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BUSINESS MEETING

BEFORE THE

CALIFORNIA ENERGY COMMISSION

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

REMOTE ACCESS ONLY

The California Energy Commission's (CEC) May 12, 2021 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 may participate consistent with the direction in these Executive Orders.

Pursuant to California Code of Regulations Title 20 section 1104(e), any person may make oral comment on any agenda item. To ensure the orderly conduct of business, such comments will be limited to three minutes or less per person. Any person wishing to comment on information items or reports (non-voting items) shall speak during the general public comment portion of the meeting and have three minutes or less to address all remaining comments.

WEDNESDAY, MAY 12, 2021

10:00 A.M.

Reported by:
Peter Petty

APPEARANCES

Commissioners (Via Remote)

David Hochschild, Chair (Absent)
Karen Douglas
Andrew McAllister
Patricia Monahan
Siva Gunda

Staff Present: (Via Remote)

Drew Bohan, Executive Director
Linda Barrera, Chief Counsel
Noemi Gallardo, Public Advisor

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P R O C E E D I N G S

APRIL 12, 2021 10:01 a.m.

COMMISSIONER DOUGLAS: All right, well good morning everybody and happy belated Mother's Day. Thank you for joining the Energy Commission's May Business Meeting. I'm Commissioner Karen Douglas and I will lead the meeting today in Chair Hochschild's absence. Chair Hochschild had his second vaccination yesterday and took today off in an abundance of caution. And we all hope he's feeling well and it sounds like he is, so let's proceed now with the Pledge of Allegiance.

Commissioner Gunda, will you please lead us in the Pledge of Allegiance?

(No audible response.)

MS. GALLARDO: Commissioner Gunda, you're muted on the screen. It sounds like he's having audio issues.

COMMISSIONER DOUGLAS: All right, Commissioner Gunda?

All right, let me see here, Commissioner McAllister, could you lead us in the Pledge of Allegiance?

COMMISSIONER MCALLISTER: Sorry, I'm away. Can you hear me okay?

COMMISSIONER DOUGLAS: Yes.

COMMISSIONER MCALLISTER: Great. Okay.

(Whereupon the Pledge of Allegiance is recited.)

COMMISSIONER DOUGLAS: Thank you, Commissioner McAllister.

So just a couple announcements before we fully begin. So, first of all, good news is on the horizon. California is set to fully reopen. We're looking at reopening on June 15th and in the meantime, of course, continue wearing a mask indoors and get vaccinated when you can. And we encourage you to register at the "My Turn" website created by the Governor's Office to receive notifications of your eligibility to get vaccinated and to schedule an appointment. For more information, go to myturn.ca.gov.

Now, I also wanted to mention that the Commission is celebrating the Second Annual Clean Energy Hall of Fame Awards in December 2021. The awards recognize leaders who are helping advance California is clean energy goals. Nominations are being accepted until June 25th in the following categories: lifetime achievement, clean energy champion, and youth game changer. Please submit nominations for individuals and entities, contributing to advancing our clean energy future. Go to the Commission's web page for more details or contact the Public Advisor's Office at 916-654-4489.

Today's Business Meeting is being held remotely without a physical location for any participant consistent

with Executive Orders N-25-20 and N-29-20 and the recommendations from the California Department of Public Health to encourage social distancing in order to slow the spread of COVID-19.

The public may participate and/or 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 on the agenda posted on the Commission's website link for the Business Meeting. We are using a combination of Zoom and Verizon for remote access. If Zoom shuts down today, we will continue this meeting on our Verizon phone line. Call Verizon at 888-823-5065. Again, 888-823-5065. The pass code is "Business Meeting."

The Commission values public participation and stakeholder engagement. Pursuant to the California Code of Regulations Title 20, 1104(e) any person may make oral comment on any agenda item. To ensure that the orderly conduct of business such comments will be limited to three minutes or less per person as to each item listed on the agenda that is voted on today.

Any person wishing to comment on information items or reports, which are non-voting items, shall reserve their comment for the general public comment portion of the meeting agenda and shall have three minutes or less total

to state all remaining comments. To provide public comment please call our Verizon phone line at 888-823-5065. The pass code is "Business Meeting. Provide your name, affiliation and item number.

Before turning to the agenda items, I'm excited to announce that at today's Business Meeting, the Commission is seeking to approve nearly 39 million in grants and loans, which is funding that helps accelerate California economic recovery.

So moving to Item 1, the Consent Calendar, items will be taken up and moved on, as a group. A Commissioner may request that an item be moved and discussed later in the meeting. Do we have a motion for Item 1?

(Overlapping colloquy.)

COMMISSIONER DOUGLAS: Go ahead, Commissioner Monahan.

COMMISSIONER MONAHAN: I move Item 1.

COMMISSIONER DOUGLAS: Thank you. Commissioner McAllister, do you second?

COMMISSIONER MCALLISTER: I'll second.

COMMISSIONER DOUGLAS: Perfect. So all in favor, Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

COMMISSIONER DOUGLAS: Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

COMMISSIONER DOUGLAS: Commissioner Gunda?

COMMISSIONER GUNDA: Aye.

COMMISSIONER DOUGLAS: And I vote aye as well, so that item passes 4-0.

Let's go on to Item 2, the Diversity Commitment Update. In this item, staff will present highlights of investment programs and efforts to accomplish the CEC's diversity commitment to increase participation of and benefits to small and diverse business enterprises and funding programs. As well as increasing the participation of benefits to disadvantaged communities through programs and policies, so Noemi Gallardo, if you could present, please.

MS. GALLARDO: Commissioner Douglas, I apologize. It had been determined earlier there was no public comment on Item 1, the Consent Calendar. So I just wanted to make sure that was on the record.

COMMISSIONER DOUGLAS: Thank you.

MS. GALLARDO: You're welcome, and yes I will begin here.

So good morning to all of you. For the record, I am Noemi Gallardo, the Public Advisor. Today, I'm honored to join a group of my colleagues to present the 2020 Diversity Report, which is an update of our progress to meet the goals of the Commission's commitment to energy

equity and supplier diversity.

As we work towards 100 percent clean energy future, we should seek to include 100 percent of Californians to create a clean energy society that prospers. This would mean that all Californians participate in and benefit from clean energy, especially those who have been disproportionately burdened by pollution and been on the frontlines of climate change. These also tend to be the people who have historically experienced disparate economic and health disparities. Next slide.

All right, 2020 represented the 5th year anniversary of the resolution that memorialized the Commission's commitment to supplier diversity and energy equity. That commitment as shown on the screen focuses on optimizing fair and equal opportunities for small and diverse-owned businesses as well as economically disadvantaged and underserved communities, to participate in and benefit from the Commission's programs.

For this anniversary report, we decided to demonstrate the progress we've made through the grant and loan programs that make up our investments. I'll highlight some comprehensive stats and then turn it over to my colleagues from various divisions to speak about each program. Next slide.

We're going to share the statistics of each program, the locations of the related project sites, and stories reflecting the impact of the programs.

The first statistic I'd like to highlight is the $458 million investment made through the Commission's loan program known as the Energy Conservation Assistance Act. These loans are zero to low interest and have been

These loans are zero to low interest. And have enabled public sector entities and schools to fund energy projects, resulting in significant savings and making for a cleaner environment, particularly important for frontline communities.

The next highlight is the $23 million investment, the Commission has supported for tribal projects. The Commission's Tribal Liaison Tom Gates has helped the agency be more diligent in our efforts to be accessible to tribes, to strengthen our role as partners. And better assist in administering energy research and project funding opportunities that are eligible tribes. Next slide.

Now I'd like to focus on the investments we've made in, and benefiting disadvantaged communities. You'll hear us mention disadvantaged communities throughout the Diversity Report. And we focused on disadvantaged communities as defined by CalEnviroScreen 3.0, because it's the only standardized metric implemented across programs at

the Commission for which we can compare apples-to-apples. That's why we're focusing on that.

This slide shows that as of December 31, 2020, the Commission has invested $996 million for projects in and benefitting disadvantaged communities. There are nine grant programs established between 1980 and 2018 that have been active in the last five years, which are the ones we focused on. And this dollar amount doesn't tell the entire story of how Californians benefit from our investments, but when we invest money in a project that means more technology is implemented in these regions, which leads to more infrastructure in communities. Which tends to lead to more jobs and careers for individuals, and that's the biggest value, because those types of jobs create stability and increase wealth for families and Californians who need it the most. Next slide.

Here we see a graph displaying the percentages of funds that have been invested in projects located in disadvantaged communities by the Commission's nine grant programs. The spending ranges from 8 percent on the low end to a high of 77 percent. I was happy to see that the majority of the spending percentages are in the double digits. I think that's a good sign. Next slide.

This map provides a glimpse of projects invested in by the Commission throughout California. The yellow

shading represents the areas considered the top 25 percent most impacted disadvantaged communities according to CalEnviroScreen 3.0. The importance of this map is that geography is one of the dimensions of equity and gives us a sense of how well we're reaching those who need resources the most, and where we can be intentionally and diligently doing more to ensure communities aren't left out or left behind from the clean energy root solution that we're leading. And instead can benefit from the Commission's great work.

I'll also clarify that projects from three of our grant programs, including EPIC and the ECCA loan program are not reflected in this map for various reasons. So that means that we have done fairly well funding projects throughout the state, and there would be a lot more dots here. So that's good, I think, too.

And I especially appreciate the investments in the Central Valley region given it is one of the most adversely impacted areas. But we also can see on this map that there are areas where we don't have that many sprinkles and that could definitely use some more love like the Inland Empire.

So that it concludes the introduction and now you'll hear from my colleagues, who will share the statistics of each program, the locations of the related

project sites if it's available. And also stories reflecting the impact of the programs, which I think is the most valuable aspect. Next slide.

I'd like to invite my colleague, Daniel Johnson, to begin with the Local Government Challenge, which is the program that gets the gold start for investing the highest percentage of its funds in projects located in and benefitting disadvantaged communities.

So Daniel, you're up.

MR. JOHNSON: Thanks, Noemi.

Hello, Commissioners. My name is Daniel Johnson. I'm an Associate Energy Specialist in the Efficiency Division. I'm honored to present the Local Government Challenge Grant program. Next slide.

The Local Government Challenge is a partnership between the Energy Commission and local governments to develop innovative solutions that will improve energy performance in California's communities. The Commission has awarded more than $10 million total in two competitive grant programs. The Local Government Challenge is an example of how the Commission is helping local governments achieve energy planning and take action to reach targets and goals to ensure a resilient and sustainable future.

In 2017, the Local Government Challenge awarded $7.2 million for Energy Innovation Challenge grants and $3

million for Small Government Leadership Challenge grants.

The energy innovation grants provided opportunities to deploy new energy efficiency and renewable generation projects that support local goals and statewide energy policy. Awardees were required to establish standards and implementation templates for widespread adoption by other local governments.

As of early 2021, ten projects are complete; the rest will likely be completed by early 2022. Seventy-seven percent of the funding was invested in projects located in disadvantaged communities, totaling about $7.9 million for seven projects.

The small government grants made available dedicated funding to disadvantaged communities with populations fewer than 150,000. This type of intentional design was the reason why such a high percentage of the funding went to projects located in disadvantaged communities. Part of why the program was so popular and effective was that the Commission responded during a time of need for local governments and included technical assistance to help ensure their improvements were successful. Next slide, please.

This map shows the locations of the projects with the diamonds representing projects located in disadvantaged communities. Next slide, please.

In terms of impact, the story I want to share is from Gateway Cities Council of Governments. The Gateway Cities Council of Governments is a collection of 27 cities and areas of unincorporated Los Angeles County and the Port of Long Beach, totaling 2.1 million people. Three-quarters of the residents live in census tracts designated as disadvantaged communities. Local jurisdictions have high needs for funding to address climate change and meet the state's climate goals.

This sub-region is prone to a variety of climate impacts, including extreme temperatures, sea level rise, flooding and urban runoff, urban heat island effect, droughts, and worsened air quality. The Climate Action Plan Framework provides cities with the tools to prepare for climate impacts, reduce emissions, and pursue climate investments. The project achieved its goal facilitating climate action planning at a reduced cost and provided gateway cities with a competitive advantage to pursue much-needed climate action funding. Next slide, please.

This is the address for the Local Government Challenge webpage. Stay tuned for a showcase of all of the various project resources later this year.

That concludes my presentation. Now I'd like to introduce my colleague Katrina Leni-Konig to present.

MS. LENI-KONIG: Hello, Commissioners. My name

is Katrina Leni-Konig. I'm a supervisor in the Energy Research & Development Division. I'm excited to present three grant programs as well as our investments with tribes. Next slide.

I'll start with the Food Production Investment Program, also known as FPIP. This program invested the second highest percentage of monies in projects located in and benefitting disadvantaged communities. It was established in 2018 to provide grants that help food processors save energy and money while reducing greenhouse gas emissions. The program's initial budget provided up to $57 million to help accelerate the adoption of advanced energy efficiency and renewable energy technologies.

The food processing industry is one of the largest energy users in California. It is also a large producer of greenhouse gas emissions. The Food Production Investment Program enables producers to replace high-energy-consuming systems with market-ready and advanced technologies and equipment.

As of December 2020, 72 percent of FPIP funding was invested in projects located in disadvantaged communities totaling about $80 million for 36 projects. Next slide.

Here's a map showing the locations of the FPIP projects with the diamonds representing projects in

disadvantaged communities, which are highlighted in yellow. As you can see, we have supported numerous projects in the San Joaquin Valley as part of FPIP. The San Joaquin Valley is one of the world's most productive agricultural regions. It is also home to numerous food production facilities. Unfortunately, the San Joaquin Valley has some of the nation's worst air quality due to the region's topography that traps air pollution from large industries and traffic. Next slide.

The story I want to share is about Initiative Foods located in the City of Sanger, a disadvantaged community in the San Joaquin Valley. The facility specializes in processing fresh fruits and vegetables into organic baby food and is the third largest baby food producer in the United States. The facility was destroyed by a fire in 2016, requiring most of the facility to be rebuilt. The fire left 120 employees without jobs and Initiative Foods worked hard to get their people back to work by rebuilding the facility and helping them find jobs in the meantime.

Funded by FPIP, the replacement of 30-to 40-year-old energy systems is the final step in a facility-wide modernization effort. This project will install energy efficient air compressors, boiler, and refrigeration equipment. And will help them save money so they can

continue to grow their business. Their greenhouse gas emissions reductions will be equivalent to removing over 1,000 passenger vehicles. Also, they will be reducing nitrogen oxides by 44,000 pounds annually in a disadvantaged community that is significantly impacted by air pollution.

The next program is the Commission's Natural Gas Research and Development Program that invests over $21 million annually in science and technology advancements that help improve public health and safety, decarbonize end uses in buildings and industry, and develop fuel alternatives, and reduce environmental impacts.

As of 2020, 40 percent of demonstration, deployment, and manufacturing funding was allocated to disadvantaged communities totaling about $19 million. This also included grants for 27 demonstration sites in disadvantaged communities. So next slide.

This map shows natural gas investments throughout the state. The recipient headquarters are identified with triangles, while project installation sites are identified with circles. As you can see, the disadvantaged communities are marked as yellow, and low-income communities are marked in brown. Next slide.

In terms of impact from our Natural Gas Research Program, the story I want to share is about the trajectory

of our investments to reduce emissions from heavy-duty vehicles. While this may not be news to many of us, a recent study made headlines highlighting a major environmental justice concern that Americans of color face higher levels of exposure to deadly fine particulate matter from traffic and other sources. We also know that pollution from heavy-duty diesel vehicles significantly impacts communities located near ports, railyards, and other major freight corridors. We at the CEC are working to reduce associated emissions through our Natural Gas Program.

So our past investments supported the development of near-zero NOx natural gas engine technology to displace diesel and reduce emissions from heavy-duty vehicles. We have since shifted our R&D priorities towards zero emissions vehicles. Despite this clear target, diesel and natural gas vehicles will likely be on the road during this transition.

So we have an active project that will help bridge current and future heavy-duty vehicle technologies. The project is assessing the real-world effectiveness of current combustion technologies and emissions regulations by collecting in-use activity and emissions data across a variety of vehicle types. Going forward, this data will help us ensure that combustion vehicles are as clean as

possible during the transition. This project is also tracking vehicle movement and behavior to inform plans for infrastructure needed to transition to zero-emission heavy-duty vehicles.

So future investments will continue to focus on a transition away from combustion engines to zero emission technologies. Our natural gas program will invest in hydrogen fuel cell technologies while the EPIC program will support battery electric technologies. We expect that our investments will lead to a significant reduction in air pollution impacting our communities. Next slide.

The next program I'd like to highlight is EPIC, our electric research and development program, which continues to advance technology and work to address the barriers to clean energy adoption. So over 33 percent of our technology demonstration funding have gone to projects located in and benefitting disadvantaged communities. This number increases to 68 percent when including projects in low-income communities and tribes. These investments are helping us to develop better solutions that are more impactful and accessible. Project teams are gaining experience working within communities and understanding conditions in the real world to help develop technologies that really benefit all Californians. While we recognize that there is more work to be done, we have made

significant progress in disadvantaged communities, with $112 million for demonstration projects at 136 sites. Next slide.

This map shows the location of EPIC technology demonstration and deployment projects benefiting California Native American tribes as represented in blue, low-income communities in green, and disadvantaged communities highlighted in orange. So EPIC has conducted extensive outreach and designed grant funding opportunities to really ensure that our investments and technology innovations bring clean energy benefits to communities throughout the state. It's really important to our program. Next slide.

The story I would like to share is about OhmConnect and how it has transformed the lives of its customers. OhmConnect is a residential demand response software that pays households to reduce their energy use when the electric grid is stressed. Each #OhmHour demand response event invites users to temporarily turn things down or off manually, or automatically by connecting their smart devices. Their EPIC project proved that large numbers of small customers are willing and able to be flexible with their electricity consumption when provided a modest incentive and the means to participate easily.

So when Kim McDermott started participating, her family was living paycheck to paycheck. By reducing their

energy use during peak demand hours and referring friends, they earned over $13,000 in 4 years. She says that OhmConnect has really helped them through some hard times, and by referring others she has been able to pass that along to so many other families.

Not only has OhmConnect helped its customers, but during the August 2020 heat wave, OhmConnect played a major role in providing critical grid support by reducing 1 GWh of energy with a peak capacity of 100 MW across 150,000 active users. That's pretty impressive. Through their new EPIC project, they expect to enroll at least 30 percent of their new customers from disadvantaged communities. So it's one of the areas they're advancing equity. Next slide.

