DOCKETED	
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California Energy Commission
Business Meeting
April 14, 2021
10:00 a.m.

Pledge of Allegiance

CALIFORNIA IS SET TO FULLY REOPEN

- WEAR A MASK
- GET VACCINATED

MyTurn.ca.gov

Sign up to get notified when it's your turn to get the COVID-19 vaccine.

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.

For remote participation instructions visit **CEC's Business Meetings webpage:**

https://www.energy.ca.gov/proceedings/business-meetings

If Zoom's toll-free phone numbers don't work:

- **Dial: (669) 900-6833**
- **Meeting ID: 938-6923-0237**

If Zoom shuts down, Business Meeting will continue via Verizon.

- **Dial: (888) 823-5065**
- **Passcode: business meeting**

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.

To comment, dial (888) 823-5065.

Passcode: business meeting

1) Tell Operator: name, organization and item number.
2) Tell Operator if you represent:
   - federal or state legislature;
   - tribal nation or California tribal government;
   - state agency; or
   - county/city government.
3) Spell your first and last name.
4) Do not use speaker phone when talking.
5) Mute Zoom while calling to comment.

Item 1 a. – b.: Consent Calendar

a. **Clean Energy States Alliance, Inc. (CESA)** Contact: Edgar Rodriguez

b. **TRB and Associates, Inc.** Contact: Anwar Ali

Item 2: 2020 IEPR Update, Volume II

April 14, 2021, Business Meeting

Heather Raitt, Assistant Executive Director, Policy Development

Mike Gravely, Lead Author for Volume II, Energy Research and Development Division

Benefits to Californians

Volume II: The Role of **Microgrids** in California's Clean and Resilient Energy Future, Lessons Learned From the California Energy Commission's Research

Adopted in March:

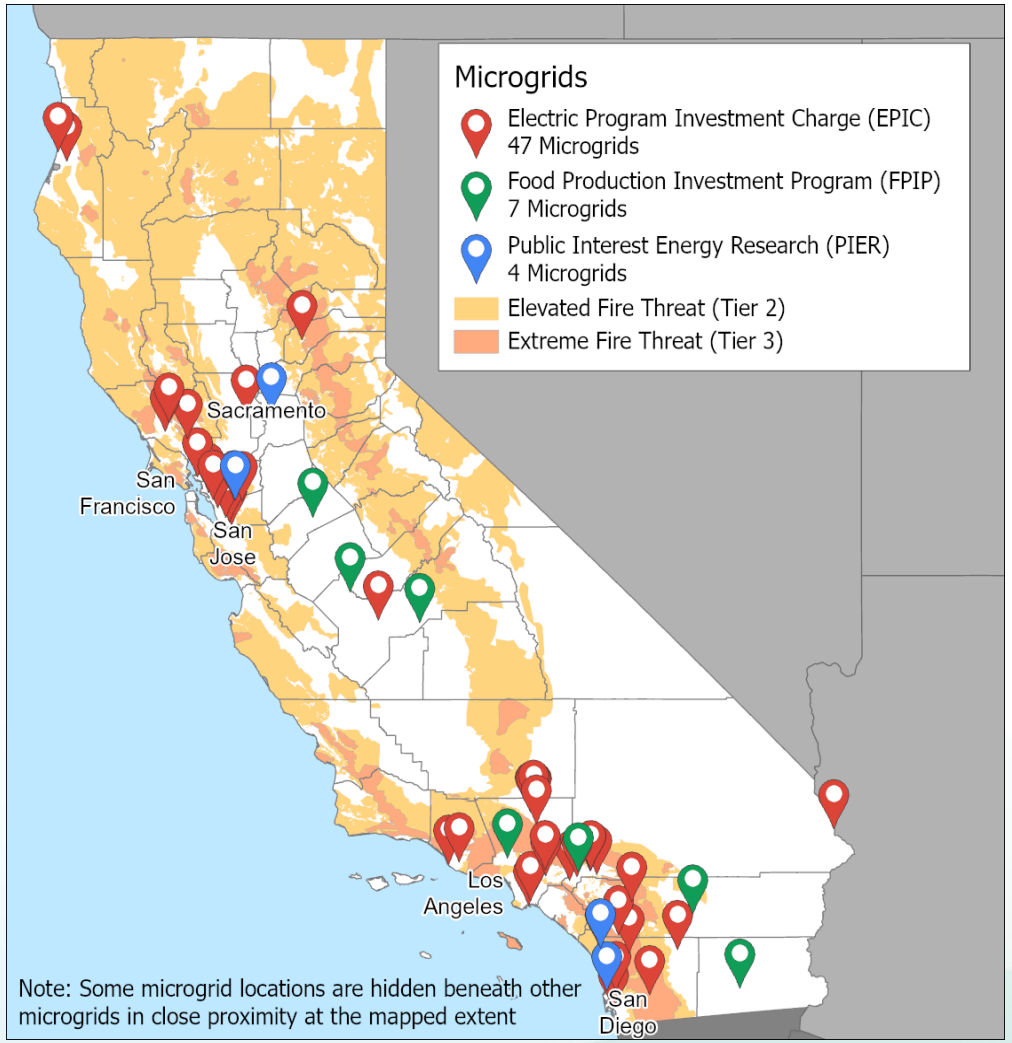
- Volume I: Blue Skies, Clean Transportation
- Volume III: California Energy Demand Forecast Update

