

State of California
California Energy Commission
Minutes of the March 21, 2018, Energy Commission Business Meeting

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

Present:

Robert B. Weisenmiller, Chair
Karen Douglas, Commissioner

J. Andrew McAllister, Commissioner
Janea A. Scott, Commissioner

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

1. CONSENT CALENDAR. (Items on the Consent Calendar 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. SUBPOENA FOR PROVISION OF DATA. Proposed resolution approving subpoena directing the California Independent System Operator to provide data needed by Energy Commission staff to evaluate generation and transmission outages, congestion, and load in assessing resource adequacy and system reliability. Contact: Michael Nyberg.
 - b. SOUTHERN CALIFORNIA EDISON (SCE) REQUEST TO USE THE DATA COLLECTION AND ANALYSES COMPLIANCE OPTION. Proposed resolution approving SCE's request to use the data collection and analyses compliance option under California Code of Regulations, Title 20, Section 1343(f), which allows utilities to participate in certain research projects, including the California Commercial End-Use Survey, in lieu of completing the survey plans, surveys, and reports described in California Code of Regulations, Title 20, Sections 1343(b)-(e). Contact: Sylvia Bender.
 - c. SACRAMENTO MUNICIPAL UTILITY DISTRICT. Proposed order approving the Executive Director's recommendation that the Sacramento Municipal Utility District's Power Purchase Agreement with ARP-Loyalton Cogen LLC for the procurement of bioenergy from the Loyalton Biomass Facility be found compliant with the Emissions 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.

The Chair announced that Commissioner Hochschild is absent. Commissioner Douglas moved Item 1 and Commissioner Scott seconded. The vote was 4-0.

2. MARIPOSA COUNTY RESOURCE CONSERVATION DISTRICT.
Proposed resolution adopting California Environmental Quality Act Findings for Mariposa County Resource Conservation District (MCRCD)'s forest waste thermochemical biomass-to-energy conversion facility, and grant agreement for MCRCD's construction of the Mariposa Biomass Project. (EPIC funding) Contact: Gina Barkalow. (Staff Presentation: 5 minutes)

- i. CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS. Proposed resolution finding that based on the lead agency Mariposa County Planning Department's 2017 Initial Study, Mitigated Negative Declaration (MND), Conditional Use Permit (CUP), and the County's 2018 Resolution approving and adopting the MND and CUP, the proposed project presents no new significant or substantially more severe environmental impacts beyond those already considered.
- ii. Proposed resolution approving Agreement EPC-17-021 with Mariposa County Resource Conservation District for a \$5,000,000 grant to fund the design and construction of a forest waste thermochemical biomass-to-energy conversion facility that will annually produce between 15,000 - 18,500 MWh of renewable, community-scale, grid connected electricity.

Commissioner Douglas moved Item 2 and Commissioner McAllister seconded. The vote was 4-0.

- 3. DEMONSTRATE BUSINESS CASE FOR ADVANCED MICROGRIDS IN SUPPORT OF CALIFORNIA'S ENERGY AND GHG POLICIES, GFO-17-302. This solicitation sought proposals to fund technology demonstration and deployment projects that meet S14 Strategic Objective - Take Microgrids to the Next Level: Maximize the Value to Customers as defined in the 2015-2017 Triennial Electric Program Investment Charge (EPIC) Investment Plan. (EPIC funding) Contact: Mike Gravely. (Staff Presentation: 5 minutes)
 - a. CITY OF LONG BEACH HARBOR DEPARTMENT (PORT OF LONG BEACH). Proposed resolution approving Agreement EPC-17-031 with City of Long Beach Harbor Department (Port of Long Beach) for a \$5,000,000 grant to fund the technology demonstration of a microgrid at the Port of Long Beach that will create an integrated system of distributed energy resources and microgrid controls to achieve long-term islanding at the Port's critical response facility, the Joint Command and Control Center. The Port of Long Beach is providing \$2,120,000 in match funding.
 - b. UNIVERSITY OF CALIFORNIA, SAN DIEGO. Proposed resolution approving Agreement EPC-17-032 with The Regents of the University of California, on behalf of the San Diego campus for a \$5,000,000 grant to develop a permanent microgrid at Marine Corps Air Station Miramar that incorporates five distributed energy resources, including renewable generation and energy storage. This microgrid allows critical flight line facilities and military operations to be maintained during grid outages. The Marine Corps Air Station Miramar and the University of California, San Diego are providing \$6,002,320 in match funding.
 - c. LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving Agreement EPC-17-038 with the U.S. Department of Energy's Lawrence Berkeley National Laboratory for a \$5,000,000 grant to demonstrate a microgrid project based at the U.S. Army Parks Reserve Forces Training Area that will make it easier for military bases to install and operate their own microgrids while maximizing renewable energy, increasing energy security and resiliency, reducing energy vulnerability and risks, and reducing GHG emissions. The Army and LBNL are providing \$11,410,900 in match funding.

Commissioner Scott moved Item 3 and Commissioner Douglas seconded. The vote was 4-0.

