

**State of California**  
California Energy Commission  
Minutes of the June 10, 2020, Energy Commission Business Meeting

The meeting was called to order by Chair Hochschild. The Pledge of Allegiance was led by Chair Hochschild.

Present:

David Hochschild, Chair  
Janea A. Scott Vice Chair  
Patricia Monahan, Commissioner

Karen Douglas, Commissioner  
J. Andrew McAllister, Commissioner

The California Energy Commission's (CEC) June 10, 2020 Business Meeting will be held remotely, consistent with Executive Orders N-25-20 and N-29-20 and the recommendations from the California Department of Public Health to encourage physical distancing to slow the spread of COVID-19. The public is able to participate and observe the meeting consistent with the direction in these Executive Orders. Instructions for remote participation can be found in the notice for this meeting and as set forth below in this agenda.

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 per person as to each item listed on the agenda that will be voted on today. Any person wishing to comment on information items or reports (non-voting items) shall reserve their comment for the general public comment portion of the meeting agenda and shall have three minutes total to address all remaining comments.

**THE COMMISSION WILL CONSIDER AND MAY TAKE ACTION ON THE FOLLOWING:**

**1. Consent Calendar.**

(Items will be taken up and voted on as a group. A commissioner may request that an item be moved and discussed later in the meeting.)

- a. ~~COSUMNES POWER PLANT (01-AFC-19C). Proposed order correcting an error in a Condition of Certification that was amended under Commission Order 18-1210-04. The table in Condition of Certification AQ-10 incorrectly displayed old SO<sub>x</sub> values rather than the approved higher SO<sub>x</sub> values. The SO<sub>x</sub> values were correctly displayed in the staff analysis of the 2018 amendment. Approval would correct the table in Condition of Certification AQ-10 to show the higher SO<sub>x</sub> values. Contact: Mary Dyas.~~
- b. INDEPENDENT AUDIT FOR JOB CREATION FUND - PROP 39. Proposed resolution approving Agreement 200-19-029 between the Proposition 39 Citizens Oversight Board and the State Controller's Office for \$600,000 to audit a selection of completed projects funded by the Clean Energy Jobs Act Job

Creation Fund to evaluate project effectiveness in meeting the intent of the California Clean Energy Jobs Act (ERPA funding) Contact: Jack Bastida.

- c. NATIONAL ENERGY MANAGEMENT INSTITUTE COMMITTEE (13-ATTCP-01). Proposed resolution approving the National Energy Management Institute Committee (NEMIC) nonresidential mechanical acceptance test technician certification provider update report for the 2019 Energy Code. This will allow NEMIC to administer its proposed program changes and training curricula adjustments for the 2019 Energy Code. Contact: Joe Loyer.
- d. RENEWABLES PORTFOLIO STANDARD (RPS) 2014-2016 COMPLIANCE PERIOD 2 REVISED VERIFICATION RESULTS REPORT (18-RPS-02). Proposed resolution adopting RPS Verification Results (Revised) Lassen Municipal Utility District Compliance Period 2 (2014-2016) report. The revised report removes the use of the delay of timely compliance optional compliance measure as reported originally in the RPS Verification Results Lassen Municipal Utility District Compliance Period 2 (2014-2016) report adopted at the March 12, 2019 business meeting. Contact: Chris Metzker.
- e. REDWOOD CITY ELEMENTARY SCHOOL DISTRICT. Proposed resolution approving Amendment 1 to Grant ARV-19-065 with Redwood City Elementary School District to: (1) increase the number of all-electric school buses and supporting infrastructure from three to six; (2) increase the total award amount by \$1,005,567; (3) modify bus specifications; and (4) adopt staff's recommendation that the installation of the charging infrastructure is exempt from CEQA. (Clean Transportation Program funding) Contact: Lorraine Gonzalez.
- f. Department of Energy (DOE)-NATIONAL RENEWABLE ENERGY LABORATORY. Proposed resolution revising the CEC's resolution from its April 8, 2020 business meeting approving amendment 4 to contract Agreement 600-15-001 with the U.S. DOE's National Renewable Energy Laboratory, to make it clear that the CEC's approval of amendment 4 includes the addition of \$200,000 to the agreement; otherwise, nothing else in the resolution approved at the April 8, 2020 business meeting is changed. (Clean Transportation Program funding) Contact: Patrick Brecht.

*Commissioner Scott moved Item 1 and Commissioner Douglas seconded. The vote was unanimous (5-0).*

## **2. Discussion of CEC Progress on Joint Agency Report, Charting a Path to a 100 Percent Clean Electricity Future, SB 100 (2018).**

Staff presentation on the clean energy goals established by SB 100, and a discussion of its requirement to issue a joint agency report due to the Legislature by January 1, 2021. Staff will also provide an update of the report development process, including the planned scope and public engagement process. Contact: Terra Weeks. (Staff presentation: 5 minutes)

*Staff gave a presentation on informational Item 2. No vote taken.*

### **3. Local Ordinance Applications (19-BSTD-06).**

Possible approval of resolutions for two applications submitted by local jurisdictions for energy ordinances that exceed the energy efficiency requirements of the 2019 California Energy Code (Title 24, Part 6). Contact: Danuta Drozdowicz. (Staff presentation: 5 minutes)