Public Engagement

- Opportunities for public comment
- 2-day, remote access workshop on microgrids

Energy Commission Research Microgrid Projects by End-User Application

CEC Research Microgrids by Location



Successfully Fielded and Operated Microgrids

Borrego Springs Microgrid

Blue Lake Rancheria Microgrid

City of Fremont Fire Station Microgrid

Assessing Strategic Locations for Clean Energy Microgrids

- Respond to PSPS events.
- Support lifesaving services.
- Deliver community services such as fire, police, emergency response.
- Support low-income, tribal, rural, and disadvantaged communities.
- Enable critical military installations and state infrastructure.
- Serve other unique energy demands where energy reliability is key.

Report Recommendations

- Continue research on clean alternatives to backup diesel generation.
- Continue to implement the CPUC SB 1339 Proceeding Track 3 activities.
- Continue to streamline distribution interconnection.
- Address right-of-way issues.
- Develop financial tools.

Staff Recommendation

Adopt the 2020 IEPR Update, Volume II:

- The Role of Microgrids in California's Clean and Resilient Energy Future, Lessons Learned From the California Energy Commission's Research

Thank you!

Item 3: Inland Empire Energy Center License Termination

April 14, 2021 Business Meeting

Presented by Elizabeth Huber, Compliance Monitoring and Enforcement Office Manager
Eric Veerkamp and Keith Winstead, Project Managers
Siting, Transmission and Environmental Protection Division

Inland Empire Energy Center (IEEC) Benefits to Californians

- Located on approximately 46 acres in City of Menifee, in Riverside County.
- From natural gas power plant to large-scale battery energy storage system, this “cradle-to-cradle” project supports state's clean energy future.

Overview and Key Milestones

Date	Action
12/17/03	CEC approved IEEC project, an 810-megawatt combined-cycle facility.
5/3/10	Facility came online. IEEC connected to on-site switchyard to existing Southern California Edison Valley substation.
6/19/19	IEEC submitted closure plan to CEC.
12/11/19	CEC approved IEEC's closure plan.
3/29/21	CEC received certificate of completion from Delegate Chief Building Official stating IEEC met all closure plan requirements.

Inland Empire Energy Center - Before

Inland Empire Site - Future

Staff Recommendation for Closure

- Terminate the license.

Item 4: Huntington Beach Energy Project (12-AFC-02C)

April 14, 2021 Business Meeting

Presenting: Elizabeth Huber, Compliance Monitoring and Enforcement Office Manager
Joseph Douglas, Project Manager
Siting, Transmission and Environmental Protection Division

Huntington Beach Energy Project Benefits to Californians

- Resident-focused engagement process led to locally-accepted project.
- New treatment captures essence of Huntington Beach, providing iconic visual image when entering city.

Overview

Context: Project owner and community took opportunity to jointly find alternative to originally-approved 120-foot “wave wall” or “spherical ball wall.”

Goal: Develop visual concept to enhance power plant site.

Approach: AES (project owner) facilitated public process through extensive outreach, virtual town halls, and numerous stakeholder meetings.

Result: Mural design by Kim West approved by community, Huntington Beach Design Review Board, and City Council.

Original Wave Wall Design

Simulation of Proposed Mural by Kim West

Staff Recommendation

Approve petition to modify VIS-1 condition of certification.

