<table>
<thead>
<tr>
<th>Docket Number:</th>
<th>21-BUSMTG-01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Title:</td>
<td>Business Meeting Agendas, Transcripts, Minutes, and Public Comments</td>
</tr>
<tr>
<td>TN #:</td>
<td>240592</td>
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<tr>
<td>Document Title:</td>
<td>November 15 2021 Business Meeting Presentation</td>
</tr>
<tr>
<td>Description:</td>
<td>N/A</td>
</tr>
<tr>
<td>Filer:</td>
<td>Dorothy Murimi</td>
</tr>
<tr>
<td>Organization:</td>
<td>California Energy Commission</td>
</tr>
<tr>
<td>Submitter Role:</td>
<td>Commission Staff</td>
</tr>
<tr>
<td>Submission Date:</td>
<td>11/15/2021 8:49:20 AM</td>
</tr>
<tr>
<td>Docketed Date:</td>
<td>11/15/2021</td>
</tr>
</tbody>
</table>
California Energy Commission
Business Meeting
November 15, 2021
10:00 a.m.
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.
YOU’RE INVITED TO

December 10, 2021
2:00 p.m. - 3:30 p.m. PST
Join via Zoom

CONGRATULATIONS

2021 CLEAN ENERGY HALL OF FAME Awardees!

Dr. Peter A. Lehman
Lifetime Achievement Award
Founding Director, Schatz Energy Research Center

Abigail Solis
Clean Energy Champion
Manager of Sustainable Energy Solutions, Self-Help Enterprises

Eddie Ahn
Clean Energy Champion
Executive Director, Brightline Defense

Youth for Environmental Justice
Youth Game-Changer Award
Communities for a Better Environment’s Youth for Environmental Justice

Nicole Capretz
Clean Energy Champion
Founder and Executive Director, Climate Action Campaign

Mutual Housing California
Clean Energy Champion
Mutual Housing California
Item 1: Consent Calendar

a. North County Transit District Contact: Esther Odufuwa

b. Ocean Protection Council. Contact: Gabriel Roark

c. American Institute of Chemical Engineers Center for Hydrogen Safety. Contact: Spencer Kelley

d. California Clean Energy Fund dba CalCEF Ventures. Contact: Joshua Croft
Item 2: Water Conservation and Efficiency Update
November 15, 2021 Business Meeting

David Johnson, Mechanical Engineer
Efficiency Division, Appliances Office
Benefits to California

- Conserves water
- Conserves energy
- Reduces cost for consumers
Current Drought Situation

• October 19: Statewide drought emergency
• Water year 2021 driest since 1924¹

¹DWR, Water Year 2021: An Extreme Year
Drought Outlook

- Dry conditions predicted for Winter 2021
- Probability of drought increases

Winter 2021 U.S. Drought Outlook, NOAA

Diffenbauch et al., PNAS, 2015
Water Efficiency Impact

Showerheads, Faucets, Toilets, Urinals

CA Water Use 2011-2015
(Total: 13,600 BGal/yr)

Data: California Water Plan Update 2018, DWR

CEC Staff Analysis
Plumbing Standards

Indoor Water Use

- Toilets: 1.6 to 1.28 GPF
- Lavatory Faucets: 2.2 to 1.2 GPM
- Urinals: 0.5 to 0.125 GPF (wall-mounted)
- Showerheads: Tiered standard from 2.5 to 2.0 to 1.8 GPM

~87 Bgal/yr

~38 Bgal/yr

Residential End Uses of Water (2016), Water Research Foundation
Outdoor Water Use Standards

Spray Sprinkler Bodies

~152 Bgal/yr

Landscape Irrigation Controllers

~92 Bgal/yr
## Recent Water Efficiency Standards

<table>
<thead>
<tr>
<th>Appliance</th>
<th>Year Adopted</th>
<th>Stock Turnover Savings (Bgal/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toilets, Faucets, and Urinals</td>
<td>2015</td>
<td>87</td>
</tr>
<tr>
<td>Showerheads</td>
<td>2015</td>
<td>38</td>
</tr>
<tr>
<td>Spray Sprinkler Bodies</td>
<td>2019</td>
<td>152</td>
</tr>
<tr>
<td>Landscape Irrigation Controllers</td>
<td>2022*</td>
<td>92</td>
</tr>
<tr>
<td><strong>Total Savings</strong></td>
<td></td>
<td><strong>369</strong></td>
</tr>
</tbody>
</table>

Equivalent to conserving a full Folsom Lake each year!

