better for the driver and is better for the whole community
22 because they're able to stay busier driving people to the
23 airport which is just better for their own revenue because
24 it encourages people if they have a four-block trip to find
25 that easier, better option that isn't adding cars to the

1 road, right. So, there's a lot to be studied and a lot to
2 be unlocked, I think, by integrating things in a way that's
3 just going to sort of optimize, you know, human behavioral
4 patterns.

5 MR. CIRCELLA: Perfect. And it seems like, you
6 know, the questions from the audience has been more or less
7 addressed already in some of the questions also from the
8 commissioners.

9 So, I would like probably to ask, and I think
10 it's probably going to be one of the final topics,
11 considering the time that is available, one question that
12 related to one topic that we touched but we didn't really
13 get into a lot of that yet, which is walking and bicycling.
14 So, we talk about the impacts of the pandemic and one of
15 the good impacts seems to be that people are walking and
16 bicycling more, at least in cities and in certain
17 environments. And, certainly, there have big efforts from
18 cities to provide more walkable environments, also the
19 transformation of some parking space into new bicycling
20 lanes, and so on.

21 And, so, big question for the future is how can
22 we try to turn this temporary pattern into more permanent
23 training society, and what can we do as a society to
24 promote that. And, of course, like, you know, cities can
25 provide the infrastructure to bike and walk, but also the

1 question is more broadly what can we do in terms of
2 federal, state, regional policies to promote this trend
3 which can be somehow related to the topic that we just
4 discussed related to micromobility, but it's also like,
5 you know privately on bicycles and scooters and walking,
6 and, in general, all the healthier behaviors rather than
7 sitting in a private vehicle.

8 MS. GREENBERG: I'd like to start. This is
9 Barbara. This is an area which I've worked in for a while
10 now, and I'm really excited that it's coming to the
11 forefront again. And just thinking about the
12 democratization of curb space and reallocation of road
13 space for people to be in, it's a very exciting moment.
14 And there's a couple of policy ideas that could be
15 supported.

16 So, one, with the pretext commuter benefits,
17 adding in Bikeshare's part of that to be covered, and also
18 the placement of parking facilities for bikes and scooters,
19 really important from a safety perspective and from an
20 economic perspective. And then a lot of business on
21 tactical urbanism and pilot programming for improving the
22 pedestrian landscape in general through like curb
23 extensions and bulb-outs, just to get a sense of how much
24 space is actually needed for cars to go through.

25 And I know we're in California, but a lot of

1 really interesting stuff happens on the roadways when you
2 plow with the snow, and you can see how much space is
3 essentially left aside for pedestrians and cyclists to use.
4 So, and interesting frame of how much space could be
5 repurposed for biking, walking and parklets and outdoor
6 dining.

7 So, it's a very exciting space and a lot of
8 political will is needed to move this forward.

9 MS. MEIER: I'm happy to add to that a little
10 bit, too. So, we have bike counters on some of our major
11 regional bike corridors in the region. And the last I
12 checked, we had seen over across all of the bike counters,
13 all of those corridors, a 91 percent increase in biking
14 since 2019. So, it's really significant.

15 The survey I mentioned to you earlier, too, a lot
16 of folks responded that they were walking and biking more,
17 and they enjoyed it, and they were intending to do it in
18 the future. So, to help local jurisdictions create safe
19 spaces for people to walk and bike and recreate we created
20 a little pilot funding program called The Shared Streets
21 Program, and we gave funding to cities to do exactly what
22 Barbara was talking about, so temporary measures that could
23 be put into place to either, you know, close part of the
24 street, or repurpose a parking lane, or slow traffic in
25 neighborhoods to allow people to have that space to walk

1 and bike and not feel threatened by, you know, fast-moving
2 vehicles and traffic.

3 The feedback we go from that program was
4 overwhelmingly positive, and we're going to offer more
5 funding to local agencies and do another call for projects
6 this spring to coincide with bike month.

7 But our hope is that this positive experience,
8 this sort of pilot project with these temporary measures
9 will lead to more permanent solutions. Cities will see the
10 benefits. They'll get good feedback from residents and
11 will be implementing more permanent solutions that give
12 space to people on bikes and walking and micromobility.

13 MR. CIRCELLA: Perfect. And, Ellen, I think you
14 also have some comments on the same topic.

15 MS. GREENBERG: Yes, thank you. Ellen Greenberg
16 from CalTran.

17 So, just briefly. I agree with the points made.
18 I do think that, you know, for people who have acquired a
19 bike, like again, that's a capital investment during COVID
20 that hopefully will stick around. We need to kind of dig
21 into what the higher level of walk and bike is for in terms
22 of recreation, exercise versus purposeful travel.

23 And I just want to mention that street light data
24 has published an E-book on COVID bike trends, and they
25 highlighted the fact that in a number of big cities there's

1 been a drop in biking, and those are the cities where there
2 was, I think, the highest level of commute cycling.

3 So we are seeing in different places nationally
4 different directionality of the bike trend. So, that was
5 really interesting to me. I'm totally on board for doing
6 whatever we can to sustain and extend the bike impacts.
7 And even at CalTran we were able change some of our
8 internal rules to enable some of that conversion of street
9 space for outdoor dining on surface streets that are state
10 highways, and with Antoinette and the others who are
11 working to advance this walkability and bikeability.

12 MR. CIRCELLA: Excellent. And these efforts
13 actually can involve a lot of coordinated efforts for
14 proving incentives, to infrastructure, to coordination also
15 with the partners in industry that can promote the shared
16 competence of these micromobility movements and combine it
17 to walking and biking naturally happening in cities.

18 I think we probably only have one minute left,
19 but it seems to be time for one very quick question more
20 from the audience.

21 MS. RAITT: Yes, that would be great. Thanks,
22 Giovanni.

23 So, Mark Palmere is going to go ahead and read
24 that question. Light duty vehicles forecast and the Energy
25 Commission's Transportation Energy Forecast Unit. So, go

1 ahead, Mark.

2 MR. PALMERE: Hello, everyone. Hello, the panel.
3 This question is for Mike, and it's from Robert Perry.
4 He's asking about a potential partnership between bus and
5 trucks. He says, "Assuming regional bus transit undergoes
6 a massive facelift, is there an opportunity for trucking
7 and Class A buses to partner in building the necessary
8 charging and refueling infrastructure?"

9 MR. ROETH: Yeah, I mean that's a good question.
10 We out in the early days of electric trucks and maybe, you
11 know, for a lot longer, anywhere we can share
12 infrastructure and get that, you know, usage up fast is
13 really important, so if the location fits and we can make
14 that happen, you know, I think that the trucking fleet and
15 the bus fleets will want to do that.

16 You know, charging, you know, some of these
17 chargings can take time and these trucks are big. So, one
18 of the things to think about, whether it's garbage trucks,
19 or tractor trailers, or even the smaller medium trucks is
20 space, you know, you just can't turn these trucks on a
21 dime. They're going to need, you know, bigger areas for
22 charging, and so that's something to really consider as we
23 think about it.

24 And that whole -- that whole, you know, space for
25 charging and infrastructure, turnover of fleet, going from

1 diesel to electric and so forth is -- you know, that's a
2 pretty big challenge. So, it would be the same whether
3 they're doing it in a private area or in a partnership,
4 sort of public charging infrastructure idea. So, good
5 idea, but it's got to be done thoughtfully.

6 MR. PALMERE: Great. Thanks, Mike. And I just
7 want to point out there actually were a couple of other
8 questions for Mike that he had answered via text. So, if
9 you're interested in -- about fuel cell trucks and ZEV
10 trucks and used trucks, the answers are in the question-
11 and-answer box as well. So, that looks like it concludes
12 the question-and-answer portion of this panel.

13 So, I'll throw it back to you I think, Giovanni.

14 MR. CIRCELLA: Thank you so much, Mark. And I
15 think we have already used all of the time that was
16 available for this panel, and so, we touched a lot of
17 topics that were very interesting. Of course there would
18 have been some other topics that would have been
19 interesting, too, like vehicle sales or intercity travel,
20 but we will need to organize another panel for that
21 because, obviously, the impact on America is so huge and
22 big in various areas that it takes a lot of time to discuss
23 all of them.

24 I really want to thank everybody. Thank you
25 Ellen, Antoinette, Austin, Barbara, Mike. Thank you so

1 much for your participation and your contribution, and with
2 this I think we go back to the Energy Commission for the
3 next panel. Thank you so much.

4 COMMISSIONER McALLISTER: Thanks all.

5 MS. RAITT: Thank you, Giovanni. Thank you to
6 our panelists. That was really awesome.

7 So, we will move on. This is Heather Raitt, and
8 we will move on to our third panel, the last panel of the
9 day. It's on the California Post-COVID-19 Business
10 Economy. And I'm pleased to turn over the microphone to
11 our moderator, Carol Zabin from UC Berkeley. Carol is the
12 director for the Green Energy Program at the Center for
13 Labor Research and Education. She's a labor economist, and
14 her current research focuses on the impact of climate and
15 clean energy policy on California's economy, workers and
16 labor unions. So, thank you, Carol. Go ahead.

17 MS. ZABIN: Thank you, everybody. Can you hear
18 me?

19 MS. RAITT: Yes.

20 MR. RAYMER: We can.

21 MS. ZABIN: Okay. I apologize. I had to switch
22 computers. My other computer went kaput, so I don't seem
23 to have video.

24 Okay. So, welcome to the last panel of the day.
25 I hope you're hanging in there with us. And I am very

1 pleased and honored to moderate and speak it in. This
2 panel addresses California's economy post-COVID, and we
3 have a distinguished panel of speakers representing trade
4 associations from a broad swath of California industries.

5 They are Lance Hastings with the California
6 Manufacturers and Tech Association, John Larrea with the
7 California League of Food Producers, Matt Peterson with
8 LA's Clean Tech Incubator, Bob Raymer with the California
9 Building Industry Association, and Bob Keefe, E2
10 Entrepreneurs.

11 So, the panel is organized a little differently
12 than the previous one. I'll kick things off as I was
13 specifically asked to provide a perspective on workforce
14 and labor issues. And then we'll turn to the industry
15 panelists for their comments. And they're going to give
16 comments on the four priority questions that I picked out
17 from the long list of questions that staff distributed.
18 And after that, we'll have an exchange. So, it will be,
19 hopefully, not more -- hopefully as interesting as the
20 previous panel. I really liked how Giovanni interspersed
21 questions, but I didn't plan it that way, so we'll stick to
22 the plan.

