



California Energy Commission Business Meeting September 9, 2020 10:00 am



Pledge of Allegiance





Keep California Healthy



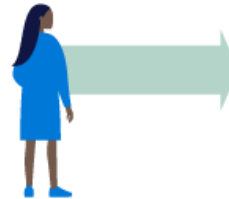
Wash



Clean



Cover



6 Feet

covid19.ca.gov



Take the Census



Complete the form by mail, by phone 844-330-2020 or online @ my2020census.gov



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: 1-888-823-5065**
- **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** 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.

Two ways to provide comments:

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- 4) Do not use speaker phone when talking.
- 5) Mute Zoom while calling to comment.



Item 1 - Consent Calendar

- a. NATIONAL ASSOCIATION OF STATE ENERGY OFFICIALS (NASEO).
Contact: Brad Worster



Item 1a - Public Comment Instructions

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Item 1b-e – Consent Calendar

b. HATHITRUST DIGITAL LIBRARY.

Contact: Nicole Waugh

c. SULPHUR SPRINGS UNION ELEMENTARY SCHOOL DISTRICT.

Contact: Tomas Ortiz

d. DOWNEY UNIFIED SCHOOL DISTRICT.

Contact: Tomas Ortiz

e. CALSTART, INC.

Contact: Bill Kinney



Item 1b-e – Public Comment Instructions

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Item 2: Discussion of Energy Commission Progress on Joint Agency Report, Charting a Path to a 100 Percent Clean Electricity Future, Senate Bill 100 (2018)

September 9, 2020 Business Meeting

Terra Weeks, Sr. Advisor
Office of Chair Hochschild

Liz Gill, PhD, Electric
Generation System Specialist
Energy Assessments Division



Benefits to California

- Under Senate Bill 100, renewable energy and zero-carbon resources shall supply 100 percent of electric retail sales and electricity procured to serve state agencies by December 31, 2045.
 - **Public and environmental health benefits** by reducing greenhouse gas emissions and air pollution from the electricity sector.
 - Substantial **economic and workforce opportunity**.



Overview

- The CEC, CPUC, and CARB are developing the Joint-Agency SB 100 report, due to the legislature by January 1, 2021, which will review the policy and provide recommendations for planning and implementation.

Activity	Estimated Date
Kickoff Workshop (Sacramento)	September 2019
Scoping Workshop 1: Central Valley (Fresno)	September 2019
Scoping Workshop 2: Northern California (Redding)	October 2019
Scoping Workshop 3: Southern California (Diamond Bar)	October 2019
Technical Workshop (San Francisco)	November 2019
Modeling Inputs & Assumptions Workshop (Sacramento)	February 2020
Draft Modeling Results Workshop (Remote Only)	September 2020
Draft Report Workshop (Remote Only)	November 2020
Report due to Legislature	January 1, 2021



Draft Results Workshop - 9/2/20

- Remote attendance only with close to 400 attendees
- **Session 1** included staff presentations on the modeling framework and results
- **Session 2** included three stakeholder panels covering the following perspectives:

Resource Build Requirements

- **Ric O'Connell**, GridLab (M)
- **Danielle Mills**, AWEA
- **Bernadette Del Chiaro**, CALSSA
- **Alex Morris**, CESA
- **Logan Goldie Scot**, BNEF
- **Mateo Jaramillo**, Form Energy
- **Shannon Eddy**, Large-Scale Solar Association

