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<th><strong>DOCKETED</strong></th>
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<tr>
<td><strong>Docket Number:</strong></td>
<td>21-BUSMTG-01</td>
</tr>
<tr>
<td><strong>Project Title:</strong></td>
<td>Business Meeting Agendas, Transcripts, Minutes, and Public Comments</td>
</tr>
<tr>
<td><strong>TN #:</strong></td>
<td>238162</td>
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<tr>
<td><strong>Document Title:</strong></td>
<td>June 9 2021 Business Meeting ADA Sans Public Comment Slides</td>
</tr>
<tr>
<td><strong>Description:</strong></td>
<td><em><strong>This document supersedes TN 238159</strong></em></td>
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<td><strong>Filer:</strong></td>
<td>Chester Hong</td>
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<td><strong>Organization:</strong></td>
<td>California Energy Commission</td>
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<td><strong>Submitter Role:</strong></td>
<td>Commission Staff</td>
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<td><strong>Submission Date:</strong></td>
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<td><strong>Docketed Date:</strong></td>
<td>6/9/2021</td>
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Pledge of Allegiance

I pledge allegiance to the Flag of the United States of America, and to the Republic for which it stands, one Nation under God, indivisible, with liberty and justice for all.
CALIFORNIA IS SET TO FULLY REOPEN

JUNE 15

- WEAR A MASK
- GET VACCINATED
Sign up to get notified when it's your turn to get the COVID-19 vaccine.
California Energy Commission’s

SAVE THE DATE
December 2021

Nominations due by:
June 25
Remote Compliance

Business Meeting held remotely, consistent with Executive Orders N-25-20 and N-29-20 and the recommendations from California Department of Public Health to encourage physical distancing to slow spread of COVID-19.

If Zoom’s toll-free phone numbers don’t work:
- Dial: (669) 900-6833
- Meeting ID: 938-6923-0237

For remote participation instructions visit CEC’s Business Meetings webpage:
https://www.energy.ca.gov/proceedings/business-meetings
Public Comment Instructions

- Pursuant to California Code of Regulations Title 20 §1104(e), any person may make oral comment on any agenda item.

- Comments may be limited:
  - to 3 minutes or less
  - 1 representative per organization

- Any person wishing to comment on information items or reports (non-voting items) shall reserve their comment for the general public comment portion of the meeting agenda.

Zoom App/Online
Click “raise hand”

Telephone
Dial (669) 900-6833 or (888) 475-4499 Enter Webinar ID: 938 6923 0237
- Press *9 to raise hand
- Press *6 to (un)mute

When called upon
Public Advisor will open your line
Unmute, spell name and state affiliation, if any, for the record, then begin your comments
Item 1 a. – d.: Consent Calendar

a. Lawrence Berkeley National Laboratory. Contact: Adeel Ahmad
b. Electric Transportation Community Development Corporation. Contact: Sharon Purewal
c. Stanfield Systems, Inc. Contact: Jesse Gage
d. Alamitos Energy Center (13-AFC-01C). Contact: Joseph Douglas
Item 2: Appointment of Members to the Disadvantaged Communities Advisory Group

June 9, 2021 Business Meeting

Noemí Otilia Osuna Gallardo, Public Advisor
Public Advisor’s Office
Benefits to Californians
DACAG Appointments Overview

- 11 members per charter
- 3 vacancies in 2021
- Terms run 4/1/21 – 3/31/23
- Start after CEC, CPUC approve
- First meeting in July
3 Candidates

José Hernandez
Community Engagement Manager
Los Angeles Cleantech Incubator (LACI)

Elena Krieger, PhD
Director of Research
Physicians, Scientists, and Engineers (PSE) for Healthy Energy

Curtis Silvers
Executive Vice President
Los Angeles Brotherhood Crusade
Staff Recommendation

• Approve 3 appointments
Item 3: Assembly Bill 2127 Revised Staff Report

June 9, 2021 Business Meeting

Kiel Pratt, Supervisor, Transportation Planning and Analysis Unit
Fuels and Transportation Division / Transportation Policy and Analysis Office
Benefits to Californians

