

State of California
California Energy Commission
Minutes of the March 8, 2017, 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

David Hochschild, Commissioner

Janea A. Scott, Commissioner

Commissioner McAllister disclosed that his wife is a professor at UC Davis King Hall and that UC Davis is involved in Items 11, 12, 16c and 18a. Commissioner Douglas disclosed that she is a professor at UC Davis King Hall and that UC Davis is involved in Items 11, 12, 16c and 18a. The Chair announced that Item 2 will be held.

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. CALIFORNIA ENERGY DEMAND UPDATED FORECAST, 2017-2027. Consideration and possible adoption of a resolution correcting the 1.5 Form extreme weather peaks for SDG&E, adopted as part of the California Energy Demand Updated Forecast, 2017-2027. Contact: Chris Kavalec.
 - b. SACRAMENTO MUNICIPAL UTILITY DISTRICT'S (SMUD) REQUEST TO USE THE DATA COLLECTION AND ANALYSES COMPLIANCE OPTION. Proposed resolution approving SMUD'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 (CEUS), 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.

Commissioner McAllister moved the consent items and Commissioner Douglas seconded. The vote was unanimous (5-0).

2. ENERGY COMMISSION COMMITTEE APPOINTMENTS. Possible approval of appointments to the Energy Commission's Standing Committees and Siting Case Committees. Contact: Kevin Barker. (Staff presentation: 5 minutes)

Item 2 was held. No action taken.

3. DELTA ENERGY CENTER (98-AFC-03C). Possible approval of an order granting the Petition to Amend to make temporary modifications to the steam turbine condenser to run the Delta Energy Center facility in simple-cycle mode. As a result of a generator fire that occurred on January 29, 2017, Delta Energy Center is seeking these modifications to allow

the facility to return to service for Summer 2017. Contact: Anwar Ali. (Staff presentation: 10 minutes)

Commissioner Douglas moved and Commissioner Scott seconded approval of Item 3. The vote was unanimous (5-0).

4. STANTON ENERGY RELIABILITY CENTER (16-AFC-01). Contact: John Heiser. (Staff presentation: 10 minutes)
 - a. Possible approval of an order adopting the Executive Director's recommendation to find the Stanton Energy Reliability Center application for certification complete. The proposed project is a new 98-megawatt hybrid electrical generating and storage facility consisting of two General Electric LM6000 PC natural gas-fired combustion turbine generators and related facilities, with integrated batteries for hybrid operation and clutch gear for synchronous condenser operation. The project would be located on a vacant 3.978 acre portion of an industrial- zoned site in the city of Stanton, west of the Southern California Edison Barre Substation in Orange County.
 - b. Possible appointment of a siting committee for Stanton Energy Reliability Center.

Commissioner Douglas moved and Commissioner Scott seconded approval of Item 4a. The vote was unanimous (5-0). Chair Weisenmiller proposed that the Presiding Member will be Commissioner Scott and Commissioner Douglas will be the Associate Member. Commissioner McAllister moved Item 4b and Commissioner Hochschild seconded. The vote was unanimous (5-0).

5. ORDER INSTITUTING INFORMATIONAL (OII) PROCEEDING. Consideration and possible adoption of an OII to gather and assess information for analyses identified in the Final Scoping Order for the 2017 Integrated Energy Policy Report (IEPR). Contact: Heather Raitt. (Staff presentation: 5 minutes)

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

6. APPLIANCE ENERGY EFFICIENCY REGULATIONS - AIR FILTER LABELING. Proposed resolution adopting Emergency Regulations to delay the effective date of testing, certification, and marking requirements for residential air filters for use in forced-air heating or forced-air cooling equipment in Title 20, sections 1606, Table X and 1607(d)(12) of the California Code of Regulations, and Finding of Emergency pursuant to Government Code section 11346.1. Contact: Patrick Saxton. (Staff presentation: 5 minutes)

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

7. APPLIANCE ENERGY EFFICIENCY REGULATIONS - POOL PUMP MOTOR CONSTRUCTION TYPES. Proposed resolution adopting Emergency Regulations to expand the list of permissible motor construction types for residential pool pump motors in Title 20, section 1606 Table X of the California Code of Regulations, and Finding of Emergency pursuant to Government Code section 11346.1. Contact Sean Steffensen. (Staff presentation: 5 minutes)

Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 7. The vote was unanimous (5-0).