- a. CITY OF RICHMOND. New ordinance requiring that newly constructed residential buildings are all electric with gas allowed only for cooking and fireplaces. Newly constructed high-rise residential and nonresidential buildings are required to be all electric, and nonresidential buildings must also install a minimum amount of on-site solar, either photovoltaic (PV) or solar thermal. Commercial kitchens and life science, public agency, and emergency operations buildings may apply for an exemption on a case-by-case basis. Prewiring for electric equipment and appliances is required where gas fired equipment and appliances are installed.
- b. CITY OF HAYWARD. New ordinance requiring that all newly constructed low-rise residential buildings other than accessory dwelling units are allelectric. Newly constructed mixed fuel high-rise residential and nonresidential buildings are required to install solar panels on the entire Solar Zone and meet higher efficiency levels than the Standard Design Building.

*Commissioner McAllister moved Item 3 and Commissioner Douglas seconded. The vote was unanimous (5-0).*

### **4. Evergreen Economics, Inc. – Economic Services.**

Proposed resolution approving Agreement 400-19-002 with Evergreen Economics, Inc. for a \$150,000 contract to provide Standardized Regulatory Impact Assessments for Efficiency Division major regulations. (COIA funding) Contact: Carlos Baez. (Staff presentation: 5 minutes)

*Commissioner McAllister moved Item 4 and Commissioner Scott seconded. The vote was unanimous (5-0).*

### **5. Energy Efficiency Technical Support Contract.**

Proposed resolution approving Agreement 800-20-001 with Guidehouse, Inc. for a \$1,500,000 contract to provide energy efficiency technical support. (COIA funding) Contact: Brian Samuelson. (Staff presentation: 5 minutes)

*Commissioner McAllister moved Item 5 and Commissioner Scott seconded. The vote was unanimous (5-0).*

### **6. ECAA 1% Loans to the City of Trinidad, Ambrose Recreation and Park District, Snelling Community Services District, and Colusa County.**

Proposed Resolution Approving ECAA Loans to the City of Trinidad, Ambrose Recreation and Park District, Snelling Communities Services District, and Colusa County. (ECAA funding) Contact: Barry McLeod. (Staff presentation: 5 minutes)

- a. CITY OF TRINIDAD. Proposed resolution approving Agreement 017-19-ECI with City of Trinidad for a \$49,280 loan at one percent interest for a 14 kWdc rooftop PV system, and adopting staff's determination that this action is exempt from CEQA. The project is estimated to save the city 18,956 kWh of electricity, resulting in annual energy cost savings of \$4,360.
- b. AMBROSE RECREATION AND PARK DISTRICT. Proposed resolution approving Agreement 018-19-ECI with Ambrose Recreation and Park District for a \$517,550 one percent interest loan for the installation of one 50.8 kWdc solar PV system, energy efficient lighting, HVAC unit replacement, programmable thermostats, and pool pump smart controls; and adopting staff's determination that this action is exempt from CEQA. The project is estimated to save 161,871 kWh of electricity and 506 therms of natural gas, resulting in annual energy cost savings of \$36,083.
- c. SNELLING COMMUNITY SERVICES DISTRICT Proposed resolution approving Agreement 019-19-ECI with the Snelling Community Services District for a \$123,195 loan at one percent interest, and adopting staff's determination that this action is exempt from CEQA. The proposed project includes the installation of a 34.5 kWdc ground-mounted PV system, and replacement of two pad-mounted sewage lift station centrifugal pumps with high efficiency submersible pumps and control panel. The project is estimated to save 57,192 kWh of electricity, resulting in annual energy cost savings of \$13,209.
- d. COLUSA COUNTY. Proposed resolution approving Agreement 020-19-ECI with Colusa County for a \$1,622,640 one percent interest loan for four solar PV systems totaling 281 kWdc, energy efficient lighting, HVAC/boiler replacements, and a cool roof; and adopting staff's determination that this action is exempt from CEQA. The project is estimated to save 623,296 kWh of electricity and 10,267 therms of natural gas annually, resulting in annual energy cost savings of \$160,037.

*Commissioner McAllister moved Item 6 and Commissioner Scott seconded. The vote was unanimous (5-0).*

- 7. Aemetis Biogas, LLC.** Proposed resolution approving Agreement LCF-19-001 with Aemetis Biogas LLC for a \$4,183,000 grant to fund construction and operation of a biogas cleanup plant and renewable natural gas production facility and adopting staff's determination that this action is exempt from CEQA. When operational, the facility will upgrade biogas from nearby anaerobic dairy digesters and convert it to renewable natural gas for use as transportation fuel. (GGRF funding) Contact: Pilar Magaña. (Staff presentation: 5 minutes)

*Commissioner Monahan moved Item 7 and Commissioner Scott seconded. The vote was unanimous (5-0).*

