

CESA Monthly

Policy Update Call

April 7, 2023



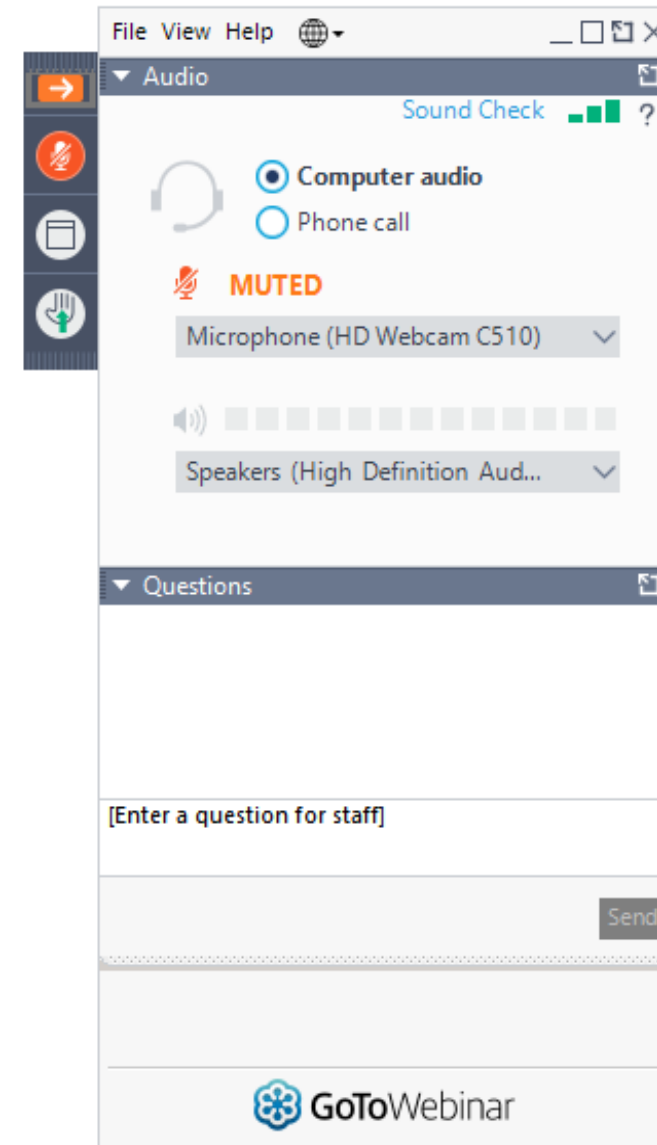
Agenda

- Key Organizational Updates
- Business Development Opportunities
- California Policy Updates
- Member Q&A



Housekeeping

- All participants are in listen-only mode
- Webinar is being recorded and notes circulated after call
- Use the “Raise Hand” feature to be queued up to speak
- Q&A conducted through “Questions” panel in menu
- Pause for Q&A



Mission

The mission of CESA is to make energy storage a mainstream resource to advance a more affordable, efficient, reliable, safe, and sustainable electric power system for all Californians.

Our CESA Board Members



Our CESA Members



Interim Executive Director Update

- **CAISO's new interconnection initiative underway (IPE 2023):** Delay QC 15 study process to 2024 and consider long-term reforms (auctions, screening, generic studies), including a focus on “priority zones”
- **CAISO Draft 2022-23 Transmission Plan published:** Record 46 transmission projects amounting to \$9.7B proposed for approval
- **CAISO Generator Deliverability Update Initiative delayed:** Waiting until IPE Track 2 schedule
- **CAISO minimum state of charge (MSOC) extended:** At least until exceptional dispatch state of charge (ED-SOC) implemented
- **Resource Adequacy (RA) slice-of-day (SOD) Decision approved:** Largely good for storage with greater flexibility and certainty in counting, includes adoption of CESA's proposed language for paired assets, delays action on multi-day storage
- **Federal watch:** FERC Final Rule on Generator Interconnection expected soon, Energy Communities guidance, other pending IRA guidance