23 Okay. So, I'm going to kick it off just by
24 saying, of course, this is a really unique year for IEPR
25 because changes are not incremental, but our economy is

1 being fundamentally reshaped by the pandemic.

2 And I was really pleased that the last panel
3 incorporated the issue of equity right from the get go and
4 sort of throughout the discussion of changes to the
5 transportation system, because I think, you know, that what
6 the pandemic exposed more than everything is the really
7 deep and systemic inequities in our economy, and so, we
8 really do have to address the unequal effect of the
9 pandemic on Californians and how to reduce those trends
10 rather than allow the pandemic to exacerbate those trends
11 in the future.

12 I mean we have a bigger budget than in previous
13 years because wealthy Californians have done really well.
14 But so much of the news and so many new studies show the
15 really unequal hit that low-wage workers, and particularly
16 black and brown Californians have experienced, both
17 economically and health wise. I mean the death rates, the
18 excess mortality in that Stanford study that really shows
19 service and blue-collar workers in -- is so much higher in
20 food and agricultural workers, transportation and logistic
21 workers, facilities workers, manufacturing and construction
22 workers. And, of course, that has to be of great concern
23 to the business owners in the industries that we're going
24 to hear from today.

25 So, with that said as a frame, I believe

1 Commissioner McAllister recommended me because of my work
2 on the Jobs and Climate Plan for 2030 that the Newsom
3 administration recently presented to the legislature. So,
4 I want to spend a few minutes on that because it both shows
5 the problems of low-wage jobs in many of the industries
6 impacted by climate policy, and also provides a road map
7 for the future for policies and climate agencies like the
8 CEC to incorporate complementary equity policies in the
9 design of programs so that we don't continue to exacerbate
10 the problem of low wage jobs which then end up being, you
11 know, health inequities, education inequities, et cetera.

12 So, in terms of that work what we looked at,
13 what's really the impact of climate policy on industries
14 and where we saw good outcomes for workers and where we
15 really saw some problems, either continuation or
16 exacerbation of low-wage jobs.

17 In terms of we call high-road success, that is
18 the support of businesses and the business model that
19 invests in workers, invests in training and pays decent
20 family supporting wages and benefits, we see the renewal
21 portfolio standard, which really has driven the
22 construction of utility scale, solar farms and wind, et
23 cetera. And those have produced good jobs with good career
24 training, inclusion of disadvantaged workers in
25 apprenticeship basically because they were and have been

1 almost exclusively built under project labor agreements
2 which are essentially union collective bargaining
3 agreements over big developments.

4 But we also see a bunch of what we call low road
5 challenges, low wage trouble spots where climate policy is
6 impacting and sometimes promoting the growth of low wage
7 jobs, and we see this in rooftop solar and some pieces of
8 energy efficiency market, in trucking, in ride sharing and
9 transportation network companies, in waste management, in
10 some manufacturing, in fire prevention and forest
11 management, et cetera.

12 So, the point of the study is to say we have to
13 be intentional about protecting workers and creating good
14 jobs, and improving bad jobs. And I think the lesson of
15 the pandemic is that we can be intentional, and if we're
16 not intentional, we're just going to perpetuate this
17 pretty, you know, stark reality that is going to impact us
18 into the future.

19 So, how will climate agencies control, or I would
20 say influence? They control some public investment, and
21 they influence a lot of private investment. And depending
22 on the industry, there are different tools to ensure that
23 the jobs being created are good jobs, and that the
24 businesses that really invest in their workforce and have
25 developed business models that can support good jobs are

1 supported.

2 We know the ones in construction. I mentioned
3 project labor agreements and you can add inclusive hiring
4 practices to those. You can put skilled and trained
5 workforce requirements to tap into the registered
6 apprenticeships system in the state, and there are other
7 tools.

8 In nonconstruction there's inclusive procurement
9 requirements and really using the power of state purchasing
10 to do that, and local purchasing as well. We heard a
11 wonderful transportation panel, and one of the positive
12 examples in terms of jobs is the procurement of electric
13 buses by transit agencies where they use bidding language
14 to really promote those manufacturers who make commitments
15 to use good labor practices, invest in training, do
16 inclusive hiring and support worker voice on the job.

17 So, it is -- this is kind of new to the climate
18 agencies, I think, and in a way IEPR is a technical
19 process, but I think, as the last panel also really pushed,
20 equity considerations are really key even in a technical
21 planning process.

22 And I think it's also important that the climate
23 agencies aren't necessarily well versed in how to ensure
24 that their program design and mandates promote good jobs.
25 And one of the positive outcomes of the jobs and climate

1 plan is that the state labor agency has actually dedicated
2 staff working with the climate agencies to identify all the
3 ways they can improve job outcomes, and they have a new MOU
4 with the CPUC. They're working with the ARB, and I'm
5 presuming and hoping that they work with the CEC as well.

6 So, again, the underlying headline that I want to
7 underline is that we are in a situation where low wage jobs
8 will persist unless we intentionally use all the tools in
9 our tool box to really support those businesses to improve
10 lower wage jobs and to build business models where
11 training, and innovation, and quality are their competitive
12 edge rather than lowest cost products.

13 So, with that, I'm ready to introduce the
14 panelists and ask them to answer some questions. I'm going
15 to read those questions because there was such a long list
16 and then turn it over to the panelists.

17 So, one, how has the pandemic affected your
18 industries? What uncertainties do you see that can affect
19 your industries and the welfare workers that your members
20 employ? Specifically please do address how the pandemic
21 has affected the lower wage workers in your industries.

22 Second. What major trends do you expect to see
23 over the next 10 years, and again, how can government and
24 your organizations help your members grow, but grow in a
25 way, a high road way that supports equity and better job?

1 Three. Did the first round of Federal stimulus
2 make a difference, and what would you want to be funded in
3 the new stimulus package that would support high road
4 development in your industry?

5 And then finally, how will California
6 environmental regs advance or challenge your business in
7 particular, and how can these regulations mitigate any
8 negative impacts on workers and ensure good job quality and
9 job access.

10 So, with that, I'm going to first turn it over to
11 Lance Hastings. I want to remind folks to unmute
12 themselves and also say their names whenever they speak. I
13 was asked not to go into the bios. The bios of all these
14 great speakers are in your package.

15 So, with that, Lance, I turn it over to you.

16 MR. HASTINGS: Great. Thank you very much.
17 Appreciate the opportunity to present on the panel given
18 all of the challenges that COVID has brought our way.

19 And I think the first part, I just want to chat
20 about the pandemic being in phases. That early when the
21 Governor issued his shelter in place order on Monday, March
22 16th, was really an important marker for the manufacturing
23 community because, unlike other sectors and perhaps
24 everyone on this call, it was difficult for us to pivot to
25 remote working, because in order for the factories to

1 remain open one must go to the factory in order to
2 manufacture items. So, we felt immediately that we were
3 right in the middle of adapting to a new paradigm and
4 worked very closely with the folks over at GoBiz and the
5 Office of Emergency Services really to do our best at
6 keeping manufacturing open, recognizing that there were
7 some health and safety risks associated with that.

8 So what we did initially is we pivoted with a
9 broader use of PPE at our sites, and keep in mind, the
10 manufacturing sector is already accustomed to wearing PPE,
11 whether it be eye, ear and foot. Toe protection is
12 something that we do every day. So, the addition of a face
13 covering for us was incremental as opposed to fundamentally
14 different. So, I think in that regard we were able to meet
15 those immediately challenges of COVID quite well.

16 And then it became a matter of community health,
17 having employees in some cases, several thousand at one
18 facility, and then going home and coming back became an
19 issue, so we had to really ramp up our health and safety.

20 I think that was really more phase one, how to
21 deal with the pandemic that we really knew nothing about.
22 We didn't know much about how the disease was transmitted.
23 We certainly didn't have any vaccine on the horizon. And
24 it was just challenging in those early days.

25 Unemployment figures in the manufacturing sector

1 remained lower than most other sectors. And I'm going to
2 kind of answer the tail end of the question about low-
3 income employees in our sector at the same time.

4 The manufacturing sector has a very high median
5 wage, and for that reason the more that we could keep
6 working within the sector was going to be better off
7 economically for the state of California and for local
8 governments as well.

9 And just by contrast, the hospitality sector, as
10 you all know, was hit very, very hard, continues to be hit
11 hard, including the restaurants, and immediate income in
12 those industries is a little bit lower.

13 So our over-indexing I think actually has been a
14 helpful thing for the state of California and for local
15 industries.

16 And then we evolved through the summer. You
17 know, do we reopen, as we did for a time, and then reclose,
18 and the ability to keep manufacturing going in California
19 has really been, I think, a savior for the state physically
20 and otherwise. I mean it's nice to continue to keep that
21 out, but going in the fifth largest economy in the world
22 and our job is really to keep it, at least at that spot and
23 not slip down and slip backwards.

24 So, that kind of covered I think your first
25 question, Carol.

1 The second question, you know, what are major
2 trends over the next 10 years, and relevant to this panel
3 really is the evolution of manufacturing into what we're
4 calling the advanced manufacturing, which is emphasizing
5 green technologies, making our existing technologies more
6 efficient so that we can have reduced emissions per unit of
7 our output.

8 And I participated in a panel just over a year
9 ago where a CARB representative identified that
10 manufacturing emissions have held steady, but we've
11 increased our output. And the only thing that one can
12 really interpret from that is the efficiencies of our
13 sector are improving every day, and that's something that
14 we continue to want to do.

15 One of the ongoing challenges will be in our
16 sector as it ages. We do have a silver tsunami effect
17 hitting the manufacturing sector in California and making
18 sure that there is enough employees in the future that are
19 trained and prepared, willing, ready and able to go to work
20 in the sector.

21 And part of the things that we're doing here at
22 CMTA is changing that narrative to make manufacturing
23 sector an appealing career choice for someone,
24 notwithstanding our median wage, which is higher than most,
25 hovering between the 75 to 85,000 dollars a year, but kind

1 of departing from the Hollywood portrayal of the sector as
2 a dirty, dark and dangerous environment when, in fact, it's
3 anything but.

4 And some of the most quiet places I've been over
5 the last two years has actually been manufacturing
6 facilities around the state, and that's the kind of
7 narrative that will help us ensure that we have workers in
8 the future for our space, and quite frankly, I'd like to
9 make sure that the manufacturing sector grows, and the only
10 way to do that is to have some effective training programs.

11 From a stimulus standpoint, the Federal
12 government, a lot of the programs that they did offer, I've
13 heard that some of our members were able to take advantage
14 of some of the programs, but not all. We were able to keep
15 operating under most cases. I think the paycheck
16 protection program was utilized by a few. But in terms of
17 a broad brush, I'd have to say likely not because of the
18 impact on our sector being less than some of the others.