Item 5: Appointment of Committee for Gilroy Backup Generating Facility

April 14, 2021 Business Meeting

Steve Kerr, Supervisor, Siting & CEQA Review Unit
Siting, Transmission, and Environmental Protection Division

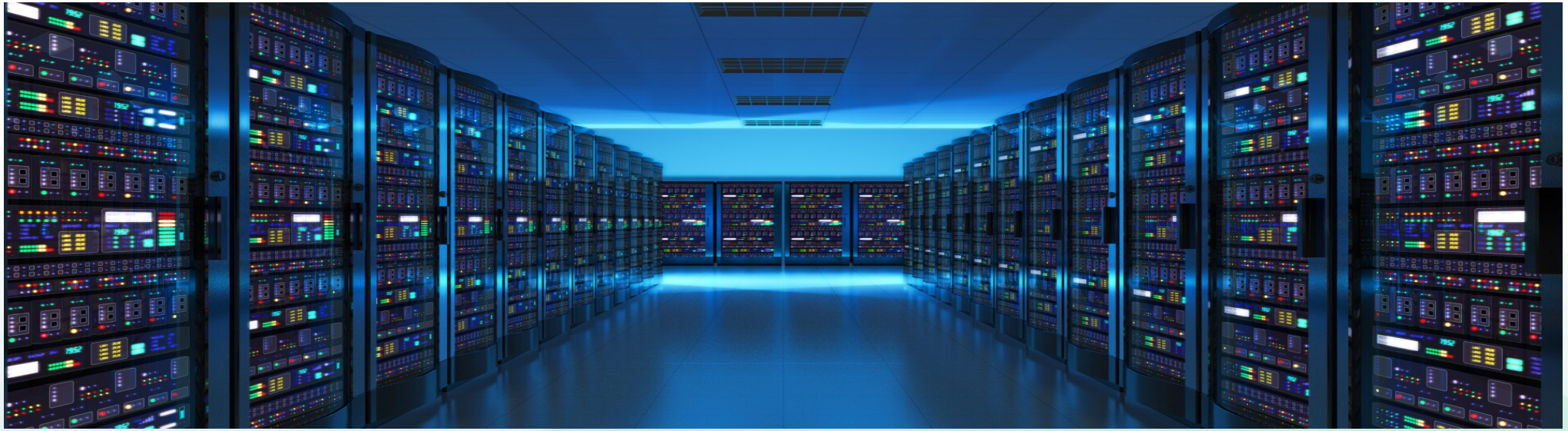
Gilroy Project Overview

Data Center:
2 buildings (438,500 sq. ft.)

+

Backup Generating Facility:
- 50 2.5-megawatt diesel-fired generators
- 2 generation yards

Purpose: Generate 96 megawatts maximum of backup electricity IF prolonged lack of primary electricity supply from PG&E exceeds storage capacity of uninterruptable power supply systems.



Staff Recommendation

Approve proposed order establishing committee to oversee Gilroy Backup Generating Facility SPPE proceeding.

Item 6: Committee Report on Small Power Plant Exemption for Sequoia Backup Generating Facility

April 14, 2021

Susan Cochran, Hearing Officer
Hearing and Policy Unit, Chief Counsel's Office

Sequoia Backup Generating Facility
19-SPPE-03

Application for Small Power Plant Exemption

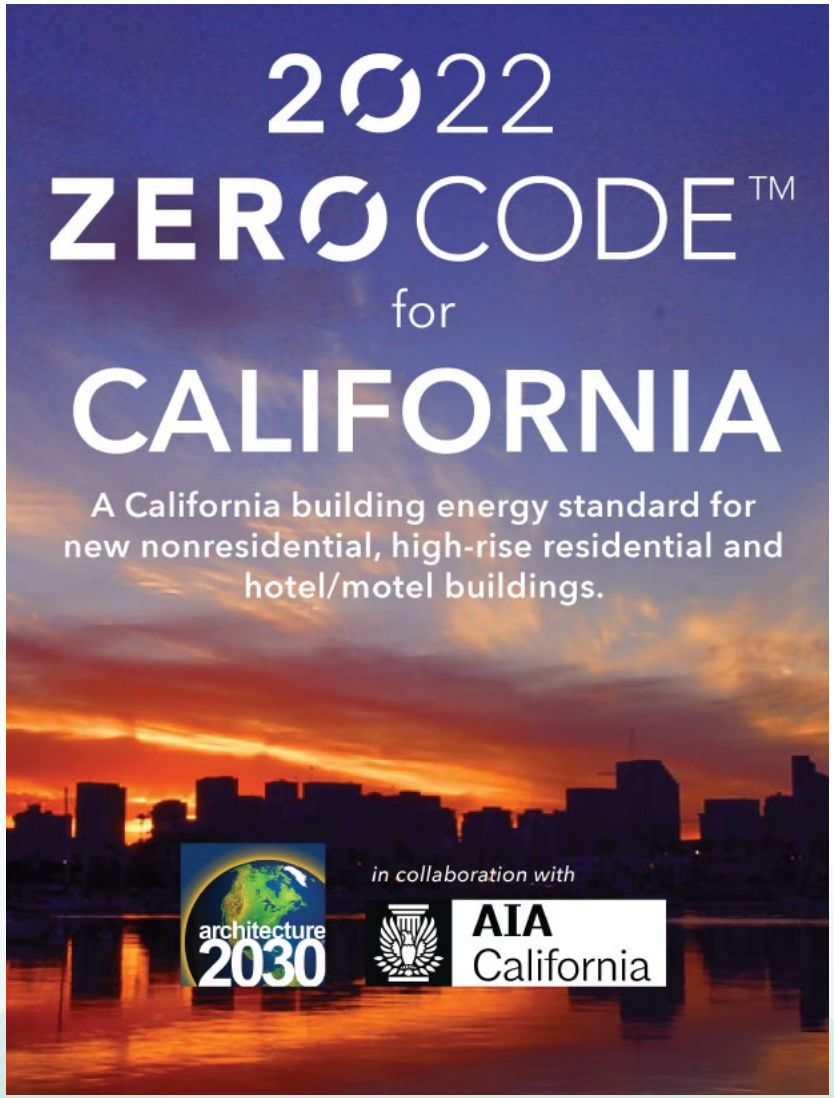
Item 7: Zero Code Petition Submitted by American Institute of Architects California

