

**State of California**  
California Energy Commission  
Minutes of the November 17, 2014, Energy Commission Business Meeting

The meeting was called to order by Chair Robert B. 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

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. CLEAN ENERGY STATES ALLIANCE, INC. Proposed resolution approving Agreement 400-14-002 for \$50,000 with the Clean Energy States Alliance, Inc. (CESA) to renew the Energy Commission's membership for one year, from July 1, 2014 to June 30, 2015. CESA is a unique multistate collaboration of public clean energy funds and state agencies working together to develop and promote clean energy and low-carbon technologies and expand the market for these technologies. (ERPA funding) Contact: Brian McCollough.
  - b. BEVILACQUA-KNIGHT, INC. (BKI). Proposed resolution approving Agreement 600-14-005 with Bevilacqua-Knight, Inc. for a one year membership in the California Fuel Cell Partnership (CaFCP) in the amount of \$87,800. BKI facilitates and coordinates the efforts of the CaFCP, including operational, financial, and project management. As a member, the Energy Commission will have a seat on the CaFCP's Steering Committee and will participate in the Working Group, Station Implementation Group, and other committees. (ARFVTP funding) Contact: Jennifer Masterson.

*Commissioner Scott stated that she is on the board of the California Fuel Cell Partnership and left the room before the vote on Item 1a. Commissioner Douglas moved and Commissioner McAllister seconded approval of the Consent Calendar. The vote was unanimous. (3-0)*

*Commissioner Scott then returned to the dais.*

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)

*No action was taken on Item 2.*

3. CITY OF PASADENA. Proposed resolution approving the City of Pasadena's locally adopted building energy standards to require the use of cool roof materials for new residential construction as well as additions and alterations to existing residential projects. This will result in greater energy efficiency than the 2013 Building Energy Efficiency Standards. Contact: Ingrid Neumann. (Staff presentation: 5 minutes)

*Commissioner McAllister moved and Commissioner Scott seconded approval of Item 3. The vote was unanimous. (4-0)*

4. HANFORD ENERGY PARK EMERGENCY PEAKER PROJECT (01-EP-7C). Proposed order granting the revocation of the 2010 Amended Final Decision for the GWF Hanford Combined-Cycle Power Project and the reinstatement and extension of the original 2001 license for the Hanford Energy Park Emergency Peaker Project. The amended project was never constructed. The project continues to operate under its original emergency peaker certification which requires the Energy Commission to certify that the project complies with certain criteria of permanence, site control and conditions of certification. Contact: Dale Rundquist. (Staff presentation: 15 minutes)

*Commissioner Douglas moved and Commissioner Scott seconded approval of Item 4. The vote was unanimous. (4-0)*

5. HENRIETTA PEAKER POWER PLANT PROJECT (01-AFC-18C). Proposed order granting the revocation of the 2010 Amended Final Decision for the GWF Henrietta Combined-Cycle Power Plant (GWF Henrietta), and the reinstatement of the original 2002 certification. The amended project was never constructed, and the project continues to operate under its original simple-cycle certification. Contact: Dale Rundquist. (Staff presentation: 10 minutes)

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

6. ABENGOA MOJAVE SOLAR PROJECT (09-AFC-5C). Proposed order granting the petition to amend the Energy Commission decision. The petition requests to amend Air Quality Condition of Certification AQ-25 to accommodate a portable handheld meter that will be used to obtain total dissolved solids values of the cooling tower blow-down water. Energy Commission Air Quality staff is also requesting minor wording changes to Air Quality Conditions of Certification AQ-26 and AQ-28 to incorporate the wording used by the Mojave Desert Air Quality Management District into these conditions. The project would continue to comply with applicable laws, ordinances, regulations, and standards. Contact: Dale Rundquist. (Staff presentation: 10 minutes)

*Commissioner Douglas moved and Commissioner Scott seconded approval of Item 6. The vote was unanimous. (4-0)*