Photo: The Sacramento Bee
Ongoing and Future Rulemakings

Landscape Irrigation Controllers

~92 Bgal/yr

Dipper Wells

~5.5 Bgal/yr

CA Water Use 2011-2015

(Total: 13,600 BGal/yr)

- Agriculture 81%
- Urban C&I 7%
- Residential Outdoor 5%
- Residential Indoor 6%

Data: California Water Plan Update 2018, DWR

- Target any opportunity which provide significant water savings and are cost-effective and technically feasible

<table>
<thead>
<tr>
<th>Appliance</th>
<th>Stock Turnover Savings (Bgal/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential Toilets</td>
<td>10-20</td>
</tr>
<tr>
<td>Other Plumbing Standard Updates</td>
<td>20-35</td>
</tr>
<tr>
<td>Building-Level Leak Detection Devices</td>
<td>30-130</td>
</tr>
<tr>
<td>Commercial Food Service Equipment</td>
<td>2-5</td>
</tr>
<tr>
<td>Agriculture Technologies</td>
<td>30+</td>
</tr>
</tbody>
</table>

CEC Staff Analysis
Item 3: Expansion, Reorganization and Renaming of Public Advisor’s Office and Revision to the CEC Tribal Consultation Policy

November 15 Business Meeting

Noemí O. O. Gallardo
Public Advisor
Expand Office Role & Responsibility

Implement IDEA Initiative

Carousel Gore, Equal Employment Opportunity Officer

Include Tribal Affairs

Katrina Leni-Konig, Deputy Public Advisor And Tribal Liaison

Tom Gates, Tribal Advisor
Ministerial Changes

• Clarify Tribal program in new office
• Identify Deputy Public Advisor is Tribal Liaison
• Update contact information
• Edit typos
Change Office Name

Office of the Public Advisor

Office of the Public Advisor, Energy Equity and Tribal Affairs (PAO+)
Staff Recommendation

• Approve resolution to:
  o expand role and responsibility
  o revise Tribal Consultation Policy
  o change office name
Item 4: Disadvantaged Communities Advisory Group Annual Report

November 15, 2021 Business Meeting

Noemí O. O. Gallardo, Public Advisor
Angela Islas, DACAG Chair
Roman Partida-Lopez, DACAG Vice Chair
Item 5: 2021-2023 Investment Plan Update for the Clean Transportation Program

November 15, 2021 Business Meeting

Patrick Brecht, Investment Plan Update Project Manager
Fuels and Transportation Division, Transportation Integration and Production Office
Benefits to California

- Advances climate change goals
- Reduces petroleum dependence
- Increased ZEV adoption
- Improves air quality
- Furthers economic development
- Supports low-income and disadvantaged communities
- Boosts job growth and workforce development
Disparities in Transportation-Related Pollution Exposure by Race and Income

Percent of Residents Living in High Diesel PM Exposure Communities, by Race

- Black: 36%
- Asian American: 29%
- Latino: 27%
- Other: 22%
- White: 15%
- Native American: 15%

Percent of Residents Exposed to High Diesel PM by Census Tract Median Household Income

- Lower-Income Communities:
  - <20K: 57%
  - 20K-40K: 40%
  - 40K-60K: 26%
  - 60K-80K: 19%
  - 80K-100K: 18%
  - 100K-120K: 19%
  - 120K-140K: 19%
  - 140K-160K: 18%
  - >160K: 16%
Clean Transportation Program Origins in Statute

