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CALIFORNIA ENERGY COMMISSION

In the matter of:

2021-2023 Investment Plan	)	Docket No. 21-ALT-01
Update for the Clean Energy	)	
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CLEAN TRANSPORTATION PROGRAM

INVESTMENT PLAN ADVISORY COMMITTEE MEETING

REMOTE VIA ZOOM

THURSDAY, SEPTEMBER 16, 2021

9:00 A.M.

Reported by:

Peter Petty

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P R O C E E D I N G S

9:03 A.M.

TUESDAY, JUNE 29, 2021

MR. BRECHT: Good morning everyone. Welcome. My name is Patrick Brecht and I'm the Project Manager for the 2021 to 2023 Investment Plan Update for the Clean Transportation Program. I want to thank you all for being here.

And I'll just start off with some housekeeping.

The workshop is consistent with Executive Order N-08-21 to continue to help California respond to, recover from, and mitigate the impacts of the COVID-19 pandemic. The public can participate in the workshop consistent with the direction in the Executive Order.

This meeting is being recorded and we ask you to mute yourself -- (clears throat) excuse me -- when you're not speaking -- (clears throat) excuse me -- and star six, or asterisk six, for the telephone.

The transcript of this meeting will be made available on the Energy Commission website. There will be an opportunity for public comment at the end of the meeting. And written comments submitted to the docket are very strongly encouraged.

Do we have the slide up?

MR. BOBADILLA: On it.

MR. BRECHT: Okay. Great. If you can advance to the next slide?

MR. BOBADILLA: Hold on. I think I got the wrong slide. My apologies.

MR. BRECHT: Sorry. Bear with us for a moment.

MR. BOBADILLA: Can you see the slides?

MR. BRECHT: Yeah. Go ahead and advance if you can, Jonathan. Thanks. Great. Oh, one back please. Great.

The location of the docket is 21-ALT-01, as mentioned on this slide.

We ask the Advisory Committee Members to indicate that they would like to speak or comment by using the raise-hand feature. We'd also like you to identify yourself before you speak. And telephone participants, dial star nine to raise your hand. And be sure to keep the chat box open in case you receive any messages. We have a lot to cover today. And since the meeting is virtual, we may have to limit Advisory Committee

Member comments to three minutes per discussion topic and, perhaps, one to two minutes for public comment.

You can advance the slide please.

Today's agenda will begin with opening remarks by Lead Commissioner Monahan. Presentations will include an overview of the Clean Transportation Program. We'll then have a presentation on updates to AB 2127, the Charging Infrastructure Assessment Staff Report published in July 2021, and the SB 1000 Electric Vehicle Charging Infrastructure Deployment Assessment. We also have a staff presentation on tracking community benefits. This will be followed by updates to the Clean Transportation Program funding. We'll then have a presentation that will include an update on the General Funds and how the funds will impact the Clean Transportation Program. Lastly, we'll discuss changes and reallocations in the Revised Staff Draft of the Investment Plan. This will be followed by an Advisory Committee discussion headed by Lead Commissioner Monahan.

And with that, I will turn it over to Commissioner Monahan for opening remarks.

COMMISSIONER MONAHAN: Sorry folks. I'm having a hard time un-muting. Well, welcome everybody. Great to see so many of you on video. As I was saying before the meeting started, I really miss the fact that we can't meet in person. You know, it definitely takes away from the interpersonal experience when we're on Zoom.

So what I would ask, if you can, since we -- it's been a long time since we've all seen each other, and not everyone will remember everyone from the Advisory Committee, so if you can adjust your name so you can put your organization afterwards, after it, just so that -- I think it will be easier for the group dynamic.

So I want to welcome you all to the Advisory Committee discussion on this year's Investment Plan. And as you all, I think, know, this is the largest amount of funding that we've ever had for zero-emission infrastructure and other clean transportation investments, so this conversation is particularly important.

When we met in April, we had a draft plan to spend our regular allotment of a little bit less than $100 million. And with the infusion of

$1.165 billion from the General Fund for zero-emission vehicle infrastructure and grants to zero-emission vehicle manufacturers, this Advisory Committee meeting and other stakeholder engagement is just more critical than ever.

So as my colleague and Manager of the Clean Transportation Program's Investment Plan, Patrick Brecht, will elaborate, our goal is to bring the Investment Plan for a vote before the Commission in November, so that's about three months away. So I'm really looking forward to discussion and feedback on our Revised Investment Plan. We want to make sure that we are appropriately balancing investments to support the state goals for zero-emission transportation and other state goals, and that our plan advances equity and provide concrete benefits for low-income and disadvantaged communities.

I want to thank all of the Advisory Committee meeting -- Members who filled out our survey about these Zoom meetings. We wanted to hear from you about what was working and what was not working. So the majority of respondents recommended that we pretty much stay the course and that we had the right balance of presentations and discussions. So that's -- we're just kind of staying the course on this meeting.

One thing I should emphasize is that, you know, the meeting is supposed to end at one o'clock. We have a public comment period that will begin at noon, so we're talking about three hours of concentrated Advisory Committee time. There's no breaks built in, I'm sorry about that, so you should feel free to take breaks as you need them. But we were trying to balance, like, well, the meeting, we wanted to keep it -- like three hours seems like the maximum that anybody could sit in a Zoom meeting, so we were trying to like just keep the time for this contained. So feel free to take breaks, walk around, stretch, do what you need to do.

So with the backdrop of this year's large infusion of funding, I wanted to remind you all about the roles and responsibilities of Advisory Committee Members. In general, Advisory Committee Members are ineligible to apply for or receive funding from the Clean Transportation Program. There are just a few exceptions, which are laid out in the Roles and Responsibilities document.

If you have questions, please do reach out to Patrick with your questions. We're also going to be recirculating the Roles and Responsibilities document to everybody just so -- just to keep it fresh in your mind.

So I think that's it for my opening remarks. I'm going to turn the mike over to Patrick Brecht now for a brief overview of the Clean Transportation Program.

MR. BRECHT: Thanks Patty.

I should add, the Roles and Responsibilities document is on the docket if you wanted to refresh yourself with that.

Okay, I will turn over to a brief overview.

The Clean Transportation Program was established by California Assembly Bill 118 in the year 2007. The program is funded through a small surcharge on California vehicle registrations which gives us a budget of up to about $100 million per year. California Assembly Bill 8 extended the program to January 1st, 2024. The program was developed to provide funding support for projects that reduce greenhouse gas emissions in the transportation sector, which accounts for roughly 50 percent of state greenhouse gas emissions. (Clears throat) excuse me, people. The projects will fund -- the projects we fund also contribute to other complimentary state goals, including improved air quality, providing investments in low-income and disadvantaged communities, economic development, and reduced petroleum dependency.

Next slide.

Today, we'll be discussing the Revised Staff Draft version of the 2021 to 2023 Investment Plan Update to the Clean Transportation Program. This document, updated annually, serves as the basis for the program's funding opportunities for each fiscal year. The allocations reflect considerations of state and federal policies and regulations, as well as the coordination with state agencies, such as the California Air Resources Board and the California Public Utilities Commission, among others.

The Investment Plan lays out how the coming fiscal year's funds will be allocated across different fuels, vehicle sectors, and supporting activities. The document is vetted through a public review process that involves multiple iterations of the document and meetings with our Advisory Committee, one we're having today which is our second. And finally, the Investment Plan sets allocations for various funding categories, not individual projects.

Next slide.

In preparation for the Investment Plan -- in preparing the Investment Plan the CEC seeks to increase the participation of disadvantaged and unrepresented communities from a diverse range of geographical regions.

The CEC also seeks to effectively engage communities disproportionately burdened by pollution and improve economic resiliency, including rural and tribal communities. And this effort includes consulting with the Disadvantaged Communities Advisory Group for guidance and receives on program effectiveness as it relates to disadvantaged communities and other vulnerable and underrepresented groups, prioritize investment in proper community outreach and engagement, and partner with local community-based organizations.

In addition to the above actions, the CEC has provided a scoring preference for projects located in and benefitting disadvantaged communities as defined by the California Communities Environmental Health Screening Tool. These preferences have been used in recent California transportation -- Clean Transportation Programs stations, where appropriate. And more than half of the site-specific Clean Transportation Program funding to date has been located within low-income or disadvantaged communities. The CEC is in the process of developing metrics that go beyond location. And my colleague Larry Rillera will speak on this later in the presentation.

Next slide.

Let me shift to provide context for developing the Clean Transportation Program Investment Plan. The allocations and the communication of the program reflects the effect of numerous policies and goals in legislation, regulation, and executive order. The net result of these policies have been to steer our program toward zero- and net-zero-emission fuels and technologies. And such policies include the ones you have on the slide, all the way to achieving a carbon-neutral economy by 2045.

Next slide.

Executive Order B-16-12 set a target of 1.5 million ZEVs on the road by 2025 and tasked various state agencies with specific actions needed to support this goal. Subsequently, in January 2018, Executive Order B-48-18 set an expanded target of 5 million ZEVs on the road by 2030, as well as a network of 200 hydrogen fueling stations and 250,000 electric vehicle charging stations, including 10,000 DC fast chargers installed or constructed by 2025. These executive orders have been part of the guidance for the EV and hydrogen fueling infrastructure investments for our program to date.

Executive Order N-79-20, signed by Governor Gavin Newsom on September 23rd of 2022, provides even more ambitious goals and requirements. These include 100 percent of in-state sales of passenger cars and trucks being ZEVs by 2035, 100 percent of operating medium- and heavy-duty vehicles being ZEVs by 2045 where feasible, and 100 percent of drayage trucks and off-road vehicles and equipment being ZEVs by 2035.

Next slide.

Now I'll talk about what is informing the Investment Plan.

We have SB 1000, Electric Vehicle Charging Infrastructure Deployment Assessment which was published, initially, in December 2020 and focused on number of chargers by geography, income, and population, with the final report expected in December 2021 which focuses on drive time by geography, income, urban and rural areas, and CalEnviroScreen scores.

Also informing our program is AB 2127, Electric Vehicle Charging Infrastructure Assessment, analyzing charging needs to support ZEVs in 2030. The Commission Report published this in July 2021.

As mentioned earlier, there's also consulting with our Disadvantaged Communities Advisory Group.

And adjusting for this year, and subsequent years, adjusting for General Fund augmentations from Budget Act of 2021.

Next slide.

Now with that, I will turn it over to my colleague Raja and he will speak on AB 2127.

Thank you.

MR. RAMESH: Good morning, Advisory Committee Members and other attendees. My name is Raja Ramesh. I'm an Air Pollution Specialist in the Energy Commission's Fuels and Transportation Division. Unfortunately, I don't have a staff video for today because I've been having some (indiscernible) issues this morning. Pleasure to speak to you all.

In June of this year the Commission adopted the inaugural Assembly Bill 2127, Electric Vehicle Charging Infrastructure Assessment, which is the result of over two years of work by the team in the Division, our leadership contractors who did the modeling work, other collaborators informing our analysis and providing data, and public stakeholders who participated in our workshops and gave feedback that helped shape the report.

California currently has over 74,000 electric vehicle chargers in public and shared private locations. Over the coming years, as technology and industries evolve, what is likely to be needed?

In 2018, the legislature passed AB 2127 and called for reports analyzing charging needs for all vehicle types, including heavy-duty and off-road, and other elements of planning, operating, and financing charging infrastructure.

In September 2020 an executive order from Governor Newsom expanded California's ZEV goals and called for our reports to encompass them. While the focus is on 2030, infrastructure needs beyond that year are also discharged in the report.

And we're talking targets for -- our report addresses two main policy goals. The 5 million ZEVs by 2030 goal was enshrined in the 2018 legislation. After the 2020 executive order, the California Air Resources Board analyzed what is likely to be needed to achieve its even more aggressive goals in its mobile source strategy. They came up with 8 million ZEVs in 2030 which we take as an input for the report.

A small note on the pictures. Innovative charging solutions that are uniquely suited for their local conditions are a key part of meeting the state's policy goals. FreeWire and Volta are good examples of this vision, using battery integration and sponsored charging for the accelerated charging (indiscernible).

Next slide please.

We're not only talking about light-duty vehicles. This is a map of the scope of our report. The white boxes have elements called formative legislature.

Back a slide please.

And the others are activities, work products, and models that went into our report and will continue to be worked on for future versions.

While the light-duty-related efforts highlighted in blue benefit from a more mature market and continue to be refined, medium-duty and heavy-duty and off-road analysis will evolve more rapidly as their respective markets develop and are a major area of emphasis in the Commission's ongoing work.

I want to give credit to our contractors who develop models in coordination with Energy Commission Staff, the National Renewable Energy Laboratory continued its work on EVI-Pro and created a model for long distance road trips. UC Davis developed a model investing ride hailing and its unique charging behavior. And Lawrence Berkeley National Laboratory developed a new model projecting charging needs for medium- and heavy-duty electric vehicles.

We've also analyzed the off-road sector and will continue to, in greater depth, as the market develops. And we'll continue to coordinate with the Air Resources Board for their projections of off-road, heavy-duty, and other vehicle types based on their regulation and analysis.

Next slide.

I won't go into great detail here but this spells out some of the methods and considerations for modeling charging infrastructure needs. You can see, there are many variables, charging behavior, where drivers go, the power levels of chargers, and even access to charging at home, which have a huge impact on when charging happens and are difficult to pin down, and they'll change as more people start to drive electric cars. We've even worked on about a dozen scenarios showing the sensitivities to these factors. It's important to understand their impact. And the difficulty of projecting needs into the future as the market and technology change and as driver behaviors and preferences evolve. We'll also look at particular applications for charging, such as long distance road trips.

In this slide, the image on the left shows existing fast charging locations in California. And the right shows simulated locations in '23 of fast charging stations to support long distance travel for pure battery-electric vehicles.

Next slide.

Now I'll briefly summarize the major quantitative results from the report.

First, light-duty chargers. These are for public and shared private locations, not cataman (phonetic) chargers in single-family houses. Under the most ambitious goals, it's predicted that California will need close to 1.2 million chargers for light-duty vehicles to ensure convenience for drivers and businesses.

As you can see in red, there's a sizeable gap, even when accounting for chargers that are already planned to be installed by 2035. While various factors can effect these numbers, and CEC Staff will update them as new market conditions and other pieces of information are important, there's a clear need to accelerate charging deployment in California in order for us to reach our ZEV adoption goals.

Next slide.

Here are the light-duty results for the most aggressive 2030 goals in load profile form. You can see the green region for fast charging, which includes those stations I showed on the previous slides for long distance travel, plus additional fast chargers for ride hailing.

But we can see that most charging happens at home, the yellow and red regions. When the charging occurs also matters a lot. If drivers set simple timers to start charging when time-of-use rates become cheaper around midnight, we see this phenomenon on the right which we call a timer spike. That could pose an issue for some local distribution grids. Smart charging, vehicle integration, these could smooth out that effect and still let the driver access the cheapest electricity.

Next slide.

Beyond the light-duty total, we anticipate that a population of roughly 180,000 MD/HD vehicles will need about 157,000 high-power chargers in 2030. We'll continue to refine the modeling and seek more regular data for this sector. And I must emphasize that transforming the heavy-duty and off-road sectors to clean power is vital to equity because of how close some priority communities are to seaports and major corridors for freight, and how these communities disproportionately suffer the impact of toxic diesel air pollution.

Next slide.

This shows the modeled charging power through the day of several medium- and heavy-duty vehicle segments. You can see these segments on the right, and the black line indicating their modeled charging load throughout the day. It's worth mentioning that because of the wide variety of jobs these vehicles serve their activities, charging behaviors, and locations are very diverse. It was challenging to get data on all the uses of heavy-duty vehicles. And we're thankful to collaborators who supplied important data and continue to coordinate with us.

Next slide.

To wrap up, there's a lot to this report beyond load curves and charger numbers. This slide alone could be five presentation. Remember the scope of the report, the boxes I showed, the elements of planning, operating, and financing charging infrastructure, our report goes into depth on each of these. And while it is not the final work on any one topic, it takes an inventory or programs, activities, and technologies that will shape the future.

