

State of California
California Energy Commission
Minutes of the July 12, 2017, Energy Commission Business Meeting

The meeting was called to order by Commissioner Douglas. The Pledge of Allegiance was led by Commissioner Douglas.

Present:

Karen Douglas, Commissioner

J. Andrew McAllister, Commissioner

Janea A. Scott, Commissioner

David Hochschild, Commissioner

Commissioner Douglas announced that Chair Weisenmiller is absent. Commissioner McAllister disclosed that his wife is a professor at UC Davis King Hall and that UC Davis is involved in Items 1d and 11. Commissioner Douglas disclosed that she is a professor at UC Davis King Hall and that UC Davis is involved in Items 1d and 11.

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. LOS ANGELES DEPARTMENT OF WATER AND POWER's (LADWP) REQUEST TO USE THE DATA COLLECTION AND ANALYSES COMPLIANCE OPTION. Proposed resolution approving LADWP'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.
 - b. 2016 PUBLIC DOMAIN CALIFORNIA BUILDING ENERGY CODE COMPLIANCE SOFTWARE-RESIDENTIAL, CBECC-RES 2016.3.0. Proposed resolution approving the 2016 Public Domain California Building Energy Code Compliance Residential software, CBECC-Res 2016.3.0, that may be used to demonstrate performance compliance with the residential provisions of the 2016 Building Energy Efficiency Standards (also known as the Energy Code). Among other improvements, this version incorporates a cap on the amount of Energy Design Rating credit from solar photovoltaic (PV), bug fixes primarily affecting additions and alterations, and other requested enhancements. The resolution also proposes to rescind approval of CBECC-Res 2016.2.1 and versions of EnergyPro and Right-Energy that are based on CBECC-Res 2016.2.1, as of October 25, 2017. (Public Resources Code, Section 25402.1(a), (b).) Contact: Larry Froess.
 - c. 2016 BUILDING ENERGY EFFICIENCY STANDARDS RESIDENTIAL ALTERNATIVE CALCULATION METHOD (ACM) REFERENCE MANUAL UPDATE. Proposed resolution certifying the updated 2016 Residential ACM Reference Manual as required by Public Resources Code Section 25402.1(e). This ACM Reference Manual documents the modeling methods used in residential

compliance software for demonstrating performance compliance with the 2016 Building Energy Efficiency Standards. Contact: Dee Anne Ross.

- d. TRANE U.S., INC. Proposed resolution approving Amendment 1 to Grant Agreement EPC-14-059 with Trane U.S., Inc. for a 12-month time extension and a budget reallocation. A merger caused a major subcontractor to be unable to continue participation in the project. Since this subcontractor was responsible for several project elements, the recipient needed to secure the commitment of several new equipment vendors and subcontractors to fulfill the project scope. The time extension and budget reallocation would allow for execution of the new subcontracts and provide sufficient time for microgrid operational data collection. (EPIC funding) Contact: Kiel Pratt.
- e. GAS TECHNOLOGY INSTITUTE. Proposed resolution approving Amendment 1 to Grant Agreement PIR-14-017 with the Institute of Gas Technology dba Gas Technology Institute (GTI) to change the demonstration site, incorporate GTI staff adjustments and reallocate the project budget. The Energy Commission funding amount and agreement end term are not changed. (PIER NG funding) Contact: Rajesh Kapoor.
- f. GREENKRAFT, INC. Proposed resolution approving the Repayment, Waiver, and Release Agreement with Greenkraft, Inc. This Agreement will require Greenkraft, Inc. to reimburse the Energy Commission for \$1,284,000 relating to unused natural gas and propane vehicle purchase incentive funding that was provided through Agreements BDIR-12-23 and BDIR-12-25. Contact: Andre Freeman.
- g. AMERICAN COUNCIL FOR AN ENERGY EFFICIENT ECONOMY. Proposed resolution approving a \$4,990 co-sponsorship and use of the Energy Commission's name and logo for the 2017 Behavior, Energy and Climate Change Conference convened by the Precourt Energy Efficiency Center at Stanford University, the American Council for an Energy Efficient Economy, and the Berkeley Energy and Climate Institute. The conference presents research in organizational behavior and decision-making, and techniques for using that knowledge to accelerate the transition to an energy-efficient and low-carbon economy. (ERPA funding) Contact: Sylvia Bender.

Commissioner Scott moved and Commissioner McAllister seconded approval of Item 1. The vote was 4-0.

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. SUMMER INSTITUTE FOR ENERGY LAW AND POLICY PRESENTATION. The Florin High School LAW Academy will present their final project which will include highlights from their research, staff interactions, and field trips to learn about key energy issues facing California. Contact: Alana Mathews. (Staff presentation: 10 minutes)

Students from the 2017 Summer Institute for Energy, Law and Policy presented Information Item 3.