April 14, 2021 Business Meeting

Will Vicent, Manager
Efficiency Division, Building Standards Office

Benefits to Californians

- Places request of petitioner in correct proceeding
- Allows CEC to consider merits of proposal in CALGreen



Overview

- AIA submits petition to CBSC to consider “Zero Code for CA”
- CBSC forwards petition to CEC on 2/2/21
- Staff finds petition complete and under CEC jurisdiction
- Petitions not to be used to address currently proposed or adopted standards prior to effective date

Staff Recommendation & Next Steps

- Deny petitioner's proposal
- Proposal to be considered in upcoming CALGreen rulemaking proceedings

Item 8: Requiring Technician Certification for Mechanical Systems Acceptance Testing

April 14, 2021 Business Meeting

Joe Loyer, Senior Mechanical Engineer
Efficiency Division, Standards Compliance Office

Certification Benefits to Californians

Having trained technicians:

- Increases consumer satisfaction
- Advances state's climate goals
- Improves consumer trust
- Strengthens reputation of newer technologies

Acceptance Testing Overview

- Verifies equipment installed in non-residential buildings
- Energy Code requires **certification program for:**

Lighting Controls
- Mandatory since 2014
- 2 providers

Mechanical Systems
- Voluntary until requirements met
- 4 providers

Mechanical Acceptance Testing Requirements and Findings

- **Triggers:**
  1) Minimum 300 certified technicians statewide
  2) Eligible professionals have reasonable access to training

- **Findings:**
  - 350+ certified technicians available
  - 4 providers (2 union / 2 private):
    1) CA State Pipe Trades Council
    2) National Energy Management Institute Committee
    3) National Environmental Balancing Bureau
    4) Refrigeration Service Engineers Society

Proposed Recommendations

1) Find that mandatory mechanical certification requirements have been met.

2) Encourage local enforcement to delay implementation until 10/1/21.

3) Direct staff to help building departments scale program through:
   - Outreach and education
   - Technical assistance

REMOVED

Item 9: School Energy Efficiency Stimulus (SEES) (20-RENEW-01).

Item 10: 2020 EPIC Annual Report

Presenter: Erik Stokes, Manager, Energy Deployment and Market Facilitation Office, Energy Research and Development Division

