



June 10, 2015

1516 Ninth Street
Art Rosenfeld Hearing Room – First Floor
Sacramento, California 95814

10 a.m.

(Wheelchair Accessible)

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. **PALMDALE HYBRID POWER PLANT OWNERSHIP TRANSFER** (8-AFC-9C). Possible approval of an order granting transfer of ownership for the Palmdale Hybrid Power Project from the City of Palmdale to Palmdale Energy, LLC. Contact: Eric Veerkamp.
 - b. **CALIFORNIA AIR RESOURCES BOARD.** Proposed resolution approving Agreement 600-14-009 with the California Air Resources Board for a \$650,000 contract to collect and analyze longitudinal, spatial, in-use vehicle data, including electric vehicle miles traveled from a variety of plug-in electric vehicles. (ARVFTP funding) Contact: Brian Fauble.
 - c. **GOVERNOR'S OFFICE OF BUSINESS AND ECONOMIC DEVELOPMENT.** Proposed resolution approving Amendment 1 to Interagency Agreement 600-13-004 with the Governor's Office of Business and Economic Development for a \$300,000 augmentation to fund the Zero Emission Vehicle Fueling Infrastructure Ombudsman within the Governor's Office of Business and Economic Development for an additional two years. The Ombudsman will facilitate the permitting and establishment of both the hydrogen fueling station infrastructure and the electric vehicle charging infrastructure by working with local, state and federal government agencies; hydrogen station developers and hosts; electric vehicle charging planners, installers, and hosts; automobile companies; and other industry stakeholders. (ARFVTP Funding) Contact: Jean Baronas.
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)

3. **PUENTE POWER PROJECT (15-AFC-01).** Contact: Jon Hilliard. (Staff presentation: 10 minutes)
 - a. Possible approval of an order adopting the Executive Director's data adequacy recommendation for the Puente Power Project. The proposed project is a new 262-megawatt air cooled natural gas-fired, single combustion turbine generator to be constructed on a vacant three-acre portion of the 36-acre Mandalay Generating Station in Oxnard, Ventura County.
 - b. Possible appointment of a siting committee for the Puente Power Project.
4. **ARGUS COGENERATION EXPANSION (ACE) (86-AFC-1C).** Possible approval of an order granting the Petition to Decommission the Argus Cogeneration Expansion Project. Staff has reviewed the petition and recommends approval with the adoption of certain new and revised conditions of certification. These new and revised conditions of certification will assure compliance with laws, ordinances, regulations and standards and reduce potential environmental impacts to a less than significant level. Contact: Dale Rundquist. (Staff presentation: 10 minutes)
5. **2016 BUILDING ENERGY EFFICIENCY STANDARDS (15-BSTD-01).** Proposed resolution adopting the Negative Declaration for the 2016 update to the Building Energy Efficiency Standards and the 2016 update to the Building Energy Efficiency Standards. Contact: Maziar Shirakh. (Staff presentation: 25 minutes)
 - a. **NEGATIVE DECLARATION.** The Negative Declaration for the 2016 update to the Building Energy Efficiency Standards, California Code of Regulations, Title 24, Part 6, associated administrative regulations in Part 1, and associated appendices (Joint, Residential, and Nonresidential Reference Appendices, and the Alternative Calculation Method Approval Manual with its appendices).
 - b. **2016 UPDATE TO BUILDING ENERGY EFFICIENCY STANDARDS.** Following publication of proposed changes and 15-day comment period, the proposed 2016 update to the Building Energy Efficiency Standards in California Code of Regulations, Title 24, Part 6, associated administrative regulations in Part 1, and associated appendices (Joint, Residential, and Nonresidential Reference Appendices, and the Alternative Calculation Method Approval Manual with its appendices).
6. **POSSIBLE ADOPTION OF THE STAFF FINAL RENEWABLES PORTFOLIO STANDARD ELIGIBILITY GUIDEBOOK, 8TH EDITION (RPS GUIDEBOOK).** The RPS Guidebook describes the eligibility requirements and process for certifying renewable resources as eligible for California's RPS and describes how the Energy Commission verifies compliance with the RPS. The RPS Guidebook is being updated to implement changes in statute, address several outstanding issues in the current (7th Edition) RPS Guidebook, and modify or clarify program eligibility requirements. Contact: Lynette Green. (Staff presentation: 15 minutes)
7. **CITY OF DAVIS.** Proposed resolution approving Agreement 005-14-ECD with the City of Davis for a \$3,000,000 loan at one percent interest for an energy efficient street light retrofit project throughout the City. The project includes the retrofitting of 4,486 street, bike path, and pedestrian path lights with various LED fixtures. The project is estimated

