

DOCKETED	
Docket Number:	21-BUSMTG-01
Project Title:	Business Meeting Agendas, Transcripts, Minutes, and Public Comments
TN #:	236430
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Description:	California Energy Commission Business Meeting January 25, 2021 10:00 a.m.
Filer:	Cody Goldthrite
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	1/25/2021 8:03:27 AM
Docketed Date:	1/25/2021



**California Energy Commission
Business Meeting
January 25, 2021
10:00 a.m.**



Pledge of Allegiance





Keep California Healthy



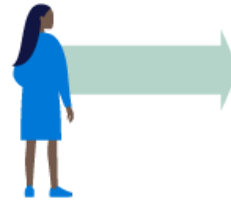
Wash



Clean



Cover



6 Feet



[covid19.ca.gov](https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/COVID-19-Resources.aspx)



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 go to **CEC's Business Meetings webpage:**

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

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

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

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

- **Call: (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** per person and **1 person 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 provide comment, call (888) 823-5065.
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Item 1: Consent Calendar

- a) **THE SOLAR FOUNDATION.** Proposed resolution approving Agreement 200-20-013 with The Solar Foundation for a \$5,000 sponsorship contract to support the research and implementation of the 2020 National Solar Jobs Census, including California-specific data. (ERPA funding) Contact: **Michael Poe.**
- b) **SACRAMENTO MUNICIPAL UTILITY DISTRICT (20-EPS-01).** Consideration and possible adoption of proposed order approving the Executive Director's recommendation that the Sacramento Municipal Utility District's Power Purchase Agreement with Roseburg Forest Products Co. for the procurement of bioenergy from the Weed Cogeneration Plant be found compliant with the Emission Performance Standard for Local Publicly Owned Electric Utilities pursuant to Senate Bill 1368 (California Code of Regulations, Title 20, Sections 2900-2913). Contact: **Michael Nyberg.**
- c) **EVERGREEN ECONOMICS, INC.** Proposed resolution approving Amendment #1 to Agreement 400-19-002 with Evergreen Economics, Inc. for a \$45,000 budget augmentation. (COIA funding) Contact: **Carlos Baez.**
- d) **UNIVERSITY OF CALIFORNIA, BERKELEY, ENERGY INSTITUTE AT HAAS SCHOOL OF BUSINESS.** Proposed resolution approving Agreement 800-20-002 with University of California, Berkeley, Energy Institute at Haas School of Business for a \$12,500 contract to co-sponsor the 2021 POWER Conference on Energy Research and Policy in Berkeley on March 16-19, 2021, and adopting staff's determination that this item is exempt from CEQA. (ERPA funding) Contact: **Lynn Marshall.**



Item 1: Public Comment

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3-MINUTE TIMER





Item 2: Janea A. Scott

January 25, 2021 Business Meeting

Presented by Chair Hochschild



Item 3: California Energy Demand Forecast Update, 2020-2030

January 25, 2020 Business Meeting

Nick Fugate
Energy Assessments Division



Purpose of the Forecast

- Integrated Energy Policy Report
- Procurement and Planning at the CPUC and ISO
 - Integrated Resource Planning
 - Distributed Resource Planning
 - Resource Adequacy
 - Transmission Planning