## **8. Advancing Next-Generation Heating, Cooling and Water Heating Systems -**

## **GFO-19-301.**

This solicitation sought proposals to fund applied research and technology demonstration projects that develop and demonstrate innovative, efficient, and environmentally-friendly approaches to provide space conditioning, refrigeration and water heating in buildings. Projects will develop systems with efficiencies comparable to or higher than today's high-efficiency equipment, while also utilizing low or no global warming potential refrigerants. (EPIC funding) Contact: Karen Perrin. (Staff presentation: 5 minutes)

- a. ASSOCIATION FOR ENERGY AFFORDABILITY. Proposed resolution approving Agreement EPC-19-030 with Association for Energy Affordability, Inc. for a \$2,800,193 grant to install and demonstrate the performance of low-global warming potential central heat pump water heating systems in multifamily buildings located in disadvantaged or low-income communities, and adopting staff's determination that this action is exempt from CEQA. The project will develop design configurations for easier adoption; provide best practices to ensure continued performance; and educate the design community on the potential of this emerging technology.
- b. ASSOCIATION FOR ENERGY AFFORDABILITY. Proposed resolution approving Agreement EPC-19-032 for a \$1,499,926 grant with the Association for Energy Affordability, Inc. to develop, and test a pre-fabricated, scalable central mechanical system module to provide space conditioning and hot water to multifamily buildings, and adopting staff's determination that this action is exempt from CEQA. The systems will be tested in buildings located in disadvantaged or low-income communities.

*Commissioner Scott moved Item 8 and Commissioner McAllister seconded. The vote was unanimous (5-0).*

## **9. Developing Non-Lithium Ion Energy Storage Technologies to Support California's Clean Energy Goals - GFO-19-305.**

This solicitation aims to fund the development and field testing of emerging energy storage technologies for the purpose of raising the Technology Readiness Level, accelerating market penetration and diversifying energy storage technologies in the state. (EPIC Funding) Contact: Robin Goodhand. (Staff Presentation: 5 minutes)

- a. ANTORA ENERGY, INC. Proposed resolution approving Agreement EPC-19-031 with Antora Energy, Inc. for a \$1,999,787 grant to develop and field-test a breakthrough long-duration energy storage system based on thermophotovoltaic technology, and adopting staff's determination that this action is exempt from CEQA. The system will be pilot tested at an existing cogeneration power plant in Fresno County.
- b. E-ZN INC. Proposed resolution approving Agreement EPC-19-034 with e-Zn Inc. for a \$1,286,777 grant to design and build an innovative energy storage system that stores electrical energy in physically free zinc metal, allowing for low-cost, long-duration energy storage. The system will be tested and validated at a greenhouse facility to demonstrate commercial

viability. Staff also request adopting the staff determination that this action is exempt from CEQA.

- c. DASH2ENERGY LLC. Proposed resolution approving Agreement EPC-19-037 with Dash2energy LLC for a \$1,275,475 grant to establish a renewable hydrogen energy storage system. The project focuses on creating an electricity in/electricity out system by integrating electrolysis, high-pressure hydrogen storage, fuel cell electrical regeneration, and microgrid control systems into a single system. The system will be integrated with an existing 1 MW wind turbine to provide electricity, and will store the energy as hydrogen to be converted to back to electricity to provide cost savings and long duration resiliency for a municipal water treatment plant. Staff also request adopting the staff determination that this action is exempt from CEQA.
- d. SALIENT ENERGY INC. Proposed resolution approving Agreement EPC-19-040 with Salient Energy Inc. for a \$1,583,125 grant to test and validate a zinc-ion battery storage system designed specifically for residential use and adopting staff's determination that this action is exempt from CEQA. The integrated pilot-scale system will be validated in a simulated residential load environment and the recipient will build the capacity to develop and assemble the batteries in California.
- e. FORM ENERGY, INC. Proposed resolution approving Agreement EPC-19-041 with Form Energy, Inc. for a \$1,998,215 grant to advance development of an aqueous, air-breathing battery energy storage system, and adopting staff's determination that this action is exempt from CEQA. The project will result in the recipient's first field demonstration and independent measurement and verification of a 10 kW, 100-hour prototype energy storage system operating under relevant customer use conditions.
- f. ANZODE, INC. Proposed resolution approving Agreement EPC-19-042 with Anzode Inc. for a \$1,747,721 grant to fund prototyping efforts to add a novel stabilizing compound to zinc-based battery electrodes which reduces electrode degradation. This stabilizer can be easily integrated into existing manufacturing processes and is expected to double battery life. The system will be tested to demonstrate performance in residential and commercial applications. Staff also request adopting staff's determination that this action is exempt from CEQA.
- g. T2M GLOBAL, LLC. Proposed resolution approving Agreement EPC-19-044 with T2M Global, LLC for a \$995,250 grant to develop and validate an Advanced Electrolyzer System (AES) that employs an innovative approach for increasing net electrical system efficiency by recovering dilute hydrogen from wastes and resources such as ammonia and gasified biomass. The AES electrolyzer stack is reversible and can operate in fuel cell mode to convert the stored hydrogen back to electricity. A small-scale system will be tested in a laboratory setting to validate the system performance under

controlled conditions. Staff also requests adopting staff's determination that this action is exempt from CEQA.