- to save the City of Davis 1,124,592 kWh/year, resulting in annual energy cost savings of \$220,065. Greenhouse gas emissions will be reduced by approximately 388 tons annually. Based on the loan amount, the simple payback is approximately 13.6 years. (ECAA Program Funding.) Contact: Barry McLeod. (Staff presentation: 5 minutes)
8. UNIVERSITY OF CALIFORNIA, DAVIS. Proposed resolution approving Agreement 400-14-004 with The Regents of the University of California on behalf of the Davis campus's Western Cooling Efficiency Center for a \$355,000 contract to develop video-based training courses and compliance resource materials about the mechanical requirements of the Building Energy Efficiency Standards for the Online Resource Center. (ERPA funding) Contact: Paula David. (Staff presentation: 5 minutes)
 9. UNIVERSITY OF CALIFORNIA, DAVIS. Proposed resolution approving Agreement 400-14-005 with The Regents of the University of California on behalf of the Davis campus's California Lighting Technology Center for a \$645,000 contract to develop video-based training courses and compliance resource materials about the lighting requirements of the Building Energy Efficiency Standards for the Online Resource Center, and to provide technical support for lighting efficiency standards. (ERPA funding) Contact: Paula David. (Staff presentation: 5 minutes).
 10. UNIVERSITY OF CALIFORNIA, BERKELEY. Proposed resolution approving Agreement 400-14-006 with The Regents of the University of California, on behalf of the Berkeley Campus for a \$300,000 contract to conduct complex macroeconomic analyses to assess statewide impacts of appliance efficiency regulations. The analytical findings will be utilized to produce Standardized Regulatory Impact Assessment Reports. The Contractor will provide additional economic analysis consultation services as required by the Energy Commission. (ERPA funding) Contact: Maunee Berenstein. (Staff presentation: 5 minutes)
 - ~~11. UNIVERSITY OF CALIFORNIA, IRVINE. Proposed resolution approving Agreement 800-14-004 with The Regents of the University of California, Irvine Campus for a \$750,000 contract to provide policy analysis training and data collection support for alternative fuels information. (ERPA funding) Contact: Ryan Eggers. (Staff presentation: 5 minutes)~~
 12. RESOURCE SYSTEMS GROUP. Proposed resolution approving Agreement 800-14-005 with Resource Systems Group, Inc. for a \$995,525 contract to design and conduct surveys of California commercial and residential vehicle owners, as well as plug-in electric vehicle owners to assess consumer behavior and preferences for different conventional and alternative fuel vehicle technologies. The survey data will be used to build vehicle demand and utilization models for use in forecasting light duty vehicle demand and fuel use. (ERPA funding) Contact: Aniss Bahreinian. (Staff presentation: 5 minutes)
 13. ASPEN ENVIRONMENTAL GROUP. Proposed resolution approving Agreement 300-14-002 with Aspen Environmental Group for a \$3,000,000 contract to provide technical support for the Research and Development Division's EPIC program. Work will be assigned to the contractor on an "as needed" basis. (EPIC funding) Contact: Reta Ortiz. (Staff presentation: 5 minutes)