- Established by Assembly Bill 118 (Nunez, 2007)
- Provides up to $100 million per year
- Extended to January 1, 2024 by Assembly Bill 8 (Perea, 2013)
Clean Transportation Program Funding
By Category 2009–2021

- **Electric** $451M
- **Other Types** $46.3M
- **Workforce** $33.3M
- **Ethanol** $33.5M
- **Hydrogen** $218M
- **Natural Gas/Propane** $131M
- **Biomethane** $67.9M
- **Biodiesel/Renewable Diesel** $67.9M

$1 Billion invested in 600+ projects & programs
2009-2021

Investments Highlights

51%
Funding located in disadvantaged or low-income communities

$734M
Matched Funding

20,000
Trainees

15,154
EV Chargers

3,152
Natural Gas Trucks

70
Natural Gas Fueling Stations

83
Hydrogen Fueling Stations

27
Manufacturing Facilities
Purpose of Investment Plan

• Guides Clean Transportation Program’s investments toward meeting state’s clean transportation goals

• Takes into consideration state regulations and other funding programs to promote coordination across agencies

• Allocates funding for multiple fuel and vehicle technologies, transportation sectors, and supporting activities (e.g., workforce development)

• Since 2020, sets multi-year funding allocations to improve consistency and transparency for potential funding partners
Advisory Committee for the Clean Transportation Program Investment Plan

- Leslie Aguayo-The Greenlining Institute
- Ruben Aronin-Better World Group
- Will Barrett-American Lung Association in California
- Jerome Carman-Schatz Energy Research Center Humboldt State University
- Morgan Caswell-Port of Long Beach
- Vacant-California Air Resources Board
- Tyson Eckerle-Governor’s Office of Business and Economic Development
- Bill Elrick-California Fuel Cell Partnership
- Larry Engelbrecht-Engelbrecht Consulting
- Casey Gallagher-Workforce Economic Development California Labor Federation
- Katherine Garcia-Sierra Club
- Matt Gregori-SoCalGas
- Kevin Hamilton-Central California Asthma Collaborative
- Daryl Lambert-Rising Sun Center
- Rey León-The Latino Equity Advocacy & Policy Institute
- Jose Lopez-Private Citizen
- Bill Magavern-Coalition for Clean Air
- Robert Meyer-Employment Training Panel
- Micah Mitrosky-IBEW 9th District
- Neena Mohan-California Environmental Justice Alliance
- David Modisette-Modisette & Associates
- Miles Muller-Natural Resources Defense Council
- Samantha Houston-Union of Concerned Scientists
- Lori Pepper-California State Transportation Agency
- Michael Pimentel-California Transit Association
- Mary Solecki-AJW
- Tracy Stanhoff-Indigenous Post
- Russel Teall-Private Citizen
- JB Tengco-BlueGreen Alliance
- Zac Thompson-East Bay Community Energy
- Eileen Tutt-California Electric Transportation Coalition
- Lucas Zucker-Central Coast Alliance United for a Sustainable Economy
Commitment to Inclusion, Diversity, Equity and Access

• Collaboration with the Disadvantaged Communities Advisory Group

• Prioritize and invest in proper community outreach and engagement

• Partner with local community-based organizations

• Develop metrics that go beyond funding locations

• Seeking to provide >50% of Investment Plan funds to benefit low-income and disadvantaged communities
Clean Transportation Program Funding Toward Disadvantaged and/or Low-Income Communities

Note: As of August 1, 2021
**Context Setting: Climate & Air Quality**

Legislation & Executive Orders are steering the state toward zero-emission transportation

<table>
<thead>
<tr>
<th>Target</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate</td>
<td>2030: 40% GHG reduction in economy</td>
</tr>
<tr>
<td></td>
<td>2030: 20% GHG reduction in transportation fuels</td>
</tr>
<tr>
<td></td>
<td>2045: Net zero carbon economy</td>
</tr>
<tr>
<td>Air Quality</td>
<td>2031: 80% reduction in smog-forming NOx</td>
</tr>
</tbody>
</table>