19 And then finally, on the environmental
20 regulations and where we're headed, I think you all recall
21 Governor Newsom in his inaugural address made comments
22 regarding the polluters in the world, specifically those
23 here in California. We saw that as a wakeup call and a
24 challenge to be more efficient with how we operate. But I
25 think we're at this really odd confluence of issues.

1 Coming out of the pandemic where economic activity has
2 declined has certainly had some environmental benefit,
3 the expected economic surge that is to follow is really
4 going to be challenged and I think impacted by Californians
5 -- by California's environmental regulatory scheme.

6 And the net of that is, of course, manufacturers
7 leaving this jurisdiction and looking for other localities
8 in other states to make those decisions. So, what may end
9 up being an externality that California creates rather than
10 an opportunity to sit down with all the regulators and all
11 the stakeholders, including those on this panel and the
12 previous panel, to have really important and robust
13 discussions about what that looks like.

14 And not to speak too hyperbolic, but in order to
15 make things there are processes involved that due require
16 emissions, some more than others. But we have to have a
17 honest and open discussion about how to address that rather
18 than just establishing what could be considered grandiose
19 targets without the technological capabilities to meet
20 those targets in any timeframe, let alone the ones that are
21 established.

22 And I just want to let, you know, a conclusionary
23 comment. CMTA and our members stand ready to engage in
24 those conversations in a constructive manner, but it's
25 certainly something that we need to have, particularly as

1 we come out of a global pandemic to an uncertain future,
2 particularly economically, let alone environmentally.

3 But I do appreciate the opportunity, Carol, to
4 opine. I hope I covered as much of the questions I could
5 in a brief amount of time.

6 MS. ZABIN: Well, thank you so much, Lance, and
7 thanks for sticking with the time. You were exactly at
8 seven minutes.

9 MR. HASTINGS: Just as I rehearsed it. Thank you
10 very much.

11 MS. ZABIN: You'll get a chance to respond to
12 questions later, so it's not your only, you know, your only
13 play here.

14 So, I'm going to turn it over to John Larrea of
15 the California League of Food Producers. John.

16 MR. LARREA: Good afternoon. Again, thank you
17 for allowing me to present at this particular panel. I'm
18 the executive director of -- the director of government
19 affairs for the California League of Food Producers, and we
20 represent a lot of the seasonal industries associated with
21 the harvest, such as tomatoes, peaches, pears, nuts,
22 olives, you name it, and the types of things that you eat
23 every day are the types of people we represent in terms of
24 this.

25 We're industrial food processors, though, so we

1 actually fit kind of in with Lance's group in terms of the
2 amount of energy that we use in order to process.

3 But what I want to point out, I know that -- how
4 did the pandemic affect us? Because we're seasonal the
5 first of the year is usually used in order to prepare for
6 the upcoming harvest. We have to be -- they go through
7 everything in terms of making sure that everything is
8 working so that by late June, early July we can hit the
9 ground running. We go 24/7 for about three months and then
10 it drops off because we are aligned with the harvest.

11 COVID hit us like a wave. It added a layer of
12 complexity to our preparations that we were unprepared for
13 and that because we are fairly nimble on our feet we were
14 able to address those issues.

15 Now, it breaks down into two. We've got some
16 companies that are -- they're large companies associated
17 with this. And so they have HR departments, and they have
18 the manpower and the ability to be able to address those
19 concerns, and they kept their companies apprised of
20 situations such as, you know, changes in the guidelines,
21 the availability of PPEs, and helped them to address how to
22 prepare for this. Whereas a lot of our companies are
23 family owned, or were family owned and still retain some of
24 that character. And so what you've got is instead of
25 having an HR department, you've got one person who may have

1 two or three different hats on. And that required them to
2 be even more focused on this, and it required a lot of
3 management time and a lot of staff time in order to prepare
4 for the upcoming season.

5 Now, the uncertainties associated with that was
6 that we were watching people being, you know, hunkering
7 down as a result of the Governor's orders. There was
8 questions as to whether or not, you know, are these people
9 going to show up for work in June or July. Where were we?
10 So, there was a lot of uncertainty going forward. So, that
11 kind of really hit us hard.

12 The other was that we saw a lot of it in the --
13 for instance, our operations, you know, we need the people
14 to be able to operate that. Raw materials. Was there
15 going to be a harvest? Were we going to see these products
16 brought to us in a timely manner so that we can get them
17 processed? Transportation and trucking was a big issue. I
18 heard a lot about that because our members were finding
19 that there weren't enough truck drivers associated with
20 this to be able to even get the harvest going, and normally
21 they prepare all of this ahead of time.

22 So, we worked with the State to try to fix things
23 but, you know -- for instance, the DMV closed down its
24 operations and was not finalizing any of the new truck
25 drivers associated with this, so these truck drivers

1 weren't licensed and we couldn't put them into our
2 processes.

3 So, we were scrambling, really scrambling at the
4 beginning of this, and we managed to -- the companies found
5 a way to get it done, but we're also looking at a
6 continuation this year as well.

7 As for uncertainties, you know, when we look
8 forward the uncertainty associated with this is not so much
9 in terms of what COVID impacts were, but in terms of the
10 environmental and energy policies that the State is
11 currently pursuing.

12 You know, the electrification of California is
13 something that, you know, we're not generally opposed to
14 it. I haven't heard a member say anything to those
15 effects, but they are concerned about what the impact is
16 going to be on natural gas. We are primarily a thermal
17 industry. So, we don't know what the price of natural gas
18 is going to be if suddenly the State starts shutting all
19 down in terms of this and trying to move towards
20 electrification.

21 We've explored electrification associated with
22 this with regards to our boilers, which are the largest in
23 the world in these cases, and it's cost prohibitive
24 associated with that, plus with the current reliability
25 issues and whether or not they can even, you know, fix the

1 grid, in order to be able to supply the types of energy
2 needs that we're going to need in the future to go with
3 something like an electric boiler is still questionable
4 itself.

5 So, we're kind of sitting back and watching
6 what's happening here and seeing, you know, and trying to
7 make sure that you understand it. In our particular
8 industry, you know we are constrained by a number of
9 factors that need to be addressed within the regulation as
10 it moves forward itself.

11 The trends in our industry, question number two,
12 I think what we're looking at, top of the list is probably
13 automation. Labor, labor continues to be a problem and it
14 will be into the future. And it's not so much the low
15 wages; it's also the mid wages, too. We're not finding the
16 types of technical help that we need in terms of like
17 mechanics in order to keep the operations running.

18 My members tell me that, you know, they are
19 constantly looking for workers to be able to come out and
20 to keep our operations going, even though it's only for a
21 three-month period, but it does make effect.

22 So, automation is probably one of them, and, you
23 know, in terms of employment, obviously, we operate -- most
24 of our guys operate in the valley. And the valley is like
25 the epicenter for unemployment. You know, it's generally

1 anywhere from five to 10 percentage points higher than the
2 rest of the state at any one time.

3 And so, you know, addressing those needs, we need
4 to be able to address that issue if we're going to be able
5 to keep producing food at the prices that we're currently
6 being able to do it at. Otherwise, you know, we could see
7 a huge increase in food prices going forward, and that's
8 what we don't want.

9 The other was some of our members as a result of
10 the Food Production Investment Program, FPIP, you know,
11 they've changed the way they look in terms of trends going
12 forward. That program actually helped our members roll out
13 of an incentive-based thought process and into a more
14 capital investment process.

15 What I mean by that is that, you know, generally
16 incentive programs were usually offered by the utilities or
17 some other where they provide some technology associated
18 with this, and if you employ this technology we'll write
19 you a check.

20 FPIP directed the solicitation not to the
21 technology companies, but to the food processors themselves
22 and said what do you need. And what that did was it took
23 the risk of that funding away from going into technologies
24 that we may or may not use but actually went to
25 technologies that we actually wanted and would employ right

1 away.

2 And, so, FPIP helped us to understand that it's
3 not a matter of just setting something in and getting a
4 check, but some of our members who really caught on early
5 on began to figure out that I can look ahead five, 10 years
6 and get my capital budget and get these things done now.
7 And all of it was associated with emissions reductions.

8 Now, how did that help the workers? Well, you
9 know, I mean it generated jobs associated with installation
10 of this and it also got our members thinking in terms of
11 outside the box how else can we get more efficient, how
12 else can, you know, keep up with where the State is trying
13 to go, but without them, you know, kind of running over us
14 in terms of just pushing green technologies on us that
15 really don't fit our particular area.

16 So, one of the things that we're hoping that we
17 can see in the future is that the State in terms of the
18 regulation -- well, let me get to that question. I'm kind
19 of jumping ahead here.

20 MS. ZABIN: And, John, you are approaching your
21 time, so --

22 MR. LARREA: Oh, I'm sorry. My boy complains
23 about that, too.

24 Let's see. Finally, okay, how will the
25 environmental regulations advance or challenge our business

1 sector in particular? What we're trying to do is to make
2 sure that the regulators and those that are developing the
3 regulations understand the difference between other
4 industries and our industries, and that they can account
5 for those in the development of the regulations,
6 themselves.

7 Being a seasonal industry, being located in the
8 valley are things that we cannot control in terms of our
9 particular industry and the development of it. So, I'll
10 stop there.

11 MS. ZABIN: Okay. Thank you so much. I just
12 want to pick up on that FPIP Program because that's a
13 perfect example of where you could also add labor and skill
14 standards to ensure that the installation is done well and
15 that workers are tied in. Those are mostly skilled trade
16 jobs that workers are tied into the State Apprenticeship
17 Program and get good career jobs.

18 And I'm hoping that may be our next speaker. I
19 haven't spoken to him, but I hear that Matt Peterson of
20 LA's Clean Tech Incubator has had some experience
21 partnering with labor, partnering with apprenticeships, so
22 I am hoping you can touch on that. I'm turning it over to
23 you now, Matt.

24 MR. PETERSON: Thank you, Carol. Good to be with
25 you and good to be with the commissioners and my esteemed

1 panelists.

2 Just for those who are not familiar with our
3 organization, the Los Angeles Clean Tech Incubator, or
4 LACTI's mission is to create an inclusive green economy in
5 three different ways. One is working with startups and
6 small businesses in the region, working to transform
7 markets connecting market signals with the practice and
8 entrepreneurs and vice versa, to create markets. And,
9 third, enhancing communities through pilots that we bring
10 the benefits of the green economy to disadvantaged
11 communities and bring in underrepresented populations into
12 the green workforce.