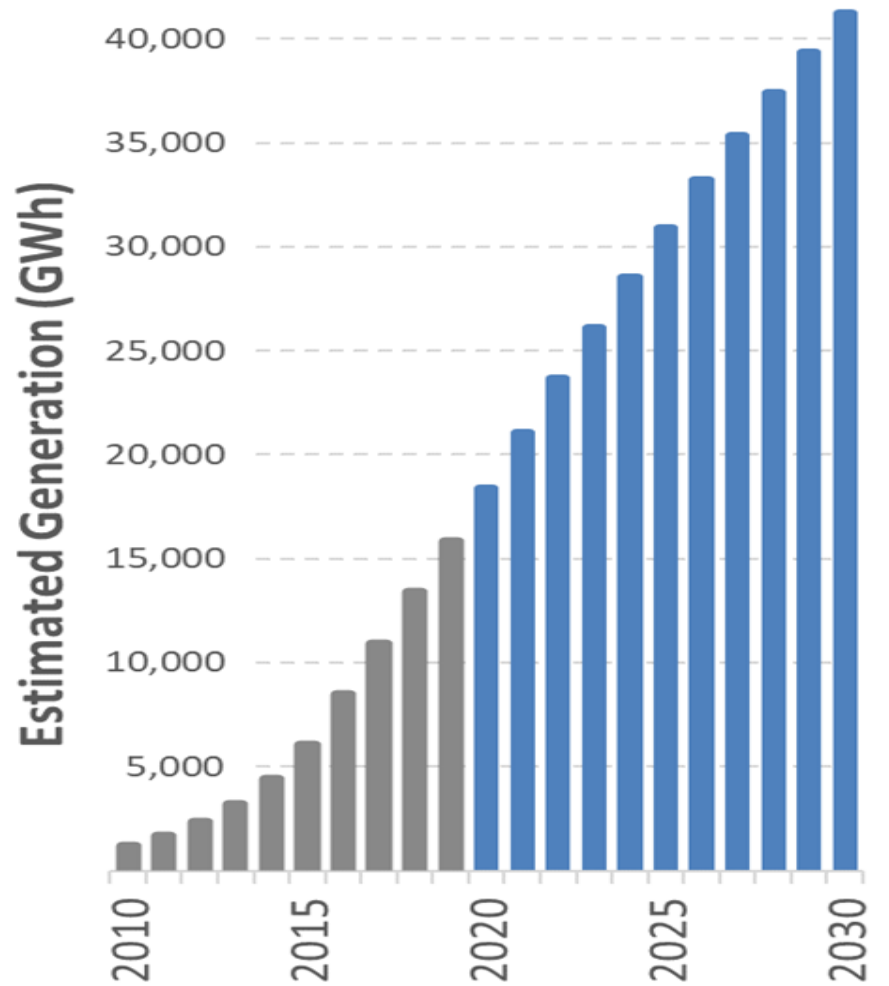


Scope of the Update

- Completely new forecast adopted every two years
- Specific components of the forecast adopted every other year
 - Additional historical data
 - Updated solar photovoltaic (PV) and battery storage forecasts
 - Updated transportation electrification forecasts
 - Refreshed economic and demographic projections



Solar PV Update

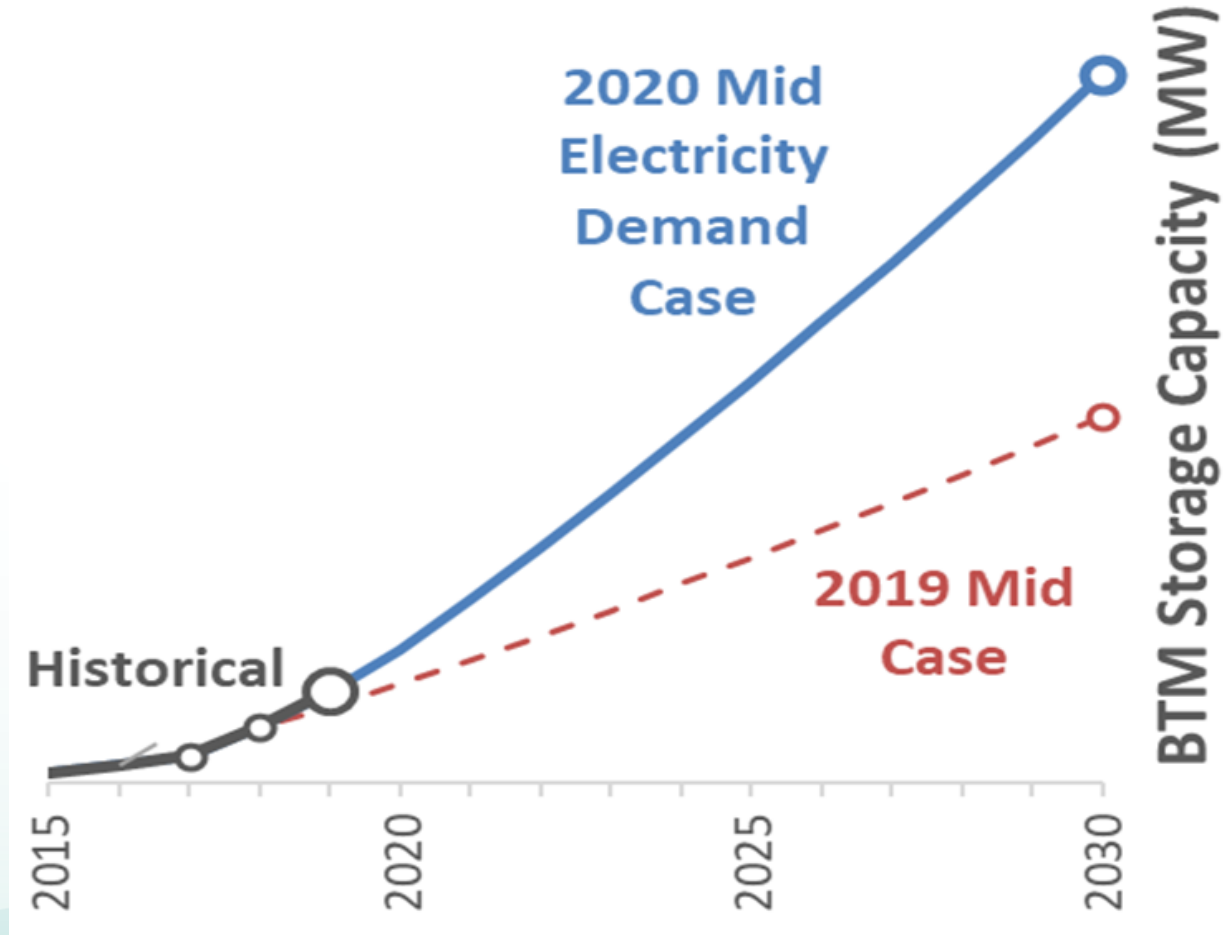


- Added historical interconnection data
- Improved PV system classification
- Revised average PV capacity factors
- Updated TOU tariffs for PG&E and SMUD
- Mid-demand case:
 - 15,800 GWh of generation in 2019
 - Grows to 41,000 GWh by 2030