4. RENEWABLES PORTFOLIO STANDARD PROGRAM. Proposed resolution adopting revisions to the Renewables Portfolio Standard Eligibility Guidebook Ninth Edition (Revised). Revisions are proposed to clarify the eligibility of aggregated units by removing the requirement that an aggregated unit must receive benefits from a rate-payer funded incentive program, participate in a net metering tariff with a load serving entity, or

primarily serve onsite load in order to be certified. Contact: Camille Remy-Obad. (Staff presentation: 5 minutes)

Commissioner Hochschild moved and Commissioner McAllister seconded approval of Item 4. The vote was 4-0.

5. ITRON, INC. WHICH WILL DO BUSINESS IN CALIFORNIA AS IBS. Proposed resolution approving termination without cause of Agreement 500-15-003, with Itron, Inc. Which Will Do Business in California as IBS, which was entered into to conduct an audit of the operational performance of solar energy systems that received incentives through the NSHP program. Contact: Natalie Lee. (Staff presentation: 5 minutes)

Commissioner Hochschild moved and Commissioner McAllister seconded approval of Item 5. The vote was 4-0.

6. CITY OF BRISBANE. Proposed resolution finding that the city of Brisbane's locally adopted energy standards will require buildings to be designed to consume no more energy than permitted by the 2016 Building Energy Efficiency Standards. The city of Brisbane's locally adopted energy standards will require installation of cool roofs and solar PV or solar hot water systems in all new buildings. Contact: Ingrid Neumann. (Staff presentation: 5 minutes)

Commissioner McAllister moved and Commissioner Scott seconded approval of Item 6. The vote was 4-0.

7. CITY OF FREMONT. Proposed resolution finding that the city of Fremont's locally adopted energy standards will require buildings to be designed to consume no more energy than permitted by the 2016 Building Energy Efficiency Standards. The city of Fremont's locally adopted energy standards will require installation of a minimum amount of photovoltaics in new single family residential construction based on the building square footage or on meeting 55 percent of the total Time Dependent Valuation (TDV) Energy as calculated by Title 24, Part 6 performance compliance software. Contact: Ingrid Neumann (Staff presentation: 5 minutes)

Commissioner McAllister moved and Commissioner Scott seconded approval of Item 7. The vote was 4-0.

8. CITY OF HEALDSBURG. Proposed resolution finding that the city of Healdsburg's locally adopted energy standards will require buildings to be designed to consume no more energy than permitted by the 2016 Building Energy Efficiency Standards. The city of Healdsburg's locally adopted energy standards will require new single family residential construction greater than 3000 square feet to be 15 percent more energy efficient than required by the 2016 Standards. Contact: Ingrid Neumann. (Staff presentation: 5 minutes)

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

9. CITY OF PORTOLA VALLEY. Proposed resolution finding that the City of Portola Valley's locally adopted energy standards will require buildings to be designed to consume no more energy than permitted by the 2016 Building Energy Efficiency Standards. The City of Portola Valley's locally adopted energy standards will require efficiency improvements of 10 percent for single family residential construction, newly constructed buildings as well as additions and alterations to existing buildings, based on the corresponding Green Point Rated checklists. Contact: Ingrid Neumann. (Staff presentation: 5 minutes)

Staff announced that the agenda item should read “Town of Portola Valley” and not “City of Portola Valley.” Commissioner McAllister moved and Commissioner Scott seconded approval of Item 9. The vote was 4-0.

10. CITY OF SAN RAFAEL. Proposed resolution approving Agreement 001-17-ECD for a \$1,178,813 ECAA loan at one percent interest to the city of San Rafael to reduce energy consumption and costs at multiple end-use locations. Energy efficiency measures include retrofitting or replacing building and street lighting fixtures, and enhancing existing energy management control systems with new sensors and automated analysis. This project is estimated to save 1,045,084 kWh and 2,338 therms, reducing 374 tons carbon dioxide equivalent in greenhouse gas emissions, and saving the city \$175,798 in energy costs, annually. Based on the estimated savings and loan amount, the simple payback is 6.7 years. (ECAA funding) Contact: Armando Ramirez. (Staff presentation: 5 minutes)

Commissioner McAllister moved and Commissioner Scott seconded approval of Item 10. The vote was 4-0.