Now I'd like to talk about the investments made in tribes. So the Commission's Tribal Program helps the organization conduct effective government-to-government cooperation, collaboration, and communication with California Native American tribes. Led by the CEC's Tribal Liaison, Tom Gates, the tribal program includes assistant tribal liaisons within each division, including myself representing the Energy Research and Development Division. Together, we work to advance the Commission's mission and provide meaningful tribal input into the development of regulations, rules, policies, plans, and activities that

may affect them. The program supports outreach, conducts tribal cultural resources assessments, and hosts tribal energy events to promote collaboration and relationship building between the Commission, tribal leaders, and their staff. And we assist in administering energy research and project funding opportunities eligible to tribes, which is what I'll focus on for this presentation.

First, I'd like to introduce the Tribal Government Challenge, which is funded by the Commission and administered by the California Strategic Growth Council. It recognizes the valuable role that tribes serve in promoting clean air standards and the state's climate and energy goals. Funding for the Tribal Government Challenge Planning Grant will help tribes conduct planning to identify solutions to reduce greenhouse gas emissions, improve clean energy access, and advance climate adaptation and resiliency on tribal lands and in tribal communities. This includes $1.9 million invested and 8 projects funded.

I'll also describe the EPIC Research and Development Program has invested over $21 million dollars and funded 7 projects in partnership with tribes. These projects are building tribal energy resiliency and developing innovative solutions through the demonstration of microgrids and long duration storage technologies, ensuring critical services are available when needed. Next

slide.

So this is a map showing the locations of the tribes funded by the Tribal Government Challenge Grants in purple as well as the EPIC projects in orange. These grants include tribes throughout the state, north and south, some coastal, and some further inland representing diverse ecosystems and climates that offer unique opportunities for clean energy solutions. Next slide.

So in terms of impact, the story I want to share is about the Kashia Band of Pomo Indians of the Stewarts Point Rancheria that received a tribal government challenge grant to develop a comprehensive energy planning project encompassing multiple tribal properties and projects. The tribe plans to lower costs, increase resiliency, and mitigate its carbon footprint by developing on-site solar, wind, and hydropower generation, and energy efficiency measures, at the Center for Abalone Research, Education, and Restoration, also called the Kashia Abalone Center currently under development.

The photographs on the right were taken at a South African abalone farm that has successfully integrated solar and hydropower into their operations similar to the plans for the Kashia Abalone Center.

The proposed center is part of the tribe's plan for the Kashia Coastal Reserve, and a response to the

"Perfect Storm" of environmental conditions that have decimated northern California abalone, which is an iconic animal for many Native American tribes, including the Pomo Indians. Abalone has an important cultural significance. And has been an important food source for thousands of years. And the shells have been used for jewelry, tools, and trade for thousands of years.

In addition to the abalone center, they are exploring biomass fuel supply and energy production from tribally-owned forest property and local timberland. The project also includes planning for energy efficiency measures and renewable energy generation at the Stewarts Point Rancheria. The tribe intends to establish a Tribal Energy Utility to deliver energy to its members.

So by reducing energy use and taking control of energy production and delivery, the tribe will be able to reduce its cost and carbon footprint across its territory, while exercising its sovereignty and increasing its resiliency.

With that, I will pass it onto my colleague Larry Rillera.

MR. RILLERA: Great. Thank you, Katrina. That was awesome.

Hola and good morning, Commissioners. My name is Larry Rillera. I am staff in the Fuels and Transportation

Division. Next slide, please.

I'm very excited and honored to present the Clean Transportation Program, which is in its 13th year of existence. The overall program goal is, "to develop and deploy innovative technologies that transform California's fuel and vehicle types to help attain the state's climate change policies."

Annual investment plans articulate state policies, goal-driven priorities, and investments aimed at reducing greenhouse gas emissions, petroleum dependence, criteria pollution emissions, and sustaining a clean transportation economy for all Californians. The program is built on partnerships and by incorporating input from an array of business and equity stakeholders, consumers, and advisory bodies such as the Disadvantaged Communities Advisory Group and the Clean Transportation Program Advisory Committee.

As of December 2020, 32 percent of Clean Transportation Program funding went to projects in disadvantaged communities. However, the percentage of investments climbs to 49 percent when low-income communities are included as well. This represents over $485 million in project investments. Over 1,338 projects funded in disadvantaged communities out of a total of 2,200 projects. Next slide, please. Thank you.

This is a map showing project locations funded by the Clean Transportation Program in disadvantaged communities. Projects impacted by these investments includes Calexico Unified School District, the Port of Long Beach and nearby environs, and Granville Homes in Fresno. Next slide, please.

A few highlights I would like to draw your attention to include: 1) the IDEAL Communities Partnership, 2) investments in the California Electric Vehicle Infrastructure Project or CALeVIP, 3) the Electric School Bus Training Project, and 4) the Sustainable Freight Foundations Certificate.

First CALeVIP offers incentives for the purchase and installation of electric vehicle charging infrastructure throughout the state. CALeVIP is currently funded for nearly $125 million with a potential of up to $200 million. Local partner co-funding contributions are over $32 million. I would note that through CALeVIP, some projects require funds to be spent in unincorporated communities, low-income communities, and/or disadvantaged communities.

Second, last year we launched the IDEAL Communities Partnership through an agreement with the Foundation for California Community Colleges. The IDEAL Communities partnership is an intentionally designed equity

effort that will assess the development of a technical assistance program, conduct outreach and engagement with priority communities to better understand and support their clean transportation needs, establish an IDEAL Student Ambassador Program. And lastly, conduct an IDEAL Community Forum for communities to express their clean transportation needs and to identify ways to improve partnerships and investments of the program.

Thirdly, workforce training and development has been a hallmark of the program since inception. The Electric School Bus Training Project provides training to school bus technicians that receive school buses from our school bus replacement program.

And lastly, the program completed a beta freight workforce project, the Sustainable Freight Foundations Certificate effort, with the Governor's Office of Business and Economic Development and CSU Long Beach. Next slide, please.

In a partnership with the colleges through the Advanced Transportation and Logistics Initiative, the Clean Transportation Program has established a ZEV, Zero Emission Vehicle High School Pilot Program. We established the "Automotive 3: ZEV Technology Program", where 28 high schools are currently participating. This wildly successful effort will be expanding the automotive program

to include even more high schools. We will also be establishing a new ZEV Truck Technology Program as well. Next slide, please.

So what about results? Throughout the Clean Transportation Program portfolio, a focus has been on job creation. Over 9,000 jobs have been supported since program inception. Turning to specific workforce investments, the total program investment for the workforce training and development portfolio is over $36 million dollars for over 20,000 trainees and hundreds of faculty and trainers.

The Clean Transportation Program will continue to lead in the establishment of ZEV training opportunities and career transportation pathways in equity and frontline communities. And will continue to be a priority of the program as more ZEV technologies are deployed.

So what is next? Increase the ZEV and ZEV infrastructure deployments, maturation of the ZEV supply chain in California, and continuing intentional engagement and support for front line communities, equity communities, and disadvantaged communities will be critical as the Clean Transportation Program investments help the state achieve its climate goals while also accruing environmental and economic benefits for all.

That concludes my presentation. Now I would like

to introduce my colleague Hally to present. Thank you.

MS. CAHSSAI: Thanks, Larry. Good morning Commissioners. My name is Hally Cahssai and I'm a supervisor in the Renewable Energy Division. I am pleased to present three programs starting with the New Solar Homes Partnership also known as the NSHP. Next slide, please.

The NSHP program was launched in 2007 as part of a statewide solar incentive program called the California Solar Initiative. It incentivizes installation of solar energy systems in new home construction in investor-owned utility territories.

As of December 2020, 15 percent of NSHP funds were invested in projects located in disadvantaged communities totaling $34 million invested in over 11,700 projects. Next slide, please.

In terms of impact, to promote strong support of all project types, the NSHP offers different incentive rates to market rate and affordable housing projects. This different incentive rate promotes efficient use of program funding and assistance to demographics most in need. As of the latest incentive level, the NSHP provides $1.85/watt for affordable housing and $0.75/watt for market rate housing.

The NSHP program has contributed to the adoption of rooftop solar in the following ways. First, assisting

the development of a new and critical sector to reach greater market maturity and market saturation. This support has helped promote the inclusion of rooftop solar in the latest building standards.

Second, providing assistive resources to prospective consumers in the form of solar equipment lists, contractor directories, and NSHP program support

Third, helping move California towards the goal of one million solar roofs.

The stay-at-home orders have vastly changed how the program functions. Program processes changed by moving to a fully digital process, helping applicants avoid the need to mail-in documents as before. As the program is set to end on December 31, 2021, the contributions of NSHP towards the solar market will continue. Next slide, please.

The second investment program I'm presenting is the Geothermal Grant and Loan Program. This program was established in 1980 to help reduce dependence on fossil fuels and to stimulate the state's economy through geothermal resource developments. Funding for the Geothermal program comes from royalty and lease payments made to the United States government by geothermal developers operating on federal land in California.

The geothermal program distributes grants and

loans with these goals. Promoting and maintaining development of California's vast geothermal energy resources, mitigating adverse impacts caused by geothermal development, and helping local jurisdictions offset the costs of providing public services necessitated by geothermal development.

As of December 2020, 8 percent of the Geothermal Program's funding totaling $2.5 Million for 1 project is located in a disadvantaged community. Next slide, please.

In this map of the projects, you can see that geothermal resources are spread throughout California. By nature, the projects tend to be in rural areas of the state. In addition to California's vast lower temperature, direct use resources, and hot springs located throughout the state, California has installed more geothermal electricity capacity than any other state in the US or other country worldwide with over 2,700 megawatts of installed capacity from 43 operating power plants.

The diamond represents a project in the disadvantaged community region in Imperial County known as the Salton Sea. The yellow shaded regions represent the top 25 person most impacted disadvantaged communities as classified according to CalEnviroScreen 3.0. Next slide, please.

The project at the John L. Featherstone

geothermal plant in the Salton Sea had a Budget of $2.5 million and Match Budget of $2.53 million and was successfully completed in September 2020. The purpose of the grant was to develop an integrated engineering design, reducing the risks and costs associated with a commercial lithium plant, to produce lithium and mineral co-products.

Current efforts of the geothermal program are to support and offer project management to the Lithium Valley Commission, further exploring the opportunities for lithium industry development in the Salton Sea Geothermal Resources Area. Next slide, please.

The final program I'm presenting is the Renewable Energy for Agriculture Program also known as REAP. REAP was established in 2018 and offers grant funding for the installation of renewable energy technologies serving California's agricultural sector.

REAP was funded through California Climate Investments, a statewide program utilizing billions of Cap-and-Trade dollars to reduce greenhouse gas emissions, strengthen the economy, and improve public health and the environment—particularly in low-income and disadvantaged communities.

REAP was allocated $10 million in funding, with $9.5 million available for grant awards. The projects awarded were spread across 18 counties in California,

including 8 out of the top 10 agricultural counties in the state. As of December 2020, 39 percent of REAP funds or about 3.7 million for 16 projects were invested in disadvantaged communities. REAP program funding was exhausted in the 2019 solicitation. Next slide, please.

This map shows the project locations of the investments made. The map's diamonds indicate REAP projects in disadvantaged communities and the highlighted areas indicate the top 25 most impacted disadvantaged community areas per CalEnviroScreen 3.0. Next slide, please.

I would like to highlight the highest-scoring REAP applicant happens to be a woman and first-generation minority-owned low-income farm. The applicant's farm specializes in organic produce. The applicant serves local farmer's markets, restaurants, and stores providing fresh organic produce to low-income children and seniors.

The team looks forward to the opportunity to be even more successful in the future funding opportunities and further advance the mission of the CEC.

That concludes my presentation. Now I'd like to introduce my colleague David Velasquez to present.

MR. VELAZQUEZ: Thank you, Hally. Good morning, Commissioners. My name is David Velazquez. I'm an Energy Commission Specialist in the Renewable Energy Division.

I'm excited to present two programs starting with the California Clean Energy Jobs Act, more commonly known as our Prop 39 K-12 Program. Next slide, please.

In terms of the investment, Prop 39 has granted more than 1.7 billion over five years to schools to plan and install energy efficiency upgrades and clean energy generation measures at over 7,000 project sites.

As of December 2020, 28 percent of Prop 39 funding was invested in projects located in disadvantaged communities totaling about $419 million for 1,684 projects. Next slide, please.

This map shows the project locations of Prop 39 projects. On this map, the yellow highlighted areas are the top 25 percent most impacted Disadvantaged Communities according to the metrics set by CalEnviroScreen 3.0. The diamonds on the map represent projects in disadvantaged communities. As you can see, there is a lot of overlap showing Prop 39 was able to provide funding for these communities that needed help the most. The Prop 39 K-12 Program invested funds in all 58 counties especially impacting those Central Valley and Southern California disadvantaged communities in our agricultural communities suffering from poor air quality. Next slide, please.

Prop 39 has had a major impact on schools throughout California. As mentioned previously, the

program has invested over $1.7 billion to energy projects at over 7,131 sites. The estimated annual savings for these energy measures are in excess of $100 million. These projects are helping students and teachers by providing an overall healthier learning environment with the new equipment installed. Next slide, please.

Now I'd like to present the Energy Conservation Assistance Act Program also known as ECAA. This presentation will look a bit different than the others, because this program is a loan program, not a grant program. The ECAA program has two loan types. One loan type provides zero-interest rate loans to public school districts, charter schools, county offices of education, and state special schools awarded via a competitive application process. The other ECAA loan type provides 1 percent interest rate loans to cities; counties; special districts; and public colleges, universities, care institutions, and hospitals awarded via a first-come first-serve application process. Both loans have been issued to eligible applicants throughout California. Next slide, please.

In terms of impact, over its lifetime, ECAA has provided hundreds of millions of dollars in loans for energy efficiency projects to cities, counties, schools, and other public entities. These projects have resulted in

substantial energy cost savings.

The program has demonstrated there is a need on the part of public entities in California for these low and zero interest loans. Cities, counties and schools are very interested in pursuing these loans to fund energy projects resulting in energy efficiency, energy generation, improved environment and energy cost savings.

The ECAA program has provided loans throughout the state, to both large and small public entities, including many disadvantaged communities. Projects funded by the loans have benefits apart from increased energy efficiency, energy generation and resilience. ECAA projects encourage the development of clean energy jobs, clean energy job training programs, installing clean energy technologies in disadvantaged communities making this technology a part of their everyday lives. ECAA-funded energy projects also help improve air quality in local communities and move us closer to achieving our climate and energy goals.

That concludes my presentation. Now I'd like to invite Noemi to come back. Thank you very much.

MS. GALLARDO: Thank you, David.

I'd like to close with some takeaways from the 2020 Diversity Report. I'll start with lessons learned.

First, several of the programs shows that the

Commission is responsive when the state is impacted by crises and other hardships. A quick example is NSHP extending deadlines during the COVID-19 pandemic. And local government challenge grants providing funds to local governments recovering from an economic downturn.

Some programs also have realized they need to provide material for communities in other languages to help ensure limited English proficient companies can access the programs.

Second we're in need of more standardized metrics to evaluate the Commission's programs. We currently rely on the CalEnviroScreen 3.0, which is a good tool but it's limited in certain ways. For example, it doesn't include tribes. I am planning to work with divisions to develop other metrics that we can standardize to try and show that those additional dimensions of diversity and equity work. The Clean transportation Program is a good example of how they're adding the workforce development dimension of benefits and tracking that.

Finally, we've seen that programs that intentionally designed the programs to be equitable and provide resources tailored to community needs can be really successful. So the local government challenge (indiscernible) nearly 80 percent of spending in disadvantaged communities. Because they've dedicated

funding to those communities with populations fewer than 150,000, so that reached some of those communities that needed it. They also included technical assistance to help ensure the government plans are successful.

I'm hoping to see at least some programs reach 100 percent spending in disadvantage and equity communities when they can. Some programs are limited by conditions or parameters beyond our control, but we can definitely continue to be intentional and diligent about investing resources strategically.

In terms of opportunities to advance equity, the key takeaways I want to highlight are to maximize our transition to in-person engagement, getting closer to the community. For example, conducting some of our business meetings in different regions of the state and scheduling an additional data connect with residents and community-based organizations located there. This would be really helpful to us, to better determine what the needs are, what the gaps are, any challenges and opportunities that they may have that we can address. And what they deem as benefits that we can learn from as well.

Second, there are several opportunities rising to partner with our peer agencies, including the Public Utilities Commission and Strategic Growth Council, to determine how to better define community benefits, how to

design tracking methods and develop more resources for communities together.

I also plan to work with our advisory body, the Disadvantaged Communities Advisory Group to guide our efforts, particularly helping us finalize an equity framework.

And lastly, I've started to form an internal task force to help close gaps and existing equity efforts and to achieve our goals to advance energy equity and supplier diversity in a more coordinated fashion. Next slide.

Finally, I'd like to thank my colleagues who supported behind the scenes to produce the Diversity Report including Tom Gates, Travis David, Gabriel Blossom, Dorothy Murimi, Karina Camacho, Armin Agullo, (phonetic) Heather Bird, and the teams supporting the presenters.

And I'd also like to thank my co-presenters for their time and love they invested in the Diversity Report. Team, please turn on your video boxes and join me on the stage here. That concludes our presentation of Item 2, the 2020 Diversity Report. We welcome any questions or comments that you may have, Commissioners.

COMMISSIONER DOUGLAS: All right. Well, thank you so much Noemi. And thanks to all of our presenters: Daniel, Katrina, Larry, Hally, David. It's great to hear, not only the content of what you had to say, but the

enthusiasm and strong support for helping us achieve these goals.

And with that, this is a non-voting item. Let me ask now if any Commissioners have comments or questions, Commissioner McAllister?

COMMISSIONER MCALLISTER: Yeah, just quickly. Thanks, Noemi, and the whole team for that. I really am gratified to see really how well we're doing. I mean, I think you've laid it out nicely, you know, highlighting our successes and then presenting ways we can improve.

I just have to say how proud I am of the challenges programs, the local government challenge and the tribal challenge. You know, we were using -- the original idea was to sort of start small, use reflows ARRA period, right? We're still churning through money from the Obama stimulus period. And these are reflows that come in from our various financing programs that we started way back then. And Commissioner Douglas, you were right in there in there in the original implementation of.

And then as we get those reflows -- when the economy went bust and local governments had to lay off their building departments, you know 80 percent in some cases with they're building departments -- we really wanted to create a resource that those local governments could rely on and doing an equitable way. And it's just really

gratifying to see.

You know, we've been paying attention along the way, and so we kind of knew the details of each project was funded by that. But it's nice to see that overall picture and the success. And really the fact that we're moving the needle on the equity front at the local government level, which is a huge gap for resources in the state. You know, often state resources have a difficult way finding their way to local governments, and we need to fix that.