Equity. Remember when I commented about the heavy-duty sector and the impact of diesel pollution on communities? Additionally, the Energy Commission, under Senate Bill 1000, is analyzing the availability of chargers for all Californians.

Vehicle grid integration. Remember the promise of using renewable energy more effectively and improving grid resilience. That can really go into high gear with bidirectional charging, the ability to discharge energy to the grid to earn revenue, or to buildings and homes in case of an outage, or even to power a camping trip or work tools at remote sites.

For example, a Forecasted F150 Lightning will have this capability, shown. This image from Forecasted shows its potential to power a house during an outage. It’s the first major vehicle ad campaign to promote bidirectional power. And this vehicle has serious energy, over eight times the capacity of a typical home battery pack, which is enough to power a house for several days.

Connectors. Standardization is a key part of driver communities in making the best use of our charger network.

Technology developments and communications. This was an issue that attracted different opinions from stakeholders on the best path forward. But what is clear, at least, is the need for grid-friendly charging on a massive scale, and a convenient experience for drivers and businesses.

Finally, the report takes an inventory of funding programs and shares stakeholder thoughts on the future of financing and sustainable and innovative business models for charging. These are all topics we’ll keep an eye on for future versions of the report.

Thank you.

MR. RILLERA: Great. Thank you, Raja.

Good morning everyone. My name is Larry

Rillera. I am Staff in the Fuels and Transportation Division. I will be providing a brief update on the CEC's California Electric Vehicle Infrastructure Deployment Assessment as directed by SB 1000.

The law requires the CEC to assess whether EV charging infrastructure, including DC fast charging stations, is disproportionately deployed and accessible by population density, geographical area, or income. The assessment is an ongoing research effort. The assessment helps inform the Clean Transportation Program policies, investments, and project designs to improve equitable deployment of new EV charging infrastructure while local communities accrue the benefits of these investments.

Next page please.

Staff started this analysis last year and focused on geographic distribution of public chargers by income and population. Results indicated that public chargers tend to be collocated with EVs but are unevenly distributed across income groups and groups of higher and lower population densities. These results were published in the SB 1000 Report of December of last year.

This year, Staff looked at community drive times to public fast chargers to better understand convenience and access. We updated the low-income community findings to show that low-income communities have some of the longest drive times to reach a public DC fast charging station. We also found that high population density areas are generally closer to a DC fast charging station that low population density areas, even though there were -- there may be fewer chargers total within a high population density census tract.

The remainder of this presentation will focus on the '21 -- excuse me, 2021 analysis and findings.

Next slide please.

To improve research and analysis of public DC fast charging access, Staff conducted an analysis of the drive times to these chargers. Staff used mapping software to the nearest single public DC fast charging station using the shortest available route and considering peak traffic. Drive time to a public charging station is just one component of access that indicates convenience to a charger and is one way that drivers measure the cost of travel.

Shown here are some of the modeling results. This map shows two different census tract population centers in Los Angeles County and the shortest route and drive time to the nearest DC fast charging station. Drive times are calculated using roadway data from CARB, the California Air Resources Board, which include afternoon peak traffic. This means that the drive time results represent the worst case scenarios across different regions where a driver may be stuck in traffic for a long period of time.

While doesn't necessarily show an individual driver's experience, since the driver could live closer to or farther away from a station than the census tract center, Staff thinks that the community-level differences that show up are important.

Next page please.

Differences in drive times helped Staff assess potential fast charging gaps or local areas where there is a lack of charging. In the analysis, local charging gaps and communities may require intentional fast charger policies and investments to fill in these gaps. Findings indicate that impacted communities with respect to public fast charging stations include several rural communities, low-income communities, and disadvantaged communities.

Next slide please.

All communities require a mix of charging stations, including newer and faster charging technologies to support demand charge, economic development, and electric vehicle uptake. To improve access to fast charging, the Clean Transportation funding decisions for charging infrastructure deployment should consider prioritizing shorter drive times to DC fast charging stations, especially for underserved communities.

The drive time maps developed through this analysis could be used in conjunction with other tools to show general areas where DC fast charging incentives may be needed to improve equitable charging access. Staff will continue to analyze fast charging technologies, use cases, and metrics, including access to public Level 2 chargers and access by other underserved populations, which also include California Native American tribes and multifamily housing residents.

Staff is also looking at ways to incorporate this analysis into upcoming grant funding opportunities, starting with the solicitation to increase charging access for rural Californians.

In terms of next steps, Staff is in the process of writing the next SB 1000 report which will cover this drive time analysis and is expected for release in December of this year. Additionally, Staff is developing a webpage that will house all reports, data, and maps.

Thank you. This concludes my presentation on SB 1000.

Next slide please.

For those of you that are not on video, are on phone, I will be presenting this item. My name is Larry Rillera. I will be providing a few remarks on the benefits of the Clean Transportation Program to communities.

Next slide please.

The CEC seeks to increase the participation of disadvantaged and underserved communities. Recent actions to diversify -- recent actions to move to diversify and increase inclusion, include diversifying the Clean Transportation Program Advisory Committee, consulting with the Disadvantaged Communities Advisory Group, or DCAG, consulting internally with the CEC's Tribal Prog and the Tribal Lead Commissioner for help with our program's outreach, and promoting transportation-related funding opportunities.

It also includes assessing distribution and access of EV charging infrastructure under SB 1000 and establishing the IDEAL Communities Partnership with the Foundation for California Community Colleges.

And lastly, it also refers to -- excuse me, includes actions with respect to the IDEAL ZEV Workforce Pilot with our sister agency, the California Air Resources Board, which is pending release.

Next slide please.

In short, the CEC will be engaging with stakeholders and the public to create a plan for bringing more Clean Transportation Program benefits to communities, including previously underserved and underrepresented communities. Through a public process, the CEC will seek to define community benefits, measure and track community benefits, and find ways to target and increase community benefits under the program.

Thank you. And this concludes my presentation. And I will turn it over to Patrick.

MR. BRECHT: Thank you, Larry.

Yeah, I'll just provide just a quick update on the Clean Transportation funding opportunities or the funding of the past -- well, since the last Advisory Committee meeting.

So next slide.

For the second block grant for the light-duty electric vehicle charger incentives, this was up to $500 million available. And the NOPA was just released September 3rd and this provides a streamlined incentive for -- to install chargers. This is per -- this is to follow up our successful CALeVIP Program. And we have two proposed awards, each up to $250 million.

And next, we have our Vehicle Grid Innovation Lab, or ViGIL. This is to increase capacity and throughput for the electric vehicle supply equipment standing -- excuse me, standards testing, support expansion of testing for light-duty and medium-to-heavy-duty charging equipment, and the provide a timely and cost effective avenue for stakeholders to validate and test products for conformance to establish standards. And testing at funded laboratories, or laboratory or laboratories, will be voluntary and will not be mandatory for entities to be buildings -- to do business in California. And this is up to $2 million availability. And NOPA is expected, that is the Notice of Public Award, excuse me, should be expected here in September.

Next, we have CARTS which is Charging Access to Reliable On-Demand Transportation Services. This provides convenient charging access for high mileage and on-demand transportation and delivery services. It provides targeted charging deployment that increases the percentage of eVMT. It provides economical charging options for drivers and fleets. And this is up to $6 million available. And proposals are due October 29th, 2021.

And next, we have two solicitations which are under development, and I think Larry touched on these a moment ago. We have our multifamily housing EV charging infrastructure and reliable rural EV charging infrastructure. These are both to promote charging access for all Californians. Both are still under development and you should expect them in November and dec.

Next slide.

And just to touch back on our medium-to-heavy-duty infrastructure investments, this is the competitive block grant solicitation. The CEC's program is seeking -- well, has a block grant recipients for design and implementing up to $50 million in grant funds to various medium- and heavy-duty zero-emission vehicle refueling infrastructure incentive projects throughout California. And we have up to $50 million approved and $17 million available to start.

So next slide.

And if you remember, this is the $10 million allocation from the last Investment Plan which contained the guiding principles of speed of implementation, impact to communities, job creation, and economic development. And with that, we have decided to fill these two solicitations or augment the solicitations.

First was the EV communities -- EV Ready Communities Blueprints, Phase II. We have an additional $9.2 million that will be allocated to this. And I think the NOPA was released, maybe, two days ago, if I recall. Additional awards will be determined based on proposals of competitively evaluated scores and expect to fully fund one partial award plus three new awards.

And next, we have our upcoming solicitation, IDEAL Workforce. IDEAL is workforce -- excuse me, Inclusive, Diverse, Equitable, Accessible, Local ZEV Workforce Pilot. And that's with a additional $0.8 million. That will be included for this solicitation. And we expect that in September, also, so that gives us the 9.2 plus 0.8, that is $10 million, and that would be under our recovery and reinvestments category from the last Investment Plan.

Next slide.

Then I'd just like to touch on our two fuel production investments. We have up to $8 million available. Preapproved applications due September 22nd, and that would be for the ultra-low-carbon fuel commercial-scale production facilities and blending infrastructure. We also have our renewable hydrogen transportation fuel production, and that's up to $7 million availability. Preapproved applications are due for that September 22nd.

And I will provide a -- next slide please.

If you'd like more information on our funding opportunities, current and upcoming, this is a great place to look and find them.

Okay, next I will -- the next slide please.

Next, I would like to talk about the General Funds from the ZEV package. Of course, most of you, I'm sure, are aware, on July 20 -- on July 12, 2021, Governor Newsom strengthened California's commitment to a clean energy future by approving the 2021 to 2022 Budget, that's Senate Bill 129, the Skinner Budget Act of 2021, which includes a three-year $3.9 billion budget for ZEV-related investments by CARB, the Governor's Office of Business and Economic Development, GO-Biz, and the CEC.

The budget prioritizes diesel emission reductions by earmarking funding to replace 1,125 drayage trucks, 1,000 school buses, and 1,000 transit buses with zero-emission alternatives and refueling infrastructure. Of that package amount, the CEC will administer $1.165 billion towards infrastructure deployment to accelerate charging and hydrogen fueling station deployment and grants to promote in-state ZEV and ZEV-related manufacturing, such as infrastructure equipment and ZEV components.

The investments will help the markets for ZEV and infrastructure grow to scale and, more importantly, serve as a foundation for an equitable and sustainable economic recovery by drawing private investments to California and creating jobs in manufacturing, construction, and engineering.

The ZEV package, also, is a multiagency investment that requires ongoing coordination with CARB, the Governor’s Office, and California State Transportation Agency, and others for each program to complement each other and to maximize benefits to Californians.

Next slide.

The Clean Transportation Program has been allocated, as mentioned before, $1.165 billion over the next three years, with up to $785 million available from the first fiscal year, that's Fiscal Year 2021 to 2022.

In order to meet the state's ZEV goals, a large amount of funding will need to be administered in a short period of time, providing funding to already evaluated projects that support the Clean Transportation Program and the Governor's budget goals, will reduce administrative burden, and get funding deployed quickly.

Additionally, disadvantaged, low-income, and underserved communities will receive air quality and economic benefits faster.

So Staff has reviewed and reevaluated over -- all oversubscribed Clean Transportation Program NOPAs, or Notice of Proposed Awards, and put together a list of recommended zero-emission vehicle infrastructure projects that best fit the goals of the one-time funding. And we have some listed here on this slide.

Hydrogen refueling infrastructure for $27 million, and this would be sufficient to reach the 200 station goal, and I'll touch on this later.

Blueprints for medium- and heavy-duty zero-emission vehicle infrastructure, this would be $2.4 million. Also from the ZEV infrastructure category, that's the $500 million category which I'll talk about later.

And zero-emission transit fleet infrastructure deployment at $16.3. And the transit buses category, which is a $30 million allocation.

And BESTFIT innovative charging solutions, that's $1.2 million for ZEV infrastructure category. That, too, is from the $500 million category mentioned earlier, and we'll touch on it in a moment.

Next slide.

I just would like to provide just a few key changes that have been made for the Revised Investment Plan Update. It's, of course, the inclusion of the zero-emission vehicle package administered by CEC over the next three years. We have included this funding in our Investment Plan, along with our typical Clean Transportation Program funds, which come to $95.2 million each fiscal year.

And we've also been working very hard to keep -- to make sure that the Clean Transportation Program funding and monies received from the General Fund will complement each other.

The Revised Staff Draft also provides updates to the AB 2127 Report, as mentioned by Raja, and the SB 1000 Report, the California Electric Vehicle Deployment Assessment, which Larry touched on, and input from the first Advisory Committee meeting, and docket submissions.

Next slide.

Now this table may be a little bit difficult to read. It shows a side-by-side comparison from the Staff Draft and the Revised Staff Draft for the Clean Transportation Program funding only. As you can see, funding for light-duty and medium- and heavy-duty investments have been evened out. So if you were to look up at the top, the first Staff Draft, we had evened out the funding, so in other words, had taken some monies from medium- and heavy-duty and shifted them over to light-duty. And this is in response to feedback we received from our first Advisory Committee meeting.

And if you were to go down to the manufacturing and workforce training development section or categories, you can see that we now zeroed out manufacturing and have added those funds to workforce training and development. And this shift is in response to the General Fund which targets manufacturing with a great deal of funding.

Next slide.

This slide shows how we are proposing to translate the aforementioned funding priorities into real funding allocations. This is the combined Clean Transportation Program funds with the General Fund here in the Revised Staff Draft version. The proposed allocations for the 2021 to 2023 Investment Plan Update combine both Clean Transportation Program funding and the General Fund ZEV package investments.

This table shows the proposed funding allocations for Fiscal Year 2021 to 2022, as well as the funding projections for the remainder of the Clean Transportation Program, as well as the $1.165 billion, which is $785 million in the current budget over three years, made available through the General Fund ZEV package. The rationale for funding allocations is focused on ZEVs, both battery-electric and hydrogen fuel cells infrastructure, and ZEV manufacturing. The proposed allocations reflect the state's goals for ZEVs, as well as near- and long-term carbon reduction, improved air quality, and equity, with focus on providing benefits for disadvantaged communities.

The table proposes an allocation of $335 million to support light-duty passenger duties, and about $373 million to support medium- and heavy-duty vehicles in Fiscal Year 2021 to 2022. During the first three-year allocation, represented in this table, the funding would total over $400 million to support light-duty passenger vehicles and about $677 million to support medium- and heavy-duty vehicles.

Now for light-duty charging infrastructure the CEC proposes $288.1 million in the current fiscal year, and an additional $43.9 million in the remaining two years of the program, which should be sufficient to meet the state's goals of having 250,000 chargers by 2025 and put the state on course to reach the 2030 goals.

For light-duty hydrogen infrastructure the CEC proposes $47 million the current fiscal year, for the current fiscal year, an additional $30 million in the future years, which will be sufficient to meet the state's goals of 200 public stations open by 2025. These stations should be the -- should have the capacity to refuel about 280,000 fuel cell electric vehicles. The auto industry estimates that the population of fuel cell vehicles will grow from 7,129 in 2021 to 61,000 by the end of 2027. So station capacity will no longer be a barrier to near-term deployment. The CEC proposes to front-load investments to ensure public adoption of ZEVs is not stymied by lack of in fact.

Now the General Fund investments will prioritize, as mentioned earlier, diesel emission reductions by earmarking funding to replace 1,125 drayage trucks, 1,000 school buses, and 1,000 transit buses with zero-emission alternative and refueling infrastructure, and to accelerate charging in hydrogen fueling stations to promote ZEV-related manufacturing.

Furthermore, it is vital to front-load funding to ensure the public adoption is not stymied by lack of the infrastructure. And due to the increase of General Funds for manufacturing, funds initially proposed, as mentioned earlier, in the draft version of the Investment Plan are now -- have now been shifted to workforce training and development. Allocations for zero- and net-zero-fuel production and supply should remain steady over the next two-and-a-half fiscal years.

That’s a lot to take in. We can -- we’ll go over that again during our discussion.

Next slide.

Now just touch on the schedule for the Investment Plan Update.

The CEC released the Draft Staff on April 26th. The first Advisory Committee meeting was held on April 29th. After reviewing feedback from the Advisory Committee and review of the docket comments, the CEC released the Staff Draft -- excuse me, the Revised Staff Draft on September 8th. And, of course, we are holding our second Advisory Committee meeting today. Comments for the Investment Plan are due, on this version of the Investment Plan, are due September 30th.

