

DOCKETED

Docket Number:	20-BUSMTG-02
Project Title:	Public Comment on California Energy Commission Business Meetings
TN #:	235448
Document Title:	Transcript of October 14, 2020 Business Meeting
Description:	N/A
Filer:	Cody Goldthrite
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	10/28/2020 12:48:11 PM
Docketed Date:	10/28/2020

BUSINESS MEETING
BEFORE THE
CALIFORNIA ENERGY COMMISSION

In the Matter of:)
) 20-BUSMTG-01
 Business Meeting)
 _____)

REMOTE ACCESS ONLY

*The California Energy Commission's August 12, 2020 Business Meeting will be held remotely, consistent with Executive Orders N-25-20 and N-29-20 and the recommendations from the California Department of Public Health to encourage physical distancing to slow the spread of COVID-19. The public is able to participate and observe the meeting consistent with the direction in these Executive Orders.
Instructions for remote participation can be found in the notice for this meeting and as set forth below in this agenda.*

WEDNESDAY, October 14, 2020

10:00 A.M.

Reported by:
Peter Petty

APPEARANCES

Commissioners (Via Remote)

David Hochschild, Chair
Janea Scott, Vice Chair
Karen Douglas
Andrew McAllister
Patricia Monahan

Staff Present: (Via Remote)

Drew Bohan, Executive Director
Darcie Houck, Chief Counsel
Noemi Gallardo, Public Advisor
Cody Goldthrite, Secretariat

Agenda Item

Patrick Brecht	1, 7
Charles Smith	1
Nicholaus (Nick) Struven	2
Eric Veerkamp	3, 4
Eleanor Oliver	5
Joshua Croft	5
Quenby Lum	6
Larry Rillera	8
Danuta Drozdowicz	9

Others Present (Via Remote)

Interested Parties

Agenda Item

Gia Vacin, GO-Biz	1
Stan Greschner, GRID Alternatives, and DACAG	1
Jeff Harris, Ellison, Schneider, Harris & Donlan for Geysers Power Co, LLC	3
Barbara McBride, Calpine Corporation	3
Joy Larson, CalSEED, New Energy Nexus	5
Bert Wank, infiniRel Corporation	5
Dennis Nickerson, Portable Solar, Inc.	5
Wilson Hago, Hago Energetics	5
Brad Hines, Planet A Energy	5

APPEARANCES (cont'd)

Interested Parties Agenda Item

Kevin Favro, EV Life 5
Leah Abate, Foundation for CCC 8

Public Comment (Via Remote) Agenda Item

Zac Thompson, East Bay Community Energy 1
Heidi Sickler, Silicon Valley Leadership Group 1
Leslie Aguayo, Greenlining Institute 1
Kevin Maggay, SoCalGas 1
Kitty Adams, Adopt a Charger 1
Eileen Tutt, CalETC 1
Emanuel Wagner, California Hydrogen Business
Council 1
Bill Magavern, Coalition for Clean Air 1
Teresa Cooke, California Hydrogen Coalition 1
Cory Bullis, Electric Vehicle Charging
Association 1
Rebecca Baskins, California Advanced Biofuels
Alliance 1
Kevin Messner, AHAM 2
Ben Thompson, Peralta Energy, LLC 9
Eric Arens, League of Women Voters California 9
Lauren Cullum, Sierra Club, California 9
Sven Thesen, Project Green Home 9
Jonny Kocher, Rocky Mountain Institute 9
Freya Chay 9
Alice Sung, Greenbank Associates 9

I N D E X

	Page
1. 2020-2023 Investment Plan Update for the Clean Transportation Program.	7
2. Order Instituting Rulemaking Proceeding (20-FDAS-01).	66
3. Calistoga Geothermal (81-AFC-01C).	77
4. Sonoma Geothermal (80-AFC-01C).	82
5. California Clean Energy Fund DBA CalCEF Ventures.	85
6. The Pechanga Band of Luiseño Indians.	106
7. DOE-National Renewable Energy Laboratory.	111
8. Foundation for California Community Colleges.	119
9. Local Ordinance Application for the City of Burlingame (19-BSTD-06	126
10. Minutes.	149
11. Lead Commissioner or Presiding Member Reports.	150
12. Executive Director's Report.	169
13. Public Advisor's Report.	170
14. Public Comment.	171
15. Chief Counsel's Report.	174

1 P R O C E E D I N G S

2 10:00 A.M.

3 WEDNESDAY, OCTOBER 14, 2020

4 CHAIR HOCHSCHILD: Good morning and welcome,
5 everybody. Today is Wednesday, October 14th. We'll
6 begin the Energy Commission's October business meeting,
7 and I've asked the Vice Chair to say the Pledge of
8 Allegiance on behalf of all of us. Go ahead, Madam Vice
9 Chair.

10 VICE CHAIR SCOTT: Good morning, everyone.

11 (Whereupon the Pledge of Allegiance is recited.)

12 CHAIR HOCHSCHILD: Thank you, so much, and
13 again, with COVID, although we are making some progress,
14 we want to encourage everybody to please continue to
15 wear a facemask when you're in public, wash your hands
16 frequently and keep physical distancing, and we're going
17 to stay on that per the Governor's directives.

18 So, again, this is a census year, and we're in
19 the very final moment of the completion of the census.
20 This is a really, really important service that we all
21 have to participate in, and we're going to make sure
22 California gets the resources that's due. You can go
23 online to complete the census at the census website,
24 Census.gov.

25 And finally, before we get in the meeting

1 agenda, the election, as everyone knows, is on November
2 3rd. You are now in California able to register the day
3 of the election at polling locations. That is available
4 to everyone, but we encourage everyone who has
5 registered to vote as early as possible and make sure
6 your votes get in.

7 So, with that, let's get into -- I have to read
8 this disclaimer here. Today's business meeting is being
9 held remotely without a physical location for any
10 participant consistent with Executive Orders N-25-20 and
11 N-29-20 and the recommendations from the California
12 Department of Public Health to encourage social
13 distancing in order to slow the spread of COVID-19.

14 The public may participate or observe the
15 meeting consistent with the direction in these Executive
16 Orders. Instruction for remote participation can be
17 found in the Notice Meeting of this meeting.

18 We will be using a combination of Zoom and
19 Verizon for remote access. If Zoom shuts down, we will
20 continue the meeting on our Verizon phone line, and
21 we'll wait 30 minutes before starting to give people
22 time to join. The Verizon number is 888-823-5065, and
23 the passcode is Business Meeting.

24 Pursuant to California Code of Regulations Title
25 20, Section 1104, any person may make oral comment on

1 any agenda item to insure the orderly conduct of
2 business. Such comments will be limited to three
3 minutes per person as to each item listed on the agenda
4 that will be voted on today. Any person wishing to
5 comment on information items or reports, nonvoting
6 items, shall reserve their comment for the general
7 public comment portion of the meeting agenda and have
8 three minutes total to state all their remaining
9 comments.

10 And as we get in the agenda, I just wanted to
11 remind everybody, you can click gallery on Zoom in the
12 top right corner to see all the speakers during today's
13 discussions.

14 We will be approving, if all the items get
15 approved today, about six million dollars in projects,
16 which is going to help support California's economic
17 recovery.

18 So, with that, let's get into Item 1, the 2020
19 through 2023 Investment Plan Update for the Clean
20 Transportation Program.

21 Patrick Brecht.

22 MR. BRECHT: Thank you, and good morning Chair
23 and Commissioners. My name is Patrick Brecht. I'm the
24 Project Manager for the 2020 to 2023 Investment Plan
25 Update for the Clean Transportation Program.

1 Today we are seeking your approval of this
2 Investment Plan Update. If approved, the current
3 revised lead Commissioner report version, originally
4 published on September 30th and then reissued with a
5 nonmaterial clarification on October 13th, will be
6 reissued as the final Commission report. This will also
7 approve the plan's proposed funding allocations for
8 fiscal year 2020 to 2021 and signal the planning funding
9 allocations for the subsequent two-and-a-half fiscal
10 years.

11 Next slide.

12 The Clean Transportation Program provides
13 funding support for projects that reduce greenhouse gas
14 emissions within the transportation sector which
15 accounts for roughly 50 percent of state greenhouse gas
16 emissions.

17 Furthermore, the program plays an important role
18 in achieving the following: petroleum reduction,
19 adoption of zero emissions vehicles, improved air
20 quality standards, economic development and recovery,
21 investment in low income in disadvantaged communities,
22 job growth and workforce development.

23 Now in its 12th year, the Clean Transportation
24 Program has provided nearly 900 million to projects
25 covering a broad spectrum of alternative fuels and

1 technologies in communities that can immediately accrue
2 health, environmental and economic benefits from these
3 investments.

4 Next slide. Excuse me.

5 This chart captures the total amount of funding
6 allocated in various fuel types, including over 40
7 percent in dark green toward electric vehicle charging
8 infrastructure, vehicle demonstrations, incentives in
9 manufacturing; nearly a fifth in dark yellow in hydrogen
10 fueling infrastructure and vehicle demonstrations;
11 nearly 15 percent toward natural gas and ethanol
12 technologies in light yellow; over 20 percent to
13 biofuel's production and distribution shown in shades of
14 dark blue, and about four percent in workforce training
15 and development in light blue, and light green shows the
16 remainder of projects that incorporate multiple fuel
17 types or does not address specific fuel types

18 Next slide, please.

19 This slide shows key outcomes from the Clean
20 Transportation Program to date, including percentage of
21 funding in low income or disadvantaged communities, as
22 well as the amount of matched funding committed by
23 project partners.

24 The program has funded over 11,000 installed or
25 planned chargers for plug-in electric vehicles. We've

1 supported the largest network of hydrogen fuel stations
2 in the nation with 62 funded new or upgraded publicly
3 available hydrogen refueling stations or fueling
4 stations.

5 Next slide.

6 The Clean Transportation Program was established
7 by California Assembly Bill 118 in 2007. The program is
8 funded through a small surcharge on vehicle
9 registrations and provides up to 100 million per year,
10 and California Assembly Bill 8 extended the program to
11 generate for 2024.

12 Next slide.

13 The purpose of the Investment Plan. Guides the
14 transportation program's investments towards meeting the
15 state's clean transportation goals.

16 Allocates funding for multiple fuel and vehicle
17 technologies, transportation sectors, and supporting
18 activities such as workforce development.

19 *Takes into consideration state regulations and*
20 *other funding programs to promote coordination across*
21 *agencies.*

22 Integrates feedback from the Advisory Committee,
23 Disadvantaged Communities Advisory Group, and public.

24 For this Investment Plan we had two Advisory
25 Committee meetings, consultations with the Disadvantaged

1 Communities Advisory Group and over 100 comments to the
2 CEC docket.

3 And new to this Investment Plan cycle, it now
4 identifies multiple-year funding allocations to improve
5 consistency and transparency for potential funding
6 partners.

7 Next slide.

8 The Advisory Committee was reconstituted for
9 this Investment Plan and beyond, and expanded to better
10 reflect California communities and provide increased
11 representation from program beneficiaries, including
12 environmental justice communities, rural communities,
13 tribes, and other public organizations.

14 Next slide.

15 In developing our funding allocations, we are
16 focused on key -- six key priorities. First, we focused
17 on opportunities to quickly address the need for
18 economic stimulus and response to COVID-19, to the
19 COVID-19 pandemic.

20 Second, a program-wide emphasis on creating
21 high-quality job opportunities.

22 Third, an early focus on the needs of light-duty
23 passenger vehicles within the ZEV infrastructure
24 allocation. It is vital to ensure the public adoption
25 of ZEVs is not stymied by lack of infrastructure.

1 The program also benefited from a one-time 51
2 million legislatively appropriated expenditure to
3 increase EV charging structure.

4 And, fourth, we propose to follow this with a
5 long-term focus on ZEV infrastructure for trucks, buses
6 and off-road equipment.

7 Fifth, we are interested in supporting projects
8 that can help overcome market and technological barriers
9 associated with ZEV commercialization and thereby
10 encourage more private investment.

11 And, finally, we are seeking to prioritize
12 investments into project types that provide direct
13 benefits toward disadvantaged communities.

14 And, last point leads me to the next slide.

15 This chart shows program funds awarded to
16 projects located within disadvantaged and/or low-income
17 communities around 33 percent. When excluding projects
18 that occur outside -- excuse me -- occurred statewide or
19 without an applicable site address the funding share is
20 closer to 50 percent.

21 Next slide.

22 This Investment Plan reflects the principles of
23 inclusion, diversity equity and access. This has
24 included collaboration with Disadvantaged Communities
25 Advisory Group on equity, outreach and engagement,

1 workforce training and development and soliciting
2 feedback on the Investment Plan development.

3 Second, prioritizing and investing in equity
4 communities using clean transportation funding.

5 Third, partnering with community-based
6 organizations such as our partnership with the Fresno
7 Metro Black Chamber of Commerce that advocates for clean
8 transportation mobility.

9 Fourth, researching and implementing benefit
10 metrics that go beyond the expenditure of program
11 dollars to -- in census tracts.

12 To this Investment Plan we are seeking to
13 provide at least 50 percent of funds from the multi-year
14 Investment Plan towards projects that benefit low income
15 and disadvantaged communities.

16 Next slide.

17 I would like to pivot to context regarding the
18 Clean Transportation Program and the development of the
19 Investment Plan.

20 The implementation of the Clean Transportation
21 Program reflects the effect of numerous policies and
22 goals by legislation, regulation and Executive Order.
23 Such policies include achieving 100 percent zero carbon
24 electricity as well as a carbon-neutral economy by 2045.
25 By 2031 by achieving 80 percent reduction in smog

1 forming NOx. We recognize that reaching these goals
2 will require a major transition toward zero emission
3 vehicles or ZEVs, as stated, as outlined in the next
4 slide.

5 Next slide.

6 Previous Executive Orders set goals for reaching
7 1.5 million zero emission vehicles by 2025 and 5 million
8 ZEVs by 2030. Executive Order N-79-20 issued last month
9 sets a new goal of having 100 percent of new sales of
10 passenger vehicles and trucks by ZEVs by 2035.

11 We also have 2025 targets for ZEV
12 infrastructure, including 250,000 electric vehicle
13 chargers and 200 refueling stations.

14 Recognizing the disproportionate air quality and
15 climate impacts of medium and heavy duty, the new
16 Executive Order also set goals for transitioning 100
17 percent of off-road vehicles and equipment to ZEVs by
18 2035, alongside of 100 percent of drayage trucks. By
19 2045 all trucks and buses are expected to be ZEVs.

20 Next slide.

21 Our proposed funding allocations also are
22 informed by vehicle and fuel regulations developed by
23 the California Air Resources Board, or CARB. These
24 include ZEV regulation for passenger vehicles, which
25 require auto manufacturers to offer for sale specific

1 numbers of the cleanest cars available, including full
2 battery electric vehicles, hydrogen fuel cell electric
3 vehicles and plug-in hybrid electric vehicles.

4 The Innovative Clean Transit Regulation set
5 milestones for all public transit agencies to transition
6 toward a 100 percent zero emission bus fleet by 2040, the
7 Advanced Clean Truck Regulation, which requires
8 manufacturers to transition to zero emission trucks
9 beginning in 2024.

10 Finally, the low-carbon fuel standard requires a
11 20 percent reduction in overall transportation fuel
12 carbon intensity by 2030.

13 Next slide.

14 A vital step in developing the Clean
15 Transportation Program Investment Plan is to coordinate
16 with other state funding programs.

17 Major examples include CARB's low carbon
18 transportation incentives, which are generally focused
19 on a development of ZEVs, major settlement agreements
20 such as with VW and NRG for the developing of electric
21 vehicles and charging infrastructure, and lastly, the
22 charging infrastructure investments of major investor-owned --
23 investor-owned utilities.

24 Next slide.

25 This slide reflects our proposed funding

1 allocations for fiscal year 2020 to 2021, as well as the
2 planned funding for the next two-and-a-half years.

3 I should mention once again the light-duty EV
4 charging infrastructure and emobility category is
5 benefitting from a one-time 51 million legislative
6 expenditure.

7 We are proposing to make big contributions
8 toward building out light-duty charging infrastructure
9 in the upcoming fiscal year, while future fiscal years
10 would focus more funding toward medium and heavy-duty
11 ZEVs and infrastructure, which leads me to the next
12 slide.

13 Speaking of charging infrastructure, this
14 graphic shows some of the progress California has made
15 toward our 2025 goals. At the bottom you can see we
16 have approximately 56,000 existing level two chargers
17 plus 117,000 expected from the allocated funds from our
18 program utilities and the aforementioned settlements. A
19 gap of approximately 66,000 level two chargers remains,
20 as does a gap of 800 DC fast chargers.

21 Next slide, please.

22 One efficient way to narrow the charging
23 infrastructure gap is through the very successful
24 California Electric Vehicle Infrastructure Project, or
25 CALeVIP. In partnership with the Center for Sustainable

1 Energy the CALeVIP provides a simplified process for
2 providing charging incentives in high priority regions.
3 Dedicated funding amounts and/or higher incentive
4 amounts are also made available for sites located within
5 disadvantaged communities. This slide shows the
6 progress to date as well as planned projects.

7 Next slide.

8 With funds from this Investment Plan the Energy
9 Commission will also be looking for opportunities to
10 simultaneously address clean transportation and improve
11 mobility in communities of need, opportunities to
12 support innovative charging technologies and business
13 models, and the opportunities to provide funding for
14 nonhardware projects that can accelerate the state's
15 charging infrastructure goals such as regional ZEV
16 readiness plans and the EV communities' challenge.

17 Next slide.

18 This slide indicates the proposed allocation for
19 the light-duty charging infrastructure and mobility
20 category. As you can see, for fiscal year 2020 to '21
21 there is a one-time legislatively approved appropriation
22 specific to this category with the purpose of
23 accelerating EV charging infrastructure.

24 Next slide.

25 Medium and heavy duty zero emission category

1 focuses on the needs of medium and heavy-duty vehicles
2 typically found in freight and fleet applications.
3 These vehicles represent a small share of California's
4 registered vehicle stock, but also emit an outsized
5 share of GHG, NOx and P 2.5 emissions.

6 Next slide.

7 For fiscal year 2020, 2021 this Investment Plan
8 allocates 20 million dedicated to medium and heavy-duty
9 ZEV and infrastructure.

10 In subsequent years we expect the need of medium
11 and heavy-duty ZEV infrastructure to ramp up
12 drastically. For this reason, the allocations will
13 increase dramatically in subsequent fiscal years to meet
14 the growing needs of charging and hydrogen refueling for
15 fueling infrastructure for medium and heavy-duty ZEVs as
16 well as demonstrate the state's commitment to improving
17 air quality.

18 Next slide.

19 The Clean Transportation Program is the primary
20 source of public funding for hydrogen refueling stations
21 in the state. Assembly Bill 8 directs the CEC to
22 allocate 20 million annually to fund the initial network
23 of 100 hydrogen refueling stations.

24 Looking further out, Executive Order B-48-18 set
25 a target of 200 stations by 2025. The CEC's most recent

1 multiyear grant funding opportunity for public available
2 hydrogen refueling infrastructure will provide between
3 100 and 110 stations based on the availability of funds
4 in this and upcoming fiscal years.

5 This list stations also encourages projects with
6 fueling agreements with fleets and commercial vehicles
7 and transit buses to increase station throughput and to
8 aid in the transition of California's commercial vehicle
9 and bus fleet to zero -- to a zero-emission alternative.

10 The CEC has already funded 62 from previous list
11 stations -- 62 stations from previous list stations, so
12 adding these new stations, the new total of the total
13 number of stations funded under the Clean Transportation
14 Program is expected to be between 162 and 172 stations.

15 Next slide.

16 This graphic captures the progress and the gap
17 that exists for hydrogen refueling stations in terms of
18 meeting the goal of 200 stations.

19 As you can see, there is a gap of 28 stations
20 anticipated by 2025.

21 Next slide.

22 For this fiscal year, the Investment Plan
23 proposes a 20 million allocation for hydrogen refueling
24 stations. For the remaining two-and-a-half fiscal years
25 it is also -- it also proposes a proportionate 50

1 million in funding for this activity. For the final
2 half fiscal year, the Investment Plan proposes to split
3 the 10 million allocation, which would be 20 percent of
4 the expected funds between light duty and heavy-duty
5 hydrogen refueling infrastructure.

6 Next slide.

7 Our zero and near-zero carbon fuel production
8 category has included a broad range of alternative
9 fuels. Biofuels, defined as nonpetroleum diesel
10 substitutes, gasoline substitutes and biomethane
11 represent the largest existing stock of alternative fuel
12 in California.

13 In addition, demand for renewal hydrogen will
14 increase in the coming years as more fuel cell electric
15 vehicles are sold.

16 Investments in this area have the potential to
17 produce high volumes of low carbon alternative fuels and
18 demonstrate new, more efficient production technologies.

19 Next slide.

20 The Investment Plan proposes to pause additional
21 funding for this category for this fiscal year while
22 planning for further allocations in subsequent fiscal
23 years. These are all -- there also remains
24 approximately 10 million in available funds from
25 previous Investment Plans to conduct new funding

1 activities in the near term.

2 Next slide.

3 The Clean Transportation Program also invested
4 in related needs and opportunities to accelerate the
5 adoption of clean transportation options. The Clean
6 Transportation Program has issued five list stations for
7 manufacturing since its inception of the program. These
8 have focused on complete ZEVs, ZEV components and ZEV
9 infrastructure with over 20 companies in our funding
10 portfolio. Projects have created over 800 manufacturing
11 jobs. Examples include Proterra, Chargepoint,
12 Transpower and Free Wire.

13 Next slide.

14 This slide shows how successful overall
15 California has been with supporting ZEV manufacturing,
16 many due to Clean Transportation Program investments.
17 There are 14 in-state manufacturers designing and
18 building cars, buses, motorcycles and trucks.

19 Next slide.

20 We also have been active in workforce training
21 and development. Initial investments from this program
22 focused on partnerships with state workforce entities.
23 Most recent investments have shifted toward more
24 targeted investments in equity communities, career
25 pathway developments from high school automotive

1 programs to community college auto programs, curriculum
2 development for ZEVs, training for electric school bus
3 technicians and a freight workforce pilot project.

4 Third is the newly dedicated recovery and
5 reinvestment funding category. For this category we are
6 reviewing ideas for projects that can accelerate
7 transportation growth in California while addressing the
8 devastating social and economic fallout from COVID-19.

9 Next slide.

10 As you can see, the manufacturing and workforce
11 development and training allocations are proposed for
12 funding throughout the remainder of the program, while
13 the recovery and reinvestment allocation is only
14 proposed for this fiscal year.

15 Next slide.

16 This slide summarizes our aforementioned funding
17 allocations. The graphic shows the proposed funding
18 priorities for 2020 to 2023. As mentioned, the CEC is
19 proposing to make big contributions toward reducing
20 light duty -- the light duty charging infrastructure gap
21 with the upcoming fiscal year while future fiscal years
22 would focus more funding toward medium and heavy-duty
23 ZEVs and infrastructure.

24 Allocations for hydrogen refueling
25 infrastructure and zero and near-zero fuel production

1 and supply would remain steady over time. Allocations
2 for ZEV and ZEV infrastructure manufacturing and
3 workforce training and development have been leveled
4 over the remaining life of the program with the shared
5 aim of supporting in-state economic development and
6 hastening ZEV adoption.

7 This brings me to our recommendation, last
8 slide.

9 Staff recommends approval of the 2020 to 2023
10 Investment Plan update. This will approve the plans
11 proposed funding allocations for fiscal year 2020 to
12 2021 and signal the planned funding allocations for the
13 subsequent two-and-a-half fiscal years. Staff also
14 recommends that termination of this plan is exempt from
15 CEQA.

16 Thank you, and I'm happy to answer questions
17 that you may have. I believe Charles Smith, Office
18 Manager from the Transportation Policy and Analysis
19 Office is on line two. And I will also mention we have
20 three representatives from three organizations who would
21 like to either speak or provide a statement about the
22 plan shortly.

23 CHAIRMAN HOCHSCHILD: Thank you, Patrick, and
24 let me thank also Commissioner Monahan for her
25 incredible dedication and her work on getting us to this

1 point, and Hannon Rasool as well, really coming on in
2 late summer and helping the team put this altogether is
3 phenomenal.