7. CALPINE KING CITY COGENERATION (85-AFC-5C). Proposed order approving the petition to amend the California Energy Commission Decision. Elimination of one condition would allow performance testing/ model validation for the combustion turbine, lifting a limit of one startup and shutdown of the turbine per day. The addition of two new conditions would exempt the gas turbines and auxiliary boilers from short-term emission limits during limited periods for tuning and performance testing. Additional administrative modifications to various conditions, or in some cases changes to or deletions of conditions that are obsolete or incorrectly numbered, are also necessary. The proposed changes would not result in an exceedance of ambient air quality standards, and the total impact, using current background concentrations, would remain below current ambient air quality standards. The revisions will not result in any adverse environmental impacts or risks to public health. Contact: Eric Veerkamp. (Staff presentation: 10 minutes)

*Commissioner Douglas moved and Commissioner McAllister seconded approval of Item 7. The vote was unanimous. (4-0)*

8. MARSH LANDING GENERATING STATION PROJECT (08-AFC-03C). Proposed order approving a Petition to Amend the California Energy Commission Decision to install a new diesel backup generator, a diesel fire pump engine and 150 feet of fire loop

pipng by adding five and amending one Air Quality Conditions of Certification and amending one Biological Resources Condition of Certification. Contact: Camille Remy Obad. (Staff presentation: 10 minutes)

*Commissioner Douglas moved and Commissioner McAllister seconded approval of Item 8. The vote was unanimous. (4-0)*

9. ORDER INSTITUTING RULEMAKING. Proposed order instituting a rulemaking to complete updates to the Commission's power plant siting and general process regulations within Title 20 of the California Code of Regulations. The updates address issues raised by staff and stakeholders as part of the lessons learned proceeding, docket 10-SIT-OII-1 and docket 14-OII-01. Contact: Jared Babula. (Staff presentation: 5 minutes)

*Commissioner Douglas moved and Commissioner McAllister seconded approval of Item 9. The vote was unanimous. (4-0)*

10. MECHANICAL ACCEPTANCE TEST TECHNICIAN CERTIFICATION PROVIDER PROGRAM. Proposed resolution approving the maximum length of time, six months, of a one-time extension of the interim-approval period for Nonresidential Mechanical Acceptance Test Technician Certification Providers from December 31, 2014 to June 30, 2015. Contact: Joe Loyer. (Staff presentation: 10 minutes)

*The meeting was recessed for one hour and reconvened at 1 p.m.*

11. CALIFORNIA ADVANCED LIGHTING CONTROLS TRAINING PROGRAM. Possible approval of the California Advanced Lighting Controls Training Program, (CALCTP), as a Lighting Acceptance Test Technician Certification Provider (ATTCP). This will allow CALCTP to train and certify field technicians and employers on the Building Energy Efficiency Standards lighting control acceptance tests. Contact: Joan Walter. (Staff presentation: 10 minutes)

*Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 11. The vote was unanimous. (4-0)*

12. NATIONAL LIGHTING CONTRACTORS ASSOCIATION OF AMERICA. Possible approval of the National Lighting Contractors Association of America, (NLCAA), as a Lighting ATTCP. This will allow NLCAA to train and certify field technicians and Employers on the Building Energy Efficiency Standards lighting control acceptance tests. Contact: Joan Walter. (Staff presentation: 10 minutes)

*Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 12. The vote was unanimous. (4-0)*

13. APPLIANCE EFFICIENCY ENFORCEMENT RULEMAKING. Proposed resolution adopting regulations establishing an administrative enforcement process for the Appliance Efficiency Regulations set forth in Title 20, section 1601 et seq. of the California Code of Regulations. The proposed action is taken under the authority of sections 25213 and 25402.11 of the Public Resources Code (PRC), and would establish the administrative enforcement process authorized by PRC section 25402.11. Contact: John Nuffer. (Staff presentation: 5 minutes)

*Commissioner Douglas moved and Commissioner Scott seconded approval of Item 13. The vote was unanimous. (4-0)*

14. RENEWABLES PORTFOLIO STANDARD PROGRAM – IMPLEMENTATION OF ASSEMBLY BILL 1478. Proposed resolution implementing Assembly Bill 1478 to

amend and clarify the eligibility requirements of a hydroelectric generation unit with a nameplate capacity not exceeding 40 megawatts that is operated as part of a water supply or conveyance system for the Renewables Portfolio Standard Program. Contact: Lynette Green. (Staff presentation: 5 minutes)

