

DOCKETED

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STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

IN THE MATTER OF:

**MIDWAY-SUNSET COGENERATION
PROJECT**

Docket No. 85-AFC-03C

**ORDER APPROVING PETITION FOR A
JOINTLY INITIATED AMENDMENT**

On December 17, 2020, Midway-Sunset Cogeneration Company (MSCC) filed a Petition for a Jointly Initiated Amendment (TN# 236001) to the California Energy Commission (CEC) Decision for the Midway Sunset Cogeneration project (project). The project is a 225-megawatt cogeneration facility that was certified by the CEC on May 14, 1987 and began commercial operation on May 1, 1989. The project produces steam to aid in an enhanced oil recovery process, and is located in Fellows, Kern County, California.

CEC Staff and the project owner propose removal of Conditions of Certification **AQ-15**, **EFF-1**, and **EFF-2** in the CEC Decision to eliminate restrictions on the project's ability to supply electric power during high demand peak loads on the California electric grid when there is no steam demand by steam hosts. Removing the requirements that the project be a cogeneration facility allows the project to continue supporting the grid as a peaking facility supplying power during times when it is most critically needed.

STAFF RECOMMENDATION

CEC staff reviewed the petition and confirmed that it complies with the requirements of California Code of Regulations, title 20, section 1769.1(a), that the proposed amendment would not result in significant environmental impacts, and the project would remain in compliance with all applicable laws, ordinances, regulations, and standards.

Therefore, staff recommends approval of the Petition for a Jointly Initiated Amendment.

ENERGY COMMISSION FINDINGS

Based on the record, including staff's analysis, the Commission finds:

- The petition meets all filing criteria of California Code of Regulations, title 20, section 1769.1(a) for a Staff and Project Owner Jointly Initiated Amendment;
- The removal of Conditions of Certification **AQ-15**, **EFF-1**, and **EFF-2** will not result in significant impacts to public health and safety or to the environment; and

- The project will remain in compliance with all applicable laws, ordinances, regulations, and standards.

CONCLUSION AND ORDER

The California Energy Commission hereby approves the Jointly Initiated Amendment and the changes to the conditions of certification as set forth in the staff analysis.

IT IS SO ORDERED

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of an Order duly and regularly adopted at a meeting of the California Energy Commission held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

IN THE MATTER OF:

*Southern California Public Power Authority
Emission Performance Standard
Compliance Filing*

Docket No. 21-EPS-01

I. INTRODUCTION

Pursuant to Public Utilities Code section 8341(e)(1), the California Energy Commission (CEC) established a greenhouse gases emission performance standard (EPS) of 1,100 pounds carbon dioxide per megawatt hour, as codified in Title 20 of the California Code of Regulations, section 2900 et seq. The CEC is responsible for reviewing all long-term financial commitments entered into by local publicly owned electric utilities for compliance with the EPS.

II. FINDINGS

- a. On January 25, 2021, the Southern California Public Power Authority (SCPPA) submitted a compliance filing requesting that the CEC find that SCPPA's Power Purchase Agreement with Coso Geothermal Power Holdings LLC for electricity from the Coso Geothermal Energy Project be determined to be compliant with the EPS;
- b. CEC staff reviewed SCPPA's filing and found it complete. Based on its review, staff recommended that the procurement be found to be in compliance with the EPS; specifically, staff concluded that the facility listed in the PPA is determined to be compliant with the EPS under section 2903(b)(1) of the Public Resources Code; and
- c. The CEC concurs with staff's recommendation that SCPPA's compliance filing is complete and that the contract with Coso Geothermal Power Holdings LLC as described in the compliance filing, complies with the EPS.

III. CONCLUSION AND ORDER

The CEC hereby adopts staff's recommendation and orders that the long-term financial commitment described in SCPPA's compliance filing complies with the CEC's Greenhouse Gases Emission Performance Standard, as codified in Title 20 of the California Code of Regulations, section 2900 et seq.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of an Order duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

IN THE MATTER OF:

*Southern California Public Power Authority
Emission Performance Standard
Compliance Filing*

Docket No. 21-EPS-01

I. INTRODUCTION

Pursuant to Public Utilities Code section 8341(e)(1), the California Energy Commission (CEC) established a greenhouse gases emission performance standard (EPS) of 1,100 pounds carbon dioxide per megawatt hour, as codified in Title 20 of the California Code of Regulations, section 2900 et seq. The CEC is responsible for reviewing all long-term financial commitments entered into by local publicly owned electric utilities for compliance with the EPS.

II. FINDINGS

- a. On February 5, 2021, the Southern California Public Power Authority (SCPPA) submitted a compliance filing requesting that the CEC find that SCPPA's Power Purchase Agreement with Roseburg Forest Products Co. for electricity from the Weed Cogeneration Plant be determined to be compliant with the EPS;
- b. CEC staff reviewed SCPPA's filing and found it complete. Based on its review, staff recommended that the procurement be found to be in compliance with the EPS; specifically, staff concluded that the facility listed in the PPA is determined to be compliant with the EPS under section 2903(b)(2) of the Public Resources Code; and
- c. The CEC concurs with staff's recommendation that SCPPA's compliance filing is complete and that the contract with Roseburg Forest Products Co., as described in the compliance filing, complies with the EPS.

