



March 12, 2014

1516 Ninth Street
Hearing Room A – 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. RENEWABLES PORTFOLIO STANDARD PROGRAM: ORDER INSTITUTING RULEMAKING. Proposed order instituting a rulemaking proceeding to consider amendments to the Energy Commission's regulations specifying enforcement procedures for the Renewables Portfolio Standard for local publicly owned electric utilities to implement changes in law under Senate Bill 591 (Stats. 2013, ch 520.) and to make other clarifying changes, as necessary. Contact: Gabe Herrera.
2. ENERGY COMMISSION COMMITTEE APPOINTMENTS. Approval of appointments to the Energy Commission's Standing Committees and Siting Case Committees. Contact: Kevin Barker. (5 minutes)
3. ALAMITOS ENERGY CENTER (13-AFC-01). Contact: Keith Winstead. (10 minutes)
 - a. The Executive Director's data adequacy recommendation for the Alamitos Energy Center (AEC). The proposed AEC is a natural gas-fired, combined-cycle, air cooled, 1,936-megawatt electrical generating facility that would be constructed on the site of, and eventually replace, the 1,950-megawatt Alamitos Generating Station in the City of Long Beach, Los Angeles County, California.
 - b. Appointment of a siting committee for the Alamitos Energy Center.
4. ALMOND 2 POWER PLANT PROJECT (09-AFC-2C). Proposed order granting a petition to amend the Final Decision for the Almond 2 Power Plant project. The proposed modifications to Air Quality Conditions of Certification would: delete the requirement that the fuel flow meter be non-resettable and totalizing; allow the testing of one turbine for startup and shutdown operations; and modify or delete conditions that regulated certain activities with reference to construction and commissioning periods that are no longer applicable. Contact: Bruce Boyer. (10 minutes)
5. PUBLIC INTEREST ENERGY RESEARCH (PIER) 2013 ANNUAL REPORT. Proposed resolution approving the PIER 2013 Annual Report to the Legislature. Contact: Laurie ten Hope. (20 minutes)

6. CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE. Proposed resolution approving Interagency Agreement 600-13-007 with the California Department of Food and Agriculture Division of Measurement Standards (DMS) for \$100,000 to test equipment and perform type evaluations allowing for the sale of hydrogen by the kilogram to refuel light duty fuel cell vehicles. DMS technical staff will test hydrogen refueling dispensers at nine public stations and one university. (ARFVTP funding) Contact: Juan Garcia. (5 minutes)
7. PIXLEY BIOGAS LLC. Proposed resolution approving Agreement ARV-10-053 with Pixley Biogas for a \$4,672,798 grant to construct an anaerobic digestion facility that will produce biogas from dairy manure to power the adjacent Calgren Renewable Fuels Biorefinery, an ethanol facility, to lower Calgren's carbon intensity. This agreement was approved at the June 2011 business meeting, and limited to pre-CEQA activities. CEQA is now complete, and this approval will allow the project to move forward with construction. (ARFVTP funding) Contact: Sarah Williams. (5 minutes)
8. AMERICAN BIODIESEL, INC. Proposed resolution approving Agreement ARV-13-008 with American Biodiesel, Inc. (dba Community Fuels) for a \$4,904,375 grant to expand the biodiesel production capacity of their facility located at the Port of Stockton. This expansion will allow Community Fuels to produce at least 15 million gallons per year of low-carbon biofuel. (ARFVTP funding) Contact: Andre Freeman. (5 minutes)
9. KINGS CANYON UNIFIED SCHOOL DISTRICT. Proposed resolution approving Agreement ARV-13-009 with Kings Canyon Unified School District for a \$300,000 grant to restore and rehabilitate the existing compressed natural gas fueling station. This facility provides fueling for several regional school districts, the City of Reedley and members of the public. (ARFVTP funding) Contact: Andre Freeman. (5 minutes)
10. REDWOOD COAST ENERGY AUTHORITY. Proposed resolution approving Agreement ARV-13-012 with Redwood Coast Energy Authority for a \$300,000 grant to develop a readiness plan in Humboldt County for the increased use of alternative fuel vehicles and infrastructure. (ARFVTP funding) Contact: Brian Fauble. (5 minutes)
11. MOTIV POWER SYSTEMS INCORPORATED. Proposed resolution approving Agreement ARV-13-010 with Motiv Power Systems Incorporated for a \$1,655,594 grant to repower United Parcel Service and United States Postal Service medium-duty pre-EPA 2010 walk-in vans with Motiv's electric powertrain. The goal of this project is to move truck fleets into electric repower mass adoption by providing them with economic, performance, and reliability data collected in field operation for 24 months. (ARFVTP funding) Contact: Brian Fauble. (5 minutes)
12. NATIONAL STRATEGIES LLC. Proposed resolution approving Agreement ARV-13-011 with National Strategies, LLC for a \$1,473,488 grant to conduct a medium-duty electric school bus repower demonstration project. (ARFVTP funding) Contact: Larry Rillera. (5 minutes)
13. GRATON COMMUNITY SERVICE DISTRICT. Proposed resolution approving Agreement 006-13-ECD with Graton Community Service District, for a \$222,300 loan to install a new energy efficient effluent pump and a variable speed drive at the District's wastewater treatment facility. The new pump and variable speed control will replace the old constant speed pump. This project is estimated to save about \$19,700 annually and have a simple payback of 11.3 years. (ECAA funding) Contact: Joseph Wang. (5 minutes)