8. PROPOSED ADOPTION OF NEW SOLAR HOMES PARTNERSHIP (NSHP) GUIDEBOOK, TENTH EDITION. Proposed resolution adopting revisions to the NSHP Guidebook. The revisions are reflected in the NSHP Guidebook, Tenth Edition. The NSHP

Guidebook describes the requirements for participating in the NSHP and receiving incentives for installing eligible solar energy systems on new residential construction located in specified investor-owned utility territories. Proposed changes to the NSHP Guidebook address requirements for projects constructed under the 2016 Building Energy Efficiency Standards (Title 24, Part 6), updates to incentive levels and calculations, improvements to increase participation from affordable housing projects and projects located in disadvantaged communities, program streamlining efforts, and input received from stakeholders on program improvements. Contact: Elizabeth Hutchison. (Staff presentation: 10 minutes)

Commissioner Hochschild moved and Commissioner Scott seconded approval of Item 8. The vote was unanimous (5-0).

9. CITY OF SANTA MONICA. Possible findings that two local ordinances adopted by the city of Santa Monica requiring reduced energy consumption compared to the 2016 Building Energy Efficiency Standards. Contact: Ingrid Neumann. (Staff presentation: 10 minutes)
 - a. Proposed resolution finding that the city of Santa Monica's local ordinances establishing and mandating a minimum amount of installed solar PV for new residential and nonresidential buildings will require lower energy consumption levels.
 - b. Proposed resolution finding that the city of Santa Monica's local ordinances requiring 1) that all new low-rise residential buildings be designed to use 15 percent less energy than the allowed energy budget established by the 2016 Standards and achieve an Energy Design Rating of Zero; and 2) that all new high-rise residential buildings, non-residential buildings, hotels, and motels be designed to use 10 percent less energy than the allowed energy budget established by the 2016 Standards.

Commissioner McAllister moved and Commissioner Hochschild seconded approval of Item 9. The vote was unanimous (5-0).

10. MARIN COUNTY. Proposed resolution approving Marin County's locally adopted building energy standards to require greater energy efficiency than the 2016 Building Energy Efficiency Standards. The ordinance requires new residential occupancies as well as residential additions and remodels to satisfy the corresponding Green Point Rated checklist. Contact: Ingrid Neumann. (Staff presentation: 5 minutes)

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

11. UNIVERSITY OF CALIFORNIA, DAVIS. Proposed resolution approving Agreement 400-16-002 with the Regents of the University of California on behalf of the Davis campus's Western Cooling Efficiency Center for a \$500,000 contract to develop training course videos about the Nonresidential HVAC and Covered Process requirements of the Building Energy Efficiency Standards for the Online Resource Center. (ERPA funding) Contact: Alex Pineda. (Staff presentation: 5 minutes)

Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 11. The vote was unanimous (5-0).

12. UNIVERSITY OF CALIFORNIA, DAVIS. Proposed resolution approving Agreement 400-16-003 with the Regents of the University of California on behalf of the Davis campus's California Lighting Technology Center for a \$100,000 contract to increase consumer and industry awareness of forthcoming changes to the lighting portion of the

Title 20 Appliance Efficiency Regulations that will go into effect in 2018 in California and 2020 nationwide. (ERPA funding) Contact: Galina Dushenko. (Staff presentation: 5 minutes)

Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 12. The vote was unanimous (5-0).

13. UNIVERSITY OF CALIFORNIA, DAVIS. Proposed resolution approving Agreement 400-16-005 with the Regents of the University of California, on behalf of the Davis campus's California Lighting Technology Center for a \$343,855 technical support contract. The California Lighting Technology Center will provide technical assistance to the Energy Commission on a variety of lighting-related issues to support the 2019 and 2022 Building Energy Efficiency Standards updates. (ERPA funding) Contact: Adrian Ownby. (Staff presentation: 5 minutes)

Commissioner McAllister moved and Commissioner Hochschild seconded approval of Item 13. The vote was unanimous (5-0).

14. LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving Amendment 2 to Contract 600-13-009 with the Department of Energy's Lawrence Berkeley National Laboratory (LBNL) to change the project site to Marine Corps Air Station Miramar in San Diego from the current sites of Moffett Federal Airfield and Parks Reserve Forces Training Area, to extend the term by 36 months to provide for a minimum of two full years for data collection and analysis, to augment the budget by \$692,472 for a total project budget of \$2,992,472, and to modify the scope of work to add activities and deliverables commensurate with the new location, added funding, and increased length of the agreement. The amendment would provide the vehicle-grid integration demonstration with sufficient time and resources to complete the installation of equipment, collect multi-year data and complete a full analysis of the project performance. (ARFVTP funding) Contact: Kiel Pratt. (Staff presentation: 5 minutes)

Commissioner Scott moved and Commissioner Hochschild seconded approval of Item 14. The vote was unanimous (5-0).

15. ZERO-EMISSION VEHICLE REGIONAL READINESS AND PLANNING SOLICITATION, GFO-16-601. This solicitation sought proposals to fund projects that will support new and existing planning efforts for zero-emission vehicles (battery-electric vehicles, hydrogen fuel cell electric vehicles, and plug-in hybrid electric vehicles). (ARFVTP funding) Contact: Sharon Purewal. (Staff presentation: 10 minutes)

- a. SAN DIEGO ASSOCIATION OF GOVERNMENTS. Proposed resolution approving Agreement ARV-16-011 with the San Diego Association of Governments for a \$300,000 grant to further regional deployment of plug-in electric vehicles and infrastructure through a combination of resource development, training, technical assistance, and outreach.
- b. REDWOOD COAST ENERGY AUTHORITY (RCEA). Proposed resolution approving Agreement ARV-16-012 with RCEA for a \$109,651 grant to provide PEV outreach and assistance activities called for in the North Coast Plug-in Electric Vehicle Readiness Plan. RCEA will facilitate accelerated ZEV adoption in the region including disadvantaged communities.
- c. SONOMA COUNTY REGIONAL CLIMATE PROTECTION AUTHORITY. Proposed resolution approving Agreement ARV-16-013 with Sonoma County Regional Climate Protection Authority for a \$300,000 grant to provide needed

resources and support to consumers, and local government staff to accelerate electric vehicle (EV) adoption in Sonoma County by establishing EV concierge services, training, streamline permitting, and survey future EV charging system installation sites.

- d. TAHOE REGIONAL PLANNING AGENCY. Proposed resolution approving Agreement ARV-16-014 with the Tahoe Regional Planning Agency for a \$104,897 grant to accelerate the adoption of zero-emission vehicle infrastructure through the creation of an ombudsman position, public education and outreach, siting analysis, and streamlined permitting processes.

Commissioner Scott moved and Commissioner McAllister seconded approval of Item 15. The vote was unanimous (5-0).

16. PROPOSED NATURAL GAS SOLICITATION FOR ENERGY-RELATED ENVIRONMENTAL RESEARCH, GFO-15-507. This solicitation sought proposals to fund projects that characterize and reduce environmental impacts from natural gas systems. (PIER NG funding) Contact: Yu Hou. (Staff presentation: 10 minutes)
 - a. ENERGY AND ENVIRONMENTAL ECONOMICS, INC. Proposed resolution approving Agreement PIR-16-011 with Energy and Environmental Economics, Inc. (E3) for a \$1,099,733 grant to prepare a strategic assessment of the long-term technology pathways for the natural gas system to achieve energy and greenhouse gas emission goals.
 - b. LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving Agreement PIR-16-012 with the Department of Energy's Lawrence Berkeley National Laboratory for a \$1,000,000 grant to fund field, laboratory, and simulation research on indoor air pollutants emitted from natural gas appliances in California zero-net energy homes. The project will investigate the impacts on indoor air quality from ventilation hood operation, overhead microwave ventilation, and others. The results will inform residential building codes and standards development processes.
 - c. UNIVERSITY OF CALIFORNIA, DAVIS. Proposed resolution approving Agreement PIR-16-013 with the Regents of the University of California, on behalf of the Davis campus for a \$597,433 grant to survey methane leakage from abandoned and plugged natural gas wells in California and estimate the contribution of drought related subsidence to the observed pattern of leakages.
 - d. ELECTRIC POWER RESEARCH INSTITUTE, INC. Proposed resolution approving Agreement PIR-16-014 with Electric Power Research Institute, Inc. for a \$1,400,000 grant to directly address the issues of fugitive greenhouse gas leaks by conducting a multi-tiered measurement campaign for methane and nitrous oxide at industrial facilities. The project includes working with industry and utility partners to identify and quantify methane leaks, and to quantify nitrous oxide stack emissions.
 - e. LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving Agreement PIR-16-015 with Department of Energy's Lawrence Berkeley National Laboratory for a \$1,599,584 grant to fund research that will develop and demonstrate a new 3-D methodology to more accurately characterize areas with high risk of potential natural gas infrastructure damage due to drought-induced subsidence and identify remedial actions.