Grid Planning Implications

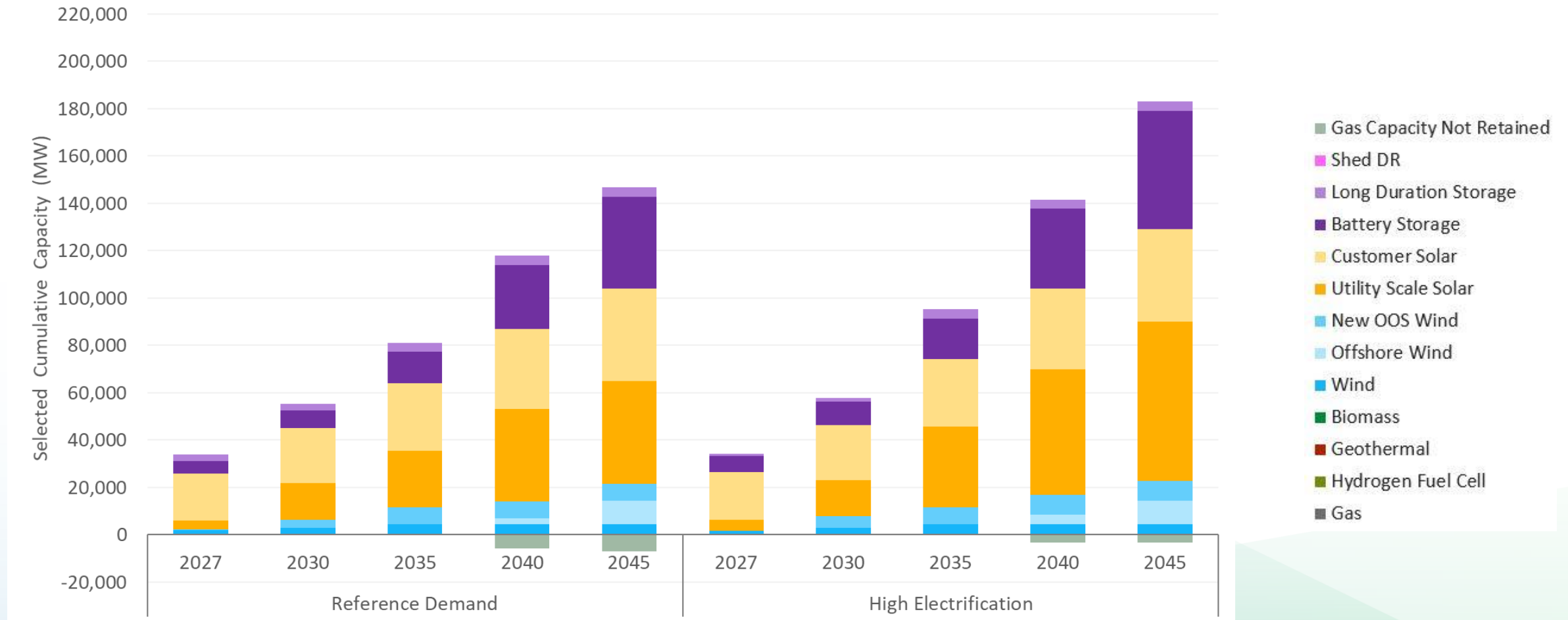
- **Mike Florio**, Gridworks (M)
- **Beth Vaughan**, CalCCA
- **Delphine Hou**, CAISO
- **James Barner**, LADWP
- **Erica Bowman**, SCE

Equity, Workforce and Additional Considerations

- **Aleecia Gutierrez**, CEC (M)
- **Shana Lazerow**, CBE
- **Elena Krieger**, PSE
- **Roger Lin**, DACAG
- **Mark Specht**, UCS
- **Shrayas Jatkar**, CWDB



