



MCE Board of Directors Meeting
Special Meeting & Public Workshop
Wednesday, July 8, 2026
4:30 p.m.

1125 Tamalpais Ave
San Rafael, CA 94901

2300 Clayton Road, Suite 1500
Concord, CA 94520

Public comments may be made in person or remotely via the details below.

Remote Public Meeting Participation

Video Conference:

<https://us02web.zoom.us/j/89558191522?pwd=3ZDhGry61ufbKYiEKaAmZDKJaB5qrf.1>

Phone: Dial (669) 900-9128, Meeting ID: 895 5819 1522, Passcode: 551526

Materials related to this agenda are available for physical inspection at MCE's offices in San Rafael at 1125 Tamalpais Avenue, San Rafael, CA 94901 and in Concord at 2300 Clayton Road, Suite 1500, Concord, CA 94520.

DISABLED ACCOMMODATION: If you are a person with a disability who requires an accommodation or an alternative format, please contact MCE at (888) 632-3674 or ada-coordinator@mceCleanEnergy.org at least 72 hours before the meeting start time to ensure arrangements are made.

Agenda Page 1 of 1

1. Roll Call/Quorum
2. Opening Remarks (Discussion)
3. Resource Adequacy (Discussion)
*Receive a presentation, followed by open Q&A session for all attendees.**
4. Adjourn

The Board of Directors may discuss any or all of the items listed on the agenda irrespective of how the items are described.

*Please note that if a quorum is not achieved for this special meeting, the meeting will proceed as a public workshop to discuss the matters listed on this agenda. Any members of the MCE Board of Directors will participate in the discussion in the same fashion as the public and such Board Members may not discuss among themselves, other than as part of the scheduled agenda, any other specific business of MCE.



Resource Adequacy Fundamentals

Public Workshop

July 8, 2026

Power Resources: Existing Building Blocks

1. **CAISO Load:** forecasting, scheduling, settlements
 2. **Power Purchase Agreements and Energy Storage Service Agreements**
 - Clean energy (unless stand-alone storage)
 - CAISO load hedging
 - Mid-term reliability (MTR) and resource adequacy (RA) capacity
 3. **Index+ Contracts:** clean energy
 - Includes power charge indifference adjustment (PCIA) allocations
 4. **Pure Hedge Agreements:** CAISO load hedging
 5. **RA-Only Contracts:** resource adequacy
-
- The diagram features a blue bracket on the right side of the slide, labeled "Today's Focus". Two arrows originate from this bracket: one points to the text "resource adequacy (RA) capacity" in item 2, and the other points to the text "resource adequacy" in item 5. Both of these text elements are enclosed in blue rounded rectangular boxes.

Power vs. Energy: Introduction

Power (MW)

- **Power** is the rate at which work is done
= Energy / Time = Joules / Seconds = **Watts**
- Example 1: a 10 watt lightbulb requires 10 watts of power
- Example 2: a 100 MW wind farm has the *same* power (or “power capacity”) as a 100 MW geothermal plant

Energy (MWh)

- **Energy** is the work that is done over time
= Power x Time = Watts x Hours = **Watt-Hours**
- Example 1: a 10 watt lightbulb that runs for 4 hours uses 40 watt-hours of energy
- Example 2: the 100 wind farm and 100 MW geothermal plant produce *different* volumes of energy over the calendar year:
 - **Wind** = 100 MW x 8760 hours/year
x 32% capacity factor = 280,320 MWh
 - **Geothermal** = 100 MW x 8760 hours/year
x 90% capacity factor = 788,400 MWh