4 I also want to recognize Drew and Rob and the
5 whole budget team as well. That additional 51 million
6 that we got to support EV charging was a process that
7 began over a year ago and it turned out to be very
8 prescient given the Governor's Executive Order, so
9 really glad to be in that position that we're in.

10 So, let's begin with Gia Vacin from GO-Biz, to
11 be followed by Stan Greschner from the Disadvantaged
12 Communities Advisory Group.

13 MS. VACIN: Good morning. Can you hear me?

14 CHAIRMAN HOCHSCHILD: Yes, we can. Good
15 morning.

16 MS. VACIN: Good morning, Commissioners. I'm
17 Gia Vacin, the Assistant Deputy Director of Zero
18 Emission Vehicle Market Development at GO-Biz.

19 And I want to start by recognizing the
20 tremendous effort of the Energy Commission and the
21 leadership of Commissioner Monahan and the Clean
22 Transportation Program Advisory Committee and
23 Disadvantaged Communities Advisory Group, and, of
24 course, the hard work by the CEC staff.

25 GO-Biz fully supports this multi-year Investment

1 Plan, and we appreciate the collaboration and focus on
2 creating this solid plan that we believe will help
3 advance our zero emission vehicle goals.

4 Now is absolutely the time to focus on zero
5 emissions as underscored by Governor Newsom's recent
6 Executive Order and 79-20, which Patrick reviewed but
7 really focused on zero emission -- a hundred percent
8 zero emission vehicles in just, you know, 15 and 25
9 years.

10 And the Clean Transportation Program is one key
11 part of this bigger effort. So, this plan, I think,
12 really helps support that focus that we have, and we are
13 undertaking at GO-Biz an effort to help organize the
14 state's efforts in close collaboration with our sister
15 agencies and with external stakeholders in the
16 development of the zero-emission vehicle market
17 development strategy as directed in Governor Newsom's
18 Executive Order.

19 And the Clean Transportation Program is clearly
20 a critical element in this. It plays a pivotal role in
21 building market confidence and, of course, in funding
22 support as well. GO-Biz appreciates the plan's
23 identification of our zero-emission vehicle
24 infrastructure gaps on both the battery electric
25 charging side and the hydrogen fuel cell electric side,

1 as well as how the plan lays out how it's aimed to help
2 address these gaps.

3 GO-Biz is also very supportive of that edit that
4 CEC made from the previous draft. In some cases, the
5 edits are subtle, but they're also very meaningful. And
6 the signals that we send to industry really matter and
7 words also really matter, particularly when we're
8 working to encourage more private investment, and
9 especially from such an important agency and program.
10 And this plan really does a nice job with both.

11 So, in closing I'd like to reiterate GO-Biz's
12 support for the multi-year Investment Plan, and we look
13 forward to continuing to work together to make sure that
14 we keep sending strong market signals and advancing our
15 mutual goal of helping to achieve market scale, and
16 ultimately in achieving our mission to realize the
17 benefits of zero emissions that all Californians
18 deserve.

19 Thank you.

20 CHAIRMAN HOCHSCHILD: Thank you, Gia. Let's
21 move on to Stan Greschner from DACAG.

22 MR. GRESCHNER: Good morning, Commissioners.
23 Can you hear me?

24 CHAIRMAN HOCHSCHILD: Yes, we can. Good
25 morning, Stan.

1 MR. GRESCHNER: Good morning. Thank you for
2 inviting me again this year to join the voting meeting
3 for the Clean Transportation Plan ensuring the DACAG's
4 perspective.

5 As you all know, I serve as the Chair of the
6 Disadvantaged Community Advisory Group.

7 I wanted to share, first of all, that DACAG
8 strongly supports this proposed three-year Clean
9 Transportation Plan. Encourage all of you to vote and
10 adopt the plan today.

11 I especially want to thank Commissioner Monahan
12 who joined the DACAG's public meetings two, maybe three,
13 times to discuss the development of this plan and also
14 had several members of the transportation team join our
15 meetings and our subcommittee meetings to discuss the
16 equity issues related to this plan. I just want to
17 thank them for their engagement with us.

18 I believe that this CTP plan has taken a
19 substantial step in expanding its equity programs and
20 refining equity metrics and --

21 (Whereupon, audio cut out)

22 -- technology and programming options come available
23 over the next three years while centering equity
24 throughout.

25 So, just to recap some of the specific

1 investment areas that we work most closely with the
2 Commissioner and Transportation Team on.

3 The first is the medium and heavy-duty side. We
4 initially had recommended establishing a 40-million-
5 dollar budget for medium and heavy duty in 2020 and 2021
6 budget cycle, this first year, as opposed to the 20
7 million. The DACAG recognizes that the most harmful
8 vehicle emissions and particulate matter in California
9 come from the long-haul truck, the drayage vehicles --

10 (Whereupon, audio cut out)

11 -- in disadvantaged communities. We worked closely with
12 Commissioner Monahan and the team and we did also come
13 to support the \$20 million proposal for this year for
14 medium and heavy duty with more funding from the program
15 being brought to medium and heavy duty in the last two
16 years and just appreciate the Commissioner's willingness
17 to work with us on those concerns.

18 Secondly is the workforce development in
19 manufacturing. The DACAG numbers recognize that as
20 California transitions to a hundred percent clean
21 vehicles considerations for developing and training
22 skilled workers must be at the forefront of our state's
23 investments, especially to open up new career
24 opportunities for individual's living index and to help
25 build our vehicles and the infrastructure and to ensure

1 that those workers have careers with a living wage. So,
2 we're glad to see the changes to the final Investment
3 Plan here to ensure there is annual funding allocations
4 for workforce development in manufacturing as opposed to
5 the start and stop investment cycles that were initially
6 proposed.

7 And finally, the funding benefits to DACs was
8 something we had a concern about, how the CEC was
9 measuring its success with its equity investments, and I
10 appreciate, again, Commissioner Monahan and the
11 transportation team's efforts to wrestle with this issue
12 and to continue to engage with the (indiscernible) on
13 finding the right metrics to measure the benefits and
14 impacts to DACs.

15 We want to see more than just how much money was
16 invested in a particular group of census tracts. We
17 want to measure how those investments are actually
18 impacting and benefitting residents in those census
19 tracts, and we look forward to continuing engaging with
20 the Commission on that issue.

21 And we appreciate that 50 percent of the funding
22 is targeted towards DACs, and hope that is seen as a
23 floor, not a ceiling with the investments.

24 Of course, as they had indicated last year and
25 this year again, we see a hundred percent of these

1 limited resources to target DACs and overcome their
2 unique barriers to participating in California's clean
3 transportation transition.

4 My final point here is just to acknowledge that
5 this plan is a great framework to build upon as we
6 narrow through all of our assumptions that we used to
7 develop this plan out the window, and now must plan for
8 and reach the new, exciting goals that Patrick talked
9 about and the Governor announced in his Executive Order,
10 for a trend to get a hundred percent light, medium and
11 heavy duty vehicles within the next couple of decades.
12 So, it's exciting work ahead for all of us on that
13 front.

14 So, please support and approve the clean
15 transportation plan. Thank you all for letting me join
16 you. And let me just put a plug in for the
17 Disadvantaged Community Advisory Group has its own
18 public meeting this Friday beginning at 1:00 o'clock,
19 and the Commissioners McAllister and Douglas who, I
20 believe, are planning on joining us at our meeting, and
21 our invite all on this call to join one of our
22 discussions if you haven't yet, so, thank you.

23 CHAIRMAN HOCHSCHILD: Thank you, Stan. I
24 believe, Madam Public Advisor, we have a comment you're
25 going to read from CARB; is that correct?

1 PUBLIC ADVISOR GALLARDO: Yes, that's correct.
2 So, this comment is from Steve Cliff, that's spelled,
3 S-T-E-V-E, C-L-I-F-F. He's the Deputy Executive Officer
4 at the California Air Resources Board and a member of
5 the CTP Advisory Committee.

6 "I regret that I'm unable to provide these
7 comments in person this morning. I would like to thank
8 the Commissioners, especially Commissioner Monahan for
9 her leadership, Energy Commission staff, members of the
10 CTP Advisory Committee and members of the Disadvantaged
11 Communities Advisory Group for the collaboration,
12 thoughtful discussion and review and effort in
13 developing this multi-year Investment Plan."

14 "Importantly, the CTP Advisory Committee was
15 completely reconstituted this cycle to ensure commitment
16 to inclusion, diversity, equity and access. CARB
17 appreciates and strongly supports the plan's emphasis on
18 collaboration between our agencies and with other
19 funding agencies."

20 "CARB and the Energy Commission have a long
21 history of working together on this and many other
22 programs, and this Investment Plan continues that
23 history of the effective collaboration. This not only
24 improves the outcomes of our programs, but also insures
25 they are complementary and not duplicative."

1 “A perfect example is the ZE-drayage pilot
2 solicitation which will allow an applicant to compete
3 for CARB funding for vehicles and CEC funding for
4 infrastructure in a single application.”

5 “CARB agrees with and applauds the Energy
6 Commission for taking a new multi-year approach as a
7 valuable new direction for the Investment Plan.”

8 “The proposed 385 million dollar investment will
9 provide certain stakeholders of the ongoing and future
10 commitments that California is making to transform our
11 transportation system. This multi-year Investment Plan
12 also continues an appropriate emphasis on charging and
13 fueling infrastructure for zero emission vehicles.”

14 “The direction of these planned investments is
15 especially appropriate in light of Governor Newsom’s
16 recently release Executive Order and 79-20 that directs
17 state agencies to leverage existing authorities to
18 ensure full transition wherever feasible to zero
19 emission technologies within the next 15 to 25 years.
20 These steps will help the state meet our climate change
21 mitigation goals and achieve health space ambient air
22 quality standards.”

23 “With Executive Order N-79-20 establishing the
24 most ambitious zero emission goal targets to date in
25 California, future Investment Plans may likely need to

1 consider even more ambitious vehicle and infrastructure
2 targets than reflected in this Investment Plan.”

3 “The Investment Plan appropriately recognizes
4 the immediate challenges ahead with a need to infuse
5 early investment in light of the economic challenges we
6 face as a result of COVID-19.”

7 “Importantly, the plan also continues
8 significant investment in workforce training and
9 development in the area that will need continued focus
10 over the next decade to ensure successful transition to
11 a clean transportation system.”

12 “CARB appreciates the appropriate gravity of the
13 Investment Plan’s considerations of the challenges ahead
14 to achieve those targets, especially with respect to
15 zero emission, charging and fueling infrastructure. The
16 Investment Plan correctly identifies a significant gap
17 in battery electric vehicle charging infrastructure, as
18 well as a gap in hydrogen fueling infrastructure and
19 plans investments accordingly.”

20 “There is urgent need to address the sizeable
21 gap in level 2 and DC fast charging as the report
22 appropriately highlights. Installation of charging
23 points in more locations across California is vital to
24 maintaining and accelerating the future deployment of
25 battery electric vehicles in California.”

1 "CARB supports the proposed amounts of funding
2 for light duty electric vehicle charging infrastructure,
3 including the one-time legislative appropriation of 51
4 million dollars. The Energy Commission's proposed
5 strategy of heavily frontloading the availability of
6 charging infrastructure funds can provide a significant
7 opportunity to further advance zero emission vehicle
8 deployment in the state."

9 "This Investment Plan is the first to directly
10 adopt not only the hundred hydrogen station milestone of
11 ADA, but also the 200-station target of Governor Brown's
12 Executive Order B-48-18."

13 "The Energy Commission recently released
14 proposed awards for three multi-year light-duty hydrogen
15 station development grants that can bring the state very
16 close to the 200-station target by 2025."

17 "CARB and the Energy Commission have been
18 planning for the CTP and the LCFS programs to be the
19 main pathways to achieving the 200-station target, and
20 the Energy Commission's commitment to hydrogen in this
21 Investment Plan provides solid support for that goal."

22 "By CARB's estimate the proposed awards could
23 enable deployment of up to roughly 100,000 fuel cell
24 electric vehicles in the state and prove to be a major
25 stepping stone to achieving financial self-sufficiency

1 in the hydrogen fueling network.”

2 “The Investment Plan’s commitment of up to 70
3 million through 2023 will be crucial to delivering on
4 this potential.”

5 “Given the rapid development of zero emissions
6 technology across the medium and heavy-duty sector, CARB
7 sees a value in considering the possibility to later
8 reallocate some hydrogen station funding from the light
9 duty sector to medium and heavy-duty sectors.”

10 “We look forward to working with you on
11 considerations for potential reallocation.”

12 “Transformation of the medium and heavy-duty
13 sectors to zero emission option hold significant promise
14 for climate change mitigation, improving local air
15 quality and protecting public health, especially in
16 communities that are disproportionately affected by the
17 operations in the medium and heavy-duty transportation
18 sector.”

19 “Governor Newsom’s Executive Order N-79-20
20 directs the agencies to ensure that that this transition
21 occurs quickly wherever feasible.”

22 “At the same time, CARB recognizes that zero
23 emission vehicles in this sector are not yet at the same
24 stage of market readiness as their light duty
25 counterparts. CARB, therefore, supports the Investment

1 Plan strategy to focus on the light duty market in the
2 near term and place greater emphasis on medium and heavy
3 duty zero emission transportation in later years of the
4 Investment Plan.”

5 “In conclusion, I would again like to thank the
6 Energy Commission for the collaborative effort with CARB
7 and others and our ongoing working relationship in the
8 clean transportation and other programs.”

9 “Thank you for allowing CARB to share our
10 comments on this important Investment Plan.”

11 So, that concludes the comment share and we do
12 have several people on the line for public comment when
13 you’re ready.

14 CHAIRMAN HOCHSCHILD: Let’s move on to public
15 comments. Go ahead. Thank you.

16 PUBLIC ADVISOR GALLARDO: Cody, the Secretariat,
17 will announce the names.

18 SECRETARIAT GOLDTHRITTE: Apparently we have 11
19 speakers on the line, and we’ll start with Zac Thompson
20 from East Bay Community Energy.

21 CHAIRMAN HOCHSCHILD: Yeah. Can I just ask the
22 speakers, in the interest of brevity, if the point has
23 already been made it’s fine just to briefly say you
24 support and no need to go on at length. But we want to
25 hear from everybody just to allow time for everyone to

1 speak. If you're going to say something that repeats
2 what's already been said, I prefer you not do that.
3 Thanks. So, let's go ahead.

4 MR. THOMPSON: Good morning, Commissioners.
5 Thank you for your time today. My name is Zac Thompson,
6 and I'm with East Bay Community Energy which is the GCA
7 serving Almeida County. And I'm also a member of the
8 Clean Transportation Program Investment Plan Advisory
9 Committee.

10 I wanted to voice support on behalf of East Bay
11 Community Energy for the Commission's report on the
12 2020-2023 Investment Plan Update for the Clean
13 Transportation Program. We strongly support the
14 Commission approving this Investment Plan Update and
15 we're very pleased to see the inclusion of the one-time
16 legislative appropriation for 51 million dollars to
17 increase and accelerate EV charging infrastructure.

18 And for the sake of brevity I'll skip over why I
19 support the program, but I just wanted to say that with
20 the Investment Plan having a near term focus on coming
21 (indiscernible) ready infrastructure deployment projects
22 we encourage the CEC to work with the investor-owned
23 utilities to ensure the electrical grid upgrades and
24 interconnection processes needed to support these
25 projects are not barriers to deployment.

1 So, again, just wanted to reiterate, EBCE
2 supports the Investment Plan update, and I'd like to
3 thank the Commission for its efforts to transition the
4 state to zero emission transportation system and a 100
5 percent clean energy future. Thank you.

6 CHAIRMAN HOCHSCHILD: Thank you for your support
7 and your brevity. Let's go to the next speaker.

8 SECRETARIAT GOLDTHRITTE: Next we have Heidi
9 Sickler from Silicon Valley Leadership Group.

10 CHAIRMAN HOCHSCHILD: Heidi, can you hear us?
11 Go to the next speaker, please.

12 PUBLIC ADVISOR GALLARDO; This is Noemi, the
13 public advisor. I'd like to remind the speakers to
14 spell their first and last names so we can have a clear
15 record.

16 MS. SICKLER: Sure. Heidi Sickler, Director of
17 Energy Environment Silicon Valley Leadership Group. HE-
18 I-D-I, last name, S-I-C-K-L-E-R.

19 Chair Hochschild, Commissioner Monahan, thank
20 you so much for the opportunity to provide public
21 comment on the FR-20-23 Clean Transportation Investment
22 Plan Update. As you know, we represent more than 350
23 employers on issues that affect economic health and
24 quality of life in Silicon Valley.

25 Member companies include TESLA, Cetera, Ford,

1 BYD, ChargePoint, NOx, Volta Charging, General Motors
2 and PG&E. And they're leading in the electrification of
3 public and private and commercial vehicles.

4 We know that California needs to install
5 charging ports at about 20 times the current --

6 (Whereupon, audio dropped out)

7 PUBLIC ADVISOR GALLARDO: This is Noemi, the
8 public advisor. Heidi, we cannot hear you. Can you try
9 again.

10 MR. GOLDTHRITE: The call dropped.

11 PUBLIC ADVISOR GALLARDO: Okay, thank you, Cody.

12 SECRETARIAT GOLDTHRITE: We'll go to Leslie
13 Aguayo from Greenlining Institute.

14 MS. AGUAYO: Hi, good morning. This is Leslie
15 Aguayo from the Greenlining Institute. I just want to
16 say thank you to the Commissioners and staff and DACAG
17 members for allowing me the chance to provide
18 opportunity to comment on this Investment Plan.

19 As part of Greenlining, which focuses on racial
20 equity, we want to applaud the CEC for their investment
21 and commitment to the process of equity as well as
22 recognizing DACAG's encouragement of investing part of
23 the investment in outreach in disadvantaged communities
24 and partnership with CBO's.

25 Additionally, I would also like to recognize the

1 importance of SC-1000 and the preliminary findings of
2 accessibility versus deployment, and would also hope to
3 encourage the CEC to consider a couple of additional
4 equity considerations.

5 Greenlining provides four set processes for
6 operationalizing equity, and through those have
7 committed to these standards in encouraging agencies to
8 follow as well.

9 A couple of points that I think would be
10 important and relevant to the practice of equity is
11 considering emerging BETA trends. So, we need to see a
12 few of these found in emerging COVID-19 data as well as
13 flood and fire risk data, zoning and land use population
14 and demographic production.

15 And I would also like to flag the potential of
16 Prop. 16. Until November 3, 2020 has passed, Prop. 16
17 would have potential to reverse Proposition 209 in which
18 case would provide an opportunity to disaggregate data
19 and really see disadvantaged communities, and low-income
20 communities, and communities of color as no longer a
21 monolith but as unique communities with different nuance
22 needs that could be applicable to the CEC Investment
23 Plan and equity framework.

24 I also would like to commend the CEC for their
25 research and investment in workforce development in

1 training opportunities. Greenlining strongly promotes
2 this as a pathway for economic mobility and also
3 encourages the CEC to look at just transition principles
4 in their design of some of these workforce development
5 opportunities.

6 And, lastly, again I would just like to thank
7 the Commission for providing me the opportunity to
8 provide comments and be part of the Advisory Committee.
9 Thank you so much.

10 CHAIRMAN HOCHSCHILD: Thank you. Next speaker.

11 MR. GOLDTHRITE: Next speaker, we've got Kevin
12 Maggay from SoCalGas.

13 MR. MAGGAY: Hi, good morning. Can you hear me
14 okay?

15 CHAIRMAN HOCHSCHILD: Yes, we can. Good
16 morning.

17 MR. MAGGAY: Okay, thank you. Good morning.
18 Kevin Maggay. I'm with SoCalGas. First name, K-E-V-I-
19 N, last name, M-A-G-G-A-Y.

20 Thank you for the opportunity to comment on the
21 Investment Plan and for the opportunity for SoCalGas to
22 sit on the Advisory Committee. The plan has a
23 longstanding history of contributing their GHG and
24 criteria for reductions. There's been very important
25 stimulus to the involvement of biofuel production, and

1 these programs have provided jobs in California
2 contributing to local property tax revenues from biofuel
3 production facilities.

4 Regarding hydrogen funding, we appreciate the
5 shifting of zero emission vehicle funding to the
6 hydrogen refueling category. However, it appears the
7 marketing exclusively to medium and heavy-duty
8 infrastructure while it comports to the (indiscernible)
9 infrastructure, these funds should not be limited to
10 larger vehicles. This change does not address the
11 comments raised by parties regarding the need for more
12 funding for light duty hydrogen fueling infrastructure.

13 Chair Jim Frazier along with other members of
14 the Senate and assembly Transportation Committee
15 submitted comments highlighting AD-5 and the Governor's
16 Executive Order which calls for 200 publicly available
17 passenger vehicle hydrogen refueling stations to meet
18 the five million zero emission target.

19 Their letter states that, "The Investment Plan
20 does not fully allocate the 20 million annual set aside
21 for hydrogen refueling infrastructure through 2023.
22 This undermines California's ability to reach five
23 million zero emission vehicles through the buildout of
24 200 publicly available stations as called for by the
25 Executive Order."

1 "We strongly encourage the Energy Commission to
2 allocate the full 200 million towards meeting the goal
3 of 200 stations by 2025."

4 Allocating funds to medium and heavy-duty
5 infrastructure will not necessarily meet those
6 objectives.

7 Further, the Health and Safety Codes states that
8 the program should promote a transition to a diverse
9 portfolio of alternative transportation fuels and reduce
10 petroleum dependency.

11 The planning for this current fiscal year
12 allocates 100 percent of the funds to zero emission
13 technologies, and that doesn't comply with the program
14 statute for promoting a diverse portfolio.

15 With the shift from the draft Investment Plan to
16 the lead Commission Investment Plan which removed all
17 funding from the zero and near zero fuel supply
18 production category and put into recovery and
19 reinvestment category, zero and near zero fuel
20 production projects have created millions and millions
21 of dollars in local revenue to property taxes and long-
22 term high-paying jobs in the areas hardest hit by
23 unemployment.

24 Regarding biofuel production, we would recommend
25 CEC elaborate on the \$10 million recovery and

1 reinvestment and how they will be prioritized to
2 different projects. There is a limited discussion and
3 they report on how these funds will be distributed. CEC
4 should consider spending the money on this industry to
5 turn waste products into zero and negative carbon fuels
6 that produce long-term jobs and millions of dollars of
7 revenue.

8 Further, because the Committee was able to
9 reallocate 51 million to light duty charging stations,
10 they do not need the 10 million now for this category.
11 The 10 million should be reallocated to zero and near
12 zero emission fuel supply production category as was the
13 case in the staff's draft.

14 PUBLIC ADVISOR GALLARDO: Sorry to interrupt.
15 This is Neomi, the public advisor just letting you know
16 your time is up.

17 MR. MAGGAY: Thank you.

18 PUBLIC ADVISOR GALLARDO: Can you please wrap
19 up, please.

20 MR. MAGGAY: Thank you.

21 CHAIRMAN HOCHSCHILD: Thank you. Let's go to
22 the next speaker.

23 SECRETARIAT GOLDTHRITTE: Next we'll go back to
24 Heidi Sickler with Silicon Valley Leadership Group.

25 MS. SICKLER: Yes, my apologies. I got cut off.

1 I'll wrap up really quickly.

2 In conclusion the Leadership Group supports the
3 proposed multi-year clean transportation Investment
4 Plan, and we look forward to continuing to work with
5 Commissioner Monahan and Chair Hochschild and other
6 Commissioners on further refining the plan to ensure
7 it's in strong market (indiscernible). Thank you very
8 much.

9 SECRETARIAT GOLDTHRITE: Next is Kitty Adams,
10 the Executive Director of Adopt a Charger.

11 MS. ADAMS: Hi. My name is Kitty Adams. K-I-T-
12 T-Y, Adams, A-D-A-M-S. I'm the Executive Director of
13 Adopt A Charger, a nonprofit organization that solicits
14 funding to install EV charging stations at national
15 parks, state parks, museums, universities and medical
16 centers.

17 I'm not sure that I totally understand the
18 process. I'm going to make comments from my
19 understanding, but I wanted to invite the Commissioners
20 to set me straight if I'm misunderstanding the process.