14. CITY OF MORGAN HILL. Proposed resolution approving Agreement 007-13-ECD with the City of Morgan Hill, for a \$750,000 loan to replace 2,097 streetlight fixtures with LED technology. The project is estimated to reduce annual energy consumption by 872,861 kWh of electricity and save the city \$116,672 annually in reduced utility expenses. The total project cost is estimated to be \$885,717, of which the city anticipates receiving \$168,575 in utility rebates. The simple payback on the Energy Commission loan amount is 6.4 years. (ECAA funding) Contact: Amir Ehyai. (5 minutes)
15. COUNTY OF SAN DIEGO. Proposed resolution approving agreement 008-13-ECD with the County of San Diego, for a \$1,560,000 loan at one percent interest to retrofit 2,000 high pressure sodium and mercury vapor streetlight fixtures with LED technology. The retrofits will save the County of San Diego approximately \$100,000 per year on utility costs, which represents a sixty percent energy reduction from the existing streetlights energy baseline. This project has a simple payback of nine years. SDG&E, the serving electric utility for the County, will provide approximately \$72,000 in rebates. (ECAA funding) Contact: Adel Suleiman. (5 minutes)
16. CITY OF SAN MARCOS. Proposed resolution approving agreement 009-13-ECD with the City of San Marcos, for a \$1,100,000 loan at one percent interest to retrofit approximately 2,200 streetlight fixtures from high pressure sodium and mercury vapor to LED technology. The retrofits will save the City of San Marcos approximately \$100,000 per year on utility costs, which represents a 67 percent energy reduction from the existing streetlights energy baseline. The payback of this project is estimated at 11 years. SDG&E, the serving electric utility for the City will provide approximately \$5,000 in rebates. (ECAA funding) Contact: Adel Suleiman. (5 minutes)
17. TRUSTEES OF THE CALIFORNIA STATE UNIVERSITY. Proposed resolution approving the seven highest ranking grant applications, totaling \$982,998, from the Public Interest Energy Research (PIER) program's Energy Innovations Small Grant Solicitation 13-03 Natural Gas and Transportation Natural Gas portion. There are two projects totaling \$299,640 under Transportation Natural Gas and five projects totaling \$683,358 under Natural Gas. These grants were competitively selected and are capped at \$150,000. (PIER natural gas funding) Contact: Raquel E. Kravitz. (10 minutes)
 - a. Transportation Natural Gas (13-03TNG)
 - i) Transient Plasma Systems, Inc., El Segundo, CA. *Advanced Low-Energy Ignition for Improved Efficiency of NG Engines*, Singleton, Dan, \$150,000. This project will determine the feasibility of using an advanced low-energy plasma ignition system to increase combustion stability at ultra-lean conditions for natural gas internal combustion engines. The objective of this project is to improve fuel efficiency and reduce emissions by more than 10 percent while also reducing maintenance requirements. If successful, this technology can be used in other engine types. Improving energy efficiency and converting engines from diesel to natural gas benefits California and its ratepayers by providing lower operating costs and reducing greenhouse gases.
 - ii) Rail Gas Technology, Glendora, CA. *LNG Pump Module Fuel Supply System for LNG Vehicles*, Stewart, Ian, \$149,640. This project will determine the feasibility of a self contained, vehicle based, pump driven, Liquefied Natural Gas (LNG) fuel delivery system. Current LNG fuel systems are not suited for mobile applications as they are large, complex and do not provide the correct flow and pressure ranges needed to support fuel delivery to an internal

combustion engine. This technology is a simple, internally controlled, self-contained, sealed, and insulated LNG transfer system incorporating an electric driven pump, interface manifold, and tank controller that can be integrated into various mobile applications. If successful, the key benefits for California ratepayers would be a more practical and affordable LNG fuel system that can store more LNG for longer periods and lower vehicle emission.