14. UNIVERSITY OF CALIFORNIA, SAN DIEGO. Proposed resolution approving Agreement 500-14-005 with The Regents of the University of California, on behalf of the San Diego Campus, Scripps Institution of Oceanography for a \$600,000 contract to develop weather related scenarios for the natural gas system for California's Fourth Climate Change Assessment. (PIER natural gas funding) Contact: Susan Wilhelm. (Staff presentation: 5 minutes)
15. DEMONSTRATING SECURE, RELIABLE MICROGRIDS AND GRID-LINKED ELECTRIC VEHICLES TO BUILD RESILIENT, LOW-CARBON FACILITIES AND COMMUNITIES, PON-14-301. This grant solicitation sought to fund technology demonstration and deployment projects that demonstrate the reliable integration of energy efficient demand-side resources, distributed clean energy generation, and smart grid components to enable energy-smart community development. (EPIC funding) Contact: Eli Harland. (Staff presentation: 10 minutes)
 - a. CHARGE BLISS, INC. Proposed resolution approving Agreement EPC-14-080 with Charge Bliss, Inc. for a \$4,776,171 grant to demonstrate a renewable-based microgrid for the John Muir Medical Center in Walnut Creek, California. This microgrid is composed of a solar photovoltaic array with battery energy storage that will provide improved power quality to support a critical trauma center and pediatric intensive care unit.
 - b. HUMBOLDT STATE UNIVERSITY. Proposed resolution adopting a Negative Declaration and approving Agreement EPC-14-054 with Humboldt State University Sponsored Programs Foundation for a \$5,000,000 grant to demonstrate a renewable-based community microgrid at the Blue Lake Rancheria located in Humboldt County, California. This microgrid will incorporate an existing biomass gasifier/fuel cell with a new solar photovoltaic array and battery energy storage to provide uninterruptable power for a nationally designated American Red Cross emergency center
16. BRINGING ENERGY EFFICIENCY SOLUTIONS TO CALIFORNIA'S INDUSTRIAL, AGRICULTURE AND WATER SECTORS, PON-14-304. This grant solicitation sought to fund technology deployment projects that accelerate the commercialization of electricity-related, energy efficient industrial, agricultural, and water/wastewater processes at multiple sites. (EPIC funding) Contact: Leah Mohney (Staff presentation: 5 minutes)
 - a. POWWOW ENERGY, INC. Proposed resolution approving Agreement EPC-14-081 with PowWow Energy, Inc. for a \$2,292,829 grant to deploy innovative data analytics software that will allow growers to automate water measurements and record keeping to help achieve water and energy savings through irrigation optimization without adversely impacting crop yields.
 - b. ASETTEK USA, INC. Proposed resolution approving Agreement EPC-14-088 with Asetek USA, Inc. for a \$3,552,678 grant to demonstrate and validate the performance, reliability, cost savings and payback of a liquid cooling technology that could cut data center energy use and be easily retrofitted with minimal operational disruptions during installation.

17. **DEMONSTRATING CLEAN ENERGY SOLUTIONS THAT SUPPORT CALIFORNIA'S INDUSTRIES, THE ENVIRONMENT, AND THE ELECTRICAL GRID, PON-14-307.** This grant solicitation sought to fund technology demonstration and deployment projects that demonstrated and deployed community scale generators, including combined heat and power (CHP) and renewable generation technologies that are in the pre-commercial stage; and demonstrated and deployed innovative energy management strategies to facilitate the integration of intermittent renewable energy and the reduction of peak power and energy demands. (EPIC funding) Contact: Mark Kootstra. (Staff presentation: 10 minutes)
- a. **SIERRA INSTITUTE FOR COMMUNITY AND ENVIRONMENT.** Proposed resolution approving Agreement EPC-14-082 with Sierra Institute for Community and Environment for a \$2,603,228 grant to deploy an innovative community-scale combined heat and power CHP system using biomass as fuel and an Organic Rankine Cycle prime mover. The CHP plant will supply power to Plumas County's Health and Human Services facility, and the waste heat will be distributed to Feather River College to boost performance of heat pumps for heating dormitories.
 - b. **BAY AREA CLIMATE COLLABORATIVE.** Proposed resolution approving Agreement EPC-14-083 with Prospect Silicon Valley dba Bay Area Climate Collaborative (BACC) for a \$2,999,601 grant to demonstrate integrated solar photovoltaic, energy storage, and advanced power electronics within a single module to reduce community energy load variability.
 - c. **ABEC #4, LLC.** Proposed resolution approving agreement EPC-14-084 with ABEC #4, LLC for a \$3,000,000 grant to design, build, and demonstrate an innovative, community scale, pre-commercial biogas fueled renewable power generator that includes combined heat and power and a heat-driven absorption chiller system for onsite milk cooling at a California Dairy.
 - d. **UNIVERSITY OF CALIFORNIA, DAVIS.** Proposed resolution approving agreement EPC-14-085 with The Regents of the University of California, on behalf of the Davis campus for a \$1,238,488 grant to demonstrate an innovative energy management system with advanced photovoltaics and second-use electric vehicle battery energy storage to reduce peak demand by at least 10 percent at the Robert Mondavi Institute on the UC Davis campus.
18. **U.S. GEOLOGICAL SURVEY.** Proposed resolution approving Agreement EPC-14-061 with U.S. Geological Survey, Forest and Rangeland Ecosystem Science Center, for a \$1,000,000 grant to conduct a comprehensive review of renewable energy impacts on birds and bats in environmental documents compared to actual outcomes. This synthesis will improve our understanding of the significance of the impacts and the success of mitigation actions, as well as our ability to predict impacts of future renewable energy projects. (EPIC funding) Contact: David Stoms. (Staff presentation: 5 minutes)
19. **DRIVING THE INTEGRATION OF ELECTRIC VEHICLES TO MAXIMIZE BENEFITS TO THE GRID, PON-14-310.** This solicitation sought to fund applied research and development projects that will advance technologies and strategies for smart and efficient charging and vehicle-to-grid (V2G) communication interfaces that will

provide maximum benefits to both the electricity grid and the plug-in electric vehicle (PEV) market. (EPIC funding) Contact: Reynaldo Gonzalez: (Staff presentation: 10 minutes)