- 4. ADVANCING THE RESILIENCE AND ENVIRONMENTAL PERFORMANCE OF CALIFORNIA'S ELECTRICITY SYSTEM, GFO-16-311. This solicitation sought proposals to fund Applied Research and Development projects that reduce the environmental and public health impacts of electricity generation and develop tools to

make the electricity system less vulnerable to climate-related risks. (EPIC funding)

Contact: Katharina Snyder. (Staff Presentation: 5 minutes)

- a. UNIVERSITY OF CALIFORNIA, BERKELEY. Proposed resolution approving Agreement EPC-17-027 with The Regents of the University of California, on behalf of the Berkeley campus for a \$200,000 grant to analyze the impacts of climate change on electricity consumption and the related impacts on emissions of air pollutants during peak demand in California's disadvantaged and non-disadvantaged communities.
- b. LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving Agreement EPC-17-028 with the Department of Energy's Lawrence Berkeley National Laboratory for a \$200,000 grant to develop an innovative mapping tool for both local and upwind emission sources that contribute to ozone air pollution in disadvantaged communities to inform decisions regarding locations and technologies of future bioenergy distributed generation in the San Joaquin Valley.
- c. CAL POLY CORPORATION. Proposed resolution approving Agreement EPC-17-029 with Cal Poly Corporation for a \$199,978 grant to develop innovative cost-effective methods for biological surveys to inform offshore renewable energy development.
- d. UNIVERSITY OF CALIFORNIA, BERKELEY. Proposed resolution approving Agreement EPC-17-033 with The Regents of the University of California, on behalf of the Berkeley campus for a \$900,000 grant to build on the Cal-Adapt platform to provide enhanced tools, data services, and visualizations. Priority tools will address sea level rise and wildfire.

Commissioner McAllister moved Item 4 and Commissioner Douglas seconded. The vote was 4-0.

5. INCREASING ADOPTION OF EMERGING CLEAN ENERGY TECHNOLOGIES THROUGH PROCUREMENT, GFO-17-301. This solicitation sought proposals to develop and scale-up new tools and resources to increase customer procurement of distributed energy resources (DER), including energy efficiency, renewable distributed generation, and distributed storage. Large institutional and commercial customers with specialized energy needs represent a crucial market for advanced DER technologies. These customers typically purchase energy equipment through formal procurement processes. (EPIC funding) Contact: Nicholas Blair. (Staff Presentation: 5 minutes)
 - a. COHEN VENTURES INC. DBA ENERGY SOLUTIONS. Proposed resolution approving Agreement EPC-17-025 with Cohen Ventures Inc., dba Energy Solutions for a \$991,110 grant to conduct a scaled demonstration of a new, innovative procurement platform for Distributed Energy Resource products and services. Contractors on the platform gain access to work opportunities, training, analytics on their services, and membership in a clean energy Group Purchasing Organization that will coordinate the purchasing power of its members to negotiate industry discounts.
 - b. LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving agreement EPC-17-026 with the U.S. Department of Energy's Lawrence Berkeley National Laboratory for a \$1,000,000 grant to adapt LBNL's MyGreenCar technology to create and launch the MyFleetBuy fleet procurement system. MyFleetBuy will help reduce the risks and uncertainties for fleet managers in procuring electric vehicles and smart charging infrastructure. As part of this project, the recipient will conduct a large-scale pilot of the MyFleetBuy platform with several city, county and state fleets. LBNL will incorporate

feedback from the pilot fleet managers in preparation for the platform's full-scale launch in California.

- c. PROSPECT SILICON VALLEY. Proposed resolution approving Agreement EPC-17-030 with Prospect Silicon Valley for a \$3,998,715 grant to fund a mentor/co-working program geared toward bridging the gap between California clean energy companies and institutional/commercial customers that rely on formal procurement processes to purchase distributed energy resource solutions and packages. As part of the agreement, the recipient will provide technical assistance to large procurement customers on streamlining processes for greater access to emerging energy technology solutions.
- d. UNIVERSITY OF CALIFORNIA, DAVIS. Proposed resolution approving Agreement EPC-17-034 with The Regents of the University of California, on behalf of the Davis campus's Western Cooling Efficiency Center for a \$10,993,646 grant to develop a rating system and associated testing methodologies to evaluate and compare emerging technology products for distributed energy resources based on criteria important to purchasing decisions by large institutional and commercial customers. As part of this agreement, the recipient will conduct on-going testing of product offerings from various original equipment manufacturers and publish the results in a web-based Buyer's Guide.

Commissioner Douglas disclosed that she is a professor at UC Davis King Hall and that UC Davis is involved in Item 5d. Commissioner McAllister moved Item 5 and Commissioner Scott seconded. The vote was 4-0.