So you know if there's some federal stimulus, we can channel that into those programs, possibly, you know we can we can find more reflows in other pots to continue to nurture those approaches. Because I think that local government is essential for our success as a state to reach our climate mitigation goals. But structurally, it's a kind of chronic underfunding that happens at the local government level. So I really want to highlight those programs.

And then obviously Prop 39, our schools, that was huge re-formula based program, but really got around the state and move the needle as well.

So but all the programs have their role and I really appreciate your oversight and your overview of all of that. I'm really proud of the Commission and all the staff that have worked on those programs over the last

decade.

COMMISSIONER DOUGLAS: Super. Thank you, Commissioner McAllister.

Commissioner Monahan?

COMMISSIONER MONAHAN: Well, I wanted to thank our Public Advisor. And it was wonderful to see the evolution of this report. I mean last year was the first year that I had actually been exposed to it. I think it was Noemi's first as well. And to see just -- I really liked the fact that there were folks representing each of the funding streams, representing and providing story vignettes about the successes. To me that really helped deepen kind of our thinking around equity.

You know this is something we've talked about a lot, but I just want to emphasize in a public setting that tracking grants locations is easy. And it's important, but it doesn't necessarily reflect a benefit to communities that we need to deepen our attentiveness to quantifying benefits.

And I really appreciated what Larry presented in terms of jobs, I thought well yeah that's the kind of metrics we need. Like 9,000 new jobs, 20,000 people trained, at least 20,000 plus people trained. And, so I look forward to working with you, Noemi, and Disadvantaged Communities Advisory Group, and the broader stakeholder

Community just on ensuring that we are constantly improving.

I mean we never -- we are not there yet, we'll never be there in terms of equity. But our job is to always improve and to have a public process that is engaging and brings people in. And really tries to do a better job supporting disadvantaged low-income tribal communities, priority communities, however we end up identifying them.

So the Clean Transportation Program has been trying to think through these benefits. And we really are committed to in the next year being more transparent about that. And working with Noemi and working with others to do that. We've gotten some feedback from our stakeholder community that they want us to spend 50 percent of our funds index, and they want 50 percent of the benefits going to DACs and low-income communities. So really, we are listening to our stakeholders and we want to be more transparent in how we're qualifying benefits.

COMMISSIONER DOUGLAS: Super. Thank you, Commissioner Monahan.

Commissioner Gunda?

COMMISSIONER GUNDA: Thank you, Commissioner Douglas.

I just wanted to start off with thank yous to

Noemi and Dorothy who has been in the meetings kind of helping me come up to speed on a lot of these efforts. Excellent presentations by Daniel and David, Hally, Katrina and Larry. Thank you so much for both kind of being thoughtful in your presentations, being thorough. I just appreciate the transparency on how we're approaching the metric, so very much thankful for all your efforts.

I do definitely recognize the value that Noemi has been bringing in terms of really thinking about how best to articulate the story of how we are doing in equity across all areas. So I just am grateful, Noemi, for your efforts in this area.

And also I want to thank DACAG for their participation in most of our grant-making processes and providing guidance and such. So an overall thank you.

As a point of opportunity, Noemi, you have kind of laid out some excellent opportunities there. I do -- you know, as kind of the Lead Commissioner of EAD, which is primarily analytical, would love to continue to work with you to think about how those efforts on the analytical side and the data side could better inform our equity efforts. And looking forward to having a slot next year on that side, how well we can do that.

So thank you all again. Thank you so much.

COMMISSIONER DOUGLAS: Well, super. Thank you,

Commissioner Gunda.

And I just wanted to add very briefly that I really love hearing the diversity of programs and just how it brought different kinds of benefits, engaged with different communities.

I had the opportunity, earlier this week to participate in the EPIC Empower Innovation Event. And moderate a panel or a breakout session discussion, which had a primary focus on active listening to and learning from participants from disadvantaged communities and communities that are under-resourced. And how to bring that into our programs and be more effective in this kind of engagement and so it was great to do that.

And I continue to be really pleased to see the many ways that the Energy Commission's executive leadership and divisions and obviously the Public Advisor and support from the Public Advisor's Office help us work to meet the Energy Commission's commitment to inclusion, equity, diversity and access. And this report is really good demonstration of that.

So thank you, Noemi and team, and with that I think we'll move on to the next item.

So Item Number 3 then, CA3 Backup Generating Facility, 21-SPPE-01. So let's see, Eric?

MR KNIGHT: Good morning, Commissioners. I'm Eric

Knight, Manager of the Siting and Environmental Office in the Siting, Transmission, and Environmental Protection Division. With me are Staff Attorney, Lisa DeCarlo, and Staff Project Manager, Eric Veerkamp. We're here to present a proposed order appointing a Committee to oversee a Small Power Plant Exemption proceeding for the proposed CA3 Backup Generating Facility. Next slide, please.

The CA3 Backup Generating Facility would consist of 44 2.75 MW diesel-fired generators to provide up to 96 MW of emergency backup power to the proposed CA3 Data Center should there be a loss of utility power to the data center from the electrical grid.

I'd like to point out what may look like a discrepancy on this slide. With 44 2.75 MW generators it may appear that the (indiscernible) generating capacity of the backup facility would be 121 MW. However, the backup facility includes redundant generators to ensure that the maximum electrical demand of the data center would be met during an emergency. So the maximum load would be 96 MW.

The data center would be housed in a nearly 470,000 square-foot, four-story building. The project, which includes the backup facility and the data center, would be located at 2590 Walsh Avenue in the City of Santa Clara.

The applicant, Vantage Data Centers, filed its

Small Power Plant Exemption application on April 12th, 2021, seeking an exemption from the CEC's power plant licensing jurisdiction..

The SPPE option is only available for thermal power plants between 50 and 100 megawatts, and pursuant to Public Resources Code section 25541, the exemption can only be granted if the CEC finds that "no substantial adverse impact on the environment or energy resources will result from the construction or operation of the proposed facility."

Staff is conducting an environmental review of the exemption application and will prepare an environmental analysis document in accordance with the California Environmental Quality Act. Staff's environmental document will analyze the entirety of the project including the demolition of an existing one-story office and warehouse building on the project site. Next slide, please.

In conclusion, staff recommends approval of the proposed order establishing a committee to oversee the CA3 Backup Generating Facility Small Power Plant Exemption proceeding.

Thank you. And we'd be happy to answer any questions you may have.

COMMISSIONER DOUGLAS: Thank you, Eric.

Is there any public comment on this item?

MS. GALLARDO: This is Noemi Gallardo, the Public Advisor. We do not have any public comment on Item 3.

COMMISSIONER DOUGLAS: All right, very good then.

Let's see here, so then I'll propose that I, Commissioner Douglas, serve as the Presiding Member on this Committee. And Commissioner Gunda, as the Associate Member of the Committee for this proceeding. Commissioner Gunda, do you have any comments and would you be willing to make a motion to this effect?

COMMISSIONER GUNDA: Yes, thank you, Commissioner Douglas. I have no comments. I move approval for the Committee as described by Commissioner Douglas to have herself as the Presiding Member and myself as the Associate Member of the Committee.

COMMISSIONER DOUGLAS: Thank you very much, and do we have a second?

COMMISSIONER MCALLISTER: I'll second.

COMMISSIONER DOUGLAS: All right, thank you, Commissioner McAllister, second.

So we'll now take the vote. Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

COMMISSIONER DOUGLAS: Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

COMMISSIONER DOUGLAS: Commissioner Gunda?

COMMISSIONER GUNDA: Aye.

COMMISSIONER DOUGLAS: And I vote aye, so that item passes 4-0. Thank you very much.

And now turning to Item 4, Integrated Environmental Solutions Virtual Environment Approved Computer Compliance Program for the 2019 Title 24, Part 6 Nonresidential, Version 1.0. Let's see, I welcome RJ Wichert to present.

MR. WICHERT: Thank you. Good morning, Commissioners. My name is RJ Wichert and I'm a Mechanical Engineer in the Building Standards Office.

I'm here to ask for your approval of Integrated Environmental Solutions Virtual Environment Title 24 2019 version 1.0, also known as IES VE Title 24, as an alternative calculation method, or ACM, for showing compliance with the 2019 Energy Code for newly constructed nonresidential buildings. Next slide, please.

If approved, IES VE Title 24 will expand the list of approved nonresidential third-party software vendors, giving the public three software options, including the public domain software CBECC-Com, to show performance compliance with the Energy Code. Further, approving IES VE Title 24 will simplify the building design and compliance process for design firms already using other components of IES VE during the building design phase. Instead of

needing to create multiple building simulation models, at least one for design in IES VE and a second in an approved compliance software like CBECC-Com, firms will be able to create one IES VE model that will work for both design and compliance. Next slide, please.

IES VE Title 24 was submitted to the CEC as an alternative nonresidential energy simulation engine to CBECC-Com under the allowances of section 1.1.5 of the 2019 ACM Approval Manual. Unlike other third-party software, which use the CBECC-Com simulation engine and ruleset, alternative simulation engines can use a different simulation engine, but must integrate the CBECC-Com compliance manager ruleset in order to produce simulation results accurate to the CBECC-Com software and passing all applicable sensitivity and ruleset tests. Next slide, please.

Staff reviewed and tested IES VE Title 24 to confirm that the application is in compliance with all requirements of the ACM Approval Manual and is seeking approval of the resolution on this item. Thank you and I'm available to answer any questions you may have.

COMMISSIONER DOUGLAS: All right, thank you very much for that presentation is there any public comment on this item.

MS. GALLARDO: This is Noemi, the Public Advisor. Yes, it looks like we have one public comment. So that is Liam Buckley on our Verizon line. Liam, a reminder to please restate your name, spell your name. And you will have up to three minutes to make your public comment. I will let you know when your line is open.

MR. BUCKLEY: My name is Liam Buckley, L-i-a-m B-u-c-k-l-e-y.

MS. GALLARDO: Thank you, Liam. Please continue.

MR. BUCKLEY: Hello, Commissioners. On behalf of IES Software, I want to take the opportunity to thank the Energy Commission and the Building Standards Office team for the support they've provided to us throughout the development cycle. And we're looking forward to working with that team again in the future.

Our local team in California are similarly looking forward to working with the building design industry in California, to achieve a zero carbon build environment, thank you.

MS. GALLARDO: Thank you. This is Noemi, Public Advisor. That is the last comment, Commissioner Douglas.

COMMISSIONER DOUGLAS: All right, thank you very much, then.

Time for Commissioner discussion and Commission McAllister would you like to start?

COMMISSIONER MCALLISTER: Yes, so thank you RJ, for your presentation. It was a really great description of the context here and also I wanted to thank Mr. Buckley and IES for bringing this forward and working with our staff on creating a new additional alternative for folks to comply with the code.

And I just wanted to reiterate and highlight something that RJ said, which is you know, we do have a public domain software CBECC-Com that has an engine, a modeling engine that people can use, you know designers, and can use to navigate code compliance. It is so much better for the industry and the marketplace as a whole to have that process integrated within the design software itself. And that's really what IES has done and they built the engine that fits within their broader set of tools.

And these are tools that already have a large user base, a relatively sophisticated user base and design-build firms, and you know it's a global enterprise. And so it's really gratifying to have this to this point where we can, if we approve it -- if vote we vote to approve it then give that additional flexibility to folks building in California. So I really wanted to just again thank the staff and IES and looking forward to moving this item. Obviously I support this item.

COMMISSIONER DOUGLAS: Thank you, Commissioner

McAllister. And obviously anything that helps facilitate compliance with the Building Standards and simplifies, is a huge help and a huge benefit.

Commissioner Monahan, any comments?

(No audible response.)

Commissioner Gunda?

(No audible response.)

All right, I think we're ready for a motion.

COMMISSIONER MCALLISTER: Great, I'll move Item 4.

COMMISSIONER DOUGLAS: Commissioner Monahan, could you second?

COMMISSIONER MONAHAN: I'll second Item 4.

COMMISSIONER DOUGLAS: Fantastic, so with that we'll call a vote. Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

COMMISSIONER DOUGLAS: Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

COMMISSIONER DOUGLAS: Commissioner Gunda?

COMMISSIONER GUNDA: Aye.

COMMISSIONER DOUGLAS: Thank you. And I vote in favor as well, so that item passes 4-0.

Moving on to Item 5, Energy Conservation Assistance Act Loan Program or ECAA Program. I welcome Matt Jones to present.

Thank you, hello Commissioners. My name is Matt Jones and I am a Supervisor with the Renewable Energy Division. I'm here to request your approval of two Energy Conservation Assistance Act, commonly known by the acronym ECAA, loan agreements with the City of Ferndale and the County of Mariposa, and one ECAA-ED loan to the Ravenswood City School District. The ECAA and ECAA-Ed programs provide low-interest loans to public entities for energy-efficiency upgrades. Next slide, please.

Benefits to California from ECAA Loans include improved health outcomes, the creation of green jobs, lower utility bills for municipalities and schools, and increased energy efficiency. Next slide, please.

The City of Ferndale is proposing to finance an energy project using an ECAA one percent interest loan in the amount of $203 thousand. The project involves retrofitting old inefficient lighting with efficient LED lighting at one city-owned facility and installing rooftop solar PV systems at two additional city-owned sites. Next slide, please.

The County of Mariposa is proposing to finance an energy project using an ECAA one percent loan in the amount of $2.8 million dollars. The project involves retrofitting old inefficient lighting with efficient LED lighting at eight sites and installing solar PV systems at an

additional four sites. Next slide, please.

The Ravenswood City School District is proposing to finance an energy project using an ECAA-ED zero percent interest loan in the amount of $2.9 million. The project involves retrofitting inefficient lighting with new LED lighting at two school sites and installing Solar PV systems at an additional four sites. Next slide, please.

Staff has reviewed all of these projects and has determined that they are technically sound. The projects would have significant energy and cost savings.

The City of Ferndale project is estimated to save over 77,000 kWh annually and have energy cost savings for the city of over $14,000 every year.

The County of Mariposa's project is estimated to save over 919,000 kWh annually and save the city over $190,000 every year.

The Ravenswood City School District project is estimated to save approximately 963,730 kWh annually and save the District over $158,000 in energy costs every year. Next slide, please

Legal staff found these projects to be exempt from the California Environmental Quality Act. Energy Commission Staff recommend approval of these loans. Thank you for your consideration.

This concludes my presentation. If you have any

questions, I would be happy to answer them.

COMMISSIONER DOUGLAS: Thank you very much for that presentation, Matt.

At this point, is there any public comment on Item 5?

MS. GALLARDO: This is Noemi, the Public Advisor. There are no public comments on Item Number 5.

COMMISSIONER DOUGLAS: All right, let's go to Commissioner discussion and Commissioner McAllister, would you like to start?

COMMISSIONER MCALLISTER: Yes, so thanks for that presentation. I think we routinely approving the ECCA program loans, because we know that the staff is evaluating those and does a really good job. And works with a local jurisdictions, whether it's the schools school districts, or the cities and counties to make sure that they check all the boxes of the program, that the project is cost effective and has the right financial profile.

So I like seeing these projects that have lots of different end uses and help pushing the ball forward on various fronts so. So I don't have any further comments, a lot of confidence in staff bringing this forward. And I'm happy to support and I can go ahead and move if there are no other comments.

COMMISSIONER DOUGLAS: Are there any additional

comments?

COMMISSIONER MONAHAN: So I just want to say, every time these come up they're like a bright spot in our day. I don't know if it's so for all the Commissioners, but this is actually we're helping local governments, we are helping schools. You know, we're helping all these entities that are struggling, saving them money and making the environment more clean. Like what's not to love about this, though?

So just thank you and your team for the hard work on this.

COMMISSIONER MCALLISTER: And also if you think about if you look at the actual end uses that are being financed by these by these loans, a lot of them have long-term ties with Energy Commission R&D and LEDs. Obviously we've helped push the market for those and solar. We've helped bring the cost down, and you know, eight-track (phonetic) improvements. All the kinds of various things that ECCA funds, we've done a lot to make those systems all they can be and bring the cost down, to enable programs like this on the hardware side. So there's just a lot to like. It's very, very reaffirming. And we all need that in this day and age, so anyway I'll move Item 5.

COMMISSIONER DOUGLAS: Thank you very much.

Commissioner Monahan, would you like to second?

COMMISSIONER MONAHAN: I'll second the item.

COMMISSIONER DOUGLAS: Excellent, so let's take the vote. Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

COMMISSIONER DOUGLAS: Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

COMMISSIONER DOUGLAS: Commissioner Gunda?

COMMISSIONER GUNDA: Aye.

COMMISSIONER DOUGLAS: And I support as well, my vote's in favor, so the vote count is 4-0 and the motion passes.

Turning now to Item 6, the University of California Davis. I welcome Miki Crowell to present.

MS. CROWELL: Good Morning, Commissioners. My name is Miki Crowell and I am an Air Pollution Specialist in the Fuels and Transportation Division. I am here to present an agreement with the Regents of the University of California, Davis Campus to award the $125,000 contract to study the role of the light-, medium-, and heavy-duty vehicles and infrastructure in a California hydrogen transition. Next slide, please.

The demand for hydrogen as a transportation fuel in California is expected to increase based on auto manufacturers' projections of vehicles. And with increased planned investments on medium and heavy-duty vehicles, as a

response to the Governor Newsom's Executive Order N-79-20, that set goals that all new passenger cars and trucks sold in California to be zero-emission by 2035. All medium and heavy-duty trucks and buses operated in California to be zero-emission by 2045 everywhere feasible. And all drayage trucks to be zero-emission by 2035.

This proposed agreement with UC Davis will study the role of vehicles and infrastructure in a California hydrogen transition and will be part of a larger project that UC Davis is currently undertaking.

The larger project will study a future hydrogen system design, scale-up and optimization within California, the benefits this system will have within the state, the costs of developing and operating the system, and policies needed to achieve it.

For this larger study, UC Davis will look at a statewide multi-sector hydrogen system, including power generation, building, and other industry sectors.

This project has secured funding from various industry stakeholders and research support from other research institutions.

The study results from this agreement and the larger project will help shape future policies, solicitations, and projects to support the hydrogen system, which in turn will advance the state towards its air

quality and climate change goals. Next slide, please.

For this agreement, UC Davis will study vehicle scenarios, location of hydrogen demand and supply, station investment behavior, and impact of demand from the transportation sector.

For vehicle scenarios: the project team will explore different light-, medium-, and heavy-duty fuel cell electric vehicle sales scenarios to 2050, and what factors will affect these sales.

For location of hydrogen demand and supply the project team will model the transportation system using their California spatial model to analyze where hydrogen demand and generation are likely to be and the distribution system needed to connect them. The impacts of different vehicle scenarios on the number, types, and locations of hydrogen refueling stations will be the focus.