21 There are a couple of things in the plan that I
22 do not agree with. One is phasing out funding for
23 electric vehicle infrastructure in 2028. The
24 requirements for EV charging stations, including ADA
25 regulations, adherence to SB-454, standard weights and

1 measures, Energy Star certifications and upcoming
2 requirements for vehicle to GRID have increased average
3 cost per charge port from about \$9,000 in 2012 to close
4 to \$16,000 currently. And at a time when costs are
5 doubling I don't think it's a good idea to phase out
6 funding for this category.

7 The other thing I'm not sure I understand is
8 transferring money from EV infrastructure to hydrogen
9 infrastructure. And this basically just comes from the
10 urgency of climate change, and hydrogen is not scaling
11 as quickly as plug-in electric vehicles. In the last 10
12 years 7.2 million EVs have been sold worldwide compared
13 to only 6,500 battery electric vehicles.

14 So, I think because of our urgency in order to
15 meet Governor Newsom's goals and in order to phase out
16 fossil fuel cars completely by 2035, I think we need to
17 focus on what is working here.

18 I also wanted to point out that there will be
19 100 different models of electric vehicles available by
20 2023.

21 And one other thing I noticed in the
22 presentation is that the Electrify America, the VW
23 settlement funds, are being added in and factored in as
24 funding for EV charging infrastructure, but that's not a
25 competitive process. You know, people have to adhere to

1 Electrify America's goals, so it's like actually
2 something that people can have guaranteed access to.

3 Thank you for considering my comments in light
4 of the presentation.

5 SECRETARIAT GOLDTHRITE: Next is Irene Tutt from
6 California Electric Transportation Coalition.

7 MS. TUTT: Thank you. My name is Eileen, E-I-L-
8 E-E-N, Tutt, T-U-T-T.

9 I want to thank you for the opportunity to
10 comment on this very important plan. I am a member of
11 the Advisory Committee, as well as being at the
12 California Electric Transportation Coalition.

13 I consider these plans to be an indication of
14 the CECs and the administration's priorities like most
15 budgets and Investment Plans, and, so, I would like you
16 to please take my comments with this in mind.

17 I am disappointed that the CEC did not consider
18 the California Electric T-C's and others comments on the
19 need for further in charging infrastructure in 2023 and
20 the need to ensure the Clean Transportation Program is
21 funded beyond 2023. I think that would have been an
22 important signal.

23 We do support the approval of the plan, but with
24 some reservation given some of the modifications that
25 came out relative to the staff proposal and the current

1 plan presented today, particularly in the year 2023.

2 We were disappointed to see that hydrogen
3 refueling infrastructure was granted an additional five
4 million in 2023 for light-duty hydrogen fueling, up from
5 five million, so doubled. It's now 10 million, and that
6 charging infrastructure and emobility was completely
7 zeroed out. This just doesn't make sense.

8 And, also, that the five million was cut from
9 investments in medium and heavy-duty ZEVs and
10 infrastructure.

11 If the Energy Commission intends to use part of
12 that 10 million currently allocated towards light-duty
13 hydrogen for medium and heavy duty, then why would it
14 have reallocated from the medium, heavy duty to light
15 duty? That doesn't make sense, and it's internally
16 inconsistent. So, I really -- I don't understand that.

17 As we stated in our comment, charging
18 infrastructure in 2023 is problematic. We hope that
19 efforts to reauthorize the Clean Transportation Plan
20 funding in 2023 and beyond will be successful and result
21 in the essential need for public funding for charging
22 infrastructure as well as for hydrogen infrastructure
23 and other investments in zero emission vehicles,
24 particularly given the Governor's N-79-20 Executive
25 Order which we were very pleased to see.

1 We know right now and the CEC has confirmed
2 that we don't have adequate accessible and affordable
3 charging infrastructure to meet the demand today, and
4 it's getting worse by the day. So, we're getting
5 farther behind by each day.

6 So, again, I want to support the approval of
7 this plan and we will work with the CEC team and the
8 Advisory Committee in 2021 to update the plan to reflect
9 a commitment to both charging infrastructure and
10 hydrogen infrastructure and prioritize medium and heavy-
11 duty ZEV investments.

12 Thank you so much.

13 SECRETARIAT GOLDTHRITE: Next we have Emanuel
14 Wagner from the California Hydrogen Business Council.

15 MR. WAGNER: All right. Can you hear me?

16 CHAIRMAN HOCHSCHILD: Yes.

17 PUBLIC ADVISOR GALLARDO: Yes, we can.

18 CHAIRMAN HOCHSCHILD: Yes, we can. Good
19 morning.

20 MR. WAGNER: All righty. Okay. Thank you so
21 much.

22 All right. So, your -- oh, first Emanuel
23 Wagner, E-M-A-N-U-E-L, Wagner, W-A-G-N-E-R.

24 Dear Commissioners, dear CEC staff, my name is
25 Emanuel Wagner. I'm the Deputy Director of the

1 California Hydrogen Business Council. The Hydrogen
2 Business Council is the hydrogen fuel cell industry's
3 trade association, and we represent over 120
4 organizations in this state, including hydrogen
5 refueling space developers and light and heavy-duty
6 electric vehicle manufacturers.

7 First up, thank you so much for your continued
8 investment in zero emission transportation and for your
9 leadership, Commissioner Monahan.

10 On August 21 of 2020, the assembly and Senate
11 Transportation Committee filed comments. Chair Frazier,
12 Assembly Member Stalli , O'Donnell and Senator Roth
13 submitted the letter to you, Commissioner Monahan,
14 requesting that the CEC's Investment Plan fully
15 allocates fully the 20 million annually set aside for
16 light-duty hydrogen refueling infrastructures through
17 2023 as per statute.

18 However, this Investment Plan does not seem to
19 allocate those full funds outlined by ADA which
20 undermines our ability to reach five million zero
21 emission vehicles trying to build out up to 100 publicly
22 available hydrogen fueling stations as called by
23 Executive Order B-48-18.

24 The five million ZEV goal is for light duty
25 passenger vehicles only, same as the goal for at least

1 100 hydrogen refueling stations that is in statute and
2 the 200 refueling stations in the Executive Order.

3 Furthermore, September 23, 2020, Governor Newsom
4 signed the very important Executive Order N-79-20 which
5 sets a goal of 100 percent of in-state sales of new
6 passenger cars and trucks to be zero emission by 2035.

7 This is especially important because as the
8 legislative letter indicates, 46 percent of Californians
9 living in multi-family dwellings and 10 percent of super
10 commuter workforce would travel more than 90 minutes per
11 day with ZEV option light fuel cell electric vehicles
12 that have a long range and faster fueling, and we must
13 have adequate infrastructure for those vehicles.

14 Part of the reason why we don't have as many
15 fuel cell electric vehicles as we have battery electric
16 vehicles on the road is because of lack in
17 infrastructure.

18 The CHBC, therefore, urges you to fully fund
19 light duty hydrogen fueling station investment at \$20
20 million and do so not by redirecting funds from heavy
21 duty hydrogen station investment.

22 To meet our ambitious goals, we need you to
23 support both sectors, light as well as heavy-duty
24 fueling stations and not at the expense of each other.

25 Thank you so much for your consideration.

1 SECRETARIAT GOLDTHRITE: Next we have Bill
2 Magavern with Clean Transportation.

3 MR. MAGAVERN: Good morning, Commissioners.
4 This is Bill, B-I-L-L, Magavern, M-A-G-A-V-E-R-N. I'm
5 Policy Director with Coalition for Clean Air and also a
6 member of the Advisory Committee.

7 And we support the plan that's before you today.
8 I want to particularly focus on a couple of elements.
9 On the Advisory Committee I had called for a commitment
10 to make sure that at least 50 percent of the funds go to
11 disadvantaged communities. So, I thank the Commission
12 and the staff for including that.

13 We know that it's our low-income communities of
14 color that are bearing the worse burdens of our current
15 transportation system with the pollution and the
16 inequities that it embodies. So, we need to make sure
17 that we're doing everything that we can to correct those
18 injustices, and I would urge the Commission to seek to
19 go above the 50 percent minimum, but we appreciate that
20 for the first time there is a commitment here to help
21 out those communities with this funding.

22 Secondly, we have prioritized cleaning up medium
23 and heavy-duty vehicles because they are predominantly
24 now fueled by diesel, and toxic diesel exhaust is
25 plaguing California's air, and, again, this has a

1 disproportionate effect on low income communities of
2 color. I very much agree with the comment that Stan
3 Greschner made. So, we need to put as much focus as we
4 can on cleaning up medium and heavy-duty vehicles, so we
5 support the plan's focus in future years of shifting
6 funding for the infrastructure to fuel and charge those
7 vehicles.

8 I would say that we would like for future
9 hydrogen fuel cell funding, which we do support, to
10 reflect that emphasis on medium and heavy-duty vehicles.
11 We have a lot of hope in the potential for hydrogen fuel
12 cell vehicles in the heavy-duty sector and want to make
13 sure that that is adequately funded.

14 So, I agree with Steve Cliff's comments
15 representing the Air Resources Board that in the future
16 you may want to look at shifting more of that hydrogen
17 infrastructure funding to the medium and heavy-duty
18 sector.

19 That concludes my comments, and I want to again
20 thank the Commission, especially Lead Commissioner
21 Monahan.

22 SECRETARIAT GOLDTHRITE: Next we have Teresa
23 Cooke from the California Hydrogen Coalition.

24 MS. COOKE: Good morning and thank you. Teresa
25 Cooke, T-E-R-E-S-A, Cooke, C-O-O-K-E, on behalf of the

1 California Hydrogen Coalition.

2 I want to say that we deeply appreciate the
3 improved signaling for the growing passenger fuel cell
4 electric vehicle market, and think that a multi-year
5 Investment Plan will be a real game changer for
6 development.

7 Obviously, coming up at the heels of the
8 Governor's Executive Order we have a great deal of work
9 to do and there is absolutely a complementary goal for
10 both the battery electric vehicle and fuel cell electric
11 vehicle market with 25 million registered vehicles on
12 the road. You know, the growth in the fuel cell
13 electric vehicle market depends largely on early support
14 from programs like the CTP and positive signals to the
15 private sector that is coming en masse to invest in the
16 hydrogen fueling network in California, more helpful to
17 continue working with the Energy Commission to close the
18 gap that not only exists for charging infrastructure but
19 for hydrogen infrastructure as well.

20 Thank you.

21 SECRETARIAT GOLDTHRITE: So, next we have Cory
22 Bullis with the Electric Vehicle Charging, followed by
23 Rebecca Baskins with California Advanced Biofuels
24 Alliance.

25 MR. BULLIS: Good morning. You have Cory Bullis

1 here with the Electric Vehicle Charging Association.
2 First name spelled C-O-R-Y. Last named spelled B-U-L-L-
3 I-S.

4 We're supportive of varied elements of the plan
5 for reasons stated by other folks on the phone, so I
6 won't repeat that.

7 And I also just wanted to cite that we are also
8 concerned, like the comment from CalETC and Adopt a
9 Charger given the plan zeroes out funding for charging
10 infrastructure in 2023.

11 The only additional maybe tidbit I'd add to some
12 of our thought process behind our concerns on this is
13 really zeroing out funding in 2023 kind of sends a
14 conflicting market signal in the face of the Executive
15 Order at a time when we need to scale up even more, get
16 more aggressive with infrastructure deployment state
17 funding is getting pulled away from charging
18 infrastructure.

19 The other thing I'd want to note is that, at
20 least based on what's in the plan, we're concerned that
21 perhaps the zeroing out of funding in 2023 overlooks
22 potentially implementation of the Clean Mile Standard
23 and electrifying TNCs and other ride-sharing fleets.
24 You know, those charging market segments and
25 infrastructure deployment strategies are certainly more

1 nascent compared to other segments in the market, and
2 we're concerned that this is going to be a time that
3 that segment more so than others is really going to need
4 some additional attention and state support separate
5 from just the overall picture of needing to meet the
6 goals of the Executive Order.

7 So, we would just respectfully ask the
8 Commission to take another look at that. We understand
9 the Investment Plan is a living, flexible document, that
10 that is an ongoing concern for us.

11 Thank you.

12 SECRETARIAT GOLDTHRITE: Rebecca Baskins with
13 California Advanced Biofuels Alliance.

14 MS. BASKINS: Hi, good morning. This is Rebecca
15 Baskins, R-E-B-E-C-C-A, B-A-S-K-I-N-S with the
16 California Advanced Biofuels Alliance. We are the
17 state's trade association for biodiesel and renewal
18 diesel.

19 Thanks for allowing us to comment on the Clean
20 Transportation Program's Investment Plan. We thank you
21 for your investing in near zero fuels and support this
22 overall.

23 We want to point out the disparity between the
24 allocation of monies between ZEVs and near zero. Our
25 fuel carbon intensity scores are on par with

1 electricity, yet ZEVs have been allocated 13 times more
2 money than near zero alternatives. We appreciate the
3 state's climate policies, but we believe we need more
4 fuel-neutral policies and Investment Plans, especially
5 in that long-haul heavy-duty sector in order to achieve
6 the state's climate goals.

7 We thank you for your continued work on this
8 issue and we look forward to continuing working with
9 you. Thank you.

10 CHAIRMAN HOCHSCHILD: How many more speakers do
11 we have?

12 SECRETARIAT GOLDTHRITTE: We have no other
13 speakers on the line.

14 CHAIRMAN HOCHSCHILD: Okay. I think we had a
15 written comment. Public Advisor, are you going to read
16 that?

17 PUBLIC ADVISOR GALLARDO: Yes, I'll do that now.

18 So, this comment is from Alana Langdon. That's
19 spelled A-L-A-N-A, L-A-N-G-D-O-N, from Nikola Motor, N-
20 I-K-O-L-A.

21 "Nikola Corporation would like to express our
22 support for the approval of the proposed resolution of
23 the 2020, 2023 Update for the Clean Transportation
24 Program. We greatly appreciate the recognition of the
25 importance of reducing the carbon footprint of the

1 freight industry in California, the current and future
2 investments being directed to the deployment of medium
3 and heavy-duty ZEVs and hydrogen infrastructure will
4 greatly help California meet its future carbon reduction
5 goals.”

6 We look forward to continued engagement with the
7 CEC and other stakeholders on the benefits and
8 opportunities with respect to the development of renewal
9 hydrogen infrastructure, production and fuel
10 distribution to address California’s statewide
11 decarbonization efforts.”

12 “Thank you for your leadership.”

13 That concludes the comment.

14 CHAIRMAN HOCHSCHILD: Great, thank you. Let’s
15 turn to Commissioner discussion. Commissioner Monahan.

16 COMMISSIONER MONAHAN: Well, I actually think it
17 might be helpful, given some of the comments around
18 hydrogen infrastructure that Patrick or Charles clarify
19 the statutory language around the -- how much money we
20 can spend for hydrogen public infrastructure. Charles
21 or Patrick, are either of you able to answer that
22 question?

23 MR. SMITH: This is Charles. Can you hear me
24 okay?

25 COMMISSIONER MONAHAN: Yes.

1 MR. SMITH: Hi, Charles Smith, California
2 Energy Commission. C-H-A-R-L-E-S, S-M-I-T-H.

3 So, I do not have it in front of me but I
4 believe our statutory requirement is that we allocate
5 \$20 million or up to 20 percent of our available funding
6 for publicly available hydrogen refueling stations up to
7 the point that the state achieves the 100-station
8 target. I believe that is our statutory mandate.

9 COMMISSIONER MONAHAN: Yes, and the last year
10 funding is supposed to have been -- why did you cut from
11 20 to 10, and it's actually because it's a half a year
12 funding for 20 percent would be half of that, and we had
13 to do it until there's 100 stations in operation. So,
14 we're following what the statutory language is. Just to
15 clarify that.

16 So, I want to go back to my big comments which
17 is I'm pretty excited about this Investment Plan and I
18 think it really aligns well with the Governor's
19 Executive Order to set a course for a hundred percent
20 zero emission vehicles by -- in the next 15 to 25 years
21 for most applications. I think there -- we will still
22 need some liquid fuels and I'm convinced in the
23 Governor's EO.

24 It's clear that, where feasible, we want to
25 electrify everything, and where it's not, we want to get

1 as low carbon as we can in terms of the fuel and as low
2 pollution as we can.

3 So, let me just start with this three first
4 (indiscernible) in this Investment Plan. So, this was a
5 new Advisory Committee, and the reconstituted Advisory
6 Committee is now 40-ish plus members, a big group. And
7 we really leaned in on the issue that there were
8 community and equity interests at the table, as well as,
9 you know, diversity of fuel interest, NGO and we really
10 tried to make sure that there were -- we met different
11 categories of interest on the Advisory Committee.

12 Second, this is the first ever multi-year plan
13 that's prioritizing ZEVs and near ZEVs.

14 And the third is that we have a recovery and re-
15 investment category centered to what's happened in the
16 wake of COVID-19.

17 And I want to emphasize that while we were doing
18 this, COVID happened, so I just give credit to the team
19 at Fuel and Transportation Division, the Advisory
20 Committee, the DACAG, many other stakeholders continue
21 to weigh in and help shape this even as we were having
22 all this destruction across the state and I'm sure for a
23 lot of folks, working from home with children, dogs and
24 other intrusions in the workplace.

25 So, I want to emphasize that while we're setting

1 allocations for the next 3.5 years, there's going to be
2 opportunity every year for minor -- for adjustments. We
3 don't envision like wholesale revisions of the
4 direction, but for minor adjustments. So, for
5 stakeholders who have been weighing in on concerns
6 around later allocations I will say that there will be a
7 process. The Advisory Committee will be reconvened, and
8 there will be an opportunity for minor revisions on an
9 annual basis.

10 I want to say also that -- that this is a really
11 important moment for the state and that as we move
12 forward with electrifying, we need to do it in a way
13 that ensures that we can electrify both light-duty and
14 heavy-duty vehicles, and this is -- you know, the
15 targets that are laid out with both, you know, with off-
16 road equipment, on road heavy-duty equipment and light-
17 duty vehicles we were trying to balance all of these
18 needs. And I feel like the team did a great job in
19 terms of balancing those, but we are willing, to as we
20 see the market develop, make revisions going forward.

21 So, I would like to thank the DACAG and
22 particularly Stan Greschner for their helpful comments
23 on how to incorporate equity into our plan. There's
24 more work to be done on that, and I'm happy to report
25 that the DACAG is going to help us work on it, together

1 with Neomi Gallardo and the idea X team here at the
2 Energy Commission to make sure that we are looking at
3 benefits more broadly than just project locations.

4 I want to thank our Advisory Committee members
5 who have been engaged, thoughtful, proactive through
6 this whole process. We have revised our Investment Plan
7 to reflect their comments and reflect the comments of
8 other stakeholders, including our goal of having 50
9 percent -- at least 50 percent of investments in low
10 income and the Spanish communities.

11 So, the last thing, I want to thank the
12 hardworking team at the Fuel and Transportation
13 Division, including Patrick Brecht, who is the primary
14 author and the Project Manager for the Investment Plan.
15 He's point on so many key tasks, so thank you, Patrick.

16 Tami Hass, Charles Smith, Michael Comader, John
17 Butler and Hannon Rasool, for all their work to get the
18 Investment Plan to the finish line.

19 I also want to thank Kevin Barker who, even
20 though he's no longer at the Commission, with words that
21 were helpful along the way.

22 So, look forward to the feedback of other
23 Commissioners and, hopefully, to improving this
24 Investment Plan.

25 CHAIRMAN HOCHSCHILD: Thank you, Commissioner

1 Monahan. And I would just note it's 11:15. We have 15
2 items on the agenda. We're still on item one, so,
3 brevity is certainly appreciated as we go to commission
4 discussion as well as the other items.

5 Any Commissioners wishing to make a comment,
6 maybe you'd wave your hand. Okay. Let's begin with
7 Commissioner McAllister.

8 COMMISSIONER McALLISTER: Yes, just quickly.
9 I'll be very brief.

10 I want to just congratulate the team for the
11 good presentation and all their hard work to get us
12 here, Commissioner Monahan for your leadership, and Vice
13 Chair Scott for her, you know, laying a lot of the
14 groundwork over the years.

15 And also, just to draw a little bit of a
16 connection within the hydrogen world, you know, a lot of
17 discussion about hydrogen in this plan. But there is a
18 broader landscape there in terms of hydrogen for the
19 power sector and the infrastructure investment that we
20 need, and a lot of these the need for coordination
21 across that, you know, existing but also, you know,
22 perceptively growing part of the energy economy.

23 So, I look forward to working with Commissioner
24 Monahan and others in the industry on, you know,
25 connecting those dots and making sure that our overall

1 investment as a state towards decarbonization leverages
2 hydrogen in the most optimal way.

3 CHAIRMAN HOCHSCHILD: Thank you, Commissioner.
4 Let's go to Vice Chair Scott.

5 VICE CHAIR SCOTT: Thank you. I will also be
6 brief. I just -- you guys already know how much I love
7 the Clean Transportation Program, so I probably don't
8 need to add too much there. But, you know, it's a
9 strong program with a solid foundation, and I think the
10 Energy Commission really does play a critical and
11 impactful role in transforming our transportation
12 sector. And you all know, of course, that's important
13 because of climate, because of clean air, it helps
14 create jobs, that whole -- you all know all the reasons
15 why so I won't go into that.

16 But I just wanted to say thank you to
17 Commissioner Monahan and to the Clean Transportation
18 Team for the great work, and again, you guys know how
19 much I love this program, so --

20 CHAIRMAN HOCHSCHILD: Thank you. Commissioner
21 Douglas.

22 COMMISSIONER DOUGLAS: Well, I just wanted to
23 also thank Commissioner Monahan and the team, the DACAG,
24 you know, everybody, the Advisory Committee, just a lot
25 of hard work went into this. It's never easy.

1 You know, as we move forward implementing the
2 new Executive Order it does put a fine point on what we
3 need to focus on next, and I realize that we didn't have
4 the benefit of having it in front of us as this plan was
5 developed, but to the degree that we need to, you know,
6 make some adjustments or think about, you know, what
7 needs to be accelerated in order to meet those goals.

8 Obviously speakers have brought up medium, heavy
9 duty, you know, rural areas. It's one thing to go, you
10 know, all ZEV in more urban areas with more
11 infrastructure. It's a lot tougher in some of our rural
12 areas, and, you know, I'm very interested in just
13 following the conversation on hydrogen and interactions
14 between the energy sector at large and opportunities in
15 the transportation sector. I think we've got our work
16 cut out for us here.

17 So, anyway, I'm in strong support of this and
18 just thank everyone for their work on this.

19 Thank you.

20 CHAIRMAN HOCHSCHILD: Thank you Commissioner
21 Douglas.

22 Well, thunderous support from me and thank you,
23 again, to Commissioner Monahan.

24 What I'd like to do is invite Commissioner
25 Monahan to make the motion and Vice Chair Scott to

1 second, given all of your hard work that led up to this
2 moment, if that's all right. Commissioner Monahan,
3 would you make the motion?

4 COMMISSIONER MONAHAN: I move to approve this
5 item.

6 CHAIRMAN HOCHSCHILD: Vice Chair Scott, would
7 you be willing to second?

8 VICE CHAIR SCOTT: I second.

9 CHAIRMAN HOCHSCHILD: All right. Let's take the
10 roll. All in favor say aye. Vice Chair Scott.

11 VICE CHAIR SCOTT: Aye.

12 CHAIRMAN HOCHSCHILD: Commissioner Monahan.

13 COMMISSIONER MONAHAN: Aye.

14 CHAIRMAN HOCHSCHILD: Commissioner McAllister.

15 COMMISSIONER McALLISTER: Aye.

16 CHAIRMAN HOCHSCHILD: Commissioner Douglas.

17 COMMISSIONER DOUGLAS: Aye.

18 CHAIRMAN HOCHSCHILD: And I vote aye as well.

19 That item passes unanimously. Congratulations to all
20 the stakeholders, and staff, and team.

21 Let's turn now to item two, Order Instituting
22 Rulemaking Proceeding Around Senate Bill 49.

23 MR. STRUVEN: Good morning Chair and
24 Commissioners. My name is Nick Struven. I work in the
25 Efficiency Division Appliance Office and I'm here to

1 present the Order Instituting Rulemaking to Implement
2 Senate Bill 49.

3 Next slide, please.

4 Senate Bill 49 requires California Energy
5 Commission to develop flexible demand appliance
6 standards in consultation with load-serving entities and
7 the Public Utilities Commission.

8 Developing and implementing these standards will
9 be critical to realizing load flexibility as a resource
10 in California of the California Energy Commission's
11 effort to lead the state to a hundred percent clean
12 energy in the coming years.