We plan on releasing the Lead Commissioner Report in late October, it could be the first week of November, but we plan on releasing the Lead Commissioner Report, as I mentioned, late October. Staff will then -- will anticipate presenting the Investment Plan to the CEC business meeting for approval on November 20 -- in November 2021.

And with that I will now turn it over to Commissioner Monahan to lead the Advisory Committee discussion and for -- to lead into some questions for consideration.

And with that, Jonathan, if you can advance the slide? And that's it.

Over to you, Patty. Thanks.

COMMISSIONER MONAHAN: So there was a lot of information in a short period of time. And I see Tracy's hand is up.

So I'm wondering, before we go into discussion, if there are any clarifying questions for the team? Let's just take a few minutes to respond to any questions about this, the presentations.

So, Tracy, do you want to -- do you have a question or a comment? What do you have?

COMMITTEE MEMBER STANHOFF: Well, thank you. I thought the presentations were great. And I loved that they were in a short amount of time so you can concentrate on it and taking it all in. And thank you, you guys, for doing a wonderful job of explaining it to us.

And perhaps, maybe, I didn't catch a couple of things, but I did have three questions or comments on them.

One, first, thank you for including tribal lands in part of your discussion today. That was very, very ingratiating to us. And I thought it was really wonderful that it's now being considered more heavily and thank you for that.

My three questions, though, were -- and maybe I missed this, one, is there taken into consideration that we're going to have enough electricity in the state to power all these charging stations?

Two, I can see, definitely, a need for microgrids on tribal lands, just in reflecting, because a lot of the tribal lands don't even have full electric coverage right now. And I know a lot of folks are very, you know, interested in having electric cars and keeping our environment clean and so forth or, you know, hydrogen cars.

And three, has there been a discussion, in light of my first comment, on incentives to keep peaker plants that are run by natural gas or whatever in place while -- to make sure that we have enough electricity in the state? I mean, we already have the peak power, flex power issues going right now. And then we have shutoffs, of course, at other times when we have wildfires.

So those are my three comments. And, again, thank you. This is a great conversation today.

COMMISSIONER MONAHAN: Well, let me respond to your comments and questions, Tracy.

You know, on the power side, that's something that we, the Energy Commission, are taking very seriously, together with our sister agencies, the Public Utilities Commission and the California Independent Systems Operator. We're doing a lot of analysis right now to evaluate how much generation we need for the grid and to identify new energy sources and distributed energy sources, so flexible resources which, actually, electric vehicles fall into that category of something that you can choose not to power at a certain time. And, you know, that's a very broad conversation.

I would say we're all deeply committed to ensuring that there's a reliable, resilient, affordable energy system, and a lot of work happening right now to make sure that that's the case.

There have been critiques, you know, well, why are we moving to battery-electric vehicles when we are having these Flex Alerts and some big challenges? And what I'll say is that when we -- when the power is down you can't get -- you actually get gasoline in most places either. So it's an issue, you know, broadly, like we want to make sure the lights stay on and that we have electricity for the grid. And, you know, we -- these problems are all solvable.

And we're exploring with our investments ways to add resilience to the system. So microgrids, as you point out, that's a great one and we're thinking more about that.

We're also thinking about funding places that have battery storage, ironically, even using second-life batteries from vehicles to provide onsite storage that when -- you know, if there is a power shortage, for whatever reason, these backup batteries can provide some resilience to the system. They can also be used, you know, at peak times when prices are particularly high to make sure you can still refill your vehicle at a good price.

So we are making investments, you know, not just in putting chargers willy nilly across the state but we're trying to be very strategic in our investments.

And I welcome your feedback on what more we can do to support tribal communities and to support resilience in tribal communities with that broader perspective than just EV charging.

Did I --

COMMITTEE MEMBER STANHOFF: Thank you.

COMMISSIONER MONAHAN: -- address all your questions, I think?

COMMITTEE MEMBER STANHOFF: Well, the only one was the peaker plant issue, you know, like the natural gas plants. If, you know, we're moving to renewables completely, which is a good thing, of course, sometimes you need some help, you know, in running the system when it's --

whatever, you know, issues come up that the renewables aren't, you know, fueling us totally for the electric needs we have in the community.

And as a business person, aside from the tribal issue, you know, we want to keep California competitive in business, so that's another thing that we wrestle with.

But, of course, being tribal, we have a lot more issues with this issue of no electrification, unfortunately --

COMMISSIONER MONAHAN: Um-hmm.

COMMITTEE MEMBER STANHOFF: -- than other communities do, so it's --

COMMISSIONER MONAHAN: And if you're okay with this, Tracy, I think what we could do is have a separate discussion about peaker plants and what's happening on the broader, just because it's beyond the Clean Transportation Program Investment Plan?

So are there any other questions from Advisory Committee meeting -- Members about the -- just the contents of the presentation? Just raise your hand if there are.

All right, Matt.

COMMITTEE MEMBER GREGORI: Thanks. Thank

you for taking my question.

Patrick, I was -- I noticed that the zero and net-zero-fuel production budget was relatively small compared to the overall budget and flat. And we got a lot of commentary on some of the other line items. I was just wondering if you could just give us a little color behind the thought process behind that planning?

MR. BRECHT: Actually, I may have to defer to Charles.

Charles, would you mind answering that question for me?

MR. SMITH: Sure, just for -- oh, sorry. Let me get my video going. Hi.

So I wonder, Jonathan, maybe go back to the slide in reference? One more maybe? Okay. Thank you.

So I think that the first thing that I would point out is that a lot of the other larger allocations that you see here are us incorporating the State Budget General Fund additions into our program. And those additions were, specifically, on the ZEV infrastructure side, as well as the manufacturing side. So that’s why you see some of the triple-digit allocations in those categories that you don't necessarily see in the fuel production and supply category.

I think we're still interested in leading with our ZEV infrastructure priority. But I do think that we are still, also, interested in leaving the door open for critical production projects that, especially, can support that ZEV transition, including renewable hydrogen fuel production.

And then I think we've also left the door open for funding for fuel production projects where the fuel goes into an end use that is not as easily transitioned into zero emissions.

But, yeah, I think the biggest explanation for the funding differences that we see between categories is the availability of those General Funds that were specified for zero-emission infrastructure and manufacturing.

COMMITTEE MEMBER GREGORI: Okay. Thank you.

COMMISSIONER MONAHAN: So we have three other hands raised. Let's see if we can tick through the questions really quickly and then get to the actual discussion.

Rey, you're next.

COMMITTEE MEMBER LEON: Hello. Good morning from the Coachella Valley. I'm actually out here in Riverdale at a hemp thing, but I'm going to take care of this first.

So my question is, you know, in regards to the resiliency and the energy availability for charging station or the future infrastructure of the charging stations, I know in Fresno County, we're pursuing a study to find out what that looks like.

But I think one good move, and I'd like to learn more from the experts on this, would be to do something like what we are focusing on for the Citizen of Huron. We're researching and assessing the possibility of building a solar microgrid on 20 acres that would be about 5 megawatts, so that, with storage, so that we could be able to part of that resiliency but, also, in a way, provide some economic justice for our residents and our commercial.

You know, Huron is a very low-income farmworker community. We're always just flirting with the red line, you know, in terms of the budget. And we see this as a possible win-win-

win. And I don't know what policies are place with -- at the state, the CPUC regulations, CEC regulations, to help make something like that possible where we could provide resiliency to the grid for EV charging, but also to empower our community to have the ability to be able to enhance quality of life for some of the hardworking people on the planet.

That's it.

COMMISSIONER MONAHAN: Thanks Rey. I think that was more of a comment than a question.

But I will say that, you know, while we're talking about the Investment Plan for the Clean Transportation Program, there is also a grant program through EPIC, our Electric Program Investment Charge Program. And that, you know, some of the microgrid investments have been coming from that set of that funding pie. And thinking through, you know, how the EPIC dollars and the Clean Transportation dollars can do double duty is -- you know, sometimes we do joint solicitations with the EPIC Program.

I'm going to try to -- so we have a number of hands up. And I want to make sure, because I want to get to the discussion, please try to keep your questions just very simple and pointed and, hopefully, we can tick through them very quickly and get to the discussion.

All right, Will, you're next.

COMMITTEE MEMBER BARRETT: Thank you very much for the presentation. I very much appreciated it. I wanted to just kind of confirm or, maybe, ask for a bit more detail about the -- how quickly you envision getting the funding out? You mentioned in the presentation getting -- you know, taking a look at the, you know, prior applications in the oversubscribed programs. It would just be helpful to know how quickly we think that the General Fund funding can go out to really, you know, as mentioned in the presentation, accelerate the benefits, especially in our communities that are most overly impacted by diesel exhaust and other transportation solutions?

So just wanted to kind of catch a little bit more detail, if possible, on how quickly you'll be going back to those solicitations and trying to get the money out the door?

COMMISSIONER MONAHAN: Charles or Patrick, do you want to take that?

MR. SMITH: Yeah. So I can say that we've already issued a couple of revised notices -- sorry. Video.

We've already issued a couple of Revised Notices of Proposed Award. So we're, at that point, reaching out to the newly-funded applicants and letting them know the, hopefully, good news, and developing new agreements based on those revised results.

For future work, in most cases we will have to do the diligence of crafting new funding solicitations that can utilize these funds. We have our block grant projects proposed for award on both the successors to CALeVIP, but also the Energize Medium- and Heavy-Duty Block Grant Project. And so I think we're starting those off with, sort of, funding to get them up and running first, but those will provide another great opportunity for getting the ZEV infrastructure out there quickly.

COMMITTEE MEMBER BARRETT: Great. Thank you very much. Appreciate that. I feel like it's a very important opportunity to kind of jump on as quick as possible, so thank you.

COMMISSIONER MONAHAN: Thanks Will.

All right, I see Mary is next.

COMMITTEE MEMBER SOLECKI: Thanks. Good morning. I appreciate Will's question. That's helps answer one thing I was wondering.

And then am I correct in understanding that all of the new funding that came from the budget that was just passed, that only went into this fiscal year; right? None of it went into future budget years?

MR. SMITH: So the funding that we are starting to implement now is based just on the current Fiscal Year 2021-22. The Investment Plan Draft that we have before you today looks at future fiscal years as well.

COMMITTEE MEMBER SOLECKI: I'm sorry. I think I wasn't clear with my question.

MR. SMITH: Oh.

COMMITTEE MEMBER SOLECKI: Sorry about that. I'm familiar with what the old proposal was.

I'm just trying to contrast what we are seeing today versus what we have seen in the past, that this augmentation is a result of the new budget that was passed and only this year was augmented; is that correct?

MR. SMITH: Only this year's, Fiscal Year 2021-22, budget has been approved by the legislature, and so those are funds that are available to us now. We expect that additional General Funds will be made available beyond our usual $95.2 million --

COMMITTEE MEMBER SOLECKI: So --

MR. SMITH: -- in the next two fiscal years as well.

COMMITTEE MEMBER SOLECKI: Right. Okay.

COMMISSIONER MONAHAN: All right. Thanks Mary.

We have Bill, and then Leslie on deck.

COMMITTEE MEMBER ELRICK: Hi. Hopefully you can hear me as I have all my things off.

You know, I just wanted to quickly kind of ask, and we can put it into the discussion later, but ask more about some of the analysis work being done, and can we see more on the hydrogen specifically, you know, whether it be the Wire model, the EVI-Pro?

You know, we heard quite a bit of the analysis on the battery side. I love the e-miles achieved per infrastructure. I understand why different approaches are taken for hydrogen and batteries.

Carbon intensity and recognizing, you know, where the market is, according to AB 8, there for hydrogen right now at over 90 percent.

So I'll just wrap all that in. I know there's some bills out there. But I think it's very important that the CTP really looks at the metrics universally, objectively, and apply them across the Board to get the $5 million ZEVs and the full transition successful. And so we're happy to work with you on that. And I just wanted to -- I know there's a lot of questions out there and still discussion, so kind of that's my big ball of questions for the most part.

COMMISSIONER MONAHAN: So maybe I can take that really quick, Charles?

I mean, and I think, Bill, as you know, AB 2127 required us to do an analysis. Senator Archuleta has a bill that would do the same on the hydrogen side. And you know, so the more we get legislative direction that's signed by the Governor, then the easier it is for us to allocate precious Staff resources towards analysis. We want to do that analysis and we welcome that opportunity.

COMMITTEE MEMBER ELRICK: Well, we -- I'd love to help do more faster, just because of the lag time in all infrastructure, and knowing CTP is really about market transformation. So, you know, looking at hydrogen, the 200 goals we're -- the 200 station goal, we're really close, but that doesn't get us to, if I look at ZEV regulation, all the way to CTP in everything from the Governor's new executive order of 100 percent transition. I don't think we wait to do work. I think this is important work we can start applying more universally.

COMMISSIONER MONAHAN: Thanks Bill.

All right, I have Leslie, and then Alfred on deck, and then we're going to move to discussion.

COMMITTEE MEMBER AGUAYO: Hi. Yeah. Good morning. I have two quick questions. I think they might be helpful for me to clarify as we move into the discussion. One of them is related to the budget.

So I was wondering if one could explain to me a little bit around the confidence that the CEC has for the next two years of funding that are subject to budget appropriations? So I know that Mary asked the question about this year's funding through the General Fund. But how confident is the CEC on the numbers that are proposed in that budget for the following two years?

COMMISSIONER MONAHAN: Well, we're planning for that now, Leslie. I mean, as Charles said, this all depends on whether the legislature allocates the -- you know, actually does this in next year's budget and the Governor signs the bill, but that's what we're planning for.

What I will say is that because we had this annual process we, you know, we have this way to revise allocations based on how much money we actually have. So we're going to use this process next year.

COMMITTEE MEMBER AGUAYO: Okay. Thank you.

And my second question, just really quickly, is it possible to have a little bit more clarity around how the decision making to count investments towards the 50 percent stack allocation is made? I wonder if it's a physical, an actual physical investment that's counted in a census tract that is tax that goes towards the overall 50 percent allocation or if it's a fair criteria that's being used?

MR. SMITH: So right now, so for the -- and as Patrick and Larry alluded to, we're looking at metrics that will look at more than funding into projects just based on where they are physically located.

But, yeah, so right now we take a look at where the project is physically located. And then what is the corresponding Clean Transportation Program investment in that project or project site and we assess low-income or disadvantaged community investments accordingly. As mentioned, we're looking to move beyond that because we recognize that, you know, that's one simple but maybe not wholistic view of how to best represent the benefits of our program to California communities.

So I think there will be a lot of conversations and outreach that we're interested in as we sort of develop ideas for what some of those other metrics could look like.

I hope that gets at your question.

COMMITTEE MEMBER AGUAYO: Yeah. Thank

you. I just wanted to clarify, based on this funding plan, how that was measured. Thanks.

MR. SMITH: Sure. Thanks.

COMMISSIONER MONAHAN: Alfred, I think you're next.

COMMITTEE MEMBER ARTIS: Thank you so much. This is Alfred Artis with Consumer Reports.

I just want to confirm, did your light-duty DC fast charging analysis find that individuals in low-income and disadvantaged communities had the furthest commutes to DC fast charging infrastructure? Is that -- did I hear that correctly?

MR. SMITH: I don't know if Larry is --

MR. RILLERA: Yeah.

MR. SMITH: Yeah.

MR. RILLERA: -- I'm here.

MR. SMITH: Thank you.

MR. RILLERA: Thank you. Thank you, Alfred, for the question.

So part of the analysis, in response to your question, goes to where we do the analysis from the census tract, the census block, the population center to the fast charger, so there's going to be some differences in there. And it could appear -- some of the early results show a longer drive time depending on that trip origin, so let me kind of start it that way. And I know that there's continuing analysis in this area to refine that before we begin design of the solicitation and incentive programs. That will continue to be part of the analysis by Staff as well.

COMMITTEE MEMBER ARTIS: Thank you.

COMMISSIONER MONAHAN: All right, so let's move into the discussion. Our team has put together some questions to tee off the discussion. Let me just read them, just for folks that don't have -- if anybody's on their phone, like Rey.