For station investment behavior the project team will estimate station costs and investment requirements for different types of hydrogen refueling stations. They will explore station utilization rates needed to achieve return on investments, as well as approaches and policies to attract private investment under different circumstances.

For impact of demand from the transportation sector the project team will link the transportation hydrogen demand generated in different scenarios to their

modeling of hydrogen supply and infrastructure, to understand what happens to overall costs to build a hydrogen system if the demand from the transportation sector is higher or lower. Next slide, please.

Staff recommends approval of this item and adopt staff's recommendation that this action is exempt from CEQA.

Staff is available to answer any questions you may have and thank you.

COMMISSIONER DOUGLAS: Thank you, Miki.

Are there any public comments on this item?

MS. GALLARDO: This is Noemi, the Public Advisor. Yes, we do have a public comment, it is Lewis Fulton. Lewis, a reminder to please restate your name, spell your full name, and you have up to three minutes to state your comment. Your line is open, you may begin.

MR. FULTON: Yes, I'm Lewis Fulton, L-e-w-i-s F-u-l-t-o-n. I direct the Energy Futures Program at UC Davis, and we are very happy to have this project with the California Energy Commission. And we look forward to working with you on this.

As Ms. Crowell said it's part of a larger project and the project overall will be looking at potential development of full hydrogen systems for California, including both transportation and other sectoral demands

for hydrogen. And then we're building a set of models on the supply side to try to understand how you would build out the hydrogen system to meet those demands with a spatial and temporal detail.

The California Energy Commission project provides us with very important funding to strengthen our characterization of the transportation demands that we may see. And how those could vary and what factors will drive that and also how refueling station economics will play into this and how various policies will interact with all of that.

So the policy aspect will be important. We'll want to understand what we can do to get the hydrogen system up and running and become a free standing system, but we need to understand what additional policy support would be needed to do that. And just how big are the hurdles to do that.

So that's all I wanted to comment on, but we really look forward to this project with CEC.

COMMISSIONER DOUGLAS: All right, well thank you very much for commenting on this item.

And at this point we'll move on to Commissioner discussion beginning with Commissioner Monahan.

COMMISSIONER MONAHAN: So on this Item Number 6, I have to recuse myself from the discussion and vote of the

proposed contract to the University of the Regents, of the University of California on behalf of the UC Davis Campus Institute of Transportation Studies.

I'm on the Board of Advisors for the Institute for Transportation Studies. In that role, I do not make governance decisions on behalf of the Institute, but we provide guidance and oversight of the program and it's four branches. Additionally, I do not receive any compensation in any form, including reimbursements for per diem for expenses. So there's no financial interest in which there will be a conflict of interest under the Political Reform or Government Code section 1090.

However, in an abundance of caution, I am recusing myself to avoid any perception of a conflict of interest. So I'm going to step away from my seat. I'll mute myself, but I'll leave my video on and I'll return when the Public Advisor contacts me.

COMMISSIONER DOUGLAS: All right, thank you Commissioner Monahan. I will give her a moment to move away from the video. There we go.

All right, so Commissioners, does anyone else have any comments they'd like to make on this item or question?

Commissioner Gunda?

COMMISSIONER GUNDA: Yeah, just a thank you for

the presentation. And again I just wanted to acknowledge what an important conversation hydrogen is moving forward to really understand the utility of hydrogen both in the transportation -- but as I understand the larger project at UC Davis also includes a study on the grid reliability and kind of the opportunities of hydrogen for broader grid needs. And so just looking forward to this project and look forward to listening to the results (indiscernible), so thank you.

COMMISSIONER DOUGLAS: Thank you.

Any other comments on this?

COMMISSIONER MCALLISTER: Yeah, just quickly. I mean along those same lines, you know, this is an area broadly that we need to get kind of jump-started in California to understand, in particular with hydrogen it's going to need probably or very likely some kind of an integrated approach across sectors. Including as Commissioner Gunda said, power sector potential applications. But also industrial and thermal in addition to the transportation. And so having an initiative that that is looking broadly, and that we can provide specific funding for, it really makes a lot of sense kind of to do that in earnest.

And this hydrogen conversation is turning out to be a pretty integrated one, so I think all of us across the

dais here will have interest in bits and pieces of it. And so it's really nice to have some integrated thinking moving forward, so I'm also supportive of this item.

COMMISSIONER DOUGLAS: Yeah, and I agree with both of your comments very much. And I'm in strong support as well.

Let me ask, Commissioner Gunda, would you like to make a motion?

COMMISSIONER GUNDA: Yeah, I would like to move Item 6.

COMMISSIONER DOUGLAS: Thank you.

And Commissioner McAllister?

COMMISSIONER MCALLISTER: Second.

COMMISSIONER DOUGLAS: All right, we have a motion and a second, so we'll move on to the vote.

COMMISSIONER DOUGLAS: Commissioner Gunda?

COMMISSIONER GUNDA: Aye.

COMMISSIONER DOUGLAS: Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

COMMISSIONER DOUGLAS: And I vote aye as well. So this item passes 3-0, with one recusal.

And Noemi, if you could bring Commissioner Monahan back, that would be very helpful.

MS. GALLARDO: Will do, I will let her know.

COMMISSIONER DOUGLAS: Thank you.

In the meantime, when Commissioner Monahan returns, we will start Item 7, Zero Emission Transit Fleet Infrastructure Deployment. And let's see, Esther Odufuwa, did I say that right? Well, wonderful. Well welcome, and it looks like Commissioner Monahan is back, so go ahead.

MS. ODUFUWA: Good morning, Commissioners. My name is Esther Odufuwa, Energy Commission Specialist with the Fuels and Transportation Division. Today, we're seeking approval today for two agreements resulting from the Zero-Emission Transit Fleet Infrastructure Deployment Solicitation.

In July 2020, staff released this solicitation, which announced the availability of up to $20 million to fund the electric vehicle charging or hydrogen refueling infrastructure that is needed to support the large-scale conversion of transit fleets to zero-emission vehicles.

Under this solicitation, four projects were proposed for award, and the infrastructure that will be deployed as a result is expected to support more than 230 zero-emission buses. Today I will be presenting two hydrogen refueling infrastructure transit agreements, while two electric charging infrastructure transit agreements will be presented at a later Business Meeting. Next slide, please.

The proposed projects will reduce greenhouse

gases and motor vehicle emissions, providing air quality benefits to transit riders and the communities served, and these are often disadvantaged and low-income communities and priority populations. The proposed projects will demonstrate large-scale infrastructure projects, resiliency, and also provide best practices and key lessons learned for future replicability at other transit agencies.

They will also help other California transit agencies understand the technology that may work best for their applications, their routes, and their environment, which ultimately accelerate meeting the California Air Resources Board's Innovative Clean Transit requirements of transitioning California's entire transit fleet to zero-emission by 2040. Next slide, please

The first agreement is with North County Transit District. The goal of this agreement is to design and construct a hydrogen fueling station that will have a capacity for up to 50 fuel cell buses in the City of Oceanside.

North County Transit District plans to deploy an initial 25 fuel cell buses by 2025 with 25 more planned for the future. North County Transit District's planned infrastructure deployment will allow for more buses to be fueled in the future without any upgrades needed to the station and is expected to decrease future costs by

constructing a higher capacity station now.

The benefits of the proposed project will extend to several communities beyond the immediate project site, which is located in a low-income community. Other project benefits include increased public health, safety, and economic development outcomes for the larger community. Next slide, please

The second project is with Sunline Transit. The goal of this agreement is to expand Sunline's existing heavy-duty hydrogen fueling infrastructure to include a new stand-alone liquid hydrogen station that will support current and future transit fueling needs.

The infrastructure that will be deployed will be used to fuel 17 buses in addition to the 16 fuel cell buses currently in the fleet. This infrastructure will ultimately be capable of fueling a total of 96 fuel cell electric buses when SunLine's transit fleet is fully transitioned to zero emission buses.

There are 7 disadvantaged communities within SunLine's service territory. And SunLine is also within Riverside County, which according to the National Ambient Air Quality Standards is in a non-attainment area. SunLine's bus service is critical to these communities because it is relied upon by community members for essential travel to workplaces, medical appointments, and

government agencies. Next slide, please

Staff recommends approval of these two grant awards and adoption of staff's determination that the projects are exempt from CEQA.

Thank you all for your time and consideration of these items. I'm available for any questions. Additionally, I believe the CEO/General Manager of Sunline Transit, Lauren Skiver, is on the call to provide public comments.

Thank you very much. That concludes my presentation.

COMMISSIONER DOUGLAS: Thank you very much for that presentation.

And Noemi, do we have public comment?

MS. GALLARDO: Yes, we do. Esther's correct, we have Lauren on the line. Lauren, a reminder to please restate your name, spell your full name. You have up to three minutes. Your line is open, you may begin.

MS. SKIVER: Thank you, Lauren Skiver, L-a-u-r-e-n S-k-i-v-e-r, CEO and General Manager for Sunline Transit Agency in the Coachella Valley.

I first want to say a big thank you to the California Energy Commissioners and staff for their commitment to funding and these projects awards that further the state's climate goals. This award is a key

element of Sunline's overall zero emission goals, and is moving forward hydrogen technology and infrastructure, not just for public transit but for fleet operators within California.

This project will allow Sunline to further demonstrate the reality of what's possible, which we've been doing for many decades. And lay the foundation for other operators to see what can work and how we can help them achieve those goals.

We look forward to working with the CEC teams. They've been amazing and always have been amazing to work with, and stand ready to deliver the next paradigm of hydrogen infrastructure for transportation. And again, this is for both private and public fleet operators and will be the new paradigm of the future in hydrogen technology, thank you.

COMMISSIONER DOUGLAS: Thank you for those comments.

And Noemi, any other public comments?

MS. GALLARDO: No more comments on Item Number 7.

COMMISSIONER DOUGLAS: All right, thank you very much, then let's move on to Commissioner discussion.

Commissioner Monahan, would you like to start.

COMMISSIONER MONAHAN: Yeah. Well, I want to thank Esther for that great presentation. And you know

coming on the on the heels of the UC Davis hydrogen study that we're proposing, I think it tells a story about how we are continuing to explore the role of hydrogen. And I think, particularly in the medium and heavy-duty arena where batteries just may not be able to meet all the needs.

And I want to highlight both these transit districts are leaning in to this challenge, especially at a time when transit districts across the country are really struggling. And yet, even as ridership has been flagging because of COVID-19 there's a recognition going forward that ridership will increase. And that attentiveness to zero emissions transportation is really important.

I'm interested also in the fact that Sunline has been a longtime leader in clean transportation, especially on the hydrogen fuel cell front and really an early adopter. And the fact that they're also exploring -- that they're using our grant for a liquid hydrogen delivery system is potentially -- I don't know if transformation maybe is too strong, but it's just that that storage is an issue as we all know, with hydrogen. It's very small and gaseous and it likes to leak.

And so figuring out how do we deliver it and exploring different solutions for that, I think is really important. So I'm strongly supportive of these grants and strongly supportive of this idea that we need to help

transit districts meet the CARB regulation and explore both battery electric and hydrogen fuel cell electric solutions to a zero emission transportation future.

COMMISSIONER DOUGLAS: Fantastic, well thank you Commissioner Monahan.

Any additional comments or questions, Commissioner McAllister or Commissioner Gunda?

COMMISSIONER GUNDA: Yeah, Commissioner Douglas, thank you. I just wanted to also thank Esther for her presentation. I also want to just thank Commission Monahan for her leadership and vision on this, on the investments in the medium and heavy duty transportation sector.

I definitely recognize also apart from the carbon emissions at the positive impact on the disadvantaged communities in terms of hydrogen fuel cell investments. So just thankful to the entire team, the FTD team, for being very thoughtful in kind of going through these solicitations and planning for those investments, and thank you, Commissioner Monahan, for your leadership.

COMMISSIONER DOUGLAS: Thank you very much, Commissioner Gunda.

So at this point let me see if we can get a motion, Commissioner Monahan?

COMMISSIONER MONAHAN: I move Item 7. I think we're on 7?

COMMISSIONER DOUGLAS: Yes, perfect.

Commissioner Gunda, would you like to second?

COMMISSIONER GUNDA: Absolutely, second.

COMMISSIONER DOUGLAS: All right, so we'll move on the vote then, Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

COMMISSIONER DOUGLAS: Commissioner Gunda?

COMMISSIONER GUNDA: Aye.

COMMISSIONER DOUGLAS: Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

COMMISSIONER DOUGLAS: And I vote in favor as well, so the vote count is unanimous, 4-0, and the motion passes.

We'll move on now -- thank you, Esther, we'll move on now to Item 8, Skyven Technologies, Incorporated. And the presentation will be I believe Mike Hunt. (phonetic)

No, it is not Mike Hunt, sorry, go ahead.

MR. LASAM: Good morning, Commissioners.

COMMISSIONER DOUGLAS: Baldomero Lasam, good morning.

MR. LASAM: Good morning. My name is Baldomero Lasam and I'm a mechanical engineer in the Energy Research and Development Division. Today, I'm presenting one recommended award from the R&D solicitation on Solar

Heating, Cooling and Power for Industrial and Commercial Applications. Next slide, please.

The objective of this R&D solicitation and the project recommended today is to reduce natural gas consumption from the industrial and commercial sectors by advancing a solar thermal system capable of delivering process heat and hot water, as well as refrigeration and electricity. Developing and deploying solar thermal technologies targeting the industrial and commercial sectors will reduce greenhouse gas emissions. The proposed award will help inform future deployment strategies by providing data on system performance and cost-effectiveness. Next slide, please.

This graph shows the natural gas consumption by various sectors in California. The industrial sector accounts for more than one-third of the total natural gas consumption and roughly one-fourth of the state's greenhouse gas emissions. The vast majority of this consumed natural gas, which is about 85 percent, is used for process heat and boiler applications in the manufacturing industry. The commercial sector additionally accounts for 12 percent of natural gas consumption. Next slide, please.

The proposed project with Skyven Technologies will develop and pilot-test a high concentration

photovoltaic and thermal system for solar combined heat and power or CHP, that is efficient, reliable, and low-cost. The system is expected to produce up to 20 percent more electrical power per unit collector area than state-of-the-art non-concentrating photovoltaic systems, while simultaneously capturing medium temperature heat. Each solar CHP system developed under this project will have a rated capacity of 500 watts electricity and 750 thermal watts, with the potential to avoid 750 pounds of carbon dioxide emissions annually.

Deploying the proposed solar CHP technology in the industrial and commercial sectors, is expected to reduce dependence on natural gas and reduce the amount of electrical power sourced from the grid, including during times of constraint. The technology will be demonstrated and deployed at the Water, Energy and Technology Center at California State University at Fresno. Next slide, please.

In conclusion, staff recommends approval of this grant award and adoption of staff's determination that this project is exempt from CEQA. Thank you, and I'm happy to answer any questions.

COMMISSIONER DOUGLAS: All right, thank you very much.

Do we have any public comments on Item 8?

MS. GALLARDO: This is Noemi, the Public Advisor.

Yes, we do. It looks like we have one public comment that's Inbal Nachman. Inbal, a reminder to please restate your name, spell your full name and you have up to three minutes to speak. Your line is open, please begin.

MS. NACHMAN: Hi, everyone. My name is Inbal Nachman, I-n-b-a-l N-a-c-h-m-a-n.

MS. GALLARDO: Please proceed.

MS. NACHMAN: Thank you. Hello, Commissioners, on behalf of Skyven Technologies, I would like to thank the California Energy Commission for this opportunity to enhance clean energy innovation and development in California's markets.

A key barrier to achieving the state's statutory energy goals is a lack of renewable technologies that can produce thermal energy at a cost that is competitive with natural gas while creating financial returns that are competitive with traditional non-concentrating solar photovoltaics.

Skyven's original vision for the company was to create a concentrated photovoltaics thermal system, due to their promising potential to pave the way for the penetration of solar energy into industrial facilities. This grant will provide Skyven the ability to build on our already existing solar thermal system and bring to life, our original vision.

Thank you again.

COMMISSIONER DOUGLAS: All right. Thank you very much for participating in the meeting and for your comments.

Noemi, no other public comments correct?

MS. GALLARDO: That's correct, Commissioner Douglas, no other comments for Item 8.

COMMISSIONER DOUGLAS: All right, well we'll move on then to Commissioner discussion. Commissioner McAllister, would you like to start us off?

COMMISSIONER MCALLISTER: Yes, just really briefly. And first I wanted to just point out that the reason I'm sort of leading off on the R&D items today is that the Chair who's actually the Lead Commissioner -- I'm the Associate on R&D -- would normally be kicking things off. So I'm playing a more prominent role than maybe normal on these for this meeting.

But I'm so excited to see some industrial thermal applications that are finding non-fossil pathways. That is a key, key really critical gap that we have. And obviously our industrial base drives much of our economy and, as you saw in the presentation, you know is responsible for a significant portion of our natural gas combustion in the state. And so we need to find alternatives to that at all temperatures and for all processes to the extent we can.

And so it's really great to see this project that's both generating electricity and producing thermal energy for industrial applications, so really excited to see how this proceeds and very supportive.

COMMISSIONER DOUGLAS: Thank you very much.

Commissioner Monahan, any comments or Commissioner Gunda?

COMMISSIONER GUNDA: I just want to go -- sorry just want to echo Commissioner McAllister's comments. Thank you, Baldomero, for your presentation.

I think figuring out pathways to decarbonize the industrial sector is so important moving forward, so thank you for this project's investment and focus on that. Thank you.

COMMISSIONER DOUGLAS: Absolutely, and I strongly agree that as well. It's really exciting to see projects that can help the industrial sector decarbonize as we move forward. Let's move on here to a motion.

Commissioner McAllister, would you be willing to make a motion?

COMMISSIONER MCALLISTER: Yes, and I wanted to also just think Baldomero for the presentation, and the commenter as well. It's very exciting, so I will move Item 8.

COMMISSIONER DOUGLAS: Super, Commissioner Gunda,

would you like to second?

COMMISSIONER GUNDA: Absolutely, I second the item.

COMMISSIONER DOUGLAS: All right, we'll move on to the vote then.

Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

COMMISSIONER DOUGLAS: Commissioner Gunda?

COMMISSIONER GUNDA: Aye.

COMMISSIONER DOUGLAS: Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

COMMISSIONER DOUGLAS: And I vote in favor as well, so this item passes 4-0.

We'll go on now to Item 9, AgMonitor Incorporated, Anish Gautam.

MR. GAUTAM: Thank you. Good morning, Commissioners. My name is Anish Gautam. I am an electrical engineer in the Energy Efficiency Research Office.