III. CONCLUSION AND ORDER

The CEC hereby adopts staff's recommendation and orders that the long-term financial commitment described in SCPPA's compliance filing complies with the CEC's Greenhouse Gases Emission Performance Standard, as codified in Title 20 of the California Code of Regulations, section 2900 et seq.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of an Order duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: RCAM TECHNOLOGIES, INC.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves a novation substituting RCAM Technologies, Inc. for Jason Cotrell dba RCAM Technologies, under Agreement EPC-17-023, as set forth in the attached Novation Agreement. Mr. Cotrell and the project team will continue ultra-tall wind turbine tower research under the new entity. There are no changes to the scope of work; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: RCAM TECHNOLOGIES, INC.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves a novation substituting RCAM Technologies, Inc. for Jason Cotrell dba RCAM Technologies, under Agreement EPC-19-007, as set forth in the attached Novation Agreement. Mr. Cotrell and the project team will continue on-site ultra-tall wind turbine tower development under the new entity. There are no changes to the scope of work, schedule, and deliverables; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: THE INTERNATIONAL COUNCIL ON CLEAN
TRANSPORTATION INC.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement 600-20-005 with The International Council on Clean Transportation Inc. for a \$15,000 membership in the International Zero-Emission Vehicle Alliance (ZEV Alliance). The ZEV Alliance is an association formed by national and subnational jurisdictions to accelerate adoption of ZEVs. As a member, CEC will receive reports analyzing international electric vehicle market and policy developments and provide CEC the opportunity to participate in ZEV Alliance coordination meetings; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

**STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION**

RESOLUTION - RE: CENTER FOR HYDROGEN SAFETY

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement 600-20-006 with the Center for Hydrogen Safety, a technical entity of the American Institute of Chemical Engineers, for a \$50,000 contract which provides the CEC with a membership for eight months. Membership allows the CEC to participate in member meetings, working groups, workshops, briefings, and other events. The Center for Hydrogen Safety membership provides a forum for the CEC to collaborate with stakeholders in the fuel cell electric vehicle and hydrogen infrastructure communities; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: ANTELOPE VALLEY WATER STORAGE, LLC

WHEREAS, to fulfill duties under the California Environmental Quality Act (“CEQA”), Kern County prepared a 2006 Environmental Impact Report for the Antelope Valley Water Bank Project [later renamed the Willow Springs Water Bank Project] (State Clearinghouse #2005091117), that was certified and used for project approvals by the Kern County Planning Commission (7/27/2006) and by the Board of Supervisors (9/12/2006); and

WHEREAS, Kern County approved the project on condition that future owners and operators of the water bank would be bound by the certified Final EIR, the Mitigation Monitoring and Reporting Program, and the County’s “A (Exclusive Agriculture) Zoning Ordinance,” and that a Memorandum of Understanding between the County and the owner-operator of the water bank memorialized these requirements (4/17/2007);

WHEREAS, due to changes in the Willow Springs Water Bank Project (including an increase of planned maximum storage capacity from 500,000 acre-feet of water to 1,000,000 acre-feet), and changes in site conditions, as a responsible agency for authorizing construction of improvements for the water bank, the Rosamond Community Services District prepared a 2018 Addendum to the 2006 Environmental Impact Report;

WHEREAS, the Rosamond Community Services District approved the Addendum and the Willow Springs Water Bank Project (8/21/2018);

WHEREAS, Antelope Valley Water Storage, LLC has made representations and presented evidence that it has replaced the original applicants for the above Willow Springs Water Bank Project approvals; that it owns and controls the Willow Springs Water Bank and is obligated to carry out the CEQA mitigation measures and other conditions of approval currently applicable to the Willow Springs Water Bank; and that the Willow Springs Water Bank facilities to be used as part of the proposed EPC-20-008 grant activities (Aquifer Pumped Hydro project) have been evaluated under CEQA as described above;

WHEREAS, Aquifer Pumped Hydro is a form of pumped storage, wherein reversible pumps/turbines in groundwater wells connect the groundwater aquifer, acting as the lower reservoir, to a reservoir at ground surface, acting as the upper reservoir;

WHEREAS, the proposed Antelope Valley Water Storage, LLC’s EPC-20-008 grant Agreement project would involve use of a portion of the Willow Springs Water Bank Project facilities and would add certain equipment, such as reversible pump/turbines in wells and additional electronics in the meter box, for Aquifer Pumped Hydro operation of certain wells, pipelines, reservoirs, and related facilities;

WHEREAS, the State Energy Resources Conservation and Development

Commission (“Energy Commission”) is considering proposed grant Agreement EPC-20-008, with Antelope Valley Water Storage, LLC, for a \$6,406,950 grant to design and construct the facilities necessary for the Aquifer Pumped Hydro project; and

WHEREAS, the Energy Commission has reviewed the 2006 Environmental Impact Report, 2018 Addendum to the 2006 Environmental Impact Report, and various Kern County and Rosamond Community Services District documents providing land use entitlements and related approvals for the Willow Springs Water Bank Project and establishing mitigation measures and conditions for its development and operation, which include facilities that would be used for the Aquifer Pumped Hydro project;

WHEREAS, the Energy Commission has considered the proposed design, facilities, construction, and operation of the Aquifer Pumped Hydro project and associated research, with regard to environmental impacts;

WHEREAS, the Energy Commission has used its own independent judgment to consider the potential environmental impacts of grant Agreement EPC-20-008 and the Aquifer Pumped Hydro project;

THEREFORE BE IT RESOLVED, that the Energy Commission finds, on the basis of the entire record before it that, with the implementation of the mitigation measures and conditions of approval previously determined, the proposed Aquifer Pumped Hydro project presents no new significant or substantially more severe environmental impacts beyond those already considered.

BE IT FURTHER RESOLVED, that the Energy Commission finds that none of the circumstances contained in the California Code of Regulations, title 14, section 15162 are present, so that no subsequent or supplemental environmental review is required; and

BE IT FURTHER RESOLVED, that the Energy Commission approves Agreement EPC-20-008 with Antelope Valley Water Storage, LLC for \$6,406,950; and

BE IT FURTHER RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the Energy Commission.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the California Energy Commission.

AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, ON
BEHALF OF THE SAN DIEGO CAMPUS

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement EPC-20-021 with The Regents of the University of California, on behalf of the San Diego campus, for a \$425,000 grant to match a \$5 million federal grant to continue development of optical switches that have the potential to double the energy efficiency of data centers by increasing data processing efficiency and reducing cooling energy requirements; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: PACKETIZED ENERGY TECHNOLOGIES, INC.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement EPC-20-011 with Packetized Energy Technologies, Inc. for a \$2,000,000 grant to demonstrate advanced grid services provided to the California Independent System Operator and provide cost savings for electric utility customers through time-of-use load shifting and direct incentives. The demonstration will include at least four megawatts (MW) of flexible capacity aggregated from up to 7,000 new and existing smart energy devices, such as smart thermostats, smart plugs, Mello smart thermostat retrofits for existing electric resistance water heaters, and existing mini-split air conditioners, as well as electric vehicle chargers and electricity storage battery systems. Packetized Energy Technologies, Inc. will partner with community-based organization GRID Alternatives to ensure that up to 2,000 of the devices are installed in and benefit low-income and disadvantaged communities; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: NOON ENERGY INC.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement EPC-20-013 with Noon Energy Inc. (Noon) for a \$2,166,000 grant to scale-up the recipient's low-cost, long-duration battery technology from TRL 4 to TRL 6. The project will advance this new technology to industrial scale to meet the demands of the beachhead markets for energy storage. Noon Energy Inc.'s new class of battery technology uses ultra-low-cost storage media, matches the energy efficiency of lithium-ion technology, doubles the energy density of lithium-ion batteries, and enables intermittent renewable electricity sources, such as solar and wind, to cost effectively meet continual demand; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: NEXT ENERGY TECHNOLOGIES, INC.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement EPC-20-014 with Next Energy Technologies Inc. for a \$3,000,000 grant to scale-up and demonstrate their production manufacturing methods for pilot-sized energy generating windows. The successful demonstration of directly coating the existing technology onto large sheets of heat-treated glass will allow a more seamless application into the window manufacturing process that leads to much higher margins with low capital cost equipment; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

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AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: SEPION TECHNOLOGIES, INC.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement EPC-20-015 with Sepion Technologies, Inc. for a \$1,400,000 grant to advance the development of safe anode-free hybrid lithium-metal cells from a lab-scale validation to a pre-prototype. This project will enhance two key components--the electrolyte and an anode-free current collector; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: SOUTH 8 TECHNOLOGIES, INC.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement EPC-20-016 with South 8 Technologies, Inc. for a \$1,010,227 grant to fund the development and testing of liquefied gas electrolytes for use in lithium-ion cells. Development will focus on utilizing a graphite anode, high-nickel cathode, and demonstration of high cell safety and recyclability with a focus on their use in energy storage system or electric vehicle applications; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: TREAU, INC.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement EPC-20-017 with Treau, Inc. for a \$2,761,606 grant to fund the component optimization and cold weather performance tuning of a new low-cost, easy-to-install and high efficiency HVAC appliance that uses low global warming potential refrigerants; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

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AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: SKYVEN TECHNOLOGIES, INC.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement EPC-20-018 with Skyven Technologies, Inc. for a \$1,110,500 grant to build an artificial intelligence (AI) platform. The AI platform will help accelerate the time-consuming and expensive front-end engineering work needed for decarbonization projects in California's industrial sector and automatically evaluate and choose potential decarbonization measures that best fit an industrial facility. This project will build the front-end engineering AI platform and pilot test the AI with a goal to demonstrate a scalable business model that cut costs by a factor of ten; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

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AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: FEASIBLE, INC.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement EPC-20-020 with Feasible, Inc. for a \$1,000,000 grant to support the commercialization of a machine learning driven battery inspection platform called EchoStat. EchoStat uses ultrasound and data analytics to detect manufacturing issues earlier and with more sensitivity. This project aims to reduce battery cell cost and the likelihood of safety incidents from unexpected battery failures; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

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AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: INSTITUTE OF GAS TECHNOLOGY DBA GAS TECHNOLOGY
INSTITUTE

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement PIR-20-001 with Gas Technology dba Gas Technology Institute for a \$3,999,971 grant to integrate a hydrogen fuel cell module, onboard hydrogen storage, and a battery module to provide an efficient zero-emission alternative to diesel switcher locomotives. The project will design, build, and demonstrate a hydrogen fuel cell switcher locomotive with Sierra Northern Railway, a Class III short-line railroad that serves the Port of West Sacramento; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

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AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: CALSTART, INC.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement PIR-20-002 with CALSTART, Inc. for a \$498,309 grant to develop an actionable hydrogen fuel cell-powered tugboat design that will be ready for construction and implementation at the Port of Los Angeles. The project will develop a pathway to decarbonize the marine sector by identifying and addressing challenges related to producing, delivering, transferring, and storing liquid hydrogen to power a zero-emission tugboat; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

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AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: GOLDEN GATE ZERO EMISSION MARINE, INC.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement PIR-20-003 with Golden Gate Zero Emission Marine, Inc. for a \$2,000,000 grant to develop a marine hydrogen fuel cell powertrain to power a passenger/patrol vessel. The project will develop a portable refueling system to enable the vessel to be fueled with hydrogen sourced from existing retail stations, avoiding the need for siting shoreside infrastructure. The researchers will demonstrate the completed zero-emission vessel at the Port of San Francisco and Port of Long Beach to validate performance; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: CERRITOS COMMUNITY COLLEGE DISTRICT

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Amendment #3 to Agreement 600-16-005 with Cerritos Community College District for an augmentation of \$1,500,000 and a 24-month extension. Under this contract, the district will expand and implement workforce development ZEV career pilot programs for high schools, focusing on underrepresented communities and regions impacted by poor air quality; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Monahan, Gunda

NAY: None

ABSENT: None

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

**STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION**

RESOLUTION - RE: CALSTART, INC.