13 To tee this up, on the workforce angle we did
14 release a report on Friday with HR and A, the advisory
15 firm, looking at the opportunity countywide here in Los
16 Angeles for green job creation.

17 Now, eventually I think we all would concur,
18 every job is a green job as we transform the economy and
19 transition to a zero emissions and hundred percent clean
20 energy future, yet that requires a lot of intention. But
21 if we look at what is a green job, obviously, or a clean
22 energy job, whichever moniker you so choose, it's
23 everything from installing the solar panels and installing
24 the charging stations, to the technicians or the CAD
25 designers, the desk workers that make it all possible.

1 We set forth a series of recommendations in that
2 report that obviously extend statewide and nationally
3 because we don't live in a vacuum here in Los Angeles.

4 We are the largest metropolitan economy in
5 California, and the third largest in the world after Tokyo
6 and New York. So, we certainly lead on our own rights, but
7 we can't work without our partners at the State level and
8 the Federal level.

9 And the recommendations range from everything,
10 how do we really invest in the jobs that are coming? A lot
11 of our great workforce organizations and community
12 colleges, you know, they have legacy equipment, they have
13 legacy programs that may not readily represent the
14 direction we're heading.

15 So, how do we help them pivot? And we are doing
16 our own workforce training program that's focused right now
17 on some of those very areas.

18 How do we maintain charging stations, which is
19 really an IT job? It's not necessary a contractor coming
20 out and fixing an electrical connection. It's what happens
21 when the backhaul or the Wi-Fi connection goes down and the
22 data logger isn't pinging and, therefore, it shuts the
23 charger down. So, that's what we're training the workforce
24 of the future to do. We'll help on the front end with the
25 design of the system and learning CAD and project

1 management programs and getting certification.

2 So, that's really how do we invest in the future
3 of the green job workforce and prepare these individuals to
4 be part of that green economy? And, of course, as you
5 talked about, Carol, high wage, high road jobs, and that's
6 really at the center of all this.

7 And, so, part of it, obviously, we recommended in
8 that report is also -- I'll take a different order of the
9 questions -- is we need stimulus.

10 Yes, the support for the economy over the last
11 year for relief packages have been enormously important, of
12 course, whether it's unemployment or PPP for small
13 businesses, EIDL. Yet we need infrastructure stimulus.

14 So, President Biden has talked about two trillion
15 dollars in infrastructure stimulus, and that's why with our
16 transportation electrification partnership and 50 other
17 companies and organizations around the United States we've
18 called on Congress to ensure as part of that package that
19 150 billion is dedicated towards transportation
20 electrification. It aligns with President Biden's other
21 priorities and Build Back Better and, of course, on climate
22 as well as environmental justice by reducing the air
23 pollution that affects our lowest income most overburdened
24 communities the most. But that investment will help us
25 return to manufacturing, whether it's supply chain

1 manufacturers, or OEMs, making the actual automobiles or
2 buses themselves across this country.

3 And, certainly we have Proterra and BYD right
4 here in LA county that have great partnerships with labor
5 and great -- Proterra announced a great workforce training
6 program recently. Those are people that can be put to work
7 and increase the amount of production that they are able to
8 put forth by investing in their workforce and their
9 production capacity as the demand for those vehicles goes
10 up across the country.

11 As well as the charging infrastructure. How do
12 we upgrade, of course, the amount of distributed energy
13 resources needed to power the EV charging stations that are
14 going to be coming? In President Biden's goal there's
15 500,000 charging stations across the U.S. that he's called
16 for, of course, in converting the Federal fleet as well as
17 moving to ending the combustion engine as the Governor has
18 done here in California through his Executive Order.

19 So, how do we invest, of course, manufacturing
20 incentives for those vehicles, the charging infrastructure,
21 the utility upgrades that are required, and then the
22 workforce training? We put in twelve and a half billion
23 dollars for workforce training, of which a billion was
24 dedicated to utility -- excuse me, union apprentice
25 programs.

1 And then, of course, active -- zero emissions
2 active in public transit. How do we help? Not just the
3 transit, relief packages are critical to getting the
4 transit agencies to recover from, you know, the precipitous
5 loss in transit and fare income that was talked about in
6 the earlier panel, but how do we help them transition to a
7 zero emissions future? And, so, that's what those funding
8 dollars are for, as well as they're making our streets safe
9 for people to walk and bike.

10 And then, finally, the innovation. We need to
11 put money into where our innovators, our startups we
12 support every day are really creating the next big, you
13 know, climate hack to be able to advance, you know, towards
14 a zero emissions future and a carbon neutral economy. And
15 those dollars are also needed for those founders of small
16 startups and owners of small businesses that have a tougher
17 time getting access to capital.

18 Women, people of color have an institutional
19 historical barrier in getting access to capital. And, so,
20 how do we help them succeed and thrive, as we've seen this
21 COVID economy and the pandemic, itself, affect those
22 populations more than any other black and Latinx
23 populations that have suffered the most in this -- from
24 this economy and pandemic.

25 And, so, that's sort of the response to how we

1 look at the green job investments we need. Of course we
2 need to train them. We need to put people to work.

3 In terms of how our startups and small businesses
4 have pivoted through this economic crisis that's come with
5 the pandemic, they, like every small business and startup,
6 have done their best to tap into PPP. We did our best to
7 help coach them and, and guide them, and connect them in
8 that process. We provided some microloans to our startups
9 as well as the small businesses, thanks to a couple grants
10 from the Wells Fargo Foundation.

11 You know, we've done everything we can and,
12 fortunately, of the roughly 60 startups and small
13 businesses we support we've only seen one of those go out
14 of business during the pandemic. You know, it required a
15 lot of intention by those owners and founders, as well as
16 our team and other partners.

17 But we've seen some of them thrive. South LA
18 Café, a small business that's gone through our Impact
19 Acceleration Program has partnered with one of our Clean
20 Tech Startups to expand their economic opportunities by
21 using a lower emission solution by a last mile delivery
22 solution company that's trying to add their menu, the
23 café's menu, to this new company called ChewBox. And, so,
24 by ChewBox and South LA Café partnering we're expanding
25 economic opportunity for both of them. So, we've seen some

1 businesses actually thrive and grow by pivoting to this
2 situation.

3 And, finally, I think I will address the question
4 around regulations and policy. From our perspective
5 policymakers set the market signals which, you know, may
6 not have given birth to Tesla and Elon Musk's success, but
7 without those market signals, with the EV mandate, you
8 know, we know Tesla wouldn't be profitable at this moment
9 and we wouldn't have seen incredible success that's come
10 from the first mover market that has grown here in
11 California, and certainly it's gone far beyond.

12 But EVs are now the number one export in
13 California. And those market signals are critical, and
14 that's why we're active in the public policy realm with our
15 corporate partners, with our government partners, whether
16 it's the Mayor of LA, the County of Los Angeles, our
17 utility partners, Edison and DVP, and we're all working
18 together now to say, all right, the Governor set forth this
19 very bold Executive Order, and even before that Executive
20 Order on electrification was rolled out last September we
21 called for a California EV authority.

22 How do we increase coordination amongst the
23 existing state agencies and increase the financing and
24 funding tools that are available to facilitate this
25 transition, because if we're going to meet these bold goals

1 that we set here in the region through our transportation
2 partnership and have been set now statewide, we need a lot
3 of help to get there, whether it's California Energy
4 Commission and the CARB. Of course, they're both doing
5 tremendous work, but we need a lot more to succeed and hit
6 these targets on charging vehicles on the road, the
7 workforce, as well as really embracing this economic
8 opportunity that's presented in this transition.

9 MS. ZABIN: Thank you, Matt. Sorry, I was muted.
10 Thank you so much for that overview of your work and your
11 perspective on this, and I now want to introduce Bob Raymer
12 from the California Building Industry Association. Take it
13 away, Bob.

14 MR. RAYMER: Thank you, Carol. Can everybody
15 hear me?

16 MS. ZABIN: Yes.

17 MR. RAYMER: All right. We were having problems
18 earlier. I'd like to thank you, Carol, and especially the
19 commissioners for inviting me back to this forum again.

20 I'll go ahead and kick off, but just by way of
21 intro, the California Building Industry Association is a
22 statewide trade association. We have thirty-one-hundred-
23 member companies in CBIA who deal in both residential and
24 commercial construction. Approximately 85 percent of the
25 new homes built in California each year are built by CBIA

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1 members.

2 So, I'm going to pile through this and, Carol, go
3 ahead and give me the hook when it's needed.

4 So, in terms of immediate impact from the
5 pandemic, as Lance had already mentioned, the Governor very
6 early on in March went ahead and identified a number of
7 industries as essential, and construction was clearly one
8 of those industries. And he specifically made note that
9 housing construction was an essential service. And that
10 was instrumental in sort of keeping things together for us.
11 It was still, obviously, a very difficult time, but that
12 really helped, the Governor's action helped out with that.

13 However, like so many things in California, you
14 know, local jurisdictions do have the ability to come up
15 with more stringent rules. And in this particular case,
16 very few people on the planet were associated with a
17 worldwide pandemic, and so in the Bay Area things sort of
18 rolled out a lot slower than in Southern California.

19 A lot of jurisdictions in the Bay Area were
20 trying to figure out how to go forward, even though we were
21 listed as an essential service, and when the jurisdiction
22 doesn't have sort of a clear path forward, the utility
23 company, in this case PG&E, will not go ahead and do
24 service for new construction. And that was very
25 problematic because once the jurisdiction finally gets

1 things going, it will then take PG&E anywhere from two to
2 four weeks to get back up and running on that particular
3 job site. And so that really slowed things down in the Bay
4 Area.

5 But on a very positive note, in Southern
6 California, particularly the building departments put their
7 heads together, and even with social distancing and all
8 that, they figured out a variety of ways to really take
9 remote plan check and remote inspection right through the
10 roof.

11 I was on a national panel, and of the four
12 jurisdictions throughout the country that were basically
13 explaining how they succeeded at remote planning, three of
14 the four were from Southern California.

15 And that's the type of thing that's going to
16 carry on after COVID becomes a thing of the past. And
17 there's a lot of efficiencies associated with that, and the
18 good news here is I strongly suspect that some of the
19 remote plan checking and some of the efficiencies that were
20 put into the local building department process is going to
21 really help out with solar interconnections.

22 You know, that's still an issue. That's a
23 problem out there. And there's even going to be a bill in
24 the Legislature this year once again trying to deal with
25 that problem, but the locals are up for the task. And, so,

1 that was very helpful.