Zero Emission Vehicles (ZEVs) are essential to achieving goals!
## Context Setting: ZEV Goals

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Light Duty Vehicles**                 | - 2025: 1.5M ZEVs  
- 2030: 5M ZEVs  
- 2035: 100% of New Sales are ZEVs (E.O. N-79-20)                                           |
| **Charging and Refueling Infrastructure**| - 2025: 250,000 Chargers (inc. 10,000 DC Fast Chargers)  
- 2025: 200 Hydrogen Refueling Stations                                                                 |
| **Medium- and Heavy-Duty Vehicles**     | - 2029: 100% of New Transit Bus Purchases are ZEVs  
- 2035: 100% of All Off-Road Vehicles and Equipment are ZEVs (E.O. N-79-20)  
- 2035: 100% of All Drayage Trucks are ZEVs (E.O. N-79-20)  
- 2045: 100% of All Trucks and Buses are ZEVs (E.O. N-79-20)                                      |
# Progress in Charging Infrastructure Report

## 250,000 Chargers by 2025

<table>
<thead>
<tr>
<th>July 2021</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Existing</strong></td>
<td><strong>66,770</strong>&lt;br&gt;Level 2 Chargers (Estimated)</td>
</tr>
<tr>
<td><strong>Existing</strong></td>
<td><strong>6,008</strong>&lt;br&gt;DC Fast Chargers (Estimated)</td>
</tr>
</tbody>
</table>

Analysis as of July 2021. Not included in this table are an estimated 665 statewide public or shared-private Level 1 chargers.
Progress in Hydrogen Refueling Infrastructure Report

200 Hydrogen Fueling Stations by 2025

- 179 public stations opened and planned
- 200 station goal

- 2021
- 2025

52 open retail hydrogen fueling stations

127 planned hydrogen fueling stations

21 gap from 2025 goal

$166 million

Analysis as of July 2021.
Informing the Investment Plan

- **AB 2127 Electric Vehicle Charging Infrastructure Assessment-Analyzing Charging Needs to Support Zero-Emission Vehicles in 2030**
  - Commission Report published on July 14, 2021

- **SB 1000 Electric Vehicle Charging Infrastructure Deployment Assessment**
  - First report published in December 2020
  - Second report expected in January 2022

- Consulting with the Disadvantaged Communities Advisory Group

- **Adjusting for General Fund augmentations from Budget Act of 2021**
  - $3.9 billion for ZEV-related investments across agencies
    - $1.165 billion to be administered by CEC
    - Some allocations are targeted, others allow more discretion
General Funds from ZEV Package to be Administered by the CEC

- $250 million - for zero-emission drayage trucks
- $25 million - for drayage truck and infrastructure pilot
- $90 million - for transit buses
- $50 million - for school buses
- $250 million - for ZEV manufacturing grants
- $500 million - for ZEV infrastructure

The budget prioritizes diesel emission reduction by earmarking funding to replace

- 1,125 Drayage Trucks
- 1,000 School Buses
- 1,000 Transit Buses

$785 million appropriated in Budget Act of 2021;
$380 million anticipated in FY 2022-23 and 2023-24

with zero-emission alternatives and refueling infrastructure

And to accelerate charging and hydrogen refueling stations and promote ZEV-related manufacturing
2021-2023 Zero-Emission Investments Funding Prioritizes

**Total Clean Transportation Program (CTP) funding:**

- **$314M**
  - Light-Duty Electric Vehicle Charging Infrastructure and eMobility

- **$690M**
  - Medium and Heavy-Duty Zero-Emission Vehicles and Infrastructure
  (battery-electric and hydrogen fuel cell)

- **$77M**
  - Hydrogen Refueling Infrastructure

**Total General Funding** (administered through CTP):

- **$25M**
  - Zero and Near Zero Carbon Fuel Production and Supply

- **$243.8M**
  - ZEV Manufacturing

- **$15M**
  - Workforce Development

**Total Funding**

- **$1.365B**
## Combined Clean Transportation Program and General Fund Allocations in the Lead Commissioner Report