April 14, 2021

EPIC INVESTMENT IN CLEAN ENERGY INNOVATION

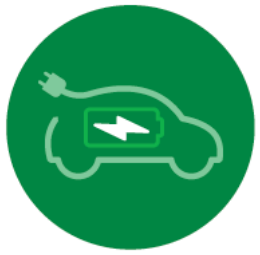
Entrepreneurial Ecosystem
$143 Million

Grid Decarbonization and Decentralization
$207 Million

Resiliency and Safety
$151 Million

Industrial and Agricultural Innovation
$119 Million

Building Decarbonization
$194 Million



Low-Carbon Transportation
$32 Million

EPIC BENEFITS FOR CALIFORNIANS

INVESTMENTS

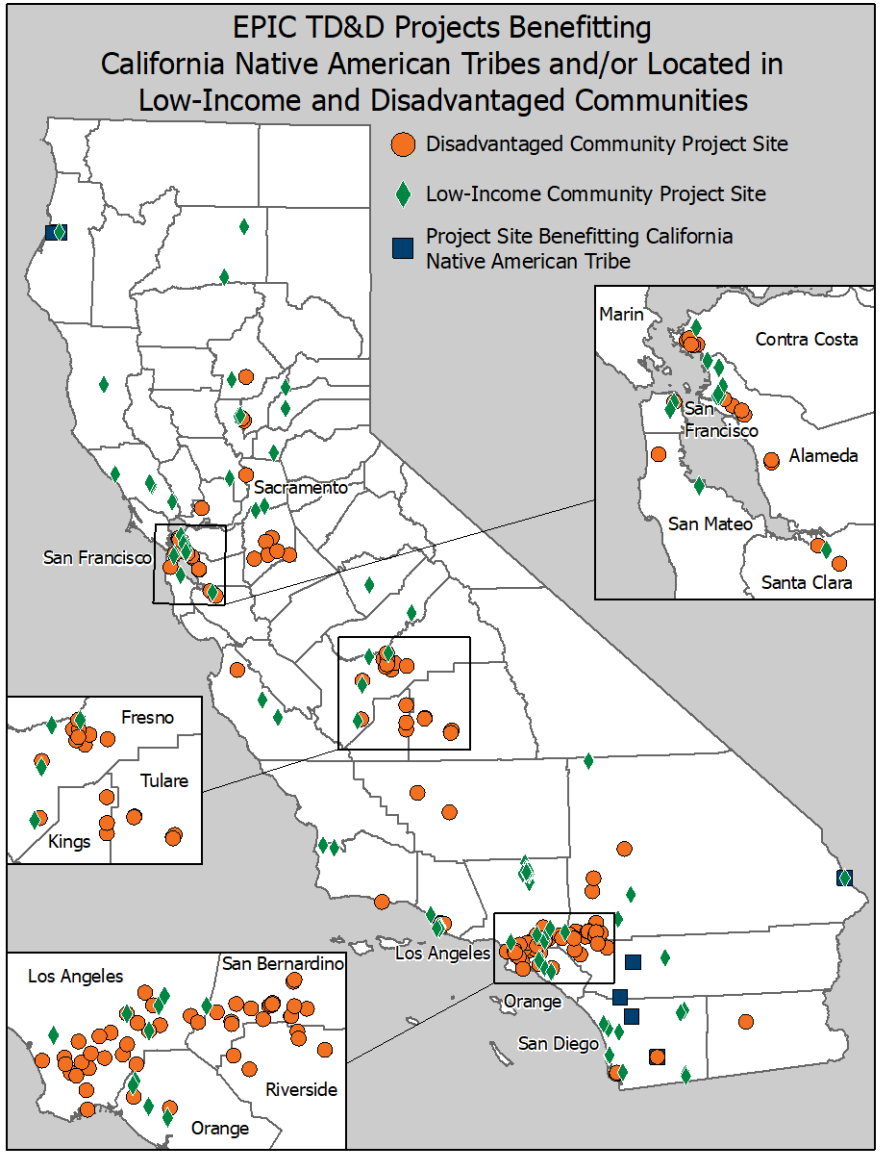
$846 Million
EPIC funds for California innovation