POLL

CESA Information Sharing Tools

California Storage Market Snapshot

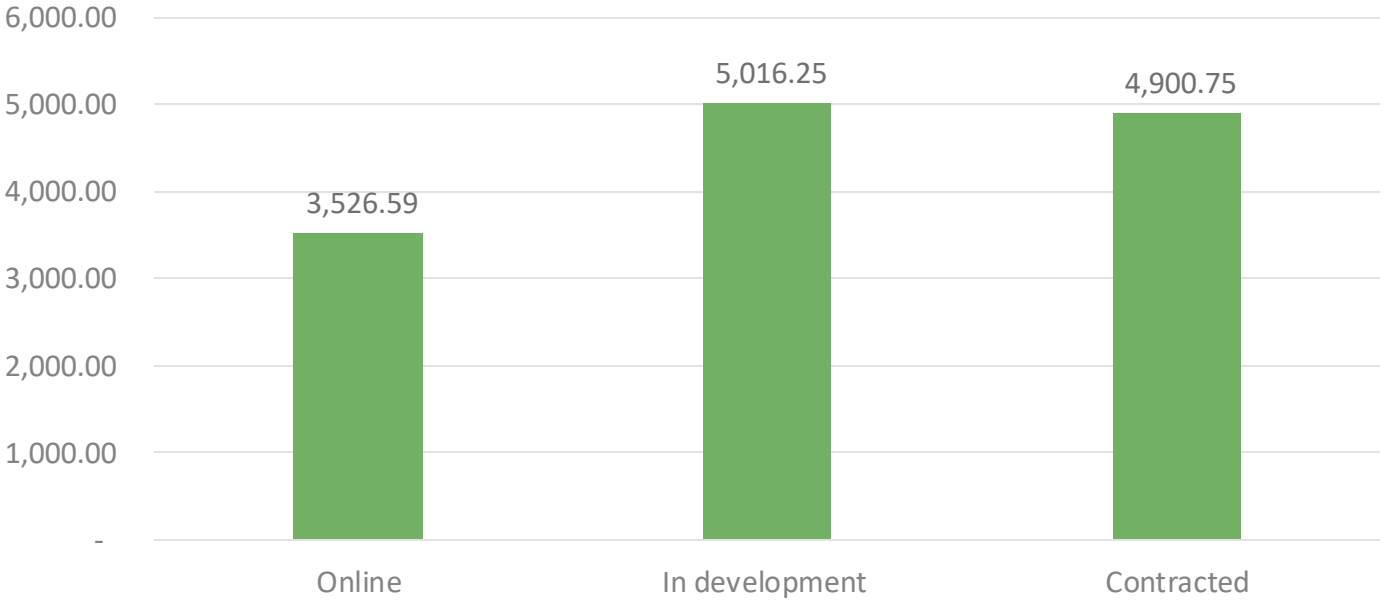


Energy storage capacity procured by LSE (MW)	
LSE	MW
Southern California Edison	4,684.73
Pacific Gas & Electric	3,539.70
Clean Power Alliance	1,120.50
San Diego Gas & Electric	945.66
Los Angeles Department of Water & Power	431.01
East Bay Community Energy	630.75
Marin Clean Energy	320.00
Central Coast Community Energy	429.13
San Diego Community Power	215.50
Clean Power SF	140.00
Valley Clean Energy Alliance & Redwood Coast Energy Authority	125.50
California Community Power	119.00
Silicon Valley Clean Energy & Monterey Bay Community Power	105.00
Silicon Valley Clean Energy	96.63
Sonoma Clean Power	80.00
Imperial Irrigation District	60.00
Desert Community Energy	50.00
Redwood Coast Energy Authority	45.00
California Choice Energy Authority	15.00
San Jose Clean Energy	10.00
Riverside Public Utilities	7.85
Sacramento Municipal Utilities District	4.87
Redding Electric Utility	3.60
Glendale Water & Power	3.50
City of Santa Clara Utilities	3.25
City of Anaheim Public Utilities	3.15
Pasadena Water & Power	0.74
Moreno Valley Utilities	0.08
Lancaster Choice Energy	0.03
Colton Public Utilities	0.02
Alameda Municipal Power	0.01
Burbank Water & Power	-

As of April 7, 2023, there are **13,443 MW** of active energy storage procurements since 2010