13 Senate Bill 49 directs the California Energy
14 Commission to establish standards and labeling
15 requirements to facilitate the deployment of flexible
16 demand technologies for appliances. This is a new
17 authority under the Warren Alquist Act for the
18 Commission.

19 The new regulations will be placed in a separate
20 section, Title 20, to differentiate them from the
21 efficiency regulatory authority for appliances. These
22 standards and labeling requirements must show that they
23 are cost effective to the consumer, will enable
24 appliance operations to be scheduled, shifted or
25 curtailed to reduce emissions of greenhouse gases

1 associated with energy generation, all requiring the
2 consent of consumers.

3 These standards shall contain cybersecurity
4 protocols, communications shall be open source,
5 interoperable and user friendly.

6 It is anticipated that this rulemaking will
7 implement directives of Senate Bill 49 to establish
8 standards for appliances that facilitate the deployment
9 of flexible demand technologies and a framework for
10 enforcement to achieve the objectives consistent with
11 state greenhouse gas reduction policies and mandates.

12 Staff will also work with the California
13 Independent System Operator, the California Air
14 Resources Board, the U.S. Department of Energy and other
15 organizations focused on this topic.

16 Next slide, please.

17 This figure illustrates the capabilities showing
18 aggregate typical demand patterns for several shiftable
19 load types in California. This is forecasted for 2025
20 along with the net load and times of need to shift.

21 These shapes represent both commercial and
22 industrial, as well as residential appliance end uses.
23 Sources of load shift can be found across commercial,
24 industrial and residential customer classes both from
25 tested and emerging technologies.

1 Electricity end uses that can readily provide
2 load shift include air conditioning, refrigerated
3 warehouse, water supply and treatment, commercial and
4 industrial batch processes, electric space and water
5 heating.

6 Emerging technologies stand to contribute as
7 well, especially battery storage and electric vehicle
8 charging. These end uses are better prepared -- these
9 end uses are better prepared than ever to quickly and
10 reliably deliver shift through automated responses due
11 to dispatch signals or preset schedules.

12 The new requirement for the California Energy
13 Commission's appliance standards to consider flexible
14 demand technologies to help maintain GRID reliability
15 will require close coordination between the load
16 management standards development and the next generation
17 of appliance efficiency standards.

18 Next slide, please.

19 The flexible demand standards for appliance will
20 be based on feasible improvements that can enable
21 appliance operations to be scheduled, shifted and
22 curtailed to reduce emissions of greenhouse gases
23 associated with electricity generation. This capability
24 to shift the timing of the demand will also reduce the
25 need to curtail renewable generation.

1 One of the benefits to consumers from flexible
2 demand technologies is the opportunity to reduce
3 electricity charges by shifting their consumption to
4 periods of the day with lower rates.

5 Another benefit to providing consumers the
6 ability to access time-bearing electricity rates,
7 greenhouse gas signals and load schedules to prompt
8 consumers to increase or decrease their use of energy in
9 line with available zero margin cost renewable
10 generation.

11 For the load serving entities a benefit of
12 flexible demand and load shift is the reduction of
13 resources necessary to meet requirements of the electric
14 GRID system.

15 Appliance standards that enable widespread
16 deployment of flexible loads along with energy storage
17 will provide a lower cost means to reducing greenhouse
18 gas emissions. These standards will reduce further
19 investment requirements for electricity networks
20 generation and transmission infrastructure that would
21 have been necessary to meet growing peak electricity
22 demand and network cost arising from the rapid growth in
23 consumer side renewable generation.

24 Next slide, please.

25 These are the steps toward a 2022 adoption of

1 initial flexible demand appliance standards. The staff
2 report is anticipated to focus on a narrow set of
3 measures to establish this new authority under Title 20
4 in an expeditious manner.

5 Next slide, please.

6 Staff recommends Commission approval of the
7 Order Instituting Rulemaking for Flexible Demand
8 Appliances. This concludes my presentation, and I am
9 available to answer any questions you may have on this
10 agenda item.

11 CHAIRMAN HOCHSCHILD: Thank you. Shall we go to
12 public comment.

13 PUBLIC ADVISOR GALLARDO: This is Noemi
14 Gallardo, the Public Advisor. We have no written
15 comment. We do have someone in the queue, Kevin
16 Messner. Kevin, we're going to open your line, and
17 please spell your name and indicate your affiliation, if
18 any, before speaking.

19 MR. MESSNER: Great. Thank you. This is Kevin
20 Messner, M-E-S-S-N-E-R, with AHAM, the Association of
21 Home Appliance Manufacturers.

22 Thanks for the opportunity to comment on this.
23 I find this very interesting in many respects. I think
24 back 10 years ago when we were really pushing the
25 efficiency advocates on the benefits of how demand

1 response in appliances can be used in a really good and
2 helpful way on energy efficiency. And we were really
3 pushing hard and ended up, I think, convincing them and
4 Energy Star to include that in some of the Energy Star
5 credit. So, that literally was in 2010, and here we are
6 10 years later and I think kind of all agree there
7 hasn't been a whole lot of progress.

8 We did see the bill that moved forward and did
9 not oppose it. Hope was that CEC might use some of its
10 authority to really help move the demand response in
11 there, so we are very supportive of that concept and
12 have been for 10 years.

13 Unfortunately, there was always a worry of CEC
14 getting new authority and using it in a way that we
15 don't like, and this CTA port you picked the one that we
16 -- the one thing out of all the areas out there that we
17 really don't like as the first one out of the box. But,
18 the CTA port is just -- it's been a long 10-year effort
19 by utilities to slap these things on appliances and
20 require appliances to have their specified docks, docks
21 or energy management, whatever you want to call it.
22 This is just another iteration of that.

23 It's a bad idea. We'll just outline two reasons
24 why. One is security. This CTA port is like going back
25 to dial-up modems. We are now on a high security, more

1 secure way to deal with multilayers of security through
2 cloud base and apps. Putting a port in a home is a step
3 backward on that. It removes a layer of security and
4 protection that hackers can get into the appliance, can
5 get into the home.

6 Another issue is liability. Once you get that
7 in their who's liable? What if a utility sends a signal
8 and it interrupts the appliance's function, it spoils
9 food in the refrigerator, it bleaches clothes because it
10 stops the cycle in the middle with bleach in there?
11 There's leak waters. There's really problems with
12 putting this port on home appliances that are in a home.
13 And we can talk through others.

14 We really, really would like to work with CEC to
15 try to promote demand response capable appliances.
16 We've been wanting to do it for 10 years. We kind of
17 after dealing with the CPSC, quite frankly, and others
18 just was like banging our head against the wall. But
19 with this new authority we would love to look at ways to
20 try do that, not the CTA port, but there's other ways to
21 do it, so hopefully we can switch this to something and
22 we can work together on it, so thank you for listening.

23 CHAIRMAN HOCHSCHILD: Thank you. Let's move now
24 to Commission discussion. Commissioner McAllister.

25 COMMISSIONER McALLISTER: Yeah, thanks. So,

1 thank you, Nick. I want to thank you and the whole
2 staff, Sean and all the others who have been working on
3 this, Pierre.

4 I'm very excited about this, so just to be
5 clear, this is opening the rulemaking, so this is not,
6 you know, voting on the substance. So, certainly to Mr.
7 Messner's point there are myriad opportunities going
8 forward to talk about what this landscape of low
9 flexible appliances actually will look like. That's
10 exactly what the discussion is for and what this
11 platform is for. And so, you know, that will happen on
12 the merit, you know, across all the stakeholders. We'll
13 get inputs from everyone and focus on developing this
14 new authority.

15 And I think, you know, Nick appropriately
16 distinguished it from our Title 20 appliances efficiency
17 authority that you're all familiar with. This is
18 completely distinct from that, so the cost
19 effectiveness, all these -- the development of test
20 procedures and all that really is completely independent
21 because the goal here is to not overlap with efficiency
22 authority that, you know, for some devices actually sits
23 over at the Federal level. So, you know, obviously
24 we're being assiduous about that.

25 Got to give some koodoos to Senator Skinner,

1 Nancy Skinner, whose bill this is, SP-49, that we're
2 implementing.

3 You know, this idea, as Mr. Messner said, and I
4 think many of you know, the demand response has been
5 around for quite a while, and there's been this vision
6 as our economy moves to a more digital economy to be
7 able to take loads ever more granularly and send them
8 signals that help them better comport with the GRID, and
9 for any number of reasons, and many of them were brought
10 up in the transportation plan vote. But having flexible
11 loads is a cheap, elegant low hassle way for our GRID to
12 be operated optimally and reliably.

13 So, this isn't going to be a way for us to get a
14 big wedge of resources built into the hardware of the
15 electricity GRID that can help with both decarbonization
16 and reliability.

17 And, so, in the context of our new commitment to
18 the Governor after the stresses of the last couple of
19 months in the electricity GRID to really lift up the
20 potential, expand the potential of distributed load
21 flexibility and DERs generally as a solution to our
22 reliability challenges, this fits perfectly with that.

23 So, it's a marathon, not a sprint. Lots of
24 stages to go through and, you know, picking categories
25 that have the most potential and working through those

1 with stakeholders.

2 But I'm really pleased to have this process
3 formally beginning and excited about the potential here
4 alongside, as Nick said, the load management standards,
5 eventually getting to a point where we can actually
6 build some of these, you know, when we get rock solid
7 solutions and the marketplaces supporting them we can
8 build them into building code, for example and really
9 focus on load flexibility across the state in literally
10 millions and billions of points that help us operate the
11 GRID reliably and in a low carbon fashion.

12 So, that's really the broader context here, this
13 effort under SP-49 fits into. So, I want to just thank
14 everybody for getting this to us, and, obviously, I'm in
15 strong support.

16 CHAIRMAN HOCHSCHILD: Thank you, Commissioner,
17 for all your leadership on this. You've been phenomenal
18 and relentless, and it's great to see the progress.

19 Other Commissioners wish to comment? No, okay.
20 So, with that, let's take a motion. Commissioner
21 McAllister, are you willing to make the motion?

22 COMMISSIONER McALLISTER: Yeah. I'll move to
23 cite them. Okay.

24 CHAIRMAN HOCHSCHILD: Commissioner Monahan,
25 would you be willing to second?

1 COMMISSIONER MONAHAN: I second.

2 CHAIRMAN HOCHSCHILD: Okay. All in favor say
3 aye. Commissioner McAllister.

4 COMMISSIONER McALLISTER: Aye.

5 CHAIRMAN HOCHSCHILD: Commissioner Monahan.

6 COMMISSIONER MONAHAN: Aye.

7 CHAIRMAN HOCHSCHILD: Vice Chair Scott.

8 VICE CHAIR SCOTT: Aye.

9 CHAIRMAN HOCHSCHILD: Commissioner Douglas.

10 COMMISSIONER DOUGLAS: Aye.

11 CHAIRMAN HOCHSCHILD: And I vote aye as well.

12 That item passes unanimously. Thank you to the team for
13 that.

14 Let's move on to Item three, Calistoga
15 Geothermal.

16 MR. VEERKAMP: Good morning Chair,
17 Commissioners. My name is Eric Veerkamp. I work in the
18 Compliance Office of the Siting Transmission and
19 Environmental Protection Division. I'm the Project
20 Manager for the Calistoga Unit 19 Geothermal Project,
21 and that's docket number 81-AFC-01C.

22 STEP Division staff requests approval this
23 morning of nearly identical proposed modifications for
24 the Sonoma Unit Three Plant, which is 80-AFC-01C, and
25 for Calistoga Unit 19.

1 With me this morning is Jerrod Gagula
2 (phonetic), staff counsel, and Nancy Fletcher from our
3 Air Quality Engineering Unit as well.

4 Next slide, please.

5 Calistoga Unit 19 is an operational geothermal
6 facility located in Sonoma County, owned and operated by
7 Geysers Power Company, LLC.

8 The petition for modification requests the
9 addition of a stationary, permanent emergency diesel
10 engine for the cooling tower wet down system. The
11 emergency diesel engine would be used to prevent fire
12 damage to the cooling tower from wildfires.

13 The approximately 250 horsepower, or .19-
14 megawatt equivalent engine with water pump is designed
15 for deployment in wildfire emergencies when the facility
16 is evacuated. The pump will wet the cooling towers to
17 reduce the chance that an ember landing on the cooling
18 tower deck will start a fire. This proposed
19 modification is similar to the amendments you've already
20 approved for Grant, Socrates and Quicksilver, and most
21 recently for the Lakeview Geothermal plant approved by
22 the Commission in January of 2020.

23 Next slide, please.

24 In order to provide clarity and eliminate
25 confusion between air district conditions and CEC

1 conditions of certification, the staff has proposed
2 revised, renumbered and reordered air quality conditions
3 of certification for consistency with the Lake County
4 Air Quality Management District permit language for this
5 project. Staff concluded that with the adoption of the
6 amended conditions of certification approval of the
7 petition will not have a significant effect on the
8 environment and will not affect the project's ability to
9 continue to comply with applicable LORS.

10 Next slide.

11 Staff is recommending Commission approval of the
12 petition to install a new permanent diesel engine driven
13 pump for the cooling tower wet down system at Calistoga,
14 along with the revised proposed air quality conditions
15 of certification set forth in staff's analysis.

16 That concludes my presentation, and I'd be happy
17 to take any questions you might have.

18 CHAIRMAN HOCHSCHILD: Thank you. Let's move on
19 to public comment. Madam Public Advisor, do we have
20 anyone who wishes to make a comment?

21 PUBLIC ADVISOR GALLARDO: This is Noemi, the
22 public advisor. We do not have any written comment. We
23 do have some people in the queue for the phone. I'll
24 differ to Cody, the Secretariat, to give us those names.
25 And I'll just remind speakers to please spell out your

1 first and last names and indicate your affiliation, if
2 any. Thank you.

3 Cody, can you let us know who's first?

4 SECRETARIAT GOLDTHRITE: We have two public
5 comments. We have Jeff Harris with Geyser Power and
6 then followed by Barbara McBride from Calpine
7 Corporation.

8 CHAIRMAN HOCHSCHILD: Okay, go ahead.

9 MR. HARRIS: This is Jeff Harris, J-E-F-F, H-A-
10 R-R-I-S. We're just here to make us available to answer
11 any questions and also to thank the staff for pushing
12 these amendments for -- to make it illustrative of a
13 good, strong working relationship between the Geyser's
14 projects and the Commission's staff on these issues.

15 The standby diesel engine will allow for the wet
16 down system to operate in the event of a wildfire,
17 wildlands fire in the vicinity.

18 So, I know you're pressed for time so I'll go
19 ahead and stop my comments there, make ourselves
20 available for any questions. I know Ms. McBride from
21 Calpine is also on the phone and available to answer any
22 questions you may have, so thank you and thanks for the
23 staff and the hard work.

24 CHAIRMAN HOCHSCHILD: Ms. McBride, were you
25 wishing to make a comment or did you just want to make

1 yourself available if Commissioners have questions?

2 MS. McBRIDE: I want to thank the staff for
3 their hard work on this. It was very expeditious and
4 great, so that's it.

5 CHAIRMAN HOCHSCHILD: Okay. Let's move on to
6 Commissioner discussion. Commissioner Douglas.

7 COMMISSIONER DOUGLAS: Sorry, I was fighting
8 with my unmute button.

9 So, I appreciate the -- you know, I received a
10 briefing on this. I think the presentation was very
11 good. These upgrades are really important. They're
12 important for safety, they're important for reliability
13 and, so, I'm in strong favor and recommend this to the
14 Commission's approval.

15 CHAIRMAN HOCHSCHILD: Okay. Any Commissioner
16 discussion? Seeing none, Commissioner Douglas, are you
17 willing to make a motion?

18 COMMISSIONER DOUGLAS: Yes. Move approval of
19 this item.

20 CHAIRMAN HOCHSCHILD: Okay. Commissioner
21 Monahan, would you be willing to second that?

22 COMMISSIONER MONAHAN: I second it.

23 CHAIRMAN HOCHSCHILD: Okay. All in favor say
24 aye. Commissioner Douglas.

25 COMMISSIONER DOUGLAS: Aye.

1 CHAIRMAN HOCHSCHILD: Commissioner Monahan.
2 COMMISSIONER MONAHAN: Aye.
3 CHAIRMAN HOCHSCHILD: Commissioner McAllister.
4 COMMISSIONER McALLISTER: Aye.
5 CHAIRMAN HOCHSCHILD: Vice Chair Scott.
6 VICE CHAIR SCOTT: Aye.
7 CHAIRMAN HOCHSCHILD: And I vote aye as well.

8 That item passes unanimously. Let's move on to item
9 four, Sonoma Geothermal.

10 MR. VEERKAMP: As mentioned, I'm the Compliance
11 Project Manager for Sonoma as well, also being proposed
12 for modification.

13 Sonoma Unit Three is an operational geothermal
14 facility located in Sonoma County, also owned and
15 operated by Geysers Power Company.

16 The petition for modification requests the
17 addition of a stationary permanent emergency diesel
18 engine for the cooling tower wet down system. The
19 emergency diesel engine would be used to prevent fire
20 damage to the cooling tower from the wildfires. Thank
21 you.

22 The approximately 250 horsepower, again .19-
23 megawatt equivalent engine, with water pump is designed
24 for deployment primarily in emergencies when the
25 facility is to be evacuated. The pump would wet the

1 cooling towers to reduce the chance that an ember on the
2 cooling deck would start a fire. Again, Lakeview
3 Geothermal was most recently approved in January of
4 2020.

5 Next slide, please.

6 So, in order to provide clarity and eliminate
7 confusion between the air district conditions and the
8 CEC conditions of certification, staff has again
9 proposed revised renumbered and reordered air quality
10 conditions of certification for consistency with the
11 northern Sonoma County air pollution control district
12 permit language for this project.

13 Staff concluded that with the adoption of the
14 amended conditions approval of the petition will not
15 have a significant effect on the environment and will
16 not affect the project's ability to continue to comply
17 with LORS.

18 Next slide, please.

19 Staff is recommending Commission approval of
20 this petition to install a new, permanent diesel engine
21 driven pump with a cooling tower wet down system at
22 Sonoma along with the revised air quality conditions of
23 certification set forth in staff's analysis.

24 And that concludes my presentation.

25 CHAIRMAN HOCHSCHILD: Thank you. Madam Public

1 Advisor, do we have any public comment on this item?

2 PUBLIC ADVISOR GALLARDO: We do not have any
3 written comment. We have the two same people as before
4 who might be on the line just to answer questions.

5 CHAIRMAN HOCHSCHILD: Okay.

6 PUBLIC ADVISOR GALLARDO: But would you like us
7 to open the lines to see if they have comment or --

8 CHAIRMAN HOCHSCHILD: I think it's the same
9 situation, I assume.

10 PUBLIC ADVISOR GALLARDO: Yes, they're the same.

11 CHAIRMAN HOCHSCHILD: So, let's move on to
12 Commissioner discussion. Commissioner Douglas.

13 COMMISSIONER DOUGLAS: Yes. Same comments as
14 before. These are important modifications. I recommend
15 the approval of the item.

16 CHAIRMAN HOCHSCHILD: Okay. Any other
17 Commissioner comments? Seeing none, Commissioner
18 Douglas, would you be willing to make the motion?

19 COMMISSIONER DOUGLAS: Yes, move approval of
20 this item.

21 CHAIRMAN HOCHSCHILD: Commissioner McAllister,
22 would you be willing to second?

23 COMMISSIONER McALLISTER: I'll second.

24 CHAIRMAN HOCHSCHILD: Okay. All in favor say
25 aye. Commissioner Douglas.

1 COMMISSIONER DOUGLAS: Aye.

2 CHAIRMAN HOCHSCHILD: Commissioner McAllister.

3 COMMISSIONER McALLISTER: Aye.

4 CHAIRMAN HOCHSCHILD: Vice Chair Scott.

5 VICE CHAIR SCOTT: Aye.

6 CHAIRMAN HOCHSCHILD: Commissioner Monahan.

7 COMMISSIONER MONAHAN: Aye.

8 CHAIRMAN HOCHSCHILD: And I vote aye as well.

9 That item passes unanimously. Thank you to staff and

10 stakeholders for that.

11 So, we move onto item five, California Energy

12 Fund, dba CalCEF Ventures.

13 MS. OLIVER: Hello, Commissioners. My name is

14 Eleanor, and today my colleague Josh and I are here to

15 request approval of 28 awards for \$150,000 each,

16 totaling for \$4.2 million from the EPIC small grant

17 program, the CalSEED initiative.

18 Next slide.

19 Since the start of this small grants program in

20 2017, CalSEED has so far awarded a total of 71 awards to

21 clean energy startups with innovative technologies.

22 From the completion of awarded projects those

23 start ups have been able to achieve a total of \$65.8

24 million and various types of follow-on funding.

25 We can also see the growth of these companies

1 over the course of the program with the increased number
2 of career opportunities created, ownership rights and
3 successful small-scale validation of these unique
4 technologies.

5 A reflection of the CEC's commitment for
6 diversity, CalSEED actively conducts outreach to ensure
7 that the applicant pool is representative of all
8 Californians, including women, low income entrepreneurs,
9 veterans, communities of color and other enter presented
10 groups.

11 Next slide.

12 As you know, CalSEED provides small grants to
13 entrepreneurs with early stage clean energy
14 technologies. Applicants first apply for a \$150,000
15 concept award, which also comes with technical resources
16 and business development expertise. Those that
17 successfully receive a concept award are then eligible
18 to compete for 450,000 additional dollars to further
19 develop their innovation.

20 The awards under consideration today are the
21 fourth round of those \$150,000 concept awards.

22 Next slide.

23 CalSEED held its fourth open application period
24 early this year and received over 200 eligible
25 applications.

1 CalSEED used a screening mechanism to ensure
2 applicants aligned with the goals and guidelines of the
3 program.

4 CalSEED directed applicants to submit proposals
5 to one of the four based on their geographic location.
6 There are seven to eight high strength applications per
7 region for your consideration today.

8 Next slide.

9 During this application period CalSEED expanded
10 eligible technology areas to include advanced power
11 electronics and power conditioning, energy storage,
12 energy efficiency, zero and negative carbon admission
13 generation and artificial intelligence and machine
14 learning. With this expansion we saw more creative
15 innovations apply and push for outside-the-box solutions
16 to help California in reaching its climate goals.

17 Next slide.

18 These applications span a wide range of
19 innovations over the five technology areas. Some were
20 at concept stage, whereas others had a basic prototype
21 tested in the lab. Their applications were evaluated
22 for long-term potential impact, including technical,
23 environmental and social impact business strategy and
24 the expertise and experience of the team.

25 I'll now pass it over to Josh who will overview

1 each of the technology areas and highlight some of the
2 exciting small grants before you today.

3 Next slide.

4 MR. CROFT: Thanks, Eleanor. Commissioners,
5 I'll be summarizing the five technology groups and
6 highlighting a project from each.

7 The first technology group is Advanced Power
8 Electronics and Power Conditioning.

9 As California moves forward into this world of
10 climate change reality it becomes -- it is more
11 important than ever to support innovations that make our
12 GRID smarter, more resilient and more responsive.

13 This year CalSEED is recommending subawards
14 under this category that help the GRID manage demands,
15 provide better and cleaner backup power and find
16 innovative and inexpensive ways to make our transition
17 GRID more resilient.

18 Take, for example, ALD Technical Solutions.
19 Through this award they are developing a hybrid
20 structural composite reinforcement system for existing
21 transmission lines that increases the power capacity
22 while decreasing the risk of sag. The add on is
23 lightweight and easy to install and uses a unique
24 combination of carbon and basalt fibers that will also
25 help prevent corrosion of the metals within the

1 transmission line.

2 Next slide.

3 Next is energy storage. As our GRID adds clean
4 generation, next generation energy storage solution
5 hastens our journey to a carbon-free GRID that is
6 consistently available and affordable.

7 The energy storage solutions before you today
8 include solid state nonflammable batteries, a nanoscale
9 battery that hopes to improve energy density by tenfold,
10 and solutions for zero emission hydrogen technology.

11 Hydrogen will likely be a key part of the
12 solution, and the recommended subawarding each group
13 technologies is developing a compact, low-cost hydrogen
14 electrolyzer with significant performance enhancements
15 compared to what is on the market today.