$3.5 Billion
Private follow-on funding

385 Projects
Funded across California

68% of Demonstration Funds
in under-resourced communities

730 Organizations
Funded by EPIC across California



EPIC BENEFITS FOR CALIFORNIANS

3,500 Jobs per Year (estimated)
From EPIC-associated economic activities

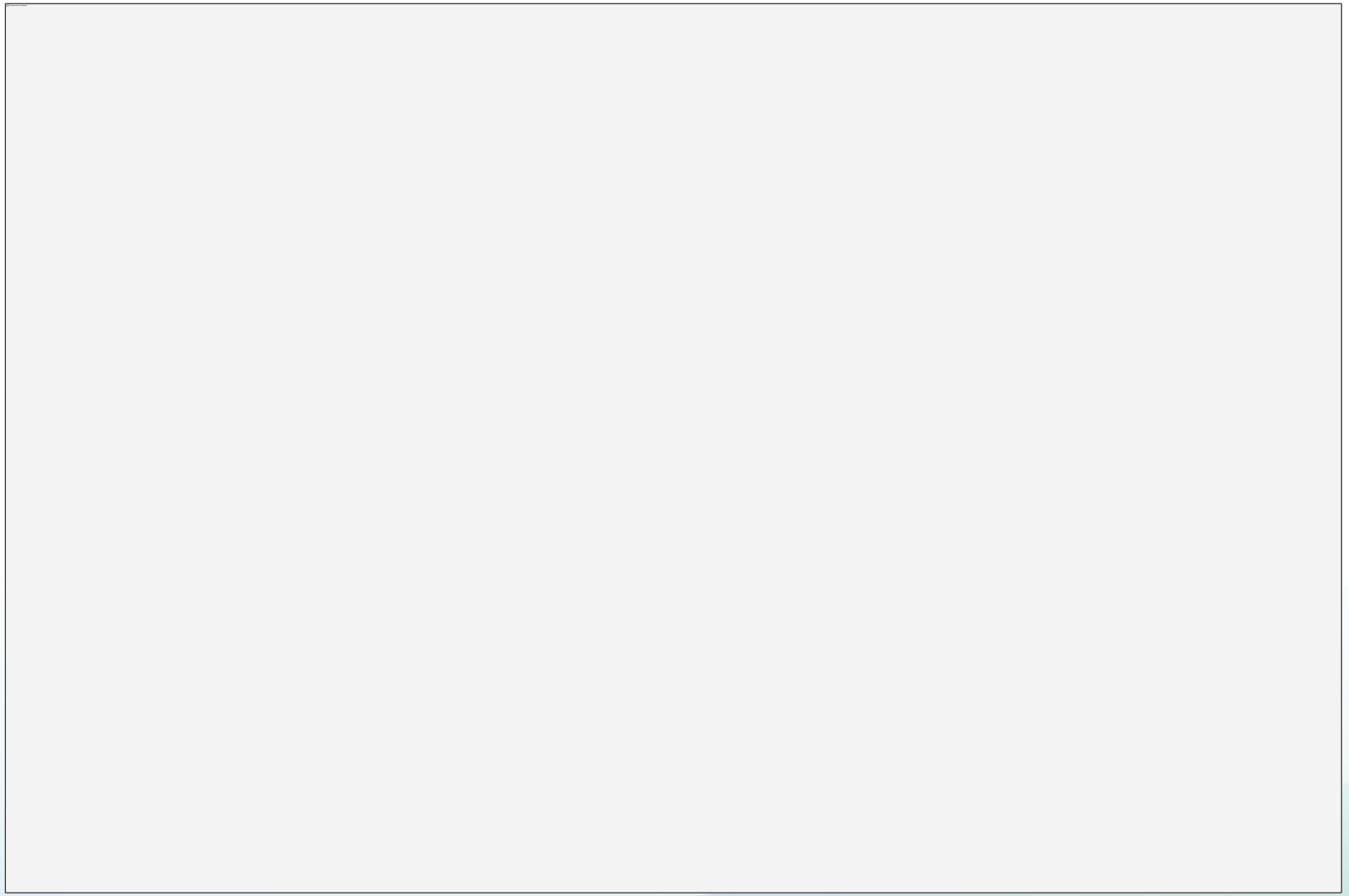
$18.6 Billion from 19 EPIC technologies
to be saved on energy bills through efficiency

$85-$191 Billion from 19 EPIC technologies
improved Health Benefits (estimated)

More than 2,900 Citations
of EPIC-funded research results

850,000 Users
of EPIC-funded online tools

NeoCharge



$1,500 cost of installing conventional EV charger and electricity panel upgrade

$450 for NeoCharge Smart Splitter (no install cost required)

7x faster charging compared to a 120V outlet

Caban Systems

"This grant enables us to meet demand faster and we look forward to working with the CEC as we expand our manufacturing operations," *Alexandra Rasch, Founder & CEO, Caban Systems*

131 ° F Temperature Caban's rugged system can withstand

<1 day to install at a telecom tower

Less than a blink of an eye to bring online after power outage

30x Increase in production capacity achieved with EPIC

Streamlined Energy Efficiency Retrofit

Above is Multifamily building before building-envelope retrofit (Corona, CA)

2 million low-income multifamily housing units in California

3 weeks to insulate, seal, weatherize using conventional approaches

<1 week to insulate, seal, weatherize using panelized approach

>20% reduction in HVAC energy use due to insulation, air tightness and use of higher quality retrofit façade panels compared to standard retrofit methods.

SRI, ExSorbtion

Hudson Ranch I geothermal power plant, March 2012, Salton Sea, California/ U.S. (source: EnergySource)