Cleaner transportation

Grid-friendly infrastructure

Consumer convenience

Source: CEC, FreeWire Technologies, Beam Global
Overview of AB 2127 and Executive Order N-79-20

• Every 2 years, create reports assessing:
  • Charging infrastructure needs for all vehicle types
  • Utility grid connection
  • Charger hardware and software
  • Programs accelerating EV adoption

• Update AB 2127 assessment to capture EO N-79-20's expanded targets
Zero-Emission Vehicle Targets

AB 2127: 5M ZEVs by 2030

EO N-79-20: 8M ZEVs by 2030
# Scope of AB 2127 Assessment

<table>
<thead>
<tr>
<th>Existing Chargers</th>
<th>Future Chargers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counting Chargers</td>
<td>Electric Vehicle Infrastructure Projections (EVI-Pro 2)</td>
</tr>
<tr>
<td></td>
<td>Electric Vehicle Infrastructure for Road Trips (EVI-RoadTrip)</td>
</tr>
<tr>
<td></td>
<td>Widespread Infrastructure for Ride-hailing EV Deployment (WIRED)</td>
</tr>
<tr>
<td></td>
<td>Medium- and Heavy-Duty EV Infrastructure Load, Operation, and Deployment (HEVI-LOAD)</td>
</tr>
<tr>
<td></td>
<td>Off-Road, Port and Airport Electrification</td>
</tr>
</tbody>
</table>

Other EVs

<table>
<thead>
<tr>
<th>Special Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charging Hardware and Software (Equipment Components, Standards, and Interoperability)</td>
</tr>
<tr>
<td>Make-Ready Electrical Equipment (Community-Centric Plans, Building Codes, and Grid Evaluation)</td>
</tr>
<tr>
<td>Other Programs to Accelerate the Adoption of Electric Vehicles (Incentives, Investments, and Others)</td>
</tr>
</tbody>
</table>
Modeling Approach

Inputs

✓ ZEV population (Hydrogen, pure battery electric, plug-in hybrid)
✓ Residential charging access
✓ Travel data
✓ Vehicle attributes by class
✓ Charger utilization

Outputs

✓ Number of chargers needed at statewide and countywide level
✓ Broken down by charger type and location type
✓ Statewide load profiles

Source: CEC, National Renewable Energy Laboratory, and Alternative Fuels Data Center
Projected Load: Light Duty

Projected 2030 statewide power for light-duty charging for 8 million ZEVs on a typical weekday.
Projected Load on the Grid: Medium- and Heavy Duty (HEVI-LOAD)

Projected 2030 load curve for medium- and heavy-duty on-road vehicles across major segments
Updates to Light-Duty Results

Updated Modeling Results (since Jan. 2021):

- Incorporate stakeholder feedback
- Better reflect current and future market conditions, especially improved EVs with longer ranges, larger batteries, and higher charging power
- Enhance methods and continually improve modeling accuracy
Medium- and Heavy-Duty Results

- **180,000** medium- and heavy-duty ZEVs in 2030 to achieve EO N-79-20 goals

- Modeling suggests **157,000** DC fast chargers needed

- Ongoing analysis will investigate higher charging power

- Critical for equity!
Beyond Charger Numbers

• Focus on Equity
• Vehicle-grid integration
  • Bidirectional charging
• Standard connectors and communications
  • Convenience
  • Grid-friendly charging
• Local “best-fit” solutions
• Financing innovations and continued public support

Source: Ford Motor Company
Recommendation

• Approve AB 2127 Revised Staff Report

• Subsequent final publication as a Commission Report

• Every 2 years: Updated charging infrastructure reports
Item 4: Solar Energy Generating System Units (SEGS) III – VII Decommissioning Plan

June 9, 2021, Business Meeting

Presented by Elizabeth Huber, Compliance Monitoring and Enforcement Office Manager
John Heiser, Compliance Project Managers
Siting, Transmission and Environmental Protection Division
Benefits to Californians

• Proposed repurpose from solar and natural gas power plant to PV panels and large-scale battery energy storage system.

