

State of California
California Energy Commission
Minutes of the February 10, 2021, Energy Commission Business Meeting

The meeting was called to order by Chair Hochschild. The Pledge of Allegiance was led by Vice Chair Scott.

Present:

David Hochschild, Chair
Karen Douglas, Commissioner
Siva Gunda, Commissioner

J. Andrew McAllister, Commissioner
Patricia Monahan, Commissioner

The California Energy Commission's (CEC) February 10, 2021 Business Meeting was held remotely, consistent with Executive Orders N-25-20 and N-29-20 and the recommendations from the California Department of Public Health to encourage physical distancing to slow the spread of COVID-19. The public was able to participate and observe the meeting consistent with the direction in these Executive Orders. Instructions for remote participation were provided in the notice for this meeting and as set forth below in the agenda.

THE CEC CONSIDERED THE FOLLOWING AND TOOK ACTION AS NOTED:

1. Audience Survey.

The Public Advisor will conduct a survey of the audience using the Zoom platform's poll feature. Participation is voluntary. The purpose of the questions posed is to solicit input from the audience that will assist the CEC in improving business meeting processes and the audience's overall experience participating in business meetings. Contact: Noemí Gallardo.

The Public Advisor presented Informational Item 1.

2. Consent Calendar.

Items 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. AKER OFFSHORE WIND USA LLC/AKER SOLUTIONS, INC. Proposed resolution approving a novation substituting Aker Offshore Wind USA LLC for Aker Solutions Inc. under Agreement EPC-19-008, and adopting staff's determination that this action is exempt from CEQA. All aspects of the project including the project team, scope of work, project schedule, deliverables, budget, and terms and conditions will remain the same. (EPIC funding)
Contact: Rizaldo Aldas.
- b. U.S. DEPARTMENT OF ENERGY'S (DOE) LAWRENCE BERKELEY NATIONAL LABORATORY (LBNL). Proposed resolution to approve Agreement 300-20-001 with LBNL to receive one vehicle for use in EPIC-related research projects. This vehicle was previously managed under EPIC agreement EPC-16-059, which will fund transport of the vehicle from the Los Angeles Air Force

Base (LAAFB) to the new location. Vehicle ownership will be transferred from CEC to LBNL. Contact: Mike Gravely.

- c. THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, SAN DIEGO CAMPUS (UCSD). Proposed resolution to approve Agreement 300-20-002 with UCSD to receive 10 vehicles for use in EPIC-related research projects. These vehicles were previously managed under EPIC agreement EPC-16-059, which will fund transport of the vehicles from LAAFB to the new location. Vehicle ownership will be transferred from the CEC to UCSD. Contact: Mike Gravely.
- d. REDWOOD CITY ELEMENTARY SCHOOL DISTRICT. Proposed resolution approving Amendment 3 to Agreement ARV-19-065 with Redwood City Elementary School District to augment the grant award by \$392,009 and increase the number of all-electric school buses and supporting infrastructure from six to seven, and adopting staff's determination that the installation of the charging infrastructure is exempt from CEQA. (Clean Energy Job Creation Fund and Clean Transportation Program funding) Contact: Manuel Aguila.
- e. DEL NORTE COUNTY UNIFIED SCHOOL DISTRICT. Proposed resolution approving Agreement ARV-20-005 with Del Norte County Unified School District for a \$762,368 grant to replace two diesel powered school buses with two clean, all-electric school buses and install supporting charging infrastructure; and adopting staff's determination that the installation of the charging infrastructure is exempt from CEQA. (Clean Energy Job Creation Fund and Clean Transportation Program funding) Contact: Manuel Aguila.
- f. RESIDENTIAL ENERGY SERVICES NETWORK, INC. (RESNET). Proposed resolution approving Agreement 400-20-001 with RESNET for a no-cost sponsorship contract for the virtual national RESNET 2021 Conference related to cultivating policies for energy efficiency related initiatives. Contact: Christine Collopy.

Commissioner McAllister moved to approve Item 2 and Commissioner Douglas seconded. The vote was unanimous (5-0).

3. Discussion of CEC Progress on Joint Agency Report, Charting a Path to a 100 Percent Clean Electricity Future, Senate Bill 100 (2018).

Staff presentation on the clean energy goals established by Senate Bill 100. Staff will also provide an update of the report development process, including the planned scope and public engagement process. Contact: Terra Weeks. (Staff presentation: 5 minutes)

The Chair announced that Item 3 was removed.