*Commissioner Scott moved Item 9 and Commissioner McAllister seconded. The vote was unanimous (5-0).*

**10. Advancing Envelope Technologies for Single-Family Residential Buildings, Low-Rise Multifamily Buildings, and Mobile Homes - GFO-19-307.**

This solicitation sought proposals to fund applied research and development, and technology demonstration and deployment projects of advanced window and building envelope systems in single-family residential homes, low-rise multifamily residential buildings, and manufactured homes. (EPIC Funding) Contact: Jackson Thach. (Staff Presentation: 5 minutes)

- a. DOE-LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving Agreement EPC-19-033 with Lawrence Berkeley National Laboratory for a \$1,850,000 grant to demonstrate the installation of thin-glass triple-pane windows in at least 16 multifamily and 30 single-family housing units located in low-income or disadvantaged communities, and adopting staff's determination that this action is exempt from CEQA. The project includes detailed investigations into energy savings, long-term performance, and quality of installed products.
- b. ELECTRIC POWER RESEARCH INSTITUTE INC. (EPRI). Proposed resolution approving Agreement EPC-19-035 with EPRI for a \$1,999,982 grant to integrate and test several advances in manufactured home design and construction to provide a model for how the industry can cost effectively achieve the state's energy and fire safety goals, and to adopt staff's determination that this project is exempt from CEQA. The advancements will be installed in new manufactured homes to be located in Northern California.
- c. ROCKY MOUNTAIN INSTITUTE. Proposed resolution approving Agreement EPC-19-036 with Rocky Mountain Institute for a \$1,917,967 grant to develop, deploy, and assess the commercial feasibility of prefabricated exterior envelope panels for retrofitting multifamily buildings to increase energy efficiency and develop commercialization plans to reduce cost, time and complexity of panel design and installation, and to adopt staff's determination that this action is exempt from CEQA. The prefabricated panel will be installed in a multifamily building located in a disadvantaged or low-income community in Northern California.
- d. INSTITUTE OF GAS TECHNOLOGY DBA GAS TECHNOLOGY INSTITUTE. Proposed resolution approving Agreement EPC-19-043 with the Institute of Gas Technology dba Gas Technology Institute for a \$2,000,000 grant to develop and test advanced energy-efficient and fire-resistant envelope systems using vacuum insulation for manufactured homes, and to adopt staff's determination that this action is exempt from

CEQA. These advances will be installed in new manufactured homes located in Northern and Southern California, with one site being in a disadvantaged community.

*Commissioner Scott moved Item 10 and Commissioner McAllister seconded. The vote was unanimous (5-0).*

**11. Validating Capability of Second-Life Batteries to Cost-Effectively Integrate Solar Power for Small-Medium Commercial Building Applications - GFO-19-310.**

This solicitation sought proposals to fund applied research and development projects that will develop a validated and replicable approach to repurposing retired electric vehicle (EV) batteries for stationary energy storage applications (second-life EV battery). (EPIC Funding) Contact: Tanner Kural. (Staff Presentation: 5 minutes)

- a. SMARTVILLE, INC. Proposed resolution approving Agreement EPC-19-038 with Smartville, Inc. for a \$2,035,787 grant to characterize the degradation of repurposed electric vehicle battery modules and validate the ability of these resources to provide building resiliency and load shifting services and adopting staff's determination that this action is exempt from CEQA. The goal is to allow multiple second-life battery form factors and module types, from multiple original equipment manufacturers, to be integrated and actively exchanged within a single system architecture.
- b. REPURPOSE ENERGY, INC. Proposed resolution approving Agreement EPC-19-039 with RePurpose Energy, Inc. for a \$3,000,000 grant to install an integrated solar PV energy storage system that incorporates second-life batteries from Nissan EVs at a food co-op in Grass Valley, and adopting staff's determination that this action is exempt from CEQA. The goal of this project is to validate the batteries' ability to integrate solar PV and provide energy resilience to the food co-op. RePurpose Energy will also conduct a series of laboratory-based cycling tests to identify the degradation rate and effective useful life of used EV battery cells.

*Commissioner Scott moved Item 11 and Commissioner Monahan seconded. The vote was unanimous (5-0).*

**12. Geothermal Energy Overcoming Technology Hurdles and Enabling Recovery of the Mineral Lithium (Geothermal) - GFO-19-303.**

This solicitation sought proposals to fund applied research and development, and technology demonstration and deployment projects that meet the following objectives: develop and demonstrate technologies, tools, and strategies to improve the productivity and flexibility of existing geothermal facilities; and develop and demonstrate technologies to recover lithium from geothermal brine. Contact: Chuck Gentry. (Staff presentation: 5 minutes)

- a. HELL'S KITCHEN GEOTHERMAL LLC. Proposed resolution adopting California Environmental Quality Act Findings for Hell's Kitchen Geothermal, LLC's

Improved Silica Removal for Enhanced Geothermal Plant Performance project and approving grant agreement EPC-19-029 with Hell's Kitchen.