SGIP has enabled the installation of an additional **596 MW** of customer-sited electrochemical storage

Chart 1. Energy storage procurement since 2010 by status (MW)



Business Development Opportunities



Procurement Obligations in September NQC MW						
LSE	2023	2024	2025	2026 (LLT)	2025 (Zero-Emission)	Total
PG&E Bundled	400	1,201	300	400	500	2,302
PG&E Direct Access (Aggregated)	77	230	58	77	96	441
Clean Power SF	31	93	23	31	39	179
East Bay Community Energy	73	218	55	73	91	418
King City Community Power	0.3	1.0	0.3	0.3	0.4	1.9
Marin Clean Energy	58	173	43	58	72	332
Monterey Bay Community Power	51	152	38	51	63	291
Peninsula Clean Energy	38	113	28	38	47	217
Pioneer Community Energy	12	37	9	12	15	70
Redwood Coast Energy Authority	7	20	5	7	8	38
San Jose Clean Energy	43	129	32	43	54	248
Silicon Valley Clean Energy	41	124	31	41	52	237
Sonoma Clean Power	25	74	18	25	31	141
Valley Clean Energy Alliance	8	23	6	8	10	44
SCE Bundled	687	2,060	515	687	858	3,948
SCE Direct Access (Aggregated)	90	271	68	90	113	520
Apple Valley Choice Energy	3	8	2	3	3	16
Baldwin Park	3	8	2	3	3	15
Pomona	5	14	3	5	6	26
Clean Power Alliance	118	354	89	118	148	679
Desert Community Energy	6	18	4	6	7	34
Lancaster Clean Energy	6	19	5	6	8	37
Pico Rivera Innovative Municipal	2	7	2	2	3	14
Rancho Mirage Energy Authority	3	9	2	3	4	18
San Jacinto Power	2	5	1	2	2	10
Santa Barbara Clean Energy	2	7	2	2	3	13
Western Community Energy	15	46	12	15	19	89
SDG&E Bundled	63	188	47	63	78	361
SDG&E Direct Access	26	79	20	26	33	152
Clean Energy Alliance	7	20	5	7	8	38
San Diego Community Power	99	297	75	99	124	570

Active/ongoing:

- **PCE 2023 Fully Deliverable RE+ Storage RFO:** Offers due 5pm on 4/18
- **Pioneer 2023 Long-Term California RPS Projects RFP:** Response due 4/19
- **CalChoice 2023 Long-Term RPS Eligible Renewable Energy + MTR Capacity RFP:** Offers due 4/25
- **SCE 2023 Catalina Island Clean Energy All-Source RFP:** Proposals due 5/1
- **EBCE/SJCE 2023 Long-Term Resource RFO:** Offers due 5/2
- **SVCE/3CE 2023 BESS Bidding Optimization Software RFI:** Proposals due 5/12
- **Section 48C Round 1 Allocation Credit:** Funding opens 5/31, concept papers due 7/31
- **SCPPA 2023 RE & ES Solutions RFP:** Responses due 6/29

Policy, Market, and Regulatory Updates

Recurring Working Group Calendar

Working Group	Schedule	Key Issue Areas
California Independent System Operator (CAISO)	Biweekly (Monday, 11am-12pm PST)	<ul style="list-style-type: none"> Energy storage enhancements Price formation and modifications Interconnection enhancements and deliverability method modifications
Distributed Energy Resources (DER)	Monthly (Wednesday, 9:30-10:30am PST)	<ul style="list-style-type: none"> Updates on SGIP, DR, NEM permitting guidebook Multiple-use applications, high DER future Microgrid policy/tariffs, value of resiliency Distribution deferral and interconnection
Emerging Technology and Long Duration	Monthly (Tuesday, 9-10am PST)	<ul style="list-style-type: none"> Solutions to barriers impeding new technologies EPIC and other grant opportunities Long-duration energy storage issues
Integrated Resource Planning (IRP)	Monthly (Thursday, 1-2pm PST)	<ul style="list-style-type: none"> IRP modeling and scenarios (including SB 100) Emerging/long-duration storage procurement
Resource Adequacy (RA)	Biweekly (Thursday, 1-2pm PST)	<ul style="list-style-type: none"> Central Buyer (CB) implementation Energy & hourly capacity related reforms
Safety	Bimonthly (Tuesday of odd months, 9-10am PST)	<ul style="list-style-type: none"> Progress update on CESA safety initiatives Safety codes & standards