So our first question is: Do the revised funding allocations in the latest version appropriately count for the availability of new General Fund money since we did switch some monies from different categories in response to this infusion of funding that came in?

Number two: Is the CEC appropriately balancing the needs and opportunities for ZEV infrastructure across the light- and medium- and heavy-duty sectors? If not, what changes should we consider?

And finally: Does the investment plan reflect the needs of low-income, disadvantaged, or underrepresented Californians and California communities? If not, what changes should we consider?

So for the discussion period, we're going to give each member up to three minutes. You don't have to use the full three minutes but each person will have up to three minutes. And then we're going to have sort of like a lightning round at the end where everybody gets one minute just to -- you know, after you've reflected upon what others have said, anything you want to particularly highlight to us, you'll have an opportunity to do that. So this is not your first bite at the apple.

So I'm going to give you all a chance to kind of mull this over. And just raise your hand and we'll just go in the order of hands raised. But I do want to make sure that every Member of the Advisory Committee speaks.

I know it's hard to be first. Mary's hand is up but I think it's a residual hand up.

Unless you want to go first, Mary?

COMMITTEE MEMBER SOLECKI: Well, it was a residual, but I'm more than happy to be the first one.

What I was reflecting on while reviewing the infusion of funding is that -- and I'd be interested to see some analysis on this that I'm sure CEC has in terms of where and how to get the fastest and biggest impacts on air quality for disadvantaged communities. And I can see that there is more funding going towards the heavy-duty sector than light-duty. But I was wondering about even putting more of the funding towards heavy-duty to try to offset some of those diesel emissions that have the really bad air quality impacts?

It's a just a question I'm pondering out loud. You probably have more analysis that would tell me whether this is the right balance or whether there should be, perhaps, more emphasis on the heavy-duty sector. But I'm inclined to say that I think even more funding should go in that category.

That's all for my comments.

COMMISSIONER MONAHAN: Lucas, and then

Casey.

COMMITTEE MEMBER ZUCKER: Thank you. Yeah. Lucas Zucker, Policy Director at CAUSE. We're an environmental justice organization.

I understand, you know, why in the staff presentation we talked about these, you know, large General Fund investments for context. But I'm worried that it's a little bit obfuscating the shifts that we're making specifically in the Clean Transportation Program budget, which is what our Committee is here to oversee, you know, if we're not kind of taking credit for these massive investments in both heavy-duty and light-duty made by the Newsom Administration.

We can see the shifts that have actually happened within our Clean Transportation budget since we last met. And, essentially, what's happened is we've slashed in half the investment in heavy-duty. We've moved tens of millions of dollars away from cleaning up diesel exhaust, deadly diesel exhaust, you know, from heavy-duty trucking through environmental justice communities, like mine, into more light-duty chargers for -- you know, that, frankly, we know, you know, tend to disproportionately benefit wider and wealthy individual EV owners.

And so I also want to say that, as far as I can tell, since we last met there were no changes made at all to the plan addressing the issues raised by environmental justice advocates, not addressing the harmful externalities of biofuels in rural communities in the Coachella Valley, not avoiding, you know, unintentional housing displacement impacts near fast chargers, and gentrifying areas that may happen not investing in zero-emission public transit infrastructure for community members who can't afford cars.

You know, and I understand that some voices are louder than others and, you know, and when political decisions are being made. But I'm honestly surprised at the extent that that was true in this plan version and the revisions.

And you know, I just want to say, the communities impacted by heavy-duty transportation emissions near ports, warehouse, and truck routes are often referred to as diesel death zones. We're called that because people in low-income communities of color, like West Oakland, Wilmington, like Logan, and South Oxnard are dying from the high cancer rates caused by diesel exhaust from heavy-duty transportation, you know? And this version of the Clean Transportation Program budget has, unfortunately, chosen to disinvest from their health and their lives.

And so, you know, I really want to emphasize that investments in the heavy-duty side meet the greatest financial and technological challenges. They have much bigger impacts on air quality and health, and much bigger impacts in terms of equity and environmental justice. And so I do think it's going to be harder for the CEC to meet its equity goals in the Clean Transportation Program with this massive shift from heavy-duty to light-duty. It's easy to get 50 percent of investments in DACs when you're focused on cleaning up heavy-duty because almost all ports and truck routes and logistic hubs are in DACs that are choked with diesel exhaust.

But when we talk about chargers for light-duty personal (indiscernible) it's not only about making sure they go into DAC neighborhoods, you know, many of these chargers may end up physically locating in a DAC census tract, according to CalEnviroScreen, but may still be predominantly used by middle- and upper-class consumers who can afford (indiscernible). And there may be times when these investments can even do harm to low-income families nearby who are renters and may take these rising rents and housing displacement (indiscernible) landlords see how to value in their proximity into fast chargers.

And so, you know, so far the state has struggled tremendously to meet its equity goals in light-duty. And I think we can expect those same challenges to continue. And so I think we need, really, to ask ourselves, you know, how will the CEC assess who's actually benefitting from light-duty charging investments? Is it only, you know, based on demographics and census tracts where a charger is physically located? You know, how are we going to assess who's actually using this infrastructure, who might be unintentionally harmed?

You know, so I would really encourage us to, you know, put more of those resources back into heavy-duty, like the original version we saw.

You know, one bright thought I want to

commend Staff on is the increase in funding for workforce development. I think that's really valuable and is going to have some real equity benefits. But I just have to be honest and express my disappoint in this version of the plan from an equity perspective.

COMMITTEE MEMBER THOMPSON: Thanks Lucas.

So we have Casey, and then Tracy.

COMMITTEE MEMBER GALLAGHER: Good morning. It is still morning. Casey Gallagher with the California Labor Federation.

First of all, I'd like to commend the CEC and the staff on the work on this report. And in particular, I'm going to be focusing on question number three. I'm going to be submitting formal comments for the Labor Fed for questions one and two, and then additional issues or comments we would like to add to the general report.

Focusing on number three, I do appreciate the addition of the added metrics of both quantitative and qualitative of metrics of focusing on different aspect of, say, equity inclusion. As I review this, I'm looking at the commitment to inclusion, diversity, and equity, and access page within the report as it points out there is, like, where investments have happened in, I'll say, low-income and disadvantaged communities in particular.

What would be helpful to know is what form of not just investments but what kind of job creation has actually been developed? And what is the quality of those jobs?

And thinking about that and looking back, like later in the report, highlighting some of the things that, for example of, in Larry Rillera's report on community benefits, really, really exploring what are the community benefits that have been created out of this? Those things have been mentioned. But like, for example, I would like to know more on what has been developed through the IDEAL Community Partnership's Project. I think there's a lot of benefits that can be highlighted out of that. And kind of what's the relationship and who are the partners within the Foundation of Community Colleges within that partnership?

One think I would also like to see is if there's any kind of encouragement or recommendation within the procurement for like highlighting and advancing higher training partnerships, as well as former agreements that are connected to the advancement of community equity, such as, say, community benefits agreements, community workforce agreements, project labor agreements, and other high-road procurement kind of practices, similar to what was done with SB 100, 100, I believe, with the electric school buses within California?

I know I'm running out of time but one of the things I would like to highlight is you already highlight and lift up certain arrangements that bring employers, community, and labor, and kind of really highlighting and kind of pointing out the role that community benefits agreements have raised and, actually, been implemented in such as the relationship, say, between Proterra and the Steelworkers, or BYD and Local 105, that it's not just a relationship between, say, labor and employers but, also, community to really expand these opportunities within the production of ZEVs.

Thank you. And I'll be submitting my comments written to you.

COMMISSIONER MONAHAN: Thanks Casey.

So we have Tracy, and then on deck,

Morgan and Sydney.

COMMITTEE MEMBER STANHOFF: Hello. Tracy Stanhoff.

I would like to echo the thoughts on the move for more money for workforce development. I think that's important as we go forward for an equity issue. That will get more people trained into these new technologies and so forth.

And then, of course, we're just wanting to see where the budget weighs out as far as, for questions one and two, how it's going to effect tribal communities and rural communities in our -- or even urban people as we have pockets of our urban American Indians lining freeways and in communities that line freeways. And that's always been a challenge with heart disease and lung disease just around regular freeway issues here in California with our tribal communities.

So anyway, I'm going to give back a lot of time. I took only, let's see, I'm talking real slow, 50 seconds. Thanks.

COMMISSIONER MONAHAN: Thanks Tracy.

All right, we have Morgan, Sydney, and then Eileen.

COMMITTEE MEMBER CASWELL: Good morning.

My name is Morgan Caswell. I work for the Port of Long Beach. I just want to say thank you for the opportunity to comment on the Investment Plan for the Clean Transportation Program.

I would like to start by saying this was really thoughtfully developed. And I commend CEC Staff for their work on this update.

I would like to focus my comments on the first question, and more specifically, the medium- and heavy-duty vehicles and infrastructure allocations for years 2021 to 2024 that is not specifically allocated to drayage, transit, and school buses. These dollars are front-loaded in years 2021 to 2022. And only $43.8 million will be available for terminals.

In particular, to apply for years 2022 to 2024, for context, we believe, here at the Port of Long Beach, we'll need $800 million to transition our operations to zero emissions, and that's just for cargo handling equipment. Front-loading these dollars will severely limit seaports and their terminal operators abilities to apply and secure infrastructure dollars to fuel the zero-emission cargo handling equipment from this program.

Most of our terminals are still demonstrating zero-emission cargo handling equipment which has not yet been proven as fully feasible for large-scale deployments, and we're not done. We need more demonstrations of innovative charging systems, hydrogen fuel cell equipment, in particular, energy management systems, and second and third generation battery-electric equipment. Large-scale infrastructure projects will not be feasible until the technology has advanced and terminal operators have developed comprehensive infrastructure master plans.

Fortunately for us, we were recently notified that our Zero-Emission Infrastructure Master Plan for our Pier J Terminal is proposed for award under the EV Ready Communities Blueprints, Phase II. And I just want to take the opportunity to thank CEC for this opportunity.

Our plan is estimated to cost $1.8 million and will include things like equipment specifications, operational configurations and site layouts, detailed infrastructure design, rough order of magnitude costs per infrastructure, energy management strategies, and an implementation schedule. We will need additional terminal-specific infrastructure plans for our other operators. This work really needs to be done before our tenants can take advantage of infrastructure funding to make our zero-emission terminal operation goal a reality.

I'd just like to respectfully encourage the CEC to spread out the medium- and heavy-duty vehicles and in fact dollars across all three years to continue to fund planning activities so that terminal operators, as well as other stakeholders such as trucking companies, can be well prepared to strategically build out infrastructure and to continue to fund demonstration projects.

Thank you.

COMMISSIONER MONAHAN: Thanks Morgan.

I wanted to just respond, quickly, that some of the reason we're front-loading some is just because this legislature gave us this money to share, but I hear your concern.

All right, we have Sydney, Eileen, and Rey.

So, Sidney, you're on next.

COMMITTEE MEMBER VERGIS: Great. Well, thank you for your time.

So I am the Division Chief overseeing the Mobile Source Control Division at the California Air Resources Board. Really, what that means is that MSCD's portfolio includes medium- and heavy-duty vehicle regulations, as well as many of CARB's vehicle and equipment incentive programs. So when it comes to thinking through with you the priorities for future investments, there are two main themes that I really wanted to lift up here, one is equity, and the other is medium- and heavy-duty infrastructure.

So on the equity side of things, we still have 75 percent of California's population that is still breathing unhealthy air. And every year, thousands die prematurely due to air pollution, which is completely unacceptable. So the needed transition to really accelerating the use of zero-emission technologies and the air quality and health benefits they provide is really of an unprecedented scope and scale. So we're going to need every tool in the toolshed to get there. So targeting equity investments that would really benefit from public investment, as well as prioritizing your outreach efforts, which you're doing, and invest the commitments to funding projects and benefitting disadvantaged communities are really critical components of this plan.

On the medium- and heavy-duty zero-emission infrastructure side, we are all embarking together on the zero-emissions transformation of the goods movement system in California. And of course, as I mentioned, we're doing this because it's absolutely necessary for community health. So the transformation and commitment to zero-emission infrastructure needs absolutely has to be a public-private partnership. And where the state will chip in, especially in the early years to help get this market started, is really critical, as you've highlighted in this plan. And we also really need the private sector to step up, as well, OEMs, utilities, EVSE providers, et cetera.

I think it's really important to flag that heavy-duty zero-emission trucks are here, and more are coming.

On the vehicle side of things, the legislature appropriated over $800 million to heavy-duty and off-road zero-emission equipment in Fiscal Year 2021-22. And that doesn't include the over $500 million in incentive dollars going to local air districts that could also be used for this purpose.

On the regulatory side, starting in 2024, per regulation, Class 2B to Class 8 zero-emission tractors will be required to be sold into California. Based on this regulation and the Advanced Clean Truck Regulation, over 300,000 zero-emission trucks will be coming to California by 2035. So the multi-year commitments outlined in the Investment Plan allocations and committing $373 million in Fiscal Year 2021-22 alone is such a great contribution towards catalyzing the early heavy-duty zero-emission market.

So with that, I also wanted to add that I really appreciate all the collaborative work that Staff has put into developing this plan. It's not an easy lift, so a big thank you.

COMMISSIONER MONAHAN: Thanks Sydney. And we appreciate all the collaboration our agencies have been having in terms of giving out grants. We're trying to make it easy for the public not to see us as two agencies but one unified state.

So we have Eileen, then on deck, Rey and Sam from UCS.

COMMITTEE MEMBER TUTT: Thank you. This is Eileen from the California Electric Transportation Coalition.

And I just want to say that something that Lucas Zucker said earlier really struck me, and that was that the funding for MHD has been, I think he said, slashed, which I think is really an underrepresentation of what happened. And I just want to say, being front, tip of the spear, fighting for this additional money that we got this year, which was very substantial, first-time-ever investment in infrastructure from the General Fund over a period of time that's reliable, was in this budget. And the vast majority went to medium- and heavy-duty vehicles.

So the idea that the money wasn't just not slashed, it was actually substantially increased, and that was a result of, I believe, Lucas's and mine and others huge effort in the legislature and with the administration to allocate more funding to medium- and heavy-duty and zero-emission vehicle transitions.

The idea that we don't need any light-duty investments is a little worrisome to me because we are so far away from meeting our light-duty infrastructure needs. And even the investments that have been made thus far, many people who drive electric vehicles right now of all different household income levels don't feel that there's enough infrastructure out there.

And for people in multi-unit dwellings or living in rental units, or homes that don't have access to off-curb parking, there's a whole lot of investment needed to make sure that these light-duty vehicles that go into these communities have access to charging infrastructure. And, in fact, all of the lessons learned on the light-duty investments, and investments in vehicle and infrastructure, translates to medium- and heavy-duty.

So not only am I very supportive of the allocations here, I am absolutely certain that you got them -- they aren't entirely right, and that's why we review this plan every year. But I do think the allocations to light-duty and medium-duty are sufficient for this year, in fact, well beyond anything we ever anticipated.

So I just want to thank the Energy Commission and all of those, many of whom are not here on this Advisory Committee, who worked hard to get more money. And we will do that again next year. We fully intend to continue these allocations, and not just for medium- and heavy-duty but, also, for light-duty, so that we really can meet the state's goal of 100 percent, which is going to be extremely challenging.

So let's not pit medium- and heavy-duty ZEVs against light-duty. Let's recognize the investment needs for both and prioritize communities and equity in both because we are nowhere near equity on the light side, and we have a long ways to go on the medium side, too, but this Investment Plan represents, I think, a very fair balance, so thank you.

COMMISSIONER MONAHAN: Thanks Eileen.

So we next have Rey, then Sam, then Kevin.

COMMITTEE MEMBER LEON: Hello. Rey Leon, the LEAP Institute, Latino Equity Advocacy and Policy. Good morning, Patricia. Good to see you. And greetings to everybody. I'm glad to see other agencies in here as well.

And I just want to also emphasize that, well, I see three points. This is all about pollution and carbon reductions. This is about advancement of climate residential infrastructure. And this is about, also, opportunities in workforce and education; right? Those are my three main points.

