

State of California

California Energy Commission Minutes of the June 8, 2022, 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

J. Andrew McAllister, Commissioner

Kourtney Vaccaro, Commissioner

The California Energy Commission's (CEC) June 8, 2022, Business Meeting will be held remotely, consistent with Assembly Bill 361 (Rivas, Chapter 165, Statutes of 2021) as extended by Governor Newsom's Executive Order N-1-22 to improve and enhance public access to state meetings during the COVID-19 pandemic. The public can participate in the business meeting consistent with the direction provided below.

Please note that the California Energy Commission (CEC) aims to begin promptly at the start time and the end time is an estimate based on the agenda proposed. The business meeting may end sooner or later than the time indicated depending on various factors.

Pursuant to the California Code of Regulations, title 20, section 1104(e), any person may make an 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 public comment portion of the meeting and have three minutes or less to address all remaining comments.

THE CEC WILL CONSIDER AND MAY TAKE ACTION ON THE FOLLOWING:

Before the Pledge of Allegiance, Chair Hochschild announced there is no quorum at this time and Commissioner McAllister would be joining the business meeting in ten minutes.

After the Pledge of Allegiance, Chair Hochschild announced we would begin the business meeting with commissioner updates first. During commissioner updates, Commissioner McAllister joined the business meeting.

After commissioner updates, Chair Hochschild moved to Item 2 to be heard first.

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. Sacramento Municipal Utility District. Proposed order approving the Executive Director's recommendation that the Sacramento Municipal Utility District's Power Purchase Agreement with Geysers Power Company LLC for the procurement of geothermal energy from a portfolio of geothermal facilities with capacity support from the Delta Energy Center be found compliant with the Emission Performance Standard for Local Publicly Owned Electric Utilities pursuant to Senate Bill 1368

(California Code of Regulations, title 20, sections 2900-2913). Contact Michael Nyberg

- b. Electricity Resource Plans. Proposed resolution approving Forms and Instructions for Submitting Electricity Resource Plans in support of the *2023 Integrated Energy Policy Report*. Obligated load-serving entities are instructed to provide the CEC with energy and capacity requirements, generating resources projections, and other data related to electricity resource plans for historical years 2020 to 2021 and forecast years 2022 to 2031. Contact: Robert Kennedy

Commissioner Vaccaro moved to approve Item 1. Commissioner McAllister seconded. The vote was (3-0).

2. Information Item on Infrastructure Investment and Jobs Act.

Staff will provide an overview of CEC's activities related to the federal funding opportunities within the Infrastructure Investment and Jobs Act. Contact: Jennifer Martin-Gallardo (Staff Presentation: 10 minutes)

Jennifer Martin-Gallardo presented an overview on CEC's activities related to the federal funding opportunities within the Infrastructure Investment and Jobs Act. Informational item only, no vote was taken.

After the information item was heard, Chair Hochschild moved to the Consent item to be voted on.

3. Proposed Joint Decision for Pecho Energy Storage Center (21-AFC-01) and Gem Energy Storage Center (21-AFC-02).

The Committees assigned to preside over the Pecho Energy Storage Center proceeding and the Gem Energy Storage Center proceeding have prepared a joint proposed decision on whether the proposed facilities are exempt from the notice of intention (NOI) process under Public Resources Code section 25540.6(a)(3). Contact: Reneé Webster-Hawkins and Ralph Lee (Staff Presentation: 5 minutes)

- a. Pecho Energy Storage Center. Public hearing and proposed order on whether to receive documents into the hearing record and adopting the committee's proposed decision regarding whether the Pecho Energy Storage Center Application for Certification (AFC) is exempt from NOI process under Public Resources Code section 25540.6(a)(3) and should be processed as an application for certification under Public Resources Code section 25519 and following. On November 23, 2021, Pecho LD Energy Storage, LLC, a joint venture of Hydrostor, Inc. and Meridiam Infrastructure Partners, filed an AFC to construct and operate the Pecho Energy Storage Center, an advanced compressed air storage facility in San Luis Obispo County.
- b. Gem Energy Storage Center. Public hearing and proposed order on whether to receive documents into the hearing record and adopting the committee's proposed decision regarding whether the Gem Energy Storage Center AFC is exempt from the NOI process under Public Resources Code section 25540.6(a)(3) and should be processed as an application for certification under Public Resources Code section 25519 and following. On December 1, 2021,

GEM A-CAES LLC filed an AFC to construct and operate the Gem Energy Storage Center, an advanced compressed air storage facility, in unincorporated Kern County.