4. City of Needles (Needles) (19-BSTD-07).

Proposed resolution approving the Section 10-109(k) determination that the solar photovoltaic requirement in the 2019 Building Energy Efficiency Standards shall not apply to newly constructed low-rise residential buildings in Needles. (Title 24, Part 1, section 10-109(k)). Contact: Cheng Moua. (Staff presentation: 5 minutes)

Commissioner McAllister moved to approve Item 4 and Commissioner Douglas seconded. The vote was unanimous (5-0).

5. Town of Truckee Petition (19-BSTD-12).

Proposed resolution confirming that solar PV requirements in the 2019 Building Energy Efficiency Standards do not apply to newly constructed low-rise residential buildings where such systems are unable to comply with California Building Code and California Residential Code snow load structural requirements. (Title 24, Part 1, section 1-313). Contact: Cheng Moua. (Staff presentation: 5 minutes)

Commissioner McAllister moved to approve Item 5 and Commissioner Douglas seconded. The vote was unanimous (5-0).

6. DOE-National Renewable Energy Laboratory (NREL).

Proposed resolution approving Agreement 800-20-003 with NREL for a \$350,000 contract to provide technical support to forecast distributed energy resources in emerging market segments, and forecast energy storage for all market segments in California for the Integrated Energy Policy Report (IEPR). NREL will make use of a version of its nationwide distributed generation market penetration model (dGen) adapted specifically for California. NREL will also deliver the adapted dGen model to the CEC and provide direct assistance to staff in setting up and running the model. (COIA funding) Contact: Sudhakar Konala. (Staff presentation: 5 minutes)

Commissioner McAllister moved to approve Item 6 and Commissioner Gunda seconded. The vote was unanimous (5-0).

7. National Technology & Engineering Solutions of Sandia, LLC (Sandia National Laboratories).

Proposed resolution approving a zero-cost Memorandum of Understanding (MOU) 20-001 between the CEC and Sandia National Laboratories to work cooperatively to advance energy storage technologies through energy storage research and development activities. At the request of the CEC, Sandia National Laboratories will provide the CEC with energy storage technical expertise to assist with implementing EPIC. The MOU establishes a framework for how the CEC and Sandia National Laboratories will coordinate to advance energy storage technologies. Contact: Mike Gravely. (Staff presentation: 5 minutes)

Commissioner McAllister moved to approve Item 7 and Commissioner Monahan seconded. The vote was unanimous (5-0).

8. Advanced Plug Load and Smart Exterior Lighting – GFO-20-303.

The purpose of this solicitation is to develop, test and demonstrate advanced innovative technologies for controlling plug load and exterior lighting energy use. The solicitation included three funding groups to: 1) Analyze and test total energy consumption of plug load devices to support codes and standards for non-covered products; 2) Demonstrate the integration of smart plug load controls and building energy management systems in commercial buildings; and 3) Demonstrate smart

exterior solid state lighting in low income or disadvantaged communities. (EPIC funding) Contact: Felix Villanueva. (Staff presentation: 5 minutes)

- a. THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, ON BEHALF OF THE SAN DIEGO CAMPUS (UCSD). Proposed resolution approving Agreement EPC-20-009 with UCSD for a \$1,028,125 grant to demonstrate the integration of advanced Smart Plug Load Controls with the existing Building Energy Management System to provide cost-effective reduction in building energy use, and adopting staff's determination that this action is exempt from CEQA.
- b. CALIFORNIA ENERGY ALLIANCE. Proposed resolution approving Agreement EPC-20-010 with California Energy Alliance for a \$996,974 grant to conduct a study to: 1) evaluate the energy consumption of selected commercial and residential plug load device types, 2) quantify their statewide market size and energy use, 3) determine potential energy and cost savings, and 4) consider future energy codes and standards, and adopt staff's determination that this action is exempt from CEQA.

Commissioner McAllister moved to approve Item 8 and Commissioner Douglas seconded. The vote was unanimous (5-0).