Core Scenario Results

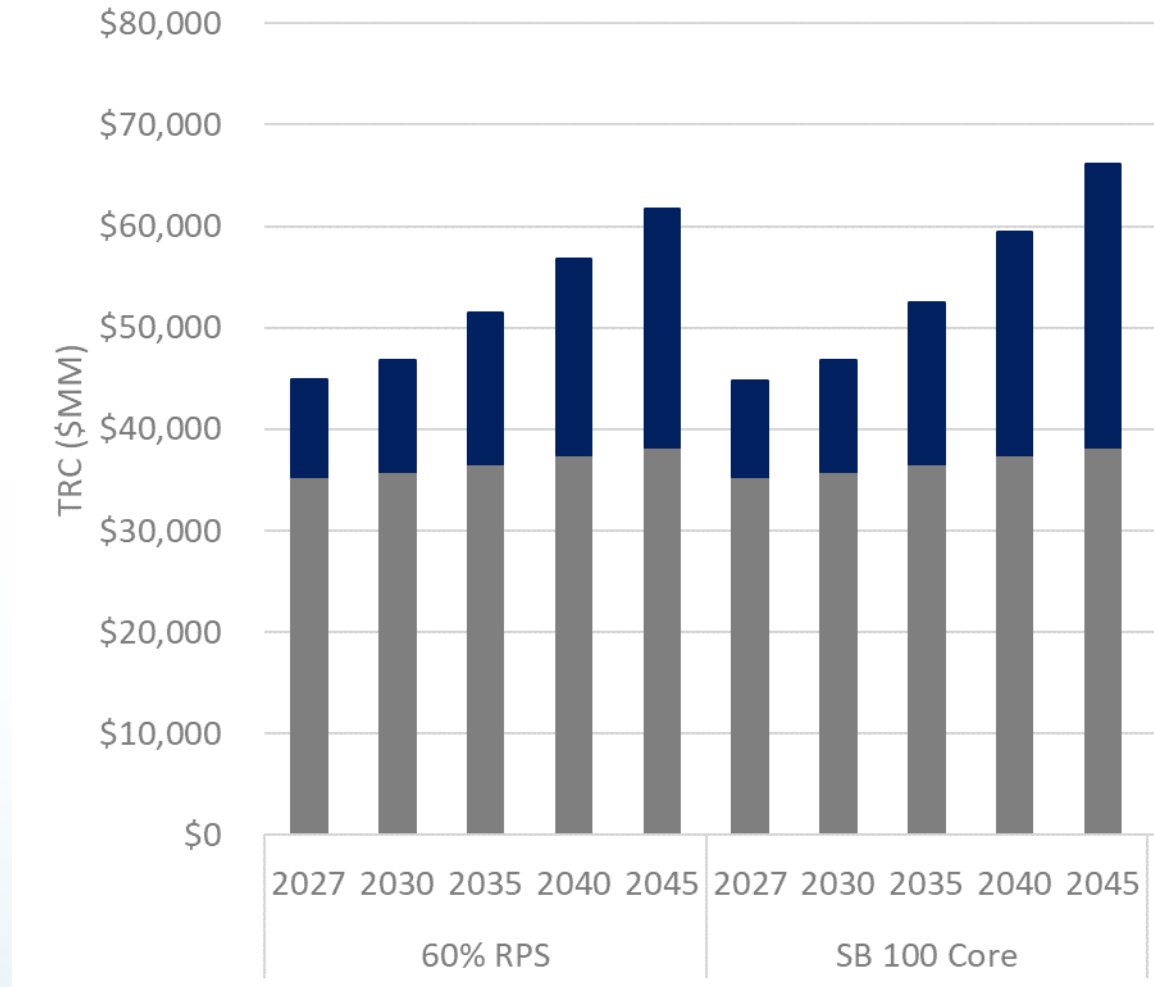


As of 2019, there is 80 GW of in-state capacity in California.

Load Coverage: Core; Resource Options: All



Total Resource Cost



2045 Scenario Costs

Scenario	Total Resource Cost (\$B)	Average Cost (¢/kWh)
60% RPS	\$62	14.8
SB 100 Core	\$66	16.0

Total resource cost (TRC) includes existing system costs (baseline costs), capital investments and operation costs.

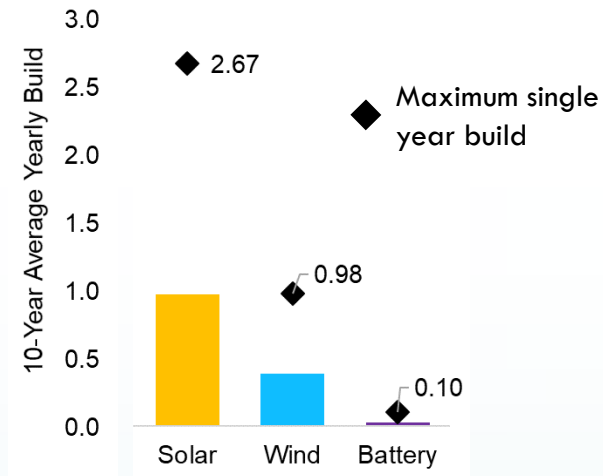
Demand: High Electrification; Resource Options: All



Resource Build Rates

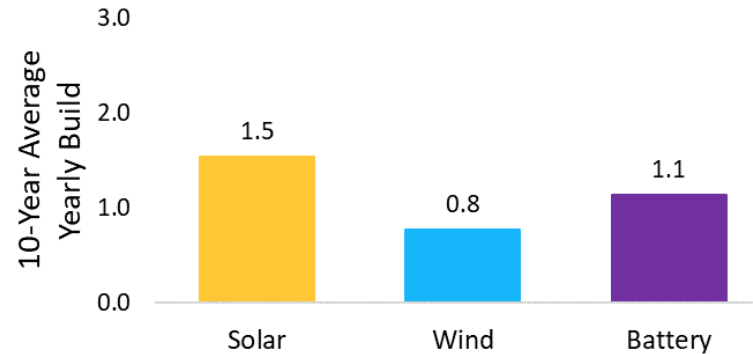
All build rates shown in “GW/year”