<table>
<thead>
<tr>
<th>Category</th>
<th>Funded Activity</th>
<th>2021-2022</th>
<th>2022-2023*</th>
<th>2023-2024*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero-Emission Vehicles and Infrastructure</td>
<td>Light-Duty Electric Vehicle Charging Infrastructure and eMobility</td>
<td>$270.1</td>
<td>$30.1</td>
<td>$13.8</td>
</tr>
<tr>
<td>Zero-Emission Vehicles and Infrastructure</td>
<td>Medium- and Heavy-Duty Zero-Emission Vehicles and Infrastructure (battery-electric and hydrogen fuel cells)</td>
<td>$391.35</td>
<td>$160.1</td>
<td>$138.8</td>
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<tr>
<td>Zero-Emission Vehicles and Infrastructure</td>
<td>Hydrogen Fueling Infrastructure</td>
<td>$47</td>
<td>$20</td>
<td>$10</td>
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<tr>
<td>Alternative Fuel Production and Supply</td>
<td>Zero- and Near Zero-Carbon Fuel Production and Supply</td>
<td>$10</td>
<td>$10</td>
<td>$5</td>
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<tr>
<td>Related Needs and Opportunities</td>
<td>Manufacturing</td>
<td>$118.75</td>
<td>$125</td>
<td>-</td>
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<tr>
<td>Related Needs and Opportunities</td>
<td>Workforce Training and Development</td>
<td>$5</td>
<td>$5</td>
<td>$5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$842.2</strong></td>
<td><strong>$350.2</strong></td>
<td><strong>$172.6</strong></td>
</tr>
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</table>

*Subject to appropriation by the Legislature*
Staff Recommendation

• Approve report that includes:
  o proposed allocations for this fiscal year
  o planned allocations for future fiscal years

• Approve staff recommendation that investment plan is exempt from CEQA
Thank you to Staff

- Matt Alexander
- Jennifer Allen
- Jean Baronas
- Jane Berner
- Jonathan Bobadilla
- Patrick Brecht
- John P. Butler II
- Michael Comiter
- Noel Crisostomo
- Miki Crowell
- Susan Ejlalmaneshan
- Brian Fauble
- Tami Haas
- Tiffany Hoang
- Elizabeth John
- Thanh Lopez
- Jeffrey Lu
- Pilar Magaña
- Esther Odufuwa
- Tim Olson
- Raja Ramesh
- Hannon Rasool
- Larry Rillera
- Charles Smith
- Michelle Vater
- Mark Wenzel
- Taiying Zhang

November 15, 2021 Business Meeting

Virginia Lew, Mike Petouhoff, Erik Stokes, Jonah Steinbuck
Energy Research and Development Division
EPIC 4 Overview

- **5-year** investment in R&D through 2025
- Nearly **$150M** annually and **$750M** total
- 6 strategic objectives spanning the grid, buildings, industry, transportation
Benefits to Californians

EPIC investments support

• Entrepreneurship
• Environmental sustainability
• Energy equity
• Affordability
• Grid Reliability
• Safety
EPIC Innovation from Past Decade

- Managed Charging
- Solar
- Microgrids
- Wildfire Mitigation
- Industrial Efficiency
- Batteries
- Storage
- Electrification
EPIC Impacts from Past Decade

**Investment**

| **$846 MILLION** | invested |
| **$3.5 BILLION** | private investment post EPIC award |
| **385** | projects funded |
| **68%** | invested in under resourced communities |
| **730 ORGANIZATIONS** | received EPIC grants |

**Impacts**

| **3,500 JOBS** | linked to EPIC |
| **$18.6 BILLION** | projected energy savings through 2045 |
| **$86--$191 BILLION** | anticipated health savings through 2045 |
| **MORE THAN 2,900 CITATIONS** | of EPIC research |
| **850,000 USERS** | of EPIC’s online tools |
EPIC 4 Plan Engagement and Collaboration