- i. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) FINDINGS. Findings that, based on the lead agency Imperial County's Final Programmatic Environmental Impact Report (EIR), adopted Statement of Overriding Considerations, and the County's Resolution No. 2015-150 approving and adopting the EIR and Statement of Overriding Considerations, as based on the County's adopted Addendum to the EIR, Conditional Use Permit #16-0001, and the County's Resolution Nos. 2017-0037 and 2017-038, approving and adopting the Addendum and Conditional Use Permit, the work under the proposed agreement presents no new significant or substantially more severe environmental impacts beyond those already considered and mitigated.
  - ii. HELL'S KITCHEN GEOTHERMAL'S Improved Silica Removal for Enhanced Geothermal Plant Performance. Proposed resolution approving Agreement EPC-19-029 with Hell's Kitchen Geothermal, LLC for a \$2,999,599 grant to develop and demonstrate a fundamentally new and innovative method for managing silica in geothermal operations. The new technology, Geothermal Micropillar Enabled Particle Separator, systematically separates silica particles from the geothermal brine based on their size as they flow through a series of carefully positioned staggered/offset posts. This technology has the potential to lower both the capital and operational costs of brine management at geothermal plants.
- b. HELL'S KITCHEN GEOTHERMAL'S Geothermal Lithium Extraction Pilot. Proposed resolution encumbering \$1,460,735, approving Phase I of Agreement EPC-19-018 with Hell's Kitchen Geothermal, LLC, and adopting staff's determination that Phase I is exempt from CEQA. Phase I will design a pilot-scale process for pre-treatment of geothermal brine to prepare the brine for lithium extraction. Activities include the pilot plan design and plan to procure materials and services to construct and operate the facility as well as obtaining approvals from the lead agency to comply with CEQA for Phase II. If approved at a future business meeting at which the lead agency's CEQA actions for Phase II are considered, Phase II involves constructing the facility, commissioning and operating the facility, and collecting data on project activities. The grant recipient is not authorized to expend funds or perform work on Phase II until and if the CEC approves it at a future business meeting.

*Commissioner Scott moved Item 12 and Commissioner Douglas seconded. The vote was unanimous (5-0).*

### **13. Food Production Investment Program 2019 - GFO-19-901.**

Staff presentation on the Food Production Investment Program followed by results of the latest solicitation. This solicitation sought proposals to accelerate the adoption of advanced energy efficiency and renewable energy technologies at California food processing plants, demonstrate their reliability and effectiveness, help California food processors work toward a low carbon future, and benefit priority populations. The technologies funded will reduce energy use and greenhouse gas (GHG) emissions

associated with food production. (GGRF funding) Contact: Kevin Uy, Kaycee Chang.  
(Staff presentation: 5 minutes)

- a. SPRECKELS SUGAR COMPANY, INC. Proposed resolution approving Agreement FPI-19-009 with Spreckels Sugar Company, Inc. for a \$2,105,320 grant to build a microgrid powered by solar photovoltaic panels and an energy storage system to reduce GHG emissions by generating renewable electricity at the recipient's sugar manufacturing facility in Brawley, and adopting staff's determination that this action is exempt from CEQA.
- b. AEMETIS ADVANCED FUELS KEYES, INC. Proposed resolution approving Agreement FPI-19-013 with Aemetis Advanced Fuels Keyes, Inc. for a \$8,000,000 grant to design, install, and operate an emerging microgrid system at the Recipient's biofuels and animal food production facility in Keyes and adopting staff's determination that this action is exempt from CEQA. The microgrid system will produce and store renewable electricity, providing reliability while reducing operating costs and GHG emissions at the facility. This project is expected to benefit priority populations through criteria pollutant emission reductions and job creation.
- c. CALIFORNIA CUSTOM PROCESSING, LLC. Proposed resolution approving Agreement FPI-19-016 with California Custom Processing, LLC for a \$3,865,631 grant to design, install, and operate a high-temperature solar thermal energy system at the recipient's organic almond processing facility in Madera and adopting staff's determination that this action is exempt from CEQA. This system will convert solar energy into supplemental heat for thermal processes resulting in reduced natural gas consumption and GHG emissions. This project is expected to benefit priority populations through criteria pollutant emission reductions and job creation.
- d. PACIFIC ETHANOL STOCKTON LLC. Proposed resolution approving Agreement FPI-19-019 with Pacific Ethanol Stockton LLC for a \$6,000,000 grant to install an evaporator that uses waste steam recompression to reduce natural gas consumption and consequent GHG emissions, and adopting staff's determination that this action is exempt from CEQA. This project is expected to benefit priority populations through criteria pollutant emission reductions.
- e. ANHEUSER-BUSCH, LLC. Proposed resolution approving Agreement FPI-19-020 with Anheuser-Busch, LLC for a \$212,629 grant to fund the installation of state-of-the-art steam traps at the recipient's breweries and adopting staff's determination that this action is exempt from CEQA. The project will replace the existing inefficient steam traps with non-mechanical traps that will reduce steam loss, natural gas use, and GHG emissions. This project is expected to benefit priority populations through criteria pollutant emission reductions.
- f. J & J SNACK FOODS CORP. OF CALIFORNIA Proposed resolution approving Agreement FPI-19-021 with J & J Snack Foods Corp. of California for a \$2,000,000 grant to upgrade the existing built-up ammonia refrigeration system to spiral freezers, install heat recovery components, and install an energy

efficient industrial fryer at the recipient's frozen food processing facility, and adopting staff's determination that this action is exempt from CEQA. These improvements will reduce GHG emissions through the reduction in energy and natural gas consumption. This project is expected to benefit priority populations through criteria pollutant emission reductions.