Policy Update Agenda

- California Independent System Operator (CAISO)
- Integrated Resources Plan (IRP)
- Resource Adequacy (RA)
- Distributed Energy Resources (DER)
- Emerging Technology and Long Duration Storage



California Independent System Operator (CAISO) Updates

- Energy Storage Enhancements (ESE)
- Price Formation Enhancements (PFE)
- Interconnection Process Enhancements (IPE)
- Transmission Planning Process (TPP)

CAISO Interconnection

CAISO 2023 Interconnection Process Enhancements (IPE) Issue Paper and Straw Proposal published (3/9) and stakeholder conference held on 3/13.

- Track 1 proposed immediate adjustments to schedule of QC 15 and proposed a separate track for Long-Lead Time (LLT) resources.
- CAISO proposes various reform ideas for Track 2, including limits based on TPD availability/plans, screening criteria, auctions, PPA/shortlisting, as-needed application window
- New initiative on deliverability reform expected in early Q2 of 2023

Key updates:

CESA submitted comments on the IPE on 3/27 highlighting several key topics to discuss including:

- Schedule adjustments for QC 15
- Separate study tracks for LLT resources
- Only accepting interconnection request (IR) where transmission capacity is available or planned.
- Auctions or screening criteria to limit IRs in a specific area.
- Requiring a PPA or be shortlisted to proceed to phase II studies.
- Opening of IR window when warranted

Next Steps: CAISO will publish draft tariff language & final proposal on **4/10**

Transmission Planning

2022-2023 CAISO Transmission Plan Draft published on April 3rd.

- Developed through the annual Transmission Planning Process (TPP).
- The Transmission Plan is developed to identify and plan solutions needed to meet the future needs of the ISO transmission grid.

The Transmission Plan takes a more strategic and proactive approach to resource, procurement, transmission planning and interconnections.

Key updates:

2022-2023 Transmission Plan based on state projections that CA needs to add more than 40 GWs of new resources over next 10 yrs.

- **CAISO has identified 46 transmission projects needed throughout CA.**
 - 24 Reliability-Driven Projects identified (\$1.76 billion)
 - 22 Policy-Driven Projects identified (\$7.53 billion)
 - No solely Economic-Driven Projects recommend.
- **Project costs range from \$4 million to \$2.3 billion.**
- **The 46 projects results in a total of \$9.3 billion in transmission infrastructure investments.**
- **Project lead times of up to 8 to 10 years.**

Next Steps: CAISO stakeholder call on 4/11 and comments on call due 4/25.

Energy Storage Enhancements (ESE)

Within ESE, the CAISO seeks to establish new market rules and enhance existing energy storage optimization

The ESE Final Proposal included the following elements:

- Two proposals to minimize the likelihood of storage being unable to meet AS awards
- A new type of exceptional dispatch, state-of-charge exceptional dispatch (SOC ED), to cure some current concerns with the minimum state-of-charge (MSOC) requirement
- The implementation of a new electable co-located model to ease compliance with the federal Investment Tax Credit (ITC) and minimize grid-charging

Key updates:

- Due to CAISO staff's anticipation that part of ESE's policy will not be in place for Summer 2023, CAISO has initiated the Minimum State of Charge (MSOC) Extension Initiative
 - Final Proposal (FP) posted 3/6 would limit extension to September 30, 2023, or "when successor elements are ready"
 - FP was approved unanimously 3/23 and the filing to FERC was done 3/28
- Following approval of the MSOC FP, the CAISO made the Phase I ESE filing at FERC on 3/31
 - This includes modifications related to bidding requirements for ancillary services and co-located enhancements

Day-Ahead Market Enhancements

Day-Ahead Market Enhancements (DAME) Initiative aims to reduce the burden on the real-time market to resolve imbalance and net load forecast uncertainty:

- Creates the Imbalance Reserve (IR) product
- Enhances the Residual Unit Commitment (RUC) process through the creation of the Reliability Capacity (RC) product
- Introduces Market Power Mitigation for both new products

Key updates:

- CAISO staff held three DAME workshops in recent weeks to allow for more stakeholder discussion of the tradeoffs of nodal vs. zonal designs for IR
 - The need for downward products (or lack thereof) was also discussed at the workshops
- CESA and other stakeholders are actively collaborating with CAISO staff to address storage concerns, particularly around representing impacts of IR on SOC to ensure feasible dispatch
- A Revised FP was posted 4/6 with a meeting scheduled 4/7

Integrated Resource Planning & Procurement (IRP) Updates

- Integrated Resource Planning (IRP)
- SB 100 Study
- LA100 Advisory Group
- Energy Storage Procurement Applications
- Renewable Portfolio Standard (RPS) Program

Integrated Resource Planning (IRP)

The IRP process optimizes for least-cost portfolio to reach goals for GHG emissions, local pollutants, DAC impacts, reliability, RPS, etc.

Each LSE files own IRP in even years while modeling is done in odd years

Scope of IRP includes:

- Planning track to assess modeling inputs, assumptions, resource valuation, and analysis of cost, GHG emissions, air pollutants, and reliability
- Procurement track to evaluate reliability issues at system level and to direct procurement as needed

Key updates:

- D.23-02-040, issued 2/28, required procurement of a total of 4 GW of NQC and modified requirements for procurement of long lead-time resources from D.21-06-035 by automatically postponing them from June 1, 2026, to June 1, 2028
 - CESA and other parties are considering a Petition for Modification (PFM) of D.23-02-040 to allow for a potential 2030 extension if good-faith efforts are demonstrated
- Inputs and assumptions (I&A) process for 2023 IRP cycle expected to commence late May, early June

Resource Adequacy (RA) Updates

- Central Procurement Entity (CPE) implementation
- Energy requirements and limitations
- Local Capacity Requirements (LCR)
- Behind-the-meter (BTM) export capacity

Resource Adequacy (RA) – Reform

D.22-06-050 adopted SCE’s 24-hour slice framework, with modifications

Phase 3 of R.21-10-002 involves two tracks:

- **Implementation Track:** PRM/LOLE refinements; LCR/FCR needs; and other “time-sensitive” issues
- **Reform Track:** Implementation workstreams for Slice-of-Day (SOD) framework

Key updates:

- On March 3, the Commission issued a Proposed Decision on the RA Reform Track
 - CESA submitted comments and replies suggesting clarifying language related to paired resources, including a series of workshops to discuss multi-day storage, and modifying some assumptions related to cycling
- A Revised PD adopting CESA’s recommendations on paired resources was issued 4/5 and unanimously approved 4/6
 - No action on multi-day storage or deliverability considerations for the resources meeting the standalone storage sufficiency verification

Distributed Energy Resources (DER) Updates

- Self-Generation Incentive Program (SGIP)
- Demand response (DR) and demand flexibility
- Rule 21 interconnection
- Net Energy Metering (NEM)
- Energy storage permitting
- TOU, real-time pricing, and load management standards
- High Distributed Energy Resources (DER) Future
- Microgrids

CEC Emergency Reliability Programs



2022 Legislative Session created two DER programs for emergency reliability.

Distributed Electric Backup Assets (DEBA) Program:

- \$700 million in funding
- Incentives for construction of DERs to serve as emergency resources

Demand Side Grid Support (DSGS):

- \$295 million in funding
- DR program providing payments for load reduction/exports during extreme events

Key updates:

- CEC expected to release draft guidelines for both DEBA and DSGS in April
- CEC staff currently contemplating Summer Grant Challenge and standardized incentives in future
- CESA in active discussion with CEC staff on program guidelines development, including on incrementality with RA supply

Demand Response & Flexibility

2023-2027 IOU DR Applications are currently open, addressing:

- Potential extension of DR Auction Mechanism (DRAM)
- Extension of ELRP through 2027 and other existing programs (BIP, CBP, ADR)
- New pilots, including for VPPs, VGI, etc.