Now, California is home to vibrant and diverse agricultural community valued at over $50 billion, growing and processing over 400 commodities from over 70,000 farms that collectively irrigate 8 million acres in California that we estimate has a agricultural pumping load of 4GW, most during the critical summer months.

The agricultural sector continues to implement

energy and water efficiency measures. However, demand flexibility from agricultural irrigation pumps has largely been untapped. But can contribute a significant share of the needed demand flexibility to support the transition to a reliable and affordable zero-carbon electricity future. Next slide, please.

AgMonitor's has developed a Software-as-a-Service platform for California's growers using smart-meter data with big data analytics to help growers know how much energy and water they are using. And then providing insights into ways to reduce their overall usage to lower electricity costs, increase grid reliability, and reduce greenhouse gas emissions by shifting our operations to utilize as much renewable sources as possible. Next slide, please.

As part of this project, we will leverage the technology developed and tested under a recently completed EPIC project, where we showed the energy, water and cost savings that can be achieved by using AgMonitor's software on (indiscernible) farms.

As part of this project, we will add new features to the software to allow the permanent shift of peak irrigation loads during 5:00 to 8:00 p.m. hours into non-peak hours. So essentially moving 3 hours per day over 5 days for a total of 15 hours per week during the growing

season.

This project will be implemented on 10,000 acres in PGE and SCE territory, and shift at least 3MW by August of this year and a full 7MW by end of next year. The project also has match funding. Next slide, please.

Staff recommends approval of this item as well as staff's determination that this action is exempt from CEQA. This concludes the presentation. Thank you so much for your time and I am available to answer any questions you may have.

COMMISSIONER DOUGLAS: Thank you. Thank you, Anish.

Do we have public comment on this item?

MS. GALLARDO: This is Noemi, the Public Advisor, no public comments on Item Number 9.

COMMISSIONER DOUGLAS: All right, thank you. Let's move on to Commissioner discussion and Commissioner McAllister, could you get us started?

COMMISSIONER MCALLISTER: Yeah, happy to kick off briefly. Thanks, Anish, for that presentation. That was terrific and again this is another one of these areas that we're kind of embarking upon in earnest. Load flexibility generally, and certainly as it applies to the agricultural sector, is another place that we know now that it will provide a nice part of the solution for underpinning

reliability and decarbonization. And help us optimize cost in the electric grid going forward.

I want to acknowledge Commissioner Gunda for his leadership in this area, really seeking out different flexibility possibilities to underpin the reliability of the state.

And I just think pumping, there are a few loads that are that are easily made to be variable speed and have storage associated with them. In the case of water, obviously, you know you can store water, you can you can often pump. You have some flexibility as to when you pump. And so those are loads that are really ripe for helping to manage load, to help reliability when we need it, either routinely every day or when there's an event that limits our capacity in other areas.

So I think even in this case, you know, possibly with frequency regulation, voltage regulation, things like that. So it's really nice to see these cloud-based resources emerging to help make the cost accessible to really all participants. And really bring California's technical knowhow to the fore to help us manage our grid in the digital age.

So I'm really excited about this project and thanks again, Anish, for the presentation.

COMMISSIONER DOUGLAS: And thank you,

Commissioner McAllister.

And I think I will go to Commissioner Gunda next for comments, please.

COMMISSIONER GUNDA: Yeah, as the Lead -- thank you, Commissioner Douglas. A wonderful presentation, Anish, thank you for that.

And I just want to echo Commissioner McAllister his comments. I think that we have been more and more kind of coming together and thinking through in an integrated fashion the opportunities with load flex across a variety of sectors. So I'm just really grateful for R&D's focus on figuring out the ag sector and the opportunity there in demand flexibility.

So just thank you for all the work that R&D is doing and the wonderful briefings I've been getting in terms of vision and thoughts behind this. So I think you'll look forward to voting on this item.

COMMISSIONER DOUGLAS: Thank you.

Commissioner Monahan, any comments?

COMMISSIONER MONAHAN: Well, a comment and a question, because I was struck by the low-hanging fruit aspect of this. And I'm wondering, Anish, have we quantified the savings in terms of just reduced energy costs? Is there is there any economic implications for the load shift that currently exists or is that there's a gap

in the -- I don't actually know how water is -- electricity is funded. So (indiscernible) per hour.

MR. GAUTAM: There is going to be monetary settings, because a lot of it is going to be a demand charges that happens during those times. So right now, from our previous project, what we're seeing is this project is coming at a perfect time. The previous project did not address the peak demand. We listed irrigation or whatever the (indiscernible) wanted to it. But we saw that the rates changed, that everyone kept asking if the demand cost is a big cost now. It didn't use to be, but now it's going to be something that we have to think about over the year. And if you can do things to change your operations, without affecting the crops and the yield that's a big win.

So this would not be possible without the previous project that's been done with AgMonitor where we established the entire ecosystem of a software that allows them to see all aspects from pumping to the crops yield, and in the (indiscernible) what that means in terms of the bottom line.

So this puts together everything from the energy efficiency aspect of it and pumps, the water costs, and then now the need market and demand costs. That wasn't really there but now is a part of it (indiscernible).

I hope that answers your questions, if not we can

definitely talk more later on it.

COMMISSIONER MONAHAN: Well, maybe we can talk more later on. This is a complicated equation about how do we set the right economic signals and that's really the PUC for some territories, but you know this. And we're seeing in the transportation side that these cottage industries are cropping up just to figure out how to save industries money through software. And through these lenses how do you either change the load through flexible programs like this? Or we're trying to increase electricity use for some sectors like transportation, but want to do it in a thoughtful way that supports the grid.

So we just seeing a lot of like cross pollination between all these efforts to figure out how do we electrify more and do it smarter to help the grid and save people money. At the end of the day, you want to save people money for doing the right thing so it's a really interesting project, thank you.

MR. GAUTAM: Thank you.

COMMISSIONER MCALLISTER: Yeah, I might just chime in -- oh, sorry.

COMMISSIONER DOUGLAS: No, go ahead.

COMMISSIONER MCALLISTER: Okay, I don't know if Anish, you had a response to Commissioner Monahan. If not, I just wanted to just make another comment.

MR. GAUTAM: Please, go ahead.

COMMISSIONER MCALLISTER: Great, yeah I mean it strikes me if we think broadly about this, about the agriculture sector -- and perhaps R&D is already having some of these conversations internally -- but you know remote sensing is increasingly used in agriculture at scale to know exactly when to harvest a given field, or whatever. And to monitor plant health as you said, you suggested, Anish.

And we also in California have a whole bunch of irrigation districts that are utilities, that have large loads. That really have a lot of autonomy in terms of how they manage their own their own electric systems. They may or may not be part of the CAISO. They have lot of independence and they do their own ratemaking. And so I wonder, you know if we could maybe step back and take an integrated view about how we can help optimize and work even more closely, hand in hand with the large agricultural producers and others in that sector to see what the opportunities might be more broadly in energy management.

COMMISSIONER GUNDA: Commissioner Douglas, are you okay if I just make a quick comment?

COMMISSIONER DOUGLAS: Yes, please.

COMMISSIONER GUNDA: Now, I just want to recognize the important question that Commissioner Monahan

raised and Commissioner McAllister's thoughts on this. I mean, the whole idea around the load flexibility, I think there's a lot of leadership at the CEC -- and thank you to Commissioner McAllister for his work on LMS.

I think you have this opportunity from the pricing, from just telemetry sectors. And then how do you gather all this information and then get to a 10,000 foot level for resource planning? I think it's becoming very integrated, very complex. And I think that the kind of questions that are being raised on the dais are extremely important to tackle as we move forward to think about this comprehensively from an economics, and now from technology and all sorts of things. So thank you, Commissioner Monahan, for raising that. And Commissioner McAllister, for your leadership too.

COMMISSIONER DOUGLAS: All right, any other discussion on this item? Obviously it's a really important topic and a really big opportunity for us as a state. Let me see if we can get a motion, Commissioner McAllister?

COMMISSIONER MCALLISTER: Yes, I will move Item 9.

COMMISSIONER DOUGLAS: All right, Commissioner Gunda, would you like to second?

COMMISSIONER GUNDA: Absolutely, second Item 9.

COMMISSIONER DOUGLAS: All right, we'll go to the

vote then.

Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

COMMISSIONER DOUGLAS: Commissioner Gunda?

COMMISSIONER GUNDA: Aye.

COMMISSIONER DOUGLAS: Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

COMMISSIONER DOUGLAS: And I vote aye as well, so this item passes 4-0. Thank you very much.

And we'll turn now to Item 10, Bringing Rapid Innovation Development to Green Energy, Michael Ferreira.

MR. FERREIRA: Good morning, Commissioners. My name is Michael Ferreira and I work in the Energy Research and Development Division. I'm here today seeking approval for two new grant agreements that resulted from our BRIDGE 2020 solicitation.

BRIDGE is one of a series of programs we've established to support clean energy entrepreneurs, with this funding opportunity having the specific purpose of bridging the gap between public and private funding opportunities. Next slide, please.

One main benefit of BRIDGE is advancing the clean energy economy by funding promising clean energy technologies that can enable the transition away from fossil fuels. Some of the specific benefits of the

agreements being discussed today, include improved grid resilience and reliability through reduced peak demand as well as technologies that will enable electrification of the grid. Next slide, please.

The first agreement is with Stasis Energy Group, who will develop their thermal energy storage system utilizing bio-based phase change materials. Peak energy periods, which are currently 4:00 to 9:00 p.m., is when electricity is most expensive and emits the most greenhouse gases. And in California, HVAC is the largest single contributor to peak energy loads, with the equipment often being old and inefficient.

The thermal energy storage system being developed in this project directly addresses the challenge of reducing peak energy demand by storing cooling energy during normal HVAC operations and releasing the energy during peak periods. The product can be easily and economically installed, or retrofitted into existing packaged HVAC systems to provide a cost-effective alternative to high-priced unit removal and replacement.

With this funding, Stasis will install their Thermal Energy Storage System in 10 commercial buildings and demonstrate and improve the product's ability to shift electricity use out of peak periods. Next slide, please.

The second agreement is with EPC Power

Corporation to develop and optimize a DC-DC power conditioning system to enable use of 2nd life EV batteries in grid storage applications.

As an increasing number of batteries are decommissioned from the transportation sector, they can be repurposed for stationary applications at lower costs than new batteries. However, achieving lower costs requires improvements to power electronics, storage system designs, and systems engineering to successfully scale product offerings while meeting the strict reliability and safety requirements demanded by the grid-tied stationary energy storage sector.

EPC has developed key power electronics, controls and cycling management technology that mitigates used battery imbalances into a uniform state-of-health, to achieve product reliability, and warrantied value. EPC has incorporated these advancements into an initial design concept called Modular Assembly Battery units, which are capable of integrating multiple used battery form factors.

This project will develop the power electronics portion into an economically viable solution for integration into the Modular Assembly Battery unit and evaluate the energy savings during a demonstration at an existing power plant facility in San Joaquin. Next slide, please.

Staff recommends approval of these two grant agreements and staff's findings that these projects are exempt from CEQA.

I believe Nick Brown or Rob Morton from Stasis Energy Group and Allan Abela from EPC, are on the line and would like to comment. And I am also available to answer any questions. Thank you.

COMMISSIONER DOUGLAS: All right, well, thank you very much.

Let's move on to public comment then, Noemi?

MS. GALLARDO: Yes, Michael's right, we do have a couple of folks on the line here. So we'll start out with Allan. Allan, a reminder to please restate your name, spell your full name, you have up to three minutes. Your line is open, you may begin.

MR. ABELA: Thank you, Commissioners. My name is Allan Abela, A-l-l-a-n A-b-e-l-a and I'm with EPC Power. I'm the Chief Commercial Officer and the Executive Vice President, and also one of the cofounders. EPC Power was founded in 2010, actually with a CEC grant. So thanks again to all the support we've received over the years. We're approaching almost 100 employees and manufacturing exclusively in San Diego County, so all of that investment is really gone to good work.

For this upcoming project we will be partnering

with Smartville, Inc a specialist in electric vehicle batteries repurposing. Together we will develop an optimized system capable of integrating multiple used electric vehicle batteries into a safe, reliable and economic battery energy storage system. We will develop and validate our system at a commercial facility as said in San Joaquin.

We're excited to partner with the CEC on this upcoming project, and thank you for your time. I'm happy to answer any questions you may have.

COMMISSIONER DOUGLAS: Thank you, very much.

Go ahead, Noemi.

MS. GALLARDO: I'm sorry to talk over you, Commissioner Douglas. We have a second public commenter. This is Nick. Nick, a reminder to please restate your name, spell your full name, and you have up to three minutes. Your line is open, you may begin.

MR. BROWN: Thank you. I'm Nick Brown, N-i-c-k B-r-o-w-n, with Stasis Energy Group. Good afternoon, Commissioners and Deputy Director Lauri ten Hope. I'll be managing the BRIDGE project together with Stasis Energy Group's President, Rob Morton.

And I wanted to use my time today to share our perspective as clean tech entrepreneurs, because we feel the state and the CEC have done a remarkable job of

building a clean tech ecosystem. One that rewards initiative and high potential inventions, but one that also requires performance and demands accountability. And Stasis Energy Group has benefited greatly from the CEC support and the cleantech ecosystem, including CalSEED, Cleantech Open, CalTestBed, the incubators and now BRIDGE.

Our technology as Michael said, is a thermal storage and load management solution that reduces peak summer cooling demand by 60 percent. And shifts peak energy consumption and from peak to off-peak periods. And we heard you loud and clear about the focus on equity, and so our goals are to reduce light day stress on the grid, but also provide ratepayer benefits. Especially in disadvantaged communities, including lower energy bills and reduce greenhouse gas emissions. In fact, if installed on just 10 percent of California's RTUs, we'd eliminate the need for one 500 megawatt natural gas power plant.

So our BRIDGE demonstration project specifically targets disadvantaged communities, low-income communities like Fresno and Pomona and Irwindale and Compton, Riverside. So thanks for the opportunity to further development showcase our first-of-its-kind technology.

MS. GALLARDO: Thank you.

This is Noemi. Commissioner Douglas, that was the last comment on Item 10.

COMMISSIONER DOUGLAS: Fantastic. Thank you to the commenters.

And let's move on to Commissioner discussion, Commission McAllister, could you start us off?

MS. GALLARDO: Commissioner, you're muted on the screen.

COMMISSIONER MCALLISTER: Oh, sorry about that. It was bound to happen eventually.

Thank you, Michael, I really appreciate the presentation. And, you know, I think we're seeing such quality proposals, projects come forward today. It's just really there's a lot to talk about with all of them, and just the innovation that as a group they're showing and no exception on Item 10 here.

You know thermal energy storage, we've already talked about that a little bit. And storage is one of the keys. It's kind of the skeleton key in a way of, you know, unlocking potential for reliability in the decentralized and distributed and renewable grid.

So anyway, these two projects do that well and I'm very supportive.

COMMISSIONER DOUGLAS: Thank you very much.

Any additional comments, Commissioner Monahan, go ahead.

COMMISSIONER MONAHAN: So I have to say I had a

briefing yesterday from Michael and Anthony and others on EPIC. And I was so excited by both of these projects that I wanted to comment on this first project -- well first project, first. So the Stasis Energy Group and I'm glad we have Nick Brown on, because I mean I'm fascinated by this idea that there's this bio based material that freezes at higher temperature. And then when we hit peak you just blow air over it, and that's what cools your building. That is mind blowing to me and I really want to see it, Nick, so it is just fascinating. I had to keep going over and over it again with Michael, wait, say that again, how is this working?

So it's a really fascinating technology and so kudos to you, Nick and the team at Stasis for really coming up with an out-of-the-box idea to deal with a big problem in California.

So and, of course, the second one us, EV batteries are near and dear to my heart. You know, there was a McUsey (phonetic) report that came out that said that by 2030 used EV batteries could comprise half of all global energy storage needs. I mean the potential is huge, but figuring out how to deal with (indiscernible) buses and Nissan leaf batteries, and how to deal with putting them all together in some way that stores energy and is cost effective. And deals with the fact that you're going to

have different bad battery degradation issues, is also really important investment.

So I'm excited about both of these investments and want to thank Michael and the team for bringing these forward.

COMMISSIONER DOUGLAS: Thank you, Commissioner Monahan.

Commissioner Gunda, any comments?

COMMISSIONER GUNDA: Yeah, I mean I think again, echoing Commissioner McAllister, I think these are like some wonderful projects today. I think that the intersection of thermal comfort and kind of the load management is kind of a difficult problem to solve. You know, we want to ensure thermal comfort, as we think through the kind of the grid liability and then overall load reduction. And I think you know it's also heartening to see the evolution of technologies, as Commissioner Monahan pointed out. We've seen a lot of interactive evaporative cooling technologies in the past for this kind of load reduction and then looking at new materials that don't really use water.

It's just great to see them and thank you, Michael, for your presentation. And the commenters for their comments today. Thank you.

COMMISSIONER DOUGLAS: Well, thank you.

Let's move on then to a motion. Commissioner McAllister, would you be interested in making a motion?

COMMISSIONER MCALLISTER: I'll move Item 10.

COMMISSIONER DOUGLAS: Super. Commissioner Monahan, would you second?

COMMISSIONER MONAHAN: I second.

COMMISSIONER DOUGLAS: Very good, we'll move on to the vote then.

Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

COMMISSIONER DOUGLAS: Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

COMMISSIONER DOUGLAS: Commissioner Gunda?

COMMISSIONER GUNDA: Aye.

COMMISSIONER DOUGLAS: And I vote aye as well, this item passes 4-0.

And just briefly before we move on to Item 11 I wanted to have a quick check in with all of you on the agenda. We're just a little past noon. It looks to me like it would be a long haul to try to cover everything without a lunch break, so I wanted to suggest that we consider taking up Items 11 and 12 and then breaking for lunch.

Any thoughts on that from any of the Commissioners?

COMMISSIONER MCALLISTER: That sounds good to me and we could give Item 13 a time certain for our return.

COMMISSIONER DOUGLAS: I was thinking 1:00 o'clock?

COMMISSIONER MCALLISTER: Yeah, that's great.

COMMISSIONER DOUGLAS: Commissioner Monahan?

COMMISSIONER MONAHAN: No, I agree with lunch, I'm a big fan of it.

COMMISSIONER DOUGLAS: Anyone want to move approval for lunch? I'm kidding. All right, so we will. So that's the plan, so if you're on the -- participating in the meeting right now for Item 13 you can come back at 1:00 o'clock. That's when we will take it up. And if you're here for Items 11 and 12 we will move through both items before breaking for lunch.