2 In terms of trends, as you already heard from
3 this morning's panel, there's a noticeable exodus from high
4 density areas, particularly the Bay Area, and too, of
5 course the Sacramento region and central valley. But
6 that's been going on prior to COVID. The odd sort of trend
7 that I saw was sort of the movement away from the urban
8 area to the suburban area directly associated with that
9 urban area.

10 Case in point, you know, Sacramento. There's a
11 whole lot of people moving out of, you know, urban
12 Sacramento to Elk Grove, for example. And while that's
13 really boosting the property values in Elk Grove, that's
14 good if you own a home in Elk Grove; it's not good if
15 you're a young, first time home buyer who has a lot of
16 student debt who basically wants to move to that home in
17 Elk Grove. And, so, there's plus and minuses around here.

18 In terms of the product that we're building, a
19 couple of interesting design trends are happening,
20 particularly with work at home. You know, what used to be
21 called the den is now called the home office. People are
22 really looking -- I mean that is becoming sort of a number
23 one plus in terms of marketing a new home. If you've got a
24 space for a home office, a segregated home office or a home
25 gym, one or the other -- that now become a very marketable

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1 item for new homes.

2 And looking on in terms of environmental
3 challenges or whatever, clearly a major challenge that
4 we're dealing with now is decarbonization in both new and
5 existing buildings, and that, of course, includes both
6 residential and commercial.

7 And I'd like to point out, you know, it's not a
8 question of can it be done. Of course it can be done. The
9 challenge for industry is getting it done on an accelerated
10 schedule.

11 And looking at the recent solar mandate, industry
12 work with the CEC, particularly Chairman Hochschild and
13 Commissioner McAllister, for nearly a decade, and it was a
14 heavy lift, but over the course of that years, that 10-year
15 period, we basically created a smooth transition.

16 And this sent a very clear message to the rest of
17 the nation. We had 49 other states, the Building Industry
18 Associations in those states that we were pretty much nuts,
19 but by the end of the day, by the time we hit January of
20 2020, we actually had the nation's first solar mandate, and
21 California didn't fall into the ocean. As a matter of
22 fact, people, quite frankly, they knew it was coming. They
23 were ready for it, and that was a very good thing.

24 And now the CEC and other agencies, of course,
25 are pushing for decarbonization, electrification, if you

1 want to refer to it that way, for both homes and commercial
2 buildings.

3 But this is going to happen on a much more rapid
4 pace than with the solar mandate. And with this
5 accelerated effort brings significant challenge, and COVID,
6 you know, isn't helping all that. And, in particular, it's
7 going to be with the labor sector and with grid
8 reliability.

9 You know, we need to retrain our existing
10 workforce to become very familiar with products and
11 installations, you know, particularly in the residential
12 sector. We've got to become familiar in a very quick
13 fashion with electric heat pump water heaters and electric
14 heat pump space heaters. That's easier said than done when
15 you've got COVID sort of hanging over your shoulder. And
16 the Energy Commission is certainly going to be assisting us
17 with that. But once again, it can be done. It's just
18 can't happen overnight.

19 I think, though, putting that aside, the bigger
20 challenge as it exists with the labor market and with our
21 electrical grid. As we well know, there's tens of
22 thousands of individuals that are employed in high-paying
23 jobs in the gas industry, and the State is giving very
24 clear signals that, you know, over the course of time these
25 individuals need to be moving to a different career path

1 such as renewable energy industry. But let's face it, that
2 is a lot easier said than done, and it's a very emotional
3 thing to have to basically have someone who's been in the
4 job capacity doing very well at it for 20, maybe 25 years
5 and basically saying it's time that we start looking, you
6 know, to move that career path elsewhere.

7 And, you know, to be somewhat critical, I'm
8 hearing the term "compassionate transition" from one job to
9 another, but I'm not really seeing a massive plan that can
10 handle this transition. And I'm also hearing the same
11 thing from the petroleum workers. This is something we've
12 all got to work together on. Once again, it can be done.

13 And, lastly, the issue of grid reliability. An
14 all-electric home with an EV in the garage, at least one EV
15 in the garage, we've been working with the CEC staff and
16 we've come to kind of the same conclusion, that an all-
17 electric home with the EV in the garage uses roughly three
18 times the amount of electricity that that traditional
19 mixed-fuel home uses. And, of course, if industry is
20 building 100,000 new homes and apartments each year, that
21 will be what we do this year, the question is can the grid
22 handle this increased load.

23 So, once again, these are problems that can be
24 solved, but the question is can we get this done in a very
25 short period of time.

1 And, lastly, in terms of impact on the industry,
2 my friend, Matthew Hargrove, from the Building Owners and
3 Managers Association and the California Business Properties
4 Association gave me some data points that I'll provide to
5 the Energy Commission.

6 We've already heard that the shopping center
7 industry, the brick and mortars, got hit hard. To put this
8 into perspective, there was a job loss of three-quarters of
9 a million employees from basically the shopping center
10 industry throughout California. That's just California,
11 not the nation.

12 And along with that, there's a 22-billion-dollar
13 lost sales, and, of course, associated with that is the tax
14 that would have gone to local and state entities. And, so,
15 it's going to be a long, steep climb out of this, but we
16 can do it by working together.

17 So, Carol, that's my presentation. Be happy to
18 answer any questions.

19 MS. ZABIN: Thank you so much, Bob. And our last
20 speaker is another Bob, Bob Keefe from E2 Entrepreneurs.
21 I'm just going to hand it over to you, Bob.

22 MR. KEEFE: Well, thanks, Carol. I always love
23 being the last Bob on the list on the last panel of a long
24 day, mainly because I get to hear and learn so much from
25 other people. So, thank you all for letting me participate

1 in this.

2 As mentioned, I'm Bob Keefe. I'm the executive
3 director of E2 Environmental Entrepreneurs. If you don't
4 know us, we're a national organization of business people
5 who care about the environment, care about the economy as
6 well.

7 We got our start in California here about 20
8 years ago. We now have about 10,000 members and supporters
9 stretched across nine chapters from Seattle and San Diego
10 where I am to New York and North Carolina.

11 Our members are -- cover the gamut of the
12 economy. There are folks in real estate. There are folks
13 in manufacturing. They're farmers, they're tech people and
14 all of the industries that have been represented before me
15 today.

16 The one thing they have in common is that they
17 realize that the economy and the environment aren't at
18 odds, but, in fact, rely on each other.

19 And a lot of our folks are clean energy
20 entrepreneurs, investors, business owners, et cetera. It's
21 not all of our members, but it's a good chunk of them. And
22 I think what I'd like to talk about today is the impacts of
23 COVID on those clean energy workers and those clean energy
24 jobs, because it's something that we've been tracking at E2
25 for almost a decade now in one way or another, most

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1 recently through our work in collaboration with U.S. Energy
2 Employment Report, the user report which is developed every
3 year from NASEO, which you all know well and Energy Futures
4 Initiative, but we've been a part of that since the
5 beginning.

6 And from that data we create something called
7 Clean Jobs America, state-specific reports on California
8 and about 20 other states, and then industry-specific
9 reports on energy efficiency jobs and other things like
10 that.

11 So, let me just kind of frame it up for you.
12 Before COVID-19 there were nearly 3.4 million Americans
13 that worked in clean energy nationally. In California, the
14 biggest state for clean energy, about 537,000 people worked
15 in clean energy. And, yes, those are solar installers and
16 wind turbine technicians, but they're also folks that are
17 working in energy efficiency, clean vehicles, efficient
18 lighting. They're welders helping build wind turbine
19 towers and solar racking systems for residents. They're
20 electricians installing LED lighting systems in our
21 downtown office buildings, whether it's in Sacramento or
22 Los Angeles. It's HVAC folks that are putting in high
23 efficiency heating, air conditioning, ventilation systems,
24 ductless mini-splits. And it's construction laborers
25 putting in low-E windows and insulation and better building

1 envelopes, the folks that work for organizations that
2 belong to Bob's organization, for instance.

3 The median salary for clean energy workers in
4 California at the start of this year was about 27.50 an
5 hour. That's about 29 percent above the state average.

6 So, that will give you a perspective on what it
7 was like before COVID.

8 In March we started tracking using the same
9 methodology and job categories as the U.S. Energy
10 Employment Report. We started tracking unemployment
11 filings in those same job sectors. And what we found was
12 that since COVID-19 hit in March, about 71,600 Californians
13 that work in clean energy had filed for unemployment.
14 Nationally the number is about 429,000 at the end of the
15 year.

16 Not surprisingly, unfortunately, workers of color
17 have been hit among the hardest. Hispanic and Latino
18 workers, for instance, make up about 14 percent of the
19 clean energy workforce. They represented about 25 percent
20 of the job losses, and there's a lot of reasons for that we
21 can get into if you'd like.

22 But I'd also point out that the hardest hit in
23 metropolitan area, the hardest hit MSA in the country is
24 where Matt Peterson is, the LA Long Beach MSA. Thirty-
25 eight thousand clean energy workers in the LA area filed

1 for unemployment, a decline of about 26 percent from where
2 we were year earlier in clean energy employment.

3 By county, LA was also -- the Bay Area was number
4 four in the country for clean energy job losses. About
5 19,500 clean energy workers lost their jobs since COVID in
6 the Bay Area.

7 By county, LA County fell about 12 percent, San
8 Diego fell about eight percent, Orange/Alameda Counties
9 fell about seven percent.

10 We've seen a lot of -- the biggest decline was
11 back in March, I think, and we started to see some pick up
12 again in job growth beginning in June, and it's been --
13 it's been bouncing on the bottom basically is how I'd
14 describe it when it comes to returning these jobs. Yes,
15 they've been picking up a little bit, but nothing like we
16 expected with -- clean energy employers expected at the
17 beginning of this year for sure.

18 So, you know COVID-19 meant that energy
19 efficiency workers couldn't get into homes or office to do
20 energy audits and upgrades to do their jobs. It meant that
21 investors started tightening purse strings amid all the
22 economic uncertainty, derailing some large utility scale
23 clean energy projects, for instance. It sidelined
24 residential sales for solar, which in most cases was really
25 dependent on face-to-face meetings, for instance, and it

1 sidelined the availability of supplies to companies. You
2 know, I've talked to some of our solar folks who had the
3 work to do but they couldn't get the panels out of
4 factories, whether they're domestic or in China.

5 One of the biggest wind turbine manufacturers in
6 America had a huge COVID outbreak at two of its plants.
7 They couldn't get turbine parts. They couldn't get the
8 nacelles and other parts out of those factories and into
9 the hands of the folks in California and elsewhere that are
10 trying to install them.