- 6. IMPROVING NATURAL GAS ENERGY EFFICIENCY, WASTE HEAT-TO-POWER, AND NEAR-ZERO EMISSION DISTRIBUTED GENERATION SYSTEMS, GFO-17-501. This solicitation sought proposals to fund industrial energy efficiency and renewable energy and advanced generation research projects that focus on reducing natural gas use. (Natural Gas funding) Contacts: Colin Corby and Chuck Gentry. (Staff Presentation: 5 minutes)
 - a. ELEMENT 16 TECHNOLOGIES, INC. Proposed resolution approving Agreement PIR-17-004 with Element 16 Technologies, Inc. for a \$1,500,000 grant to demonstrate a low temperature heat recovery system at a chemical production facility in Trona to reduce the facility's natural gas usage and greenhouse gas emissions.
 - b. UNIVERSITY OF CALIFORNIA, RIVERSIDE. Proposed resolution approving Agreement PIR-17-005 with The Regents of the University of California, on behalf of the Riverside campus for a \$1,499,910 grant to demonstrate a smart control system that measures natural gas fuel quality and makes adjustments to optimize fuel efficiency in the combustion process.
 - c. LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving Agreement PIR-17-007 with the U.S. Department of Energy's Lawrence Berkeley National Laboratory for a \$300,000 grant to conduct a technical assessment of the chemical and allied products manufacturing industry in California to identify energy efficiency research priorities to reduce both natural gas use and greenhouse gas emissions.
 - d. T2M GLOBAL LLC. Proposed resolution approving Agreement PIR-17-001 with T2M Global LLC. for a \$1,299,109 grant to develop and demonstrate a waste heat to power system. The system involves newly developed materials used in a high efficiency forward osmosis process to create pressurized water which runs a turbo-generator to produce power. The process is driven by low-temperature

waste heat. The successful demonstration of the technology will open a new economic pathway for currently wasted heat from industrial and other operations.

- e. ALTEX TECHNOLOGIES CORPORATION. Proposed resolution approving Agreement PIR-17-002 with Altex Technologies Corporation for a \$1,222,850 grant to develop and demonstrate an advanced thermoelectric generator system to produce electricity from waste heat. The recipient will use cutting edge heat exchangers integrated with innovative thermoelectric generator modules to maximize efficiency and minimize cost. The successful demonstration of the technology will provide industry with a more economical way to produce electricity from wasted heat.
- f. INSTITUTE OF GAS TECHNOLOGY. Proposed resolution approving Agreement PIR-17-003 with Institute of Gas Technology for a \$1,499,406 grant to develop and demonstrate two near-zero NOx emission, micro-scale combined heat and power systems. The 4.5 kW and 25 kW systems will undergo laboratory testing to obtain California Air Resources Board Distributed Generation emissions certification to be followed by installation and operation at a commercial building and fitness center to measure system performance and perform cost-benefit analysis.
- g. ETAGEN, INC. Proposed resolution approving Agreement PIR-17-006 with EtaGen, Inc. for a \$995,659 grant to demonstrate a high-efficiency and low-emissions linear generator technology at a commercial facility in Southern California. The project is expected to achieve greater than 45 percent net electrical efficiency and surpass the CARB 2007 DG emissions standard.

Commissioner Douglas moved Item 6 and Commissioner McAllister seconded. The vote was 4-0.

- 7. DISCUSSION OF ENERGY COMMISSION PROGRESS RE: IMPLEMENTATION OF THE CLEAN ENERGY AND POLLUTION REDUCTION ACT OF 2015 (SB 350). Staff presentation regarding progress on implementation of SB 350 requirements, including administration of the California Renewables Portfolio Standard program, review of local publicly owned electric utility integrated resource plans, revision of Commission data collection regulations to improve demand forecasting, identification of progress in meeting the bill's goals of 50% renewables procurement and doubling of energy efficiency, implementation of widespread transportation electrification, and preparation and publication of the study required by Public Resources Code section 25327 regarding barriers for low-income customers to energy efficiency, weatherization, and renewable energy investments. Contact: Michael Sokol. (Staff presentation: 5 minutes)

Staff presented Information Item 7.

- 8. **Minutes.** Possible approval of the February 21, 2018 and February 28, 2018 Business Meeting minutes.

Commissioner Scott moved Item 8 and Commissioner McAllister seconded. The vote was 4-0.

- 9. **Lead Commissioner or Presiding Member Reports.** The Commissioners reported on their recent activities.
- 10. **Chief Counsel's Report.** None.
- 11. **Executive Director's Report.** None.
- 12. **Public Adviser's Report.** None.
- 13. **Public Comment.** None.

Appearances:

(*by telephone)

Melinda Barrett, Mariposa County Resource Conservation District

Jay Johnson, Mariposa Biomass Project

*Steve Engfer, Mariposa County Planning Department

Christine Houston, Port of Long Beach

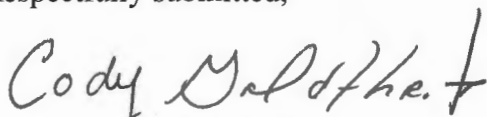
*Col. Jason Woodworth, Commanding Officer, Marine Corps Air Station at Miramar

*Greg Vallery, PE, UUSAG Fort Hunter Liggett

Theresa E. Pistochini, MS, Western Cooling Efficiency Center UC Davis

There being no further business, the meeting was adjourned.

Respectfully submitted,



CODY GOLDTHRITE
Secretariat