Battery Storage Update

- Recent adoption rate has outpaced expectations
 - 130 MW added capacity in 2019
 - 470 MW of outstanding SGIP reservations (Fall 2020)
- Storage is forecast to reach 2,600 MW by 2030
- Considers new SGIP eligibility requirements





Electric Vehicle Update

Light-Duty

- Severe disruption to vehicle sales
- Scenarios developed prior to Executive Order
- Mid case projects 3.3 million ZEVs by 2030
 - 4.2 million high case
 - 4.8 million "bookend"

Medium/Heavy-Duty

- HVIP incentives
- Impacts from COVID-19 and China Trade Agreement
- Mid case projects 81,500 vehicles by 2030
 - 90,500 high case



Economic & Demographic Scenarios

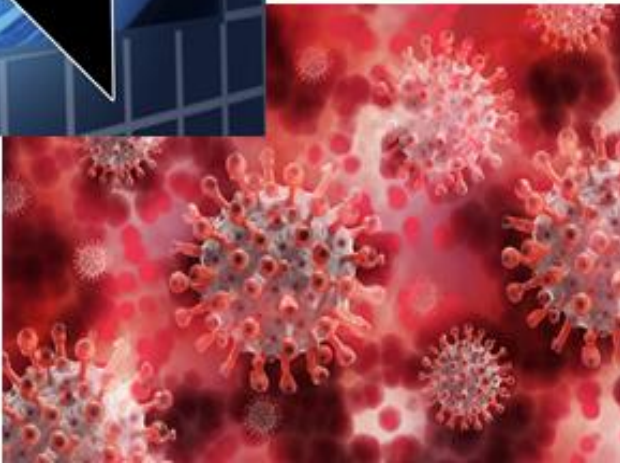


Demographic

- Department of Finance (June 2020)
- Lower population and household growth

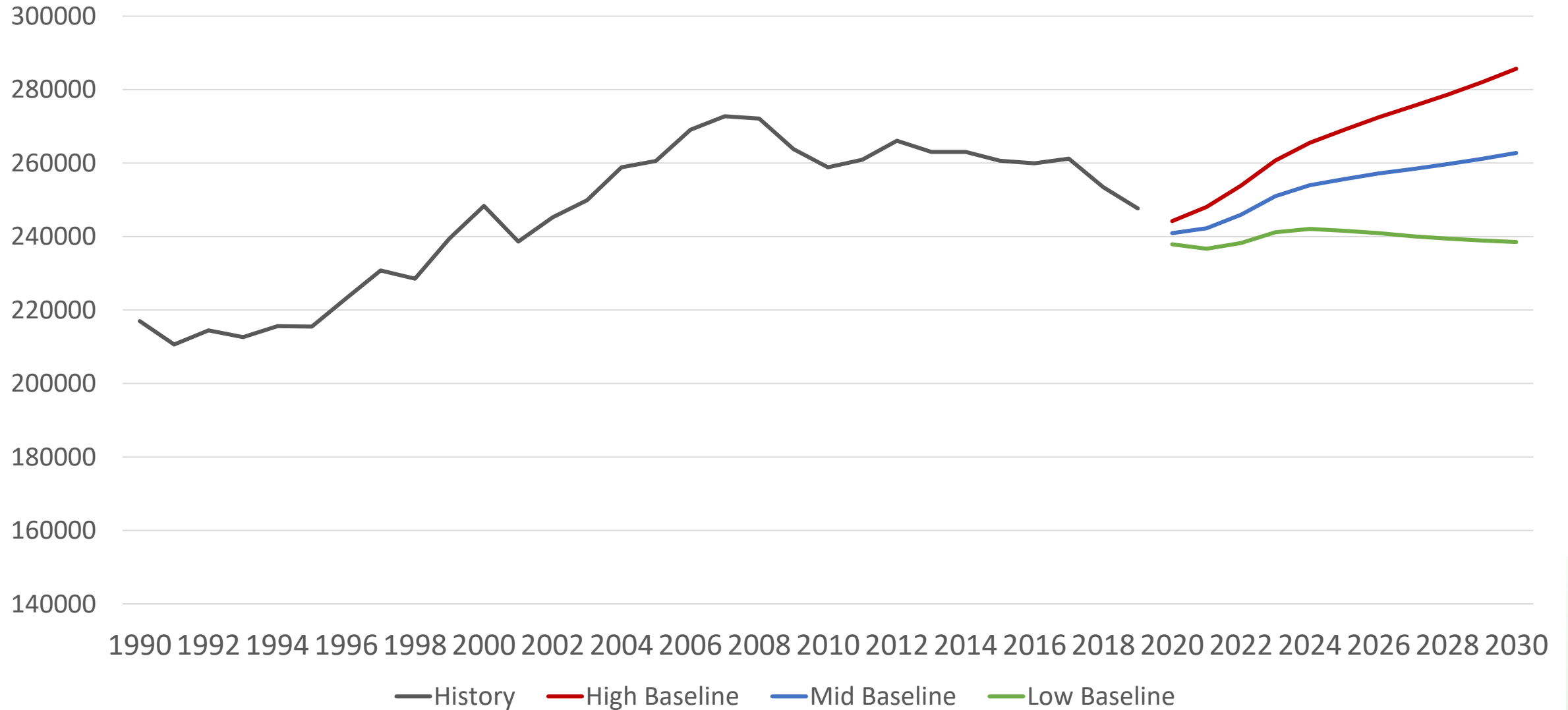
Economic

- Moody's Analytics (June 2020)
- Employment, income, and output reduced due to COVID-19
- Decline in 2020, recovery begins mid 2021
- Recovery continues through 2024