11 So, we're starting to see those jobs come back,
12 but at the same time actually we're now starting to hear
13 from some of our members, anyway, and other employers who
14 are saying the other problem is we can't find enough
15 workers now. We can't find enough skilled workers. So,
16 how is that when you have a huge hit in employment in clean
17 energy and then you have people saying we can't get enough
18 workers.

19 Well, think about one of the biggest sectors in
20 clean energy is construction jobs in one way or another as
21 I mentioned, welders, electricians, construction laborers,
22 et cetera. And some of the growth that Bob and the
23 building industry has seen recently thanks to low interest
24 rates, and remodeling projects, and new home construction,
25 et cetera, has kind of sucked some of those employees out

1 of clean energy because these folks need a paycheck, and
2 they're going to go where things are growing.

3 So, a lot of employers that we've talked to in
4 clean energy have said that when things do come back, and
5 when they come back big, and when it comes back under the
6 policy that you're seeing under the Biden administration,
7 from the policies we're seeing in California, we're
8 actually going to need a hell of a lot more workers than we
9 had previously. And in order to get those workers we're
10 going to need to train them up.

11 So, one of the things that we're really keeping
12 our eye on is the kind of thing that Matt Peterson was
13 talking about earlier, which is workforce training. We
14 need to figure out how to get more employees trained up for
15 this type of work so they can transition into this work
16 when it does return big time, and we know it's going to
17 return big time. We know it from what's happening in
18 Washington, we know it's happening in Sacramento. We know
19 from what the markets are doing and what investors are
20 doing.

21 You know, earlier today I was actually on a
22 Brookings conference call with Larry Finke of BlackRock who
23 basically said, look, there's actually a lot of private
24 capital on the sidelines right now that is just looking for
25 ways to invest in clean energy in the United States. Right

1 now, most of our investments -- BlackRock's investments he
2 said for its -- for the clients and advisors are going
3 overseas when it comes to clean energy investments. That's
4 going to change. That's going to change with the policies
5 and the leadership on clean energy that we're seeing at the
6 Federal level for sure, and it's going to change here in
7 California because of that and because of the leadership of
8 CEC and the State Legislature and the Governor's office.

9 Where is that growth going to be? You all
10 probably know it as well as I do, yes, it's building
11 decarb. Switching to electric buildings means electric hot
12 water -- heat pump hot water tanks. It means ductless
13 mini-splits. It means induction stoves. It means LED
14 lighting systems. Somebody has got to make all that stuff.
15 Somebody has got to install all that stuff. Somebody has
16 got to sell all that stuff. It's going to be in storage,
17 of course, the holy grail of clean energy has been found, I
18 think, and we're going to see a lot more storage obviously
19 down the road, and those are ranging from the LG battery on
20 my garage that's hooked to my solar panels to the
21 truckloads of those that are serving as storage for utility
22 scale solar and wind all across the country, and, of
23 course, yes, EV, electric vehicles. Yes, cars, but also
24 buses, trucks, yard vehicles that are working at our ports
25 and in our shipyards and our warehouses and so forth.

1 And it's in grid modernization. That -- you all
2 know this better than I do, but we've got to do something
3 about the grid. The opportunities are there. Several of
4 the other speakers, many of the other speakers today talked
5 about that.

6 I was talking earlier this week, or rather last
7 week with one of our E2 members who -- he's in Colorado,
8 but he runs a major wind development. He's done a lot of
9 work in California and a lot of other states. But he told
10 me basically, Bob, it's almost getting -- yes, it's great
11 that everybody wants more wind and solar, and we stand
12 ready to build it, but here's the deal. It's almost
13 becoming not economical to do so because the cost of wind
14 energy has become so low, which is great for consumers,
15 it's great for all of us, but there's going to be --
16 they're starting to get pressure on wind, and solar
17 development for that matter, could be able to build these
18 projects at prices that justify the construction of them.
19 That's a good thing for anybody who uses juice, right. But
20 we need to figure out how to get that cheaper electricity
21 around and available to more places. And to do that we
22 need to fix the grid.

23 So, the last thing I'd like to mention, and sorry
24 if I'm rambling, but is around equity. I mentioned the
25 diversity issues in clean energy. Right now, clean energy

1 is about 75, 78 percent white males, actually. Clean
2 energy has got a diversity problem. We should be looking
3 at ways to fix that, and we can do that with the programs
4 and the policies that we're seeing both at the State and
5 the Federal level now.

6 And we need to figure out how to get those
7 opportunities in clean energy not just in jobs, but in the
8 benefits of lower monthly electricity bills, and the
9 benefits of cleaner energy into the communities that have
10 been bypassed by this industry so far -- LMI communities,
11 communities of color, rural communities, and communities,
12 frankly, that have been impacted by the transition or being
13 impacted by the transition into cleaner energy.

14 So, I'm hopeful that we can find solutions to
15 train the workers that we need for the clean energy
16 industry, get them back to work, and do it in a way that
17 opens opportunities for all of us.

18 And, Carol, I'll turn it back to you if that's
19 the plan here.

20 MS. ZABIN: Okay. So appreciate the data, and
21 information, and perspective from all of you.

22 And to sum up, we've seen a lot of different
23 stories, and I think it's really important to highlight
24 that each industry is different, and the challenges and the
25 solutions are different.

1 I heard a common theme of being willing to work
2 with government and other partners to solve problems,
3 including the challenges posed by COVID and by
4 environmental regulation.

5 I was pleased to hear people discuss workforce
6 inequity issues, including job loss associated with natural
7 gas or other fossil fuel decline, including the need for
8 diversity and inclusion, and including the need for
9 training. I didn't hear too much discussion about low-wage
10 jobs, and I just want to highlight, since taking ownership
11 of being a moderator that I hope in the future the business
12 community really does engage on that front as well.

13 And I want to just point out the Biden
14 administration's Executive Order really on climate, if you
15 look at the number of times the phrase "good union, clean
16 energy jobs" was in that Executive Order, it was, you know,
17 at least a dozen times. And I think that is a very
18 different perspective than our last Democratic president,
19 President Obama, who I cherish, but who talked about green
20 jobs, and I think there really is a recognition at the
21 Federal and the State level that the power of -- the
22 bargaining power of workers in this economy is important,
23 that equity is important, and particularly with stimulus
24 which stimulus really is going to more than anything invest
25 in construction infrastructure. And those are trades jobs,

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1 and we know that we have a gold standard in training there
2 that also works to diversify the workforce through
3 registered apprenticeships.

4 So, I'm going to stop there and ask the
5 commissioners to respond and ask questions, and we can have
6 a more free-flowing discussion. Commissioner McAllister, I
7 don't know who else is here from the commission, but I'd
8 love you to respond to this panel.

9 COMMISSIONER McALLISTER: Yeah. Can you hear me,
10 Carol? I'm switching from phone to computer.

11 MS. ZABIN: Yes.

12 COMMISSIONER McALLISTER: Okay, great. Well, I
13 want to just thank everybody, first of all, for being on.
14 Very diverse perspectives here, some common themes.
15 Obviously, as you said, Carol, the sectors are distinct and
16 need really tailored solutions, a lot of diversity across
17 our state.

18 Plus heartened to hear the success of the -- not
19 surprising, but heartened to hear about the success of the
20 FPIP model, and I think there's a lot of opportunity to
21 channel any stimulus funding, whether it's Federal or
22 State, or, you know, programmatic directed funding from the
23 Legislature to that kind of a model.

24 I totally agree that, you know, it has to be a
25 partnership, not widget focused but process focused and

1 integrated with the particulars of the business of the
2 particular sector.

3 So, we try to be flexible but still performance
4 oriented, and across the board that's the solution that I
5 think we're seeing over and over again, gets the most
6 success. So, those kinds of partnerships really positive
7 about.

8 I guess, let's see, I have a couple of -- well, I
9 want to make one observation. You know, climate is
10 different from many of the other problems that we've had in
11 the energy sector. I mean we are not going to solve the
12 climate problem without in large measure simultaneously
13 solving our social justice and economic inequality
14 problems. That just seems increasingly clear. I mean,
15 again, it's sort of not rocket science. You know, we need
16 to solve those problems for many, many good reasons
17 independently of climate, but I think climate is the kind
18 of problem that is the ultimate community resource problem,
19 common pool resource problem.

20 And, so, you know, just on a performance basis
21 we're not going to get our emissions down if we don't bring
22 everybody along, and that means sustainability across all
23 the different metrics you've been discussing here. So
24 that's both giving access to, you know, low-income
25 disadvantaged communities. You know, we're developing

1 different terminologies better, more kind of just
2 terminologies for those folks, but as receivers of clean
3 technology, but also as participants in the clean energy
4 economy with good jobs.

5 And, so, this is a huge complex problem and so I
6 think just the collaboration we need across all the
7 business sectors, and government, and nonprofit, and local,
8 you know, government at all levels is just -- I think it's
9 unprecedented. And we have a huge opportunity as we
10 creatively think about how to restart and grow our economy
11 again and target how we're going to do that. So, I think
12 there's a lot of -- at high level I'm just describing we
13 have a lot of opportunity, but, you know, it comes with a
14 lot of difficult conversations and discussions.

15 So, my question, you know, Bob O'Keefe (sic.),
16 you pointed out the U.S. Energy and Employment Report, what
17 you guys do with the data that NASEO and EFI come up with.
18 Every year I've been involved in that for a number of
19 years. And, you know, those numbers are staggering, and
20 the Biden administration talks about eight million, 10
21 million good paying jobs in clean energy sector.

22 If you do the numbers in California, we're
23 talking 10s really hundreds of billions of dollars in
24 investment, and the question is where is that going to come
25 from? And, you know, obviously the State can't subsidize

1 really even a large -- you know, a good-sized fraction of
2 that, a small fraction perhaps. And what do entrepreneurs
3 need -- and you said there's lots of capital, you know, on
4 the sidelines. That's been the case, you know, for a long
5 time, way pre-COVID. We've had low interest rates and lots
6 of capital, searching for a place to go. What's it going
7 to take for capital to find projects in communities across
8 the state and organize the supply chain and the value
9 proposition for the customer to get those projects in the
10 pipeline and done as scale?

11 And this isn't just a question for Bob O'Keefe,
12 but I think for everybody. But if we're going to get into
13 our, you know, 12 million homes and all of our business and
14 all the establishments, you know, building in the state, if
15 we're going to get into those and retrofit them, it's a
16 serious pipeline and it needs to be done over the next 15
17 years, 15, 20 years. So, what ideas do you have for how to
18 sort of, you know, begin to get that done in scale?