New OIR to Advance Demand Flexibility Through Electric Rates released

- Phase 1: Rate design and guiding principles
- Phase 2: Rate reform and establishing policies and programs to advance demand flexibility

Key updates:

- CESA will focus testimony on maintaining ELRP, particularly around minimum dispatch hours and value of export compensation structure
- PD issued on rate and demand tariff principles for consideration in future proposals, which largely landed in good place to support policy goals

Rule 21 Interconnection

Phase 2 of the R.17-07-007 is beginning with the scope including:

- Limited Generation Profiles
- Interconnection Portal Improvements
- Non-NEM interconnection fees
- Distribution cost sharing: both among Rule 21 resources and Rule 21 vs the Wholesale Distribution Access Tariff
- Other follow-up items from Phase 1

Proposed Decision on Phase 2 is expected in Q2 2023

Key updates:

- IOUs submitted advice letters requesting discontinuation of notification-only process for small non-exporting energy storage systems
- CESA protest will discuss merits of continuation and advocate for modifications, including eligibility of storage retrofits to existing solar
- Ongoing discussions on Limited Generation Profiles (LGPs) and Smart Inverter Operationalization Working Group (SIOWG)

High DER & Grid Modernization

New High DER & Grid Modernization rulemaking launched as successor to the DRP proceeding

Scoping Memo (11/15) established three tracks for this proceeding:

1. Distribution Planning Process and data improvements (including DIDF)
2. Distribution System Operator (DSO) roles & responsibilities
3. Smart Inverter Operationalization (SIO) and Grid Modernization

IDER will continue focus on developing sourcing mechanisms and avoided cost calculator (ACC)

Key updates:

- High DER OIR starting to really get underway with discussion on distribution planning process (DPP) enhancement discussions, with a focus on accommodating electrification loads
- Reforms to DIDF and Partnership Pilot have stalled

Microgrid Commercialization Framework

Pursuant to SB 1339, R.19-09-009 will develop microgrid framework and policies.

The proceeding includes 5 tracks:

- **Track 1:** 2020 wildfire resiliency solutions and strategies
- **Track 2:** Microgrid service standards, new rates or tariffs, other barriers and principles
- **Track 3:** IOU standby charges and Resiliency and Microgrids WG (RMWG)
- **Track 4:** Emergency Reliability (Phase 1) and Microgrid Incentive Program & Microgrid Multi-Property Tariff (Phase 2)
- **Track 5:** Value of Resiliency

Key updates:

- Microgrid Incentive Program (MIP) decision adopted without any major modifications, particularly related to points-cap system
- Sunnova Microgrid CPCN decision adopted dismissing the Application

Emerging Technology Updates

- CEC LDES Program
- SB 846 Clean Energy Reliability Investment Plan

CEC LDES Commercialization Program

Governor Newsom's proposed budget includes \$380M for a long-duration energy storage program:

- Program will be administered by CEC
- Targeting durations of 8+ hours, maybe with stretch duration (20-100 hr.) carveouts
- Tech must be on the “verge of commercialization” – Li-ion and pumped hydro excluded

Key updates:

- Governor Newsom's 2023-2024 budget includes \$190M in additional LDES funding
- Next steps still in the works on LDES Program RFP, expected in Summer 2023, with workshop on RFP design expected in coming months
- Successful CESA LDES Pitch Day on March 14 for members

Clean Energy Reliability Investment Plan

On March 2, 2023, the Clean Energy Reliability Investment Plan (CERIP) was finalized and published

- The CERIP addresses a requirement in SB 846 for the CEC to develop a \$1 billion investment plan for clean energy resources
- Investments areas of interest include:
 - Transmission planning
 - Community Engagement
 - Setting up a Central Procurement Mechanism
 - Expediting Interconnection and Permitting

Key updates:

- CERIP outlined funding priorities throughout the year
 - First year will focus on demand-side and supply-side resources
 - Remaining priorities will be better addressed with the larger funding pools anticipated
 - \$400 million in 2024-2025
 - \$500 million in 2025-2026

Q&A

Ask us anything!



Next Policy Update Call

May 12, 2023



Contact Us

For membership inquiries, policy questions, and more, contact:

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CESAA

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