PM2.5 is certainly a huge problem in low-income communities and environmental justice communities, in the ports, certainly, also in the region of the San Joaquin Valley where have two -- what I call the two main veins of pollution, 99 and the I-5, and also communities like my own, Huron, which are, in a way, land ports. On a daily basis, we are shipping out tons and tons of tomatoes, of cantaloupe, of numerous types of produce. If you've eaten pizza or pasta, you've eaten a Huron tomato, most likely. But that is bringing in a lot of pollution into the community.

So, certainly, I see the need of more investment in heavy-duty. In terms of how that happens, I think I'm kind of detached on the details of what's -- how it's being put forth, but certainly we need that.

The other things is in regards to light-duty. You know, Huron has the most electric vehicle chargers for a city per capita in the nation. I've shared that with folks before. But what I've noticed is that the incentives, the subsidies, the deals provided are still insufficient for the families in my community, the arborists that provide the food that, I'm sure, most you eat on the daily, whether it's a salad, again, pizza, pasta, tomato sauce; right? And so we've still got to work on that.

I think CEC could participate in ensuring that every family that qualifies get an extra plug into their home, and a charger once they, you know, bite the bullet to purchase a vehicle. But I think ARB also needs to do some work in terms of -- and I've got some ideas on how to make that happen. Because if you're part of the CARE Program in PG&E, then what if you had a card that you could use to charge your vehicle, and then you also get an incentive to be able to, you know, charge your vehicle; right? There's a bunch of things. I've got a laundry list of things that could happen for that.

So if we could get low-income communities -- and I have to disagree with the sister before me in terms of a lot of low-income people having EVs, that's not the case. And I could tell you that because in my city I see it and in my region I see it. And we need to do some more work in that arena.

In terms of workforce and education, I mean, we need more opportunities for the folks to come onboard. I mentioned microgrid earlier. We need to really be able to bring onboard farmworkers due to the fact that the drought has impacted employment hugely in our region. And if we could transition them to clean energy, which is through one of our programs we're trying to do, we could create opportunities for families. And at the end of the day, education is a great equalizer.

So if we're able to also provide scholarships for students that are interested in clean energy, that are interested in this type of work, from high school, then provide them a little leg up and interest in the future of what California is leading, right, internships and fellowships in the clean energy industry, incentive these industries to be able to provide them for communities that are not fairly represented in the industry.

Latinos are 40 percent of California. We're not 40 percent of the clean energy industry, or even the agencies that are leading this work. And I think that's a way, if you represent, also, and impact fully, environmental justice communities by incorporating the communities in the process thereof and the leadership of this great work.

The unemployment; right? Also in the agencies, clean energy, the Commission and these others, and so forth.

But those are my main three points. Thank you.

COMMISSIONER MONAHAN: Great. Thanks Rey.

All right, next, we have Sam.

COMMITTEE MEMBER HOUSTON: Thank you, Patty. It's nice to be with you, and nice to be with everyone this morning. I'll just start with a note of appreciation for those who have already offered their comments so far.

I wanted to give get a high-level note of support about the concept of front-loading, noting that the urgency with which we need to reduce greenhouse gases, and the very acute urgency with which we need to reduce health-harming pollution, I think really speaks to the fact that front-loading these investments makes sense and is necessary. Every greenhouse gas and, you know, health-harming pollutant we reduce now reduces the cumulative impacts of those things over time. And so I wanted to make a general note of support about that.

As part of that, I think the concept of future-proofing is also really important. And, of course, some of the details about that will come down the line through the solicitations and whatnot. But I just wanted to pick up on the point about vehicle grid integration broadly, and many have alluded to this in conversations about microgrids, that I would really like to see those kinds of things built in as expectations, at least for capability, if not for full-on implementation as these dollars get spent so that the infrastructure can continue to be useful and, indeed, do more and more to support the grid and save consumers money, save this money over time.

You know, it's certainly not lost on me the comments about needing to give actors who need to move later or need to have planning, like courts (phonetic), that, you know, we'll need to provide support and certainty for them down the line. I don't think these two are totally antithetical. But it also highlights the need for all of us to continue to push as hard as we can to continue making dollars available for these activities, you know, beyond the scope of this current budget. There's certainly more work to do for all of us.

On the equity metrics, I'm also very encouraged by the commitment in broad strokes to include metrics beyond just geographic location. I think that's really important, you know, spending some time on this myself, trying to support efforts around that as part of the EV Strike Force, and in other spaces, as well.

And on that I would say we shouldn't, really, even just be looking at charger access but equity metrics where workforce and economic empowerment can come into play in the infrastructure installation itself and not just, you know, holding that aside for the workforce programs.

And I would say, as we develop these metrics and other ways to assess the ways that programs are benefitting communities, I would encourage the CEC and stakeholders to also have a backwards sort of perspective as well. You know, we saw in the slides, 50 percent of the investments to date have been in the current equity designated communities. But as we get more meaningful metrics can we continue to look back and assess the benefits have been, even on dollars that have already been out the door, to continue to identify gaps where communities are underinvested?

Thank you.

COMMISSIONER MONAHAN: Great. Thanks Sam.

So next, we have Kevin Hamilton, we have -- and we have Zac and Tyson on deck.

So, Kevin, you're turn.

COMMITTEE MEMBER HAMILTON: Hi. Good morning. And thank you for the presentation today, and your time. I have a couple of points to make with regard question number one.

As far as appropriately account for the

availability as it spends down the money, there will never be enough money here, I think, for I don't know how many years to come. So it's really hard to say that, you know, enough is enough or that something reflects the availability of it. Well, it uses it all, so I'm not sure what you could do to change that.

I do want to reflect the comment that this idea of this contest between light- and medium-duty and heavy-duty needs to stop. We need to do both. There's certainly some urgency around heavy-duty, for those of us in those freight corridors, no doubt about that. And I think that there is a due diligence on that that continues and that the plan adequately reflects that.

However, I don't feel that the needs of low-income or disadvantaged or unrepresented Californians and communities are adequately assessed here in order to put together a solid Investment Plan. So we need to do a lot better.

And CEC could do a lot better by spending more time talking to organizations and residents in these various communities and counties to find out what they think they need. What is it that it would take for them to have an infrastructure that would support this future of their driving an EV, whether it's a truck because they own a truck and that's the income for the whole family, or is it simply the cars that get them to work? Because, again, these other transportation strategies aren't going to really benefit them when they live 50 miles from a major metropolitan area and they all go to work at different places at different times of day. So that solution is sort of alluding us there.

I think one of the main problems that we see, and it crops up over and over again, we all know the future of charging is, at the very least, easy fast charging. We want the average person to feel like they can trust this kind of thing when they're away from home, and it's going to be access to those. Yet we identify sites and we say, we need the infrastructure there, and the first thing we find out is that there's not the core infrastructure, which is access to that 460 three-phase power (phonetic) that is really needed. So if I go out to Huron and I want to put in a lot of DC fast chargers, I'm going to run out of that DC fast charger core power really quickly.

So really focusing on getting that higher level of voltage out there to convey the power to those communities is a critical first step. Again, we're not going to make this transition if we put a bunch of Level 1 and 2 fast chargers out in these communities everywhere.

So that would be my recommendation to the plan. Thank you.

COMMITTEE MEMBER LEON: Solar microgrid with storage, Kevin.

COMMITTEE MEMBER HAMILTON: You know I agree with you, brother.

COMMITTEE MEMBER LEON: Right on.

COMMISSIONER MONAHAN: All right. Thanks Kevin.

So next, we have Zac Thompson, then we have Tyson and Daryl on deck.

Zac?

COMMITTEE MEMBER THOMPSON: Yeah. Hi everyone. Zac Thompson with East Bay Community Energy. Thanks for this super detailed presentation. You know, I'm still sort of processing all this information and these new numbers, so I'll have much more detailed comments that I'll submit to the docket. But I'll keep it pretty brief for now.

I'm definitely happy to see how these General Funds have been incorporated into the program, very supportive of that, particularly in the medium- and heavy-duty section, and in the light-duty charging infrastructure section.

The one thing I would maybe question is whether some more dollars should be allocated to the workforce training and development section. One thing that we've heard in talking to stakeholders, particularly in the medium- and heavy-duty sectors, that, you know, they do need some help in the workforce area here. So maybe if more funds would be allocated to that, that could be helpful -- (clears throat) excuse me -- particularly up front.

But, yeah, otherwise every supportive. And thank you all for the presentation, and for your time.

COMMISSIONER MONAHAN: Excellent. Thanks Zac.

All right, we have Tyson, and then Daryl and Michael on deck.

Tyson, over to you.

COMMITTEE MEMBER ECKERLE: Great. All right. Thank you very much. And, as always, great job with the plan. I think it's really well done.

And maybe, Zac, just to play off what you were talking about, the workforce, I think it's important to look at this in the context of the entire budget and the money that's gone to it like, you know, through the labor agency. And I think as a collective we need to figure out how to leverage that a little bit more, as well.

And kind of same thing as like, you know, on the equity front with investments in public transit, there's a big investment here in public transit from Energy Commission and Air Resources Board. And we also have CalSTA which set $470 million for the TCRIP [sic] project, which can invest in zero-emission buses and trains and upgrades. So I think it's important to look at this in context. And so I think, you know, leveraging.

Eileen would say, this budget is a big deal, and I think, you know, the Investment Plan definitely reflects what was in the budget, what was directed by the legislature and signed by the

Governor, so that's really exciting.

I think on the, you know, the light-duty, medium- and heavy-duty, we tried to get that right as a collective. I think this reminded us, I think, we're investing in a system, you know, like all of these things, getting more battery cars out there. And the light-duty sector helps get more batteries in the supply chain for medium- and heavy-duty. Same with hydrogen with the interplay between light- and heavy-duty driving down component costs and driving down supply costs.

And then question three, that's always hard; right? Making sure that we take care of everybody, that is a very hard thing to do. And I think in the development of the budget, you know, we're really focused in on those heavy-duty corridors and the transit, and make it clean cars for all expansion. So looking at it wholistically, you know, I think it does a good job but we're always looking to do better.

And I think -- and I really commend the Energy Commission for pulling together the stakeholders to get the feedback. And so, you know, I think it's really good to hear from the other Advisory Committee Members with deep roots in the, you know, the communities we're trying to reach, and so that's really helpful.

So but just in closing I think, you know, especially the coordination across agencies with the Energy Commission and CARB, and CalSTA with the big money, kind of working together and trying to make it, you know, one state picture for an end user is really important to keep doing in the implementation of things. So, and yeah, I think this is a really well done plan. I'm excited to work in getting it implemented.

COMMISSIONER MONAHAN: Great. Thanks Tyson. And thanks to you, personally, with your leadership with the ZEV market development and strategy in helping all of us collaborate together to make sure that we reach our state goals.

All right, so next, we have Daryl Lambert. And Michael and Robert are on deck.

Daryl?

COMMITTEE MEMBER LAMBERT: Good morning everybody. Daryl Lambert with Rising Sun Center for Opportunity.

First of all, I just want to applaud the increase in the workforce development funds, the allocation. I do agree with many of the other commenters that that needs to be more. I'd like to see more of that.

And I think in direct response to question number three, reflecting the needs of low-income, disadvantaged, and underrepresented Californians and California communities, I think there's a lot left on the table here when it comes to workforce development and training that we're not taking advantage of. I'd really like to see the investments in community colleges and the education system. But I think there are several mechanisms that have held up by other communities, you know, community benefit agreements, project labor agreements that are not mentioned anywhere in the report or in the plan.

And, also, you know, I think we're missing an opportunity to really elevate the hire and training partnership model as a way to focus on the workforce system, connecting it with the employers and preparing folks for jobs that exist where the demand is needed. I'd like to see that mentioned more. If we can make that happen?

And, finally, I think I would like to see a more built-out plan in the plan related to workforce training and development. It's still very brief. It still focuses on three things that have been done in the past, and what the plans are in the future, but it's not very concrete.

And I think I would like to see or I would like to see some mention or focus on working with pre-apprenticeship or other programs that really focus on connecting with low-income, disadvantaged, underrepresented Californians and providing a basis for foundational skills to allow them to access the very well established apprenticeship programs that exist in the state of California where you can being to work, earn and income, start receiving benefits while you're launching your career and beginning to build those skill sets that will result in a long-term, rewarding, fully benefitted career. So I'd like to see that called out a little bit more.

So thank you very much for your time. I look forward to hearing the rest of the comments. And I will cede the rest of my time to other Advisory Committee Members.

COMMISSIONER MONAHAN: Thanks Daryl.

All right, we have Michael, and then Robert and Katherine on deck.

Michael?

COMMITTEE MEMBER PIMENTEL: Well, thank you, Commissioner Monahan, for the opportunity. Folks, this is Michael Pimentel, Executive Director of the California Transit Association, representing 200 member organizations in the transit industry, including 85 transit and rail agencies across the state. And I greatly appreciate the opportunity to participate in this forum on behalf of our industry and to provide comment today.

As you know, California's transit agencies are required, per ARB regulation, to transition their bus fleets to zero-emission technologies by 2040, with purchase requirements beginning at the largest agencies in the state as soon as 2023. Now the regulation does include a series of provisions that encourage transit agencies to take early action and that target those early actions in areas of nonattainment for the purposes of the Federal Clean Air Act.

So with that, I just assert that, I believe, it's appropriate that the CEC front-load the investments in the medium- and heavy-duty sector.

And I would just also acknowledge that we, like the very stakeholders on today’s call, will, of course, be mobilized with the legislature in coming years to make sure that there isn’t a drop off in funding and that, in fact, we are meeting our funding needs in those out years.

Now for me, I would say that it is a bit difficult to respond toe the question of whether the funding is being rightly applied between purposes, particularly within the medium- and heavy-duty sector in ways that benefit disadvantaged communities and low-income communities, because we have not seen, yet, the proposed programmatic allocations for this for this funding. You know, we’re talking generally about sectors, less about programs and specific uses.

Of course, I want to acknowledge the set aside that is noted for transit. But in the absence of the more, you know, general programmatic breakdown, I’ll just emphasize a few points.

One is the importance of the state continuing to weight its investments for purposes, like public transit, that will deliver co-benefits beyond just a reduction of emissions from the vehicle technologies themselves. Transit, as you know well, delivers mobility benefits, particularly to disadvantaged and low-income communities. The average bus rider in Los Angeles, for example, and Los Angeles has the largest agencies within the state, carries the most people, is just under $15,000 annually.

Additionally, public transit is a service that is actively reducing VMT and congestion, and with continued investments in this charging infrastructure, the vehicle technologies that come from ARB that allows our agencies to continue to apply their monies from the federal and state governments toward maintaining and expanding operations.

Now as this plan moves forward and the programmatic details are flushed out, I would encourage the CEC to continue to investment in supporting the large-scale transition of (gap in audio) to scale. Zero-emission transit fleet infrastructure deployment project is a good vehicle for that.

And then finally, in closing, I would continue to elevate the importance of investments to support resiliency projects, as well as storage or DG solutions that guard against grid disruption. I think this is one of the areas that both the state and federal governments have not focused enough on. But certainly, we're going to come to a point where we're not making those investments, we have wildfires, we have earthquakes that down the grid. We're going to be in significant challenges, whether it's for public transit or any other form of medium- and heavy-duty sector, and that is going to be relying on grid technology.

COMMISSIONER MONAHAN: Great. Thanks Michael. Really appreciate the comments.

And I've got to say, I'm excited that the legislature and the Governor have put specific targets for both CARB and the CEC in terms of how many transit buses, 1,000 transit buses, 1,000 school buss, 1,250 drayage trucks. I mean, that gives us specific targets that we're going to be really aiming to make sure that we're able to fulfill.

And I do want to emphasize, also, that we're in the medium- and heavy-duty space, you know, with transit. We're looking at both fuel cell electric and battery-electric technologies as viable.

COMMITTEE MEMBER PIMENTEL: Yeah. Absolutely. If I can just remark on that and just note that, you know, from my association's perspective, we are a technology-neutral association, so appreciate that continued emphasis at this point.

COMMISSIONER MONAHAN: Great. Thank you.

All right, next, we have Robert Meyer. And Katherine and Kevin [sic] are on deck.

COMMITTEE MEMBER MEYER: Good morning. Thank you very much, Commissioner Monahan, for the work of you and your team on the presentation and the Investment Plan update.