• “Cradle-to-cradle” project supports state's clean energy future.
Overview

• Located on approximately 1,000 acres of desert terrain outside Kramer Junction in San Bernardino County.

• Filed a Final Decommissioning Plan for SEGS III – VII.
## Key Milestones

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
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<tbody>
<tr>
<td>5/25/1988</td>
<td>CEC approved SEGS III – VII project consisting of five 30 MW (150 W net total) solar and natural gas-fired units</td>
</tr>
<tr>
<td>2/01/1989</td>
<td>Power plant came online and producing power under a power purchase agreement with Southern California Edison</td>
</tr>
<tr>
<td>10/15/2019</td>
<td>Final operations suspended pursuant to a revised Cold Layup Plan.</td>
</tr>
<tr>
<td>4/20/2021</td>
<td>Final Decommissioning Plan (TN: 27500) submitted</td>
</tr>
</tbody>
</table>
Solar collectors capture and concentrate sunlight to heat a synthetic oil called therminol, which then heats water to create steam.
Steam is piped to onsite turbine generator to produce electricity, which is then transmitted via power lines.
Staff Recommendation

• Approve SEGS III – VII Decommissioning Plan and newly-proposed decommissioning conditions.
Item 5: 2022 Title 20 Data Collection Regulation Modifications

June 9, 2021 Business Meeting

Ryan Eggers, Transportation Fuels Data & Analysis Unit
Energy Assessments Division, Data Integration & Policy Office
Benefits to Californians

Help ensure reliability & advance state energy goals
Overview of Modifications

New data:

• Hydrogen, biodiesel, and renewable diesel production data
• Property Assessed Clean Energy (PACE) data
• Natural gas storage system data

General regulations:

• Data submission procedural changes
• General language modernization
• Confidentiality process changes
<table>
<thead>
<tr>
<th>Event Description</th>
<th>Date</th>
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<tbody>
<tr>
<td>Pre-Rulemaking Workshop</td>
<td>10/27/20</td>
</tr>
<tr>
<td>Opening Phase 2 Data Rulemaking Activities (submit materials with OAL)</td>
<td>6/18/21</td>
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<tr>
<td>45-Day Comment Period</td>
<td>6/18/21 – 8/2/21</td>
</tr>
<tr>
<td>Public Hearing</td>
<td>8/6/21</td>
</tr>
<tr>
<td>Adoption of Rulemaking Package by Commissioners (PROPOSED)</td>
<td>9/8/21</td>
</tr>
<tr>
<td>Adopted Rulemaking Package sent to OAL</td>
<td>September – October 2021</td>
</tr>
<tr>
<td>Enacted Regulations</td>
<td>1/1/22</td>
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</tbody>
</table>
Next Steps

• ISOR and Express Terms will be submitted by 6/18.

• Staff to present proposed regulations at September Business Meeting.
Item 6: California Schools Healthy Air, Plumbing and Efficiency (CalSHAPE) Program Guidelines

June 9, 2021 Business Meeting

Jonathan Fong, Manager
Renewable Energy Division, School Stimulus Office
Benefits to California

Energy Efficiency
Air Quality

Creates Jobs

Conserves Water
Assembly Bill 841 Overview

• CalSHAPE = California Schools Healthy Air, Plumbing and Efficiency Program

• 2 grant programs
  Ventilation: assess, maintain, and repair HVAC systems
  Plumbing: replace inefficient plumbing fixtures and appliances
Program Budget

2021 Program Accrual

$266 M

Estimated Overall Program Budget

$500 M

2021 - 2026
Priority Eligibility

Initial phase: 100% to schools in “underserved” areas
  • Disadvantaged communities
  • Low-income communities
  • CalEnviroScreen
  • Free and Reduced Price Meal
  • Tribal land
GIS Web Map Tool
- 2 public workshops
- Staff Draft Guidelines: 1/22
- Revised Staff Draft Guidelines: 3/26
- Collaborative Meetings:
  - LEAs
  - HVAC and Plumbing Industry
  - Stakeholders
Proposed Ventilation Guidelines

