

**STATE OF CALIFORNIA**  
California Energy Commission  
Minutes of the April 8, 2015, 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

David Hochschild, Commissioner

Karen Douglas, Commissioner

Janea A. Scott, Commissioner

J. Andrew McAllister, Commissioner

With respect to Items 19b and 19c, Commissioner Douglas disclosed for the record that she is an adjunct professor at UC Davis King Hall and that UC Davis a subcontractor for these agreements. King Hall receives no funds from either agreement. Commissioner McAllister made the same disclosure with regard to his wife's employment at King Hall.

In addition, Commissioner McAllister announced his intention to recuse himself from discussion of Item 9b because his former employer is the main subcontractor for the agreement; and from Item 22c because the agreement is with his former employer.

Chair Weisenmiller stated that due to the continuing severe drought conditions, the Governor issued an Executive Order on April 1, 2015, directing the Energy Commission to, among other things, adopt emergency regulations establishing efficiency standards for water appliances.

*Based on the need for immediate action, and the fact that the need came to the Commission's attention after the agenda was posted, Chair Weisenmiller moved and Commissioner McAllister seconded the addition of Item 29 (Toilet, Urinal, And Faucet Water Efficiency Regulation) to the agenda. The vote was unanimous. (5-0)*

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. NONRESIDENTIAL BUILDING ENERGY USE DISCLOSURE PROGRAM (15-OIR-03). Proposed Order adopting regulations establishing July 1, 2016, as the date by which nonresidential buildings with a total gross floor area measuring at least 5,000 square feet and up to 10,000 square feet must comply with the Nonresidential Energy Use Disclosure Program, as set forth in Title 20 Section 1682(c). Pursuant to Government Code Section 11346.1(e), this regulation certifies and makes permanent the emergency regulation to Title 20, Section 1682(c) that became effective September 2, 2014, which was extended for 90 days pursuant to Government Code Section 11346.1(h) on March 4, 2015. Contact: Abhi Wadhwa.

*Chair Weisenmiller moved Item 1a to Discussion. Commissioner McAllister moved and Commissioner Douglas seconded approval of the item. 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. (5 minutes)

*This item was held. (No action was taken.)*

3. DIVERSITY POLICY. Proposed resolution to adopt a policy to reflect the Energy Commission's commitment to making sure the widest possible range of Californians participate in the Energy Commission's programs. Contact: Alana Mathews. (5 minutes)

*Commissioner Scott moved and Commissioner Hochschild seconded adoption of Item 3. The vote was unanimous. (5-0)*

4. PALOMAR ENERGY CENTER (PEC) 01-AFC-24C. Proposed order granting the petition to amend the California Energy Commission decision. The petition requests to amend, add, and delete certain Air Quality Conditions of Certification to be consistent with the San Diego County Air Pollution Control District revised permits to operate. The proposed modifications are related to startup and combustor tuning conditions, administrative changes on reporting and enforcement, and deletion of obsolete conditions. These changes will not cause any increase in air emissions, and the PEC will remain in compliance with all laws, ordinances, regulations, and standards. Contact: Jonathan Fong. (Staff presentation: 5 minutes)

*Item 4 was removed from the agenda.*

5. ENERGY PRO V6.5 BY ENERGY SOFT AS 2013 NONRESIDENTIAL COMPLIANCE SOFTWARE (ENERGYPRO V6.5 for Nonresidential Compliance). Proposed Order approving EnergyPro V6.5 as an alternative calculation method for demonstrating performance compliance with the nonresidential provisions of the 2013 Building Energy Efficiency Standards, California Code of Regulations, Title 24, Part 6, and associated administrative regulations in Part 1, Chapter 10 (Standards). This version of EnergyPro was submitted for review incorporating the previously approved CBECC-Com Compliance Manager V3a for the first time and thus is being reviewed pursuant to the Full Approval process, as outlined in the Nonresidential Alternative Calculation Method Approval Manual. (Cal. Code Regs., tit. 24, §§ 10-109 (c)(2), 10-110). Contact: Todd Ferris. (Staff presentation: 5 minutes)