I did want to thank, also, Larry Rillera and Tami Haas for continued partnership in alignment with workforce development opportunities on behalf of ETP.

Specifically regarding questions one and three, we are definitely glad to see additional funding for workforce training and development, as well as the expanded emphasis on equity and economically disadvantaged communities represented across the plan. We are very interested to see what the outcomes are going to be on this emphasis and, in general, learning more about the programs that will directly impact equity outcomes.

Relative to CTP, we're going to continue looking at funding opportunities to address workforce training for both public and private transit fleet adoption in logistics sectors and public transit sectors, as well as a continued emphasis on ZEV infrastructure manufacturing deployment and ZEV vehicle manufacturing in California. Our hope is to fund workforce training that supports the public and private employers deploying these technologies, and that aligns closely with not on the Labor and Workforce Development Agency but GO-Biz, Tyson spoke earlier, as well as the Division of Apprenticeship Standards, supporting pre-apprenticeship and apprenticeship alignment, as well as journey worker trainer for electrification. The CEC and CARB program goals as well.

Using our CORE Program funds, we're going to award contracts for these manufacturers, and look for the pre-apprenticeship and apprenticeship workforce being supported. That is a key for us for equity.

We're also looking at funding programs through RESPOND (phonetic). We heard something about national -- or natural disaster earlier. We have funded programs dealing with stationary power and electric vehicle infrastructure manufacturing. So if you'd like more information on that, that program specifically deals with the economic impact of natural disasters, including earthquake, fire and, importantly, drought in the Coachella Valley.

A new announcement. We have approximately $55 million in General Funds that are going to be deployed in two program areas targeting job creation and expansion for high-road employers and industries that -- we'll be including IT, manufacturing, healthcare, among others. These funds will also be partnered with the extension of the contracted education partnerships that ETP has to better serve job creation for (indiscernible) business and high-impact industry sectors. These General Fund program guidelines will be approved at our upcoming panel meeting on October 1st. And we will then be going out for partners.

Lastly, we're looking for a wider lens for serving economically disadvantaged communities and furthering our efforts in supporting the traditionally underserved workforce populations. We are engaging stakeholders, but we are going to seek additional partnerships and organizations that can help provide input on our policies to better serve the traditionally underserved. And I would definitely like to champion the comments of Casey Gallagher and of Daryl of Rising Sun. And in all disclosure, we've recently approved a comment with Rising Sun and look for replicating that model statewide in pre-apprenticeship training.

Thank you.

COMMISSIONER MONAHAN: Great. Thank you.

Next, we have Katherine Garcia, then we have Will and Bill on deck.

So Katherine?

COMMITTEE MEMBER GARCIA: Hi everybody. I'm Katherine Garcia. I'm the Sierra Club. And

I really want to thank the CEC for your work on this comprehensive update today.

I also want to give a thank you to my fellow Advisory Committee Members for taking the time today to give such thoughtful comments.

So today, we come here, and really appreciate the presentation. But looking back over the yeas, you know, we've worked so hard to ensure that we have the bull targets in place to transition to zero-emission cars, trucks, and buses. And we know that these historic policies go hand-in-hand with tremendous investment in charging infrastructure. That's how we are going to get the transition we need during this climate emergency.

I appreciate that you've highlighted the funding for public transit and school buses. I think that's so important. As we've said before, clean buses are a win-win-win because they improve air quality, reduce climate pollution, and reduce VMT.

In addition, charging for medium- and heavy-duty vehicles are absolutely critical as we start to prepare for the beginning of the ACT rule in 2024.

In terms of light-duty vehicles, I do want to emphasize that car drivers really feel they need to feel comfortable about charging availability and feel confident that they're going to find chargers. But given the limited funding, I think that equity is just absolutely key, and stakeholder engagement is critical. We want to make sure to maximize the dollars, maximize every dollar.

I appreciate the assessments that have been completed. And I think we need to carefully and strategically prioritize disadvantaged communities to make sure that the light-duty vehicle charging is placed in a way that really prioritizes equity. And I agree with the previous comments that we are going to keep pushing and fighting for additional funding.

Thank you.

COMMISSIONER MONAHAN: Thanks Katherine.

All right, next on deck, we have Will Barrett -- next, we have Will Barrett, not just on deck. And then -- wait. Bill disappeared on the hand. And then we have Bill and Alfred.

COMMITTEE MEMBER BARRETT: Thank you very much. Will Barrett with American Lung

Association. And, largely, I'll be repeating a lot of the great comments that people have made, so I'll try to be brief.

Very much appreciate the conversation, all the panelist discussions, and the staff's work to kind of answer the questions.

I wanted to really, kind of question one, agree with what Kevin said, you know, there's never enough money. And we think that the best way to get, you know, to the health benefits of all of these investments is to get the money moving as quickly as possible, get the projects in the ground, get the clean air benefits moving. So I'll just kind of repeat what I asked the question about earlier on that front.

On question two, I think, you know, we know that, from the air quality perspective, from the public health perspective, that the heavy-duty sector is dominating the harmful emissions on-road, off-road. We know that these -- the NOx emissions of diesel particulates are adding to our air pollution burdens. We have the worst air pollution in the United States. Despite decades of progress, we still have a long way to go. So these investments really are critical to accelerating the benefits and getting us closer and closer to attaining clean air standards.

We also know that the heavy-duty sector is a dominant reason for so many health disparities in California. And again, just really want to emphasize the need to move the funding quickly and equitably out so that we're cleaning up the heavy-duty sector as rapidly as possible.

That said, we also, you know, fully agree that we need our light-duty vehicle sector, we need the heavy-duty sector all moving to zero-emission as quickly as possible. So I won't kind of comment on the value of how much is going into each.

My dog is a making a brief appearance here. I apologize.

So the basic idea I wanted to just emphasize on the equity piece is really reiterating some of the comments that we need to be really looking at, while the Energy Commission is pushing towards 50 percent of investments in disadvantaged communities, that should really be the floor, making sure that we're exceeding those goals, we're treating it as more than a goal, as a standard, so that the investments we're making are really moving towards putting our money where the need is greatest.

And then the last thing I'll say is I just wanted to flag, actually, the comment that Sam at USC made, that really looking at a health evaluation, both going forward, you know, what could be accomplished, and looking back at what the benefits of the investments we've made so far, you know, have yielded in low-income communities and in disadvantaged communities to really make sure that these benefits are accruing in those communities where they're needed most.

So with that, thank you all very much. Much appreciated.

COMMISSIONER MONAHAN: Thanks Will.

I want to emphasize that I welcome pets and children in Zoom videos, so it's one of the benefits that I see your dog. What a cutie. Yeah, it's whatever we can do to bring joy while we're on Zoom, let's do it.

Okay, then next, we have Alfred Artis. And on deck, we've got Bill and Matt.

So, Alfred, your turn.

COMMITTEE MEMBER ARTIS: Hi there. I'm

Alfred Artis from -- sorry. I was on mute. Hi there. I’m Alfred Artis from Consumer Reports. There we are. I’m visible now. And I would like to address questions one and three, broadly, mostly regarding consumers who do not live in single-family homes.

As folks here know, a consumer with a private garage has access to the most convenient and the lowest cost charging equipment in the form of common household plugs. But for multifamily dwelling units, especially those in disadvantaged communities, it sounds like your report says that those low-income individuals have the furthest drive to access DC fast charging. And, generally, folks in multifamily dwellings do not have access to common household plugs in their garages or wherever they park.

It is, already, sometimes four times higher -- four times more expensive -- sorry -- to rely on DC fast charging. And if the chargers themselves are not even sited in low-income and low-density areas where there are disadvantaged communities, that presents a further problem.

It is also concerning that there are still no planned Level 2 chargers at residential multifamily housing in this plan. And that's something that should be addressed as charging at home is the easiest and most convenient way, as well as the cheapest way, to deliver electricity to an EV.

But as a consumer group and not an equity group, we defer to the voices on the ground, especially folks on this call from Huron, the rest of the Coachella Valley, and elsewhere. If their communities want DC fast chargers, please, do your best to provide them with DC fast chargers.

That said, the overall consumer answers are pretty clear. Number one, you should immediately demand that EV charging capabilities at multifamily dwellings are in the Building Code. It's cheaper to build correctly than to rebuild. And as the California Building Code is being updated at the moment, we think this is something that CEC should address as quickly as possible.

We also believe that money should be spent to reach the most difficult consumers that have -- that will have the most -- that will require the most amount of money to electrify their transportation. If that means building, if that means retrofitting urban multifamily dwellings, then that should be where the money is spent.

And then, finally, we believe that on-street Level 2 is going to be part of the solution, especially in urban areas. Underserved communities deserve the convenience of at-home charging.

So those are my comments. Thank you very much.

COMMISSIONER MONAHAN: Great. Thanks Alfred.

And I should emphasize, we are not giving up on multifamily, charging in multifamily dwellings. We are not giving up on that. It is a tough nut to crack but we are definitely planning investments in that space and trying to learn what works and what doesn't work and replicate what works. We know that's a major problem.

COMMITTEE MEMBER ARTIS: Thank you.

COMMISSIONER MONAHAN: Let's see. We have Bill Magavern next, and Matt and Leslie on deck.

COMMITTEE MEMBER MAGAVERN: Thanks Patty. Bill Magavern with Coalition for Clean Air. And I want to thank the CEC for continuing the commitment to investing at least half the money in disadvantaged and low-income communities for the benefit of those communities, a commitment that we first sought in this Committee last year. And I agree with Will Barrett that the goal is that that's a minimum and we want to exceed it.

And, really, the best way to deliver equity with this program, I think there are two priorities, one is providing clean mobility for all Californians, and the other is in providing clean air. And as many have said, the priority there, when it comes to air quality, is to reduce toxic diesel emissions from medium- and heavy-duty vehicles.

In the Charge Ahead California campaign, we did a lot of budget advocacy and prioritized those two areas, equity and heavy-duty. And the legislature really came through when it came to heavy-duty, didn't do as well when it came to equity. So we're hoping that in the future that we'll deliver more in the vehicle area, particularly for the transportation equity projects.

And for heavy-duty, a lot of people have made good points. One that I wanted to add is when it comes to funding hydrogen stations, since there are so few of them, it seems that every hydrogen station should be one that is accessible to buses and trucks, as well as to cars. And we really need to keep alive the possibility of reducing diesel emissions through zero-emission hydrogen fuel cell technology, which is already happening in buses, and some demonstrations are going on in trucks that we hope will scale up and be much more successful. So I think that's the way we can maximize investments in that area.

And, finally, just a procedural request. When this item comes to the Commission at your building meeting, I'm wondering whether we can have some time for the Committee Members to make our comments before going to general public comment?

Thank you.

COMMISSIONER MONAHAN: Thanks Bill. Good food for thought for us.

Next, we have Matt. Then we have Leslie and Kevin on deck.

So Matt Gregori?

COMMITTEE MEMBER GREGORI: Good morning, Commission Monahan, CEC Staff, esteemed Members of the Advisory Committee, and members of the public. My name is Matt Gregori and I serve as a Technology Development Manager on SoCalGas's Research, Development, and Demonstration Group. Clean transportation is a major component of my team's research portfolio.

As you may know, SoCalGas has committed to replacing its over-the-road fleet with electric and fuel cell electric vehicles, achieving a 100 percent zero-emissions fleet by 2035. We have also successfully partnered with Sierra Northern Railway and Zero Emissions Industries to secure grants from the CEC in the locomotive and harbor craft zero-emission solicitations, which is really exciting.

To address question two today, we believe more funds should be directed to the heavy-duty sector where clean transportation investments will have a greater impact on air pollution, particularly in environmental and social justice communities.

And to address question three, while much of the work in the research community, where I work, is focused on zero-emissions technology, deployment of net-zero-emission vehicles to displace diesel trucks should continue to be supported by the Clean Transportation Program.

In a recent letter, Wayne Nastri, Executive Director of the South Coast Air Quality Management District, stated that,

"Actions to make progress towards climate goals and to reduce air pollution can and must go hand in hand."

Mr. Nastri's letter further states that,

"Heavy-duty trucks fueled with renewable natural gas, or RNG, are commercially available today, can provide substantial GHG emissions reductions, and are at least 90 percent cleaner than new diesel trucks on NOx, and 100 percent cleaner on cancer-causing diesel particulate matter."

In addition, a peer-reviewed study recently published by the University of California, Riverside in the Journal of Transportation Research Part D further substantiates this point by stating,

"Heavy-duty trucks fueled with RNG should be rapidly deployed in the 2020 to 2040 time frame to achieve GHG and NOx emissions reduction targets. And current incentive programs need to be reevaluated to ensure near-zero-emissions technologies are being encouraged and not delayed."

We encourage the CTP to support innovative investment strategies. For example, a fuel card program can help offset the up-front costs of owning and operating a natural gas or renewable natural gas heavy-duty truck. This is similar to how Toyota offers free fuel to customers who purchase a Mirai to help incentivize purchases of new hydrogen fuel cell electric light-duty vehicles. Fuel cards can be provided to customers who purchase a new heavy-duty Class 8 natural gas near-zero-emission truck or hydrogen fuel cell electric truck that is preloaded with a balance at an amount designed to improve economics and encourage adoption.

And with that, thank you for the opportunity to comment.

COMMISSIONER MONAHAN: Thank you, Matt.

All right, next, we have Leslie. And Kevin Hamilton and Bill Elrick are on deck.

So, Leslie, you're up.

COMMITTEE MEMBER AGUAYO: Thanks Patty. Hi everyone. Good morning.

I want to start off by thanking the Energy Commission for this report, and taking some of our feedback into consideration, particularly, some of the comments that were made on the previous Advisory Committee around equity, so I'd like to focus most of my comments around that.

While I do appreciate all of the investments that have been doing, and the recognition that 50 percent of the investment allocations have been going to disadvantaged communities, I would like to see a little bit more just aggregated data to further understand where exactly some of these investments have been placed, particularly since we've clarified a little earlier that the investments criteria for disadvantaged communities are specific to where they are physically located in California.

I took a look at some of the investments to date, and I might have done some of the calculus wrong, but it looks like out of the around 13,000 charging stations invested to date only 1,339 stations have actually gone in disadvantaged communities for light-duty chargers, which reflects about a ten percent deployment of the overall investment.

So I just kind of wanted to clarify -- (coughs) excuse me -- a little bit more around the equity data that's being considered for how these investments are being placed throughout census tracts that are in disadvantaged communities? And I think that would be really helpful to clarify how to move along/move forward in future investments in DACs.

I also wanted to highlight the earlier comments around moving the criteria from just physically located to also having a clear definition of benefits and what benefits mean to the CEC. There are really great resources, specifically in the Greenhouse Gas Reduction Fund funding guidelines from CARB in 2018 that reflect that direct investments must be meaningful, assured, and direct for disadvantaged communities. So happy to share some of those resources.

And, lastly, I'd also like to point out some of the, I believe, you know, lack in more language around resiliency. I did notice that some of the presentations around equity focused on having vehicle-to-grid integration. But it would be really great to also include criteria and metrics that reflect the land use and changing demographics, specifically, you know, as we're starting to see shifts in infrastructure and in demographics as folks leave urban areas and dense populations to more suburban areas, so trying to capture that reflection in some of the SB 1000 reports that we are taking a look at.

So with that, I will cede the rest of my time. Thank you.

COMMISSIONER MONAHAN: Thanks Leslie. Well, as we refine our definitions, we'll really appreciate the input of Greenlining and other groups to make sure we -- I don't want to say get it right but move towards getting it right. It's a work in progress. But we are committed to be more explicit about what meaningful, assured, and direct really means in the -- in our grants.

So let's see, we have Kevin Hamilton next, and Bill and Miles on deck.

COMMITTEE MEMBER HAMILTON: Hi. Thank you. Kevin Hamilton, Coachella Valley Asthma

Collaborative here in the San Joaquin Valley.

I wanted to support and reinforce the comments from my colleagues, Will Barrett and Bill Magavern. We agree strongly with their points.