**Initial phase:** Assessment and Maintenance Grants
- Planned Projects or Reimbursements for work after 8/1/2020

- Assessment
- Maintenance
- Adjustments of ventilation rates
- Filter replacements
- Carbon dioxide monitor installation
- Assessment Report

**Possible future phase:** HVAC Upgrade and Repair Grants
- HVAC repairs, upgrades, or replacements
Proposed Plumbing Guidelines

Eligible Fixtures

- Toilets
- Urinals
- Showerheads
- Faucets

Eligible Appliances

- Dishwashers
- Commercial Ice Makers
- Commercial Clothes Washers
Streamlined Application Process
Staff Recommendation

• Approve CalSHAPE Ventilation & Plumbing Program Guidelines
• Adopt determination that action is exempt from CEQA
Item 7: Agreement 600-20-008 with California Air Resources Board for a $850,000 Contract

June 9, 2021 Business Meeting

Mark Johnson, Energy Commission Specialist
Fuels and Transportation Division, Advanced Vehicle Infrastructure Office
Benefits to California

- Advances safety
- Strengthens consumer protection
- Provides data
Overview

• Develop and release competitive solicitation
• Build new hydrogen station testing device
• Collect fueling data received from stations tested
Staff Recommendation

• Approve agreement
• Adopt staff's recommendation that action is exempt from CEQA
Item 8: California Air Resources Board

June 9, 2021, Business Meeting

Larry Rillera, Air Pollution Specialist
Fuels and Transportation Division, Transportation Policy and Analysis Office
Benefits to California

• ZEV and infrastructure training
• Equity community training, employment, and recovery
• ZEV-related jobs and career pathways
• Address critical community-identified clean transportation needs
Overview of Proposed Item

- Collaborate on ZEV policies, investments, and deployments
- Be intentional about Inclusion, Diversity, Equity, Access, and Local (IDEAL)
- Transfer $1 million from CARB to the CEC for a workforce solicitation
- Set up IDEAL ZEV Workforce Pilot Solicitation
Staff Recommendation

- Approve item
- Approve staff recommendation – exempt from CEQA
Item 9: California Conservation Corps

June 9, 2021, Business Meeting

Larry Rillera, Air Pollution Specialist
Fuels and Transportation Division, Transportation Policy and Analysis Office
Benefits to California

• Training for transportation electrification
• ZEV-related career pathways
• Intentional investment in front-line communities
• Leverage and expand state investments for GGRF Funded Energy Corps
Overview of Proposed Item

• Develop ZEV training curriculum and field activities

• Secure partners and project sponsors

• Develop and implement the Transportation Electrification Training Plan

• Provide classroom instruction and on-the-job training

Energy Corps Centers

Fresno
Norwalk Hub
Sacramento Hub
Vista (No. San Diego)
Staff Recommendation

• Approve item
• Approve staff recommendation – exempt from CEQA
Item 10: Aspen Environmental Group

June 9, 2021, Business Meeting

David Erne, Manager
Energy Assessments Division, Supply Analysis Office
Benefits to Californians

• Provides specialized expertise
• Supports analysis of critical energy systems

SoCalGas Hot Summer Demand
A Scenario Analysis Based on Historical Data

California Energy Commission
CONSULTANT REPORT

California Off-Road Transportation Electrification Demand Forecast

Aliso Supports ~9,800 MW; 40% LADWP/ 60% in CAISO; Critical for Peak Day and Contingency Reserve Situations
Scope Of Work

• Electricity System & Infrastructure Analysis
• Demand Analysis
• Natural Gas Assessments and Forecasting
• Distributed Generation Analysis
• Data Management
Staff Recommends

• Approve this contract.
Item 11: California Clean Energy Fund DBA CalCEF Ventures

California Sustainable Energy Entrepreneur Development (CalSEED) – Low-Carbon Gas (LCG) small grants program

June 9, 2021 Business Meeting

Michael Ferreira
Energy Deployment and Market Facilitation Office
Energy Research & Development Division
Benefits to California