12 workshops and events

1,900+ participants

Coordination with CPUC, other agencies, and across CEC

Coordination with Disadvantaged Communities Advisory Group
EPIC 4 Strategic Objectives

Accelerate Advancements in Renewable Generation Technologies

Create a More Nimble Grid to Maintain Reliability as California Transitions to 100% Clean Energy

Increase the Value Proposition of Distributed Energy Resources to Customers and the Grid

Improve the Customer Value Proposition of End-use Efficiency and Electrification Technologies

Enable Successful Clean Energy Entrepreneurship Across California

Inform California's Transition to an Equitable, Zero-Carbon Energy System that is Climate Resilient and Meets Environmental Goals
Strategic Objective: Accelerate Advancements in Renewable Generation Technologies

Offshore Wind | Geothermal and Mineral Recovery | Emerging Solar
Floating Offshore Wind Energy

Innovations
• Component development
• Installation, O&M
• Grid integration, port readiness
• Environmental impacts and mitigation

Goals
• Lower cost
• Reduce technical and financial risk
• Minimize environmental impact
• Support grid reliability
Strategic Objective: Create a Nimbler Grid to Maintain Reliability as CA Transitions to 100% Clean Energy

- Storage
- Grid Congestion
- Power Quality
- Zero Carbon Firm Dispatchable Resources
- Cybersecurity
Energy Storage Demonstrations to Support Grid Reliability: Short & Long Duration Tech, Use Cases

Innovations
- Short and long duration storage (LDS)
- Energy storage use cases
- Comparison framework between LDS ZCFD resources

Goals
- Meet SB 100 projections
- Optimize cost and performance, minimize environmental impact
- Improve depth of discharge, degradation, thermal runaway, supply-chain diversity
Strategic Objective: Increase the Value Proposition of Distributed Energy Resources to Customers and the Grid

DER Forecasting | Backup Power | EV Charging | Virtual Power Plants | Load Flexibility
Design-Build Competition

Innovations
• Reimagine mixed-use development
• Engage stakeholders to realize shared vision
• Demonstrate emerging technologies

Goals
• New building designs
• Grid-interactive, zero-emission buildings
• Facilitate adoption of advanced technologies and practices
Electric Vehicles as Distributed Energy Resources

Innovations

- Grid-interactive inverters in bi-directional chargers
- Integrate charging with building management systems
- High-accuracy, low-cost submeters

Goals

- Lower site costs
- Enable EV operator benefits
- Ratepayer savings
Strategic Objective: Improve the Customer Value Proposition of End-use Efficiency and Electrification Technologies

Industrial Decarbonization
Process Heating | Concrete | Separation Processes

Building Decarbonization
Heat Pumps | Building Envelopes | Controls | Tech Prize Competition
High Efficiency, Low Global Warming Potential (GWP) Heat Pump Water Heaters and HVAC Heat Pumps

Innovation

• Advance use of low-GWP refrigerants
• Have similar or greater efficiencies, life & maintenance, and cost as existing HPs
• Include 120V and 240V applications

Goals

• Reduce GHG emissions
• Lower cost
Strategic Objective: Enable Successful Clean Energy Entrepreneurship Across California

Entrepreneurial Ecosystem

- Research & Development
- Prototype/Proof of Concept
- Pilot/Demonstration
- Customers in 1st Target Market
- Customers in follow-on Markets
- Maturity/Price Competition

Innovation Clusters

- CalSEED
- CalTestBed
- BRIDGE
- RAMP
Activating Innovation and Expanding California’s Clean Energy Entrepreneurial Talent Pool

Innovation
• Attract diverse talent
• Match talent with intellectual property
• Support initial business setup

Goals
• Broaden entrepreneurship
• Lower entry barriers
• Increase commercialization
Strategic Objective: Inform California's Transition to an Equitable, Zero-Carbon Energy System that is Climate Resilient and Meets Environmental Goals