I also want to highlight the health aspect of these changes and the lack of evaluation, that we feel very strongly that adding an evaluation of the economic and physical health changes -- physical and mental health changes that these programs can bring about in these communities and in local residents is tremendous and is not well known because it’s not being considered as part of any of these grants and programs that are sent out to the communities. And attempts, quite honestly, to add them at various points that we’ve made along the way with some of our UC colleague have been widely rebuffed.

And so, you know, why we wouldn’t want to know that I can’t imagine. I think the legislature and others would look at lot more favorable about -- on more funding and building on that, on these projects, if you could see just what a change having an EV in a driveway, for instance, with solar on a roof in an energy efficient home can bring to a family, both economically and reduction of stress which is going to improve the health of the family, and on local businesses that now have access to this new clean transportation source that costs significantly less to maintain and is significantly more reliable. Yet those kinds of assessments don't seem to be part of -- part and parcel of the work here.

So we would like to submit that that should be added in and done intentionally, which it is not at this time.

I want to reenforce --

COMMISSIONER MONAHAN: Well, Kevin --

COMMITTEE MEMBER HAMILTON: -- my good --

COMMISSIONER MONAHAN: -- I'm --

COMMITTEE MEMBER HAMILTON: Yes?

COMMISSIONER MONAHAN: -- really sorry to interrupt, really sorry to interrupt --

COMMITTEE MEMBER HAMILTON: No, no.

COMMISSIONER MONAHAN: -- but we --

COMMITTEE MEMBER HAMILTON: As long as they freeze the clock --

COMMISSIONER MONAHAN: -- we haven't

had --

COMMITTEE MEMBER HAMILTON: -- I'm okay.

COMMISSIONER MONAHAN: Well, we -- you've already -- did I get it wrong? Because I think you've already spoken. You've already used three minutes? I mean --

COMMITTEE MEMBER HAMILTON: I did. Oh, I'm sorry. Did we not get --

COMMISSIONER MONAHAN: So we haven't --

COMMITTEE MEMBER HAMILTON: -- a second chance?

COMMISSIONER MONAHAN: Some Advisory Committee Members haven't.

COMMITTEE MEMBER HAMILTON: Apologies.

COMMISSIONER MONAHAN: I appreciate that you have a lot of comments to make. And we are going to have a lightning round at the end. But I would just say, let's make sure we can hear from everybody --

COMMITTEE MEMBER HAMILTON: Absolutely.

COMMISSIONER MONAHAN: -- on the Advisory Committee first.

COMMITTEE MEMBER HAMILTON: Yes.

COMMISSIONER MONAHAN: All right. Thank you.

COMMITTEE MEMBER HAMILTON: I didn't realize I was breaking a rule.

COMMISSIONER MONAHAN: All right.

COMMITTEE MEMBER HAMILTON: Apologies. Go ahead and take the rest --

COMMISSIONER MONAHAN: All right.

COMMITTEE MEMBER HAMILTON: -- of my time. Thanks.

COMMISSIONER MONAHAN: Okay. Thank you.

All right, Bill, you're next. And then we have Miles and Micah on deck.

COMMITTEE MEMBER ELRICK: Great. Thank you.

Others have commented on all the good hard work by Staff and CEC leadership. But I want to point out and recognize that we really appreciate this Advisory Committee meeting because the diversity of voices in that input is so important in this process, so thanks for that and having that opportunity.

Quickly commenting on a few earlier comments, colocation of hydrogen stations, we know where that works and where it doesn't. Just looking at today's fuel market, travel plazas are an awesome opportunity, maybe not so much in the urban markets. Think about where you fuel your light-duty vehicles now. And we have a new fuel cell truck vision that looks at some of that space, you know, not just California, but how we expand this market well outside of this state.

And then, finally, to an earlier comment about multi-unit dwellings, by design, hydrogen stations support multi-dwelling units -- multi-unit dwellings. And so that diversity in ZEVs is really important to help everyone.

To the questions at hand, the first question about spending funding, you know, our aim is to make this a total transformation and get away from public subsidies overall. So I want to reiterate, focusing on that, beyond just legislative targets but what gets us there, and so seeing the Investment Plan recognize other market milestones along the way, not waiting for formal milestones.

The Fuel Cell Partnership through a public-private process has created targets of 1,000 light-duty stations, 200 heavy-duty stations. I'd love to see that recognized and work towards more proactively. And we look to work with you, Commissioner, and others on maybe furthering those through a more public process again, really making sure we get those right because we all know this is an ongoing effort.

The other is recognize some of the materials that are already out there. There are AB 8 reports twice a year. I don't see those reflected in this document. And I think that would really expand the analysis within the CTP rather easily. And they're already there for the taking.

The other document is ARB's Draft Self-Sufficiency [sic] for the Light-Duty Market. It's out there. And what's amazing is it's achieving the ZEV regulation. It's the first identified ZEV transition pathway in the world. I can't say that enough. And that we could reach the light-duty hydrogen and fuel cell vehicle market sustainability by 2030, so seeing that recognized. And I think that's really important to highlight and focus more of the tangible benefits and opportunities, especially per dollar of CTP investment made in the document, and it is.

I said earlier, you know, I'd love to work with you more on these. So excited for this. Thanks for all the hard work. And I look forward to more.

COMMISSIONER MONAHAN: Excellent. Thank you, Bill.

All right, so we have Miles next. And we have Micah and Lori on deck.

COMMITTEE MEMBER MULLER: Great. Thanks Patty. Miles Muller with the Natural Resources Defense Council. Really enjoyed the conversation so far and appreciate all the thoughtful comments from the Advisory Committee, as well as all the work that's gone into the Revised Staff Report.

Other Committee Members have largely covered much of what I would have said, so I won't belabor those points too much, but I would like to echo some the comments by Bill Magavern, Leslie Aguayo, Sam Houston, and Will Barrett.

I would strongly reiterate the appropriateness and importance of continuing to strengthen the program's commitment to expanding the benefits of clean transportation in low-income and disadvantaged communities, and to continuing to explore additional metrics to better define, measure, and track community benefits from the program. As Bill and Leslie referenced, an essential part of realizing that commitment to equity will be ensuring that at least 50 percent of investments go to projects that directly serve or benefit people who live in those disadvantaged and low-income communities.

Likewise, we also agree with the value of front-loading those investments in early years to help reduce greenhouse gas emissions and local air pollution as early as possible and provide critical relief to those communities hardest hit by the effects of polluting vehicles.

As many panelists have said, while this money will go a long way in helping California -- helping keep California on track to meet its climate, equity, and air quality goals, and help establish a strong foundation for future efforts, continued and expanded funding in future years will be critical. So we look forward to continuing to push for increased investments in clean transportation and these important programs, as well as continuing to work with the Commission and Advisory Committee to help California realize a cleaner and more equitable transportation future.

So thank you for the opportunity to

comment.

COMMISSIONER MONAHAN: Excellent. Thank you, Miles.

Next, we have Micah and, last, Lori.

So, Micah, you're on.

COMMITTEE MEMBER MITROSKY: Hi everyone. Good morning, Commissioner, fellow Advisory Committee Members. Great job to the staff this morning on the presentation. Micah Mitrosky. I'm an International Representative with IBEW Ninth District.

I'm sorry. I have a little bit of a rowdy cat in the background.

I'd like to highlight three points.

We support the comments by Casey Gallagher and others pertaining to high-road job creation and advancing pre-apprenticeship, plus apprenticeship partnerships.

Additionally, we support prioritizing investments to rapidly reduce air pollution in low-income and disadvantaged communities.

And then, finally, we agree with the comments of Bill Magavern, Miles, Will Barrett, and others that the 50 percent investment in disadvantaged communities should be a floor and not a ceiling.

Thank you.

COMMISSIONER MONAHAN: Thanks Micah.

All right, we have Lori Pepper, adding cleanup.

Lori, you're on.

COMMITTEE MEMBER PEPPER: Good morning. Thank you. Thanks Patty. And thanks to the entire CEC team for all your hard work. And to the Advisory Committee Members, I really have enjoyed the discussion this morning and hearing everybody's thoughts.

I did want to -- I didn't want to repeat too much, so just had a couple of things I wanted to highlight on behalf of the Transportation Agency.

First, I do want to thank CEC, CARB, and GO-Biz for including us in coordination meetings on funding. You know, we have big goals to achieve, and we each have different pieces of the puzzle. And so making sure that we're using our different pieces to their highest value is important. And these coordination meetings are critical to that.

As far as CalSTA goes, we do have the

TIRCP, the Transit Intercity Rail Capital Program. And so if you qualify, or if you partner with an entity that qualifies, really want to make sure everybody knows that that's another program where we can kind of expand our reach in order to flip the transit agencies and our intercity rail agencies to zero-emission vehicles. So please take a look at that, as well, as another option.

I also wanted to -- oh, here we go -- I also wanted to comment on the idea of having low-income benefits. There was some discussion earlier about having a card. And I wanted to make sure people know that we have a program called Cal-ITP, the Integrated Travel Project. And one of the potential benefits that we're trying to do is to lower the barriers to access actual benefits. And we're trying to really reform the way we have payments and planning and being able to reach people in a different way.

And this is something where we might be able to integrate a program, like was discussed, into what we're doing. So if that's something that people want to discuss, I would really hope that we could be included in that conversation.

Thank you very much.

COMMISSIONER MONAHAN: Thanks Lori. I mean, I'm really glad you and Tyson and Sydney, you know, are emphasizing the relationship that we have. I feel like we've never had -- I mean, granted, I've only been in this job two-and-a-half years, so my longevity is somewhat short, but I feel like the level of coordination is extraordinary right now between agencies. And we're all committed to meeting the state goals and doing it in a way that's going to be effective and attentive to equity. So just thank you for being here, and thanks to all the other fellow state agencies, and for your collaboration.

So I don't see any more hands. I hope every Advisory Committee Member has had a chance to speak, but I'll give folks just a second if you -- I don't have a list going. But if you are on the Advisory Committee and you have not spoken and you want to, just raise your hand right now. Okay, I don't -- oh, there's one. Oh, Larry's raised his hand again. Because we do have the -- now we have the lightning round.

So, basically, I wanted to give everybody a chance because that was a lot to digest. I'm digesting a lot. And if there's anything that anybody else said that made you think, ahh, there's something else I want to add to my thoughts, or I you just want to summarize pithily within a minute your high-level thoughts (indiscernible) opportunity. So we're going to do a quick lightning round, so anybody who wants to speak again gets one minute to do that.

And, Larry, you are first up.

MR. BRECHT: Actually, I think, Larry, you haven't spoken yet, so I would -- if that's correct?

COMMISSIONER MONAHAN: Oh, I'm sorry. Larry hasn't spoken yet. Oh, and Russell hasn't spoken. So we have two that haven't spoken; is that right?

COMMITTEE MEMBER ENGELBRECHT: I'll let --

MR. BRECHT: That's correct.

COMMISSIONER MONAHAN: Okay.

COMMITTEE MEMBER ENGELBRECHT: -- Russell go first while I try to bring up my document again.

COMMISSIONER MONAHAN: Okay.

COMMITTEE MEMBER TEALL: Russell Teall, private citizen.

The writing of the solicitation is an art form. And the CEC Staff does it well. And we need to prioritize bidirectional chargers, chargers supported by renewables, and workforce development. Instead of dedicating a line item budget, it could be incorporated in everything the CEC does.

And I've learned to use priority communities instead of disadvantaged communities because they're not disadvantaged. They're culturally equivalent in many respects.

So that's my comments.

COMMISSIONER MONAHAN: All right. Thank you, Russell.

Larry, have you had a chance to find your notes?

COMMITTEE MEMBER ENGELBRECHT: Yes. I have it here. Thank you very much.

My comment is, and I'll submit a written one to the docket shortly after this, there is no umbrella oversight of transportation education from what I am seeing in California. Using automotive as an example, because that's directly related to ZEV training, California Department of Ed has their standards. So does the Community College Chancellor's Office, as well as UC for their A through G approved programs for high schools. Add the Industry National Accreditation Standards and the dog-piling unnecessary duplication and redundancy of standards is simply staggering. And it's no wonder that instructional staff are so resistant to changing our curriculum.

Add to that the ineffective articulation agreements between high school and community college transportation programs, the strengthening of dual and concurrent enrollment agreements between high schools and community colleges is of critical importance to develop and strengthen the pathways for training for ZEV programs.

The point I'm trying to make is that there needs to be some sort of coordination or oversight, perhaps at the superintendent and public instruction level, or somewhere where we can eliminate this redundancy and come up with a set of standards that everybody can use and we can strengthen our pathways of, because the pathways between high schools programs, and I'm aware that there is ZEV programs that have been developed, that needs to be continued in college to pick up where they left off, to continue going to advanced training and accreditation, in addition to the high school students that missed out on the ZEV training and then wanted to start that in community college.

That is all. Thank you.

COMMISSIONER MONAHAN: Thanks Larry.

So any other Advisory Committee Members who have not spoken? All right, I don't see any more hands.

So let's move to the lightning round. So we have -- at noon, we do want to stop for public comment, but I think you have enough time for a minute for anybody who wants to speak, again, from the Advisory Committee. So just raise your hand if you want to use the minute lightning round to just either summarize your thoughts or modify your thoughts based on what you've heard from other Advisory Committee Members. And you don't have to use the lightning -- (clears throat) excuse me -- you don't have to use the lightning round. But we just wanted to make it available in case folks wanted to say something additional.

I see Robert with his hand raised.

COMMITTEE MEMBER MEYER: All right. Do I get a minute? All right.

COMMISSIONER MONAHAN: You do.

COMMITTEE MEMBER MEYER: It's started too.

I wanted to reiterate the call that we have regarding efforts to reach out to small business, economically disadvantaged communities, and the organizations that serve them. We do want to, similar to this effort of getting input and a perspective regarding equity, we want to improve that in our programs. And we have several funding sources that specifically address that.

The other thing I would mention is we have specific grant funding dealing with small businesses that we are interested in applicants for. So if you'd like more information, please don't hesitate to reach out to me.

But on the aside of it, thank you so much for the opportunity to provide input on this plan. It's such a massive effort. And given all of the funding efforts that seem to have flooded all of our programs, I really appreciate the effort to try and efficiently align the awarding of funds, the providing of program support, and look forward to the continued collaboration.

Thank you.

COMMISSIONER MONAHAN: Great. Thanks Robert.

I see Tracy with her hand raised.

COMMITTEE MEMBER STANHOFF: Yes. Thank you.

Can Robert put his email in the chat so we can email him or send him information on that small business grant info step please? Thank you.

COMMISSIONER MONAHAN: I got to say, I'm very entertained with how different meetings are in Zoom, so much chatting and hand raising happening.

All right, does anybody else from the Advisory Committee want to make a final comment?

Casey?

COMMITTEE MEMBER GALLAGHER: Yeah. I just want to thank everyone for the opportunity to make comments on (indiscernible).

COMMISSIONER MONAHAN: Oh, Casey, you went away for a second there. So you might want to just try turning off your video so that your bandwidth is reserved for audio.

COMMITTEE MEMBER GALLAGHER: All right. Let's give this a go. Fun times during the pandemic and Zoom. My cat's sleeping or I would bring her out to show everyone.

So I just want to thank everyone for the comments being made today and the opportunity to do -- and add additional comments to the plan.

Ultimately, I just want to point out that as we kind of explore equity, and also different forms of advancement for low-income and disadvantaged communities, and expand this kind of investment for all Californians, the Labor Federation is happy to provide any kind of resources or discussion or follow up on different plans that have been created and other ways that these things have been implemented across the state.

Thank you.

COMMISSIONER MONAHAN: Thank you, Casey.

I'm not seeing any other hand raised. So I'm going to just say a few concluding remarks.

And then I'm going to turn it over to the public comment period.

Well, first, I want to thank all the Advisory Committee Members for taking so much time our of your day to help advise us on these important investments. I want you to know that we are taking your feedback very seriously. And we're going to be doing more outreach to get additional feedback. I'm going to be actually meeting with the Disadvantaged Communities Advisory Group on Friday, just to give them an overview, and we'll have a deeper dive with them. We're doing a roundtable with some environmental justice groups. We'll be getting some information back from them.