19 MR. KEEFE: Well, thanks for that. This is Bob
20 Keefe with E2. I'll start, since I think you kind of
21 directed that at me, and see what I can come up with.

22 But, you know, certainly a big chunk of this has
23 got to be at the Federal level, right. One of the
24 questions was about how have companies and others
25 benefitted from the stimulus that we've had so far.

1 I would suggest that we haven't had a stimulus so
2 far. We've had some recovery. We've had some rescue. We
3 had PPP and absolutely that helped just about every company
4 in America, including clean energy companies. It helped
5 them get back on their feet. It didn't help them run. We
6 haven't had the type of stimulus that we saw, for instance,
7 in 2009 where the Federal government injected 90 billion
8 dollars into clean energy projects through the American
9 Recovery Reinvestment Act.

10 What did we get out of that? We got something
11 like 100,000 clean energy projects around the country. We
12 got a million homes weatherized. We got Federal loan
13 guarantee programs that invested in companies like Tesla,
14 for instance, that paid its loan back in full, as we all
15 know, and about 450 other companies that created millions
16 of jobs behind it, Tesla alone 48,000 jobs, I think.

17 So, certainly a lot of it is going to have to
18 come from the Federal -- at the Federal level and trickle
19 down through the states as it does through grant --
20 community grant programs and other things like that, I
21 believe.

22 Certainly it's going to -- but just as
23 importantly as that market signal that we've been talking
24 about throughout today that is so important in government's
25 actions to drive target markets, guys like Larry Finke that

1 I mentioned, they're sitting on the sidelines with that
2 money waiting to do something. Yeah, it's been around for
3 a while, but we haven't had the conditions, at least at a
4 Federal level, to unlock that until recently.

5 In California the successes that we've seen here,
6 thanks to you all and the other leadership in the state,
7 that's starting to be seen in other parts of the country as
8 well, and you see some of these states coming on and
9 following California in everything from the Clean Trucks
10 Rule to clean vehicles, et cetera.

11 So, the other component I think is going to be
12 the need for things like green banks. There's legislation
13 now in the works nationally for a national green bank
14 essentially. Connecticut pioneered this idea many years
15 ago and has done a pretty good job, and California has
16 talked about it for a long time. That's something that can
17 help I think, channel some private investments and pool
18 some of this money to jump start some of these projects.

19 COMMISSIONER McALLISTER: Thanks, Bob. Anybody
20 else want to talk about maybe models for channeling private
21 capital to projects across the state for decarbonization?

22 MR. RAYMER: Yeah, I'll take a stab at it. Two
23 thoughts come to mind, and, Commissioner, you and I have
24 talked about this in the past.

25 First off, in terms of planning and land use,

1 both new residential and commercial. To give you an
2 example, both Newhall and Tejon Ranch, you know, the two
3 very large southern California projects, have been in the
4 planning stage for over 25 years. In the case of Newhall,
5 it's 30 years. And they're finally getting off. They're
6 finally going to be building homes. But if there is a way,
7 if basically in plan check if they can show that they're
8 going to be doing X, Y and Z in terms of electrification,
9 in terms of battery storage, grid harmonization, you name
10 it.

11 There's any number of things that can speed up
12 that planning and land use process and give them some
13 certainty about when things -- that will be worth enormous
14 financial benefit to that project and, in turn, that money
15 can be channeled into more productive things other than
16 attorneys.

17 And, so, that is one thing in the course some
18 facsimile similar to the New Solar Home Program for battery
19 storage, et cetera. The fact is back in 2012, you know
20 that we had a market penetration of less than one percent
21 for rooftop solar. But that relatively small amount of
22 money that was used there, you know, it was a game changer.
23 You know, within five years we had a market penetration of
24 between 25 to 30 percent. And that, you never see a
25 program that successful. It was stunning. I've been doing

1 this for 40 years and, still, that will be the one program
2 that I always remember that this actually changed the face
3 of construction.

4 And, so, things like that where government can
5 partner with the private sector and, in turn, you know,
6 basically leverage a lot of different programs together at
7 the same time, you can leverage that and it will work. I
8 mean new solar homes was an example that, you know,
9 basically tweaking (audio skips) a little bit, no major
10 changes, but basically providing some assurance and
11 certainty on the planning and land use process, that would
12 be worth millions of dollars. Thank you.

13 COMMISSIONER McALLISTER: Thanks, Bob Raymer, and
14 then thanks Bob Keefe.

15 I guess anybody want to talk about maybe existing
16 buildings. I mean actually when I asked the question I was
17 thinking about both, but really primarily the huge, you
18 know, preponderance of existing buildings that are the ones
19 we need to get into along the road to 2045 and beyond.
20 And, you know, if you do the numbers it's a lot of billions
21 of dollars to get into those buildings and upgrade them in
22 various ways for decarbonization.

23 So -- and, Carol, feel free to chime in here as
24 well, anybody who wants to step up to that questions. I'm
25 conscious of the time. This will be my last question, and

1 then if there are other commissioners on the line, either
2 Commissioner Monahan or Douglas. I don't see either of
3 them at the moment.

4 MS. SABIN: Any other commissioners on the line?
5 No, okay.

6 COMMISSIONER McALLISTER: It does not look like
7 it.

8 MS. SABIN: Andrew, Commissioner McAllister, I
9 mean you and I -- you've dedicated your life to energy
10 efficiency, which is I've dedicated a few years of my life
11 to it. And it's really one of the toughest ones, and I
12 think it would be good to kind of admit that utility
13 incentive programs haven't really moved the needle very
14 much, and to really try some new and different models, I
15 mean I would always push models where the workforce --
16 where the job outcomes can also be good, and I think there
17 are plenty of those.

18 I still think public investment in the whole much
19 sector is key, and that produces jobs and really builds the
20 industry and builds the knowledge and knowhow and practice
21 of contractors who already work in those sectors to them
22 expand. I mean we kind of started with residential in
23 California, and I think if we had started with public and
24 commercial we would have had a more solid group of
25 contractors, more highly skilled workforce.

1 And then the other, you know, idea that you
2 thought of that has never really played out is procurement.
3 So, you know, we do pilot programs for emerging
4 technologies and emerging business models to procure
5 electricity, and we could do the same for procuring savings
6 of electricity, and we haven't really totally explored
7 those models of putting out pilot programs for procurement
8 that could have labor standards embedded in them and really
9 spark the entrepreneurs who are willing to take some risk
10 in those investments for a guaranteed market. A guaranteed
11 market of procurement is a very powerful tool.

12 So, other questions? May I ask the CEC staff if
13 there's questions from the audience, because we only have
14 six more minutes.

15 MS. RAITT: Sure. This is Heather. Thanks,
16 Carol. Mark Palmere, would you go ahead and share a couple
17 of our questions? Thanks.

18 MR. PALMERE: Yeah, it looks like we have two
19 from the audience.

20 The first one is from Robert Perry is about the
21 possibility of vehicle grid integration in the industrial
22 microgrids. I'll just -- you guys can kind of read this
23 setup, but the question is, "How does vehicle grid
24 integration implemented in your respective areas through
25 development of commercial, industrial microgrids, zero

1 carbon fleets and a trained local workforce advance
2 California's proposed pandemic recovery while also
3 addressing resource adequacy, transportation
4 decarbonization and equity goals?" Just open that up to
5 anyone who would like to respond.

6 MR. PETERSON: I'd like to respond and take a
7 stab.

8 You know, I think -- I mean vehicle the grid, or
9 vehicle the building or vehicle the home is still something
10 that's emerging, as most of you all know.

11 I will say we've taken a look at -- we're really
12 focused on heavy duty charging infrastructure in and around
13 the ports complex of Los Angeles and Long Beach, nothing
14 along the 710 out to the Inland Empire, and we've been
15 studying sites both on their ability to integrate public
16 charging, so to speak, for a class A truck drivers, drayage
17 truck drivers, as well as how we integrate the DER into
18 those high-speed fast chargers that are going to require an
19 enormous amount of electricity.

20 It's certainly an opportunity that we're getting
21 towards the end of our study to determine that financial
22 feasibility, what level it makes sense and doesn't make
23 sense. But those are certainly great opportunities for the
24 workforce and the kind of thing that we've included in our
25 Federal stimulus proposal to integrate DER storage along

1 with storage and solar primarily with charging.

2 And, you know, I think there's a solicitation on
3 the street right now from DOE that will, I think, promote
4 -- profligate, you know, pull forth some BGI pilots with
5 some utilities that may have been reluctant before,
6 including seeing some movement from the Department of Water
7 and Power as OEMs and utilities begin to engage more in
8 dialogs about how to really tackle BGI.

9 MS. ZABIN: Thanks, Matt, and, you know, you
10 might want to put the website for your new report with
11 stimulus recommendations on the chat.

12 MR. PETERSON: Okay.

13 MS. ZABIN: Anybody else want to tackle that or
14 should we move on to the next -- the last --

15 MR. RAYMER: Well, I think one very quick thing.
16 It doesn't get to the heart of the question that was asked,
17 but sort of an emerging thing that we're working on right
18 now. This is the Department of Housing and the Energy
19 Commission staff along with ARB staff. We're updating our
20 green buildings standards, and, you know, looking at my
21 crystal ball, for the regs that are going to take effect in
22 2023 there's going to be a quantum leap for multifamily
23 construction. And instead of having a few spaces that are
24 what we call, you know, EV capable for level two, we're
25 looking at massive application of level one.

1 So that if you've got assigned parking, you know,
2 in a secured area or whatever, you're going to have access
3 to level one. Oddly enough, that's not around now. Yeah,
4 you'll find a plug here and there, but we're looking to
5 make sure every dwelling unit has access to that level one.
6 And when you're, of course, staying there overnight, that's
7 kind of what you need, plus from an energy standpoint it's
8 much easier to handle that load than a series of level two.
9 So, that's in the works right now. We're going to have
10 another workshop next week on this very subject.

11 MS. ZABIN: Thank you.

12 MR. PETERSON: One thing to add, Bob, to your
13 comment. There's a company down here called PCS Energy
14 that's installed about eight to a thousand of the 10,000
15 chargers the Mayor just announced that have been installed
16 within the city of LA, and a lot of those have been
17 installed in multiunit dwellings, permanent buildings
18 without adding additional electrical capacity because
19 they're really looking on how to manage that load through
20 software managing the chargers and the use.

21 MS. ZABIN: And, Matt, I just want to catch that
22 last question before we end our panel.

23 MR. PALMERE: Yeah, I guess this is the other
24 questions. We have a couple of minutes. So, it's for Bob
25 Keefe, if you could perhaps quickly address more detail

1 about the reasons for a higher percentage of African-
2 American and Latinx unemployment and clean energy job loss,
3 which is a higher percentage compared to the total
4 percentage.