- c. Possible closed session deliberation on the proposed joint decision. (Government Code section 11126(c)(3)).

Commissioner McAllister moved to approve Item 3. Commissioner Vaccaro seconded. The vote was (3-0).

4. Mojave Solar Project (MSP) Petition to Amend (09-AFC-05C).

Proposed order amending the CEC's certification of the MSP to allow the installation of a hydrogen generation system, including an electrolyzer that uses electricity from the plant to decompose demineralized water into hydrogen and oxygen, and adopting staff's determination that this action will not result in any significant effects on the environment and does not meet any of the criteria specified in Public Resources Code section 21166 that would require preparation of a subsequent or supplemental environmental document under the California Environmental Quality Act (CEQA). Contact: Elizabeth Huber (Staff Presentation: 5 minutes)

Commissioner Vaccaro moved to approve Item 4. Commissioner McAllister seconded. The vote was (3-0).

5. California Schools Healthy Air, Plumbing and Efficiency Program (CalSHAPE) (20-RENEW-01).

Proposed resolution adopting the second edition guidelines for both the CalSHAPE Ventilation and CalSHAPE Plumbing programs, and adopting staff's determination that this action is exempt from CEQA. The CalSHAPE Ventilation program provides grants to local educational agencies (LEAs) to assess, maintain, and repair heating, ventilation, and air conditioning (HVAC) units in California schools. The CalSHAPE Plumbing program provides grants to LEAs to replace noncompliant plumbing fixtures and appliances. Contact: David Velazquez (Staff Presentation: 10 minutes)

Commissioner McAllister moved to approve Item 5. Commissioner Vaccaro seconded. The vote was (3-0).

After Item 5 was voted on, Chair Hochschild announced a lunch break and reconvene at 1:30 p.m.

Chair Hochschild reconvened the meeting at 1:45 p.m.

6. Energy Conservation Manual for the 2022 Building Energy Efficiency Standards (2022 Energy Code).

Proposed resolution certifying the following portions of the energy conservation manual, which is required by Public Resources Code section 25402.1(e), and adopting staff's determination that this action is exempt from CEQA. Contact: Che Geiser and Haile Bucaneg (Staff Presentation: 10 minutes)

- a. Compliance Documents. The 2022 Energy Code compliance documents are used by the building industry and local jurisdictions to demonstrate compliance with the Energy Code.

- b. Data Registry Requirements Manual. *The 2022 Data Registry Requirements Manual* is a resource for data registry providers to aid in the design and implementation of software procedures and user interface features for their data registries that meet the requirements of Reference Joint Appendix 7 in the 2022 Energy Code.
- c. Alternative Calculation Method Reference Manuals. *The 2022 Single-Family Residential Alternative Calculation Method Reference Manual* and *2022 Nonresidential and Multifamily Alternative Calculation Method Reference Manual* are used to document the modeling methods used to demonstrate performance compliance with the Energy Code.

Commissioner McAllister moved to approve Item 6. Commissioner Vaccaro seconded. The vote was (3-0).

7. California's Building Energy Code Compliance Software (CBECC 2022.1.0 and CBECC-Res 2022.1.0).

Proposed resolution approving the 2022 public domain residential, nonresidential, and multifamily software as required by Public Resources Code section 25402.1(a). The public domain compliance software has been updated, as described in the 2022 Alternative Calculation Method Reference Manuals, and will enable contractors, builders, architects, engineers, and government officials to demonstrate performance compliance with the 2022 Building Energy Efficiency Standards. Contact: RJ Wichert (Staff Presentation: 5 minutes)

Commissioner McAllister moved to approve Item 7. Commissioner Vaccaro seconded. The vote was (3-0).