b. Natural Gas (13-03G)

- i) University of California, Davis, Davis, CA. *Remote Sealing of Leaks in Natural Gas Distribution System*, Delplanque, Jean-Pierre, \$140,587. This project will determine the feasibility of using aerosol sealants to repair natural gas leaks in aging pipelines, enhancing the efficiency and safety of natural gas distribution and limiting the environmental impacts associated with leaks. If successful, this project could potentially save California natural gas customers between 8,500 and 40,000 cubic feet of natural gas, with a value of \$38 million to \$180 million in eliminated gas losses, based on December 2013 pricing, and reduce greenhouse gas emissions. This project would also save additional repair and replacement costs incurred by utilities and borne by California natural gas customers.
- ii) University of California, Davis, Davis, CA. *Methane Enhancement by Anaerobic Composting of Food Waste and Fats, Oils, and Grease*, VanderGheynst, Jean, \$149,999. This project will demonstrate methane enhanced by anaerobic composting of food waste, fats, oils, and grease deposits. This project will evaluate waste decomposition, biogas production, compost quality, leachate quality, air emissions, and life cycle cost. This project will combine anaerobic digestion followed by aerobic digestion in a process using only one container and using a compost cap to reduce air emissions during the compost phase.
- iii) GC Environmental, Inc., Anaheim, CA. *Feasibility Study to Reform Biogas to Reduce Nitrogen Oxide Emissions*, Prosser, Richard, \$95,000. This project will evaluate the feasibility of reforming biogas to generate hydrogen to improve the combustion characteristics and to decrease the Nitrogen Oxide (NOx) emissions during electricity generation in a reciprocating biogas engine. If successful, this project could reduce NOx emissions by 12 tons per year in a medium sized reciprocating engine power plant fueled by 500 standard cubic feet per minute biogas generating 12.5 gigawatt hours of electricity worth \$324,000 at \$.05/kilowatt hours. The overall economic savings using this new process could save \$13 million per year in NOx control for 100 medium size power plants.
- iv) University of California, Riverside, Riverside, CA. *Methane Bi-reforming in a Heat Exchanger Platform Reactor*, Raju, Arun, \$148,247. This project will determine the feasibility of developing a gas reformer using a Pd-Rh (palladium-rhodium) based catalyst in a unique heat exchanger reactor. If successful, this technology could fuel solid oxide fuel cells in small to medium scale applications and could make available renewable natural gas that displaces the equivalent of 900 million gallons of diesel per year.
- v) Mark Miles Consulting, Inc., Oakland, CA. *Low-Cost Heat Exchanger for Solar Water Heating Systems*, Miles, Mark W., \$149,525. This project will

determine the feasibility of developing an inexpensive compact planar heat exchanger for use in solar water heating. If successful, this technology could make solar water heating systems economically competitive with natural gas and encourage their deployment. The potential for energy savings by converting to solar water heating represents 105 trillion British Thermal Units (BTUs) of natural gas and 8 trillion BTUs of electricity in California alone.

18. **Minutes:** Proposed February 18, 2014, Business Meeting Minutes.
19. **Lead Commissioner or Presiding Member Reports.** (Information Item) 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.
20. **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. *In the Matter of U.S. Department of Energy (High Level Waste Repository)*, (Atomic Safety Licensing Board, CAB-04, 63-001-HLW).
 - b. *Asphalt Roofing Manufacturers Association v. California Energy Commission* (Sacramento County Superior Court, 34-2012-80001195).
 - c. California Independent System Operator Corporation (Federal Energy Regulatory Commission, Docket No. ER12-2634).
 - d. *PECG v. Brown*, Alameda County Superior Court Case Nos: RG10494800 et al. (Furlough Litigation).
 - e. *American Public Gas Association v. U.S. Department of Energy*, Case No. 11-1485 (9th Cir. Dec. 23, 2011).
 - f. *Laborers' International Union of North America, Local #1184 v. California Energy Commission (Blythe Solar Energy Center)*, (Sacramento County Superior Court, 34-2014-80001767-CU-WM-GDS).

The Energy Commission may also consider 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.

21. **Executive Director's Report.** (Information Item)
22. **Public Adviser's Report.** (Information Item)
23. **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).