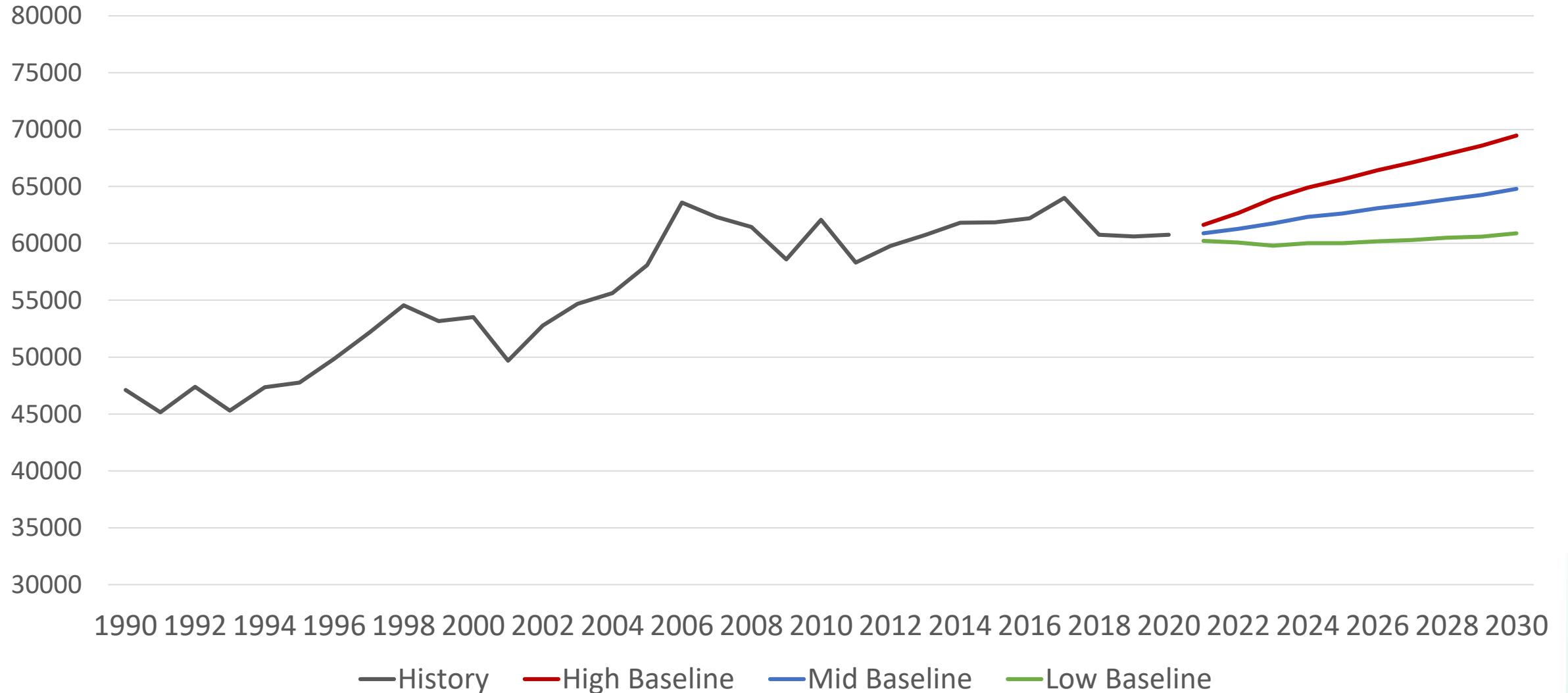


Statewide Electricity Sales (GWh)





Statewide Peak Demand (MW)





Resource Assessment

- Evaluate adequacy of California's electricity system
 - Industry standard: 1 hour in 10 years of supply shortfall
- Simulate system dispatch, using random draws of:
 - Solar and wind profiles
 - Hourly demands
 - Forced outages
- Considers possibility and impact of extreme events on California's electricity system



Stakeholder Process

- Two IEPR workshops
- Demand Analysis Working Group (DAWG) meetings
- Joint Agency Steering Committee (JASC) discussion
- Final revisions made in response to stakeholder comments
 - New data center load added to Silicon Valley Power forecast
 - Final forecast forms docketed on January 14, 2021



Staff Recommendation

- Adopt the California Energy Demand Forecast Update, 2020-2030



Item 3: Public Comment

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Item 4: Redwood Energy. Central Heat Pump Water Heater Load Flexibility (EPC-20-004)