Power vs. Energy: Implications for RA

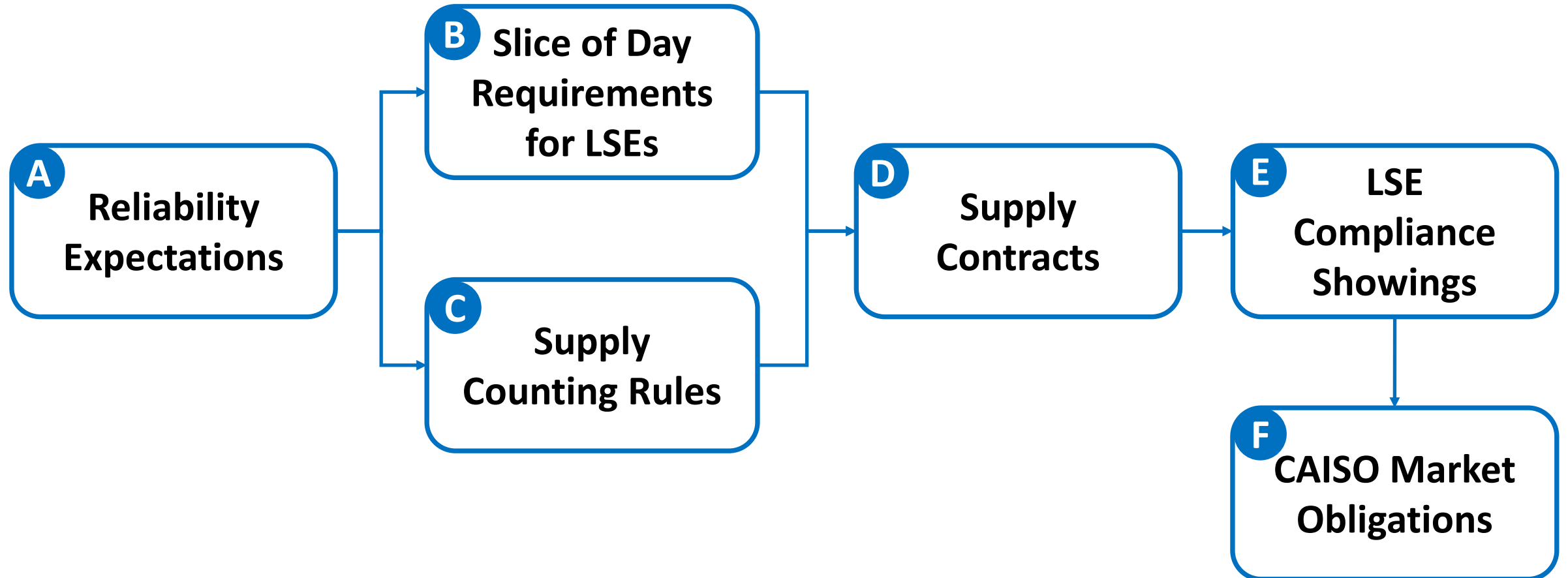
Contracts for RA are contracts for **power capacity**.

When an LSE buys 10 MW of RA for one month, it is buying 10 MW of **power capacity** that must be available throughout the month. The LSE is not buying energy.

However, RA capacity must be offered into CAISO markets, where it can be awarded / dispatched to provide **energy**:

- IF the **energy** (and corresponding environmental attributes) are also under contract to an LSE, then the LSE can claim this energy on its power content label. The offtaker for the RA does not have to be the same entity as the offtaker for the energy
- IF the **energy** (and corresponding environmental attributes) are not under contract, then this energy is accounted for as system/grid power on the power content label