11. CALIFORNIA HOMEBUILDING FOUNDATION. Proposed resolution adopting California Environmental Quality Act Findings for California Homebuilding Foundation’s Zero Energy Residential Optimization - Community Achievement Project new demonstration site at the Abrams “B” housing development in the City of Marina, and approving Amendment EPC-15-042-01 with California Homebuilding Foundation. (EPIC Funding). Contact: Brad Williams. (Staff presentation: 5 minutes)
 - a. CALIFORNIA ENVIRONMENTAL QUALITY ACT FINDINGS. Findings that based on the lead agency City of Marina’s Final Environmental Impact Report and supplement thereto, mitigation monitoring plan, and adoption of a statement of overriding considerations, the work under the proposed project’s new demonstration site at the Abrams “B” housing development in the City of Marina presents no new significant or substantially more severe environmental impacts beyond those already considered and mitigated and adopting a statement of overriding considerations.
 - b. CALIFORNIA HOMEBUILDING FOUNDATION’S ZERO ENERGY RESIDENTIAL OPTIMIZATION – COMMUNITY ACHIEVEMENT PROJECT. Proposed resolution approving Amendment EPC-15-042-01 with California Homebuilding Foundation, as part of the original grant amount of \$4,819,805, to fund a community-scale demonstration of cost-effective Zero Net Energy construction for a subdivision of single-family homes at the Abrams “B” housing development in the City of Marina. The project will identify, develop and demonstrate cost effective ZNE designs and will evaluate actual energy savings, costs, behavioral aspects, and indoor air quality in these homes.

Commissioner McAllister moved and Commissioner Hochschild seconded approval of Item 11. The vote was 4-0.

12. DEVELOPMENT, DEMONSTRATION AND DEPLOYMENT OF ENVIRONMENTALLY AND ECONOMICALLY SUSTAINABLE BIOMASS-TO-ENERGY SYSTEMS FOR THE FOREST AND FOOD WASTE SECTOR, GFO-15-325. This solicitation sought proposals to fund applied research and development (AR&D) and technology demonstration and deployment (TD&D) activities to advance bioenergy electricity generation. Consistent with the 2015-2017 EPIC Investment Plan and in coordination with the California Public Utilities Commission, the solicitation addresses three bioenergy funding initiatives. This solicitation is also responsive to the Governor’s 10-30-2015 Proclamation of a State of Emergency to protect communities

against unprecedented tree die-off. (EPIC funding) Contact: Kevin Uy. (Staff presentation: 5 minutes)

- a. TAYLOR ENERGY. Proposed resolution approving Agreement EPC-17-012 with Taylor Energy for a \$1,499,000 grant to perform pilot-scale demonstrations of three different energy pathways for conversion of woody biomass to electricity. After identifying the optimal pathway, extended testing will be performed and the technical, economical, and environmental performance of a full-scale facility will be evaluated via modeling and simulation.
- b. ALTEX TECHNOLOGIES CORPORATION. Proposed resolution approving Agreement EPC-17-013 with Altex Technologies Corporation for a \$1,499,994 grant to develop a pilot-scale modular biomass power system that uses forest slash as a renewable fuel. The system, based on an indirect-fired gas turbine technology scaled at 100 kWe, will generate electricity while meeting criteria pollutant requirements, supporting renewable energy goals, reducing forest fire hazards and greenhouse gas emissions, and improving overall forest sustainability.

Commissioner Scott moved and Commissioner McAllister seconded approval of Item 12. The vote was 4-0.

13. 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. (EPIC funding) Contact: Felix Villanueva. (Staff presentation: 5 minutes)

- a. TAYLOR ENGINEERING, LLC. Proposed resolution approving Agreement EPC-17-001 with Taylor Engineering, LLC for a \$2,966,716 grant to demonstrate the viability and scalability of innovative control strategies in existing commercial buildings. This project also aims to validate a new delivery mechanism for control system upgrades with plug-and-play solutions in collaboration with industry and utilities to address California's need for cost-effective energy reductions to meet Senate Bill 350 requirements. The demonstrations will occur in office buildings in Northern and Southern California.
- b. WILLDAN ENERGY SOLUTIONS. Proposed resolution approving Agreement EPC-17-009 with Willdan Energy Solutions for a \$3,994,256 grant to demonstrate a suite of pre-commercial energy-efficiency technologies to be installed in an existing office and laboratory building in Southern California. The technologies to be demonstrated include: chillers using "next-generation" low global warming refrigerants; advanced LED lighting; and advanced controls for zonal lighting, HVAC, plug-load controls, demand response and laboratory exhaust fans.
- c. CENTER FOR SUSTAINABLE ENERGY. Proposed resolution approving Agreement EPC-17-008 with Center for Sustainable Energy for a \$2,824,685 grant to demonstrate the impact of an integrated suite of pre-commercial energy efficiency technologies in a large, existing retail building with a goal of achieving a 20 percent reduction in energy use. Potential measures include advanced direct current lighting, advanced heating, ventilating and air conditioning systems, and integrated system and building level controls. The demonstration will occur in Covina, California.

Commissioner Scott moved and Commissioner McAllister seconded approval of Item 13. The vote was 4-0.