• Advance clean energy economy
• Reduced GHG emissions and criteria air pollutants
• Safer natural gas infrastructure
EPIC CalSEED

- Modeled after EPIC-funded CalSEED program:
  - Concept Award: $150K
  - Mentoring
  - Technical Consulting
  - Business Development Services
  - Business Plan Competition: $450K Prototype Award

CalSEED Follow On Funding

- Public $37.4M
- Private $28.36M
- 2 Acquisitions
CalSEED Low-Carbon Gas

- Technology Foci:
  - Industrial process heating
  - Medium- and heavy-duty transportation
  - Natural Gas infrastructure safety

Source: California Air Resources Board

425.3 MMT CO$_2$e 2018 TOTAL CA EMISSIONS

Source: California Air Resources Board
Staff Recommendation

• Approve item and adopt staff’s determination that project is exempt from CEQA
Item 12: Guidehouse Inc.

June 9, 2021 Business Meeting

Kevin Uy, EGSS II
Energy Research and Development Division
Energy Efficiency Research Office
Benefits to Californians

- Inform future natural gas decarbonization research
- Support natural gas decarbonization technologies
- Focus funding on areas supporting achievement of aggressive carbon neutrality goals
Overview

- Long-Term Natural Gas Research Strategy
- Research Gaps
- Stakeholder Input
- Technology Assessment
- Decarbonization Scenarios
- Recommendations
Staff Recommendation

• Approve this contract agreement.
• Adopt staff’s determination that action is exempt from CEQA.
Item 13: GFO-20-503 - Strategic Pathways and Analytics for Tactical Decommissioning of Portions of Natural Gas Infrastructure

June 9, 2021 Business Meeting

Reta Ortiz, Energy Commission Specialist I
Energy Research Development Division
Energy Systems Research Office
Benefits to Californians

- Enhance strategic long-term gas planning
- Foster transparent, collaborative planning processes
- Develop strategies for cost-effective, equitable gas transition
- Enable decommissioning opportunities and assessments of potential benefits
Pathways and Analytics for Tactical Decommissioning Overview

Project Requirements
- Collaboration with utilities, local governments and customers
- Site selection criteria and decision-making framework
- 3 candidate sites for pilot decommissioning
- Guidelines and criteria to replicate the success for deployment
Project Goals:

- Develop analytical framework to identify where natural gas decommissioning will:
  1. Serve the interests of affected communities,
  2. Lead to net economic and societal benefits, and
  3. Be plausible under a wide range of possible future conditions.

Proposed Cities:

- Santa Monica
- Long Beach
Project Goals:

- Identify opportunities to achieve gas system cost reductions in PG&E’s service territory through tactical decommissioning.
- Identify community priorities, perspectives, and paths forward on electrification and tactical gas decommissioning.

Proposed Cities

- West Oakland
- Berkeley
- Fremont
- Tracy
Staff Recommendation

- Approve grant agreements
- Adopt staff’s determination that projects are exempt from CEQA
Item 14: Entrepreneurial Ecosystem

June 9, 2021 Business Meeting

Anthony Ng
Energy Research and Development Division
Energy Deployment and Market Facilitation Office
Benefits to Californians

$1.6+ billion in follow-on private, public investment
1,000+ employed
400+ patents
4 company exits (3 acquisitions, 1 IPO)
• In 2015, private capital was not supporting clean energy technologies

• Compared to software, clean energy innovation took too much time and money to reach market

• Entrepreneurial Ecosystem sought to fill this gap
Entrepreneurial Ecosystem
• Customized service plan tailored to technology and business needs

• Services include investor and industry connections, pilot site opportunities, and business model development

• Assigned mentor pairing with subject matter experts
Activate Global, Inc.