So with that, thank you colleagues. And we will move on to Item 11, Evaluation of Bi-Directional Energy Transfer and Distributed Energy Resource Integration for Medium and Heavy-Duty Fleet Electrification. Looking for Ben Wender to present, there you are, thank you.

MR. WENDER: Good afternoon, Commissioners. It's good to be here. My name is Ben Wender. I'm an Electric Generation System Specialist in the Energy Research and Development Division. Today, I am presenting two recommended awards from the EPIC solicitation "Evaluating

Bi-directional Energy Transfers and Distributed Energy Resource Integration for Medium and Heavy-Duty Fleet Electrification." Next slide, please.

The proposed awards will bring multiple benefits to Californians. The technologies developed through these awards will facilitate charging of large electric vehicles like school buses in ways that reduce stress on the electric grid, increase use of distributed energy resources, and reduce the cost of charging for fleets transitioning to electric vehicles. These technologies can also provide resilience benefits for sites and communities where they are deployed, while maximizing emission reductions from the electric and transportation sectors. Next slide, please.

The objective of the solicitation and of the projects recommended today is to develop integrated distributed energy resource packages to help charge fleets of medium- and heavy-duty electric vehicles. Transportation electrification is a key strategy for reaching the state's zero emission transportation goals, including the targets established in Governor Newsom's Executive Order N-79-20 summarized here.

Projects will focus on demonstrating and collecting data on three use cases: minimizing the cost of charging; increasing utilization of renewable electricity;

and providing back-up power to increase resilience. Next slide, please.

In the first project, MOEV, Incorporated will partner with the Gardena Transit Agency to deploy 350 kW of solar PV and 1 MWh of battery storage. The proposed project will demonstrate MOEV's advanced charging optimization and distributed resource integration software in minimizing charging costs and increasing renewable electricity utilization. Shown is a visualization of their technology components, including a mobile app for messaging and collecting information from drivers as well as real-time monitoring of transit buses for optimal charge scheduling.

MOEV is a former CalSEED Initiative awardee that has matured with support from CEC investment in the state's clean energy innovation ecosystem. Next slide, please.

The second project with Lawrence Berkeley National Lab and their commercialization partner Paired Power, will deploy four direct-DC fast chargers with integrated solar and storage in the Franklin McKinley School District in San Jose. The images shown show the CalEnviroScreen 3.0 scores for the community served by the school district, which ranks in the 80-85th percentile of pollution vulnerability and burden.

Also shown is the proposed construction site at

the elementary school. The direct-DC chargers are more efficient, because they avoid energy losses from converting DC to AC and back to DC. The project will add 120 kW of solar and 520 kWh of battery storage at the site that will be used to power a community resilience hub in the school cafeteria during power outages.

Project partners will engage community members to identify desired emergency capabilities—such as public access cooling and charging facilities—and then design the demonstration to meet their objectives. Next slide, please.

So staff recommends approval of these two grant awards, and adoption of staff's determination that these projects are exempt from CEQA. Thank you and that concludes my presentation. I'm available for any questions as are representatives from MOEV and LBNL.

COMMISSIONER DOUGLAS: Excellent, thank you for that presentation, Ben.

Do we have any public comment then, Noemi?

MS. GALLARDO: Yes, we do. It looks like we have Rajit. Rajit, please restate your name -- apologies in advance if I mispronounced it -- and please spell your full name. You have up to three minutes. Your line is open. You may begin.

MR. GADH: Thank you so much, Commissioners and the CEC team. My name is Rajit Gadh, spelled R-a-j-i-t,

last name G-a-d-h. And I'm one of the four cofounders of MOEV, Inc., a startup company.

MOEV has -- and Commissioner McAllister, you talked about the ARRA funding -- MOEV's technology was developed originally at UCLA and three patents came out of an ARRA grant in which we worked the Los Angeles Department of Water and Power for electrification of transportation. Most technology now uses AI and machine learning and applying this technology to MVHD or medium-duty heavy-duty fleets. Those fleets are characterized by very high levels of power due to high levels of energy requirements for the day and variations and constraints in the duty circles.

So the technology is a software technology that sits on the cloud and it takes real time data from the fleet operators, from the fleet telematics -- specifically from the battery management systems in the vehicles as you're driving around -- from the grid operators. From the charging infrastructure, which in the case of this project would be in EV charging stations of the vehicles, when they're parked the solar PV and the battery. And then it doesn't optimize -- it does a prediction and optimization. The optimization pertains to the goals of the particular fleet operator, in this case a bus transit fleet operator. Lawrence Berkeley National Labs with their heavy pro and heavy-load expertise is a partner in this project.

The key interesting technology what we're really excited about is that you have continuous data streams coming in and you're optimizing through the day. And the reason to do that is because, as we know the energy, the renewable energy through the day, varies. If the sun is shining, if there's a cloud cover, it doesn't stop shining and so forth. And so green energy same way. (phonetic)

And then the grid resilience needs of the grid operator by web demand response or local resilience, is varied through the day. We see through the day the different levels of sort of infrastructure and see duty cycle challenges that these fleet operators have.

The cost can vary dramatically if you're not careful about your opex, (phonetic) your fuel bill might go up (indiscernible) three or four. Or if you're not careful, you install your (indiscernible) capacity and you're essentially stressing the grid.

So our software takes all of that and optimizes with one of the very, very important objectives also being reduction of greenhouse gas emissions that help with health issues in disadvantaged communities. And on the positive side, a lot of these fleets tend to be in disadvantaged communities. And so the possibility of jobs, as we transition into this high tech world of EVs is there. Thank you very much.

MS. GALLARDO: Thank you.

This is Noemi, there are no more public comments for Item 11.

COMMISSIONER DOUGLAS: All right, thank you very much. Let's move on to Commissioner discussion, Commissioner McAllister, could you kick us off?

COMMISSIONER MCALLISTER: Well, I'll start us off. I certainly want to imagine Commissioner Monahan is really excited about this project too. But it's so great another, you know, storage and intelligence solicitation with great results, so kudos to the EPIC team on this.

Ben, thank you so much for that presentation. The title of it is -- just starting off with the title of it, it was a mouthful. But I think again this is a perfect application of these kinds of R&D funds, you know, to have as the commenter just -- as Rajit said, you know take advantage of real-time information to manage and optimize, to orchestrate both the demand side and with intelligence about the supply side. And the grid needs at every given moment.

And really the fact that it impacts disadvantaged communities in a positive way. The fact that it can help essentially use energy that would otherwise be curtailed, and take advantage of that, I mean it's almost you know pre-lunch or reduced lunch maybe. And maybe that's most

applicable to schools. But I think having -- investigating these loads and figuring out what the use cases actually are, and just understanding how we can utilize these resources. They're mobile and inherently flexible without diminishing or compromising the level of service that they give. And their main job is really huge.

And offloading the responsibility for energy management of the sophisticated grid from institutions that really have no desire or interest in being a utility or an energy management business, right? A school, they need to focus on being a school and so educating our youth. And so having them be able to rely on competent backend services that help them manage their costs and help them do their primary role, I think is a really great value in these kinds of projects. And it is not only going to help us manage carbon, manage the grid increase reliability. But also help the schools operate and function in a more robust fashion as well. So really a win, win all around.

And I'm just very excited about this. And all the other end uses were these fleets are going to sit. So thanks, I'll stop there.

COMMISSIONER DOUGLAS: All right. Thank you.

All right, thank you. Commissioner Monahan, additional comments.

COMMISSIONER MONAHAN: Yeah, I mean I am really

excited about these projects. And I think as we expand our attention to the medium and heavy-duty sector the opportunities, I think, are really great to set the business case for electrification.

But there's also these big challenges. And one of them, I mean is that everybody gets the same price for the fuel that they use for transportation, no matter what time of day it is, no matter where they are. And battery electric vehicle to call for an entirely different mindset.

And so what I'm excited about with both these projects, I mean with school districts of course (indiscernible) whatever we can do to help them and help them electrify their fleet, so that kids breathe easier on the bus. I mean, it's compelling public health rationale for both the transit bus and the school bus electrification. But then as we expand to other heavy-duty businesses that are just more focused on the byline, not that they don't care about public health, but you know that they're focused on the bottom line. So these kinds of services that I referred to in the past that you need sometimes somebody else whose job it is just to think through, how do I electrify this fleet in the most cost effective way, save money, provide resilience?

I mean it's complicated and I could see why AI is a good application for this. But these kinds of

investments are really -- I mean, to move big businesses to electrify their fleet they need a bottom line business case. And its applications like this that are going to help them figure that out.

COMMISSIONER DOUGLAS: Thank you, fantastic.

Commissioner Gunda, anything you'd like to comment on the bottom?

COMMISSIONER GUNDA: Yeah, I just will say amen, because it's so many things that are just really cool projects. And it's like all in the same (indiscernible). I absolutely agree with Commission McAllister and Commissioner Monahan's comments on this.

COMMISSIONER DOUGLAS: All right, thank you very much. Let's move on to see if we can get a motion, Commissioner McAllister?

COMMISSIONER MCALLISTER: I move Item 11.

COMMISSIONER DOUGLAS: And a second. Commissioner Monahan, would you like to second.

COMMISSIONER MONAHAN: I'll second.

COMMISSIONER DOUGLAS: Right, well we'll take the vote then.

Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

COMMISSIONER DOUGLAS: Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

COMMISSIONER DOUGLAS: Commissioner Gunda?

COMMISSIONER GUNDA: Aye.

COMMISSIONER DOUGLAS: All right, I vote aye as well. This item passes unanimously 4-0, and thank you.

We'll go on to Item 12 Food Production Investment Program 2020. And we are looking -- first, I welcome Cyrus Ghandi to present.

MR. GHANDI: Hi. Good afternoon, Commissioners. My name is Cyrus Gandhi. I am an Electric Generation System Specialist I with the Energy Research and Development Division. Today staff is providing a presentation on the Food Production Investment Program, followed by a recommendation to approve seven awards. This presentation summarizes the results to date of the Food Production Investment Program since the program inception in 2018.

The Food Production Investment Program, or FPIP, funds drop-in and emerging energy technologies at food production facilities in California.

FPIP is part of California Climate Investments, a statewide initiative that puts billions of Cap-and-Trade dollars to work reducing greenhouse gas emissions, strengthening the economy, and improving public health and the environment, particularly in disadvantaged communities. Next slide, please.

Food production is a key economic sector in California and contributes $82 billion to the economy annually. And also provides 200,000 direct jobs, as well as 560,000 indirect jobs.

Food production is also a large contributor of greenhouse gas emissions with about 3.2 million metric tons of CO2 equivalent emissions per year.

FPIP has allocated $116 million across 5 funding opportunities to 51 projects resulting in 164,000 metric tons of CO2 equivalent in annual emissions reductions, which is equivalent to removing 36,000 passenger vehicles from the road. Next slide, please.

Scoping of the FPIP program was done in collaboration with key stakeholders. Before the program started, a working group was created, which included public agencies, utilities, researchers, trade organizations, and most importantly food producers. On this slide, you can see the list of organizations represented in the working group.

In addition to public workshops, several working group meetings were held to get feedback on the program as it was formed. The result was a program, which was easy to apply to, conformed to the seasonal schedules of food producers, and provided funding for what they needed most -- implementing modern technologies. In essence, FPIP was

designed by food producers, for food producers. Next slide please.

I will now present the recommended awards.

The first project is with Blue Diamond Growers. This proposed project will upgrade the existing compressed air system at the recipient's nut processing facility in Sacramento. The system will consist of variable frequency drive compressor, advanced controls, and larger piping and air storage systems which enables lower system pressure that requires less energy to maintain. Next slide please

The second project is with Pacific Coast Producers. This project will overhaul the compressed air system at the recipient's tomato processing facility in Woodland. This project will install a high efficiency air compressor, air dryer, filters, variable frequency drives, and larger air storage tank to reduce system pressure and energy use. Next slide, please

The third project is with Jessie Lord Bakery. This project will install advanced energy-efficiency upgrades at a pie producing facility in Torrance. This project will install a boiler economizer, steam traps, insulation, a low-global warming potential refrigeration system, and new burners and controls for a baking oven. Next slide please

The fourth project is with Baker Commodities.

This project will upgrade the hot water system at the recipient's rendering plant in Vernon. The project will install new natural gas burners for two high efficiency 800 hp boilers and upgraded insulation on two large holding tanks. Next slide, please

The fifth project is with WWF Operating Company. The proposed project will upgrade the existing steam system with high efficiency steam traps at the recipient's dairy processing facility in the City of Industry. This project will install over 200 steam traps improving the efficiency of the existing steam system. Next slide, please

The sixth project is with Campbell Soup Supply Company. The proposed project will upgrade the existing evaporator system at the recipient's tomato processing facility in Dixon. This project will retrofit an existing evaporator to add an additional evaporation stage, also known as "effect", converting a two-stage evaporator into a three-stage evaporator. The new system will provide more evaporation capacity using the same amount of steam input, thereby making the process more efficient. Next slide, please

The lastly, the seventh project is with E.&J. Gallo Winery. The proposed project will replace an aging compressor system and refrigeration system at two of the recipient's wineries. This project will install high

efficiency compressor equipment at the Livingston winery and a low-global warming potential refrigeration system at the St. Helena winery.

These 7 projects combined would reduce GHG emissions by over 13,000 metric tons of CO2 annually. Next slide please.

I will now show a short time-lapse video of an FPIP project that was implemented at the Sun-Maid raisin production facility in Kingsburg. This project modernizes the compressed air system by replacing inefficient, oversized compressors with highly efficient, sequenced compressors. Instead of running constantly, this new system kicks on each compressor as needed and at variable speeds, saving energy.

As you can see, to minimize the downtime this system was installed in only 10 days. And this project is a great example of how FPIP helps facilities modernize their operations and reduce energy use and greenhouse gas emissions. Next slide, please

With that, staff recommends approval of these seven awards as well as staff's determination that these actions are exempt from CEQA. This concludes my presentation. I am available to answer any questions you may have and Kevin Uy and Kathryn Colson are also available.

In addition, my understanding is that representatives from Baker Commodities, Pacific Coast Producers, Campbell Soup Supply and Jessie Lord Bakery would like to make a verbal comment, or have prepared written comments they would like read into record. Thank you.

COMMISSIONER DOUGLAS: Thank you very much for that presentation.

Noemi?

MS. GALLARDO: All right, so we do have several public comments. I'm going to begin with a written comment, this is from David Kiehn, that's spelled D-a-v-i-d, Keen K-i-e-h-n. I might be pronouncing incorrectly, so apologies for that. He's the Director of Agriculture Operations at Campbell Soup Supply Company.

"Dear Commissioners Campbell Soup Supply Company appreciates the work of the California Energy Commission and its staff in developing and operating the Food Production Investment Program. We are excited that our proposal to add an evaporator effect at our facility in Dixon, California was selected for funding during the latest round of this program.

"California has served as a leader in agriculture and food production for many generations and continues to supply its bounty to the nation and the world.

"As a company committed to combating climate change and its impacts, we welcome the opportunity to use this funding to make our operations more sustainable. We are also proud that this project will support California, businesses and provide jobs to California workers.

"At Campbell, we are committed to building a more resilient food system that improves the world we share for generations to come. We look forward to completing this project and using the lessons learned to help inform further improvements in our own operations and those of other similar facilities elsewhere. Sincerely, David."

MS. GALLARDO: That concludes the written comment.

Next we have about four people on the Verizon conference line. I'm going to start with Erick Watkins. Erick, please restate your name, spell your full name, you have up to three minutes. Your line is open, you may begin.

(No audible response.)

MS. GALLARDO: Erick Watkins, your line is open, you may begin.

(No audible response.)

MS. GALLARDO: All right, it seems like he may be having -- Erick may be having some technical issues there, so let's move on to the next person on the Verizon

conference line, which would be Sean Lee.

Sean, a reminder to please restate your name, spell your full name. You'll have up to three minutes. Your line is now open, please begin.

MR. LEE: Hi, this is Sean Lee, can you guys hear me okay?

MS. GALLARDO: Yes, we can.

MR. LEE: Perfect. Thank you, so I'm the General Manager and Owner of Jessie Lord Bakery. We specialize in manufacturing pies. We've been in Torrance for over 30 years.

I'm speaking to express my gratitude for the FPIP program, the opportunity that's provided and appreciation for CPUC and all your work. You know, this project was awarded to us, because of the diversity of energy efficiency improvements that we have planned. It's projected to help reduce our greenhouse gas emissions by over 167,000 metric tons over the life of the equipment. The majority of this will be achieved through the elimination of HFC refrigerants with high global warming potential.

And again, Jessie Lord Bakery just wants to thank the California Energy Commission. And we're glad that we have the ability to partner to invest in this type of projects that will help the environment and also keep jobs

and our facility operating in Torrance for the near future, and after that. So thanks again.

MS. GALLARDO: Thank you.

The next comment will be William Cordray. (phonetic) William, please restate your name, spell your full name. You have up to three minutes. Your line is open and you may begin. William, you may begin?

MR. CORDRAY: I didn't have a prepared statement, excuse me for the error there, thank you.

MS. GALLARDO: No problem at all.

All right, so next up is Doug Smith. Doug, a reminder to restate your name, please spell your full name. And you have up to three minutes. Your line is open, please begin.

MR. SMITH: Okay, my name is Doug Smith, D-o-u-g S-m-i-t-h. I'm the Assistant Vice President for Research and Development with Baker Commodities. And first, I would just like to thank all the CEC Board Members and staff. You have all been wonderful in working with Baker Commodities in the past, and we hope to continue that in the future. So a very big thank you to the Commission and also the opportunity to be awarded a grant.

You have all been wonderful and working with baker commodities in the past and we hope to continue that in the future so very big thank you to the Commission and

also the opportunity to be awarded a grant.

As a rendering industry we're kind of the tail end of food processing. We take care of the items that the public doesn't eat when they get the meats and stuff. But we do produce products that are usable to the consumers, as well as you know, animal feeds and biofuels. With that being said, we have always prided ourselves as being a diverter of organics from the landfill. We've kept all these things out of landfills, so we hope to continue aiding California in organics diversion.

But for this grant, this grant will help us reduce California's food production cost. It's going to greatly help us reduce our operating costs and the greenhouse gas emissions, which is very important for us. We're surrounded by communities that are priority communities, and we would love to clean up the air that is going out to our neighbors. We very much care about communities around us, so this benefits us greatly.

And it also allows us as a corporation, you know, that's environmentally conscious to work towards these low-carbon futures that we have for California, to make the air cleaner.

That's pretty much all I had to say. And I look forward to working with all the staff that you guys have. Thank you.

MS. GALLARDO: Thank you.

This is Noemi, again we're going to try Erick Watkins' line again.