14. SOLAR+: TAKING THE NEXT STEPS TO ENABLE SOLAR AS A GRID ASSET, GFO-16-309. This solicitation sought proposals to fund technology development, pilot demonstrations, and full-scale demonstrations to advance the deployment and grid integration of distributed solar resources through the use of energy storage, smart inverters, and advanced forecasting and modeling techniques. (EPIC funding) Contact: Angela Gould. (Staff presentation: 5 minutes)
- a. HUMBOLDT STATE UNIVERSITY SPONSORED PROGRAMS FOUNDATION. Proposed resolution approving Agreement EPC-17-002 with Humboldt State University Sponsored Programs Foundation for a \$1,500,000 grant to fund the development and pilot testing of an advanced distributed energy system that includes solar photovoltaic, energy storage and advanced building system controls. The project will innovate across-site targeting guidelines, hardware design practices, and model-predictive control software to enable the scale-up of these technologies in small and medium-sized commercial buildings throughout California.
 - b. CLEAN POWER RESEARCH, L.L.C. Proposed resolution approving Agreement EPC-17-003 with Clean Power Research, L.L.C. for a \$750,000 grant to provide the California Independent System Operator with an improved 10-minute to day-ahead high resolution, system-wide, and probabilistic power production forecast for all California photovoltaic systems.
 - c. ENERGY AND ENVIRONMENTAL ECONOMICS, INC. (E3). Proposed resolution approving Agreement EPC-17-004 with E3 for a \$987,379 grant to develop a Solar + Storage Tool to evaluate and optimize the dispatch, operations, and value proposition of integrated solar + storage systems.
 - d. ELECTRIC POWER RESEARCH INSTITUTE, INC. Proposed resolution approving Agreement EPC-17-005 with Electric Power Research Institute, Inc. for a \$1,491,764 grant to demonstrate a customer side of the meter, commercial scale photovoltaic and storage system, which includes advanced energy management algorithms coupled with high efficiency, low cost, and designed for scale energy efficiency and distributed resources technologies. It is located at a brownfield site with an established load profile and a real economic use (coffee roasting business) in a disadvantaged community. The project will focus on demonstrating local and distribution grid services and applications, without hindering customer's business imperatives.
 - e. ELECTRIC POWER RESEARCH INSTITUTE, INC. Proposed resolution approving Agreement EPC-17-006 with Electric Power Research Institute, Inc. for a \$749,740 grant to develop an improved forecasting of solar irradiance in California, with a particular focus on fog and stratus conditions, through targeted deployment of instrumentation. This project will use a targeted instrumentation network, consisting of existing and new sensors, to improve the forecasts that are most important to the California Independent System Operator and utility operations.
 - f. CENTER FOR SUSTAINABLE ENERGY. Proposed resolution approving Agreement EPC-17-007 with the Center for Sustainable Energy for a \$2,005,923 grant to create and demonstrate the impact of an integrated community solar and storage energy system at a low-income mobile home park in Bakersfield, California. The community solar and energy storage system is expected to reduce net energy consumption and reduce energy bills for residents while providing benefits to the distribution grid.

Commissioner Hochschild moved and Commissioner McAllister seconded approval of Item 14. The vote was 4-0.

15. 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 15.

16. **Minutes:** Possible approval of the June 14, 2017 Business Meeting minutes.

Commissioner Scott moved and Commissioner Hochschild seconded approval of Item 16. Commissioner McAllister abstained. The vote was 3-0.

17. **Lead Commissioner or Presiding Member Reports.** The Commissioners reported on their recent activities.
18. **Chief Counsel's Report:** None.
19. **Executive Director's Report.** The Executive Director gave a report.
20. **Public Adviser's Report.** The Public Adviser's Office gave a report.
21. **Public Comment:** None.

Appearances:

(*by telephone)

Lance Lee, Florin High School LAW Academy
Christina Quijas, Florin High School LAW Academy
Paola Mendoza, Florin High School LAW Academy
Eric Yang, Florin High School LAW Academy
Alexis Delso, Florin High School LAW Academy
Angeles Laguna, Florin High School LAW Academy
Ronil Sen, Florin High School LAW Academy
Melissa Bonilla, Florin High School LAW Academy
Alejandro Alfaro, Florin High School LAW Academy
Jacky Perez, Florin High School LAW Academy
Kenia Plazola, Florin High School LAW Academy
Garth Torvestad, ConSol

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Donald Gene Taylor, Taylor Energy

Smita Gupta, Itron

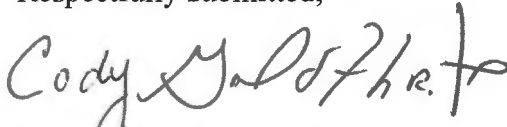
*Ken Johnson, City of Bisbane

*Rachel DiFranco, City of Fremont

*Brandi de Garmeaux, Town of Portola Vally

There being no further business, the meeting was adjourned.

Respectfully submitted,



CODY GOLDTHRITE
Secretariat