16 The team plans to demonstrate their electrolyzer
17 at prototype scale, expecting to show a 50 percent
18 increase in performance while keeping the manufacturing
19 cost of the electrolyzer below market competitors.

20 Next slide.

21 Next are our Energy Efficiency Projects.
22 California's industry and building stock must also move
23 toward becoming a better GRID resource. Creative
24 solutions are still needed to get us to our ambitious
25 policy goals. This year's CalSEED program includes

1 solutions for industry, commercial and residential, but
2 I'd like to highlight Cypris Materials, Inc.

3 The Cypris Materials team is continuing
4 development on a transparent solar control coating that
5 was previously supported by RPE. The coating is
6 directly painted onto rough or smooth surfaces such as
7 the roofs or walls of buildings. This coating uses
8 chemicals readily available in the market and achieves a
9 50 percent reflection in energy. If technology is
10 successful, they hope to show almost a 20 percent
11 reduction in cooling costs.

12 Next slide.

13 As we shift our energy from natural gas and
14 other carbon-producing sources of energy to zero carbon
15 solutions, innovations in the underlying generation
16 technology will make the transition faster and cheaper.
17 In CalSEED cohort there are technologies that make solar
18 energy cheaper, lighter and better performing and more
19 durable.

20 There are also other technologies for better
21 centers within geothermal wells and a dispatchable power
22 solution designed to turn hydrogen into power on a GRID
23 scale.

24 For example, Leap Photovoltaics hopes to reduce
25 the cost of PV cell manufacturing by 50 percent. Using

1 their CalSEED award they hope to demonstrate a better
2 way to manufacture thin film PV technology. They plan
3 to verify the performance of different metal inks and
4 show at a laboratory and prototype scale that it is
5 valid for their manufacturing method.

6 Next slide.

7 As the world makes advancement in the field of
8 AI, some of those gains can be applied to clean energy.
9 This year CalSEED created a group specifically to
10 support early research ideas around this. The projects
11 that came to the top include solutions for better and
12 faster quality checks on batteries, predicted
13 maintenance and energy recovery for municipal and
14 industrial water treatment, and better electrical
15 equipment and distribution inspection.

16 One applicant, Tolo, Incorporated, will use a
17 technique called parallax imagery to create machine
18 learning models which will improve inspection for
19 aboveground electrical infrastructure. The innovation
20 hopes to greatly reduce the need for slow and costly
21 field inspection with the ability to provide
22 consistently high-quality inspections and labeling of
23 electric infrastructure in bulk.

24 Furthermore, the total AI modeling can be
25 trained without needing to pay to produce much of the

1 training data. Instead, they use the data already being
2 gathered by inspectors and combine this with their high-
3 resolution imagery.

4 Solutions like this one will be invaluable as we
5 combat the devastating wildfire challenges California
6 has today and in the future.

7 Next slide.

8 That wraps up my summary of this year's batch of
9 small grants. We recommend approval of the 28 small
10 grant awards and adoption of staff findings that these
11 projects are exempt from CIQUA.

12 Staff are available for questions.

13 CHAIRMAN HOCHSCHILD: Thank you very much.

14 Let's go to public comment, if we could.

15 PUBLIC ADVISOR GALLARDO: This is Noemi, the
16 Public Advisor. We do have a written comment and four
17 people on the line right now. We're going to start with
18 the people on the phone line. Joy Larson of CalSEED
19 will be first.

20 This is a reminder to Joy and to all speakers to
21 please spell their first and last names and indicate
22 their affiliation, if any.

23 Joy, you may begin.

24 MS. LARSON: Good morning. Thank you for the
25 opportunity to say a few words in support of approving

1 CalSEED grants.

2 My name is Joy Larson. That's J-O-Y, L-A-R-S-O-
3 N. I'm the Program Director for CalSEED at New Energy
4 Nexus. We administered a solicitation process for
5 grants, so we're thrilled to be on the agenda for today.

6 We continue to work with our partners at the
7 Greenlining Institute to refine the impact criteria used
8 to evaluate these applications. And we're grateful to
9 our partners at the CEC, Josh Croft, Anthony Neeg,
10 Eleanor Oliver and Eric Stokes for their collaboration
11 with the technology areas and for continuing to clarify
12 EPIC criteria for us and the applicants.

13 A special thank you to the 40 technical Advisory
14 Committee members industry, academia, not for profits,
15 venture capital and legal firms that participated in the
16 selection process.

17 I want to keep my comments brief. I just want
18 to say that back in December and January when we were
19 designing this solicitation we were excited for this
20 cohort because it's the first year we added wildfire
21 resilience to the selection criteria.

22 So, a lot has happened since the application
23 window closed in March. These CalSEED grants are really
24 a lifeline to entrepreneurs that have watched other
25 funding sources dry up. And while the companies that

1 are funded by CalSEED and EPIC will advance California's
2 energy goals, now these will be the business leaders
3 that will create jobs and use supply chains in our post-
4 COVID economic recovery.

5 We are all very excited to start working with
6 them this year, and we look forward to continued
7 collaboration with the CEC and the CalSEED program.

8 Thank you for your consideration.

9 CHAIRMAN HOCHSCHILD: You said post-COVID, and
10 it's a welcome phrase. We all look forward to that.

11 Any other comments, Madam Public Advisor?

12 PUBLIC ADVISOR GALLARDO: Yes, we do have other
13 people on the line. Cody, the Secretariat, will
14 announce those names.

15 SECRETARIAT GOLDTHRITTE: So, next we have Bert
16 Wank with InfiniRel Corporation.

17 MR. WANK: Yes. Good morning, gentleman. My
18 name is Bert Wank, B-E-R-T. Last name is spelled W-A-N-
19 K, but preferable pronounced Vank. I'm the founder and
20 CEO of InfiniRel Corporation, one of the 29 proposed
21 grant recipients of the California Clean Energy Fund.
22 We are also finalists of the American-made Solar
23 Challenge from three years.

24 And I would like to thank you, Commissioner and
25 the rest of the team to allowing this really exciting

1 instrument that really has been very helpful.

2 As indicated before, in a world where the race
3 to the bottom has challenged the supply chain, has
4 challenged funds, particularly in the high stakes and
5 high risk development where investors are really looking
6 for a way to limit that technology risk by field trials,
7 and this is exactly what even a limited amount of funds
8 will tremendously add to our ability to provide the GRID
9 or grow that GRID from a lab experiment or early test
10 into the field, getting recognition and then attract the
11 larger funds to actually commercialize the technologies
12 that help California staying in the leadership role that
13 I've seen from my history in Germany in the leadership
14 in the energy transition, and that's one of the reasons
15 I moved to California, because this is the state that
16 makes it happen.

17 Just to build a little bit of light in view of
18 why those funds have been compromised in the last
19 decade. Industry leader, solar industry as an example,
20 inverter manufacturer Satcon went bankrupt. ConEdison
21 who started PPAs in California went bankrupt. There's a
22 long line of equisystem failures that have pushed
23 investors away from longer time investments and, rather,
24 taking the low road on, okay, let's do the software
25 applications that are much quicker to turn into

1 profitability.

2 This means that we as entrepreneurs,
3 particularly solving challenges that haven't been solved
4 before, especially now when we actually are full force
5 in those mega electrification and the transportation
6 system going autonomous, going distributed is so needed
7 to get completed. I would highly support your efforts
8 in supporting the missions and valuable aspect in domain
9 expertise that came together here with the training and
10 applicants that the team has selected and that we're
11 also very favorable and able to participate in.

12 I ask for your support for those innovative
13 suitors CalSEED program. It is instrumental to
14 implement California's own (indiscernible) transition.

15 CHAIRMAN HOCHSCHILD: Thank you. As we go to
16 other speakers I would just welcome brevity. We have a
17 long, long agenda today, so, with that let's go on to
18 the next speaker.

19 SECRETARIAT GOLDTHRITE: Next in line we have
20 Dennis Nickerson from Portable Solar, Inc.

21 MR. NICKERSON: Hi. This is Dennis Nickerson,
22 CEO of Portable Solar, one of the perspective grant
23 recipients. And I'd like to thank the Commissioners and
24 CalSEED for this opportunity.

25 We're hoping to make residential solar much more

1 accessible to rural areas and low- and moderate-income
2 communities in California by developing a small solar
3 device, one, two and three kilowatt sizes, that you can
4 easily maneuver around your yard or driveway and that
5 you can take with you if you move.

6 We're a startup and still in the design phase,
7 but are really excited to have soon a low-cost solar
8 solution for California ratepayers.

9 Thank you.

10 CHAIRMAN HOCHSCHILD: Thank you.

11 SECRETARIAT GOLDTHRITTE: Next we have
12 Wilson Hago from Hago Energetics.

13 MR. HAGO: Hi. Can you hear me?

14 PUBLIC ADVISOR GALLARDO: Yes, we can.

15 MR. HAGO: Yes, this is Wilson Hago, that's W-I-
16 L-S-O-N, H-A-G-O. I'm founder and CEO of Hago
17 Energetics. I want to thank the California Energy
18 Commission and New Energy Nexus for bringing us here
19 before you for our project to consider a funding
20 consideration.

21 Our project is to develop new technology to turn
22 biogas to hydrogen, so the biogas can be derived from
23 animal waste or even from forest waste.

24 The reason why I'm doing this is basically I am
25 deeply concerned about climate change and I want to

1 contribute in whatever manner I can to do that.

2 So, we hope to enlarge the hydrogen supply lines
3 in the state of California and support the clean
4 transportation program.

5 Ultimately we want to help farms enhance their
6 profitability and create more jobs in the state.

7 Thank you.

8 CHAIRMAN HOCHSCHILD: Thank you.

9 SECRETARIAT GOLDTHRITTE: Next we have Brad
10 Hines, Planet A Energy.

11 MR. HINES: Hi, this is Brad Hines. That's H-I-
12 N-E-S. I'm the CEO of Planet A Energy and one of the
13 fund -- proposed CalSEED fund recipients. I want to
14 thank the program and the Commissioners for this
15 opportunity.

16 I want to just fill you in on what you're
17 funding in our case because it's kind of different,
18 because we're funding storage, we're funding energy
19 generation. But imagine if you had a PV panel that was
20 also a battery, so there was no extra storage system.
21 The energy just got collected and stored right in the
22 solar panel, was available 24/7 on demand. And imagine
23 if it actually ended up costing less than a regular PV
24 panel.

25 We do that with our solar thermal modules, and,

1 so, we concentrate and collect sunlight at up to 1000
2 degrees. We store it directly in the module, this high
3 temperature heat. There's no separate receiver needed;
4 no separate storage system needed so the costs are
5 dramatically lower than traditional solar thermal
6 solutions.

7 And our storage material is black sand, which is
8 literally cheaper than dirt in a lot of places and
9 chemically inert.

10 And, so, it's just a completely new paradigm.
11 It's solar with built in storage, and our resolve is
12 that our incremental cost of storage works out to about
13 a dollar per kilowatt hour.

14 And mostly I just wanted to speak so that you
15 would be aware of this new paradigm that sometimes when
16 you do two things in one you can get something that's
17 greater than the sum of the parts.

18 Thank you.

19 CHAIRMAN HOCHSCHILD: Thank you.

20 SECRETARIAT GOLDTHRITTE: Last comment on the
21 line we have Kevin Favro from EV Life.

22 MR. FAVRO: Thank you. Hi, my name is Kevin
23 Favro, K-E-V-I-N, F-A-V-R-O, and I'm a cofounder of EV
24 Life.

25 EV Life began in 2019 with the mission to

1 accelerate the adoption of electric vehicles. Since
2 then we've developed innovative tools and resources on
3 our web platform giving car buyers everything they need
4 to confidently make the switch to an electric vehicle.

5 This CalSEED grant will fund the building of an
6 EV climate loan platform. The EV climate loan aims to
7 lower the monthly cost of an EV by up \$200 a month. By
8 turning someone's post-purchase EV incentives into a
9 down payment we can significantly reduce the overall
10 size of the loan, making the monthly economics of owning
11 an electric car cheaper than owning a gas car.

12 We are honored to have received this CalSEED
13 award and are excited to begin building our incentive-
14 based finance platform that will change the economics of
15 owning an electric car, especially for disadvantaged
16 communities.

17 Thank you.

18 CHAIRMAN HOCHSCHILD: Thank you. Is there any
19 other comments?

20 PUBLIC ADVOCATE GALLARDO: Yes. This is Noemi,
21 the Public Advisor. I have one written comment from
22 Tony Jones. That's spelled T-O-N-Y, J-O-N-E-S. He
23 says:

24 "I wanted to acknowledge that my company,
25 Waterhound Futures, Inc. is honored to receive the

1 California Sustainable Energy Entrepreneur Development
2 Initiative Grant for our project entitled Predictive
3 Modeling and Analytics Performance Optimization
4 Software.”

5 “We appreciate the efforts of CalCEF ventures,
6 part of New Energy Nexus and CEC staff in reviewing the
7 212 applications.”

8 “This grant is a significant recognition of our
9 approach to the problem of industrial and municipal
10 energy consumption in treatment of waste water.”

11 “The fund will allow us to move forward with
12 efforts to demonstrate the software on three real world
13 situations. This type of interaction and feedback is
14 critical for our new concern and we do appreciate the
15 award.”

16 “We look forward to meeting the other recipients
17 and building a strong business community around energy
18 efficiency in the state and elsewhere.”

19 “Again, thanks to the Commission for this award.
20 Should the Commissioners receive feedback and
21 suggestions on who to approach for our demonstrations,
22 we would welcome the referral.”

23 That concludes the written comments.

24 CHAIRMAN HOCHSCHILD: All right. Thank you.
25 Let’s move on to Commission discussion. Vice Chair

1 Scott.

2 VICE CHAIR SCOTT: Yeah, absolutely. So, I'm
3 really excited about this new cohort of CalSEED projects
4 coming your way. I want to say thank you to Eleanor and
5 Josh for their thorough and thoughtful presentation.

6 I actually don't have too much to add to what
7 they laid out for you. I do just want to highlight the
8 really smart design of the EPIC investments. We have
9 programs like this where we're putting \$150,000 into
10 great ideas, and then we have it set up so that you can
11 work all the way through the innovation pipeline and get
12 your technology ready to be pushed out into the market,
13 and, so, I really just am continually impressed by the
14 strategic and smart investment strategy that the EPIC
15 team has put together for people to be able to get your
16 idea from your head out into the market.

17 I think what you have before you is a
18 fascinating set of projects. You heard from a few of
19 the project components in their comments, and also a
20 nice flavor for those in the presentation that Josh --
21 the part of the presentation that Josh did. These, I
22 think, are really cutting-edge types of projects.
23 They're going to move the needle in these spaces and
24 these projects are going to kind of push the
25 technologies and the platforms up to the next level.

1 So, as you all know, I'm always excited to see like
2 what's next, what's next, what comes as these
3 (indiscernible) are wrapping up, and I know these ones
4 are just getting started.

5 If you haven't had a chance to really dig down
6 into all of the projects I highly recommend getting a
7 briefing from the staff or reading through some of the
8 proposals in detail. It really is a neat cohort of
9 projects, and I highly recommend them to you.

10 CHAIRMAN HOCHSCHILD: All right. Thank you,
11 Vice Chair. Any other comments from Commissioners
12 before we move to motion. Okay, seeing -- oh,
13 Commissioner McAllister.

14 COMMISSIONER McALLISTER: Sorry. Who else
15 wanted to go?

16 CHAIRMAN HOCHSCHILD: Go ahead, Commissioner.

17 COMMISSIONER MONAHAN: I'll be after you.

18 COMMISSIONER McALLISTER: Okay. Okay, great. I
19 did actually look at that list of projects and there
20 are, you know, obviously too many to list. There's some
21 great (indiscernible). I really love the power
22 conditioning and sort of the, you know -- we really can
23 in this age, you know, utilize low cost electronics to
24 do all sorts of cool things with power, slide and dice
25 it and it's really tremendous, you know, figurative

1 power that it gives us to increase reliability and
2 leverage renewable and store.

3 So, I'm really excited about a whole bunch of
4 these different projects, and we'll be paying attention
5 to them as they go forward, so thanks to everyone for
6 that.

7 CHAIRMAN HOCHSCHILD: Great. Commissioner
8 Monahan.

9 COMMISSIONER MONAHAN: Yeah, just really
10 briefly. Well, I want to thank Josh, Eleanor and
11 Anthony Enge who gave a great briefing and for all their
12 hard work to get these projects up and running.

13 And I want to thank Vice Chair Scott. A big
14 congratulations, especially on the heels of the EPIC
15 renewal which is just amazing.

16 So, citing further investments that bring
17 together this intersection of transportation, buildings
18 and a clean GRID and, you know, really all moving
19 forward for our 2045 goal of a carbon neutral economy.

20 And I just wanted to -- they did a great job of
21 representing the depth and breadth of those EPICs. You
22 know, all the R&D that we're going to need is just
23 really inspiring, so I just want to, again, thank the
24 full team for the best.

25 CHAIRMAN HOCHSCHILD: Thank you. Commissioner

1 Douglas, did you want to say something?

2 COMMISSIONER DOUGLAS: Yes, just very briefly.

3 I just wanted to add on. This is a really impressive
4 set of projects, and as Commissioner Monahan had noted,
5 the breadth of the subject matter covered here is
6 impressive. It's nice to see EPIC continuing to serve
7 as a catalyst for the development of technologies that
8 are scalable, cost effective and can really make a
9 difference for us.

10 I'm really interested in all of these projects.
11 The one involving the built-in storage, you know, I
12 might want to learn a little more about that. The
13 hydrogen project looks pretty interesting to me, but
14 really all of them.

15 So, I appreciate the hard work that went into
16 this and, you know, it's always hard to wait for the
17 results, but I guess we have to.

18 So, thank you.

19 CHAIRMAN HOCHSCHILD: Well said. Yeah, and I
20 would just add, you know, we know going into this not
21 every one of these companies is going to succeed. That
22 is the nature of the innovation sector, but I think
23 CalSEED is an appropriate name, because when you plant a
24 lot of seeds you have a good chance some of them are
25 going to grow to maturity and really bear a lot of

1 fruit, so I'm really excited by the diversity of
2 projects and the talent that we saw today.

3 I want to thank everybody who has applied to the
4 program, participated in the program and those of you
5 who spoke today, and this certainly has my full support.

6 So, let's see if, Vice Chair Scott, would you be
7 willing to make the motion?

8 VICE CHAIR SCOTT: Yes. I will move approval of
9 Item 5.

10 CHAIRMAN HOCHSCHILD: Okay. And Commissioner
11 Douglas, would you be willing to second?

12 COMMISSIONER DOUGLAS: Second.

13 CHAIRMAN HOCHSCHILD: Okay. Let's go to the
14 vote, all in favor. Vice Chair Scott.

15 VICE CHAIR SCOTT: Aye.

16 CHAIRMAN HOCHSCHILD: Commissioner Douglas.

17 COMMISSIONER DOUGLAS: Aye.

18 CHAIRMAN HOCHSCHILD: Commissioner McAllister.

19 COMMISSIONER McALLISTER: Aye.

20 CHAIRMAN HOCHSCHILD: Commissioner Monahan.

21 COMMISSIONER MONAHAN: Aye.

22 CHAIRMAN HOCHSCHILD: And I vote aye as well.

23 That item passes unanimously. Let's move on to Item 6,
24 The Pechango Band of Luiseno Indians.

25 MS. LUM: Good afternoon, Chair, Vice Chair and

1 Commissioners. I am Quenby Lum from the Energy Research
2 and Development Division.

3 Today I'm presenting on an agreement that was
4 part of the long duration energy storage solicitation
5 where most of the projects were presented at the July
6 8th business meeting.

7 The purpose of the solicitation was to show the
8 value of nonlithium ion energy storage technologies that
9 can provide at least 10 hours of duration. This
10 solicitation was divided into four distinct groups.
11 This project is from the group that focused on
12 demonstrating long duration energy storage systems
13 providing direct benefits to residents of Native
14 American tribes with a minimum power rating of at least
15 50 kilowatts and a minimum duration of 10 hours.

16 Next slide, please.

17 Currently, most of the energy storage available
18 and in use today is designed for four hours to help
19 manage the demand during peak hours, and most of this
20 storage is in the form of lithium ion battery
21 technology.

22 Long duration storage is needed to provide
23 greater resiliency and to store excess renewable energy
24 for later use. Longer duration storage is expected to
25 play an important role for California in reaching its

1 target of 100 percent zero emission electricity by 2045.
2 It can help fill in the gaps to provide a consistent
3 reliable source of energy during public safety power
4 shutoffs when renewable energy is not available in real
5 time and as fossil fuel power plants are phased out of
6 use.

7 Diversity in technology is also needed to avoid
8 potential raw material shortages and production
9 bottlenecks.

10 Next slide, please.

11 This project will be partnering with the
12 Pechanga of Luiseno Indians where they will be
13 demonstrating a 2000-kilowatt hour system using a
14 vanadium redox flow battery from Invinity Energy
15 Systems.

16 In conjunction with onsite solar the system will
17 provide 10 hours or more of backup power to the
18 recreational center and emergency shelter on the
19 Pechanga Reservation located in Temecula.

20 This backup power will allow the facility to
21 remain online during both plan N and planned outages.
22 The storage will also enable daily shifting of solar PV
23 generation from midday to evening, thereby reducing GRID
24 supply electricity during peak hours.

25 The use of storage with onsite solar generation

1 during evening peak hours will reduce electricity costs
2 for the tribe.

3 Next slide, please.

4 Staff recommends approval of this agreement and
5 adoption of staff's determination that this action is
6 exempt from CEQUA.

7 This concludes my presentation and I'm happy to
8 answer any questions. Staff is on the line as well to
9 answer questions if needed. Thank you.

10 CHAIRMAN HOCHSCHILD: Thank you. Let's go to
11 public comment.

12 PUBLIC ADVISOR GALLARDO: This is Noemi
13 Gallardo, the Public Advisor. There are no written or
14 oral comments.

15 CHAIRMAN HOCHSCHILD: Okay. Let's go to
16 Commissioner discussion. Vice Chair Scott.

17 VICE CHAIR SCOTT: Thanks. Here we go. I don't
18 have much to add to the presentation. I also recommend
19 this for your approval as well.

20 CHAIRMAN HOCHSCHILD: Thank you. Any
21 Commissioner comments? Commissioner Douglas, did you
22 want to add anything?

23 COMMISSIONER DOUGLAS: Yeah, just briefly. As
24 the lead Commissioner for the Energy Commission Travel
25 Program I'm always really excited to see tribes

1 participate in Energy Commission programs, and I really
2 appreciate the great work that the EPIC program has done
3 to create really good avenues for tribes to participate
4 and to do outreach to tribes.

5 The Pechanga band of Luiseno Indians was also
6 the sponsor and host -- you know, one of the sponsors
7 and the host of our first Tribal Energy Summit a couple
8 of years ago, so, you know, it's nice to see, you know,
9 then they had aggressive energy goals and they were
10 organizing themselves in the energy arena, and it's nice
11 to see them continuing that track record and moving
12 forward with this -- you know, with this proposal and
13 this program. So, I'm very supportive of this.

14 CHAIRMAN HOCHSCHILD: Okay. Thank you. Any
15 other comments? Hearing none, Vice Chair Scott, would
16 you be willing to make the motion?

17 VICE CHAIR SCOTT: Yes. I move approval of Item
18 6.

19 CHAIRMAN HOCHSCHILD: All right. Commissioner
20 Douglas, would you be willing to second?

21 COMMISSIONER DOUGLAS: Second.

22 CHAIRMAN HOCHSCHILD: All right. All in favor
23 say aye. Vice Chair Scott.

24 VICE CHAIR SCOTT: Aye.

25 CHAIRMAN HOCHSCHILD: Commissioner Douglas.

1 COMMISSIONER DOUGLAS: Aye.

2 CHAIRMAN HOCHSCHILD: Commissioner McAllister.

3 COMMISSIONER McALLISTER: Aye.

4 CHAIRMAN HOCHSCHILD: Commissioner Monahan.

5 COMMISSIONER MONAHAN: Aye.

6 CHAIRMAN HOCHSCHILD: And I vote aye as well.

7 And this does build on a great legacy of our improved
8 and growing engagement with the tribal community in
9 California, including the Blue Lake Rancheria,
10 Montague GRID and others, and, so, I just want to
11 congratulate the staff for all the hard work and the
12 stakeholders as well. I'm looking forward to seeing the
13 results of this one, so --

14 With that, let's move on to Item 7, DOE, NREL.

15 VICE CHAIR SCOTT: Chair, before we start on
16 number seven I need to do a disclosure.

17 CHAIRMAN HOCHSCHILD: Okay, yeah. Sorry, go
18 ahead.

19 VICE CHAIR SCOTT: No problem. So, Chair and
20 Commissioners, I have served on the U.S. Department of
21 Energy Hydrogen and Fuel Cell Technical Advisory
22 Committee, and I have received reimbursements paid by
23 U.S. DOE through the California Energy Commission for my
24 travel and the other expenses related to that to
25 participate on the H-tech. So, pursuant to government

1 code Section 1091.5A9, I am disclosing on the record
2 this reimbursement as a noninterest in this contract
3 amendment.