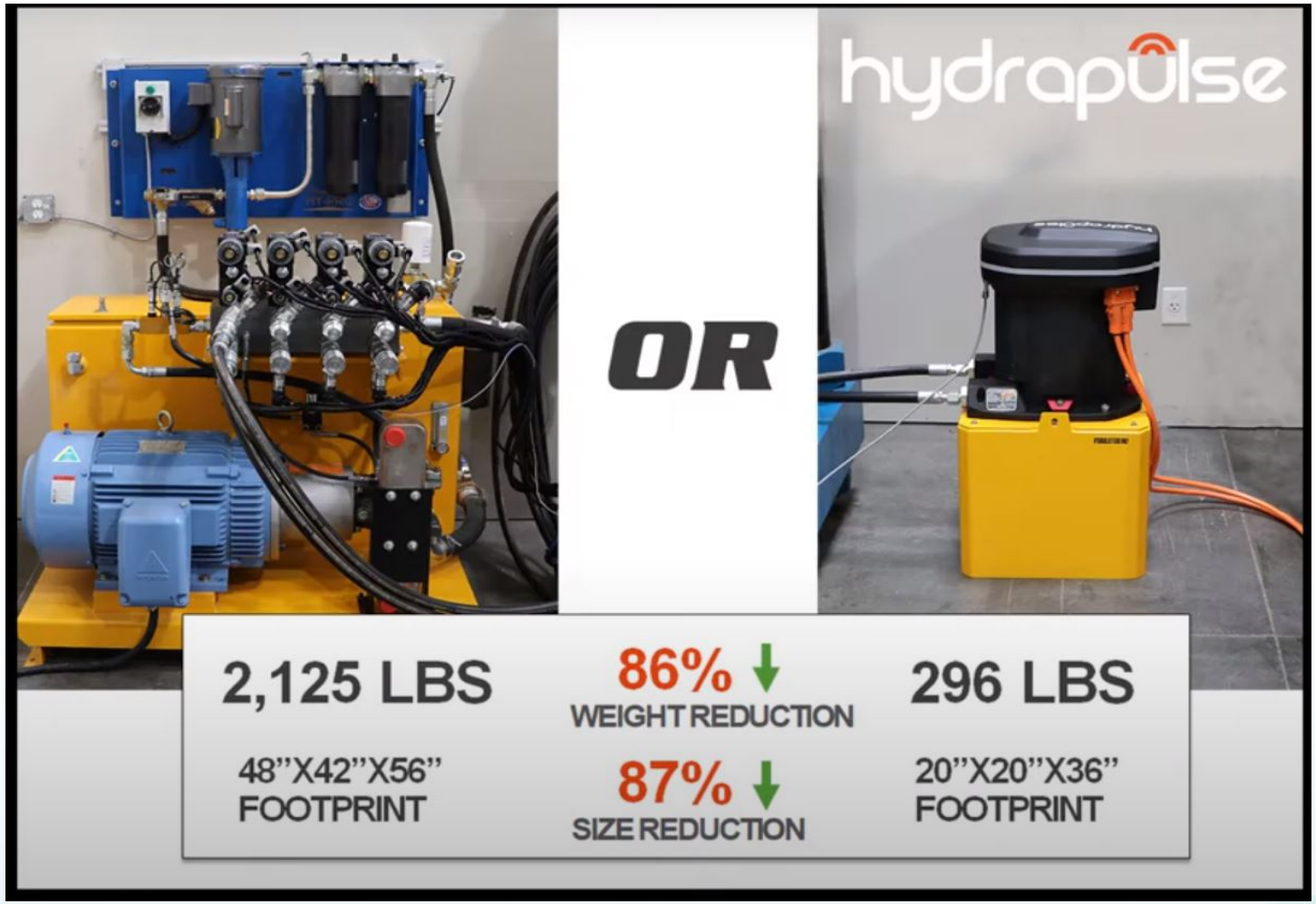
$6 billion annual estimated value
of lithium carbonate potential in Salton Sea area

600,000 tons
Annual potential lithium carbonate production from Salton Sea area, enough to produce about **11.3 million EV batteries each year**