- Operates Cyclotron Road program
  – two-year fellowship in conjunction with Lawrence Berkeley National Lab

- Focus on hardware technologies

- Rigorous startup curriculum and mentorship

- Access to network of industry, investors, academia and government
California State University, Fresno

• Covers Central Valley, Central Coast, and North State

• Hub and spoke model to cover area

• Specializes in agriculture and water technologies

• Irrigation technology testing, farm demo site
Los Angeles Cleantech Incubator

• One-to-two-year programs for companies with pre-commercial products to Series B

• Focus on energy, zero emission mobility, and circular economy

• Advisory services, investment support, and pilot opportunities
California Clean Energy Fund

- Small grant program
- $150k - $450k awards
- Business development curriculum
- Introductions to network of investors
Staff Recommendation

• Approve item and adopt staff’s determination that projects are exempt from CEQA
Item 15: Evaluating Bi-Directional Energy Transfers and Distributed Energy Resource Integration for Medium- and Heavy-Duty Fleet Electrification

June 9, 2021 Business Meeting

Ben Wender
Electric Generation System Specialist
Research and Development Division
Benefits to Californians

• Reduce stress on grid
• Increase use of distributed energy resources
• Reduce charging costs
• Provide site and community resilience
• Maximize emissions reductions
Purpose of Solicitation

Three Scenarios of Transportation Energy Demand Through 2030

From CEC Energy Assessments Division Transportation Electrification Demand Forecast, 2020 IEPR Vol III
TA Operating LLC

TAking Charge: TravelCenters of America Ultra-Fast En-Route Charging
Sysco Riverside, Inc

Distributed Resources for Diversified Renewable Energy

CalEnviroScreen 3.0

Enlarged area
Staff Recommendation

- Approve grant agreements
- Adopt staff’s determination that projects are exempt from CEQA
Item 16: ACEE Program – Advancing and Commercializing Energy Efficiency in California’s Industrial, Agricultural, and Water Sectors

June 9, 2021 Business Meeting

Michael Lozano, Senior Mechanical Engineer
Energy Research and Development Division
Energy Efficiency Research Office
Benefits to California

Group 1: Dairies

- Smart Sensors
- Big data analytics

= Happy Cows
= Lower electricity costs
= Reduced GHG emissions

Group 2: Wastewater Treatment

- Wastewater
- Advanced Tech

= Lower electricity costs
= Increased capacity
= Smaller footprint
= Lower O&M costs
Optimized Controls for Cooling California Dairy Cows

- Electricity savings: 50 GWh/yr
- Water Savings: 12 Billion/yr
- $306,451 match funds
- Project Locations:
  - Atwater (DAC)
  - Laton (DAC)
  - Pixley (DAC & LIC)
Leveraging Artificial Intelligence and Machine Learning to Increase Energy Efficiency in California Dairies

- 30 Dairy Processing Facilities
- 1-year payback with 20% electricity reduction
- $1,665,912 match funds
- Projects Locations:
  - El Monte (DAC & LIC)
  - Hawthorne (DAC & LIC)
  - Lemoore
Item 16c - Enpowered Solutions

Artificial Intelligence for Energy Efficiency Optimization in California Dairy Operations

• 2-year payback with 10% electricity reduction
• $350,274 match funds
• Project Locations:
  • Turlock (DAC & LIC)
  • Santa Ana (DAC & LIC)
  • Two in City of Industry (LIC)
  • Riverside
Item 16d - Caliskaner Water Technologies

Demonstration of Advanced Primary and Secondary Treatment Technologies for Energy and Performance Benefits to Wastewater Treatment

• 25% efficiency gains → saves 125 GWh/yr
• $2,532,156 match funds
• Project Location:
  • Olivehurst (DAC & LIC)
Item 16e - Gate 5 Energy Partners

Demonstration of Advanced Primary and Secondary Wastewater Treatment Technology

- 60% reduction in aeration energy
- 25% increase in treatment capacity
- $2,327,919 match funds
- Project Location:
  - San Juan Capistrano (Not DAC or LIC)
Staff Recommendation

• Approve 5 grant agreements
• Adopt staff’s determination that items 16a-d are exempt from CEQA
• With respect to 16e, Gate 5 Energy Partners, approve and adopt lead agency Santa Margarita Water District’s CEQA findings.