4 CHAIRMAN HOCHSCHILD: Thank you, Vice Chair
5 Scott. Okay, let's go to staff.

6 MR. BRECHT: Thank you. Good afternoon Chair
7 and Commissioners. I'm Patrick Brecht, Contract Manager
8 for this agreement with the Fuels and Transportation
9 Division, or FTD. I'm here to seek your approval for a
10 proposed Amendment number 5 to the FTD's technical
11 assistance contract with the National Renewable Energy
12 Laboratory or NREL.

13 The CEC has contracted with NREL for technical
14 assistance services totaling approximately five million
15 in Clean Transportation Program funds. The
16 collaboration has been very successful. Many previous
17 tasks are winding down as FTD staff become more capable
18 of in-house analysis.

19 However, NREL's assistance is still needed to
20 expand on certain high-profile tasks and to conduct new
21 tasks that either exceed current staff capabilities or
22 require limited term assistance.

23 Next slide, please.

24 Collaboration between NREL and the CEC will
25 continue to inform and improve multiple CEC programs

1 that benefit all Californians. Such programs include
2 the work done under the Clean Transportation Program,
3 the charging infrastructure assessments required by AB-
4 21-17 of 2018, and the fuel and vehicle forecasts
5 produced for the Integrated Energy Policy Report.

6 Next slide.

7 Staff is requesting to incorporate the following
8 elements into this amendment, Amendment 5 of this
9 contract:

10 First, augment to receive light-duty vehicle
11 attribute forecasts and hydrogen price forecasts for the
12 2121 -- excuse me, 2021 IEPR. In addition to
13 benefitting the development of the IEPR, the resulting
14 vehicle forecast will also support the development of
15 the AB-21-27 charging infrastructure assessment.

16 The hydrogen price forecast will be used to
17 generate light and heavy-duty fuel cell electric vehicle
18 forecasts for the 2021 IEPR. The Fuel Transportation
19 Division will also benefit from the hydrogen price
20 forecast in next year's AB8 report on hydrogen refueling
21 stations.

22 Second would be to augment to include additional
23 EVI pro updates and related activities. This will be to
24 improve EVI pro models to be more realistic and robust,
25 achieves results at a finer geographic resolution to

1 better assess GRID impacts, links the EVI pro models
2 together to leverage the co-utilization of DC fast
3 chargers, optimize the charger network design and
4 conduct more accurate infrastructure and GRID impact
5 analyses, and informs equity goals by better
6 understanding the value of public charging to those
7 without residential charging.

8 Third would be to augment to support new
9 analyses for California Transportation Program benefit
10 support within the 2021 IEPR. Since 2013 NREL has been
11 supporting the program's biennial benefits report with
12 calculations of expected benefits and market
13 transformation benefits.

14 The current contract lists 2019 as the final
15 benefits report addition to be supported by NREL. Under
16 this agreement, or, excuse me, under this amendment
17 staff will be working with NREL to refine the benefits
18 methodology for the 2021, including discussions about
19 the program's transition toward the focus of ZEV
20 infrastructure.

21 Staff is also interested in NREL's support for
22 -- in addressing past programs' excesses for project
23 types where Clean Transportation Program is no longer
24 proposing investments.

25 Fourth, and finally, add a new task titled

1 HyStEP 2 to test hydrogen refueling stations that serve
2 medium duty fuel cell electric vehicles. The current
3 HyStEP tester built in 2015 is outdated. It can only
4 test light duty fueling protocols. Building a brand new
5 HyStEP will allow for light duty and commercial fueling
6 protocols to be incorporated into the new device. New
7 HyStEP will be able to test stations that serve medium-
8 duty fuel cell electric vehicles that use hydrogen as a
9 transportation fuel.

10 Under this agreement -- excuse me, under this
11 amendment the CEC would provide 250,000 for NREL to
12 design and validate a new HyStEP device. Concurrently,
13 the CEC staff will be pursuing a separate 850,000
14 interagency agreement with the California Air Resources
15 Board for a competitive solicitation to develop a new
16 HyStEP device using NREL's design.

17 All together Amendment 5 would increase the
18 agreement's budget by 1.47 million and would require
19 extending the contract term from March 31, 2021 to
20 December 31, 2023.

21 Next slide.

22 Staff recommends approving this amendment which
23 totals, as I said, approximately 1.47 million dollars in
24 Clean Transportation Program technical support funding,
25 and extends the contract term, as mentioned, to

1 December 31, 2023.

2 This concludes my presentation, and I'm happy to
3 answer any questions you may have. I should add that I
4 have Margaret, or Maggie, Mann of NREL. She is
5 available for questions, along with Mark Johnson from
6 the Fuels and Transportation Division's Hydrogen Unit to
7 answer questions regarding HyStEP.

8 Thank you.

9 CHAIRMAN HOCHSCHILD: Thank you. We'll go to
10 public comment. Is there anyone on the line wishing to
11 make a public comment?

12 PUBLIC ADVISOR GALLARDO: This is Noemi, the
13 Public Advisor. We do not have any written comments.
14 As Patrick mentioned, Margaret or Maggie Mann, spelled
15 M-A-N-N, is on the line if you'd like to ask her any
16 questions.

17 CHAIRMAN HOCHSCHILD: Okay. Let's go to
18 Commissioner discussion. If anyone has questions for
19 her, please. Let's start with Commissioner Monahan.

20 COMMISSIONER MONAHAN: As Mr. Scott knows, NREL
21 has been a really key analytical partner for many years
22 with Clean Transportation, and they're doing analysis
23 necessary for our demand forecast and for 2027 analysis
24 in charging and 2030 is for 5 million EVs.

25 The one I want to focus on is the benefits

1 analysis, so, we just met with Maggie and her team this
2 week to talk about the benefits report, and it's going
3 to be really important because it's the last one before
4 the Clean Transportation Program Funding expires at the
5 end of 2023, so, we talked with Maggie and her team
6 about what kind of expanded metrics could be used around
7 benefits to be more responsive to just how complicated
8 it is to give benefits like charging infrastructure and
9 hydrogen infrastructure that we know are going to be
10 critical to reaching our best targets but are hard to
11 like just say, you put in this charger, this is the GHD
12 reduction that you get.

13 It's harder, so I really want to thank Maggie
14 and her team for being willing to wrestle with us and
15 work on different metrics and trying to think through
16 like could we talk about how much time investment is
17 prorating, you know, on top of the public investment to
18 see how the public investment can help spur investments
19 by the private sectors of, you know, utilities and other
20 entities. So, also really being attendant to the needs
21 of disadvantaged and low-income cases and the fact that
22 our funding has to support electrification for all, not
23 just electrification for the wealthy, so I just am
24 excited to work with NREL and their team as we think
25 about a more expanded set of metrics to articulate the

1 benefits in the Clean Transportation Program.

2 CHAIRMAN HOCHSCHILD: Thank you. Are there any
3 other Commissioners wishing to make a comment? Seeing
4 none, let's see if Commissioner Monahan, will you be
5 willing to make the motion?

6 COMMISSIONER MONAHAN: I move to approve Item 7.

7 CHAIRMAN HOCHSCHILD: Okay. Commissioner
8 McAllister, would you be willing to second?

9 COMMISSIONER McALLISTER: Sure. Second Item 7.

10 CHAIRMAN HOCHSCHILD: Thank you. Let's take the
11 vote. All in favor say aye. Commissioner Monahan.

12 COMMISSIONER MONAHAN: Aye.

13 CHAIRMAN HOCHSCHILD: Commissioner McAllister.

14 COMMISSIONER McALLISTER: Aye.

15 CHAIRMAN HOCHSCHILD: Commissioner Douglas.

16 COMMISSIONER DOUGLAS: Aye.

17 CHAIRMAN HOCHSCHILD: And Vice Chair Scott, you
18 were just disclosing; you were not recusing, correct?

19 VICE CHAIR SCOTT: Correct.

20 CHAIRMAN HOCHSCHILD: Okay, so, Vice Chair
21 Scott.

22 VICE CHAIR SCOTT: I also vote aye.

23 CHAIRMAN HOCHSCHILD: Okay. And I vote aye as
24 well. That item passes unanimously.

25 Colleagues, it's now 12:25. We still have quite

1 a bit to go in this. What I would suggest is that we
2 take a break for lunch and reconvene at 1:00 o'clock.
3 Would that be acceptable for everybody?

4 PUBLIC ADVISOR GALLARDO: Yes.

5 CHAIRMAN HOCHSCHILD: And we'll take Item 8 at
6 1:00 o'clock. So, let's just leave our Zoom on and is
7 that okay, Noemi?

8 PUBLIC ADVISOR GALLARDO: Yes, that's
9 acceptable, and we'll put on a slide indicating that
10 we're taking a break and returning at 1:00 p.m.

11 CHAIRMAN HOCHSCHILD: Thanks, everybody. See
12 you at 1:00.

13 (Off the record at 12:25 p.m.)

14 (On the record at 1:01 p.m.)

15 CHAIR HOCHSCHILD: Okay. Welcome back,
16 everyone. Let's reconvene the meeting and move on to
17 Item 8, Foundation for California Community Colleges.

18 MR. RILLERA: Good afternoon, Chair and
19 Commissioners.

20 My name is Larry Rillera, staff with the Fields
21 and Transportation Division. I am here to present Item
22 Number 8. This item is a proposed \$300,000 agreement
23 with the Foundation for California Community Colleges,
24 or Foundation, and funded through the Clean
25 Transportation Program. As described by Patrick Brecht

1 in his presentation of Item Number 1, the Clean
2 Transportation Program targets investment in the
3 development, deployment, and scaling of zero emission
4 vehicles, ZEV, infrastructure.

5 Today's approved investment plan explicitly
6 calls out the need for inclusion of equity committees
7 into the program's incentives, solicitations, and
8 partnerships. This focus was also expressed by members
9 of the program's advisory committee, as well as the
10 Disadvantage Advisory -- excuse me, Disadvantage
11 Communities Advisory Group.

12 Next slide, please.

13 The benefits of the project include exclusive
14 focus on disadvantaged and low-income communities and
15 specified regions; building local capacity for informing
16 and participating in clean transportation program
17 funding opportunities; and thirdly, increasing the CEC's
18 understanding of communities' needs regarding zero
19 emission transportation.

20 The next slide, please.

21 The agreement proposed for approval today, the
22 IDEAL Communities Partnership Project, IDEAL standing
23 for inclusion, diversity, equity, access, and local,
24 reflects the direction noted previously to expand,
25 partner, and intentionally embed equity into the Clean

1 Transportation Program. The agreement with the
2 Foundation proposes these activities, as noted here,
3 through the Foundation's existing networks and
4 institution.

5 The agreement requires the Foundation to develop
6 an assessment of the Clean Transportation Program and
7 equity communities, conduct outreach and engagement,
8 establish a student ambassador program with community
9 members from rural and unincorporated areas, make
10 recommendations for Clean Transportation Program
11 technical assistance, and conduct a community forum in
12 which project participants, community stakeholders, and
13 community-based organizations can convey their findings
14 and recommendations directly to the Energy Commission.

15 Next slide, please.

16 In closing, staff recommends approval of this
17 agreement with the Foundation for California Community
18 Colleges for \$300,000, and approval of staff's
19 determination that the project is exempt from CEQA.

20 This concludes my presentation. I would note
21 that a representative from the Foundation is present to
22 provide any remarks and any questions.

23 Thank you for consideration of this item.

24 CHAIR HOCHSCHILD: Thank you. Let's move to
25 public comment.

1 MS. GALLARDO: This is Noemi Gallardo, the
2 public advisor. We do not have any written comments but
3 we do have Leah Abate on the line.

4 Leah, before you begin speaking, please spell
5 your first and last name, and indicate your affiliation,
6 if any.

7 MS. ABATE: Good afternoon, Chair, Vice Chair,
8 and Commissioners.

9 My name is Leah Abate. L-E-A-H; Abate,
10 A-B-A-T-E. With the Foundation for California Community
11 Colleges, or Foundation CCC. Thank you to Mr. Rillera
12 for your introduction and partnership.

13 The Foundation CCC has served as the auxiliary
14 nonprofit supporting the California Community Colleges
15 Chancellor's Office and Board of Governor, which serves
16 2.2 million students and is the largest system of public
17 higher education in the nation. Over 67 percent of
18 enrolled students are of diverse ethnic backgrounds and
19 many campuses are located within disadvantaged and low-
20 income communities.

21 The Community Impact and Equity Departments
22 conduct outreach programs and awareness campaigns that
23 help build a just and equitable California. We're
24 currently in our fourth year working with the California
25 Air Resources Board on outreach for California Climate

1 Investments Program, which is included in person and
2 digital outreach to potential and current program
3 beneficiaries, creating collateral materials, and
4 helping state agencies expand their network
5 (indiscernible) related to environmental equity.

6 In addition, we are involved in the One-Stop-
7 Shop Project administered by CARB and have years of
8 experience as case managers for clean mobility programs
9 like Replace Your Ride, also known as Clean Cars for
10 All.

11 We also manage multiple student and master
12 programs to really engage students at the community
13 colleges to raise awareness, help their peers, families,
14 and communities access resources and programs related to
15 clean mobility, environmental equity, mental health and
16 wellness, and public benefits like CalFresh.

17 We're thrilled to work with the California
18 Energy Commission on the IDEAL Communities Partnership
19 to identify community needs, enhance communication,
20 build mutual capacity, and assist applicants through the
21 program through outreach and engagement and technical
22 assistance. We aim to build a strong foundation upon
23 which equity and community engagement efforts will
24 continue to thrive once transitioned back to
25 Mr. Rillera's team and the Clean Transportation Program.

1 Thank you for your consideration of this
2 partnership.

3 CHAIR HOCHSCHILD: Thank you. Are there any
4 other comments, Noemi?

5 MS. GALLARDO: No other comments.

6 CHAIR HOCHSCHILD: Okay. Let's move to
7 Commissioner discussion.

8 Commissioner Monahan?

9 COMMISSIONER MONAHAN: Well, first I want to
10 thank Larry, he's been really such an amazing advocate
11 for equity and workforce development for many years on
12 the Field and Transportation Division.

13 And I think you all know, this isn't a surprise,
14 equity communities are disproportionately impacted by
15 pollution and we're really working hard to make sure
16 that they can be informed of the programs and that we
17 can be informed of community needs. So this is really
18 like a two-way communications street. And that really,
19 I think, builds on the Clean Transportation Program's
20 investment plan, that you all just approved. Thank you.
21 So, yeah, I strongly support this program.

22 CHAIR HOCHSCHILD: Great. Thank you.

23 Any other Commissioner comments on this?

24 Seeing --

25 VICE CHAIR SCOTT: I'll make a quick comment on

1 this.

2 CHAIR HOCHSCHILD: Yes. Go ahead.

3 COMMISSIONER SCOTT: This is Vice Chair Scott.
4 I really like this part of the flexibility that we have
5 within the Clean Transportation Program to help work
6 with community colleges and support the types of
7 curriculum that then supports folks who can come and
8 have living wage jobs in this clean energy transition,
9 right? So we've done it with the ports on some of the
10 work they've got, work together with the community
11 colleges to make sure folks can use some of the cleaner
12 port equipment. And so I really do strongly support
13 this. It's one of the components of the Clean
14 Transportation Program that I love a lot, being able
15 to -- to train that workforce so that they can work on
16 all of these cool clean energy technologies.

17 CHAIR HOCHSCHILD: Thank you, Vice Chair.

18 Unless there's other Commissioner comments,
19 Commissioner Monahan, would you be willing to make the
20 motion?

21 COMMISSIONER MONAHAN: I move to approve this
22 item.

23 CHAIR HOCHSCHILD: And Vice Chair Scott, would
24 you be willing to second?

25 VICE CHAIR SCOTT: Yes, I second.

1 CHAIR HOCHSCHILD: Okay. All in favor say aye.
2 Commissioner Monahan.
3 COMMISSIONER MONAHAN: Aye.
4 CHAIR HOCHSCHILD: Vice Chair Scott.
5 VICE CHAIR SCOTT: Aye.
6 CHAIR HOCHSCHILD: Commissioner Douglas.
7 COMMISSIONER DOUGLAS: Aye.
8 CHAIR HOCHSCHILD: Commissioner McAllister.
9 COMMISSIONER MCALLISTER: Aye.
10 CHAIR HOCHSCHILD: And I vote aye as well.
11 Congratulations to all those involved with this. That
12 item passes unanimously.
13 Let's move onto Item 9, local ordinance
14 applications for the City of Burlingame.
15 MS. DROZDOWICZ: Good afternoon, Chair and
16 Commissioners.
17 I am Danuta Drozdowicz, I work in the Efficiency
18 Divisions Building Standards Office and I am here to
19 present local ordinances from jurisdictions that have
20 applied to the CEC for approval. Joining me today is
21 Jacqueline Moore from Chief Counsel's Office.
22 Next slide, please.
23 Local ordinances, or REACH codes, benefit
24 California by giving local jurisdictions the opportunity
25 to participate and even lead in the state's effort to

1 address climate change.

2 Next slide, please.

3 For a local standard to be enforceable, the
4 jurisdiction must file with the CEC its determination of
5 its standards are cost effective. The CEC must then
6 find that the local standards will require a reduction
7 of energy consumption levels compared to the current
8 statewide energy code.

9 Next slide, please.

10 To date, under this code cycle, 30 ordinances
11 from 28 jurisdictions have been submitted and approved
12 by the CEC. One in three Californians currently live in
13 a community with an energy code that exceeds state
14 standards.

15 Next slide, please.

16 One jurisdiction has applied for Commission
17 consideration at this business meeting, the City of
18 Burlingame. Their application includes three
19 ordinances.

20 Next slide, please.

21 Staff posted the complete application including
22 the local ordinances and adopted cost effective analysis
23 on the CEC's website, under Docket Number 19-BSTD-06 for
24 the required public comment period. Staff reviewed the
25 applications to determine if these local ordinance

1 standards would result in the reduction of the energy
2 consumption levels permitted by the 2019 energy code,
3 per the requirements in the public resources code.

4 Staff finds that the standards will reduce the
5 amount of energy consumed and will not lead to increases
6 in energy consumption in consistent with state law.

7 Staff further confirms that the jurisdiction
8 publicly adopted a finding of cost effectiveness for the
9 standards. Because staff has found that the application
10 meets all the requirements of the public resources code,
11 staff recommends approval enforcement of the three
12 following ordinances.

13 Next slide, please.

14 Ordinance Number 1979 applies to new single-
15 family construction and requires that these homes, as
16 well as substantial additions and improvements, are all
17 electric. Gas cooking appliances and fireplaces are
18 omitted. Exemptions are allowed for old electric
19 buildings not feasible and for gases installed,
20 rewiring for electric equipment and appliances is
21 required.

22 Next slide, please.

23 Ordinance Number 1980 applies to new multifamily
24 construction and requires that these buildings are all
25 electric. Exemptions are allowed for all electric

1 buildings not feasible. Prewiring for electric
2 equipment and appliances is required for gases
3 installed. And photovoltaic, or solar thermal hot water
4 systems, are required with some exemptions allowed.

5 Next slide, please.

6 Ordinance Number 1981 applies to new
7 nonresidential construction and requires that these
8 buildings are all electric. Gas cooking appliances are
9 permitted in public or commercial kitchens. Exemptions
10 are allowed where all electric buildings are not
11 feasible and prewiring for electric equipment and
12 appliances is required for gases installed.
13 Photovoltaic, or thermal hot water systems, are required
14 and some exemptions allowed.

15 Energy related, but not subject to CEC approval,
16 all three ordinances also include provisions for
17 electric vehicle charging infrastructure.

18 This concludes my presentation and I am
19 available to answer any questions that you may have.

20 CHAIR HOCHSCHILD: Thank you. Let's move on to
21 public comment.

22 MS. GALLARDO: We do have people on the line.
23 I'm going to give the reminder to the speakers now that
24 they spell out their first and last names and also
25 indicate affiliation, if any. And I will defer to Cody,

1 our secretariat, to announce the speakers.

2 MR. GOLDTHRITE: We have Ben Thompson from
3 Peralta Energy, LLC.

4 MR. THOMPSON: Hi. Good afternoon. My name is
5 Ben, B-E-N; Thompson, T-H-O-M-P-S-O-N, with Peralta
6 Energy. We work with providers of affordable housing to
7 meet building energy code and to qualify for state tax
8 credits and tax-exempt bonds.

9 I'm speaking today in favor of adoption of the
10 Burlingame REACH code. And applaud the city for
11 adopting the ordinance and for showing leadership in
12 this area. I'm also speaking more generally in favor of
13 a single all-electric baseline in the 2022 code cycle.
14 We know that single fuel buildings are cheaper to build.
15 We know that all electric buildings are better for
16 occupant health and safety. And it's time to give
17 developers and builders clear direction and incentive to
18 go all electric, without further delay, across the
19 state.

20 If we go through another code cycle with gas
21 installed in new buildings, we're simply making the
22 inevitable retrofit problem bigger and dumping more GHCs
23 into the atmosphere and the oceans. You will be told to
24 let the market decide, that government should not pick
25 winners and losers. As we all know, there are

1 tremendous costs associated with natural gas that are
2 not on the ballot sheets and I think it's appropriate
3 for you to step in and set guidelines when the market's
4 distorted by gross externalized costs. You will also be
5 accused again of waging a war on gas, but this is just
6 to skirmish the actual wars for the future of our
7 planet.

8 Thank you very much.

9 CHAIR HOCHSCHILD: Thank you.

10 MR. GOLDTHRITE: So next we have Eric Arens from
11 the League of Women's Voters of California.

12 MR. ARENS: Yeah, hi. I am Eric Arens, and I
13 would like to say that the League of California is very
14 concerned about global warming and the League strongly
15 supports electrifying buildings. And that means
16 electrifying all new buildings now or as soon as
17 possible. Electrifying all buildings in a few years
18 from now.

19 And we can't put this off because the forest
20 fires and hurricanes are growing in number and
21 intensity. And so all the details that have been said
22 by other people. But the League of Women Voters of
23 California, and I might add also of the United States,
24 is very concerned about global warming.

25 Thank you.

1 CHAIR HOCHSCHILD: Thank you.

2 MR. GOLDTHRITE: Next we have Lauren Cullum from
3 the Sierra Club of California.

4 MS. CULLUM: Hi. Can you hear me?

5 CHAIR HOCHSCHILD: Yes.

6 MS. CULLUM: Hi. Good Afternoon, Chair and
7 Commissioners.

8 Lauren Cullum, L-A-U-R-E-N, C-U-L-L-U-M, with
9 Sierra Club California, representing 13 local chapters
10 in California and half of million members and supporters
11 throughout the state. I am speaking today to express
12 our strong support for the Energy Commission's approval
13 of the Burlingame ordinance before the Commission today.

14 This local democratic process is leading the way
15 for the state to implement decarbonization pollution
16 that are critical to combat climate change, reduce air
17 pollution, and improve housing and energy affordability.
18 All electric buildings are necessary to achieve a
19 cleaner, healthier, safer California which is why we
20 support the Commission's approval of REACH codes and
21 encourage all electric construction, as well as support
22 an all-electric baseline in the 2022 code.

23 The evidence of rapid climate change is
24 abundantly clear and it is devastating. We need our
25 state leaders to establish policies that reflect the

1 urgency of the climate crisis. It is simply not
2 possible for us to hit our climate targets while
3 continuing to burn gas in our homes. Gas appliances are
4 responsible for 50 million tons of greenhouse gas
5 pollution each year. This is why we need more all-
6 electric buildings and why moving to an all-electric
7 baseline across building types in the 2022 code is
8 critical. Postponing electrification for three more
9 years until the 2025 code cycle will lock us into
10 decades of climate pollution.