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

6. DRIVING TO CLEANER TRANSPORTATION WEBPAGE (Information Item). Description of update to "Driving to Cleaner Transportation" webpage, which showcases projects funded under the Alternative and Renewable Fuel and Vehicle Technology Program (AB 118 and AB 8). Contact: Michelle Chester. (Staff presentation: 5 minutes)

*Item 6 was for information only.*

7. 2015-2016 INVESTMENT PLAN UPDATE FOR THE ALTERNATIVE AND RENEWABLE FUEL AND VEHICLE TECHNOLOGY PROGRAM. Proposed resolution approving the 2015-2016 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program. The purpose of the program is to develop and deploy innovative technologies that transform California's fuel and vehicle types to help attain the state's climate change goals. The annual Investment Plan Update determines priorities and opportunities for the program, describes how funding will complement existing public and private efforts, and serves as a guide for funding decisions. Contact: Charles Smith. (Staff presentation: 15 minutes)

*Commissioner Scott moved and Commissioner Hochschild seconded approval of Item 7. The vote was unanimous. (5-0)*

8. VIRIDIS FUELS, LLC. Proposed resolution approving Agreement ARV-14-040 with Viridis Fuels, LLC for a \$3,393,598 grant to construct and operate a biodiesel production facility in Oakland, California. This facility will produce up to 20 million gallons of biodiesel annually from fats, oils, and grease (FOG), as well as purpose-grown crops. (ARFVTP funding) Contact: Andre Freeman. (Staff presentation: 5 minutes)

*Commissioner Scott moved and Commissioner McAllister seconded approval of item 8. The vote was unanimous. (5-0)*

9. ZERO EMISSION VEHICLE (ZEV) READINESS (PON-14-603). This grant solicitation sought proposals to develop and implement regional readiness plans for plug-in electric vehicles (PEVs), fuel cell electric vehicles (FCEVs), and associated fueling infrastructure. (ARFVTP funding) Contact: Lindsee Tanimoto. (Staff presentation: 5 minutes)
  - a. SANTA BARBARA COUNTY AIR POLLUTION CONTROL DISTRICT. Proposed resolution approving Agreement ARV-14-038 with Santa Barbara County Air Pollution Control District for a \$242,872 grant to prepare a detailed readiness plan for developing hydrogen infrastructure in the Tri-Counties region (Santa Barbara, San Luis Obispo, and Ventura counties). Planning resources will be for municipalities and county governments that are identified as primary candidates for early adoption of FCEVs.
  - b. SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT. Proposed resolution approving agreement ARV-14-039 with the San Joaquin Valley Air Pollution Control District for a \$300,000 grant to implement training, encourage permit streamlining, and conduct outreach activities identified under an existing PEV Readiness Plan.

*All Commissioners were present for discussion of Item 9a. Commissioner Scott moved and Commissioner Hochschild seconded approval of Item 9a. The vote was unanimous. (5-0.) Commissioner McAllister recused himself and left the room during the discussion of Item 9b. Commissioner Scott moved and Commissioner Hochschild seconded approval of Item 9b. The vote was 4-0.*

- c. CITY OF CORONA. Proposed resolution approving Agreement ARV-14-041 with the City of Corona for a \$275,078 grant to install signage for electric vehicle charging stations (EVCS) and perform a study of residential EVCS installation processes, distribution system requirements, and feasible rate structures.
- d. CITY AND COUNTY OF SAN FRANCISCO. Proposed resolution approving Agreement ARV-14-042 with the City and County of San Francisco for a \$300,000 grant to identify and evaluate options to accelerate the adoption of PEVs by residents of multifamily buildings in San Francisco through a neighborhood-based approach to charging and e-mobility.
- e. CITY AND COUNTY OF SAN FRANCISCO. Proposed resolution approving Agreement ARV-14-043 with the City and County of San Francisco for an \$111,495 grant to provide analysis to expedite the implementation of FCEVs and hydrogen refueling infrastructure for the municipal fleet. The project will include site assessments for refueling station locations.

- f. REDWOOD COAST ENERGY AUTHORITY. Proposed resolution approving Agreement ARV-14-046 with Redwood Coast Energy Authority for a \$300,000 grant to implement core elements of the North Coast PEV Readiness Plan.