Resource Adequacy: Key Elements

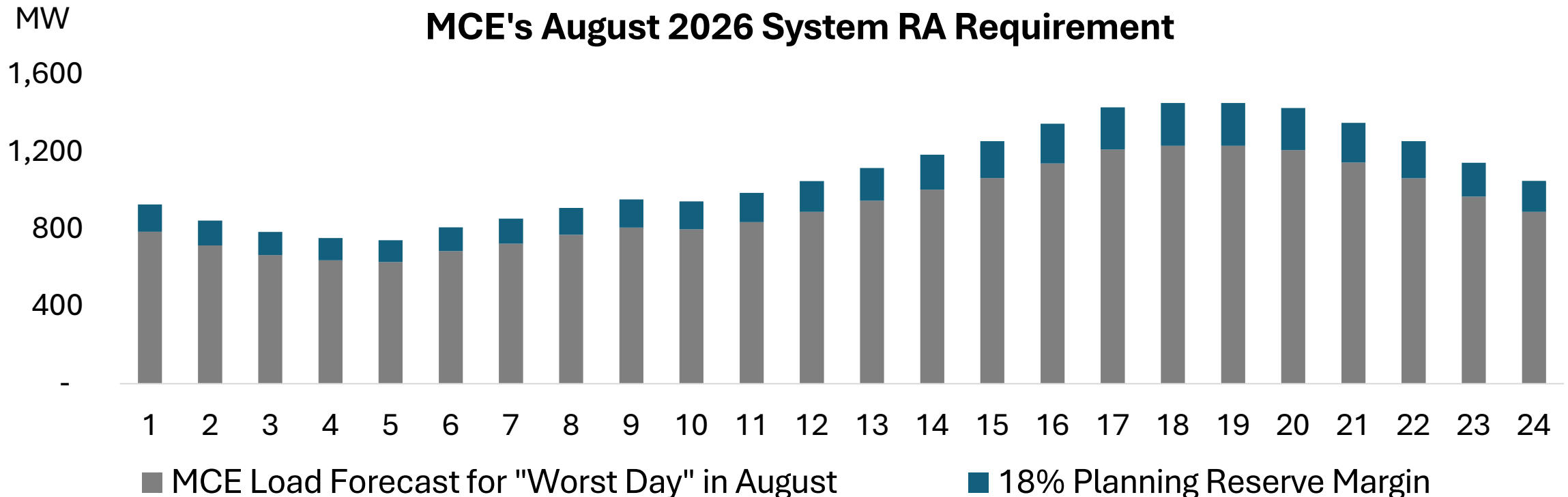


A Reliability Expectations

- Reliability expectations drive CAISO RA, which is a forward capacity program jointly managed by the CAISO, CEC and CPUC
- The CPUC sets “Slice of Day” (i.e., month-hour) RA requirements and supply counting rules for its jurisdictional LSEs, including MCE
- The CPUC sets requirements and counting rules to achieve a specific reliability expectation: **1 CAISO-grid load loss event every 10 years**

B Slice of Day Requirements for LSEs

- LSEs must secure enough system capacity to meet their hourly load forecasts on the “worst day of the month” + a planning reserve margin (18% for 2026 and 2027)
- Worst day of the month: the day with the highest forecasted peak load across CAISO
- LSEs must also meet their share of flexible capacity requirements
- A “central procurement entity” is responsible for procuring local capacity



C Supply Counting Rules*

- The CPUC sets supply counting rules and calculates resource qualifying capacities (QCs)
- The CAISO calculates resource net qualifying capacities (NQCs), which account for whether the modelled output of each resource can serve system load under stressed conditions
- NQCs are used for both CPUC and CAISO showings, but the CAISO only uses 1 value per month

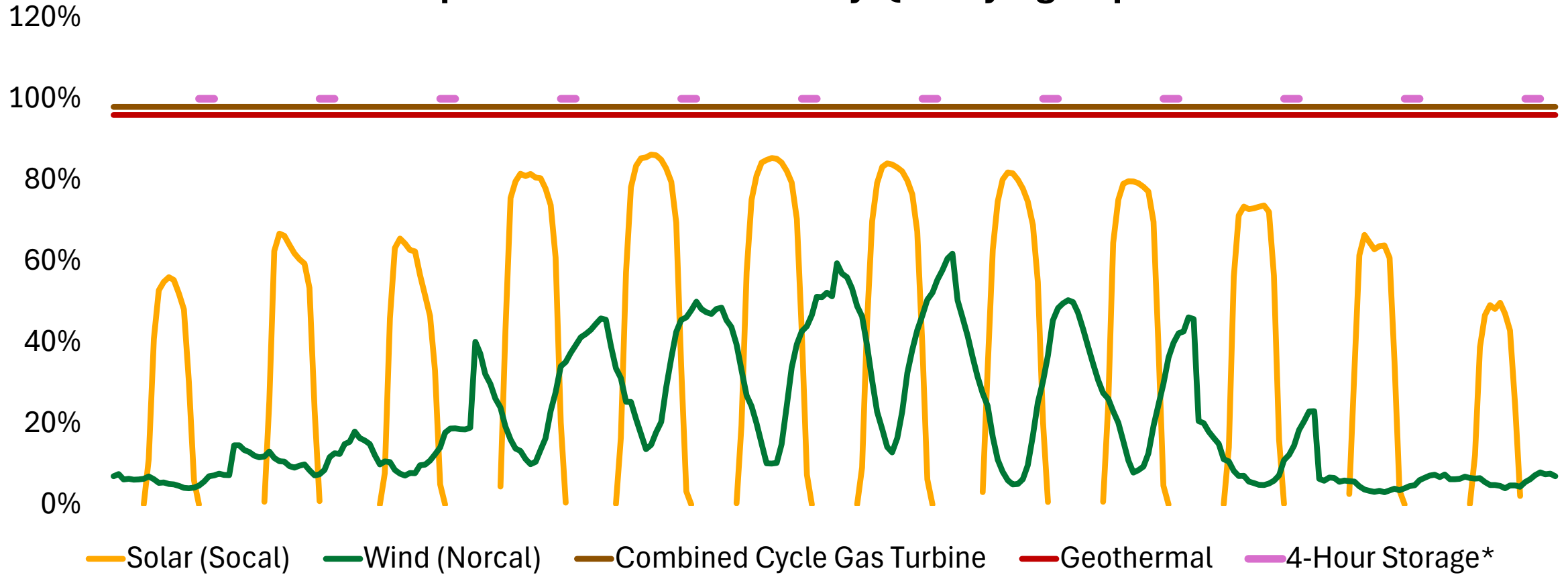
Examples of MCE Supply	Counting Rules (NQCs)
Thermal Geothermal, Landfill Gas, Natural Gas	1 value per month. Dispatchable resources are counted at maximum operating capability, known as PMax.
Variable Energy Resources Solar and Wind	24 values per month for each technology and region, based on historical production. CAISO only uses peak hour value.
Energy Storage 4-Hour, 8-Hour	1 value per month (PMax), limited to the number of hours at which the resource can discharge at full throttle. Requires excess capacity for charging.