Average Build Rate to Date

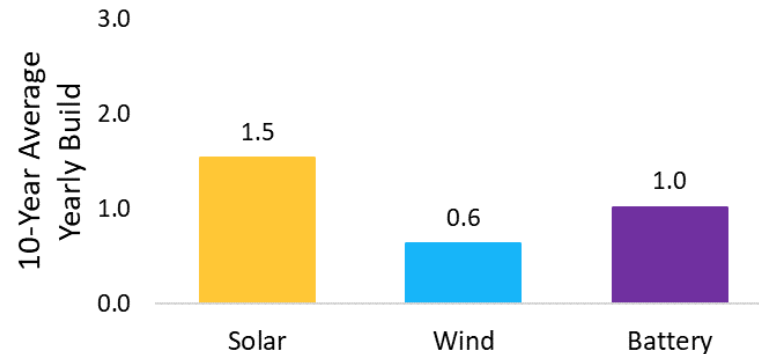


Average Build Rate to 2030

High Electrification Demand

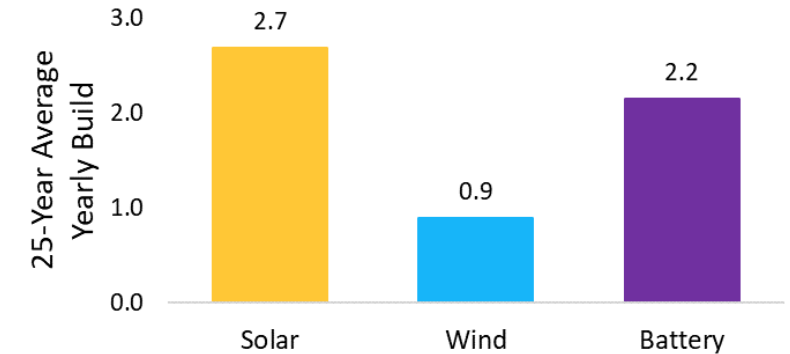


Reference Demand

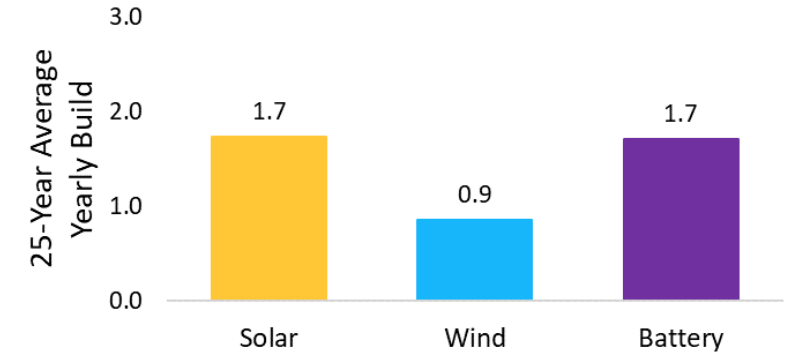


Average Build Rate to 2045

High Electrification Demand



Reference Demand





Key Takeaways from Draft Results

- **SB 100 is achievable with existing technologies.**
 - Cost reductions and innovation in zero carbon technologies, as well as demand flexibility and energy storage development can further reduce implementation costs.
- **Portfolio diversity is generally valued by the model.**
- **Sustained record setting resource build rates will be required to meet SB 100.**
- **Natural gas capacity is largely retained, but fleet-wide utilization decreases by 50% compared to a 60% RPS future.**
 - Cost reductions and innovation in zero carbon firm resources and storage resources may reduce economic gas fleet retention.



Workshop Comments

- **Achieving SB 100 is possible but will be a big push.** Requires a coordinated regulatory environment for system planning and to address bottlenecks.
- **Results are directionally useful, but more work is needed** to address specific implications, such as reliability, land-use and the location of resources, and equity.
- **Better capture resource potential of emerging and non-generation resources**, such as hydrogen, lower-cost geothermal, behind the meter resources, long-duration energy storage, and demand flexibility.
- Incorporate **social costs and non-energy benefits**
- Explore the use of **zero-carbon firming resources to further reduce remaining gas and prioritize retirements in disadvantaged communities.**
- **Workforce programs** require strong partnerships, including with employers. Pre-apprenticeship programs have been a successful model.
- **SB 100 provides a helpful forum** to address a range of topics across agencies.



Next Steps

- Staff will review additional written comments (due 9/15) and continue working with the joint agencies to develop the draft report.
- Draft report workshop planned for later this fall.