*Commissioner Scott moved approval, with the exception of Item 9b. Commissioner Hochschild seconded. The vote was unanimous. (5-0)*

- 10. ADVANCED VEHICLE TECHNOLOGY MANUFACTURING, PON-14-604. This grant solicitation sought proposals to encourage the manufacturing of alternative fuel vehicles and vehicle components in California that can significantly reduce greenhouse gas emissions, displace petroleum fuel demand, and stimulate economic development. (ARFVTP funding) Contact: Darren Nguyen. (Staff presentation: 5 minutes)
  - a. PROTERRA, INC. Proposed resolution approving Agreement ARV-14-044 with Proterra, Inc. for a \$3,000,000 grant to design, develop, and operate a state-of-the-art manufacturing line for battery, all electric, zero-emission, public transit buses in the City of Industry in San Gabriel Valley, California. The project will provide a high-tech manufacturing plant in the heart of Los Angeles, the largest bus market in the United States.
  - b. TRANSPOWER. Proposed resolution approving Agreement ARV-14-045 with Transportation Power, Inc., dba TransPower for a \$2,999,880 grant to manufacture electric vehicle components for Class 8 trucks in Poway, California. Manufactured components will include an inverter-charger unit, battery management system, automated manual transmission, and power control and accessory subsystem.
  - c. EFFICIENT DRIVETRAINS, INC. Proposed resolution approving Agreement ARV-14-047 with Efficient Drivetrains, Inc. for a \$2,990,900 grant to purchase equipment and modify a manufacturing facility in Milpitas, California. The equipment and modifications will allow for the production of powertrain components for hybrid and battery-electric vehicles, as well as the conversion of conventional vehicles into hybrid and battery-electric vehicles.

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

- 11. CHICO UNIFIED SCHOOL DISTRICT. Proposed resolution approving Agreement 020-14-ECG with the Chico Unified School District for a \$3,000,000 loan at zero percent interest to install solar photovoltaic panels at five campuses within Chico Unified School District. The project is estimated to save the District approximately 1.3 million kWh, resulting in annual energy cost savings of \$255,407 and reducing greenhouse gas emissions by 447 tons of CO<sub>2</sub> equivalent annually. Based on the loan amount, the simple payback is approximately 11.7 years. (ECAA-Ed Program funding) Contact: Laura Zaninovich. (Staff presentation: 5 minutes)

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

- 12. SYLVAN UNION SCHOOL DISTRICT. Proposed resolution approving Agreement 023-14-ECG for a \$1,700,839 loan at zero percent interest to the Sylvan Union School District in Modesto for energy efficiency measures at the district's eight schools, District Office, Central Kitchen, and Maintenance Facility. Based on the loan amount, the simple payback is approximately 20 years. The project will save approximately \$89,992

annually. The project will reduce greenhouse gas emissions by approximately 205 tons of CO2 equivalent every year. (ECAA-Ed Program funding) Contact: Marites Antonio. (Staff presentation: 5 minutes)

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

13. ADVANCED NATURAL GAS ENGINE IGNITION SYSTEMS RESEARCH, PON-14-501. This grant solicitation sought proposals to support the applied research and development of advanced high-energy ignition systems capable of overcoming the challenges of igniting natural gas fuel under high boost pressures with exhaust gas recirculation (EGR) for spark-ignited Class 3-8 engines. (PIER natural gas funding) Contact: Pilar Magana. (Staff presentation: 10 minutes)
  - a. NORTH AMERICAN REPOWER, LLC. Proposed resolution approving Agreement PIR-14-009 with North American Repower, LLC for a \$750,000 grant to optimize, test and demonstrate two advanced ignition systems for heavy-duty natural gas engines.
  - b. GAS TECHNOLOGY INSTITUTE. Proposed resolution approving Agreement PIR-14-010 with Institute of Gas Technology dba Gas Technology Institute for a \$750,000 grant to develop an advanced corona discharge ignition method applicable to high efficiency engines for medium heavy-duty vehicles.
  - c. GAS TECHNOLOGY INSTITUTE. Proposed resolution Agreement PIR-14-011 with Institute of Gas Technology dba Gas Technology Institute for a \$749,868 grant to develop two advanced high-energy plasma ignition systems that are capable of effectively and efficiently igniting natural gas fuel and air mixtures for natural gas engines suitable for Class 3-8 vehicles.
  - d. OLSON-ECOLOGIC ENGINE TESTING LABORATORIES, LLC. Proposed resolution approving Agreement PIR-14-012 with Olson Ecologic, LLC for a \$750,000 grant to advance development of jet ignition prechambers in a natural gas fueled engine suitable for on-road heavy-duty vehicles.