January 25, 2021 Business Meeting

Kadir Bedir, EGSS I
Energy Research and Development Division
Energy Efficiency Research Office



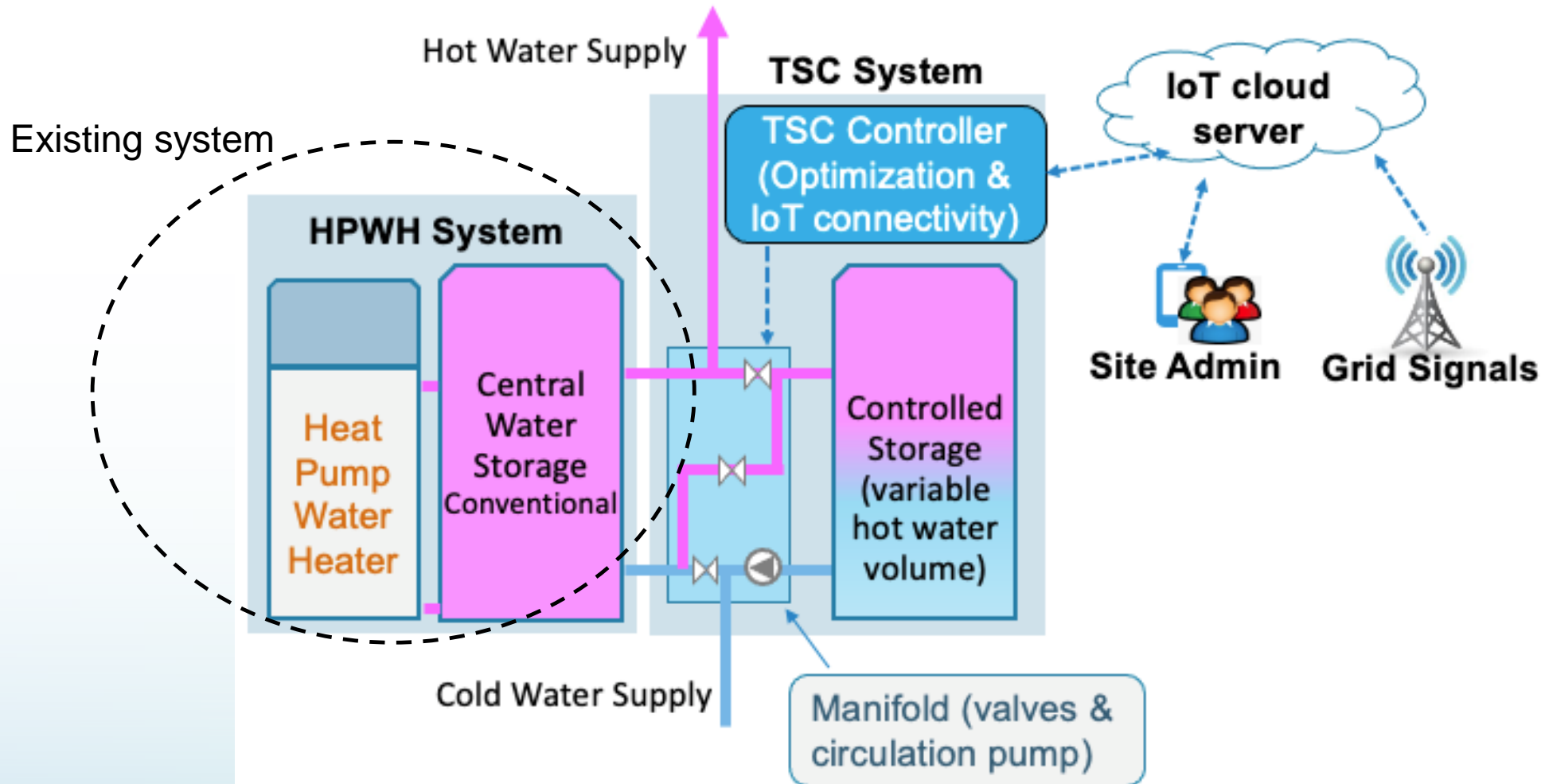
Funding Overview (GFO-19-301)

Project Group	Available Funding	Minimum Award Amount	Maximum Award Amount
Group 1: Low Carbon Space Conditioning (Applied Research)	\$4,000,000.00	\$1,500,000	\$2,500,000
Group 2A: Low Carbon Water Heating (Applied Research)	\$1,500,000.00	\$500,000	\$1,500,000
Group 2B: Low Carbon Water Heating (Technology Demonstration in low-income or Disadvantaged Communities)	\$3,000,000.00	\$1,500,000.00	\$3,000,000.00
Group 3: Refrigerant Leakage (Applied Research)	\$2,000,000	\$1,000,000.00	\$2,000,000.00
Group 4: Heat Pump Load Flexibility in Existing Buildings (Applied Research in low-income or Disadvantaged Communities)	\$5,000,000	\$1,500,000.00	\$3,000,000.00
TOTAL	\$15,500,000		



EPC-20-004 Technology Overview

Thermal Storage Control (TSC) technology for load management of central and electric water heaters.