I encourage everybody to submit written comments so that we -- that elaborate on the comments that you've made verbally today, so we'll have must sort of more of a platform to make a good decision going forward with the final Investment Plan. And this is not just lip service. Like we are really listening carefully to what you're saying and thinking about how best we can serve California, meet the state goals, promote equity, and do a better job articulating what it means to have a meaningful, assured, and direct benefit to communities.

So with that, just thank you again. You're welcome to stay and listen to the public comment. And I'm going to turn it over, I think, is it Michael or Patrick that's going to be leading this next?

MR. COMITER: Yes. I'll announce the public comment.

COMMISSIONER MONAHAN: Oh, great. Okay. Thanks Michael.

MR. COMITER: Sure. All right. So --

MR. BRECHT: I just would --

MR. COMITER: Oh, go ahead.

MR. BRECHT: -- I just would reiterate, the comments are due by September 30th, that we, like Patty said, strongly encourage those comments. And to be as specific as possible in those comments would be really appreciated. So thank you for being here.

And I'll turn it over to Michael for public comments. Thank you.

MR. COMITER: All right. So we're going to start with raised hands. And then, afterwards, we're going to move on to the Q&A.

So to start off with, we're going to go to Mark Roest.

Please go ahead and state your full name, then spell it, and then state your affiliation.

MR. ROEST: My name is Mark Roest. I'm in San Mateo, California. I am with Sustainable Energy, Inc. And we are a battery and solar technologies startup company. And, first, I have a question, then I have a comment.

The question is: Are LCFS credits readily available for BEV charging infrastructure for both roads and agricultural, for ports and rail hubs, for multifamily residential, for non-utility provision, meaning onsite solar and storage, community solar gardens, that sort of thing?

The comment is, by Q4 2022, we hope to have high-value, low-cost, non-lithium batteries for both stationary storage and traction use. By mid to late 2023, we plan to offer 48 percent efficient solar thin film that can be used for rooftop and canopy capture and on vehicles as well. So I'm particularly interested in having that go into the impacted communities.

And, also, this will create businesses

who are interested in getting people hired and starting up cooperatives to convert vehicles' existing fleet to full battery-electric, and to install and put up solar storage -- solar and storage.

Thank you.

MR. COMITER: All right. And now we'll be moving on to Teresa. But just a reminder going forward, we will only have one minute per speaker.

So go ahead, Teresa Bui, and state your name and affiliation.

MS. BUI: Thank you so much. Good morning and thank you for hosting this. My name is Teresa Bui, spelled B-U-I. I'm the Safe Climate Policy Director with Pacific Environment. We're an environmental NGO with a consultative status at the International Maritime Organization.

Ships are one of the work polluters in California. And in the area surrounding San Pedro Bay ports, harbor craft constitutes one of the top three sources of cancer risks because of the diesel particulate matter.

So what we're asking you is we're urging the CEC to allocate funding for green hydrogen infrastructure and electrification to modernize operation and drastically reduce shipping emission for front-line and fence-line port communities. Green hydrogen infrastructure and shore power is a critical infrastructure energy pathway for oceangoing vessels and small ships.

And I just want to remind you that marine vessels are considered off-road mobile sources and part of the Governor's Climate Executive Order N-79-20 to achieve zero-emission by 2035.

Thank you so much.

MR. COMITER: Thank you.

Now, we'll be moving on to Ryan L.

Go ahead.

MR. LAU: Hi. My name is Ryan Lau, spelled L-A-U, with AC Transit, a transit agency in the San Francisco East Bay.

So I just wanted to echo some of the comments made around the benefits of transitioning the heavy-duty sector to zero-emission, and from my perspective, in particular, transit buses. Because if we are concerned about the public health of vulnerable and disadvantaged communities, we are traveling through those communities all day every day.

You know, our ridership consists of 65 percent low-income households, 75 percent people of color, 29 percent limited English proficiency -- excuse me, not enough coffee this morning -- and 43 percent have no access to a car. And so they ride our buses because we travel through their communities all day.

And so the best way to impact the air quality of these communities is to help us transition to zero-emission.

Thank you.

MR. COMITER: Thank you.

Next, we'll move to Roger [sic].

Go ahead and state your name and affiliation.

MR. HURDLE-BRADFORD: My name is Rodric, R-O-D-R-I-C, Hurdle, H-U-R-D-L-E, hyphen - Bradford. I am with News Data, and California Energy Markets Media Outlets.

My question is -- I know Ryan just spoke about public transportation from a demographic standpoint. And I may have missed this referred to on the call as I had to step out, but what is the plan or direction, or does this plan address the dramatic decrease in demand of private car usage that we see from this younger generation? We are looking at a generation that is going to go more towards a European-style thinking when it comes to transportation and not our traditional, especially in California, our everyone-needs-a-car mentality.

So is there are any plan or is there any angle developed, or a resource you could point me to, that talks about that demand, as in that was a -- the main reason I got on this call is to see and use that as a story angle?

Thank you. And I'll be muted for your response.

MR. COMITER: Thank you. I do want to remind you, we are just taking statements currently. But you're able to follow up with Patrick Brecht via email afterwards.

So next, we'll move to Mikhael.

Please state your name and affiliation.

MR. SKVARLA: Thank you. Mikhael Skvarla. I'm with The Gualco Group, here on behalf of the California Hydrogen Coalition. I want to express our appreciation for the meeting today and all the comments from the Advisory

Committee panel members, and Lead Commissioner.

CHC and our members stand ready to build the light-, medium- and heavy-duty hydrogen refueling infrastructure necessary to achieve California's climate and zero-emission goals. The challenge facing us today is that we need to -- both the industry and the state, and specifically the CEC and the Air Resources Board, is that we're going to build this infrastructure faster than ever before. The aggressive goals of the Governor's executive order, as well as the rules being promulgated by the Air Resources Board with the Advanced Clean Fleets, require us to have in place by 2024 substantially more infrastructure than what we do today.

And to that end, we look forward to partnering with everyone here and providing some specific comments to this proceeding in answering some of the questions above so that we can help inform our preferred pathway for moving forward.

Thank you.

MR. COMITER: All right. Thank you, Mikhael.

All right, next, we'll move to Glenn.

Go ahead and state your name and

affiliation.

MR. CHOE: Hi. Glenn Choe from Toyota Motors North America. Last name is spelled C-H-O-E. Greatly appreciate the time to communicate today. We just want to add some insights from our experience with light-duty zero-emission vehicle market.

With regards to CEC's metrics for funding, whether it's based upon number of stations or chargers available, as well as capacity, we'd like to recommend adding another metric which is based on customer experience. And that can be related to station availability or accessibility, uptime, or that of reliability.

We're learning from our experience that consumer confidence in zero-emission vehicles also relies upon their confidence in the infrastructure. So far it has been -- it has not been the best experience. And we're concerned as we move forward that such metrics may be needed to require additional funding.

Overkill of stations or chargers is greatly appreciated. Redundancy is never enough. So we'd like to encourage the CEC to look into adding additional metrics to your analysis.

Thank you.

MR. COMITER: All right. Thank you, Glenn.

Next, we'll move on to Dan Howells.

Go ahead and state your name and affiliation. Please un-mute, Dan. You're able to give your statement.

MR. HOWELLS: Sorry about that. Hi. My name is Dan Howells. I'm with the Electric Vehicle Charging Association. My last name is spelled H-O-W-E-L-L-S. EVCA is a nonprofit organization that brings together thought leaders throughout the value chain of the electric vehicle charging industry to advance the goal of clean -- of a clean transportation system. We'll be submitting comments, so I'm just going to do a couple of highlights, and some of this will be a tad redundant.

We would like to prioritize infrastructure deployment. We're heard -- it's been good to hear that you're releasing the funds quickly. But we would like to see that done by expanding existing rebate programs. We would like to see all targeted infrastructure deployment at urban mobility hubs. And we would also like to support the -- emphasize the infrastructure deployment in low-income and disadvantaged communities.

Thanks.

MR. COMITER: Thank you, Dan.

Next, we'll move on to William.

Please state your name and affiliation.

MR. ZOBEL: Yes. Good morning. My name is William Zobel, Z-O-B-E-L. I'm the Executive Director of the California Hydrogen Business Council. We represent over 125 companies in the commercialization of hydrogen and fuel cell technology here in the state of California. We appreciate the opportunity to comment today and agree that the focus of this task force should certainly be on overburdened communities that are impacted by heavy levels of air pollution.

We would point out that fuel cell electric vehicles, light-, medium- and heavy-duty, present a one-for-one replacement of petroleum vehicles and can be deployed today, and on the heavy-duty side be deployed in the very near term in communities that are overburdened by air pollution.

I would also point out that we echo the

comments made by Bill Elrick, who is one of the Advisory Committee Members, in particular those that are focused on cost. We need to take a look at what the state is spending on the various zero-emission vehicle programs and see what you get for the dollars that are spent. Bill pointed out the ARB reports that show a path to self-sustainability. We should focus on that and the need to continue to focus on that market to achieve that.

Thank you.

MR. COMITER: All right. Appreciate the public comment.

And it looks like we have two more raised hands. Let's move on to -- oh, another one popped up -- let's move on to Claire Warshaw.

Please state your name and affiliation.

MS. WARSHAW: Hi. My name is Claire Warshaw and I'm a Rosemont suburb, a Sacramento citizen. I live in an area that's effected by construction particulate matter, that would be from gravel construction companies, like granite, asphalt companies, and diesel trucks in this area. I am very low income. I learned California's Food Stamp Program for the first time over COVID. And I have different ideas than you've presented, though I'm very thankful for what you have presented. And I just want to echo a few things.

Rey's comment about travel influencing mental health, that's very true about low income.

I want to echo Russell's comments about endorsing bidirectional meter panels for emergencies.

Also, low-income people like to travel very cheaply, by plane, and I wrote a comment into the chat regarding that. I might write into the docket, although my eyeballs get strained. I imagine yours do too.

So thank you very much.

MR. COMITER: All right. Appreciate the comment. Thank you.

All right, next, we'll move on to Adam.

Go ahead and state your name and affiliation.

MR. MOHABBAT: Hi everyone. My name is Adam Mohabbat, spelled M-O-H-A-B-B-A-T. I'm a Policy Manager with EVgo. We are the nations largest network of public fast charging stations, based right here in California. Thank you for the opportunity to comment today. And I want to thank the Commission staff for the thoughtful work on the Investment Plan and the historic investments being made into ZEVs and ZEV infrastructure.

Two comments here, and we'll follow up with written comments as well.

First, to the extent where the Investment Plan can provide clarity on structure and cadence of upcoming funding programs, that would be extremely helpful in positioning the market and partners to meet state deployment goals.

Second, we're supportive of the Commission's work around SB 1000 on equitable distribution of charging infrastructure and are supportive of its use to guide the investments made in DCTB (phonetic).

Thanks.

MR. COMITER: All right. Thank you, Adam.

All right, it looks like we have two additional raised hands so far, so let's move on to Brett.

State your name and affiliation.

MR. ZEUNER: Hi. Thank you. My name is

Brett Zeuner and I'm with the Foundation for California Community Colleges. And I just wanted to emphasize the importance of workforce development. And I'm glad to hear that that came up so much.

I see the $5 million investment there juxtaposed against, you know, the triple-digit numbers for other things. And, yeah, just highlighting the importance of investing in community colleges and the need for the just transition to not just immediately benefit those who have been left out of growth and prosperity but to build those deep and resilient capacities that ensure the long-term economic and environmental health for everyone in those communities, so thinking about the long-term investment there.

And then one other bit was the just importance of ensuring that these investments don't lead to passed-on cost to consumers and communities while private businesses kind of profit from them. I've seen that happen in the light-duty incentives. So just making sure that this isn't just subsidizing the private sector but that we measure a way for the public to ensure that they're benefitting, as well, and costs don't get passed down.

Thank you.

MR. COMITER: All right. Thank you for the comment, Brett.

Lastly, we'll move on to Levi.

Go ahead and state your name and affiliation.

MR. TILLEMANN: Hi. My name is Levi Tillemann. I'm with Ample, which is a battery swap company that operates out of the San Francisco Bay Area.

I'm also an electric vehicle owner. And I think it's really important for electric vehicle owners that don't have access to overnight charging to be part of this process. Current public charging, whether it be Level 2 or DC fast charge, is both very inconvenient and very expensive for electric vehicle owners.

China has developed a solution for this. They're rapidly deploying battery swap infrastructure. By 2025, there will be capacity for 80 million battery swaps a week in China.

The federal government is also

integrating battery swap into the reconciliation language in its current infrastructure push. And we think it's really important that California do that as well. We haven't seen any evidence of that thus far in CEC or CARB policy. We believe that battery swap solves a lot of the challenges related to both equity and convenience for electric vehicles and would appreciate that you guys seek to integrate it in the future.

Thank you.

MR. COMITER: All right. Thank you, Levi.

And it looks like we had just another raised hand pop up. If we have time for that, we'll move on to Wayne.

Go ahead. State your name and affiliation.

MR. LEIGHTY: Hello. This is Wayne Leighty. (Indiscernible.)

MR. COMITER: Sorry. Could you increase your volume? It's difficult to hear.

MR. LEIGHTY: Sorry. Is that better?

MR. COMITER: Perfect.

MR. LEIGHTY: Wayne Leighty. Last name is L-E-I-G-H-T-Y, commercial head for Shell

Hydrogen.

I agree with the comments already made by Bill Elrick and Will Zobel and others. But just to reemphasize, charging and hydrogen --

MR. SMITH: Wayne, I apologize. It sounds like you've faded out again. We could hear you but it's almost whisper quiet.

MR. LEIGHTY: Okay. Any better?

MR. SMITH: Much better. Thank you.

MR. LEIGHTY: Just briefly, charging and hydrogen fueling infrastructure are so key and are becoming limiting to the adoption of zero-emission vehicles. So thank you for (indiscernible) this.

Market confidence is important, as well, for the low-income residents and the customers. And the wise integration and use of our (indiscernible) are essential.

Thank you.

MR. SMITH: Thank you, Wayne. Since we weren't able to hear it with crystal clarity, I wonder if you might be able to follow up with a docket submittal, as well, if you're so inclined?

MR. LEIGHTY: I will. Thank you.

MR. SMITH: Thank you.

MR. COMITER: All right. That seems to do it for all of the stated public comments.

So we'll go ahead and move on to the written Q&A, but it seems like we covered some of these topics already and I don't want to go over the time, so I'll just touch on the first question posted by Adrian Martinez, and that was,

"On the AQMD's Clean Fuel Program at the Advisory Committee meeting yesterday, EPRI gave an interesting presentation mentioning particular transportation electrification projects that originally estimate very large energy needs for larger scale bus projects, but with optimized charging solutions, dramatically reduced this need." And it's saying, "Will there be a capacity -- will there be capacity grants/resources for agencies, like the transit agencies, school districts, et cetera, to explore this so they can get the right size for the projects and stretch their funds?"

And with that, I don't know that we have the time to touch on anything else.

Any other comments from the people on the panel?

COMMISSIONER MONAHAN: I think, Michael, we’re just going to be closing it up. So if there’s no more public comments, maybe I’ll just make a few concluding remarks, and we can --

MR. COMITER: Perfect. Yeah.

COMMISSIONER MONAHAN: Okay. Any other -- any final -- folks want to make a comment?

MR. BRECHT: I’ll just add, please, the email -- my email is up on this slide. Oh, if you could put it back, perhaps? If you have any questions, please follow up with me and I’ll do my best to answer those as quickly as possible, so thank you.

COMMISSIONER MONAHAN: Great. Well, thanks to all the members of the public and stakeholder community that stuck it out through the entire AC meeting and made your comments at the end. As Patrick said, we encourage you to make written comments, and we are going to be taking written comments very seriously. You don’t have to be an Advisory Committee Member to influence our decision making process. In fact, we want as much stakeholder comments and feedback as possible. So we’re very excited, as you can tell, to move forward on this and to make smart decisions based on good public input. So please do provide your written comments.

And thanks again for participating. All right. Have a good day everybody.

(Off the record at 2:02 p.m.)

REPORTER'S CERTIFICATE

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

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IN WITNESS WHEREOF, I have hereunto set my hand this 11th day of October, 2021.

PETER PETTY
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Barbara Little
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