- g. CALIFORNIA DAIRIES, INC. Proposed resolution approving Agreement FPI-19-022 with California Dairies, Inc. for a \$2,067,581 grant to fund the deployment of heat recovery systems at two of the recipient's dairy processing facilities and adopting staff's determination that this action is exempt from CEQA. The project will reduce GHG emissions by reducing fuel consumption on the dryers and boilers. This project is expected to benefit priority populations through criteria pollutant emission reductions.
- h. E. & J. GALLO WINERY. Proposed resolution approving Agreement FPI-19-023 with E. & J. Gallo Winery for a \$314,788 grant to replace old refrigeration compressors and update controls to reduce electricity consumption and consequent GHG emissions at the recipient's winery in Fresno, and adopting staff's determination that this action is exempt from CEQA.
- i. PACIFIC COAST PRODUCERS. Proposed resolution approving Agreement FPI-19-024 with Pacific Coast Producers for a \$1,388,173 grant to install an efficient refrigeration system and install ceramic insulation on the existing process rotary cookers at the recipient's food processing facilities in Oroville, Woodland, and Lodi, and adopting staff's determination that this action is exempt from CEQA.
- j. PEPSICO, INC. Proposed resolution approving Agreement FPI-19-025 with PepsiCo, Inc. for a \$366,254 grant to install a condensing heat recovery system to reduce GHG emissions at the recipient's beverage production facility in Ventura, and adopting staff's determination that this action is exempt from CEQA. This project is expected to benefit priority populations through criteria pollutant emission reductions.
- k. SUN-MAID GROWERS OF CALIFORNIA. Proposed resolution approving Agreement FPI-19-026 with Sun-Maid Growers of California for a \$3,300,000 grant to design, install, and operate a microgrid system at the recipient's raisin production facility in Kingsburg and adopting staff's determination that this action is exempt from CEQA. The microgrid system will produce and store renewable electricity, provide reliability, and reduce operating costs and GHG emissions at the facility. This project is expected to provide benefits to priority populations through job creation.
- l. BAKER COMMODITIES, INC. Proposed resolution approving Agreement FPI-19-027 with Baker Commodities, Inc. for a \$1,125,150 grant to install an efficient boiler with selective catalytic reduction and a regenerative thermal oxidizer to reduce GHG emissions, energy consumption, and operating costs, at the recipient's Kerman animal food production facility, and adopting staff's determination that this action is exempt from CEQA. This project is expected to benefit priority populations through criteria pollutant emission reductions.

- m. VALLEY FINE FOODS COMPANY, INC. Proposed resolution approving Agreement FPI-19-028 with Valley Fine Foods Company, Inc. for a \$1,733,443 grant to install a transcritical carbon-dioxide refrigeration system at the recipient's frozen food production facility in Yuba City, and adopting staff's determination that this action is exempt from CEQA. The new refrigeration system will eliminate the need for conventional, high global warming refrigerants and reduce GHG emissions, energy consumption, and operating costs.
- n. SUN-MAID GROWERS OF CALIFORNIA. Proposed resolution approving Agreement FPI-19-029 with Sun-Maid Growers of California for a \$336,276 grant to install an optimized steam and hot water system to reduce GHG emissions at the recipient's raisin production facility in Kingsburg, and adopting staff's determination that this action is exempt from CEQA. This project is expected to benefit priority populations through criteria pollutant emission reductions.
- o. E. & J. GALLO WINERY. Proposed resolution approving Agreement FPI-19-031 with E. & J. Gallo Winery for a \$3,440,771 grant to replace old refrigeration equipment with more efficient equipment, better controls, and ultra-low global warming potential refrigerants at the recipient's wineries in Livingston, Modesto, and San Miguel to reduce GHG emissions from electricity consumption and refrigerant leakage, and adopting staff's determination that this action is exempt from CEQA.
- p. BIMBO BAKERIES, USA, INC. Proposed resolution approving Agreement FPI-19-032 with Bimbo Bakeries, USA, Inc. for a \$350,000 grant to install advanced ovens with new controls that allow the ovens to burn natural gas only when necessary, reducing natural gas consumption and consequent GHG emissions, and adopting staff's determination that this action is exempt from CEQA. This project is expected to benefit priority populations through criteria pollutant emission reductions.