9. California Clean Energy Fund dba CalCEF Ventures.

Proposed resolution approving six grant applications totaling \$2,700,000 from EPIC's California Sustainable Energy Entrepreneur Development (CalSEED) Initiative 2020 Prototype Award Competition administered by CalCEF Ventures; and adopting staff's determination that this action is exempt from CEQA. These awards were selected competitively via a business plan competition where CalSEED entrepreneurs that had previously received a \$150,000 "Concept Award" were evaluated on the technical and commercial potential of their technology. These individual follow-on funding awards are for a maximum of \$450,000 each. (EPIC funding) Contact: Eleanor Oliver. (Staff presentation: 10 minutes)

- a. CALSEED INITIATIVE 2020 PROTOTYPE AWARDS
 - i. Takachar Inc., Decentralized Conversion of Plant-Based Residues into Bioproducts, \$450,000. The goal of this project is to advance a portable, low-cost technology that produces high-performance filtration media from crop and forest residues for wastewater treatment. This biomass reactor unit can be easily deployed to smaller rural areas to produce quality commercial bioproducts for wastewater treatment, reducing energy consumption by 20 percent, while generating localized power from the process heat that can be used for local agriculture and industrial applications.
 - ii. Icarus RT Inc., Hybrid Photovoltaic/Thermal (PVT) Advanced Solar Plus Storage System, \$450,000. The goal of this project is to demonstrate a low-cost hybrid solar PVT system co-located with commercial and larger solar PV arrays that have the potential to increase power availability 25 percent and reduce costs by more than 50 percent over current systems. The system will

- recover heat from PV panels, store energy, and generate power from the stored energy after sunset by utilizing a novel organic fluid cycle method and nano-technology to convert thermal waste into useable power.
- iii. EnZinc Inc., Safe, Low-Cost, Light Energy Storage, \$450,000. The goal of this project is to develop and test an innovative battery chemistry that combines a proprietary zinc sponge anode with nickel, silver, or carbon for different applications. This battery technology is anticipated to match the performance of Lithium-ion while achieving the much lower price point of lead-acid batteries and will be safer than both chemistries
 - iv. ReJoule, Inc., Fast Battery Diagnostics, \$450,000. The goal of the project is to validate a portable battery diagnostic system that can be embedded in a battery pack management system to continuously monitor battery health without disassembly. This battery diagnostic technology is more accurate and faster than competitors and will be able to self-calibrate based on the individual battery pack characteristics.
 - v. SiLi-ion, Inc., Silicon-Carbon Power, \$450,000. The goal of this project is to continue the development of commercial lithium-ion batteries by developing a silicon-carbon composite which will be used in place of graphite as an anode material. This innovation is a “drop-in” additive for Li-ion batteries that improves battery performance and can instantly integrate with current battery manufacturing lines with no retooling or modifications.
 - vi. Antora Energy Inc., Inexpensive, Long-Duration Energy Storage, \$450,000. The goal of this project is to build an inexpensive thermal energy storage system by storing energy as heat in inexpensive raw materials and converting that heat back to electricity with high-efficiency PV modules exposed to light radiating from the hot storage medium. This technology delivers energy storage for less than \$10/kWh – over an order of magnitude cheaper than Li-ion batteries.

Commissioner McAllister moved to approve Item 9 and Commissioner Douglas seconded. The vote was unanimous (5-0).

10. Minutes.

Possible approval of the January 25, 2021 business meeting minutes.

Commissioner Douglas moved to approve Item 10 and Commissioner Monahan seconded. The vote was unanimous (5-0).

11. Lead Commissioner or Presiding Member Reports.

The Commissioner's reported on their recent activities.

12. Executive Director's Report.

The Executive Director gave a report.

13. Public Advisor's Report.

The Public Advisor gave a report.

14. Public Comment.

Lauren Cullum, Sierra Club

Robert Gould, Physicians for Social Responsibility

Jonny Kocher, Rocky Mountain Institute

Karl Aldinger, North County Climate Change Alliance

Sasan Saadat, Earthjustice

Shiba Bhowmik, Sinewatts

David Moller, Climate Reality Project, Bay Area Chapter

Vanessa Teo, Bay Area Youth Climate Action Team

Eric Arens, League of Women Voters

Jenny Green, Self

Laura Deehan, Environment California

Sonja Robinson, Public Power San Diego

Ronni Solman, Self

Christy Zamani, Day One

Bret Andersen, Carbon-Free Palo Alto

Ann Feeney, San Diego 350

Ann Harvey, Climate Health Now

Robert Whitehair, Self

Elaine Salinger, Citizens Climate Lobby

Mark Roest, Self

Lauren Weston, Acterra, Action for a Healthy Planet

Diane Bailey, Menlo Spark

Bronwyn Barry, North American Passive House Network

Matthew Vasilakis, Climate Action Campaign

Colleen Fitzsimons, US Green Building Council

Bruce Naegel, Self

Paul Wermer, San Francisco Climate Emergency Coalition

Tom Kabat, Self

Wesley Reutimann, Active San Gabriel Valley

Ellyn Dooley, Citizens Climate Lobby San Mateo County Chapter

Alice Sung, Aia East Bay Committee On The Environment

Carlos Davidson, Pacifica Climate Committee

Melissa Elder, Sunrise Movement San Diego and San Diego Building Electrification Coalition