11 At current emission rates, a three-year delay
12 will result in over 4 million additional metric tons of
13 carbon emissions by 2030, and cause California more than
14 \$1 billion in unnecessary gas infrastructure. We cannot
15 afford this.

16 An all-electric baseline in the 2022 code will
17 ensure that any new homes that are built with gas after
18 2022, are held to the same greenhouse gas limits as the
19 efficient electrical alternative and help us achieve our
20 climate targets. Fossil fuel free homes and buildings
21 are already becoming standard in California with local
22 ordinances such as the one before the Commission today.
23 Cities representing nearly 10 percent of the state's
24 population have committed to gas-free new construction,
25 with more cities joining all the time. And we need for

1 the Commission to build on this and extend these
2 measures statewide to an all-electric baseline in the
3 2022 code.

4 Again, Sierra Club urges the Commission to join
5 local leaders and get polluting fossil fuels out of
6 California's homes and buildings. We urge the CEC to
7 commit to prioritizing the health of Californians and
8 put the state on a determined path to achieve its
9 climate goals by committing to an all-electric baseline
10 for the 2022 code.

11 Thank you so much for the opportunity to provide
12 these comments at this time.

13 CHAIR HOCHSCHILD: Thank you.

14 MR. GOLDTHRITE: Next we have Sven Thesen from
15 Project Green Home.

16 MR. THESEN: Good afternoon, Sven Thesen. I am
17 hoping you can hear me. Would someone please confirm?

18 CHAIR HOCHSCHILD: Yes. We can hear you fine,
19 Sven.

20 MR. THESEN: Splendid. Thank you. So, I am
21 calling on behalf of Project Green Home, my wife, my
22 children, and my children to come.

23 First of all, I would like to invite you to tour
24 Project Green Home. It's an all-electric home that was
25 designed and engineered in 2008 and finished in 2011.

1 We've been living, my family, have been living the all-
2 electric lifestyle for the last nine years, and we've
3 had over 4,000 people tour the home so far. And again,
4 I would like you guys to come and see what living the
5 all-electric life is like. Because it's more
6 convenient. It's more comfortable. And total cost of
7 ownership, it's cheaper.

8 There are five important things about the all-
9 electric home that I would like to bring up and it
10 applies to multiunit dwellings as well as single-family
11 dwellings.

12 One, it's safer. It's safer because it has an
13 induction stove for my children so they don't burn
14 themselves and we don't generate excess heat from
15 natural gas, the combustion of natural gas in the
16 summertime.

17 Second, the air quality in the home, because
18 there is no live flame, is much better. You've seen the
19 graphs before that talk about carbon monoxide and
20 unburnt or partly combustive hydrocarbons from natural
21 gas. Spike in air quality in the home directly related
22 to natural gas combustion. Too, it would have been
23 cheaper had I listened to my architect. Back in 2008
24 and '09 when we were engineering the home, I didn't know
25 about induction stoves. I didn't know about heat pumps.

1 I didn't know about condensing to wires. They all work,
2 as we learned later. But I had the house plumbed for
3 natural gas. And we were connected to natural gas. And
4 in 2013, I disconnected from natural gas because we
5 never used it. I had put the system in as a safety. We
6 didn't need it. And that was nine years ago.

7 It's more resilient during blackouts and
8 earthquakes because it only runs on electricity and
9 should Palo Alto have a blackout, it would be very easy
10 connect batteries to my solar system. If I connected
11 batteries, say a 20 kilowatt hour system to my house
12 right now, I wouldn't need to take any energy off the
13 grid from literally April to October.

14 Again, I've talked about how much more pleasant
15 and convenient the home is. And finally, and this is
16 the part about the children, my children's children, and
17 your children's children, is that the home has a much
18 lower carbon and much lower energy footprint than the
19 conventional or equivalent dual fuel home. And this is
20 important.

21 Given the climate crisis, given the incredibly
22 poor air quality we have just experienced, we really
23 need to go this way to all electric. It's critical.
24 When I think about the sort of story from a movie
25 perspective, to me it's clear. There are heroes and

1 there are villains out there. And the villains aren't
2 really bad people. They're just being told by their
3 companies what to do and they are being told that it's
4 not as bad it is. It's bad. And they're --

5 MS. GALLARDO: This is Noemi, the public
6 advisor. Sorry to interrupt you but your time is up and
7 I want to be fair to everyone else on the line. Could
8 you please spell your name before you hop off?

9 MR. THESEN: Okay. First name is Sven, S-V-E-N.
10 Last name Thesen, T-H-E-S-E-N. And it's Project Green
11 Home.org. Pin me and come tour. Thanks, cheerio.

12 MS. GALLARDO: Thank you.

13 MR. GOLDTHRITE: Next we have Jonny Kocher from
14 the Rocky Mountain Institute.

15 MR. KOCHER: Hello, can you hear me?

16 MS. GALLARDO: Yes, we can.

17 MR. KOCHER: Hello, can you hear me? Yep?
18 Okay.

19 MS. GALLARDO: Yes.

20 MR. KOCHER: Good afternoon and thank you for
21 the opportunity to comment. My name is Jonny Kocher,
22 J-O-N-N-Y, K-O-C-H-E-R. And I work in the Oakland
23 office of Rocky Mountain Institute, an independent
24 nonprofit working to shift towards the world carbon
25 future.

1 In the certification ordinance that of our
2 local government -- the last certification ordinances
3 that our local governments have passed this year shows
4 the exact type of leadership we need during this unique
5 time in history. These ordinances not only reduce
6 emissions but also create a cleaner, safer, healthier
7 communities. The CEC has also shown great leadership to
8 date to address the California's climate and air quality
9 issues, including approving over 30 local REACH codes
10 and ordinances.

11 The next step in leadership would be to help
12 usher in a statewide electrification by adopting a
13 single all-electric baseline in the 2022 code cycle.
14 California doesn't have a plan to reduce buildings
15 sector emissions and that is part of the reason why we
16 are on track -- we are not on track to meet our 2030
17 emissions goals. California strives to be a climate
18 leader but it's also adding more gas customers than any
19 other state.

20 A recent report by E3 produced by the California
21 Air Resources Board suggests that building
22 electrification is the least regrets option for
23 achieving our economy-wide goal of carbon neutrality by
24 2045. In all scenarios, in this report at least two-
25 thirds of all homes are required to be all -- to have

1 all electric heating by 2045.

2 If we want to reach -- if we want to meet our
3 state's climate goals, we need the CEC to act on the
4 results of this report and jumpstart the shift towards
5 all electric building statewide. If we wait until 2025
6 to pass an all-electric code, many buildings won't go
7 into operational under that code until 2028 and 2029.
8 How are we possibly going to reach our decarbonization
9 goals as described in this report if we delay another
10 three years?

11 If we continue to build and make fuel buildings,
12 we are locking in more carbon emissions and increasing
13 (indiscernible) risks. If we wait until 2025, we lock
14 in six more years of carbon emitting buildings and emit
15 several million tons of emissions by 2030. That can be
16 avoided now. We spend a billion dollars on new gas
17 structure and we leave ratepayers to bear hundreds of
18 millions of dollars (indiscernible) costs.

19 These don't include the great costs to our
20 health and our planet. You'd also be exposing
21 Californians to the health risk of gas pollution
22 including increased asthma. 1 in 8 Californians already
23 has asthma and that correlation is higher in low-income
24 communities and communities of color. Let's not
25 increase that number.

1 Beyond approving City of Burlingame's REACH
2 code as assessed today, I ask the California Energy
3 Commission to adopt a single all-electric baseline in
4 the 2022 code cycle for all cities statewide. I'm
5 confident with the CEC's leadership on building
6 electrification, that we will have a cleaner and
7 healthier California.

8 Thank you for your time and consideration.

9 MR. GOLDTHRITE: Last caller on the line, we
10 have Freya Chay.

11 MS. CHAY: Can you hear me?

12 MS. GALLARDO: Yes, we can.

13 MS. CHAY: Great. My name is Freya Chay,
14 F-R-E-Y-A, C-H-A-Y. I recently finished a master's
15 program at Stanford University and hope to spend my
16 career promoting decarbonization and a just clean energy
17 transition.

18 I would love to build on -- on Jonny's comments.
19 First of all, thank you for your leadership and for
20 approving past REACH codes. And I urge you to continue
21 on and approve Burlingame's REACH code today. Beyond
22 that, I will echo all the commenters before me in
23 desires to see the CEC's leadership by adopting all of
24 the (indiscernible) in the 2022 code cycle.

25 For me, the simplest argument really is to zoom

1 out to a national scale. The 1.5 degree target required
2 near 100 percent electrified substitution in the
3 building in transportation sectors starting in five
4 years or else our window is gone. The scale and speed
5 of the transition needed I think really will rely on
6 standards and intelligence support such that all
7 Californians and all United States citizens can
8 participate in that transition.

9 This is the CEC's opportunity to rise to that
10 scale and speed and the example already set by
11 California communities pursuing REACH codes.

12 So I -- I anticipate your continued leadership.
13 And thank you for your time.

14 MR. GOLDTHRITTE: We have one more. We have --

15 MS. GALLARDO: I have --

16 MR. GOLDTHRITTE: Sorry. We have Alice Sung with
17 Greenbank Associates.

18 MS. SUNG: Yes, hello, good afternoon. Can you
19 hear me?

20 CHAIR HOCHSCHILD: Yeah, we hear you fine.

21 MS. GALLARDO: Yes, we can.

22 MS. SUNG: Thank you so much. I'm Alice Sung,
23 A-L-I-C-E, S-U-N-G, with Greenbank Associates. I am an
24 individual climate advocate for public schools.

25 I'd like to commend the Commission for having

1 these hearings and holding true public comment on the
2 all-electric baseline. I'm here to support the all-
3 electric baseline not just for residential but in
4 particular for public sector commercial properties. And
5 that in particular will be our public schools all across
6 the state.

7 As everyone knows or maybe not everyone knows,
8 REACH codes are great but in fact, they don't apply to
9 our public school districts. They are separate local
10 educational agencies that are under a different
11 jurisdiction; in fact, the Division of State Architect.
12 So what we need now is a titling for it and the code
13 that actually applies to public schools.

14 So this community, as you know, is over a
15 thousand public school districts, over 6.3 million
16 diverse school-aged children. And over half of those,
17 3.6 million qualify for free reduced price lunch
18 eligibility. And those are the districts that are in
19 areas that are most disadvantaged with most low-income
20 children and that are most impacted from health
21 consequences from both indoor and outdoor air pollution.

22 So this community represents over 10,000 school
23 sites in all 58 counties. And they're all estimated
24 that two-thirds of them that are greater than 25 years
25 old, the recent Government Accountability Office report

1 says that 50 percent of all school districts across the
2 nation require HVAC systems upgrades. Seventy-five --
3 70 percent, excuse me, of these are gas-fired HVAC
4 heating, cooking systems in California.

5 And we know that CARB has estimated the natural
6 gas use as of 2018 as an annual about 428,000 tons of CO₂
7 per year. If you multiple that over the next decade,
8 that's 4.3 million tons of possible avoided gas
9 emissions from gas over our existing buildings. In
10 fact, does not include the new buildings to be upgraded
11 or installed in the years to come.

12 So for this reason, I urge you not to -- not to
13 leave behind public school districts as we move to
14 electrify and decarbonize our residential sector and
15 other buildings across the state for the following
16 reasons. To reduce utility expenses and increase
17 funding to general education funds. To increase health
18 and the health of our children, the most vulnerable
19 population, to better (indiscernible) and better --

20 CHAIR HOCHSCHILD: Thank you. Unfortunately, we
21 have to stop you there.

22 Next speaker, please.

23 MS. SUNG: Sure. I -- for all the same reasons
24 that they're good for residential population, they're
25 the same for school population and even more.

1 Thank you for this opportunity.

2 CHAIR HOCHSCHILD: Thank you.

3 MR. GOLDTHRITE: That's the last one on the
4 line.

5 CHAIR HOCHSCHILD: Okay. Let's move to --

6 MS. GALLARDO: I have --

7 CHAIR HOCHSCHILD: Oh, did you have written --
8 some written comments, Noemi?

9 MS. GALLARDO: I do. A short one, yes.

10 I have a comment from Kimberly Burr, that's
11 spelled K-I-M-B-E-R-L-Y, B-U-R-R. She's with public --
12 she's a public interest environmental lawyer and
13 restoration volunteer with Green Valley Creek
14 Forestville, Sonoma County.

15 She says, I support the approval of Item 9. I
16 believe going in direction of all electrification versus
17 more gas infrastructure is critically important at the
18 local level such as Burlingame and at the state level
19 and hopes CEC embraces this strategy.

20 That concludes the written comment.

21 CHAIR HOCHSCHILD: Thank you. Let's move to
22 commissioner discussion.

23 Commissioner McAllister.

24 COMMISSIONER MCALLISTER: Yeah, great. Well,
25 first of all, I want to thank everybody for -- for your

1 comments, your extensive comments and thoughtfulness on
2 this.

3 I guess I would just sort of play schoolmarm a
4 little bit here just at the outset. You know, at least
5 one of the comments didn't even mention the item that
6 we're actually voting on. So went straight to the all-
7 electric baseline. So that's fine. More appropriately,
8 if it's not going to address, you know, if the comment
9 does not address the item we're actually voting on, it
10 would be more appropriate in the public comment at the
11 end of the meeting.

12 So I want to -- so just say, you know, kudos for
13 Burlingame for working through the process and, you
14 know, bringing us this -- their finding, their cost
15 effectiveness, and their proposal for REACH code and
16 staff check the boxes in terms of showing that it does
17 actually improve the energy performance, the efficiency
18 of those buildings and so support this item.

19 I did want to take the opportunity just very
20 briefly to, you know, point out that our decarbonization
21 goals actually have a lot of different facets and
22 different timelines for different parts of the economy,
23 different sectors. And so I wanted to just point to,
24 you know, the commenters of this meeting and previous
25 meetings for around the local ordinances. And I think

1 people have characterized them in their leadership role
2 appropriately in general.

3 But commend you to look at some other platforms,
4 then, within Title 24 for your comments as well. In
5 particular, the Assembly Bill 3232 Building
6 Decarbonization Plan, someone mentioned there is no
7 plan. Well, that plan is required of us, actually,
8 under that piece of legislation. And Energy Efficiency
9 Division staff are working on that and they need to get
10 a draft out by the end of the year. So that is the
11 decarbonization plan for California's buildings will
12 include new construction and existing buildings.

13 We're going to follow that conversation in the
14 Integrated Energy Policy Report next year in 2021. And
15 so that, again, more -- a much more integrated
16 conversation about our building and decarbonization of
17 our buildings in order to really make sure that they
18 help us meet our interim goals and our long-term goal by
19 2045 if not before. So.

20 So those are a couple of platforms that I think
21 really do lend themselves to a wide range of discussion
22 about the technologies and the market trajectories and
23 the -- all the different levers that we have to pull in
24 not just in this Commission but across the state
25 agencies. You know, as we've heard, there are a number

1 of agencies involved in this, including ARB, and the
2 Division of State Architect, et cetera.

3 So I want to just make sure people have the
4 broad view so that they cannot just -- and build
5 comments around the local ordinances but also
6 participate in the other platforms and the other
7 rulemakings that are going to create the tools for us to
8 shift marketplaces, you know, aggressively towards
9 decarbonization.

10 So with that, I think -- then I'll just invite
11 you to get in touch with Noemi Gallardo, our public
12 advisor if you need connection with those proceedings or
13 directly with the Efficiency Division staff working on
14 the AB 3232 report. And so the public advisor can help
15 connect you with those -- with those staff. And so want
16 to get on those service lists and make sure that you see
17 those opportunities come up to chime in on, you know, as
18 appropriate because your comments will be valuable there
19 as well.

20 So with that, I support the Burlingame overall
21 proposal with all its three elements. I think it's --
22 I'll be really interested, I'll say, in seeing how the
23 exemption processes that they're going to put in place
24 kind of pan out and how that looks, you know, in terms
25 of the specific sort of building subsectors and types of

1 situations that they're going to work through in the
2 course of receiving applications to build under the new
3 ordinance.

4 So with that, I'll move Item 9.

5 CHAIR HOCHSCHILD: Let me just first see if
6 there are other comments from my colleagues on Item 9?

7 Hearing none, Commissioner McAllister has made a
8 motion. Is there a second?

9 Commissioner Douglas, do you want to second
10 that?

11 COMMISSIONER DOUGLAS: Yes, second.

12 CHAIR HOCHSCHILD: Okay. Let's take the roll.
13 All in favor, Commissioner McAllister?

14 COMMISSIONER MCALLISTER: Aye.

15 CHAIR HOCHSCHILD: Commissioner Douglas?

16 COMMISSIONER DOUGLAS: Aye.

17 CHAIR HOCHSCHILD: Vice Chair Scott?

18 VICE CHAIR SCOTT: Aye.

19 CHAIR HOCHSCHILD: Commissioner Monahan?

20 COMMISSIONER MONAHAN: Aye.

21 CHAIR HOCHSCHILD: And I vote aye as well.

22 So congratulations to Burlingame. Let me just
23 reiterate, I do really want to highlight how important
24 the leadership of local cities and counties is on our
25 decarbonization efforts. A lot of the path breaking

1 policies we're seeing not just in this case but over the
2 years is now over 100 local ordinances that we have
3 approved to get out ahead of state code over the last 20
4 years. And really have been incredibly pioneering. So
5 thank you for your leadership at the local level.

6 Let's turn now to Item 10, approval of the
7 business meeting minutes.

8 Any comments on this -- any public comments on
9 this, Noemi?

10 MS. GALLARDO: This is Noemi, the public
11 advisor. No comments.

12 CHAIR HOCHSCHILD: Okay. Unless there's
13 comments from the Commissioners, I'd entertain a motion.

14 Commissioner Douglas, would you be willing to
15 move that? The -- finding the unmute button is such --

16 COMMISSIONER DOUGLAS: Yeah, you know, my --
17 occasionally, the window shifts on me, then I have to
18 reopen the window and then find the unmute button.

19 So, yes, so moved.

20 CHAIR HOCHSCHILD: Thank you for moving that.

21 Vice Chair Scott, would you be willing to second
22 that?

23 VICE CHAIR SCOTT: Yes, I second it.

24 CHAIR HOCHSCHILD: Okay. All in favor of
25 approving the minutes, say aye.

1 Vice Chair Scott.
2 VICE CHAIR SCOTT: Aye.
3 CHAIR HOCHSCHILD: Commissioner Douglas.
4 COMMISSIONER DOUGLAS: Aye.
5 CHAIR HOCHSCHILD: Commissioner McAllister.
6 COMMISSIONER MCALLISTER: Aye.
7 CHAIR HOCHSCHILD: Commissioner Monahan.
8 COMMISSIONER MONAHAN: Aye.
9 CHAIR HOCHSCHILD: I vote aye as well. That
10 item passes unanimously.

11 Let's move on to Item 11, Lead Commissioner
12 presiding member of reports. Let's start with
13 Commissioner Monahan.

14 COMMISSIONER MONAHAN: Well, I feel like I
15 belabor the executive order of the governor but I just
16 feel like I can't say it enough because it's so
17 exciting. The study enforce the 100 percent ZEVs in the
18 next 15 to 25 years including off-road equipment,
19 including diesel equipment. I know the chair did a lot
20 to help with that development. And Vice Chair Scott has
21 really laid the groundwork with a lot of this work that
22 she's done over the years. So it's just really, really
23 exciting.

24 I feel like it put California right at the
25 forefront globally on transportation electrification.

1 That's where we want to be. So now we've got to help
2 the governor achieve these goals and I, you know, I'm
3 confident that we can, it's just going to take all hands
4 on deck to make sure that we can have the rates, that
5 infrastructure, and that we're -- we're fueling these
6 vehicles in a way that helps support the grid and lowers
7 rates for everybody. So it's just really exciting.

8 It was a busy week, lots of public -- lots of
9 media requests and, you know, really trying to develop
10 that message of like, yeah, we're a little behind on
11 where we need to be but, you know, if we all marshal our
12 resources, we can get there is kind of a, you know, the
13 tension that we're seeing in terms of yeah, we're not
14 quite there, but let's, you know, if we all work
15 together, we'll be able to reach these goals. So.

16 And with that, you know, the 51 million that we
17 got as the Chair mentioned, we have great support for
18 that really trying to figure out how to leverage that
19 for economic recovery in jobs in the near term. As you
20 offered in the clean transportation program
21 (indiscernible), we've done a lot of engagement with the
22 DACAG and well even in SAHA as well. So in the last
23 month, I've met with the DACAG, I've met with SAHA and
24 we're trying to just really expand that definition of
25 what events it is to a low-income community.

1 So the last thing I would just say is that the
2 draft IEPR is on -- it's not on the streets because it's
3 just in my inbox, it's not in yours yet. But I'm pretty
4 excited about what it says in terms of it brings the
5 three revolutions of electrification, automation,
6 mobility of service, it really talks about how the
7 global market is scaling up on battery electric vehicles
8 and why fuel cells are a little behind where battery
9 electric vehicles are I think in terms of their
10 contribution, and especially with the medium and heavy
11 duty sector, it's going to be important.

12 So just, you know, hopefully that will be in
13 your inbox soon. But I think the team did a really good
14 job with going -- well, kind of further than they
15 usually, I would say, go in terms of this kind of more
16 expansive really deep dive into transportation.

17 So that's all. Sorry I said it really fast, but
18 I know it's been a long day already.

19 CHAIR HOCHSCHILD: Thank you, Commissioner
20 Monahan.

21 Let's move on to Vice Chair Scott.

22 VICE CHAIR SCOTT: All right. Well, I always
23 like the opportunity to get to talk with you all a
24 little bit about what I've been working on and hear
25 about what you've been working on as well.

1 The EPIC symposium is coming up next week so
2 that is Monday, October 19th through Wednesday,
3 October 21st. I think all of you have a role at this
4 symposium so I'm really excited for that. We'll be
5 joined also by some Commissioners from the Public
6 Utilities Commission, legislators, and lots of other
7 fantastic folks. So I'm very much looking forward to
8 our virtual EPIC symposium coming up next week.

9 A few things that I have been doing. We did
10 another virtual innovation tour. And this one was
11 focused on California-based clean energy manufacturing.
12 That was really great to see. The folks are doing these
13 really wonderful presentations where you just get a
14 short video but it's -- and it's not the same as getting
15 to go and walk around the factory or the manufacturing
16 space, but it is really neat to kind of see the video,
17 see what the scientists and the different labs are
18 working on. So they've done a nice job putting that
19 together. So we can still get a great feel for the
20 types of things that EPIC is funding. We're also doing
21 that with our preproduction investment program as well.

22 I had a chance to talk to some folks in the
23 Stanford Energy Group which was really wonderful.
24 Hopefully I inspired a few students to think about
25 coming into state service and the impactful work that

1 they would be able to carry out at a wonderful agency
2 like the Energy Commission. I talked broadly about our
3 mission and then spent some focus on of course the
4 research portfolio at the Commission.

5 And it's pretty exciting when you have I think
6 those broad overviews. Because the Commission really
7 does do a lot of amazing work all across the energy
8 sector and it's fun to talk about and take questions and
9 see what folks, especially the students, are thinking in
10 this space.

11 Had a chance to participate in LACI, the clean
12 tech incubator power day a few weeks ago, which was
13 fantastic. And also the DOE Storage Summit. So those
14 are just a few places that I have been virtually over
15 the last little bit.

16 And then I just wanted to close by noting I had
17 a great opportunity to talk with the administrative
18 division at the Energy Commission. So I really
19 appreciate Rob inviting me to be part of the dialog. He
20 has kind of an all-hands admin meeting periodically.
21 And, you know, just the work that that team does for us
22 each and every day. And the fact that -- and one of the
23 things that Rob says is that if we don't notice it, that
24 means they're doing a great job. And I said, well, we
25 rarely do. So. You know, they're just really doing a

1 great job getting everything set up for us, whether
2 it's, you know, the IT, getting our contracts out the
3 door. I mean, it's just -- everything that that team
4 does. So I was honored to have a chance to talk with
5 them.