*Commissioner Douglas moved and Commissioner McAllister seconded approval of Item 14. The vote was unanimous. (4-0)*

15. SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT. Proposed resolution approving Agreement 600-14-003 with South Coast Air Quality Management District for a \$1,400,000 contract to install overhead catenary line infrastructure to demonstrate zero-emission drayage truck operations along the I-710 corridor. (ARFVTP funding) Contact: Sam Lerman. (Staff presentation: 5 minutes)

*Commissioner Scott moved and Commissioner McAllister seconded approval of Item 15. The vote was unanimous. (4-0)*

16. CALSTART, INC. Proposed resolution approving Agreement ARV-14-025 with CalSTART, Inc. for a \$900,000 grant to develop and demonstrate an innovative, zero-emission battery dominant fuel cell hybrid system architecture for a 40-foot heavy-duty transit bus that will reduce the size of the fuel cell power plant, with a goal of reducing the price by 70 percent. Reducing acquisition costs will make future purchases comparable to today's hybrid costs and make fuel cell hybrid buses more commercially viable for transit authorities. (ARFVTP funding) Contact: David Nichols. (Staff presentation: 5 minutes)

*Commissioner McAllister moved and Commissioner Scott seconded approval of Item 16. The vote was unanimous. (4-0)*

17. PACIFIC ETHANOL DEVELOPMENT, LLC. Proposed resolution approving Agreement ARV-14-026 with Pacific Ethanol Development, LLC for a \$3,000,000 grant to develop and use sorghum feedstock that will lead to the production of low carbon transportation fuel. (ARFVTP funding) Contact: Larry Rillera. (Staff presentation: 5 minutes)

*Commissioner Scott moved and Commissioner Douglas seconded approval of Item 17. The vote was unanimous. (4-0)*

18. CITY OF SAN MATEO. Proposed resolution approving Agreement ARV-14-028 with the City of San Mateo for a \$2,450,000 grant to produce low carbon biomethane from the unused digester gas that is generated at the City of San Mateo's wastewater treatment plant. The biomethane will be used to fuel fleet vehicles. (ARFVTP funding) Contact: Andrew Hom. (Staff presentation: 5 minutes)

*Commissioner Scott moved and Commissioner Douglas seconded approval of Item 18. The vote was unanimous. (4-0)*

19. CAMPBELL UNION SCHOOL DISTRICT LOANS. (ECAA-ED Program funding) Contact: Jim Holland (Staff presentation: 10 minutes)
  - a. Rosemary Elementary. Proposed resolution approving Agreement 006-14-ECG with Campbell Union School District for a \$794,812 loan at zero percent interest for energy efficiency measures and photovoltaic installation at the Rosemary Elementary School, a charter school. Based on the loan amount, the simple payback is approximately 17.7 years. The projects will save approximately \$44,922 annually.

- b. Rolling Hills Middle School. Proposed resolution approving Agreement 007-14-ECG with Campbell Union School District for a \$692,584 loan at zero percent interest for energy efficiency measures and photovoltaic installation at the Rolling Hills Middle School, a charter school. Based on the loan amount, the simple payback is approximately 16 years. The projects will save approximately \$43,161 annually.
- c. Marshall Lane Elementary. Proposed resolution approving Agreement 008-14-ECG with Campbell Union School District for a \$478,754 loan at zero percent interest for energy efficiency measures and photovoltaic installation at the Marshall Lane Elementary School, a charter school. Based on the loan amount, the simple payback is approximately 15.8 years. The project will save approximately \$30,266 annually.
- d. Lynhaven Elementary. Proposed resolution approving Agreement 009-14-ECG with Campbell Union School District for a \$65,887 loan at zero percent interest for energy efficiency measures at the Lynhaven Elementary School, a charter school. Based on the loan amount, the simple payback is approximately 11.5 years. The project will save approximately \$5,714 annually.
- e. Forest Hill Elementary. Proposed resolution approving Agreement 010-14-ECG with Campbell Union School District for a \$534,346 loan at zero percent interest for energy efficiency measures and photovoltaic installation at the Forest Hill Elementary School, a charter school. Based on the loan amount, the simple payback is approximately 17 years. The project will save approximately \$31,362 annually.
- f. Castlemont Elementary. Proposed resolution approving Agreement 013-14-ECG with Campbell Union School District for a \$81,218 loan at zero percent interest for energy efficiency measures at the Castlemont Elementary School, a charter school. Based on the loan amount, the simple payback is approximately 11.2 years. The project will save approximately \$7,250 annually.
- g. Blackford Elementary. Proposed resolution approving Agreement 014-14-ECG with Campbell Union School District for a \$513,000 loan at zero percent interest for photovoltaic installation at the Blackford Elementary School, a charter school. Based on the loan amount, the simple payback is approximately 16 years. The project will save approximately \$31,838 annually.
- h. Sherman Oaks Elementary. Proposed resolution approving Agreement 015-14-ECG with Campbell Union School District for a \$1,084,933 loan at zero percent interest for energy efficiency measures and photovoltaic installation at the Sherman Oaks Elementary School, a charter school. Based on the loan amount, the simple payback is approximately 17.3 years. The projects will save approximately \$62,729 annually.
- i. Monroe Middle School. Proposed resolution approving Agreement 016-14-ECG with Campbell Union School District for a \$1,078,750 loan at zero percent interest for energy efficiency measures and photovoltaic installation at the Monroe Middle School, a charter school. Based on the loan amount, the simple payback is approximately 13.6 years. The projects will save approximately \$79,319 annually.