Helena Birecki, Climate Reality Project Bay Area (statement read into the record)

15. Chief Counsel's Report.

- a. Pursuant to Government Code section 11126(e), the CEC may adjourn to closed session with its legal counsel to discuss any of the following matters to which the CEC is a party:
 - i. *In the Matter of U.S. Department of Energy (High Level Waste Repository)*, (Atomic Safety Licensing Board, CAB-04, 63-001-HLW); *State of California v. United States Department of Energy* (9th Cir. Docket No. 09-71014).
 - ii. *Communities for a Better Environment and Center for Biological Diversity v. Energy Resources Conservation and Development Commission, and California State Controller* (Alameda County Superior Court, Case No. RG13681262).
 - iii. *State Energy Resources Conservation and Development Commission v. Electricore, Inc. and ZeroTruck* (Sacramento County Superior Court, Case No. 34-2016-00204586).
 - iv. *Natural Resources Defense Council, Inc., et al. v. United States Department of Energy* (Federal District Court, Northern District of California, Case No. 17-cv-03404).
 - v. *State Energy Resources Conservation and Development Commission v. HyGen Industries, Inc* (Sacramento County Superior Court, Case No. 34-2019-00252543).
 - vi. *Olson-Ecologic Testing Laboratories, LLC v. CEC*. (Orange County Superior Court, Case No. 30-2019-01115513).
 - vii. *Interlink Products International, Inc. v. Xavier Becerra, Drew Bohan, Melissa Rae King* (United States District Court for the District of New Jersey, Case No. 2:20-cv-10566).
 - viii. *Southern California Gas Company v. California State Energy Resources Conservation and Development Commission* (Orange County Superior Court, Case No. 30-2020-01152336-CU-WM-CXC).
- b. Pursuant to Government Code sections 11126 (a) and (e), the CEC 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 CEC, which might include personnel matters.

The Chief Counsel gave a report.

Appearances:

(All by telephone/Zoom)

Rick Daniels, Needles City Manager

Joshua Stoops, Counsel City of Needles

Darcey Messner, Town of Truckee

Mark Dickson, Simple Power Solar

Seth Kielas, Simple Power Solar

Kevin McCabe, National Renewable Energy
Laboratory, NREL

Imre Gyuk, Department of Energy, DOE

Daniel Borneo, Sandia National Laboratories

Ranji George, Coalition for Advanced ZEV

Josh Dean, California Energy Alliance

Joy Larson, CalSEED New Energy Nexus

Michael Burz, EnZinc

Kevin Kung, Takachar

Russell Okamura, ReJoule

Lauren Cullum, Sierra Club

Robert Gould, Physicians for Social Responsibility

Jonny Kocher, Rocky Mountain Institute

Karl Aldinger, North County Climate Change Alliance

Sasan Saadat, Earthjustice

Shiba Bhowmik, Sinewatts

David Moller, Climate Reality Project, Bay Area Chapter

Vanessa Teo, Bay Area Youth Climate Action Team

Eric Arens, League of Women Voters

Jenny Green, Self

Laura Deehan, Environment California

Sonja Robinson, Public Power San Diego

Ronni Solman, Self

Christy Zamani, Day One

Bret Andersen, Carbon-Free Palo Alto

Ann Feeney, San Diego 350

Ann Harvey, Climate Health Now

Robert Whitehair, Self
Elaine Salinger, Citizens Climate Lobby
Mark Roest, Self
Lauren Weston, Acterra, Action for a Healthy Planet
Diane Bailey, Menlo Spark
Bronwyn Barry, North American Passive House Network
Matthew Vasilakis, Climate Action Campaign
Colleen Fitzsimons, US Green Building Council
Bruce Naegel, Self
Paul Wermer, San Francisco Climate Emergency Coalition
Tom Kabat, Self
Wesley Reutimann, Active San Gabriel Valley
Ellyn Dooley, Citizens Climate Lobby San Mateo County Chapter
Alice Sung, Aia East Bay Committee On The Environment
Carlos Davidson, Pacifica Climate Committee
Melissa Elder, Sunrise Movement San Diego and San Diego Building Electrification
Coalition
Helena Birecki, Climate Reality Project Bay Area (statement read into the record)

There being no further business, the meeting was adjourned.

Respectfully submitted,

PATRICIA CARLOS
Secretariat