

**STATE OF CALIFORNIA**  
**California Energy Commission**  
September 23, 2009

Minutes of the September 23, 2009, Energy Commission Business Meeting.

The meeting was called to order at 10:08 by Chairman Karen Douglas. The Pledge of Allegiance was led by Chairman Douglas.

Present:

Karen Douglas, Chairman  
James D. Boyd, Vice Chair  
Jeffrey D. Boyd, Commissioner  
Julia A. Levin, Commissioner

1. ABENGOA MOJAVE SOLAR PROJECT (09-AFC-05). Contact: Eileen Allen. (10 minutes)
  - a. Possible approval of the Executive Director's data adequacy recommendation for the Abengoa Mojave Solar Project. The proposed 250 MW solar project, using parabolic trough technology, would be located on approximately 1,765 acres of privately-owned land northwest of the Town of Hinkley in San Bernardino County.

*Commissioner Byron moved and Commissioner Boyd seconded approval of the Executive Director's recommendation that the AFC be found data inadequate at this time. The vote was unanimous. (4-0) Therefore, no action was taken on Item 1b.*

- b. Possible appointment of a siting committee for the Abengoa Mojave project.
2. CONTRA COSTA GENERATION STATION (09-AFC-04). Contact: Eileen Allen. (10 minutes)
  - a. Possible approval of the Executive Director's data adequacy recommendation for the Contra Costa Generating Station, a nominal 624 megawatt natural gas-fired, combined-cycle facility located in the City of Oakley in eastern Contra Costa County.

*Commissioner Levin moved and Commissioner Byron seconded approval of the Executive Director's recommendation that the AFC be found data adequate. The vote was unanimous. (4-0)*

- b. Possible appointment of a siting committee for the Contra Costa Generating Station project.

*Chairman Douglas appointed Vice Chair Boyd as presiding member and herself as second member of the siting committee for the Contra Costa project. Commissioner Levin moved and Commissioner Byron seconded approval of the appointments. The vote was unanimous. (4-0)*

3. LAWRENCE BERKELEY NATIONAL LABORATORY. Possible approval of Contract 500-09-010 for \$900,000 with Lawrence Berkeley National Laboratory to develop a graphical interface for the building energy simulation tool, EnergyPlus. The upgrade will

allow EnergyPlus to be used more easily and effectively by building designers and other professionals. This agreement is consistent with Governor's Executive Order S-09-09. (PIER electricity funding.) Contact: Norm Bourassa. (5 minutes)

*Vice Chair Boyd moved and Commissioner Levin seconded approval of Contract 500-09-010. The vote was unanimous. (4-0)*

4. DEPARTMENT OF GENERAL SERVICES. Possible approval of Contract 600-09-005 for \$25 million with Department of General Services for administration of the Energy Efficient State Property Revolving Loan Program. This agreement is consistent with Governor's Executive Order S-09-09. (ARRA funding.) Contact: Mark Hutchison. (10 minutes)

*Item 4 was moved to the September 30, 2009, agenda.*

5. WESTERN GOVERNORS' ASSOCIATION. Possible approval of Amendment 3 to Contract 150-07-005 with Western Governors Association, adding \$103,649 to continue preparation for federal nuclear waste shipments to the Waste Isolation Pilot Plant in New Mexico. This agreement is consistent with Governor's Executive Order S-09-09. (Reimbursement funding.) Contact: Barbara Byron. (5 minutes)

*Vice Chair Boyd moved approval of Item 5, amending Contract 150-07-005, and Item 6, amending Contract 150-07-006, as related items. Commissioner Byron seconded the motion. The vote was unanimous. (4-0)*

6. CALIFORNIA HIGHWAY PATROL. Possible approval of Amendment 3 adding \$103,649 to Contract 150-07-006 with the California Highway Patrol to reimburse expenses to continue preparation for federal nuclear waste shipments to the Waste Isolation Pilot Plant in New Mexico. Costs include escort and training, including Commercial Vehicle Safety Alliance training, and shipment inspections. This agreement is consistent with Governor's Executive Order S-09-09. (Reimbursement funding.) Contact: Barbara Byron. (5 minutes)