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

14. GAS TECHNOLOGY INSTITUTE. Proposed resolution approving Agreement PIR-14-013 with Institute of Gas Technology dba Gas Technology Institute for a \$400,000 grant to conduct research and development of technologies to improve fuel transfer efficiency in compressed natural gas vehicles. (PIER natural gas funding) Contact: Pilar Magana. (Staff presentation: 5 minutes)

*Commissioner Douglas moved and Commissioner McAllister seconded approval of Item 14. The vote was unanimous. (5-0)*

15. UNIVERSITY OF CALIFORNIA, BERKELEY. Proposed resolution approving Agreement 500-14-003 with the Regents of the University of California on behalf of the Berkeley Campus for a \$300,000 contract to deliver readily accessible visualizations and information tailored to support climate resilient planning, management, and decision-making in the natural gas sector. (PIER natural gas funding) Contact: Susan Wilhelm. (Staff presentation: 5 minutes)

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

16. ELECTRIC PROGRAM INVESTMENT CHARGE (EPIC) 2014 ANNUAL REPORT. Proposed resolution approving the EPIC 2014 Annual Report to the Legislature. Contact: Erik Stokes. (Staff presentation: 5 minutes)

*Commissioner Douglas moved and Commissioner Scott seconded approval of the report. The vote was unanimous. (5-0)*

17. DEVELOPING A PORTFOLIO OF ADVANCED EFFICIENCY SOLUTIONS: TECHNOLOGIES AND APPROACHES FOR MORE AFFORDABLE AND COMFORTABLE BUILDINGS GRANTS, PON-13-301. This grant solicitation sought proposals for applied research and development projects to develop next generation end-use efficiency technologies and strategies for the building sector. (EPIC funding) Contact: Jackson Thach. (Staff presentation: 5 minutes)

- a. ELECTRIC POWER RESEARCH INSTITUTE, INC. Proposed resolution approving Agreement EPC-14-021 with Electric Power Research Institute for a \$2,993,005 grant to develop and test the next generation residential space conditioning system by combining and integrating several advanced technologies into a single space conditioning system that cost-effectively fits California's climate conditions.

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

18. DEVELOPING ADVANCED ENERGY STORAGE TECHNOLOGY SOLUTIONS TO LOWER COSTS AND ACHIEVE POLICY GOALS, PON-13-302. This grant solicitation sought proposals for applied research and development projects to: optimize grid-level energy storage deployment with respect to location, size, and type; and, develop innovative utility-scale and generation energy storage technologies and applications to mitigate intermittent renewables and meet peak demand. (EPIC funding) Contact: Alan Solomon. (Staff presentation: 5 minutes)

- a. COGENRA SOLAR, INC. Proposed resolution approving Agreement EPC-14-020 with Cogenra Solar, Inc. for a \$2,530,952 grant to pilot test and demonstrate a solar hybrid system with advanced storage and low temperature turbine to produce on-demand solar electricity.
- b. UNIVERSITY OF CALIFORNIA, LOS ANGELES. Proposed resolution approving Agreement EPC-14-027 with the Regents of the University of California, on behalf of the Los Angeles Campus for a \$1,621,628 grant to build an energy storage system that can efficiently store grid-level energy from renewable sources and release that energy when it is needed to meet peak demand.
- c. EOS ENERGY STORAGE, LLC. Proposed resolution approving Agreement EPC-14-023 with Eos Energy Storage, LLC for a \$2,156,704 grant to demonstrate an AC integrated system incorporating Eos' advanced Znyth™ zinc hybrid-cathode battery technology to advance the understanding of, opportunities for, and obstacles to their deployment in grid-connected utility applications.