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement ARV-20-006 with CALSTART, Inc., for an up to \$50,000,000 block grant to design, implement, and fund, with CEC oversight, various medium- and heavy-duty ZEV refueling infrastructure incentive projects throughout California. The CEC is providing \$17,000,000 in grant funds to design and implement this block grant project and fund incentive projects in the state. Additional funds may be added up to \$50,000,000 at future dates for similar activities, subject to future appropriations and Clean Transportation Program Investment Plan funding allocations; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Monahan, Gunda

NAY: None

ABSENT: None

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: CITY OF SACRAMENTO

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement ARV-20-007 with the City of Sacramento for a \$1,825,418 grant to implement various projects to support the adoption of EVs identified in the City's EV Ready Communities Challenge Blueprint. Under this agreement, the City of Sacramento will install EV charging infrastructure, implement an E-bike pilot program, and conduct activities and outreach to ensure projects benefit disadvantaged and low-income communities; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Gunda

NAY: None

ABSENT: Monahan

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

RESOLUTION - RE: CONTRA COSTA TRANSPORTATION AUTHORITY

RESOLVED, that the State Energy Resources Conservation and Development Commission (CEC) adopts the staff CEQA findings contained in the Agreement or Amendment Request Form (as applicable); and

RESOLVED, that the CEC approves Agreement ARV-20-008 with Contra Costa Transportation Authority (CCTA) for a \$2,467,067 grant to implement key strategies outlined in CCTA's EV Readiness Blueprint adopted by the CCTA Board in 2019. Key strategies include: expanded access to EV chargers at multiunit dwellings and public locations to improve health and welfare of residents who face barriers to zero emission mobility options; workforce development programs that train local residents in underserved communities to repair EVs and install/maintain EV supply equipment; and implementing car share programs to provide reliable transportation options in underserved communities; and

FURTHER BE IT RESOLVED, that the Executive Director or his/her designee shall execute the same on behalf of the CEC.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Monahan, Gunda

NAY: None

ABSENT: None

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

IN THE MATTER OF:

**THE 2021 INTEGRATED ENERGY
POLICY REPORT (2021 IEPR)**

Docket No. 21-IEPR-03

**RESOLUTION ADOPTING NATURAL
GAS DEMAND AND RATE
FORECASTING FORMS AND
INSTRUCTIONS**

WHEREAS, the California Energy Commission (Energy Commission) is directed to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices" and to "use these assessments and forecasts to develop and evaluate energy policies and programs that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety" (Public Resources Code § 25301(a)); and

WHEREAS, the Integrated Energy Policy Report (IEPR) contains these assessments and associated policy recommendations and is adopted every two years; and

WHEREAS, the Energy Commission may require the submission of natural gas demand forecasts and retail price information from utilities and other market participants to perform assessments (Public Resources Code § 25303, § 25303.5, § 25305, and § 25210); and

WHEREAS, Energy Commission staff has prepared and made public draft Natural Gas Demand and Rate Forecasting Forms and Instructions in December 2020, hosted two webinars to respond to questions on the forms, and received written comments in response to the drafts; and

WHEREAS, the draft Natural Gas Demand and Rate Forecasting Forms and Instructions require the submission of information by each gas utility with annual natural gas deliveries of 200 million therms or more in California in both of the two previous calendar years;

THEREFORE BE IT RESOLVED, the California Energy Commission hereby adopts the Natural Gas Demand and Rate Forecasting Forms and Instructions for the 2021 *IEPR*, along with any changes identified at its March 17, 2021 Business Meeting.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the CEC held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Monahan, Gunda

NAY: None

ABSENT: None

ABSTAIN: None



Patricia Carlos
Secretariat

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION**IN THE MATTER OF:*****Preparing the 2021 Integrated Energy
Policy Report (2021 IEPR)*****Docket No. 21-IEPR-01****ORDER INSTITUTING
INFORMATIONAL PROCEEDING****I. Introduction**

The California Energy Commission (CEC) is required to adopt the Integrated Energy Policy Report (IEPR) every two years.¹ The IEPR contains an overview of major energy trends and issues facing the state, as well as a number of detailed assessments of energy supply and demand, energy reliability, efficiency, and other energy issues affecting the state's economy, public health and safety, and environment. The IEPR requires participation from, and coordination with an array of public and private stakeholders, including utilities, public agencies, marketers, producers, generators, importers and exporters, and others, many of whom submit detailed information to support the CEC's analytical efforts. Development of the IEPR is a public process, and numerous workshops and other opportunities for public participation are provided throughout the year-long proceeding. All IEPR events are publicly noticed, and all submissions are received into one of several IEPR dockets maintained for the proceeding, which together serve as the basis for the recommendations in the final IEPR.

II. Assignment of the Committee and Scope

Determining the scope of the IEPR begins with review of the applicable statutory provisions, found in Public Resources Code section 25301 et seq. Commissioner J. Andrew McAllister is the Lead Commissioner for the *2021 IEPR*. Commissioner McAllister also will lead the analysis of building decarbonization and energy efficiency. Commissioner Siva Gunda will lead the analysis of energy reliability, natural gas, and the demand forecast in the *2021 IEPR*. Commissioner Patty Monahan will lead the analysis of the benefits of transitioning to a clean transportation system.

¹ Public Resources Code, sections 25301, 25302.

On February 5, 2021, the *2021 IEPR* Lead Commissioner, J. Andrew McAllister, issued a scoping order identifying the topics that will be examined in the *2021 IEPR*. In addition to analyses specifically required by statute, the *2021 IEPR* will address four major topics as described in further detail in the attached *Scoping Order*:

- Energy reliability over the next five years.
- Natural gas outlook and assessments.
- Building decarbonization and energy efficiency.
- Energy demand.

The scoping order is attached and available at [2021 IEPR Scoping Order](#), or at <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2021-integrated-energy-policy-report>. The *2021 IEPR* may also address other topics as the Lead Commissioner deems necessary.

III. Hearings and Workshops

The first workshop for this proceeding was held on February 2, 2021. Additional hearings will be held and separately noticed. The Commissioners responsible for overseeing the *2021 IEPR* will issue notices at least ten days in advance of their respective hearings and workshops and will identify at that time when written comments and testimony will be due, as well as the manner of the filing. Any person may make oral comments on the subject of this proceeding at these hearings and workshops. The written public comment periods for this proceeding, and the manner in which they will be required to be filed, will be established by separate notice.