- a. CENTER FOR SUSTAINABLE ENERGY. Proposed resolution approving agreement EPC-14-077 with Center for Sustainable Energy for a \$1,499,999 grant to develop a standards-based communication platform to analyze current grid loads and optimize PEV charging schedules with projected loads. The platform will consolidate and optimize the collected data to provide a viable pathway to using PEVs to manage variable grid conditions and renewable energy intermittency.
 - b. CHARGEPOINT, INC. Proposed resolution approving agreement EPC-14-078 with ChargePoint, Inc. for a \$1,500,000 grant to develop a grid-vehicle-charging station connectivity methodology and assess the real-time potential for residential smart chargers to respond to utility signaling for grid stabilization.
 - c. ELECTRIC POWER RESEARCH INSTITUTE, INC. Proposed resolution approving Agreement EPC-14-086 with Electric Power Research Institute for a \$1,499,977 grant to develop a V2G communication system that will demonstrate grid awareness, self-regulation, and interoperability. The communication technology and interfaces will support V2G information processing to better leverage PEVs and improve renewable generation penetration.
20. ELECTRIC POWER RESEARCH INSTITUTE, INC. Proposed resolution approving agreement EPC-14-079 with Electric Power Research Institute, Inc. for a \$1,705,478 grant to evaluate advanced inverter functionality to enable higher penetration of photovoltaics (PV) on the grid. The project will identify, implement, and test optimal methods by which smart inverters can mitigate the issues that otherwise would limit local high penetrations of residential PV. (EPIC funding) Contact: Prab Sethi. (Staff presentation: 5 minutes)
21. ADVANCING CLEAN ENERGY FROM BIOGAS, BIOMETHANE AND NATURAL GAS, PON-14-505. This solicitation sought proposals to fund research, development and demonstration projects that address the barriers to increased market penetration of renewable energy, particularly biogas and biomethane (also known as renewable natural gas), and natural gas fueled distributed generation, and combined heat and power systems. (PIER natural gas funding) Contact: Kevin Uy. (Staff presentation: 10 minutes)
- a. GAS TECHNOLOGY INSTITUTE. Proposed resolution approving Agreement PIR-14-018 with Institute of Gas Technology dba Gas Technology Institute for a \$562,820 grant to fund a laboratory- and pilot-scale demonstration of an Air Resources Board-compliant prepackaged 25 kilowatt low-emission, reciprocating engine-based combined cooling heating and power system.
 - b. GAS TECHNOLOGY INSTITUTE. Proposed resolution approving Agreement PIR-14-019 with Institute of Gas Technology dba Gas Technology Institute for a \$1,000,000 grant to develop and demonstrate a novel biogas cleanup technology at a landfill which consists of compact liquid scrubber systems, membranes, and

secondary treatment for sequestration of contaminant species to produce a purified stream of renewable natural gas.