5 MR. KEEFE: That's a great question. Thanks for
6 that. So, I think it depends on a number of things. And,
7 by the way, mainly it's Hispanic and Latinx workers who
8 have been hit the hardest in clean energy with
9 unemployment. Blacks and African-Americans have actually
10 done a little bit better. But still communities of color
11 have been hit the hardest for sure.

12 So, part of it has to do with demographics. I
13 mean if you think about where I mentioned was the biggest
14 decline in clean energy jobs in America was in the LA MSA.
15 The LA MSA is about, I think, majority Hispanic, Latino
16 right now -- Latinx right now. So, that's part of in
17 California, for instance.

18 The other part is the labor force makeup. A lot
19 of -- a huge number of clean energy jobs are, in fact, when
20 you get down to it construction jobs. They're construction
21 laborers. They're energy efficiency jobs. They're
22 installation jobs, HVAC jobs, et cetera. And there is a
23 very large population of Hispanic and Latinx folks that
24 work in construction. So, there's that.

25 And then lastly is kind of the societal thing

1 that we've kind of touched on here, and the need for
2 workforce training and education, which is simply the lack
3 of diversity in clean energy generally.

4 Because people want to do what they see, and
5 let's face the facts, you see a lot more solar panels and
6 Teslas in Santa Monica than you do in Watts. You see a lot
7 more clean energy opportunities in white communities than
8 you do in communities of color. So, you have fewer people
9 going into these jobs to begin with. And that's, again,
10 something that what's the right policies and a focus on
11 workforce education and equity we can hopefully start to
12 address.

13 MS. ZABIN: Yeah, and I'd just like to point out
14 in every recession unemployment is worse for folks of color
15 than --

16 MR. KEEFE: That's true.

17 MS. ZABIN: There is a hierarchy in the labor
18 market, and as we talk about diversity we just have to link
19 that to the job quality so that people aren't just in the
20 worst -- the folks of color aren't just in the worst and
21 lowest wage jobs in the clean energy, just as in the
22 economy as a whole.

23 So, I'm going to wrap up. I want to thank all
24 the panelists and thank the commissioners for this
25 opportunity to have a rich discussion, and I wish you all

1 well. So, I think I am done with my job; is that right,
2 Heather and others?

3 COMMISSIONER McALLISTER: Thanks, Carol.

4 MS. RAITT: Yes. Go ahead, Commissioner.

5 COMMISSIONER McALLISTER: No, sorry. I was just
6 saying thank you, Carol, and thank you all panelists.
7 Really appreciate your comments and hope you to get your
8 engagement as we move forward throughout the IEPR cycle
9 this year in 2021 to look at a variety of issues that are
10 going to -- like our energy infrastructures and our
11 buildings and our reliability of our electric grid. So,
12 thanks again.

13 MS. RAITT: Great. And thank you, Carol, and to
14 all the panelists. And we have reached the end of our day
15 where we will move to public comment. And Rosemary Avalos
16 is here again to help us with that from the Public
17 Advisor's Office. Can you go ahead, Rosemary?

18 MS. AVALOS: Thank you, Heather, and good
19 afternoon to all. I will first call on attendees using the
20 raised hand feature on Zoom. Please state your name and
21 affiliation and spell your first and last name. Also,
22 please do not use the speaker phone feature because we may
23 not be able to hear you clearly.

24 So, let me take a look and see who we have. We
25 have Steven Jimenez. Okay. You may need to unmute on your

1 end, Steven. Go ahead. Hi, Steven. You might need to
2 unmute on your end in order to be heard. Okay, you're
3 unmuted. Go ahead. Yes, we can hear you.

4 MR. JIMENEZ: My apologies. Perfect. My
5 apologies.

6 Good afternoon and thank you for allowing me to
7 comment at today's workshop. My name is Steven Jimenez,
8 and I'm a manager of (indiscernible) advocacy with the
9 American Lung Association.

10 We're deeply concerned about the ways that COVID
11 has had an immense impact on the state's resources and
12 Californians, and we appreciate the attention that the
13 Energy Commission is giving to the multiple lung health
14 crisis facing Californians.

15 According to our most recent State of the Air
16 Report, California is home to seven of 10 of the most ozone
17 polluted cities in the U.S. with six of the 10 most
18 impacted cities by annual level of particle pollution.

19 And as new research continued to emerge, we are
20 seeing that exposure to air pollution makes individual more
21 vulnerable to more severe COVID 19 impacts.

22 With this, we fully support adoption of 100
23 percent zero emission vehicles infrastructure and
24 technologies throughout California as rapidly as possible
25 to improve air quality and reduce transportation solutions,

1 especially for our most vulnerable and disadvantaged
2 communities who often face disproportionate health impacts
3 due to poor air quality.

4 The widespread electrification of zero emission
5 vehicles can have an immense impact and reduce a wide range
6 of public health problems, including asthma attacks, heart
7 attacks, strokes, lung cancer and premature death, which
8 often fall hardest on the state's most disadvantaged
9 communities, children, seniors and people living with heart
10 and lung disease.

11 Full transition to zero emission vehicles in
12 California could yield 22 billion dollars in annual public
13 health benefits, avoid over 1,900 premature deaths and
14 26,000 asthma attacks, according to our 2020 Clean Air
15 Report.

16 As we move forward, California must continue with
17 efforts to encourage the prioritization of disadvantaged
18 communities in the state's transition to zero emission
19 vehicles.

20 We recognize (indiscernible) in California's
21 clean air and climate standards relies in large part
22 building zero emission vehicle infrastructure as rapidly as
23 possible to spur the transition needed to meet the goals as
24 outlined in Executive Order N-79-20, and thus the urgency
25 to maintain on the zero emission vehicle infrastructure

1 across the light and heavy duty sectors, especially for our
2 most disadvantaged communities and multiunit dwellings to
3 encourage an equitable deployment of zero emission
4 vehicles, ease consumer concerns and help the state reach
5 its clean air and climate standards.

6 Thank you for your time in this matter, and we
7 look forward to working with the Energy Commission as
8 California continues its efforts to meet the transportation
9 and healthier transportation future. Thank you so much.

10 MS. AVALOS: Thank you for your comments, and I
11 would just like to remind listeners that if you are on the
12 phone dial start nine to raise your hand and star six will
13 mute and unmute you.

14 Okay, moving on Robert Perry. Go ahead. Your
15 line is open. Okay, there we go. Go ahead, Robert. You
16 may need to unmute on your end. Thank you.

17 MR. PERRY: Can you hear me?

18 MS. AVALOS: Yes.

19 MR. PERRY: Yeah, hi. My name is Robert Perry,
20 R-O-B-E-R-T, Perry, P-E-R-R-Y. I'm an independent energy
21 policy consultant.

22 And I'm just kind of adding on to the question I
23 posed to the last panel concerning commercial and
24 industrial micro-grids and utilizing vehicle grid
25 integration technologies.

1 One thing that may have gotten lost in the
2 translation, and I apologize for the length of my question,
3 was the fact that, you know, most commercial, industrial
4 zones are located adjacent to low-income communities who
5 are disproportionately impacted by the emissions from these
6 commercial, industrial sites. And it's a real opportunity
7 to decarbonize the commercial, industrial zones which will
8 benefit the low-income communities. If you can combine
9 that with promoting microgrid technologies at schools,
10 which are general perceived of as -- or perceived as
11 critical facilities, there's the opportunity to build a
12 curriculum around these technologies which would ready
13 local students to enter the local workforce.

14 So, there's a lot of synergies that are presented
15 by this opportunity, and I encourage the Energy Commission
16 and other state agencies to really take a hard look and to
17 develop those areas.

18 Thank you very much.

19 MS. AVALOS: Okay, thank you. And, again, I'll
20 give a few more seconds and see if there are others who
21 would like to make a public comment. Again, a reminder, if
22 you're on the phone, it's star nine to raise your hand, and
23 if you are on Zoom you can go ahead and raise your hand
24 with the raised hand icon. Okay. Seeing there are no
25 raised hands, I'm going to turn to Commissioner McAllister.

1 Go ahead.

2 COMMISSIONER McALLISTER: Well, great. So, this
3 is the end of the day, correct. I just wanted to sort of
4 confirm. Do we need to do wrap up comments?

5 MS. RAITT: That's it, yeah. If you have any
6 comments.

7 COMMISSIONER McALLISTER: Well, great. Thanks
8 for this third excellent panel. What a day today. Really
9 a lot of information, a lot of food for thought. This is
10 exactly the kind of creative thinking and lots of kind of
11 laterals that we I think highlighted for further
12 exploration. Certainly the updating of our network on some
13 of these long-term issues that we're facing in California
14 through COVID and beyond as we try to restart the economy
15 and really leverage that opportunity to help the clean
16 energy sphere, and do it in a way that's just equitable.

17 So, I think today has really served us well as a
18 kickoff point for the 2021 IEPR. So, I want to just thank
19 again everyone who participated, everyone who stuck it out.
20 We've got 49 people still on the line.

21 And again, all of our excellent speakers, really
22 appreciated the conversation today, looking forward to
23 doing the continued spade work throughout the course of the
24 year, and producing a really valuable IEPR that helps us
25 head in the right direction for the long term.

1 So, with that, I think I'll turn it back over to
2 Heather to wrap us up, and send us off.

3 MS. RAITT: Okay, great. Thank you,
4 Commissioner, and thank you again to all the panelists for
5 being here today. Welcome you to submit written comments,
6 and they are due on February 23rd, and please see our
7 notice for information about how to do that, or you can
8 contact us and we'll be happy to help you. And so that's
9 it. Have a great rest of your afternoon.

10 (The workshop adjourned at 4:26 p.m.)

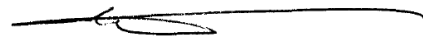
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And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 13th day of April, 2021.



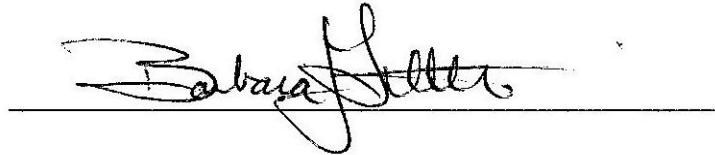
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IN WITNESS WHEREOF, I have hereunto set my hand this 13th day of April, 2021.

A handwritten signature in cursive script, appearing to read "Barbara Little", is written over a horizontal line.

Barbara Little
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