*Commissioner Scott moved Item 13 and Commissioner McAllister seconded. The vote was unanimous (5-0).*

**14. Proposed Natural Gas Solicitation for Air Quality Impacts from Renewable Natural Gas and Improving Natural Gas System Resilience - GFO-19-501.**

This solicitation sought proposals to fund energy-related environmental research projects that meet the following initiatives: Characterization of Climate and Criteria Air Pollutant Emissions Before and After Deployment of a Renewable Natural Gas Project; and Fostering Natural Gas Sector Resilience. (PIER NG funding) Contact: Martine Schmidt-Poolman. (Staff presentation: 5 minutes)

- a. EAGLE ROCK ANALYTICS. Proposed resolution approving Agreement PIR-19-006 with Eagle Rock Analytics for a \$1,000,704 grant to produce a data assimilation platform that supports adaptation planning, and adopting staff's determination that this action is exempt from CEQA. The platform will be designed to support continuously updated historical weather and climate data and to support efforts to provide quality-controlled, high resolution, hourly climate data to the natural gas investor owned utilities. Platform

development will be informed by stakeholder engagement, and the data platform will pull in a mix of weather observations, remote sensing, and reanalysis data.

- b. THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, ON BEHALF OF THE SAN DIEGO CAMPUS. Proposed resolution approving agreement PIR-19-007 with the Regents for a \$1,363,550 grant to fund development of a detailed spatial and temporal historical (1980-2019) climate record, determining sources of trends, and adopting staff's determination that this action is exempt from CEQA.
- c. EPRI. Proposed resolution approving agreement PIR-19-009 with EPRI for a \$998,355 grant to perform field measurements of GHG and other air pollutant emissions from various facilities, both before and after implementation of renewable natural gas production processes, and adopting's staff's determination that this action is exempt from CEQA.
- d. THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, ON BEHALF OF THE RIVERSIDE CAMPUS. Proposed resolution approving agreement PIR-19-011 with the Regents for a \$999,296 grant to assess the impacts of biogas production from dairy digesters on emissions of methane and other air pollutants, and adopting staff's determination that this action is exempt from CEQA.

*Commissioner Scott moved Item 14 and Commissioner Douglas seconded. The vote was unanimous (5-0).*

#### **15. Storage Monitoring, Smart Shutoff and 3D Mapping Technologies for Safer Natural Gas Infrastructure - GFO-19-502.**

This solicitation sought proposals to fund natural gas infrastructure safety and integrity projects to advance technologies on natural gas infrastructure damage and failure prevention and to better locate subsurface natural gas pipelines. (PIER NG funding) Contact: Reta Ortiz. (Staff presentation: 5 minutes)

- a. INSTITUTE OF GAS TECHNOLOGY DBA GAS TECHNOLOGY INSTITUTE. Proposed resolution approving Agreement PIR-19-015 with Institute of Gas Technology dba Gas Technology Institute for a \$1,821,631 grant to enhance and demonstrate a natural gas pipeline locating technology that improves the accuracy of locating pipelines using adapted and improved above-ground large standoff three-dimensional electromagnetic detection technology and an in-pipe gyroscopic mapping device, and adopting staff's determination that this action is exempt from CEQA.
- b. BAKHTAR RESEARCH AND ENGINEERING, LLC. Proposed resolution approving agreement PIR-19-017 with Bakhtar Research and Engineering, LLC for a \$1,582,117 grant to develop and demonstrate a natural gas pipeline detector using forced resonance imaging technology for near real-time detection, locating, depth estimation, and material differentiation

(plastic or metallic) of underground natural gas pipelines and adopting staff's determination that this action is exempt from CEQA.

- c. INSTITUTE OF GAS TECHNOLOGY DBA GAS TECHNOLOGY INSTITUTE. Proposed resolution approving agreement PIR-19-018 with Institute of Gas Technology dba Gas Technology Institute for a \$1,738,436 grant to develop and demonstrate a software platform for mapping underground pipelines with better accuracy and improving pipeline assets management by integrating multiple data sources from several proven locating technologies, aggregating pipeline assets information into the geographic information systems, and visualizing underground natural gas pipelines in real-time, and adopting staff's determination that this action is exempt from CEQA.

*Commissioner Scott moved Item 15 and Commissioner Douglas seconded. The vote was unanimous (5-0).*

#### **16. DeCarbonization in Healthcare and Large Buildings - GFO-19-504.**

This solicitation sought proposals to fund applied research and development and technology demonstration and deployment of innovative approaches, strategies and technologies to decarbonize healthcare facilities and large commercial buildings. The focus is reducing the carbon intensity of HVAC systems and hot water systems. (PIER NG funding) Contact: Bradley Meister. (Staff presentation: 5 minutes)

- a. INSTITUTE OF GAS TECHNOLOGY DBA GAS TECHNOLOGY INSTITUTE. Proposed resolution approving Agreement PIR-19-008 with Institute of Gas Technology dba Gas Technology Institute for a \$1,424,704 grant to design and demonstrate an integrated HVAC/water heating system to reduce energy consumption and GHG emissions and to adopt staff's determination that this action is exempt from CEQA. This technology will be demonstrated in a large medical center in a disadvantaged community.
- b. EPRI. Proposed resolution approving Agreement PIR-19-012 with EPRI for a \$1,446,685 grant to demonstrate a high-efficiency dehumidification and energy recovery system that will reduce or eliminate energy consumption associated with reheating supply air, and increase chiller efficiency, and to adopt staff's determination that this project is exempt from CEQA. The technology will be demonstrated in a healthcare facility.
- c. THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, BERKELEY CAMPUS. Proposed resolution approving Agreement PIR-19-013 with the Regents for a \$1,446,850 grant to demonstrate and evaluate packages of low-cost software controls and other measures targeting space heating, hot water distribution and boiler operational efficiency in large commercial buildings, and to adopt staff's determination that this action is exempt from CEQA. The measures will be demonstrated in large commercial buildings located in disadvantaged communities