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

19. 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: Jamie Patterson. (Staff presentation: 15 minutes)

- a. GRIDSCAPE SOLUTIONS. Proposed resolution approving Agreement EPC-14-050 with Gridscape Solutions for a \$1,817,925 grant to design and build microgrids at three fire stations within the City of Fremont. These three microgrids will optimally manage local renewable energy resources and provide power to the critical loads during a utility power outage.
- b. TRANE U.S., INC. Proposed resolution approving Agreement EPC-14-059 with Trane U.S., Inc. for a \$4,999,804 grant to demonstrate a microgrid that utilizes renewable electricity and battery energy storage at a City of Santa Rosa wastewater treatment plant. This project will also show how microgrids enable participation in ancillary services energy markets.
- c. ROBERT BOSCH, LLC. Proposed resolution approving Agreement EPC-14-053 with Robert Bosch, LLC for a \$2,817,566 grant to demonstrate a direct current microgrid at a distribution center in Chino, California. This microgrid project will demonstrate a simpler way to achieve zero-net energy requirements in commercial buildings with a microgrid of on-site solar photovoltaics and battery energy storage.
- d. CHABOT-LAS POSITAS COMMUNITY COLLEGE DISTRICT. Proposed resolution approving Agreement EPC-14-055 with Chabot-Las Positas Community College District for a \$1,522,591 grant to demonstrate a high penetration, renewable, campus-wide microgrid at the Las Positas Community College in Livermore, California.
- e. SAN DIEGO GAS & ELECTRIC COMPANY. Proposed resolution approving Agreement EPC-14-060 with San Diego Gas & Electric Company for a \$4,724,802 grant to demonstrate a utility operated high-penetration, renewable-based community microgrid at Borrego Springs in Southern California.
- f. LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving Agreement EPC-14-057 with the Department of Energy's Lawrence Berkeley National Laboratory for a \$1,993,355 grant to demonstrate a smart charging control system for electric vehicle supply equipment that will minimize utility costs through managed charging of fleet vehicles.
- g. UNIVERSITY OF CALIFORNIA, LOS ANGELES. Proposed resolution approving Agreement EPC-14-056 with the Regents of the University of California, on behalf of the Los Angeles Campus for a \$1,989,432 grant to install and demonstrate electric vehicle charging stations with bi-directional capabilities using new algorithms.

*Commissioner Scott moved and Commissioner Douglas seconded approval of Item 19. The vote was unanimous. (5-0)*

20. ADVANCING CLEANER, LESS COSTLY, MORE RELIABLE DISTRIBUTED GENERATION TO ENABLE CUSTOMER SOLUTIONS AND ZERO-NET ENERGY COMMUNITIES, PON-14-303. This grant solicitation sought proposals for applied

research and development activities to increase the technical performance and value of distributed biopower and photovoltaic technologies. (EPIC funding) Contact: Prab Sethi. (Staff presentation: 10 minutes)

- a. INTERRA ENERGY, INC. Proposed resolution approving Agreement EPC-14-034 with Interra Energy, Inc. for a \$2,000,000 grant to research, install and demonstrate a pilot-scale advanced modular bioenergy technology. The first phase of the project involves design, test plan development, research and development activities, and minor physical upgrades on an existing reactor. After consideration of the first phase results, the Energy Commission may approve the second phase, which will include installation and pilot-scale demonstration of the technology.
- b. LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving Agreement EPC-14-035 with the Department of Energy's Lawrence Berkeley National Laboratory (LBNL) for a \$1,000,000 grant to install a pilot photovoltaic storage system and develop innovative control algorithms to test net zero energy capabilities of a test cell in LBNL's facility.
- c. SUNSPEC ALLIANCE. Proposed resolution approving Agreement EPC-14-036 with SunSpec Alliance for a \$2,000,000 grant to develop a complete solution for smart systems that enhances reliability of the California grid, increases photovoltaic penetration and evaluates the market potential of a standardized communication interface.
- d. TAYLOR ENERGY. Proposed resolution approving Agreement EPC-14-045 with Taylor Energy for a \$1,499,481 grant to design, develop and test a 3-pound per minute waste-to-energy process development unit, involving thermal-catalytic gasification integrated with reforming for conversion of refuse derived biomass into clean fuel gas, enabled by Pulse detonation technology. This project will evaluate the results and provide engineering data to design a 30 ton/day plant generating one megawatt of electric power.
- e. SOUTHERN CALIFORNIA GAS COMPANY. Proposed resolution approving Agreement EPC-14-047 with the Southern California Gas Company for a \$1,494,736 grant to demonstrate the integration of a combined concentrating solar power and a high temperature processing technology which converts dairy manure into low-carbon, high-quality renewable natural gas suitable for electricity production.
- f. ALL POWER LABS, INC. Proposed resolution approving Agreement EPC-14-051 with All Power Labs, Inc. for a \$1,990,071 grant to design, deploy, and test a demonstration mobile biomass gasifier technology that can convert forest slash biomass into on-demand renewable energy.