Air Quality | Health | Equity | Climate Resilience | Environmental Sustainability
Integrating Climate Resilience in Electricity System Planning

Research Innovations
• Evaluate climate impacts on grid
• Quantify societal benefits of resilience technologies and strategies

Goals
• Integrate resilience into electricity system planning, investment, operations
Staff Recommendation

• Adopt *EPIC 4 Investment Plan* with any non-substantive corrections (or other changes adopted today)

• Adopt staff’s determination that plan adoption is exempt from CEQA

• Direct Executive Director or designee to:
  • Finalize adopted plan
  • File plan to CPUC by December 1, 2021
Item 7: Blueprints for MD/HD ZEV Infrastructure (GFO-20-601)

November 15, 2021 Business Meeting

Kate Reid, Air Resources Engineer
Fuels and Transportation Division
Medium- and Heavy Duty Zero-Emission Technologies Office
Freight & Transit Unit
Benefits to California

Will Enable:

- Roadmaps
- Resiliency
- Replicability
- Compliance
Vehicle Sectors Addressed

- fleets, 32%
- goods movement, 28%
- transit, 12%
- school buses, 10%
- ports, 8%
- other, 10%
Project Overview

Central Coast Community Energy (3CE) (ARV-21-031)

- Accelerate and scale MD/HD ZEV adoption
- Accelerate deployment of MD/HD infrastructure

Source: 3cenergy.org
Project Overview

MHX, LLC (ZVI-21-001)

• Enable full fleet conversion to ZEVs and infrastructure
• Articulate a futuristic view of freight planning
Staff Recommendation

**Approve**
- 2 grant agreements

**Adopt**
- Staff’s determination that projects are exempt from CEQA
Item 8: BESTFIT Innovative Charging Solutions – GFO-20-605
November 15, 2021 Business Meeting

Kyle Corrigan, Associate Energy Specialist
Fuels and Transportation Division, LDEV Infrastructure and Analysis Office
Benefits to Californians

• Innovation

• Tailored charging solutions

• Accelerate commercialization
Overview

• Sought charging solutions for light-, medium-, and heavy-duty vehicles
Ultrafast chargers with integrated battery packs

• Installing, maintaining, and collecting data from six 120kW DCFC

Key Project Benefits:
• Minimizing grid impacts
• Utilizing existing grid infrastructure
ConnectMyEV (ZVI-21-003)

Robotic, automated parking and charging solution

- Demonstrating in parking structure for City of San Jose
Andromeda Power (ZVI-21-004)

ELEVATE – ELEcetric Vehicle AdapTEr

- Develop and manufacture a charging adapter to provide networked demand response “smart charging” capabilities in non-networked chargers

Key Project Benefits:
- Minimizing grid impacts
- Greater accessibility to “smart charging” technology
- Compatible with any low-cost, non-networked charger
ChargePoint (ZVI-21-005)

Overhead Charging Cable System

Key Project Benefits:

• Designed for light-duty EV fleet operators

• Can be installed in a variety of parking configurations

• Ideal for space constrained installations
Smart Charging Management
• Allow for charging 3 times more fleet vehicles than unmanaged scenario without incurring infrastructure upgrades
• Provide energy cost reduction of 40%+ relative to unmanaged charging solutions

Key Project Benefits:
• Demonstrate innovative charge management technology
• Reduction of up-front infrastructure and operating cost to accelerate EV adoption
Market Potential

Innovative technologies in a modern marketplace:

• Augmenting existing infrastructure with newer efficient technology
• Helping solve congestion through automation
• Cheaper, simpler devices to modernize older “dumb” chargers
• New ways of implementing demand responsive charging systems that are more cost-effective
Staff Recommendation

• Approve following agreements:
  1) Eneridge, Inc.
  2) ConnectMyEV.
  3) Andromeda Power.
  4) ChargePoint.
  5) Electriphi, Inc.

• Adopt staff’s determination that action is exempt from CEQA