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

17. FEDERAL COST SHARE UNDER THE ELECTRIC PROGRAM INVESTMENT CHARGE, PON-14-308. This solicitation sought proposals to provide cost share funding to eligible applicants that apply for and receive an award from eligible Federal Funding Opportunity Announcements and meet the requirements stipulated in this solicitation. (EPIC funding) Contact: Amir Ehyai. (Staff presentation: 5 minutes)
- a. SLAC NATIONAL ACCELERATOR LABORATORY. Proposed resolution approving Agreement EPC-16-031 with the Department of Energy's SLAC National Accelerator Laboratory for a \$70,000 grant to develop the VOLTTRON Testing Tool Kit (VTTK). This funding provides cost-share to leverage a \$700,000 U.S. Department of Energy (DOE) award to develop the VTTK. VOLTTRON is a DOE-funded open source platform for transactive energy applications. The platform allows for more effective integration between buildings and the electric grid and is aimed at improving energy efficiency and participation in demand response.

Commissioner McAllister moved and Commissioner Hochschild seconded approval of Item 17. The vote was unanimous (5-0).

18. IMPROVING PERFORMANCE AND COST EFFECTIVENESS OF SMALL HYDRO, GEOTHERMAL AND WIND ENERGY TECHNOLOGIES, GFO-16-301. This solicitation sought proposals to fund applied research and development projects to develop advanced technologies and strategies that will help expand California's use of in-conduit hydrokinetic power, improve the cost-effectiveness of geothermal energy generation, and upgrade California's aging wind turbines. The agreements will enable higher penetrations of renewable energy into California's electricity mix. (EPIC funding) Contact: Silvia Palma-Rojas. (Staff presentation: 5 minutes)
- a. UNIVERSITY OF CALIFORNIA, DAVIS. Proposed resolution approving Agreement EPC-16-019 with the Regents of the University of California, on behalf of the Davis campus for an \$810,438 grant to develop inexpensive, standardized wind turbine upgrades. The upgrade is a low-cost, robust, wireless communication and control system for aged wind turbines which will allow the turbines to communicate with a central controller for increased dispatchability and responsiveness to grid needs.

Commissioner McAllister moved and Commissioner Scott seconded approval of Item 18. The vote was unanimous (5-0).

19. EMERGING ENERGY EFFICIENT TECHNOLOGY DEMONSTRATIONS (EEETD), GFO-16-304. This solicitation sought proposals to accelerate market adoption of innovative, pre-commercial energy efficiency technologies into the marketplace through full scale monitoring, evaluating and reporting on the actual performance of the technology in the field. This could result in rapid deployment and demonstration of innovative emerging energy efficiency technologies into the commercial building sector. The first phase of the solicitation focused on demonstration projects located in the Los Angeles Basin most affected by the shutdown of the Aliso Canyon natural gas storage facility. (EPIC funding) Contact: Felix Villanueva. (Staff presentation: 10 minutes)
- a. NEW BUILDINGS INSTITUTE, INC. Proposed resolution approving Agreement EPC-16-032 with New Buildings Institute, Inc. for a \$4,981,000 grant to develop and demonstrate cost-effective deep energy retrofit packages using pre-commercial, market ready technologies in several existing government buildings in the Los Angeles Basin. The retrofits will integrate advanced lighting, window

shades, and plug-load controls as a low barrier deployable solution to achieve 20 percent or more energy savings.

- b. CALIFORNIA STATE UNIVERSITY LONG BEACH RESEARCH FOUNDATION. Proposed resolution approving Agreement EPC-16-033 with California State University Long Beach Research Foundation for a \$2,509,946 grant to develop and demonstrate an innovative, pre-commercial energy management system for control of lighting, HVAC, and plug loads to reduce energy use and be capable of anytime demand reduction during demand response events.
- c. ZERO NET ENERGY ALLIANCE, INC. Proposed resolution approving Agreement EPC-16-034 with Zero Net Energy Alliance, Inc. for a \$2,500,000 grant to demonstrate, deploy at commercial scale, and initiate rapid market adoption of the Automated Cloud-Based Continuously Optimizing Building Energy Management System. The technology will continuously optimize building energy management systems through an artificial intelligence-enabled analytics engine. The technology will be demonstrated at two college campuses in the Los Angeles Basin and has the potential of reducing energy use by 20 percent in the effected buildings.