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

21. DEMONSTRATING BIOENERGY SOLUTIONS THAT SUPPORT CALIFORNIA'S INDUSTRIES, THE ENVIRONMENT, AND THE GRID, PON-14-305. This grant solicitation sought proposals for technology demonstration and deployment projects to demonstrate and appraise the operational and performance characteristics of pre-commercial biomass conversion technologies, generation systems, and development strategies. (EPIC funding) Contact: Gina Barkalow. (Staff presentation: 10 minutes)

- a . UNIVERSITY OF CALIFORNIA, IRVINE. Proposed resolution approving Agreement EPC-14-031 with the Regents of the University of California, on behalf of the Irvine Campus for a \$1,499,386 grant to demonstrate a gradual oxidizing technology for generation of electricity from low quality fuel gas generated by landfills.
- b . THE WATERSHED RESEARCH AND TRAINING CENTER. Proposed resolution approving Agreement EPC-14-033 with The Watershed Research and Training Center for a \$4,965,420 grant to install and demonstrate a commercial-scale gasification-to-electricity facility that converts wood waste from forest management activities to renewable electricity while providing reduced fire risk, watershed protection, improved air quality, other environmental benefits, and local jobs.
- c . BIOGAS & ELECTRIC, LLC. Proposed resolution approving Agreement EPC-14-041 with Biogas & Electric, LLC for a \$2,249,322 grant to demonstrate a low-cost wet scrubber technology with a biogas fired lean burn engine at a waste water treatment plant.
- d . LAWRENCE BERKELEY NATIONAL LABORATORY. Proposed resolution approving Agreement EPC-14-044 with the Department of Energy's Lawrence Berkeley National Laboratory for a \$4,300,000 grant to perform research to enable environmentally and economically sustainable deployment of technology that transforms organic municipal solid waste into heat, electricity, and compost via dry anaerobic digestion.
- e . KENNEDY JENKS CONSULTANTS. Proposed resolution approving Agreement EPC-14-046 with Kennedy Jenks Consultants for a \$1,496,902 grant to demonstrate a new technology to effectively pre-process food waste and to develop a new strategy to lower mass of dewatered cake to improve the economic viability of co-digestion and biogas energy production at Silicon Valley Clean Water.
- f . ORGANIC ENERGY SOLUTIONS, INC. Proposed resolution approving Agreement EPC-14-052 with Organic Energy Solutions, Inc. for a \$5,000,000 grant to develop an innovative 100 ton per day anaerobic digester system that will convert organic waste from a grocery store distribution center and wastewater to clean renewable electricity integrated with peak load strategies for the grid.

*Commissioner McAllister moved and Commissioner Scott seconded approval of Item 21. The vote was unanimous. (5-0)*

- 22 . ANALYSIS OF SOCIAL, CULTURAL, AND BEHAVIORAL ASPECTS OF ACHIEVING ENERGY EFFICIENCY POTENTIAL (PHASE 1: RESIDENTIAL SECTOR), PON-14-306. This grant solicitation sought to fund market facilitation projects to analyze the role of society, culture, and behavior in the adoption and use of energy efficiency measures in the residential sector. (EPIC funding) Contact: David Hungerford. (Staff presentation: 10 minutes)
  - a . UNIVERSITY OF CALIFORNIA, BERKELEY. Proposed resolution approving agreement EPC-14-026 with Regents of the University of California, on behalf of the Berkeley Campus, for a \$360,632 grant to conduct a quasi-experimental, econometric study of energy efficiency adoption and energy savings. This project