8. Bringing Rapid Innovation Development to Green Energy (GFO-20-301).

This solicitation sought proposals to fund the continued development, specifically in applied research or technology demonstration and deployment, of high-potential, high-impact energy technologies. (EPIC Funding) Contact: Misa Werner (Staff Presentation: 10 minutes)

- a. Solid Energies Inc. Proposed resolution approving Agreement EPC-21-039 with Solid Energies Inc. for a \$3,000,000 grant to develop and integrate a new class of all-solid-state Lithium-ion battery cells with higher power density and better manufacturing for electric vehicle (EV) and stationary storage applications, and adopting staff's determination that this action is exempt from CEQA. This battery achieves the listed advantages with a combination of a novel polymer-composite based solid-state electrolyte, innovative composite electrodes, and a silicon-based composite anode.
- b. Enzinc Inc. Proposed resolution approving Agreement EPC-21-034 with Enzinc Inc. for a \$1,807,600 grant to scale development of Enzinc's zinc metal sponge anode and integrate and test it in a full battery cell and battery pack, and adopting staff's determination that this action is exempt from CEQA. There are two primary solutions to stationary energy storage for discharge times between two hours and twelve hours: lead-acid and lithium-based batteries, each of which

has limitations. Enzinc has developed a zinc-based battery that combines the low cost and dependability of lead-acid batteries with the performance of lithium-based batteries.

- c. Lookin, Inc. Proposed resolution approving Agreement EPC-21-035 with Lookin, Inc. for a \$999,947 grant to produce a high-throughput terahertz scanner for in-line quality control of battery electrodes, which improves manufacturing capability to deliver high power batteries with better shelf life, increased safety, lower cost, and decreased production lead-time, and adopting staff's determination that this action is exempt from CEQA. Lookin's breakthrough terahertz scanner technology addresses the limitations of existing terahertz scanners by providing 1000-times higher sensitivity and scanning speed through a patented terahertz transceiver technology.
- d. Element 16 Technologies, Inc. Proposed resolution approving Agreement EPC-21-036 with Element 16 Technologies, Inc. for a \$1,000,000 grant to enable electrification of industrial processes with low-cost sulfur electric thermal energy storage, and adopting staff's determination that this action is exempt from CEQA. The proposed research and development activities and pilot testing will validate the capability of molten sulfur thermal energy storage to store electricity and discharge heat for various industrial applications including process heat, cooling, and electricity generation.
- e. Pyro-E, Inc. Proposed resolution approving Agreement EPC-21-040 with Pyro-E, Inc. for a \$1,548,602 grant to deploy a novel Auto-Modulating Power Source (AMPS) device that will demonstrate water and cost savings across approximately 150 affordable housing units in Los Angeles, and adopting staff's determination that this action is exempt from CEQA. The AMPS technology powers wireless data sensors indefinitely by harnessing energy from water pressure. The bill savings from water and avoidance of lithium battery replacements will be scalable to over two-thirds of California households to meet Assembly Bill 758 mandates and municipal green initiatives.

Commissioner McAllister moved to approve Item 8. Commissioner Vaccaro seconded. The vote was (3-0).

9. Research to Support a Climate Resilient Transition to a Clean Electricity System (GFO-21-302).

This solicitation sought proposals to incorporate climate change into electricity system modeling, with particular attention to climate extremes that threaten reliability. Research will also explore emerging relationships between climate, supply, and demand over the next few decades, as the electricity system evolves to support 2030 and 2045 decarbonization goals. Results will provide foundational models and data to support a resilient, reliable transition to a zero-carbon electricity system. (EPIC Funding) Contact: Alexandra Kovalick (Staff Presentation: 5 minutes)

- a. Eagle Rock Analytics. Proposed resolution approving Agreement EPC-21-037 with Eagle Rock Analytics for a \$900,000 grant to develop stakeholder-informed data products and research on climate-related changes to availability and

distribution of solar, wind, and hydroelectric generation through mid-century, and adopting staff's determination that this action is exempt from CEQA. This research will leverage state-of-the-art climate projections and expand the understanding of climate-related phenomena that affect solar and wind resources in California, including climate extremes, compound and cascading events, and high-stress weather and climate events to support a high-renewables, reliable, and cost-effective electricity grid.