IV. Authority

Pursuant to Public Resources Code section 25210 and California Code of Regulations, Title 20, section 1220(b), informational proceedings allow the CEC to hold hearings and take other actions to gather and assess information needed to assist it in formulating policies. Instituting an informational proceeding with the adoption of this Order ensures that the assigned Commissioners responsible for overseeing the preparation of the *2021 IEPR* can collect the information needed to complete the required analyses and assessments.

V. Participation

Those interested in receiving notices of workshops and hearings for the *2021 IEPR* can subscribe at <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2021-integrated-energy-policy-report>. (Scroll down the right side of the page to find “subscribe.”). Alternatively, parties may go to https://ww2.energy.ca.gov/listservers/index_cms.html to sign up for the energypolicy list

server. There will be opportunities for providing written comments before and during these hearings, the details of which will be specified in the notice issued for each hearing. In general, the following instructions will apply, but may be modified in the hearing notice:

For the 2021 IEPR, the CEC is using an electronic commenting system. Visit the website

at <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2021-integrated-energy-policy-report>. Please select and expand the appropriate docket (there are currently 3 separate dockets for the 2021 IEPR and more may be added as needed) and click on the “**Submit e-Comment**” link. This will take you to the page for adding comments to that docket. Please enter your contact information and comment title. You may include comments in the box titled “Comment Text” or attach a file with your comments. Attached comments must be in a Microsoft® Word (.doc, .docx) or Adobe® Acrobat® (.pdf) formatted file. The CEC encourages use of its electronic commenting system, but written comments may be submitted by emailing them to the Dockets Office, or by U.S. Mail to:

California Energy Commission
Dockets Unit, MS-4
Re: Docket No. [insert appropriate docket here]
1516 Ninth Street
Sacramento, CA 95814-5512

If you choose not to use the electronic filing system, please include the appropriate docket number on any emailed or written comments. Comments may alternatively be emailed to docket@energy.ca.gov, with the appropriate docket number provided in the subject line. Please note that your electronic, emailed, written and oral comments, attachments, and associated contact information (for example, address, phone number, and email address) become part of the viewable public record. Additionally, this information may become available via Google, Yahoo, and other search engines.

Any person may make oral comments on the subject of the proceeding at the workshop; the notice for each workshop will identify further details and any limitations surrounding the provision of such comments. The commissioners overseeing the 2021 IEPR may also require the presence and participation of certain persons, consistent with the nature and purpose of the proceeding.

The CEC’s Public Advisor’s Office provides the public with assistance in participating in CEC proceedings. For information on participation or to request interpreting services or reasonable accommodations, please contact the Public Advisor, Noemí O. Gallardo, at publicadvisor@energy.ca.gov, by phone at (916) 654-4489, or toll free at (800) 822-6228. Requests for interpreting services and reasonable accommodations should be

made at least five days in advance. The CEC will work diligently to accommodate all requests.

If you have questions about the subject matter of this order, please contact Heather Raitt, Assistant Executive Director for Policy Development, at (916) 628-2355 or by email at Heather.Raitt@energy.ca.gov.

Direct media inquiries to mediaoffice@energy.ca.gov or (916) 654-4989.

The CEC therefore appoints the Commissioners named above and orders the institution of an informational proceeding for the 2021 IEPR, directing the Executive Director and staff to gather and assess the information needed to prepare the 2021 IEPR consistent with the scope identified in section II above, under guidance of the Lead Commissioner and other assigned Commissioner.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of an Order duly and regularly adopted at a meeting of the California Energy Commission held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Monahan, Gunda

NAY: None

ABSENT: None

ABSTAIN: None



Patricia Carlos
Secretariat

Attachment: Scoping Order for the 2021 Integrated Energy Policy Report

In the matter of:) Docket No. 21-IEPR-01
)
 Preparation of the)
 2021 Integrated Energy Policy Report)
)

Scoping Order for the 2021 Integrated Energy Policy Report

The California Energy Commission’s (CEC’s) Commissioner J. Andrew McAllister is the Lead Commissioner for the 2021 Integrated Energy Policy Report (*2021 IEPR*). Commissioner McAllister also will lead the analysis of building decarbonization and energy efficiency. Commissioner Siva Gunda will lead the analysis of energy reliability, natural gas, and energy demand in the *2021 IEPR*. Commissioner Patty Monahan will lead the analysis of the benefits of transitioning to a clean transportation system.

Legislative Authority

Public Resources Code (PRC) Section 25301(a) requires the CEC to “conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices.” These assessments and forecasts are used to develop recommendations for energy policies that conserve state resources, protect the environment, provide reliable energy, enhance the state’s economy, and protect public health and safety. The CEC includes these energy policy recommendations in its biennial Integrated Energy Policy Report that is issued in odd-numbered years.

Pursuant to PRC Section 25300(d), “The Legislature further finds and declares that timely reporting, assessment, forecasting, and data collection activities are essential to serve the information and policy development needs of the Governor, the Legislature, public agencies, market participants, and the public.”

Consistent with past practices, the CEC intends to open an informational proceeding for the development of the *2021 IEPR*. Pursuant to PRC Section 25210 and California Code of Regulations, Title 20, Section 1220, informational proceedings allow the CEC to hold hearings and take other actions to gather and assess information needed to assist it in formulating policies. Instituting an informational proceeding through the adoption of an order by the Commission ensures that the commissioners who will be responsible for overseeing the preparation of the IEPR, can take all action necessary to collect the information needed to complete the required analyses and assessments, including the issuance of subpoenas.

Further, PRC 25302(d) requires the CEC to consult with various entities in preparing the IEPR including the: California Public Utilities Commission (CPUC), CPUC Public Advocates Office, California Air Resources Board, California Independent System Operator (California ISO), Department of Water Resources, Department of Transportation, and Department of Motor Vehicles,

and any federal, state, and local agencies it deems necessary. The statute states that: “For the purpose of ensuring consistency in the underlying information that forms the foundation of energy policies and decisions affecting the state, those entities shall carry out their energy-related duties and responsibilities based upon the information and analyses contained in the report.” Additionally, the CEC will collaborate with federal and state agencies, local governments, and tribes to meet mutual decarbonization and energy equity goals.