EPC-20-004 Technology Objective

- Reduce annual cost of central (electric) water heating by up to 37% by coupling load shifting with high-efficiency thermal storage.
- Provide several grid services, such as peak load reductions and renewable integration, without causing any service disruptions over consumers.



EPC-20-004 Project Overview

TSC system will be demonstrated by installing additional storage tanks on existing heat-pump water heating systems at:

Site Name	Monterrey Gateway Affordable Housing	Eureka Veterans Village	Santa Rosa Veterans Village
Location (Climate Zone)	Gilroy, CA (CZ 4)	Eureka, CA (CZ1)	Santa Rosa, CA (CZ 2)
Number of Units	70 units (Four-story apartments)	51 units (Three-story apartments)	14 units (Tiny homes complex)
Population Served	Low-income seniors	Seniors & veterans	Seniors & veterans



Staff Recommendation

- Approve this grant agreement with Redwood Energy (a general partnership).
- Adopt staff's determination that action is exempt from CEQA.



Item 4: Public Comment

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Item 5: Climate Scenarios and Analytics to Support Electricity Sector Vulnerability Assessment and Resilient Planning GFO-19-311

January 25, 2021 Business Meeting

Alex Horangic, Energy Resources Specialist III
Energy Research and Development Division
Energy Generation Research Office



Benefits to California

- Foundation for California's Climate Change Assessments.
- Better anticipate and adapt to climate and weather-related challenges.
- Directly support implementation of CPUC's Adaptation Rulemaking (R.18-04-019).



Image credit: <https://www.climateassessment.ca.gov/>



Overview of Recommended Projects

Project: Development of Climate Projections for California and Identification of Priority Projections

Awardee: University of San Diego Scripps Institution of Oceanography

Funding: \$1,500,000

Objectives:

- Develop climate projections for California at high spatial and temporal resolution.
- Utilize new techniques to better capture processes of importance to planning and investing in a resilient, reliable renewables grid, such as wind and cloud cover.



Overview of Recommended Projects

Title: Co-Produced Climate Data and Analytics Platform to Support CA's Electricity Resilience Investments

Awardee: Eagle Rock Analytics

Funding: \$3,500,000

Objectives:

- Generate actionable, user-informed climate data and analytics through co-production.
- Develop a stakeholder-informed, state-of-the-art climate data platform to facilitate adaptation planning.