MR. GANDHI: Erick messaged me just now that he is having a hard time unmuting. Is it *6 to unmute.

MS. GALLARDO: No, he's not Zoom. He's on Verizon, but his line looks like it's open. Let's give him a try, a Verizon operator was working with him.

Erick, are you able to hear us? If so please say something.

MR. WATKINS: I can, can you hear me?

MS. GALLARDO: Yes, we can. Thank you.

MR. WATKINS: Oh, that's fantastic. Great. Yeah, I just wanted to make a couple of quick comments today. My name's Eric, Watkins, E-r-i-c-k W-a-t-k-i-n-s. I work for Pacific Coast Producers. We're a cooperative here in Northern Central California. We do canned fruit and tomato products, have facilities in Lodi, Oroville and Woodland.

Today you guys are reviewing for approval, a air compressor project. I believe this will be the seventh project that Pacific Coast Producers has done through the Producers Incentive Program. And we just want to thank everybody from CARB to CEC to the Legislature, for supporting this program and I hope it gets renewed in the

future. And we hope we get our project approved today, and thank you very much.

And I wanted to give a special thanks to Cyrus. He's worked with me on all these projects and we've been very successful. And we're about to finish, or third and fourth projects and can't emphasize enough how great this program is, thank you very much.

MS. GALLARDO: All right, this is Noemi again. Commissioner Douglas, that was the last public comment on Item 12.

COMMISSIONER DOUGLAS: All right, thank you very much, Noemi.

Let's move to Commissioner discussion, Commissioner McAllister.

COMMISSIONER MCALLISTER: Yeah so thanks, Commissioner Douglas. And really all of the companies that are on this item, really your efforts to decarbonize and to improve your operations are incredibly necessary for California. And I think we are actually privileged to be able to help you do that.

So and I wanted to just back up and thank Cyrus for the great presentation, really appreciate that. But I wanted to back up a little bit and just say what a spectacular program this has turned out to be. And a lot of it, you know, certainly the competence of our of our

administrative staff and Laurie ten Hope's Division and just the diligence with which they've constructed and implemented the program, I think has really put our best foot forward. And built a lot of trust with a sector of our economy that is kind of new to this programmatic game in a way. And so this programmatic kind of environment. And so I think that is just incredibly positive and there's a great foundation to build on there.

And backing up even further, you know, I remember the origin of this program really was driven at the highest levels of the state government. And Secretary Ross did a convening and Secretary Crowfoot was involved in at the beginning. And just to see that continuity come to fruition at each business meeting that we have, an item (indiscernible) on it, is really gratifying.

And I think there are many directions this program can go if we could you know begin to address even other sectors more in the food production side of things, but also more broadly in industry. And you just see from the diversity of these projects that all sorts of different kinds of processes and end uses, compressors, refrigeration systems -- most of which are going to be site built right there. So in a sense custom hot water, different heating loads, thermal loads.

I'm really happy to see some steam management in

here and the low GWP refrigerants as well, and the refrigerant piece. That actually is something that we need to focus -- we are focusing as a state on. But we really need these projects to help demonstrate the path forward to implement low GWP refrigerants as part of our overall climate strategy.

So you know this combination of efficient of high quality, efficient equipment and innovative controls, it really is the sweet spot. And so we've seen over and over again today that we're funding these integrated types projects that take advantage of intelligence and AI in many cases, applied to the latest efficient technology. And I think that's just a really great place to be right now. We're really demonstrating, I think, for many, many others to build on.

And again I just commend -- thank Mr. Lee, and Mr. Smith, Mr. Watkins for your comments. And again Cyrus for the great presentation and just all your and the team's great work administrating and bringing up ideas. And doing the program opportunity notices and just getting the money out there where it can do a lot of good, so thanks again.

COMMISSIONER DOUGLAS: Thank you, Commissioner McAllister.

Commissioner Monahan, any comments?

COMMISSIONER MONAHAN: ((No audible response.)

COMMISSIONER DOUGLAS: Commissioner Gunda?

COMMISSIONER GUNDA: Yeah, Commissioner, thank you. Just I wanted to thank Cyrus for his wonderful presentation. And really highlighting the stakeholder engagement that went into designing this program, just kind of learning about this today a little bit more. I'm just really proud of the work that the R&D team has been doing in the stakeholder engagement and thinking through this robustly, so thank you.

COMMISSIONER DOUGLAS: Thank you.

And I agree with all the comments made both by you Commissioner Gunda and Commissioner McAllister, this is a great program. But it's a very unique sector and designing a program to work effectively with the food production industry really requires the full participation and help of the industry. And it's really nice to see how well the team did and pulling that together.

So let's move on to a vote, Commission McAllister?

COMMISSIONER MCALLISTER: Yeah, I'll move Item 12.

COMMISSIONER DOUGLAS: Commissioner Gunda, would you like to second?

COMMISSIONER GUNDA: Yes, second Item 12.

COMMISSIONER DOUGLAS: Very good, so we'll go to

the vote now.

Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

COMMISSIONER DOUGLAS: Commissioner Gunda?

COMMISSIONER GUNDA: Aye.

COMMISSIONER DOUGLAS: Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

COMMISSIONER DOUGLAS: And I vote aye as well, so this item passes 4-0.

Commissioners, I'd like to make a suggestion that we come back at 1:15 instead of 1:00, is that acceptable?

(Overlapping colloquy.)

COMMISSIONER DOUGLAS: All right, very good. So everybody, we will be breaking for lunch. We'll come back at 1:15 and thanks very much.

COMMISSIONER GUNDA: Thank you all.

(Off the record at 12:41 p.m.)

(On the record at 1:16 p.m.)

COMMISSIONER DOUGLAS: Convening now after our lunch break. It's 1:16 and we're moving on to Item 13, Local Building Energy Efficiency Standards Application. And I'm looking for Danuta Drozdowicz to present. Here you go, welcome.

MS. DROZDOWICZ: Good afternoon, Commissioners. My name is Danuta Drozdowicz. I work in the Efficiency

Division's Buildings Standards Office and I'm presenting local ordinances that exceed the energy code from jurisdictions that have applied for review and consideration by the CEC. Joining me today via the phone line is Jacqueline Moore from the Chief Counsel's Office. Next slide, please.

Jurisdictions that adopt local ordinances are exploring and adopting technologies for our clean energy future; and reducing state greenhouse gas emissions as they lead from the grassroots. I think you'll find it interesting that approximately one in three Californians lives in a community with an energy code that exceeds state energy standards. Next slide, please.

For a local standard to be enforceable, the jurisdiction must file with the CEC, its determination that its standards are cost-effective. And the CEC must find that the local standards reduce energy consumption compared to the current statewide Energy Code. Next slide, please.

To give you a better sense of what's happening throughout the state, to date under this code cycle, 44 ordinances from 37 jurisdictions, have been approved by the CEC. This does not include the applications on the agenda today. The majority require all-electric or electric preferred construction, 24 ordinances also require photovoltaics on buildings not subject to the current

provisions of the energy code. And 23 required additional electric vehicle infrastructure or charging. Next slide, please.

Three jurisdictions have applied for approval to enforce their ordinances at this Business Meeting.

The City of Piedmont requires that low-rise residential retrofits valued at more than $25,000 meet energy efficiency requirements.

The City of Albany requires that newly constructed buildings meet or exceed Energy Design Ratings or Compliance Margins more stringent than the 2019 Energy Code.

And the City of San Carlos requires that new buildings, including substantial renovations and additions, to be all-electric with some exceptions: Prewiring for electric appliances where gas appliances are installed and photovoltaic systems on most new buildings. Next slide, please.

Because the applications meet all the requirements of the Public Resources Code, staff recommends approving enforcement of the ordinances. This concludes my presentation. I am available to answer any questions you may have.

COMMISSIONER DOUGLAS: Thank you for that presentation.

Noemi, do we have any public comment on this item?

MS. GALLARDO: This is Noemi, the Public Advisor. I see no public comments for Item 13.

COMMISSIONER DOUGLAS: All right, thank you very much, then let's go on to Commissioner discussion.

Commissioner McAllister, can you kick us off?

COMMISSIONER MCALLISTER: Yeah, for sure. So I really want to just say thanks to the three jurisdictions here for bringing us these reach codes.

And just as a reminder, Danuta, thank you very much for the presentation. And appreciate every time we get these Reach codes from local governments, I appreciate the diversity of our state. You know, we're big, we have 16 climate zones. We have lots of different local goals. And every constituency, every population is different. And their elected officials actually make decisions that are highly relevant for that particular context. And so the variety, the diversity of Reach codes that we've considered over the months and years is reflective of that.

So just to put a I guess mostly redundant, but it bears repeating, that you know we really have a limited role here as the Energy Commission. You know we're not evaluating most of these reach codes. We're evaluating just to make sure that they are more strict from an energy

perspective, then the minimum state code, Part 6 of Title 24. So that they do conserve energy, after all this is an energy efficiency code.

And then we need evidence from the local jurisdiction that they had a process to evaluate cost effectiveness along the way, and so that's really the extent of our of our evaluation of these and that, from our perspective is enough for us to enable them to enforce that Reach Code locally. We don't evaluate other aspects of the code, so the different provisions, maybe in terms of all electric or the particular posture towards some of these broader questions.

So, but we do learn a lot from the local governments. And markets actually have to respond to those local governments. And it does help move the needle forward in terms of low carbon technologies. And hopefully, we'll again as we talked about earlier in the meeting, see markets begin to scale and low GWP refrigerant solutions, get some scale and get the cost down. So that sort of thing is very positive coming out of this diversity that we have in the state.

So with that I'll move -- well, we'll see if anybody else has comments, but I'm happy to move.

COMMISSIONER DOUGLAS: Yeah, thank you, Commissioner McAllister.

Are there any other comments from other Commissioners are questions?

(No audible response.)

COMMISSIONER MCALLISTER: All right, Commissioner McAllister if you would make a motion, please.

COMMISSIONER MCALLISTER: I will move Item 13.

COMMISSIONER DOUGLAS: Fantastic. Commissioner Monahan, would you like to second?

COMMISSIONER MONAHAN: I'll second that item.

COMMISSIONER DOUGLAS: Great we'll move on to the vote then.

Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

COMMISSIONER DOUGLAS: Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

COMMISSIONER DOUGLAS: Commissioner Gunda?

COMMISSIONER GUNDA: Aye.

COMMISSIONER DOUGLAS: And I vote aye as well, so that item passes as well 4-0.

With this let's turn to Item 14, possible approval of the April 14, 2021 Business Meeting minutes. Is there any public comment on Item 14?

MS. GALLARDO: This is Noemi, the Public Advisor. I see no public comments on Item 14.

COMMISSIONER DOUGLAS: Thank you.

Any discussion on Item 14? All right, it doesn't look like it, so could we get a motion Commissioner Monahan?

COMMISSIONER MONAHAN: Move to approve Item 14.

COMMISSIONER DOUGLAS: Excellent, Commissioner McAllister would you consider a second?

COMMISSIONER MCALLISTER: I'll second.

COMMISSIONER DOUGLAS: Very good, we'll move on to the vote then.

Commissioner Monahan?

COMMISSIONER MONAHAN: Aye.

COMMISSIONER DOUGLAS: Commissioner McAllister?

COMMISSIONER MCALLISTER: Aye.

COMMISSIONER DOUGLAS: Commissioner Gunda?

COMMISSIONER GUNDA: Aye.

COMMISSIONER DOUGLAS: Very good and my vote is in favor as well, so the vote count is 4-0 and the motion passes.

Item 15, the Commissioner or Presiding Member Reports, Commissioner Gunda, would you like to begin?

COMMISSIONER GUNDA: Thank you, Commissioner Douglas. Thank you for deciding today -- it's awesome to watch you in action today.

Just add in a few reports at the top. The primary focus of the Assessments Division over the last

month has been to continue to think through reliability for this summer, as well as the midterm. So staff have done some excellent work both preparing analysis, an outlook analysis for this summer, as well as the future that we're going to talk through in a future workshop. So I'm really proud of the EAD team for continuing to kind of develop new products to inform stakeholders and the state to have a robust conversation and how to think through procurement for the future.

I want to note the town hall we had with Justice Liu. What an amazing workshop that was. I want to thank Justice Liu and inform the attendees today that we had a town hall to discuss the outrage that has been happening against the Asian American Community. And we were joined by Commissioner Shiroma from the PUC. And I just want to applaud the team for putting this together, the Chair for thinking about it, but also our staff for opening up at the town hall and sharing their stories and making it a thoughtful exercise for all of us to reflect and move forward as one big family.

We've been having a lot of briefings. Some of them were in coordination with Commissioner Douglas's office on thinking through future infrastructure planning and then imagining the future of the grid. And so having -- very informative from many stakeholders, which I would

not name every single one of them today. But it's helping us to think through some of the analysis that CEC should take on as we think through SB 100 and the future implementation.

I want to call out both EAD staff, as well as Siting staff for some of the excellent work that they are beginning to imagine to inform some of these long-term issues.

I want to take a moment to thank the IEPR team for putting together that a reliability workshop last week, which discussed the summer 2021 outlook. I want to thank CPUC, CAISO, DWR as well as LADWP for their participation including Secretary Matt Baker. And just helping think through this collectively. as a state, as some of the outlook, and some of the contingencies we have. And (indiscernible) and how best to communicate, collaborate and plan for this summer.

That's kind of like the high-level topics I had I wanted to share. I'll just kind of keep my head down and continue focusing on that reliability for the summer. And every occasion I have, I just want to thank my fellow Commissioners for the incredible work behind the scenes, the generosity of spirit. And continuing to foster the vision for the state, so thank you, everybody.

COMMISSIONER DOUGLAS: Thank you very much,

Commissioner Gunda.

Commissioner Monahan, could you go next?

COMMISSIONER MONAHAN: Happy to and just thank you, Commissioner Gunda, for your leadership. I mean the challenge of ensuring that our energy system is reliable this summer is a big one. And there's a lot of great cross agency, I think, collaboration on this. But your leadership will be really important going forward, so just thank you for stepping in.

So we're focused on the Governor's budget and looking forward to when they revise, which will happen this week. And on reauthorizing the Clean Transportation Program, ensuring there's money for or front loaded for an investments in infrastructure. And in ZEV infrastructure in particular, but also with a real strong focus on medium and heavy-duty vehicles. Whereas we all know we have air quality issues that we need to wrestle with. So that has been just a job and a half, I would say.

And Hannon, Quentin, and actually the whole team at FTD (phonetic) has really been amazing on this one. There's been a lot of fire drills, a lot of late-night emails. So I think everybody here has been through this, this is my first time at having something so big being in the subject the reauthorization. So it's all somewhat new to me and I'm learning. Thank god, for Anna (phonetic) to

get me through this.

Let's see, I think you know I'm starting a bit more and I'm interested in -- Commissioner McAllister I know you've done a lot of this with the Council of Parties (phonetic) coming up. And in Glasgow, and the fact that there's a big focus on transportation, so there's been a lot of cross agency discussions about what that should look like. The staff at FTD are very involved and others in the agency.

But I think Secretary Blumenfeld was really going to be the lead for us on this, but there's a strong piece of ZEV infrastructure that is increasingly emerging as part of the narrative. So it's not just settings that targets for vehicles, but also thinking about the infrastructure needs to those vehicles.

So I'm excited. I mean the fact that it's actually going to be in-person, which is shocking, shocking. It's this potential, because this is as we all know a global market. And we cannot -- you know, California has been at this a long time. And longer than anybody, longer than any other country hands down. And now, what we're seeing is progress at the global stage. And the EU, actually countries in the EU beating us in terms of vehicle sales. The share of new vehicle sales, so Germany and other countries, I mean Norway of course has

been beating all of us for a long time as per the GM Will Ferrell ads I like.

But you know I just feel like there's so much opportunity for us California, as part of this global -- fostering these global partnerships. And figuring out how to do that in the most effective way again is exciting and it's kind of a new learning experience for me.

And speaking of Norway, I just want to say I did have a speaking engagement. I thought it would just share this, because I know that Commission Douglas was on there. I'm not sure, but I don't think you guys were there, but it was this in-person event and virtual event. And the Prince of Norway was involved in convening this. But it was a virtual -- like a real person event, but then they had this virtual aspect with people from Norway being on the stage kind of virtually with you.

And it was a very surreal experience actually to be someplace without a mask. I mean just very surreal, but exciting to feel like okay we're coming to the place of more people being vaccinated. And more comfort with in-person events. And so to that end, I wanted to let you guys know and invite you, if you're still in -- well, I don't know we can invite you actually. Never mind I take that back, because I don't know if I can.

But we're planning a EV manufacturer's tour. And

we had it started. The Chair and I were doing it last year. And Commissioner Rechtschaffen came with us. And I recently met with Liane Randolph, the new CARB Chair and Commissioner Rechtschaffen on a socially distanced hike. And I asked them if they wanted to restart this EV tour. And they're like yes let's do it. And Chair Randolph was like, let's do it in person, we are. So we are organizing an in-person tour in probably late summer with some EV manufacturers in Southern California. So excited to embark on that and restart again to be able to like go physically and do things. I'm excited for that possibility.

And I'm excited, because I just think EVs were a number one export in California last year. With EV manufacturing we had 70,000 jobs (indiscernible) we have over 340 individual entities involved in electric vehicles, zero emission vehicles, I should say. And so having this be just part of our job is to help foster this ecosystem of opportunity in California, good jobs, building the vehicles and the infrastructure that we need to the future. I think, is just a really great opportunity for us.

Okay that's it.

COMMISSIONER DOUGLAS: All right. Well, thanks for that great report, Commissioner Monahan. And you may even want to flag to the Chief Counsel's Office that they help you think about how you might extend invitations. I

think a number of us would be interested and as long as we don't all traipse around a tour at once, we might be able to find a way. But I'm really glad you're getting that off the ground. And what an exciting thing to look forward to this summer.

So Commissioner McAllister, your next.

COMMISSIONER MCALLISTER: All right. Well, thank you Commissioner Douglas, this is great. I guess I have some big things I really need to talk about, and give a lot of thank yous this month. Just because we got a couple of big ticket items out the door last week, reached a couple of milestones. And there's just a lot of people to thank behind both of those things.

And, in particular you all saw the news that the 45-day language period started for the Part 6 Building Code Update. And I'm really happy with where this is landing. Obviously the formal rulemaking is now underway. And we have a couple of Commissioner workshop -- three Commissioner workshop days the week of the 24th of this month to have public opportunity to comment. There's already been quite a bit of public interaction on this update.