6 And also to thank folks. Again, as you all
7 know, it's such a challenge to work virtually. And, you
8 know, sometimes we're sitting under smoke, people are
9 worried about COVID. We don't know if schools are going
10 to be in person or continue to be online. Like, there's
11 just lots of challenges that people are juggling and so
12 the fact that they bring their A-game to the Energy
13 Commission every day is really appreciated. And I just
14 want to keep saying that because I hope people do feel
15 appreciated. And they're doing a great job, I think,
16 juggling all the different challenges. And I was happy
17 to get a chance to talk to the admin division.

18 So those are my updates for you all.

19 CHAIR HOCHSCHILD: Thank you, Vice Chair.

20 Let's go to Commissioner McAllister.

21 VICE CHAIR SCOTT: You're muted.

22 CHAIR HOCHSCHILD: Commissioner, you're muted.

23 Can you unmute?

24 COMMISSIONER MCALLISTER: Sorry. Sorry. Sorry.

25 Every now and then, you know, working (indiscernible).

1 CHAIR HOCHSCHILD: I think that is the single
2 most common -- since the beginning of COVID, it's the
3 most common --

4 COMMISSIONER MCALLISTER: Yeah. It's like --
5 yeah, exactly. And you, you know, you can use your
6 space bar, that comes in handy every now and then.

7 CHAIR HOCHSCHILD: Yeah.

8 COMMISSIONER MCALLISTER: For example, if you
9 lose the video.

10 So, yeah, let's see. I guess I wanted to --
11 first start out by thanking you, Chair Hochschild,
12 because just for carrying what really has been quite a
13 burden over the last, you know, months, weeks and
14 months, over a month now, month and a half, but who's
15 counting, in terms of dealing with the stresses that we
16 had and the heatwaves and the, obviously, outages a
17 couple of days. And then some tense moments subsequent
18 to those but without further outages at least due to
19 inadequacy of resource. So.

20 But I wanted also to thank the teams, in
21 particular Siva Gunda, Assessments Division, who really
22 stepped up and his team. Melissa Jones and others who
23 really stepped up to do great analysis about what
24 happened and proposing solutions both on the supply side
25 and the market side, and the demand side, working with

1 the other agencies, PUC and ISO to come up with our
2 analysis of what happened and also recommendations for
3 how to avoid that in the future.

4 And it's really actually, despite the
5 challenges, it's giving me a lot of optimism that we
6 actually have, you know, much more congealed and focused
7 discussion about what we need to do going forward. And
8 obviously, I focus a lot on the demand side, on the
9 local side of distribution grid and sort of digitization
10 of our energy use. But there are a wide array of
11 solutions both, you know, from wholesale large-scale,
12 all the way down to individual devices. And so
13 California really can mobilize all these resources. We
14 have the innovation, we have the know-how, we have the
15 people, we have the investment. And so I'm really, you
16 know, buoyed in a way. With challenge comes
17 opportunity, right? They're sort of the yin and the
18 yang. So. So going forward I think we have a clearer
19 view of what's necessary even if it's not always going
20 to be easy. So.

21 And then I'll focus in on just a few things that
22 I've been doing as well. The -- on this front of active
23 efficiency and, you know, grid flexibility, really
24 excited to have the SB 49 process kicked off. And then
25 also the load management standards moving forward

1 relatively expeditiously and that'll be -- we'll be
2 doing some newsworthy things over the coming months and
3 year on both of those fronts.

4 These discussions have a lot of traction in DC
5 and then actually across the globe. You know, this sort
6 of light bulb about loads and our ability to manipulate
7 loads and manage loads is actually -- these light bulbs
8 are going on not quite independently but they're kind of
9 sequentially going off really fast. And people are
10 connecting the dots and they're really figuring out that
11 this is a resource whose time has come.

12 So in DC, there's a lot of conversation about
13 the transition whichever way it goes, but certainly
14 urgency to heighten the official electrification and
15 active efficiency as solutions to our climate problems
16 and our reliability problems.

17 Grid interactive efficient buildings. NASEO and
18 NARUC regulatory utility commissioners across the
19 country have a joint effort to enable grid interactive
20 efficient buildings. And so there's a big effort and
21 it's just, it's really gratifying to see. And just in
22 the last couple of days, Department of Energy has
23 released (indiscernible) communities funding opportunity
24 notice that is pretty exciting. It's like \$65 million
25 for just that grid interactive efficient building. So

1 it's actually pretty -- pretty timely as well. There's
2 a lot of collaboration happening. I'm super optimistic
3 about that.

4 Globally, I'm getting asked to do a lot of
5 talking about these issues. And EPRI and EIA have
6 their -- their conference coming up. Some collaborative
7 discussions with Kodurupaka in India. Just all over the
8 globe there are interesting developments in this front.
9 And so, you know, developing could be used to leap frog
10 into some of these ideas that can really help at all
11 happen that much faster.

12 So I guess rather than just sort of detail all
13 my comments, I'll just highlight a couple.

14 I wanted to thank Melissa Jones, actually, for
15 spearheading and leading sort of a restart of really a
16 new start, I guess, of the CEC gas working group.
17 Collecting a bunch of stakeholders around a table,
18 virtual table, obviously, to talk about natural gas.
19 Very diverse group, varied great opinions but substance
20 based. They're not making policy, they're talking
21 about, you know, nuts and bolts on the ground, how
22 systems work, how they can transition, how they can
23 decarbonize. It's sort of a gloves off but very civil,
24 right?

25 So, you know, practical reality based but

1 collegial and civil. So that's the goal for how we do,
2 you know, good interactions and build a good record that
3 we can then inject into the policy discussion.

4 So I also wanted to mention hydrogen. You know,
5 mentioned in one of the items today. But there's been
6 some -- I had some great conversations about it. And
7 dating back before I went to COP on the Commissions'
8 behalf, the Counsel of Parties, last November. There,
9 had a bunch of conversations with different, you know,
10 countries. Scotland, Germany, other countries that
11 really are focused on hydrogen as a solution. Not only
12 for transportation but also for bulk power system. And
13 so, you know, as transitioned to a green hydrogen as a
14 decarbonized gaseous fuel.

15 And so we now have, you know, couple of
16 organizations with the footprint in California. The
17 Green Hydrogen Coalition and the Green Hydrogen Business
18 Counsel. And some -- and a project with LADWP's
19 leadership to transition, get them out and power
20 project. So there's really, I think, interesting steps
21 forward happening on that front. And so our challenge
22 is going to be to figure out how to -- how to integrate
23 that into our overall energy system planning. But I'm
24 super excited about that.

25 Lastly, I'll just say on buildings, given a couple of

1 talks again, that kind of had a global footprint, the
2 International Living Building Institute and then also the
3 International Passive House Conference. Those were, you know,
4 large events with diverse stakeholders. A lot of talk about
5 equity, a lot of focus on equity, and a lot of focus on advance
6 building construction practices and how it can bring benefits to
7 our communities. So all of those topics really have traction and
8 it's growing. I mean, you know, we hear -- we hear in our
9 business meetings and other forums how much salience this has and
10 how much urgency there is. So I think, you know, marketplaces
11 have to figure out how to make it happen, you know, at scale and
12 evermore cheaply. But I think there's a really good synergy
13 happening right now.

14 And finally, I guess it's in the future but I already
15 did my part, I'm really looking forward to the EPIC symposium.
16 So. I think maybe I'm not supposed to say anything, some of these
17 sessions are taped at least, but I did a really nice session with
18 Senator Skinner and David Nemptzow from DOE, and we're really
19 looking forward to that fireside chat and a follow at the EPIC
20 symposium. So thank you to Commissioner Scott for organizing and
21 meeting that.

22 And that's it for me.

23 COMMISSIONER MONAHAN: Commissioner McAllister --

24 CHAIR HOCHSCHILD: Thank you.

25 COMMISSIONER MONAHAN: -- I have just a quick question.

1 Can I just ask a question?

2 CHAIR HOCHSCHILD: Yeah, go ahead.

3 COMMISSIONER MONAHAN: You said --

4 COMMISSIONER MCALLISTER: I'm sorry, who's this?

5 CHAIR HOCHSCHILD: It's Patty. Go ahead.

6 COMMISSIONER MCALLISTER: Oh, I'm sorry, I didn't see
7 you. Okay. There you go. Yeah, go for it. You're kind of,
8 you're a little bit crackly, I didn't recognize your voice

9 COMMISSIONER MONAHAN: Oh, I'm sorry. It's funny, I'm
10 using my, this headset too.

11 I'm curious the national roundtable that you talked
12 about, is that internal group or is that external?

13 COMMISSIONER MCALLISTER: So, yeah it's a -- it's -- I
14 don't know if you're familiar with the DAWG, the Demand
15 Assessment -- the Demand Analysis Working Group, it's sort of, you
16 know, well not exactly, but roughly analogous to that where it's
17 getting agency reps in the room but also stakeholders in the
18 natural gas arena across the spectrum, you know, together to talk.
19 So I think it's, you know, it'll be -- yeah, it's a, I mean, it's
20 not a formal like working group but it is a kind of a way to
21 compare notes and make sure that everybody is talking about the
22 same realities in terms of molecules.

23 COMMISSIONER MONAHAN: Thanks. Fascinating. I think
24 you know I can share your interests in what's the world of
25 hydrogen broadly in our decarbonization track. So. Thank you.

1 And I share that interest and curiosity.

2 COMMISSIONER MCALLISTER: Yeah.

3 COMMISSIONER MONAHAN: And I want to -- where he said
4 about the Chair and all he had to shoulder. I think everybody, I
5 think we all, all the Commissioners feel the same way, and the
6 thing that's nice is that we really appreciate Chair Hochschild
7 all you're doing to collaborate with other agencies, make sure
8 that we have a secure energy system. And I know the other
9 agencies are also CAISO and CPUC are equally committed. But we
10 just really appreciate your leadership and what you have done and
11 what Siva and other folks and Lori, many folks in the organization
12 have done. But thank you.

13 CHAIR HOCHSCHILD: Well, thank you. So getting a lot
14 more gray hairs in this job. But we have an incredible team and
15 it's actually been really rewarding the last few months
16 especially.

17 Let's go to Commissioner Douglas.

18 COMMISSIONER DOUGLAS: All right. Couple quick updates
19 from me. I've been doing a fair amount of speaking, not all
20 offshore wind, but some of it certainly including the virtual
21 Offshore Wind Summit a week or so ago.

22 I've also really enjoyed participating in a series of
23 webinars that the Schatz Energy Center in Humboldt County has been
24 putting on on offshore wind. It's, you know, what they're really
25 doing is highlighting and explaining work that they've done with

1 the benefit of Ocean Protection Council and Office of Planning
2 and Research and some federal BOEM funding. But they're doing it
3 in a way that is facilitating community information dissemination
4 and a community dialog and I'm quite happy with how that's going.
5 You know, they have a real diversity of voices. They have ample
6 time for community dialog. And I think I can tell that people
7 feel engaged and, you know, are really happy to have that forum.

8 And what they've done is, you know, rather than have an
9 entire day that becomes offshore wind day, they've just done, you
10 know, every Monday for two or so hours for a series of weeks. I
11 think they're taking one Monday off and then they'll do their last
12 one or two. But it's worked out really well, it's been a nice
13 model and it's been fun to see.

14 I wanted to share the STEP division is working with me
15 and working with the Chair to pull together a workshop that will
16 explore ways of upgrading existing natural gas plants to make them
17 work more efficiently when it is very hot out and other kind of on
18 the margins efficiency improvements that can help support our
19 system. I think it's an exciting opportunity. You know, we're
20 already doing outreach around the workshop, we're going to, for
21 example, this Friday, make sure the DACAG knows about it and then
22 follow up with a more in-depth discussion with the DACAG
23 subsequent to the workshop that can also engage them on the energy
24 emergencies and steps that have been taken to address them and
25 things like that. So I wanted to make you aware of that.

1 There is a final and last workshop on our RPS
2 regulations coming to an Energy Commission near you and after that
3 it's coming to a business meeting near you, so this calendar year.
4 So be ready.

5 Lastly, you know, one international relationship that
6 I've been privileged to take part in on behalf of the Energy
7 Commission has been with Norway. I had a chance to speak actually
8 during a pilot week, you know, at an event organized by the
9 Norwegians in San Francisco. And since then, we've entered into
10 an agreement to cooperate and share information and so on. And
11 we've decided to do a series of informal information exchanges on
12 topics of interest to us that would be, you know, government
13 discussions. They probably wouldn't be broader, although one or
14 two might be. Certainly the one on offshore wind might be.

15 And so we're looking at exploring topics like hydrogen,
16 which we've mentioned quite a bit here. They have a national
17 strategy on hydrogen, they have some pretty interesting work that
18 they're doing there. Carbon sequestration, which is something
19 else that they've pretty upfront on, and offshore wind. And then
20 one of the topics they're actually interested in, more information
21 from us, is on the vehicle side. So especially with the
22 governor's leadership and executive order, and all the work that
23 we've done in the state through Energy Commission, Air Resources
24 Board, and so on. And I think we're getting a lot of recognition
25 for how we're moving that market and moving technology in that

1 space. So to be continued on that, but it's, I think it'll be a
2 very mutually beneficial dialog.

3 So I think that's all I've got. Thank you.

4 CHAIR HOCHSCHILD: Thank you. Is that everybody? I
5 think, it might be.

6 So I -- well, I guess I'll just begin by sharing I did
7 a four-hour briefing before the legislature on Monday on the
8 blackouts. This was President Batjer, myself, Steve Prorick
9 (phonetic), and then who is the new CEO of CAISO, Elliot Mainzer
10 who just started. And we owned the failure. It is on all of us
11 collectively. We have to do better. We will do better. And we
12 kind of walked through a number of the key actions, including the
13 fact that we're going to basically have a 10X increase in energy
14 storage on the grid in the next year, as well as some other
15 improvements we're making.

16 I really want to thank Commissioner Douglas's team and
17 Shawn Pittard for the work we're going to be engaging on with
18 getting more juice out of the existing fleet. We have 79
19 jurisdictional power plants representing 28 gigawatts and there
20 are a number of measures that can be taken to improve the output
21 of our current fleet, principally through improvements to chilled
22 water systems, but also other measures to enhance efficiency. So
23 that is just part of a much larger mosaic of activities that we're
24 doing. Commissioner McAllister been's spectacular in particular
25 on this, pushing for low management standards and more ambitious

1 demand response and enhanced load management activity.

2 Now, there is no -- my main answer was, there is no
3 single cause for the blackouts. Obviously, the heat storm was a
4 historic heat storm, and it was extended for five days. But
5 there's no single solution either. It's not silver bullet, it's
6 silver buckshot, and there's many, many different activities that
7 we're engaging with as we strengthen grid liability in California.
8 And it is a solvable problem. So I think that's the good news, is
9 a bunch of measures we can take that are going to put us in a
10 healthy place.

11 And we also briefed the governor. That went also over
12 well. And we had, I cannot thank Siva Gunda and his team enough
13 for all the prep as we address this issue. It was really
14 fundamental to the state, to our climate strategy, to everything
15 we're working on to keep building that resilience.

16 So other updates, we had great Department of Navy
17 partnership meeting with the energy agencies, Mike Gravely did
18 that per video, as usual. The military is a great partner for us.
19 During the blackouts, they disconnected 22 ships from shore power
20 during some of the challenging times and that was really helpful,
21 had just been terrific. And also obviously had a great
22 (indiscernible) at the time with all of our clean energy benefits
23 to have this. That relationship continues to pair.

24 I went to the Tesla Battery Day with Secretary
25 Blumenthal, that was the same week the executive order came out.

1 So it was exciting to see the pathway for getting another 50
2 percent reduction in cost we're looking by the Tesla working, and
3 the pilot manufacturing line there for their battery technology.

4 Did also the climate week event with Tom Steyer and
5 Amelia Shitani and Assemblyman Garcia really talking about equity
6 as we (indiscernible) entered a great phrase which I borrowed
7 generously that we (indiscernible) front door to our finance
8 policy, and I think that's exactly right. So we talked a little
9 bit about how that it's expressing itself in all these different
10 programs that we're doing from the build program which is
11 exclusively for low-income housing as we do building
12 electrification to this new program to be established by AB 841
13 which the governor just signed into law, which is kind of focus on
14 public schools, but with a heavy focus on low-income schools. So
15 that's a real model for the country.

16 I also just want to get a little attention to the
17 Eduardo Garcia bill which the governor signed into law that's
18 going to create this lithium task force. I'm working with
19 Commissioner Douglas on that. We're going to be getting those
20 nominees together by the end of the year and in putting the task
21 force in place to work on this vision of lithium valley. And I
22 want to thank Assemblyman Garcia for his work on that.

23 And that covers my update.

24 Let's go to Item 12. Does the executive director have a
25 report?

1 MR. BOHAN: Thank you, Chair. Good afternoon,
2 Commissioners. I'm speaking from scenic Carmichael, California
3 and I have a few quick updates for you.

4 I report out on the budget and we had very good success
5 with the requests we had made. And the Chair just alluded to one
6 of the two bills that we were entrusted with stewarding in AB
7 1657, the lithium Blue Ribbon Commission. We also, of course,
8 directed to implement AB 841. And both of those are in one
9 division. Luckily, our manager of that division, Natalee Lee, you
10 all know, is extremely skilled. But it's a lot so we'll be
11 drawing from other parts of the organization to make sure we've
12 got appropriate resources to perform those obligations.

13 I also just can't speak without acknowledging the entire
14 Energy Assessments Division team that helped out with the root
15 cause analysis. A terrible thing that happened but I think the
16 three agencies worked together really, really well to come up with
17 solutions. And so we feel pretty good that implementing solutions
18 will avoid this problem in the future.

19 And then finally, I just want to say internally, as I
20 think you know we've eliminated landlines for those of us who have
21 been -- that have state-issued phones, we're now moving into the
22 next level. This is going to save us in the neighborhood of
23 \$200,000 per year to have issued cell phones to staff instead of
24 landlines. We are looking to digitize all paper records and we're
25 fortunate to find some funding for that that makes it no cost to

1 the Energy Commission.

2 And finally, our telework consultants are working
3 closely with us and will be starting next week to do an outreach
4 effort to you, to our senior management, and then to other staff
5 to talk about their needs and desires in how we can best continue
6 our teleworking into the future. Even as we are enabled to go
7 back, at some point we're going to have a much more expansive
8 approach to telework.

9 Thank you very much.

10 CHAIR HOCHSCHILD: Thank you. Let's go to Item 13,
11 Public Advisor's report.

12 MS. GALLARDO: Thank you, Chair, Vice Chair, and
13 Commissioners.

14 I have more of an announcement than report today. I
15 want to remind you and the public that in celebration of its 45th
16 anniversary this year, the Energy Commission is launching the
17 Clean Energy Hall of Fame Awards to recognize leaders advancing
18 California's clean energy goals and helping achieve 100 percent
19 clean energy future for all.

20 We'll have three types of awards focused on lifetime
21 achievement, clean energy champions, and one focused on the youth
22 game changer. We've received over 100 nominations, so it will be
23 quite competitive. We encourage everyone at this meeting to join
24 us and to invite your friends, family, and peers. The event is at
25 2:00 p.m. on December 10th via Zoom. The details are on the

1 homepage of our website at energy.ca.gov which is also listed on
2 the side showcasing the beautiful the logo created by our talented
3 media and public communications team. Thank you to them for their
4 hard work.

5 I also want to thank my colleague, friend, and team
6 member Albert Lundeen for helping lead this effort and thanks to
7 our equity intern Hannah Phillips for her support.

8 That concludes my report.

9 CHAIR HOCHSCHILD: Thank you. And thanks for all of
10 your work pulling that together. We're really excited to finally
11 get that launched.

12 All right. Let's move on to Item 14, public comment.

13 MS. GALLARDO: So, Chair, I will provide the
14 instructions here again. This is Noemi Gallardo, the public
15 advisor. This is the period for any person wishing to comment on
16 information, items, or reports of the meeting agenda and shall
17 have three minutes total to give comment.

18 As a reminder, we are not accepting public comments
19 through the Zoom system. Please call our Verizon line at
20 888-823-5065. The passcode is business meeting, and there is
21 still time to get on the line.

22 Once your line is open, please spell your first and last
23 name, state your affiliation, if any. There should only be one
24 representative per organization. Do not use the speaker phone
25 when talking because we won't hear you clearly. If you're also on

171

1 Zoom, either mute or leave Zoom to avoid feedback.

2 So I do have one written comment. So I'll begin with
3 that, Chair.

4 The comment is from Ted Sirkin. So that's spelled
5 T-E-D. Sirkin is S-I-R-K-I-N. He's from Valvette Systems. He
6 says, I am a California licensed landscape and irrigation
7 contractor since 1963. My company's name is Valvette Systems,
8 spelled V-A-L-V-E-T-T-E. Born and bred here in California, we
9 manufacture the world's only water conservation sprinklers, which
10 are the only sprinklers on the rebate list of the nation's largest
11 treated water facility, the Metropolitan Water District of SoCal.
12 The MWD named our sprinklers and sprinkler parts In-Stem Flow
13 Regulating sprinklers, IFR.

14 We appealed to the CEC two months ago to consider
15 allowing a one-year provisional approval of our sprinklers so we
16 could arrange for testing at the Center for Irrigation Technology,
17 a California state organization located at a California
18 university, Cal State, Fresno. This would parallel the end goals
19 of the CEC's October 1st sprinkler head pressure regulation
20 mandate. The CIT is the underwriter's laboratory for irrigation
21 products.

22 The new CEC standard arose from the huge water loss
23 through sprinklers when operating under high pressure
24 circumstances common throughout many areas in California. The
25 present method of sprinkler head pressure regulation was developed

1 in the 20th century, whereas the IFR technology was developed in
2 the 21st century, resulting in a huge improvement.

3 In our appeal, we provided access to 19 different
4 testing results that show the tremendous water savings achievable
5 with In-Stem Flow Regulation. The existing 20th century
6 technology does just one thing to save water, it controls high
7 pressure up to 70 PSI by one manufacturer, up to 100 PSI by
8 another.

9 IFR saved water in several ways and allowed for an
10 unobstructed water passageway, whereas the existing device
11 obstructs the passageway. IFRs make a major contribution to water
12 conservation by eliminating overspray, the number one cause of
13 runoff, which is illegal in California. The present method makes
14 no contribution in this regard. With IFRs, one dials in the
15 precise distance of water throw from the sprinkler. The IFR
16 allows for higher uniformity of the water application which also
17 contributes to water saving.

18 The negative response from the Appliances Office was
19 bureaucratic and unnecessarily restrictive. The IFR utilizes the
20 more up-to-date method of eliminating water wasting misting and
21 fogging, therefore the method to test the IFR could not be the
22 same as testing the existing technology. The CEC's sole reliance
23 on the EPA's water sense testing on 20th century devices
24 undertaken at the University of Florida several years ago clearly
25 does not serve the California Energy Commission's goals of

1 conserving the water. Rather, the office's response blocks
2 further consideration of obtaining much more water conservation
3 that is available in this century that was not available in the
4 20th century.

5 But all, there are more -- there is more to the comments
6 but I'll end there in the interest of time and to be fair to
7 others if there are any, is anyone on the line.

8 I'll defer to Cody, the secretariat, to see if there is
9 anyone on the line.

10 COMMISSIONER MCALLISTER: Can I -- actually, Public
11 Advisor Noemi, this is Commissioner McAllister, can I just ask
12 that you docket those comments in their entirety?

13 MS. GALLARDO: Definitely we will do so.

14 COMMISSIONER MCALLISTER: Thank you.

15 MR GOLDTHRITTE: We have no, no public comment on the
16 line.

17 CHAIR HOCHSCHILD: Thank you, Cody. Let's move on to
18 Item 15. Does the chief counsel have a report?

19 MS. HOUCK: Hold on here. No report today,
20 Commissioners. Thank you.

21 CHAIR HOCHSHILD: Okay. Thanks, everybody. We are
22 adjourned.

23 (The Business Meeting adjourned at 2:14 p.m.)

24 --oOo--

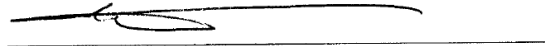
25

REPORTER' S CERTIFICATE

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

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

IN WITNESS WHEREOF, I have hereunto set my hand this 28th day of October, 2020.



PETER PETTY
CER**D-493
Notary Public

TRANSCRIBER'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 transcribed by me, a certified transcriber.

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

IN WITNESS WHEREOF, I have hereunto set my hand this 28th day of October, 2020.



Jill Jacoby
Certified Transcriber
AAERT No. CERT**D-633