- b. Eagle Rock Analytics. Proposed resolution approving Agreement EPC-21-038 with Eagle Rock Analytics for a \$750,000 grant to enhance the Cal-Adapt's web application to accommodate an increase in the volume of climate-related data produced through Electric Program Investment Charge initiatives, develop and execute new stakeholder-informed scientifically rigorous climate visualizations and tools, and adopting staff's determination that this action is exempt from CEQA. The effort will advance California's electricity sector's capacity to incorporate climate into investments, planning, and rulemaking, including supporting California's Fifth Climate Change Assessment.
- c. Energy & Environmental Economics, Inc. Proposed resolution approving Agreement EPC-21-041 with Energy & Environmental Economics, Inc. for a \$1,950,000 grant to provide a foundation to assess and improve the climate resilience of California's electricity system in transition through the creation of novel datasets and tools that support energy system planning, and adopting staff's determination that this action is exempt from CEQA. Energy & Environmental Economics will update energy system models to incorporate climate data, increase the spatial extent to best capture climate impacts, and incorporate uncertainty and risk modeling to address climate uncertainty.

Commissioner McAllister moved to approve Item 9. Commissioner Vaccaro seconded. The vote was (3-0).

10. Advancing Cost and Efficiency Improvements for Low Carbon Hydrogen Production (GFO-21-502).

This solicitation sought proposals for applied research and development and technology demonstration and deployment projects that will address the technical and economic challenges of producing hydrogen from carbon-neutral production pathways. (Gas R&D Funding) Contact: Baldomero Lasam (Staff Presentation: 5 minutes)

- a. Southern California Gas Company. Proposed resolution approving Agreement PIR-21-003 with Southern California Gas Company for a \$750,000 grant to address key challenges associated with developing a low carbon hydrogen production system that is also cost-effective and scalable, and adopting staff's determination that this project is exempt from CEQA.
- b. Electro-Active Technologies Inc. Proposed resolution approving agreement PIR-21-007 with Electro-Active Technologies Inc. for a \$573,714 grant to develop and advance a microbial electrolysis technology for conversion of 100 percent renewable organic waste into low carbon hydrogen, and adopting staff's

determination that this project is exempt from CEQA. This project will significantly reduce electricity consumption for hydrogen production compared to water electrolysis, use food waste, reduce GHGs, and provide a modularized system for onsite or near-site application.

Commissioner McAllister moved to approve Item 10. Commissioner Vaccaro seconded. The vote was (3-0).

11. The Regents of the University of California, on behalf of the Los Angeles Campus.

Proposed resolution approving Agreement PIR-21-006 with The Regents of the University of California, on behalf of the Los Angeles Campus, for a \$1,000,000 grant to integrate corrosion detection technologies, corrosion risk assessment methodologies, and risk management optimization approaches to create a new corrosion risk management approach, and adopting staff's determination that this action is exempt from CEQA. (Gas R&D Funding) Contact: Jeffrey Sunquist (Staff Presentation: 5 minutes)

Commissioner McAllister moved to approve Item 11. Commissioner Vaccaro seconded. The vote was (3-0).

12. The Regents of the University of California as Management and Operating Contractor for the Ernest Orlando Lawrence Berkeley National Laboratory.