- will use consumer energy-use data to develop program adoption estimates for specific cultural and socio-economic sub-populations.
- b. INOVA ENERGY GROUP, LLC. Proposed resolution approving Agreement EPC-14-032 with Inova Energy Group, LLC for a \$224,593 grant to conduct research on subpopulations in California to better understand the social, cultural, and behavioral aspects of their decisions to purchase energy efficient technologies and the behaviors associated with operating these technologies once installed.
  - c. CENTER FOR SUSTAINABLE ENERGY. Proposed resolution approving Agreement EPC-14-037 with the Center for Sustainable Energy for a \$599,924 grant to conduct research utilizing data from a statewide retrofit program to advance understanding of the role of societal, cultural and behavioral factors in the adoption of energy efficient measures.
  - d. INDICIA CONSULTING. Proposed resolution approving Agreement EPC-14-038 with Indicia Consulting for a \$574,545 grant to analyze and document the role of emerging attitudes and practices around energy efficiency that can help improve design of programs that effectively address how people experience and respond to technologies.
  - e. TRC ENGINEERS, INC. Proposed resolution approving Agreement EPC-14-039 with TRC Engineers, Inc. for a \$379,019 grant to study cultural and demographic factors of multifamily tenants' electric energy use patterns, before and after energy efficiency upgrades and how cultural factors influence tenant interest in adoption of more efficient appliances, electronics and lighting.

*All Commissioners were present for discussion of Item 22 a, b, d, and e. Commissioner McAllister moved and Commissioner Scott seconded approval of Item 22 a, b, d, and e. The vote was unanimous. (5-0.) Commissioner McAllister recused himself and left the room during the discussion of Item 22c. Commissioner Douglas moved and Commissioner Hochschild seconded approval of Item 22c. The vote was 4-0.*

23. **Minutes:** Possible approval of the March 11, 2015, Business Meeting Minutes.

*Commissioner Scott moved and Commissioner Hochschild seconded approval of the Minutes. The vote was 4-0-1. Commissioner Douglas abstained.*

24. **Lead Commissioner or Presiding Member Reports.** The commissioners reported on their recent activities.

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

26. **Executive Director's Report.** Executive Director Rob Oglesby gave the report.

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

28. **Public Comment:** None.

29. TOILET, URINAL, AND FAUCET WATER EFFICIENCY REGULATION. Proposed resolution adopting water efficiency regulations for toilets, urinals, and faucets. The proposed regulations implement Executive Order B-29-15 directing the Commission to "adopt emergency regulations establishing standards that improve the efficiency of water appliances, including toilets, urinals, and faucets." The proposed adoption would, as of January 1, 2016, prohibit the sale or offer for sale of covered toilets, urinals, and faucets that do not meet minimum water efficiency requirements, and would have the effect of prohibiting the installation of such fixtures.

*Commissioner McAllister moved and Commissioner Hochschild seconded adoption of the resolution. The vote was unanimous. (5-0)*

Appearances:

Manuel Alvarez, Southern California Edison

Mary Anderson, PG&E

Anthony Andreoni, CMUA

Tim Carmichael, California Natural Gas Vehicle Coalition

Peter Christensen, California Air Resources Board

Andreas Cluver, Alameda County Building and Construction Trades Council

Fredrick Desborough, Plumbing Manufacturers International

Jerry Desmond, Jr., Plumbing Manufacturers International

Nate Dewart, Energy Solutions

Leonhard Fahreddin, Efficient Drivetrains, Inc.

Gary Fernstrom, PG&E

Jay Friedland, Zero Motorcycles, Inc.

Daniel Gleiberman, Sloan Valve Company

Bonnie Holmes-Gen, American Lung Association California

Thomas Kramer, Kohler Company

Max Mikalonis, Office of Assemblymember Rob Bonta

Edward Moreno, Sierra Club California

Kathy Neal, Viridis Fuels

Roxanne Petteway, Organic Energy Solutions

Tracy Quinn, Natural Resources Defense Council

Ronna Reed, North American Repower

John Shears, CEERT

Gregory Stangl, North Fork Community Power

Paul Sturman, Center for Biofilm Engineering

Tom Tansy, Sunspec Alliance

Eileen Tutt, California Electric Transportation Coalition

Tim Tutt, SMUD

Claire VanZuiden, Proterra

Michelle Wong, Clean World

There being no further business the meeting was adjourned.

Respectfully submitted

HARRIET KALLEMEYN  
Secretary to the Commission