90%
of lithium can be recovered using SRI's technology

More than 6x
Reduction in upfront costs

Terzo Power Systems



124,000 Hydraulic power motors
in California

80% Potential increase
in energy efficiency

More than 80% Reduction
in size and weight

$19 million annual savings
potential in California

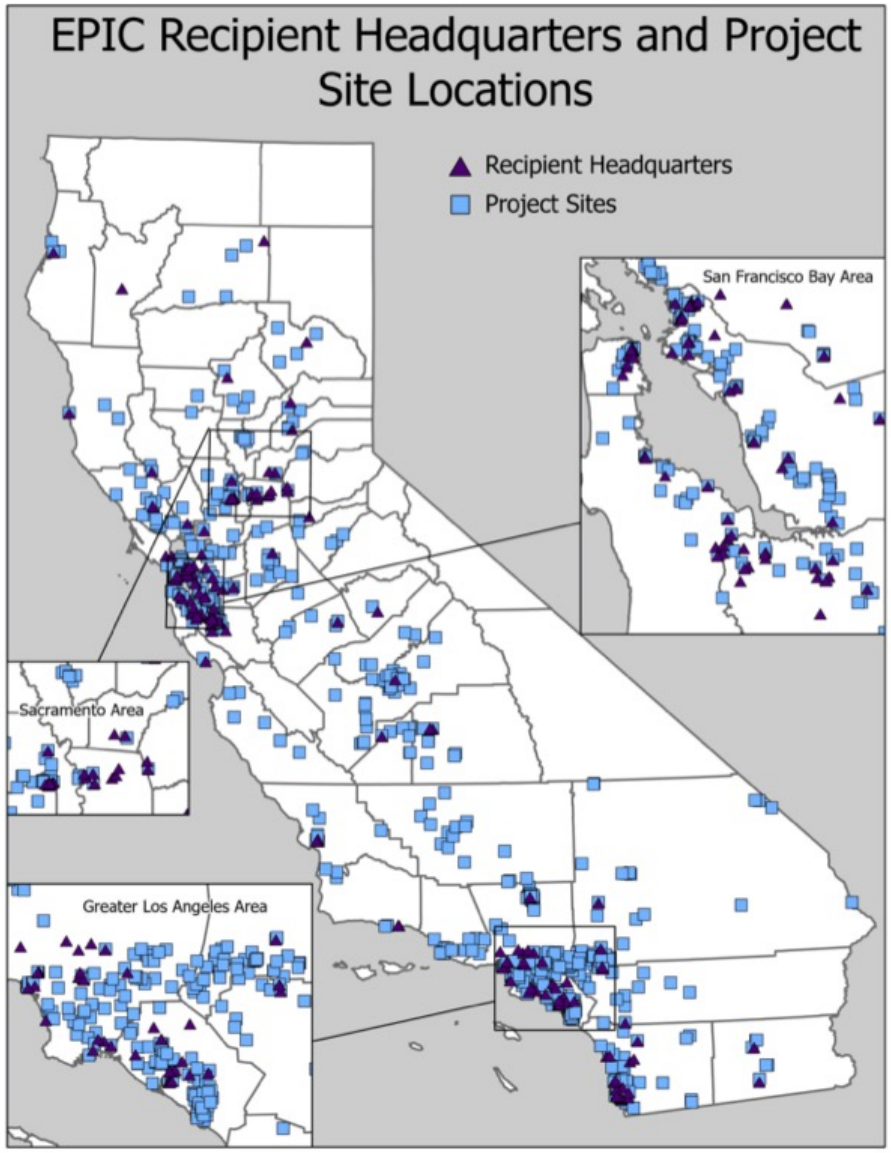
Nuvve

$800
Maximum monthly electric bill reduction from control system for 3 bi-directional EV chargers

>1.2 MW
Load reduced by Nuvve's energy management system at UCSD during the August 2020 heat wave.

More than $18 million
subsequent private capital investment received by Nuvve

DISCOVER THE POWER OF ENERGY INNOVATION



EPIC Opportunities in 2021

- The next EPIC Investment Plan
- **B**ringing **R**apid **I**nnovation **D**evelopment to **G**reen **E**nergy, continued support for technologies that have attracted interest from the market
- **R**ealizing **A**ccelerated **M**anufacturing and **P**roduction for Clean Energy Technologies, funds to advance to the low-rate initial production stage
- Climate resiliency research
- Understanding health and equity issues related to electrification
- Mobile, renewable, clean energy resiliency solutions
- Design-build competition for affordable and resilient zero-emission mixed-use buildings
- Zero-net carbon prefabricated homes
- Vehicle-to-grid research for medium- and heavy-duty vehicles
- Offshore wind platform advances and environmental research to mitigate species impact
- Carbon capture and use for the industrial, agricultural, and water sectors
- Green hydrogen in industry
- Load flexibility and decarbonization for cold storage facilities
- Energy efficiency and load flexibility in urban farms
- Accelerating heavy-duty truck electrification
- Recycling pathways for lithium-ion batteries
- Vehicle-to-building resiliency solutions for residences and other buildings

Thank You!

Item #11 a & b: Electric Vehicle Ready Communities Phase II – Implementation

April 14, 2021 Business Meeting

Kyle Corrigan, Energy Analyst
Fuels and Transportation Division, Advanced Vehicle Infrastructure Office

Benefits to Californians

- **Improve** access to electric vehicle charging infrastructure
- **Reduce** barriers to zero emission transportation
- **Increase** mobility options in disadvantaged communities
- **Support** green job creation

Ventura County Regional Energy Alliance
$2.5 Million

Project:

- Establish EV Coach for education and outreach activities
- Provide reliable and clean electric mobility services
- Develop workforce training through Ventura County Community College District

Kern Council of Governments
$700,515

Project:

- Install EV charging stations in disadvantaged communities
- Develop local workforce training programs through Bakersfield College
- Conduct EV outreach and marketing campaigns

Kern Council of Governments

Staff Recommendation

- Approve agreements
- Adopt determination that projects are exempt from CEQA