- c. LAS GALLINAS VALLEY SANITARY DISTRICT. Proposed resolution approving agreement PIR-14-020 with Las Gallinas Valley Sanitary District for a \$999,070 grant to install and operate a pre-commercial biogas energy recovery system that will convert biogas from a wastewater treatment plant into conditioned digester gas for combined heat and power generation and renewable compressed natural gas for use as transportation fuel.
 - d. MOSAIC MATERIALS, INC. Proposed resolution approving Agreement PIR-14-021 with Mosaic Materials, Inc. for a \$1,000,000 grant to develop and demonstrate a solid-state amine scrubbing technology for upgrading biogas to renewable natural gas that provides a significant reduction in capital and operating costs compared to current state-of-the-art aqueous amine scrubbers.
 - e. BIOGAS ENERGY INC. Proposed resolution approving Agreement PIR-14-022 with Biogas Energy Inc. for a \$415,000 grant to fund research for food waste anaerobic digester operations, feedstock, and micronutrient management to optimize biogas production and to perform a feasibility study for pipeline injection of biomethane.
 - f. UNIVERSITY OF CALIFORNIA, SAN DIEGO. Proposed resolution approving Agreement PIR-14-023 with The Regents of the University of California, on behalf of the San Diego Campus for a \$1,000,000 grant to develop and demonstrate a novel bioenergy pathway which converts woody biomass into renewable natural gas via fluidized-bed methanation.
 - g. ELECTRIC POWER RESEARCH INSTITUTE, INC. Proposed resolution approving Agreement PIR-14-024 with Electric Power Research Institute, Inc. for a \$999,889 grant to demonstrate cost-effective distributed generation of electricity at an industrial site using an Organic Rankine Cycle Technology operating on waste heat from industrial driers at a textile drying plant.
22. CALSTART, INC. Proposed resolution approving Agreement ARV-14-061 with CALSTART, Inc. for a \$1,194,659 grant to launch, manage, and sustain the San Joaquin Valley Clean Transportation Center. Through this center, CALSTART will promote increased acceptance and deployment of alternative fuel vehicles in the San Joaquin Valley (SJV), perform outreach to the public and key stakeholders, and advocate for policy decisions and economic development strategies beneficial to the unique needs of the transportation sector in the SJV consistent with state air quality and climate objectives. (ARVFTP funding) Contact: Elyse Cheung-Sutton. (Staff presentation: 5 minutes)
23. ZERO EMISSION VEHICLE (ZEV) READINESS, PON-14-607. This grant solicitation sought proposals to support new and existing planning efforts for plug-in electric vehicles (PEVs) and fuel cell electric vehicles (FCEVs). (ARFVTP funding) Contact: Lindsee Tanimoto. (Staff presentation: 10 minutes)
- a. CITY OF OAKLAND. Proposed resolution approving Agreement ARV-14-060 with the City of Oakland for a \$170,324 grant to provide education and training,

assessment and recommendations for permitting and inspection best practices to streamline future implementation of the Bay Area Plug-in Electric Vehicle Readiness Plan for the cities of Oakland and Tiburon.

- b. CITY OF PALM SPRINGS. Proposed resolution approving Agreement ARV-14-062 with the City of Palm Springs for a \$57,500 grant to install directional signage, remote access, and interactive kiosks mapping electric vehicle charging infrastructure in the City of Palm Springs.
 - c. SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS. Proposed resolution approving Agreement ARV-14-063 with the Southern California Association of Governments for a \$125,181 grant to address the challenges facing electric vehicle charging for existing multi-unit dwellings (MUD). This analysis will be used to update the Southern California PEV Readiness Plan, focusing on how to maximize MUD charging implementation efforts in the densest cities in the Los Angeles County region.
24. **Minutes:** Possible approval of the May 13, 2015, Business Meeting Minutes.
25. **Lead Commissioner or Presiding Member Reports.** A Lead Commissioner on a policy matter may report to the Commission on the matter and discussion may follow. A Presiding Member on a delegated committee may report to the Commission on the matter and discussion may follow.
26. **Chief Counsel's Report:** The Energy Commission may adjourn to closed session with its legal counsel [Government Code Section 11126(e)] to discuss any of the following matters to which the Energy Commission is a party:
- a. *Asphalt Roofing Manufacturers Association v. Energy Commission* (Third District Court of Appeal # C076990).
 - b. *In the Matter of U.S. Department of Energy (High Level Waste Repository)*, (Atomic Safety Licensing Board, CAB-04, 63-001-HLW).
 - c. *Communities for a Better Environment and Center for Biological Diversity v. Energy Commission* (Court of Appeal, First Appellate District, # A141299).
 - d. *Energy Commission v. SoloPower, Inc. and SPower, LLC.* (Sacramento County Superior Court # 34-2013-00154569)

The Energy Commission may also discuss any judicial or administrative proceeding that was formally initiated after this agenda was published; or determine whether facts and circumstances exist that warrant the initiation of litigation; or that constitute a significant exposure to litigation against the Commission.

27. **Executive Director's Report.**
28. **Public Adviser's Report.**
29. **Public Comment:** People may speak up to three minutes on any matter concerning the Energy Commission, with the exception of items appearing elsewhere on this agenda or items related to pending adjudicative (certification or enforcement) proceedings.

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Adjournment of Hearings and Meetings: Depending upon time available and the orderly management of proceedings, the Commission may order adjournment (recess or postponement) of any noticed hearing or meeting, to be continued to the next day, another specific date or time, or to the next business meeting, as appropriate. Any such adjournment will be noticed at the time the order of adjournment is made (Government Code §§11128.5, 11129).