Background

California has enacted a suite of policies aimed at reducing the state’s greenhouse gas (GHG) emissions, while also maintaining energy reliability, controlling costs, and ensuring that all Californians benefit from the state’s clean energy initiatives. Key legislative actions and executive orders (EOs) are listed below and build toward achieving an electricity system that is 100 percent zero carbon by 2045, and, more broadly, a statewide goal of carbon neutrality by 2045. These innovative policies, coupled with rapid market changes and the growing effects of a changing climate, create new opportunities and require creative solutions to transform the state’s energy system.

The heat storm experienced in August 2020 that led to rotating power outages prompted a redoubling of efforts to assure energy reliability in this changing climate. The CEC, CPUC, and the California ISO are working to ensure grid reliability in response to the heat storm and other increasingly severe events related to climate change. In the January 2021 *Final Root Cause Analysis, Mid-August 2020 Heat Storm*, the CEC, CPUC, and California ISO identified factors that led to the two rolling outages, and recommended actions for improving resource planning, procurement and market practices (<http://www.caiso.com/Documents/Final-Root-Cause-Analysis-Mid-August-2020-Extreme-Heat-Wave.pdf>). Implementation of these actions is underway. The 2021 *IEPR* can provide additional information to inform these actions, particularly those aimed at improving near-term reliability.

Energy use and the resulting emissions in the building sector remain a key focus for the state as it aims to decarbonize the economy by 2045. As the state decarbonizes its energy system, it must prudently manage its aging gas-pipeline infrastructure. The 2021 *IEPR* will build on the goals and work responding to Assembly Bill (AB) 758 (Skinner, Chapter 470, Statutes of 2009), Senate Bill (SB) 350 (De León, Chapter 547, Statutes of 2015), AB 3232 (Friedman, Chapter 373, Statutes of 2018), and the 2019 *IEPR* to further a comprehensive approach toward decarbonizing buildings in a cost-effective and equitable manner.

Finally, in every odd numbered year (such as 2021), the CEC undertakes a new 10-year energy demand forecast. For the 2021 *IEPR*, the CEC will make the following enhancements to the forecast (1) extend the forecast timeframe to 15 years to coincide with several state goals that are planned for 2035, and (2) improve methodologies to better quantify and predict the likelihood, severity, and duration of future extreme heat events. In addition to the forecast, beginning with the 2021 *IEPR*, the CEC will further the development of demand scenario analyses to help address the growing magnitude of uncertainty in long-term energy planning due to economy-wide decarbonization efforts. Transportation was the focus of the 2020 *IEPR Update*, which identifies important changes and trends in the state’s transportation system. While not the focus of the 2021 *IEPR*, planning for changes in the transportation system is a major element of energy planning.

Key Legislative Initiatives and Executive Orders

The 2021 *IEPR* will reflect the many key policy initiatives that shape California’s energy policies, including:

- AB 758 (Skinner, Chapter 470, Statutes of 2009): required the CEC to develop and periodically update an action plan to increase energy efficiency savings in existing buildings.
- EO B-16-2012: set a goal of reaching 1.5 million ZEVs on California's roadways by 2025.
- SB 1383 (Lara, Chapter 523, Statutes of 2014): set a target of achieving a 40 percent reduction in statewide methane emissions below 2013 levels by 2030.
- SB 350 (De Leon, Chapter 547, Statutes of 2015): elevated the need for energy equity and updated renewables and energy efficiency goals towards reducing GHG emissions by 2030.
- SB 32 (Pavley, Chapter 249, Statutes of 2016): set a statewide goal to reduce California's GHG emissions 40 percent below 1990 levels by 2030.
- AB 197 (Garcia, Chapter 250, Statutes of 2016): assured that the state's implementation of its climate change policies is transparent and equitable, with the benefits reaching disadvantaged communities being fundamental to these efforts.
- SB 100 (De León, Chapter 312, Statutes of 2018): accelerated the state's renewables goal to 60 percent by 2030 and put into law the state's commitment to 100 percent renewable and a zero-carbon electricity system by 2045.
- EO B-55-18: established a statewide goal to achieve carbon neutrality by 2045.
- AB 3232 (Friedman, Chapter 373, Statutes of 2018): called on CEC to assess potential to reduce GHG emissions 40 percent below 1990 levels from residential and commercial buildings by 2030.
- SB 1414 (Wolk, Chapter 678, Statutes of 2016): required the CEC to develop a plan to promote the installation of central air conditioning and heat pumps in compliance with Title 24.
- SB 1477 (Stern, Chapter 378, Statutes of 2018): required the CPUC, in consultation with the CEC, to create two incentive programs to promote the installation of low-emission and near-zero-emission space- and water-heating technologies in new and existing homes (the Building Initiative for Low-Emissions Development [BUILD] and Technology and Equipment for Clean Heating [TECH]).
- SB 49 (Skinner, Chapter 697, Statutes of 2019): gave the CEC new authority to develop flexible demand appliance standards within Title 20 and requires the CEC to report on implementation in the IEPR.
- EO B-48-18: called for at least 5 million ZEVs on California's roads by 2030 and spurs the installation of 250,000 plug-in electric vehicle chargers, including 10,000 direct current fast chargers and 200 hydrogen refueling stations by 2025.
- EO N-79-20: called for 100 percent of in-state sales of new passenger cars and trucks to be zero-emission by 2035, set a goal of 100 percent of medium- and heavy-duty vehicles in the state be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks, and set a goal for the state to transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible.

Scope of the 2021 IEPR

The 2021 IEPR will continue and expand on previous efforts to decarbonize California's energy system while ensuring that the benefits are equitably spread. The 2021 IEPR will address four major topics as described below with a focus on equity in the report and workshops:

1. Energy reliability over the next five years
2. Natural gas outlook and assessments
3. Building decarbonization and energy efficiency
4. Energy demand

The *2021 IEPR* will include an analysis of the benefits of transitioning to a clean transportation system, as required by statute.