And we're landing in a place that's quite bold. That's very innovative. That is really staking out this decarbonization pathway and sending very clear signals to

the marketplace, that this is where we're headed. But at the same time creating enough -- enabling enough flexibility, so that you know as the housing market needs to do builders and OEMs and all of the trade allies can organize themselves to provide the housing that California needs. And in a way that's flexible and kind of optimizes the supply chain and then execution. And so it's very clear what this statement is making within this building code.

So I wanted to in particular just highlight -- you all know the -- well I think you've all gotten briefings. I would encourage you to do so. But the high points are really pivoting towards heat pumps as an inherent efficient technology that's also low carbon for the long term, as our electric system decarbonizes. Also expanding our PV requirements into some nonresidential building categories. Again, these are modest sized PV systems that you have a big impact for the customer and are very cost effective.

And we're also pairing those now for the first time for batteries that actually really do -- you know, as we saw earlier in the meeting and we've discussed in previous meetings -- they're enabling technology for decarbonization and renewables integration. And so at the site level it's really that's playing out as that industry

matures.

And so now we're in the position again, of having gotten to a place where at an initial phase we can begin to require these technologies that California is going to depend on, to get to our carbon reduction goals. And a little bit of cleanup as well, and also focusing on indoor air quality and low-rise single family residential as well by adjusting our ventilation requirements. So those are kind of the big ticket items.

But this is more than a village it's almost a -- it really mobilizes a significant portion of the Energy Commission. And just to put it in context, I mean the Energy Commission's origin really was three main authorities in terms of the energy consumption environment. Obviously we have forecasting. And we have emergency planning. And we have power plant siting. Those were also obviously in the mix, particularly the siting role. That was in the mix in the 70s when that function didn't have a home and the Commission was created for that.

But on the on the Buildings and Efficiency side, you know that was the initiation of energy efficiency in demand side management as a discipline. And building standards, appliance efficiency standards and load management standards were the three primary authorities that enshrined in the Warren-Alquist Act. And we're moving

forward on all three of those in a very forthright way. We have a new authority that's around load flexibility for appliances that I think really joins that triumvirate as a fourth.

So very exciting times, and so the Building Standards get updated every three years. And this one is a -- it is and has been and continues to be a big lift. And I wanted to just go through -- let's see maybe not in any particular order, I'm going to just highlight some of the key people. But it's a long list and I'm just going to ask you to bear with me here.

All of these people have been integral to the development of the Building Code Update regulatory process. And it requires a lot of management, and technical, and administrative, and just very detail oriented. So far this update has gotten 750 or so distinct comments from 550 or so distinct commenters. There have been more than 40 workshops along the way with different forms and different sets of stakeholders. And so there's just been a lot of activity to get us where we are, so lots of public process. And you've heard at previous business meetings, how much interest there has been in this update.

So in the Building Standards Office, first really everyone in that office, but I'll mostly just list -- and you know I can't really do everyone justice here --

reading their name is sort of I think not a complete representation of how important each and every one of these folks has been.

So Adrian Ownby, Alexis Markstrum, Amie Brousseau, Che Geiser, Cheng Moua, Chris Olvera, Danny Tam, Danuta Drozdowicz. Sorry, Danuta, I always do that. Haider Alhabibi, Haile Bucaneg, Javier Perez, Jeff Miller, Maziar Shirakh, Michael Shewmaker, Payam Bozorgchami, Peter Strait, RJ Wichert, Robert Hudler, Ronald Balneg, Simon Lee, and Thao Chau and Will Vicent.

And I just want to call out Will Vicent as the Office Manager of the Building Standards Office. You know you've waded in the deep water really fast and been doing a great job. And Mazi and Payam, Danny, and the whole team doing the technical analysis. Really, there's just a lot of deep, deep expertise here that's world class at the Energy Commission on this.

And RJ. Yeah, I'm going to leave somebody else. I'm trying not to not to call out too many people specifically, but the analysis that goes into making sure that it's cost feasible in the marketplace, cost effective, and good to go from a statewide regulation perspective.

In the Compliance Office Lorraine White is the Office Manager, and Joe Loyer, Daniel Wong and Matthew Haro, all of them have been really instrumental in sections

of the Building Code Update. And interacting with a lot of the stakeholders on the update, making sure that it's implementable and enforceable in the real world.

The Administration team, Amber on the media front and the outreach fronts, Christine, and Mike the Deputy Director and the Director, Mike and Christine you've really been great leaders throughout this process. You know, we're not to finish line yet. A lot of lot of interaction with stakeholders and some tweaks in the offing as we move through the 45-day language. But I really appreciate all your leadership there. Tajanee Ford-Whelan, Mary Trojan, Corrine Fishman, and again Amber Beck.

In the Chief Counsel's Office, which so critical in a regular -- especially now that we've entered the regulatory process formally. Linda Barrera, James Qaqundah, Josephine Crosby, Justin Delacruz, Matt Chalmers and Michael Murza, all of them have played a really key role in this.

And I'll say we're doing also an environmental impact report for this update, which doesn't always happen. Actually it's relatively rare. But there's a lot of analysis going into that. And as you all know that's a big deal. We have a CEQA equivalent skill set in the Siting Division.

So the Siting Division has really stepped up got

to give kudos to Sean and his team, as well as the Chief Counsel's Office in putting that together. And I'll just call out Linda Barrera again. The Chief Counsel has been instrumental in moving that forward.

So, those are all the people I wanted to -- well, let me just also thank Bill Pennington and Brian from my office. You know, Bill in particular is a real lion in this realm of Building Standards nationally and internationally. And his input has been -- his guidance on this has been really key as well. So anyway that's the status report on that.

The other big one is the 3232 Draft Staff Report is out for Building Decarbonization. So that's out on the street for comments. The existing Buildings Office really led that in the Efficiency Division, so that's Michael Kenney, Heriberto Rosales, Jennifer Nelson, the Office Manager Heather Bird, Aida Escala, Brian Samuelson, Gabe Taylor, and Mike Sokol all from the Efficiency Division. And Christine as well as the Deputy in Efficiency Division, have helped guide that and put it together. But Michael in particular and Heriberto and Jennifer have been key to finishing that document.

That's been a real collaborative effort across divisions. And the Assessments Division did the meat of the analysis, actually put together the modeling tools and

managed the contract for that. And just provided, developed, and I think will maintain this analytical expertise in the building decarb arena. So that we can monitor going forward how we're doing, and really as we gather more and more end use data it'll provide incredible insights as to how we're implementing, whatever the Legislature then asks us to do as a result of that report.

So in the EAD Nick Janusch, Ingrid Neumann, Mike Jaske, Matt Coldwell, the Office Manager, Aleecia Gutierrez, the Deputy and Melissa Jones, on constructing the report. And really helping us craft it. So that's out on the street and really good to have that out there for feedback.

Both of these developments in the Building Code and the 3232 Building Decarb Report are going to inform that theme in the IEPR discussion going forward. And I'll just flag for everybody on the 21st there's a workshop about the 3233 report. And then on the 25th is an IEPR workshop on building decarbonization. So both of those are you know where we grabbed that ball and we started to carry it down the field during the IEPR process.

And on that note I'll just thank Heather and the IEPR team for the few workshops we've already done on the IEPR. And then all the ones that are to come and it's going to be a full summer on a bunch of important topics.

I'm really looking forward to working with all of you and my colleagues on the dais.

And many of these workshops will be interagency where we'll have ARB, we'll have you know potentially OPR. We'll have certainly the PUC on the dais I think relatively often. And so, as we work through the building decarb themes and the other themes in the IEPR I'm looking forward to that.

The last item of note, I guess I will just thank -- for completeness thank my other advisor, Fritz Foo, who is helping out with the international stuff. Collaboration with the EU, which has been really interesting lately.

And on the hydrogen topic as well. There's a really rising interest in hydrogen. And I think, as we move forward together to figure out what California is role in that is going to be across sectors, we talked about earlier in the meeting, it's really helpful to educate ourselves about it as much as we can. And keep up to date on this breadth of knowledge that exists on hydrogen.

And then finally just I'll sort of channel the Chair here. He and I, a few days after our last Business Meeting, went and visited Sonoma Clean Power, their Advanced Energy Center, which we actually funded. You might remember that we voted a significant grant for them to set that up. And they are really in the final stretch

of finishing it and opening it. And it's just going to be a really fabulous resource for the public and Sonoma County.

And then also just we can actually use it as an offsite when we can do that again. So they've got a great meeting space. They've got all the AV. So I think, as we do, regional meetings around the state that'll be a nice place. They're absolutely excited to host us. But the demonstrative value and sort of all of the technologies that we talked about at this meeting and in a previous meetings, they're going be able to showcase in real life for people. So they can actually use them and that piece of market transformation, I think is going to be really critical. And their leadership is amazing on this.

So with that I'll wrap up. Thanks for bearing with me through all the thanks. But I think my theme for this meeting is gratitude, both those for all the staff that's working so hard.

And also my colleagues, you are just fantastic and obviously including the Chair, who couldn't be with us today. But we're firing on all cylinders and just the collaborative spirit and the respect for public service is something that is really precious. And I think sometimes we have so much to do, we don't quite -- we're not able to focus on backing up and sort of taking it all in. But I

think we're moving the ball forward on so many fronts. And it's impacting the world in a really positive way. And you're all making that happen, so it's really a pleasure to be working with you.

COMMISSIONER DOUGLAS: Well, thank you, Commissioner McAllister, for those comments. And for the thanks, which I know we all appreciate and share and right back at you. And I know it's been a remarkably busy time for you with the Building Standards.

I have my own update and then I actually have a brief update to read from the Chair, so I'll go into my own first. We've had some really nice international collaboration, and collaboration with other states. In the period since the last Business Meeting I had a chance to join a NYSERDA, so that's New York, California, Denmark conversation on offshore wind that also touched on hydrogen. That was really nice conversation and appreciated NYSERDA inviting us in at the last minute. But it worked out really well to have that be a three-way conversation.

We also had an opportunity, and I know that the Chair, Commissioner McAllister and I think also Commissioner Monahan participated in an information exchange with -- or a dialogue with Germany on hydrogen. And it was a great dialogue. I had a chance to ask about

100 questions and got answers to some of them. And some follow-up items, but I learned a lot. It was really nice.

We had a Lithium Valley Commission meeting on April 29. The Lithium Valley Commission is really valuable. It's so nice to have a community voice and input. And to have a table where you get these diverse stakeholders from industry, tribes, local community, environmental justice, just all having an opportunity to talk. And sort of envision what they want to see with this incredible environmental and economic opportunity coming out of Lithium Valley.

Like Commissioner Monahan, I had some of my first in-person meetings. I actually had two, two days in a row. So like you, Commissioner Monahan, the Norwegian Royal visit, I think her topic was transportation and mine was offshore wind. Commissioner Rechtschaffen joined us. And it looked -- you know, we sat in a studio in San Francisco with the moderator. And then there were two CEOs from Norway participating. And it looked like -- they could make it look like we were in the same room, it was really fascinating. And great dialogue, very fun. My first work trip, you know, for more than a year.

And followed the next day with a meeting in Sacramento with the Yurok Chair and several members of the Tribal Council who traveled to Sacramento. And had a

number of meetings with state agency folks on the roof of the PUC. And in our case on some of the Capitol park benches, supplemented by some outdoor chairs, that you would take camping or to sporting events. And yeah, we had a great conversation. And we actually really enjoyed being able to talk and be outdoors in this beautiful environment. It was really nice.

I wanted to thank Katrina Leni-Konig who spoke earlier on the Diversity report. But she came to that meeting with me and she brought a few chairs and I brought a few chairs. But it worked out really well. I have outdoor meeting space on my wish list now, because it was very nice.

Let's see, we already mentioned the IEPR reliability workshop. You know, as a number of you have indicated this has been a really busy time as we think about what do we need to do with the state to meet our SB 100 build-out goals. What do we need to do on summer reliability? What do we need to do on summer reliability? What do we need to do in between the long term in the immediate term, to get our state leaders just to stay on the on the right track. And to bring people along and coordinate and cooperate and work together. And bring our best you know, analysis and thinking to that. And so it's been it's been a really busy and productive and interesting

time, I think, on the Commission.

And I think that wraps my report, but now with your indulgence, colleagues, I will read the Chair's report. Its brief and so here's what he has say.

He would like to thank Commissioner Gunda and Commissioner Shiroma from the PUC for joining the town hall we hosted on Anti-Asian violence a few weeks ago with California Supreme Court Justice Goodwin Liu.

He especially wants to thank those who shared their stories that day. And to 500 staff who joined and listened with compassion to the stories that were shared.

He and Commissioner McAllister toured the Sonoma Clean Powers Advance Energy Center in Santa Rosa, which you mentioned, Commissioner McAllister. Which demonstrates all electric home appliances, electric induction cooktops, heat pumps and other measures to decarbonize. And he'd like to encourage the public to visit when it opens later this month. I might put that on my list to.

He brought up the IEPR reliability workshop. And thanks Commissioner Gunda, the IEPR team, and EAD for a successful workshop. And also mentioned that he and Commissioner Gunda will be participating in a legislative hearing next week on reliability. And thanks staff for their hard work on this important issue.

And in terms of the express terms for Title 24,

offers his congratulations again to Commission McAllister for an outstanding job getting the energy code released, and the 3232 report completed.

And he'd like to thank all the staff that worked on these important milestones for our building decarbonization agenda. There's a lot more work to do, but these accomplishments represent a big step forward for building decarbonization. And it would not be possible without Commissioner McAllister's dedication and leadership.

So I think we all thoroughly join in that sentiment. And thank you, yep. All right, so --

COMMISSIONER MCALLISTER: Aw shucks.

COMMISSIONER DOUGLAS: -- Commissioner McAllister?

COMMISSIONER MCALLISTER: I'll just say aw shucks, that's what we're here to do. You know, I just think we all have spent a lifetime learning what we need to know, to be able to do what we think is the right thing. And take advantage of the positions that we're in and do it responsibly. So that's all I think I'm doing and I know you're all doing the same thing in your realm. So yeah, but thank you.

And really all the kudos go to staff really in fact.

COMMISSIONER GUNDA: Commissioner Douglas, can I just make one quick comment?

COMMISSIONER DOUGLAS: Yeah.

COMMISSIONER GUNDA: Yeah, I kind of wanted to make sure that I did not mention 3232 and a bunch of other things I knew Commissioner McAllister was going mention. That and the SB 100 efforts.

The two of you have been -- you and Commissioner McAllister have been the closest that I've been working on in terms of the SB 100 effort and the 3232. And I know we -- and you and Commissioner McAllister are extremely modest, and so is Commissioner Monahan. But today I just want to focus on both of you.

Thank you so much for, Commissioner McAllister, your work on 3232. I mean, I was staff back then. Thank you for helping guide me and the team to develop a robust analysis that really kind of sets the stage for the future of building decarbonization analytical work at CEC. And I'm incredibly thankful for your leadership. And just in complete awe on how much you can take on and continue to kind of finish.

So to your to office as well as I think I was really grateful that you mentioned every single name. Because it's kind of like I feel kind of stressed that I'm reciting names, because I'm going on too long. But I just

want to call out a couple: Mark Kootstra and Angela Tanghetti, who was also instrumental in the (indiscernible) work. So kudos to all of them.

And Commissioner Douglas kind of passed over the SB 100 coordination work like it was like a simple thing over like a couple of seconds. And I've been watching her in action over the last month in trying to really develop a statewide partnership with tons of stakeholders and getting everybody on the same page to kind of think about how do we implement SB 100? How do we think through land use, transmission analysis, big, big projects, long-term projects. How do we think through some of the long-duration storage issues, offshore wind? I

So I just want to give kudos and thank you Commissioner Douglas for her leadership on pushing forward on the SB 100. I'm glad to be a part of your team on both of them.

And the Chair, fabulous work on reliability and is always behind the scenes. And he lets me be in the front, but I just have gratitude for him for pushing that forward. Thank you.

COMMISSIONER DOUGLAS: Thank you, Commissioner Gunda.

All right, I think we will move on to Item 16 now, Executive Director's Report.

MR. BOHAN: Greetings, Commissioners. I have no report this afternoon, thank you very much.

COMMISSIONER DOUGLAS: Thank you.

Item 17, Public Advisor's Report.

MS. GALLARDO: Hi, there. This is Noemi. I said a mouthful earlier, so I just have a couple of quick things.

First, I participated in the mPower Innovation event on a Monday. And I wanted to uplift the Research and Development Division, and in particular in the EPIC and mPower Innovation teams for the great work they did to really make it a community-centered event where they focused on getting all this great feedback from community members. So and leaders and whatnot.

So I'm hoping that those types of approaches can also be applied in other areas. And one of the things I'm going to be doing is trying to make sure that we break silos and can communicate across divisions. Sometimes we just get bogged down with what we're doing and it's hard to do. So I'm going to try to help out there.

And then second, is the Clean Energy Hall of Fame we mentioned at the top. Commissioner Douglas, you did a great job promoting that and we want to remind folks to please submit nominations for any candidates. And the deadline is June 25th, so please submit by then.

And that's it for me thank you so much, Commissioners, for everything that you do for us.

COMMISSIONER DOUGLAS: And thank you, Noemi, for everything you do for us and for the Commission.

And I should have brought up the mPower Innovation event in my report, so I'm glad that you did. Thank you.

Let's go on now to Item 18. Is there any public comment?

MS. GALLARDO: So I'm going to read some instructions first, Commissioner Douglas.

This is the period for any person wishing to comment on information items or reports of the meeting agenda or any other item. Each person has up to three minutes to comment and comments are limited to one representative for organization. We may reduce the comment time, depending on the number of commenters. As a reminder, we are not accepting public comment through Zoom. Please call our Verizon line at 888-823-5065. The pass code is "business meeting."

After your line is opened, please spell your first and last names, state your affiliation if you're representing an organization. Do not use the speakerphone when talking, because we won't hear you clearly. And if you're also on Zoom, either mute or leave Zoom to avoid

feedback.

So I'm hoping that gave people a chance to hop on the line. And we do not have anyone on the line for public comment for Item 18.

COMMISSIONER DOUGLAS: All right, thank you then, Noemi.

We'll go to Item 19, the Chief Counsel's Report.

MS. BARRERA: Hi, Commissioners. The Chief Counsel's Office does not have a report today.

COMMISSIONER DOUGLAS: All right, thank you very much, Linda.

I think, then with that we are finished. So the meeting is adjourned. Thanks everyone.

(The Business Meeting adjourned at 2:00 p.m.)

REPORTER'S CERTIFICATE

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

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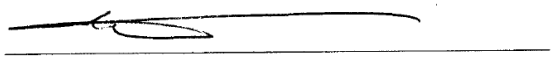

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IN WITNESS WHEREOF, I have hereunto set my hand this 27th day of May, 2021.

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Myra Severtson
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