- j. Capri Elementary and Village School. Proposed resolution approving Agreement 017-14-ECG with Campbell Union School District for a \$796,007 loan at zero percent interest for energy efficiency measures and photovoltaic installation at Capri Elementary School and Village School, both charter schools on the same site. Based on the loan amount, the simple payback is approximately 12.7 years. The project will save approximately \$62,512 annually.
- k. Campbell MS and Corporate Yard. Proposed resolution approving Agreement 018-14-ECG with Campbell Union School District for a \$1,378,638 loan at zero percent interest for energy efficiency measures and photovoltaic installation at the Campbell Middle School and the school district corporation yard. Based on the loan amount, the simple payback is approximately 16.4 years. The project will save approximately \$84,287 annually.

*Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 19. The vote was unanimous. (4-0)*

- 20. NEWPORT MESA UNIFIED SCHOOL DISTRICT. Proposed resolution approving Agreement 011-14-ECG with Newport Mesa Unified School District for a \$3,000,000 loan at zero percent interest for renewable energy measures at the school district's facilities. Based on the loan amount and California Solar Initiative incentives, the simple payback is approximately six years. The projects will save approximately \$461,458 annually. (ECAA-Ed Program funding) Contact: Jim Holland. (Staff presentation: 5 minutes)

*Commissioner Scott moved and Commissioner McAllister seconded approval of Item 20. The vote was unanimous. (4-0)*

- 21. PATTERSON JOINT UNIFIED SCHOOL DISTRICT. Proposed resolution approving Agreement 012-14-ECG with Patterson Joint Unified School District for a \$3,000,000 loan at zero percent interest for renewable energy measures at two school district sites. The project at each site will be the installation of solar photovoltaic panels and related equipment. The project is estimated to save the district 1,151,000 kWh per year, resulting in annual energy cost savings of \$166,918. Based on the loan amount, the simple payback is approximately 17.9 years. (ECAA-Ed Program funding) Contact: Barry McLeod. (Staff presentation: 5 minutes)

*Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 21. The vote was unanimous. (4-0)*

- 22. TRUSTEES OF THE CALIFORNIA STATE UNIVERSITY. Proposed resolution approving the five highest ranking grant applications totaling \$584,311 from the Public Interest Energy Research (PIER) program's Energy Innovations Small Grant Solicitation 14-02 Natural Gas and Transportation Natural Gas. These grants were competitively selected and are capped at \$150,000 each. (PIER natural gas funding) Contact: Raquel Kravitz. (Staff presentation: 10 minutes)

- a. Natural Gas (14-02G)

- i) University of Southern California, Los Angeles, *The Building Occupant Mobile Gateway*, Konis, Kyle, \$149,400. This project will develop and evaluate the feasibility of using smartphone software to provide detailed occupant feedback to building management personnel. The goal is to use the occupant feedback from embedded sensors to achieve space heating and ventilation energy reduction goals while maintaining occupant comfort. If

successful, this technology has the potential to achieve 30 percent or greater annual natural gas reduction in California commercial buildings through identifying and helping to minimize unnecessary heating and ventilation and preventing scheduling errors.