1. Energy Reliability Over the Next Five Years

Electric Reliability: In coordination with the CPUC, California ISO and other statewide balancing authorities, the *2021 IEPR* will discuss opportunities to improve electric reliability for Californians over the next five years. Areas for discussion will include:

- Electric reliability assessments in the California ISO footprint as well as all of California as a whole over the next five years. This will include an evaluation of progress towards ensuring sufficient replacement resources are available to enable the most expedient retirement of the remaining once-through cooling power plants (consistent with recommendations in the *2019 IEPR*) and of the Diablo Nuclear Power Plant.
- *Opportunities to reduce reliance on* fossil gas-fired electric generation in California over the next five years while maintaining electric reliability.
- Approaches to prioritize equity including improving air quality, reducing cost, and exploring other opportunities to increase benefits to all Californians. Opportunities to increase reliability in California through better integration with the western regional grid.
- Whether it is economically workable to retrofit existing pipeline gas-fired electric generation resources to improve their efficiency to support achieving policy goals.
- Opportunities to address issues and barriers related to expanding the role of distributed energy resources and demand response in supporting reliability and resource sufficiency both in the near term and in long-term planning. This exploration will consider market trends and will examine the current and potential roles of smart meter data in enabling these resources.
- Publicly owned utility (POU) compliance with energy storage system procurement targets and policies adopted by their governing boards (Public Utilities Code 9506).
- Ensuring energy reliability in Southern California, taking into account the infrastructure challenges with the pipeline gas system, limitations on the use of the Aliso Canyon pipeline gas storage facility, and the development of replacement resources from power plant retirements.

2. Natural Gas Outlook and Assessments

In the *2021 IEPR*, the CEC will assess the outlook for gas use in California both in the 10-year and 25-year planning horizons across key sectors through development and refinements to gas demand forecasts and scenarios, to accurately reflect the impacts of decarbonization policies and goals of the state.

This will include exploring the role of renewable gas, hydrogen, and other zero-carbon alternatives such as engineered carbon removal (ECR) in a low carbon future, to replace and/or complement the use of fossil gas with focus on: identification of the most suitable applications;

availability and pricing; and opportunities to repurpose existing infrastructure to integrate the usage of renewable gas, hydrogen, and ECR.

The CEC will also collaborate with the CPUC on their Long-Term Gas Planning Rulemaking and develop necessary assessments.

As appropriate, the 2021 IEPR will report on interagency planning efforts related to the potential to reduce, repurpose, and transform the state's pipeline gas infrastructure as the demand for fossil gas declines.

3. Building Decarbonization and Energy Efficiency

Decarbonizing California's building stock is an essential element of meeting the state's long-term carbon neutrality goals. The 2021 IEPR will include an in-depth discussion on building decarbonization policies and strategies, provide updates and analysis of the various standards and incentive programs aimed at supporting building decarbonization and maintaining system reliability, and assess the contributions of existing and potential policies and programs toward meeting the state's decarbonization goals in an equitable manner. Expanding on the building decarbonization assessment called for by AB 3232, the 2021 IEPR building decarbonization analysis will include discussion of:

- Residential and commercial building decarbonization strategies, as well as strategies to decarbonize industrial and agricultural sectors.
- An update on targets towards a statewide doubling of energy efficiency, as required by SB 350.
- Strategies to promote and ensure the quality installation of central air conditioning and heat pumps, as directed by SB 1414.
- The development of load flexibility standards for technologies that have the ability to make operational adjustments in response to signals from the grid. SB 49 gave the CEC new authority to develop flexible demand appliance standards within Title 20 and requires the CEC to report on implementation in the IEPR.
- Analysis of equity and workforce considerations related to decarbonization to support equitable decarbonization measures.
- Strategies to increase innovative financing approaches — removing the upfront costs barriers — for the comprehensive retrofits of existing buildings that support California's decarbonization goals, including expanded financing opportunities for renters and low-income Californians, to be done in collaboration with CPUC initiatives (for example, CPUC Rulemaking 20-08-022).
- The Building Energy Efficiency Standards 2022 Update and future updates.
- POU energy efficiency targets in comparison with actual savings (Public Utilities Code 9505, PRC 25305.2).
- Needed data and analytical tools to enhance assessments and measure progress of decarbonization of California's building stock.

4. Energy Demand

Electricity, Natural Gas, and Transportation Demand Forecasts: The CEC will prepare new end-user electricity, natural gas, and transportation fuel demand forecasts to 2035. Several forecasting products will be developed, including forecasts of electricity consumption and peak

electricity demand for California and for individual utility planning areas and forecast zones in the state and analysis of procurement trends amongst load serving entities. In this, the CEC will reassess the impacts on electricity demand of climate change, behind-the-meter generation, adoption of battery storage, energy efficiency standards, fuel substitution programs, and transportation electrification trends. In developing the peak demand forecast, the CEC will improve methodologies for quantifying the likelihood, severity, and duration of future extreme heat events. The CEC will also develop exploratory transportation demand scenarios to assess energy impacts of state goals, proposed policies, and other potential market changes.

Energy Demand Scenarios: Staff will initiate a process to develop economy-wide energy demand scenarios through a “what if” analysis geared towards policy compliance and aspirational goal setting. Staff will explore new programs, policies, potential market changes, and other demand-side strategies that are (1) needed to meet California’s long-term decarbonization goals, and (2) outside the scope of the ten-year energy demand forecast.

The demand scenarios will be designed to assess options for achieving several goals related to a renewable and carbon-free electricity system by 2045, GHG emissions reductions, and the sale of zero-emission vehicles. The demand scenarios are a tool to assess the potential of policies and strategies needed to meet decarbonization goals, as well as their impact on state energy system planning, including consideration of impacts on disadvantaged communities.

2021 IEPR Schedule

The Lead Commissioner directs the CEC staff to use the following general schedule. As workshop topics and dates are finalized, the CEC will post notices on its website and notify stakeholders at least 10 days in advance of each workshop date. The schedule will be posted and regularly updated at <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2021-integrated-energy-policy-report>.