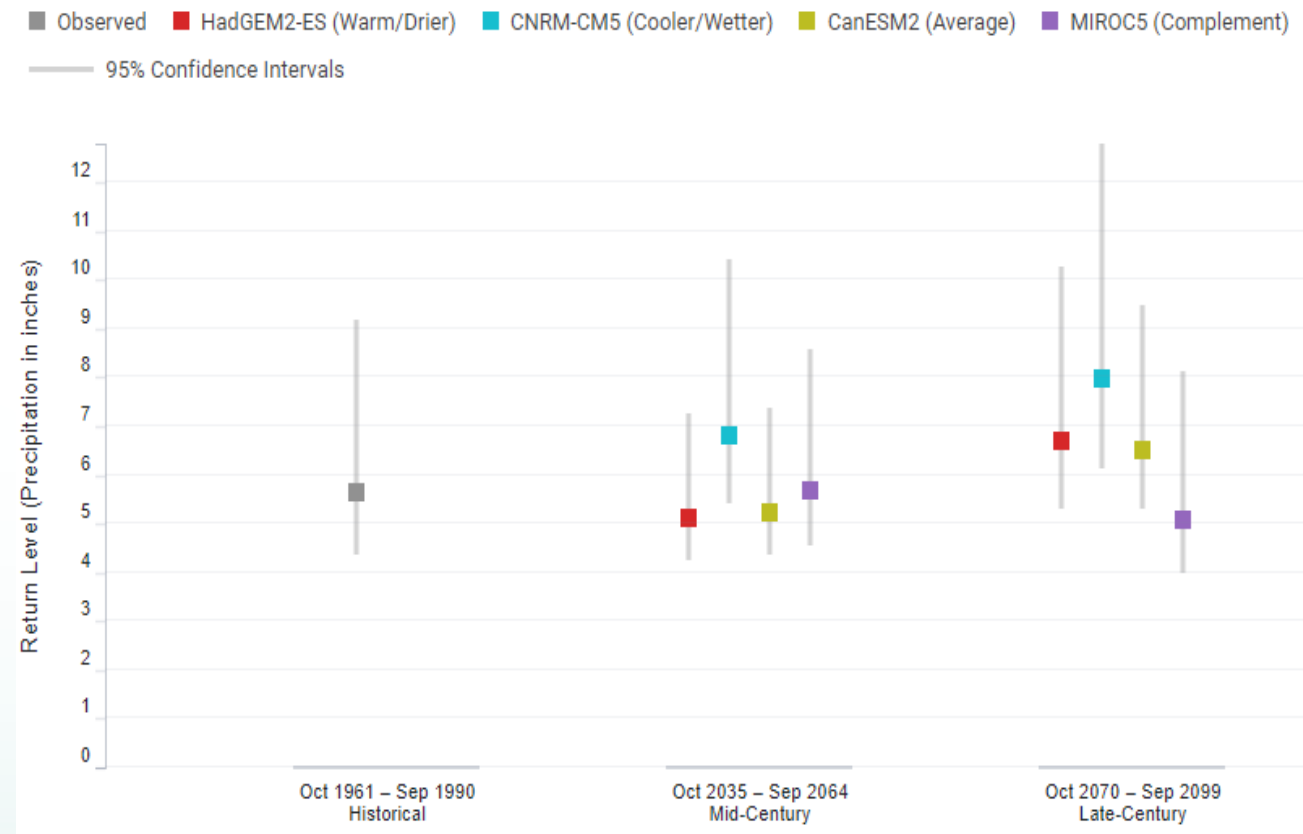


Figure: Amount of rainfall associated with 2-day extreme precipitation event (50-year return interval) for Sacramento, based on climate projections. Image credit: Cal-adapt.org



Staff Recommendation

- Adopt staff's determination that this item is exempt from CEQA.
- Approve recommended agreements with UCSD and Eagle Rock Analytics.



Item 5: Public Comment

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Item 6: Loan Agreements 003-20-ECG thru 15-20-ECG with 13 Local Educational Agencies throughout California totaling \$16,656,765 in ECAA-Ed Funded Loans

January 25, 2021 Business Meeting

Armand C. Angulo

Assistant Division Deputy Director, Renewable Energy Division



Benefits of the ECAA Loans to California

Creates **Green Jobs**



Lowers Utility Bills

Promotes Energy Efficiency & Renewable Generation

7 OF 10
of the most ozone polluted U.S cities are in California



CALIFORNIA CLEAN AIR DAY
A PROJECT OF THE COALITION FOR CLEAN AIR





Northern California Region

Loan Recipient	Project Type(s)	Loan Amount	Annual Energy Cost Savings	*FRPM%
South Bay Union School District	Exterior LED Lighting and Roof-Mounted 70 kW PV System	\$257,600	\$23,191	72%
Redwood Coast Montessori School	Heat Pump and a 10 kW PV System	\$125,600	\$9,371	67%
Pacific Union School District	125 kW PV System	\$437,343	\$25,984	58%
Pierce Joint Unified School District	256.6 kW PV System	\$1,974,850	\$105,522	83%

* Percentage of student body eligible to participate in the Free or Reduced Priced Meal (FRPM)



Central California Region

Loan Recipient	Project Type	Loan Amount	Annual Energy Cost Savings	FRPM%
Provisional Accelerated Learning Academy	51.7 kW PV System	\$238,028	\$19,371	92%
Upland Unified School District	891.9 kW PV System	\$2,987,865	\$171,563	71%
Hanford Elementary School District	522 kW PV Systems	\$2,473,151	\$ 140,082	84%
Pixley Union School District	396 kW PV System	\$1,465,747	\$ 115,559	90%
Chualar Union School District	98.3 kW PV System	\$599,477	\$ 30,583	87%
Buttonwillow Union Elementary School District	132 kW PV System	\$792,352	\$60,693	86%
Golden Valley Unified School District	Lighting, Plug Loads, and Building Control	\$1,712,180	\$134,745	67%



Los Angeles & Southern Region

Loan Recipient	Project Type	Loan Amount	Annual Energy Cost Savings	FRPM%
School of Arts and Enterprise	161.4 kW PV System	\$610,822	\$71,408	80%
Palo Verde Unified School District	877 kW PV System	\$2,981,800	\$215,339	80%



Combined Project Energy Savings

Renewable Generation Measures

3,591 kW of renewable generation capacity
\$980,797 projected annual energy cost savings

Energy Efficiency Measures

730,332 kWh of energy conservation
\$142,614 projected annual energy cost savings



Staff Recommendation

- Adopt staff's determination these projects are exempt from CEQA.
- Approve agreements 003-20-ECG through 015-20-ECG.



Item 6: Public Comment

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Item 7: Local Ordinance Applications (19-BSTD-06)

January 25, 2021 Business Meeting

Danuta Drozdowicz, Efficiency Specialist
Efficiency Division, Building Standards Office



Benefits to California

Jurisdictions that adopt local ordinances:

- Living laboratories for clean energy future
- Reduce greenhouse gas emissions
- Lead from the grassroots