- ii) University of California, Berkeley, *Maximizing Efficiency of Natural Gas Engines Through Argon Power Cycle*, \$135,000. This project will determine the feasibility of applying the highly efficient Argon Power Cycle to natural gas internal combustion engines for energy generation and storage. The goal is to demonstrate high efficiency and low emissions of an argon/methane cycle compared to a standard air methane cycle. If successful, this technology has the potential to increase efficiency by 30-35 percent, reduce natural gas consumption in California, and also reduce the CO<sub>2</sub> emissions from power generation.
- iii) Policy Consultants LLC, Claremont, CA, *Multi-Family Residential Natural Gas Monitoring and Analysis Software (MFR-MAS)*, Nelson, Hal, \$74,951. This project will develop spatial analytics software that uses Geographic Information Systems that aggregate multi-family residential building data and natural gas meter data. The goal is to merge and analyze existing databases relevant to multi-family residential buildings and provide recommendations on applicable natural gas energy efficiency measures for each building. If successful, this technology has the potential to help utilities identify buildings with high gas use.

b. Transportation Natural Gas (14-02TNG)

- i) Cliff Edge Consulting, LLC, Sylmar, CA, *Exhaust Gas Heat Exchanger Model for Mobile ICEs*, Stewart, John, \$74,960. This project will develop an exhaust gas heat exchanger for natural gas engines used in mobile applications, such as heavy-duty trucks and locomotives. Recovered heat would be used to increase the available power of the vehicle while reducing emissions. If successful, this technology has the potential to save 3,334 gallons per year per truck.
- ii) McMem, Diamond Bar, CA, *Low Cost High Performance Natural Gas Vehicle*, Wong, Jim, \$150,000. This project will demonstrate the feasibility of using a patent-pending expander-compressor concept to increase natural gas vehicle engine performance at a much lower incremental cost. This project targets full-size pickup trucks and cars. If successful, this technology has the potential to save 50 percent in fuel costs in California compared to gasoline or diesel.

*Commissioner Douglas moved and Commissioner Scott seconded approval of Item 22. The vote was unanimous. (4-0)*

23. **Minutes:** Possible approval of Business Meeting Minutes.

- a. October 7, 2014, Minutes

*Commissioner Douglas moved and Commissioner McAllister seconded approval of the October 7 minutes. The vote was 3-0-1. Commissioner Scott abstained.*

- b. October 29, 2014, Minutes

*Commissioner Douglas moved and Commissioner McAllister seconded approval of the October 29 Minutes. The vote was unanimous. (4-0)*

**24. Lead Commissioner or Presiding Member Reports.**

The commissioners gave updates on their recent activities and site visits.

**25. Chief Counsel's Report:** None

**26. Executive Director's Report.** None

**27. Public Adviser's Report.** Public Adviser Alana Mathews gave the report.

**28. Public Comment:** None

Appearances.

Scott Blaising, Friant Power Authority

Michael Carroll, Latham & Watkins for GWF Energy LLC

Kevin Dayton, National Lighting Contractors Association of America

Tom Enslow, IBEW/NECA LMCC

Christa Heavey, Natural Resources Defense Council

Gogo Heinrich, City of San Mateo

Joseph Impulliti, South Coast Air Quality Management District

Paul Koehler, Pacific Ethanol

Bernie Kotlier, CALCTP

Richard Markuson, Western Electrical Contractors Association

Barbara McBride, Calpine King City

Kevin Messner, Association of Home Appliance Manufacturers

Clyde Murley, Newport Mesa School District

Sarkis Nazerian, City of Pasadena

Mark Ouellette, CALCTP

George Piantka, NRG Marsh Landing

Samantha Pottenger, Ellison Schneider & Harris

Kent Ramsmeier, Newport Mesa School District

Robert Shearer, NLCAA

Jack Yapp, NLCAA

Greg Wheatland, Ellison Schneider & Harris for Calpine King City