*Item 6 was approved in conjunction with Item 5 as noted.*

7. ANDES CONSULTING. Possible approval of Purchase Order 09-409.00-014 for \$225,000 to provide programming for application and database development and support for the Energy Commission's Program Development and Support office. This contract is for short-term projects and/or overflow from current projects where there is a need for additional resources and specific expertise. This agreement is consistent with Governor's Executive Order S-09-09. (ERPA funding.) Contact: Larry Smith. (5 minutes)

*Vice Chair Boyd moved and Commissioner Byron seconded approval of Purchase Order 09-409.00-014. The vote was unanimous. (4-0)*

8. METAVISTA CONSULTING GROUP. Possible approval of Purchase Order 09-409.00-15 for \$400,000 with MetaVista Consulting Group to provide technical programming maintenance support for the Program Information Management System (PIMS) and training for Energy Commission staff. This agreement is consistent with

Governor's Executive Order S-09-09. (ERPA funding.) Contact: Larry Smith. (5 minutes)

*Vice Chair Boyd moved and Commissioner Levin seconded approval of Purchase Order 09-409.00-15. The vote was unanimous. (4-0)*

9. ANDES CONSULTING. Possible approval of Purchase Order 09-409.00-006 for \$175,230 with Andes Consulting, LLC, to manage and coordinate the continued design, development, testing and pilot phases of the Dynamic Simulation Transportation Energy Model (DynaSim) project. This agreement is consistent with Governor's Executive Order S-09-09. Contact: Mike Smith. (5 minutes)

*Vice Chair Boyd moved and Commissioner Levin seconded approval of Purchase Order 09-409.00-006. The vote was unanimous. (4-0)*

10. TRUSTEES OF THE CALIFORNIA STATE UNIVERSITY. Possible approval of ten grant applications, totaling \$901,278, from PIER Energy Innovations Small Grant's Solicitation 08-02. This agreement is consistent with Governor's Executive Order S-09-09. (PIER funding.) Contact Matt Coldwell.

*Vice Chair Boyd moved and Commissioner Byron seconded approval of the ten grant applications. The vote was unanimous. (4-0)*

- a. 08-02-78, Sunprint, Inc., Berkeley, CA, *Printing Low Cost Solar Cells with Ultrasonic Ejection*, \$93,350. This project will develop an ultrasonic ejection process for printing thin film solar cells, which will further reduce its cost, making widespread use of photovoltaics more cost effective. The ultrasonic ejection process precisely prints a uniform film a few microns thick by focusing ultrasonic energy on the free surface of the PV ink.
- b. 08-02-10, ThermAvant Technologies, San Francisco, CA, *Heat-Activated Ejector Cooling System*, \$95,000. This project will determine the feasibility of a highly efficient jet ejector cooler for buildings using low-grade thermal energy as its power source. This heat activated ejector cooling system will use the heat transfer from two environmentally-friendly working fluids to produce the low-grade thermal energy.
- c. 08-02-58, University of California San Diego, La Jolla, CA, *Developing Ultrahigh-Efficiency Thermal-to-Electric Energy Conversion Technique*, \$95,000. This project proposes to prove the feasibility of converting heat to electricity based on the capacitive effect, in other words, using two nanoporous electrodes placed at different temperatures that will adsorb different amounts of ions from an electrolyte solution creating a net output voltage.
- d. 08-02-83, Pacific Consolidated Industries, LLC, Riverside, CA, *Renewable Energy through Purification of Low-BTU Landfill Gas*, \$95,000. This project will research a gas separation process that increases the methane concentration in methane deficient landfill gas to a level acceptable to an internal combustion engine or microturbine.