1 IN 3
CALIFORNIANS

**lives in a community with
an energy code exceeding
state standards**



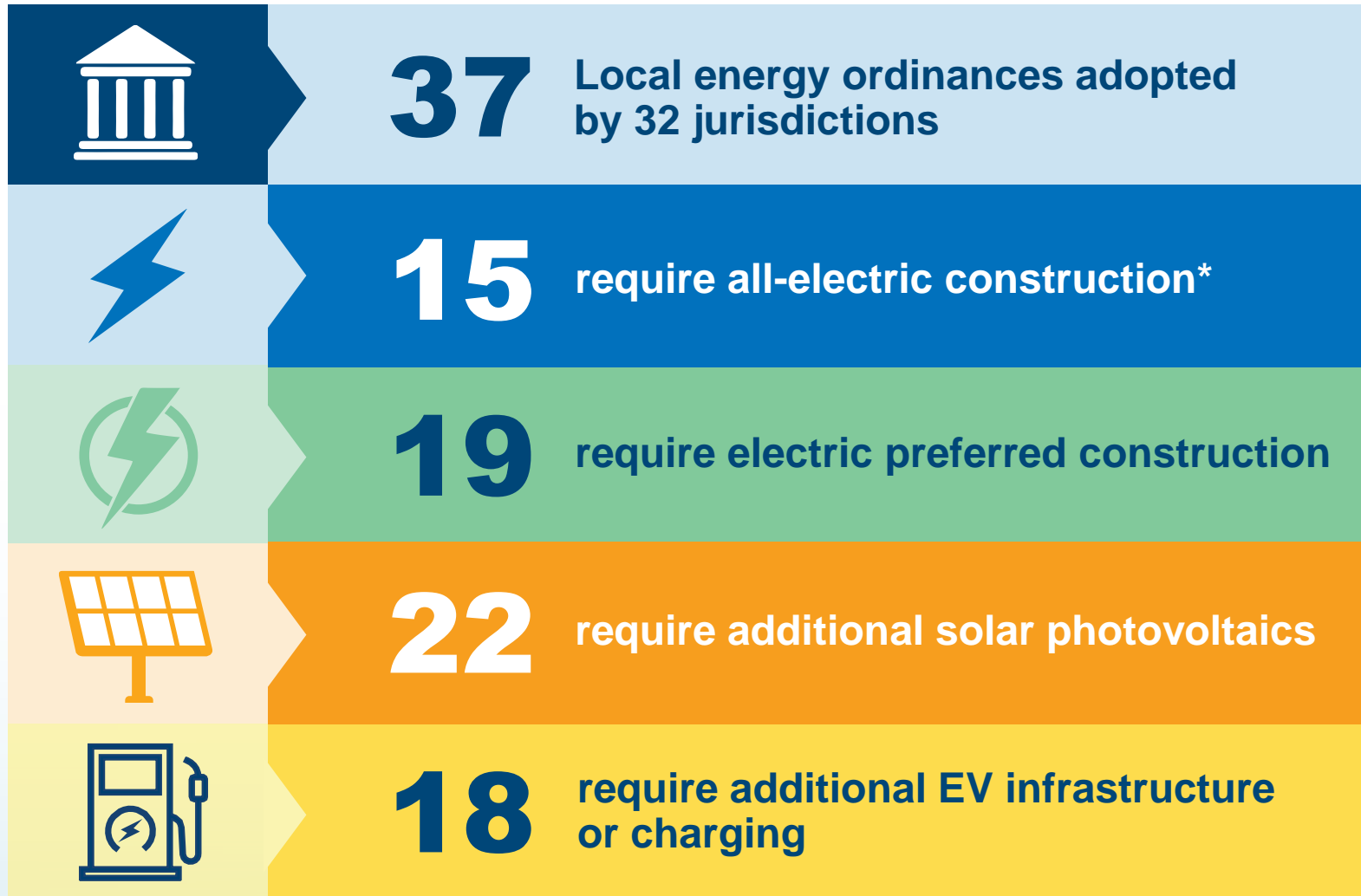
Overview of Local Ordinance Approval Process

For local building efficiency standards to be enforceable:

1. File application with CEC that shows its standards are cost-effective
2. CEC finds standards reduce energy consumption compared to current statewide Energy Code
3. Staff confirms criteria are met, makes recommendation based on findings



Local Ordinances Exceeding 2019 Building Energy Efficiency Standards



* May not apply to all building types



Local Ordinances



Jurisdiction	Cost Effective	Energy Reduction	Energy Efficiency or All-Electric Provisions	Exceptions
City of Campbell	yes	yes	HPWH for water heating, space conditioning	Gas allowed for cooking and fireplaces
City of Millbrae	yes	yes	All-electric + PV for all new buildings + prewiring for electric appliances	Gas allowed for cooking, fireplaces and laboratories
City of Sunnyvale	yes	yes	All-electric + PV for all new buildings + prewiring for electric appliances	Gas allowed for emergency centers, kitchens, laundries
City of Chula Vista	yes	yes	Pre 2006 homes improve energy efficiency when adding or remodeling	Technical infeasibility, home energy score > 8, PV for 95% of load, +
City of Los Altos	yes	yes	All-electric new construction + pre-wiring for electric appliances	Gas allowed for cooking, fireplaces, laboratories, commercial kitchens



Staff Recommendation

- After reviewing application materials, staff found criteria for approval are met
- Staff recommends the Commission approve jurisdictions to enforce local ordinances



Item 7: Public Comment

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Item 8: Committee Report on the Application for a Small Power Plant Exemption for the Sequoia Backup Generating Facility

January 25, 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



In Closed Session

Pursuant Government Code Section 11126

The CEC's January 25, 2021 Business Meeting will resume shortly.

We appreciate your patience.



Item 8: Public Comment

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Item 9: Public Comment

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Item 13: Public Comment

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