- d. SOUTHERN CALIFORNIA GAS COMPANY. Proposed resolution approving agreement PIR-19-014 with the Southern California Gas Company for a \$1,446,850 grant to demonstrate an emerging and replicable gas heat pump technology that can reduce natural gas consumption for hot water heating by at least 35 percent in large commercial buildings and to adopt staff's determination that this action is exempt from CEQA. This technology will be demonstrated in a large commercial building in Southern California.
- e. MAZZETTI, Inc. Proposed resolution approving Agreement PIR-19-016 with Mazzetti, Inc. for a \$1,000,000 grant to fund a comprehensive and interactive guidebook that focuses on existing and emerging energy efficiency equipment and systems and design improvements to reduce natural gas use, increase efficiency, and provide a plan for decarbonizing the healthcare industry, and to adopt staff's determination that this action is exempt from CEQA.

*Commissioner Scott moved Item 16 and Commissioner McAllister seconded. The vote was unanimous (5-0).*

#### **17. Minutes.**

Possible approval of the May 13, 2020 business meeting minutes.

*Commissioner Scott moved Item 17 and Commissioner McAllister seconded. The vote was unanimous (5-0).*

#### **18. Lead Commissioner or Presiding Member Reports.**

*The Commissioner's reported on their recent activities.*

#### **19. Executive Director's Report.**

*The Executive Director gave a report.*

#### **20. Public Advisor's Report.**

*The Public Advisor gave a report.*

#### **21. Public Comment.**

*None.*

#### **22. Chief Counsel's Report.**

- a. Pursuant to Government Code section 11126(e), the CEC may adjourn to closed session with its legal counsel to discuss any of the following matters to which the CEC is a party:
  - i. *In the Matter of U.S. Department of Energy (High Level Waste Repository), (Atomic Safety Licensing Board, CAB-04, 63-001-HLW); State of California v. United States Department of Energy (9th Cir. Docket No. 09-71014).*
  - ii. *Communities for a Better Environment and Center for Biological Diversity v. Energy Resources Conservation and Development*

- Commission, and California State Controller (Alameda County Superior Court, Case No. RG13681262).*
- iii. *State Energy Resources Conservation and Development Commission v. Electricore, Inc. and ZeroTruck (Sacramento County Superior Court, Case No. 34-2016-00204586).*
  - iv. *Natural Resources Defense Council, Inc., et al. v. United States Department of Energy (Federal District Court, Northern District of California, Case No. 17-cv-03404).*
  - v. *City of Los Angeles, acting by and through, its Department of Water and Power v. California Energy Resources Conservation and Development Commission (Los Angeles Superior Court, Case No. BS171477).*
  - vi. *In re: PG&E Corporation and In re: Pacific Gas and Electric Company (United States Bankruptcy Court, Northern District of California, San Francisco Division, Case No. 19-30088).*
  - vii. *Chukwuemeka (Emeka) Okemiri v. California Energy Commission, et al. (Sacramento Superior Court, Case No. 34-2018-00246019).*
  - viii. *State Energy Resources Conservation and Development Commission v. HyGen Industries, Inc. (Sacramento County Superior Court No. 34-2019-00252543).*
  - ix. *Olson-Ecologic Testing Laboratories, LLC v. CEC. (Orange County Superior Court. Case No. 30-2019-01115513).*

- b. Pursuant to Government Code section 11126(e), the CEC may also discuss any judicial or administrative proceeding that was formally initiated after this agenda was published; or determine whether facts and circumstances exist that warrant the initiation of litigation, or that constitute a significant exposure to litigation against the CEC, which might include personnel matters.

*The Chief Counsel gave a report.*

Appearances:

(\*by telephone)

\*Keith Rivers, Evergreen Economics

\*Wendy Tyler, County of Colusa

\*Andy Roth, Aircon Energy, Inc.

\*Andy Foster, Aemetics Biogas, LLC

\*Ram Narayanamurthy, EPRI

\*Martha Campbell, Rocky Mountain Institute, (RMI)

\*Philip Gleckman, California Custom Processing

\*Inbal Nachman, California Dairies, Inc.

\*Erick Watkins, Pacific Coast Producers

\*Mike Miller, PepsiCo, Inc.

\*Bryan Cullen, Valley Fine Foods Company, Inc.

\*Kevin Yavari, Bimbo Bakeries USA, Inc.

Daniel Slagel, E. & J. Gallo Winery

(written testimony)

Barbara Halliday, Mayor, City of Hayward

(written testimony)

Beckie Menten, East Bay Community Energy

(written testimony)

\*Lauren Cullum, Sierra Club California

There being no further business, the meeting was adjourned.

Respectfully submitted,

CODY GOLDTHRITE  
Secretariat