Proposed resolution approving Agreement PIR-21-008 with The Regents of the University of California as management and operating contractor for the Ernest Orlando Lawrence Berkeley National Laboratory for a \$2,000,000 grant to conduct applied research to improve the characterization of residential methane emissions in California homes, and adopting staff's determination that this action is exempt from CEQA. The study will help improve California's methane emission inventory, quantify the benefits of decarbonization in buildings, and inform the development of cost-effective programs to reduce methane emissions from the residential building sector. (Gas R&D Funding) Contact: Maninder Thind (Staff Presentation 5 minutes)

Commissioner McAllister moved to approve Item 12. Commissioner Vaccaro seconded. The vote was (3-0).

13. Arup US, Inc.

Proposed resolution approving Agreement 400-21-005 with Arup US, Inc. for a three-year, \$1,800,000 contract to lead a team of professional architectural and engineering consultants to provide technical support for evaluating and implementing strategies to advance the decarbonization of residential and nonresidential buildings and to increase Energy Code compliance. (COIA Funding) Contact: Elizabeth Thomsen (Staff Presentation 5 minutes)

Commissioner McAllister moved to approve Item 13. Commissioner Vaccaro seconded. The vote was (3-0).

14. IDEAL ZEV Workforce Pilot (GFO-21-602).

This solicitation sought proposals for workforce training and development that support zero-emission vehicles (ZEV), ZEV infrastructure, and ZEV-related commercial technologies in priority communities of California. (CTP Funding)
Contact: Larry Rillera (Staff Presentation: 5 minutes)

- a. Municipal Equipment Maintenance Association, Inc. Proposed resolution approving Agreement ARV-21-068 with the Municipal Equipment Maintenance Association, Inc. for a \$500,000 grant to develop curricula and conduct technician training on ZEV and charging infrastructure for public and private fleets in and near the City of Long Beach, and adopting staff's determination that this action is exempt from CEQA.
- b. The Latino Equity Advocacy & Policy Institute (The LEAP Institute). Proposed resolution approving Agreement ARV-21-069 with The LEAP Institute for a \$499,957 grant to develop and conduct EV and electric vehicle supply equipment assessment, training, and outreach, and adopting staff's determination that this action is exempt from CEQA.
- c. SunLine Transit Agency. Proposed resolution approving Agreement ARV-21-070 with SunLine Transit Agency for a \$500,000 grant to plan and conduct ZEV transit training workshops throughout the state, and adopting staff's determination that this action is exempt from CEQA.

Commissioner Vaccaro moved to approve Item 14. Commissioner McAllister seconded. The vote was (3-0).

15. Minutes.

Possible approval of the May 11 and May 24, 2022, Business Meeting minutes.

Before Item 15 was voted on, Chair Hochschild announced we would vote on the approval for May 24, 2022, Business Meeting minutes only.

Commissioner Vaccaro moved to approve the May 24, 2022, business meeting minutes. Commissioner McAllister seconded. The vote was (3-0).

16. Lead Commissioner or Presiding Member Reports.

At the beginning of the business meeting, the Commissioners reported on their recent activities. After Item 15 was voted on, Commissioner McAllister and Chair Hochschild shared additional reports.

17. Executive Director's Report.

The Executive Director had nothing to report.

18. Public Advisor's Report.

The Public Advisor had nothing to report.

19. Public Comment.

No public comment.

20. Chief Counsel's Report.

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. *Interlink Products International, Inc. v. Xavier Becerra, Drew Bohan, Melissa Rae King (United States District Court for the Eastern District of California, Case No. 2:20-cv-02283).*

The Chief Counsel had nothing to report, but recommended the Commissioners break for a closed session to discuss agenda Item 20(i).

Appearances:

Jeffery D. Harris, Ellison Schneider, Harris & Donlan

Curt Hildebrand, Hydrostor

Dominic Lucero, Boilermakers Local 549

Zack Bradford, CEC

Chris Walker, Cal SMACNA

Heidi Werner, Statewide Utility Codes and Standards Enhancement Team

Nezih Tolga Yardimici, Lookin, Inc

Kevin Zanjani

Sean Soni, SoCalGas

Alex Lewis, Electro-Active Technologies, LLC

Evette Ellis, ChargerHelp!

There being no further business meeting was adjourned.

Respectfully submitted,

LIZA LOPEZ
Secretariat