- e. 08-02-13, University of California San Diego, La Jolla, CA, *Nitric Oxide Reduction using Oxy-Combustion in Stationary Power Engines*, \$95,000. This project will determine the feasibility of reducing NOx emissions in a natural gas powered engine using oxygen enrichment techniques with nitrogen levels reduced to 4.5 percent in the reactants. This process will be coupled with re-circulating the exhaust gas to maintain the appropriate combustion temperature that would otherwise increase due to reducing the nitrogen content.
  - f. 08-02-82, University of San Diego, La Jolla, CA, *Novel Energy Saving Light Bulb*, \$94,909. This project will test an innovative design to light emitting diode (LED) light bulbs that operates at a lower temperature, maintains a superior level of efficiency, and has improved light emitting qualities compared to current LED technology.
  - g. 08-02-71, Iowa State University, Ames, Iowa, *Innovative Biogas Hydrogen Sulfide Removal Technology*, \$95,000. This project proposes to remove hydrogen sulfide in a more cost effective way, using an innovative approach that will integrate a small sulfide-oxidizing unit into an existing anaerobic digester. The resulting biogas will be free from hydrogen sulfide, which causes significant problems in biogas utilization, and increases operation and maintenance costs in a biogas engine.
  - h. 08-03-34, University of California Davis, Davis, CA, *Improving High Solids Biomass Conversion Efficiency Using Spray Dried Enzymes*, \$93,019. This project proposes to experiment with a novel approach to convert lignocellulosic residues (agricultural waste, animal waste, municipal waste) to a form of renewable energy. The approach may be beneficial because it will reduce the cost of producing biomass, and reduce the use of water and generation of wastewater in the process.
  - i. 08-02-29, Nanotron, Fallbrook, CA, *Nanowire Thermoelectrics for Industrial Waste Heat Recovery*, \$95,000. This project proposes a low-cost, high volume manufacturing process for nanowire-based thermoelectric materials (solids that produce an electric current as heat passes through) using existing fiber optic manufacturing technologies.
  - j. 08-02-11, University of California Irvine, Irvine, CA, *Transient Operation and Control of Fuel Cell Temperature Variations*, \$50,000. This project seeks to develop control systems and strategies to maintain cell temperature profiles during transient periods and disturbances. This will minimize thermal stresses in the fuel cell and avoid cell degradation.
11. TESLA POWER PLANT (01-AFC-21C). Possible adoption of the Siting Committee's proposed decision on Pacific Gas & Electric Company's petition for a license extension for the Tesla Power Plant to June 16, 2014. Contact: Gary Fay. (1 hour)

*Commissioner Byron moved and Vice Chair Boyd seconded adoption of the proposed decision. The vote was unanimous. (4-0)*

12. **Minutes:**

- a. Approval of the September 9, 2009, Business Meeting Minutes.

*Vice Chair Boyd moved and Commissioner Levin seconded approval of the September 9 Minutes. The vote was 3-0-1. Commissioner Byron abstained.*

- b. Approval of the September 16, 2009, Special Business Meeting Minutes.

*Commissioner Levin moved and Commissioner Byron seconded approval of the September 16 Minutes. The vote was unanimous. (4-0)*

13. **Commission Committee Presentations/Discussion:** A discussion by the Commissioners regarding Committee Oversight matters may be held.
14. **Chief Counsel's Report:** Chief Counsel Bill Chamberlain gave the report.
15. **Executive Director's Report:** Executive Director Melissa Jones gave the report.
16. **Public Adviser's Report:** None.
17. **Public Comment:**  
Mr. Scott Galati, Galati Blek, LLP

There being no further business, the Commission adjourned to a closed session to discuss personnel matters pursuant to Government Code, Section 11126(a).

Appearances:

Mr. Chris Ellison, Ellison, Schneider & Harris  
Mr. Scott Galati, Galati Blek, LLP  
Mr. Greg Lamberg, Radback Energy  
Mr. Robert Sarvey  
Mr. Jim Swaney, San Joaquin Air Pollution Control District  
Mr. Mark Krausse, Pacific Gas and Electric Company

Respectfully submitted,

HARRIET KALLEMEYN  
Secretary to the Commission