Task/Event	Date(s)
Public workshops on specific topics	February 2021 – December 2021
Final Scoping Order released	March 2021
Adopt order instituting investigation for 2021 IEPR	March 2021
Release draft <i>2021 IEPR</i>	October 2021
Release final <i>2021 IEPR</i>	January 2022
Adopt <i>2021 IEPR</i>	February 2022

Participation in the Integrated Energy Policy Report Proceeding

Policy recommendations contained in the *2021 IEPR* will be based on the record developed during the proceeding, including data and technical analyses by the staff and stakeholders. Analysis and information developed in other proceedings at the CEC and by other agencies will be incorporated as appropriate. Participants should use the IEPR docket number 21-IEPR-01 and associated dockets when submitting information for the Lead Commissioner’s consideration which are as follows:

- 21-IEPR-01 - General/Scope
- 21-IEPR-02 - Electricity Resource Plans
- 21-IEPR-03 - Electricity and Gas Demand Forecast
- 21-IEPR-04 - Energy Reliability

- 21-IEPR-05 - Natural Gas Outlook and Assessments
- 21-IEPR-06 - Building Decarbonization and Energy Efficiency
- 21-IEPR-07 - Clean Transportation Benefits

The Lead Commissioner encourages the active participation of all interested and affected participants because public input is essential to ensure a complete and thorough record. As in previous proceedings, the Lead Commissioner recognizes that close coordination with federal, state, local, and other agencies is critical to identifying and addressing energy infrastructure and related environmental challenges. The Lead Commissioner directs staff to continue working with these agencies to ensure their participation in this proceeding.

Contacts

The Energy Commission's Public Adviser's Office provides the public with assistance in participating in Commission proceedings. For information on how to participate in this forum, please contact the public adviser at publicadviser@energy.ca.gov, (916) 654-4489, or toll free at (800) 822-6228. Requests for interpreting services and reasonable accommodations should be made at least five days in advance. The CEC will work diligently to accommodate all requests.

Media inquiries should be directed to the Media and Public Communications Office at mediaoffice@energy.ca.gov or (916) 654-4989.

Questions on the technical subject matter should be directed to Heather Raitt, Assistant Executive Director for Policy Development, at (916) 628-2355 or by email at Heather.Raitt@energy.ca.gov.

Availability of Documents

When new information is posted, an email will be sent to those on the energypolicy listserv. Those interested in receiving these notices can subscribe in the lower right corner at <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2021-integrated-energy-policy-report> or alternatively manage existing listservs or sign up for others here <http://www.energy.ca.gov/listservers/index.html>.

IT IS SO ORDERED.

Dated: Tuesday, March 16, 2021, at Sacramento, California

APPROVED BY:

J. Andrew McAllister
Lead Commissioner for the 2021 IEPR

CEC List Servers: energypolicy, diversity, dcag, barriers, climatechange, efficiency, existing_buildings, decarbonization, electricity, natural gas

STATE OF CALIFORNIA

STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

IN THE MATTER OF:

Docket No. 20-IEPR-01

*THE 2020 INTEGRATED ENERGY
POLICY REPORT UPDATE (2020 IEPR)*

*Adoption of the 2020 Integrated
Energy Policy Report Update*

WHEREAS, the Warren-Alquist Act requires the Energy Commission in even-numbered years to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices" and to "use these assessments and forecasts to develop and evaluate energy policies and programs that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety" (Public Resources Code § 25301, subd. (a)); and to update these assessments and forecasts in odd-numbered years (Public Resources Code § 25302, subd. (c)); and

WHEREAS, on February 24, 2020, the Lead Commissioner issued a Scoping Order for the *2020 Integrated Energy Policy Report Update* stating that the *2020 Integrated Energy Policy Report Update* would consist of three volumes consisting of (1) a report on transportation trends, challenges, and opportunities; (2) an update to the demand forecast; and (3) an assessment of microgrids; and

WHEREAS, 12 public workshops were held between May 2020 and December 2020 to solicit input from stakeholders on these topics, including nine public workshop on transportation and two on the demand forecast; and

WHEREAS, on January 6, 2021, the Lead Commissioner published the draft *2020 IEPR Update, Volume I: Blue Skies, Clean Transportation* for public review and comment, and, after considering all comments received, published the proposed final version on February 25, 2021 along with a Notice of Intent to Adopt at this regularly scheduled Business Meeting; and

WHEREAS, on February 4, 2021, the draft *2020 IEPR Update, Volume III: California Energy Demand Forecast Update* was published for review and comment and, after considering all comments received, the proposed final was published on

February 25, 2021 along with a Notice of Intent to Adopt at this regularly scheduled Business Meeting; and

WHEREAS, the draft 2020 IEPR Update, Volume II on microgrids will be published and adopted at a later date; and

WHEREAS, the Energy Commission has considered the application of the California Environmental Quality Act (CEQA) to the adoption of the *2020 Integrated Energy Policy Report Update, Volumes I and III*, and concluded that the adoption of these reports is not a “project” under CEQA, but in the event that adoption was determined to be a project, that it would nonetheless be exempt from CEQA requirements pursuant to the “common sense” exemption (CEQA Guidelines, § 15061, subd. (b)(3)).

THEREFORE BE IT RESOLVED, the California Energy Commission hereby accepts, approves, and adopts the Final *2020 Integrated Energy Policy Report Update, Volume I Blue Skies, Clean Transportation and Volume III: California Energy Demand Forecast Update* incorporating any changes presented and adopted today along with any non-substantive changes such as typographical corrections, and directs Energy Commission staff to make the document accessible to state, local, and federal entities, the public, and the Legislature.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of a Resolution duly and regularly adopted at a meeting of the California Energy Commission held on March 17, 2021.

AYE: Hochschild, Douglas, McAllister, Monahan, Gunda

NAY: None

ABSENT: None

ABSTAIN: None



Patricia Carlos
Secretariat