Item Number 3: ZEV and EV Charger Dashboard

September 9, 2020, Business Meeting

Siva Gunda, Deputy Director
Energy Assessments Division



Overview

- CEC launched a dashboard to track ZEV and EV charger statistics to track progress toward the state goals
 - Vehicle on-road population
 - ZEV annual and cumulative sales
 - Public and shared-private EV charger counts
- Provides most up-to-date, accurate and geographically disaggregated information for policy makers, researchers and the public
- Developed in collaboration with DMV and CARB

<https://www.energy.ca.gov/zevstats>



Data Portal Demonstration



Next Steps

- Vehicle Population dashboard will be updated annually at a minimum; staff are hoping to update more frequently
- ZEV Sales dashboard will be updated quarterly, and the next update will occur at the end of October
- EV Charger dashboard will also be updated quarterly
- Dashboard will evolve as we receive input and feedback from users

<https://www.energy.ca.gov/zevstats>



Item Number: 5. Local Ordinance Applications (19-BSTD-06)

September 9, 2020 Business Meeting

Danuta Drozdowicz, Efficiency Specialist
Efficiency Division, Building Standards Office



Benefits to California

- Reach Codes – local ordinances that exceed the Energy Code – provide the opportunity for local jurisdictions to participate directly in the state’s efforts to address climate change



Overview: The Local Ordinance Approval Process

For local building efficiency standards to be enforced:

1. Jurisdiction must file a determination that its standards are cost-effective
2. CEC must find that the local standards require a reduction of energy consumption levels compared to the current statewide Energy Code

Staff review application materials to confirm that these criteria are met, and make a recommendation based on the findings



2019 Energy Code Approved Local Ordinances To Date

1. Berkeley
2. Brisbane
3. Cupertino
4. Davis (2)
5. Hayward
6. Healdsburg
7. Los Angeles County
8. Los Gatos
9. Marin County
10. Menlo Park
11. Mill Valley
12. Milpitas
13. Mountain View
14. Pacifica
15. Palo Alto
16. Richmond
17. San Francisco
18. San Jose
19. San Luis Obispo
20. San Mateo
21. Santa Monica
22. San Rafael
23. Santa Rosa
24. Saratoga
25. West Hollywood
26. Windsor



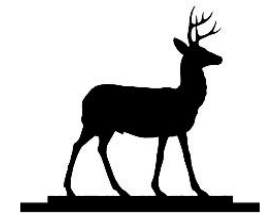


Local Ordinance Applications Submitted for Approval at this Business Meeting are from:

**The Town of San Anselmo
The County of San Mateo**



The Town of San Anselmo Local Ordinance Requires:



TOWN OF
SAN ANSELMO
EST. 1907

1. Newly constructed buildings shall be all-electric or, if mixed fuel, meet higher energy efficiency standards that the 2019 Energy Code.
2. Prewiring for future electric equipment and appliances is required where gas fueled equipment and appliances are installed.



The County of San Mateo Local Ordinance Requires:



1. All newly constructed buildings are all-electric with exceptions allowed for laboratories, commercial kitchens, publicly owned emergency shelters, and buildings for which there is no all-electric compliance pathway.
2. Prewiring for electric equipment and appliances is required where gas fueled equipment and appliances are installed.
3. Photovoltaic systems are required on all buildings not subject to the provisions of the Energy Code with exceptions allowed for buildings with vegetative roofs or with limited solar access.



Staff Recommendation

- Staff reviewed application materials from the local jurisdictions
- Staff found, based on the application material, that the criteria for approval are met
- Staff recommends that the Town of San Anselmo and the County of San Mateo be approved to enforce its respective local ordinances



Item 5 - Public Comment Instructions

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Item 6: Charge Bliss. Demonstrating Long Duration and Title 24-Compatible Energy Storage Technologies – GFO-19-306

September 9, 2020 Business Meeting

Joseph Sit, Utilities Engineer

Energy Research and Development Division, Energy Systems Research Office



Benefits to California

- Most current energy storage designed for 4 hours
- Longer duration energy storage needed for:
 - Resilience
 - Use excess renewable generation



Overview

- Solicitation required demonstration of 400kW, 10 hr+ non-lithium ion storage technology
 - Demonstrate 800kW battery system in conjunction with onsite solar
- Kaiser Permanente Ontario Medical Center
- 90% of essential power for over 10 hours
- Funding: \$8.3M (CEC) and \$7.5M (match)



charge bliss

VIONXTM
ENERGY



Staff Recommendation

- Approval of this agreement
- Approval of supporting CEQA documentation



Item 6 - Public Comment Instructions

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Item 10



SAVE THE **DATE**

Thursday, December 10, 2020

Nominations due 9/30/20

Go to: www.energy.ca.gov



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Break

**The September 9, 2020 Business Meeting
will not resume earlier than 1:30 PM.**

We appreciate your patience.



Item No. 13: Small Power Plant Exemption for the Sequoia Backup Generating Facility

September 9, 2020

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 13 - Public Comment Instructions

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In Closed Session

Per Government Code Section 11126

The September 9, 2020 Business Meeting will resume shortly.

We appreciate your patience.