Commissioner McAllister moved and Commissioner Hochschild seconded approval of Item 19. The vote was unanimous (5-0).

- 20. ADVANCING CUTTING-EDGE TECHNOLOGIES AND STRATEGIES TO REDUCE ENERGY USE AND COSTS IN THE INDUSTRIAL, AGRICULTURE AND WATER SECTORS, GFO-16-305. This solicitation sought proposals to fund applied research and development projects that will advance and test pre-commercial energy efficiency and demand response technologies and strategies for the industrial, agricultural and water sectors. (EPIC funding) Contact: Kevin Mori. (Staff presentation: 10 minutes)
 - a. IRRIGATION FOR THE FUTURE. Proposed resolution approving Agreement EPC-16-027 with Irrigation for the Future for a \$1,588,872 grant to test analytical tools that can help growers identify and implement optimal irrigation management strategies. These strategies will allow growers to capitalize on time-of-use rates, and participate in demand response and automated demand response programs. The tools will be tested in farms in the San Joaquin Valley.
 - b. ADVANCED MICROGRID SOLUTIONS, INC. Proposed resolution approving Agreement EPC-16-028 with Advanced Microgrid Solutions, Inc. for a \$1,403,465 grant to develop, test, and validate a pre-commercial load shifting and demand response platform for water agencies that includes real time monitoring, automated load control, cost optimization, energy storage and automated demand response capabilities. The platform will be tested in Southern California.
 - c. ANTELOPE VALLEY WATER STORAGE, LLC. Proposed resolution approving Agreement EPC-16-029 with Antelope Valley Water Storage, LLC for a \$1,000,000 grant to evaluate the feasibility of using groundwater storage and cycling surface reservoirs to shift water deliveries to non-summer months to manage peak load and demand.
 - d. UNIVERSITY OF CALIFORNIA, RIVERSIDE. Proposed resolution approving Agreement EPC-16-030 with the Regents of the University of California, on behalf of the Riverside campus for a \$1,783,118 grant to test technologies that improve energy efficiency at the server, data center, and data center cluster levels in a smart power distribution system. These technologies have the potential to reduce electrical consumption of data centers by approximately 35 percent

through improved scheduling and workload management. The technologies will be demonstrated at San Jose State University.

Commissioner Scott moved and Commissioner McAllister seconded approval of Item 20. The vote was unanimous (5-0).

21. 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 21.

22. **Minutes:** Possible approval of the February 15, 2017 Business Meeting minutes.

Commissioner Douglas moved and Commissioner Scott seconded approval of Item 22. The vote was unanimous (5-0).

23. **Lead Commissioner or Presiding Member Reports.** The Commissioners reported on their recent activities.
24. **Chief Counsel's Report.** None.
25. **Executive Director's Report.** The Executive Director gave a report.
26. **Public Adviser's Report.** The Public Adviser gave a report.
27. **Public Comment.** None.

Appearances:

(*by telephone)

Jeff Harris, Ellison Schneider Harris & Donlan LLP

Robert Sarvey, Public

Rob Simpson, Helping Hand Tools

Scott Galati, DayZen LLC

Karen Miles, W Power LLC

George Nesbitt, HERS rater

Mathew Vartola, Bestway

Robert Raymer, California Building Industry Association

Ron Takiguchi, City of Santa Monica

Joel Cesare, City of Santa Monica

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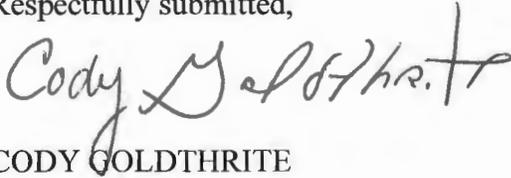
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Captain William Whitmire, Marine Corps Installation West
Masoud Nazari, California State University, Long Beach
Mark Beuhler, Antelope Valley Water Storage

There being no further business, the meeting was adjourned.

Respectfully submitted,



CODY GOLDTHRITE
Secretariat