**This slide outlines counting rules for “system” and “local” RA. There are additional counting rules for “flex” RA.*

C Supply Counting Rules

Percent of PMax

Examples of 2026 Slice of Day Qualifying Capacities

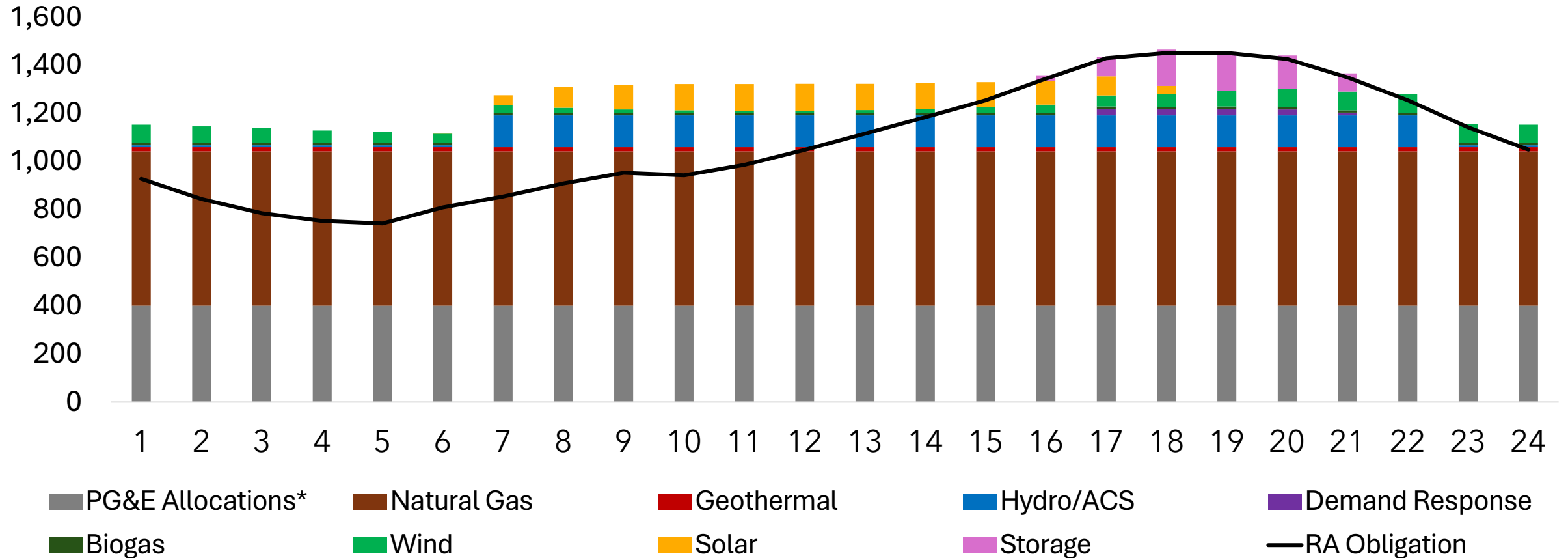


**Shown in this chart from 5pm-9pm each month, but storage is flexible. It also requires charging capacity.*

C Supply Counting Rules: Applied to MCE

NQC (MW)

MCE's August 2026 RA Portfolio



*PG&E allocates RA capacity to MCE through the Cost Allocation Mechanism (CAM). This capacity is mostly natural gas, nuclear and energy storage.

Supply Contracts

MCE uses three types of contracts to obtain RA capacity:

- Power purchase agreements
- Energy storage service agreements
- RA-only agreements

RA-Only Agreement Key Provisions:

- Delivery Term: Start Date, End Date
- Resource Details: Name, Type, ID, Location, Capacity Area
- Volume
 - Net qualifying capacity by month
 - Effective flexible capacity by month (if applicable)
- Price
 - \$/kw-month of NQC by month

LSE Compliance Showings

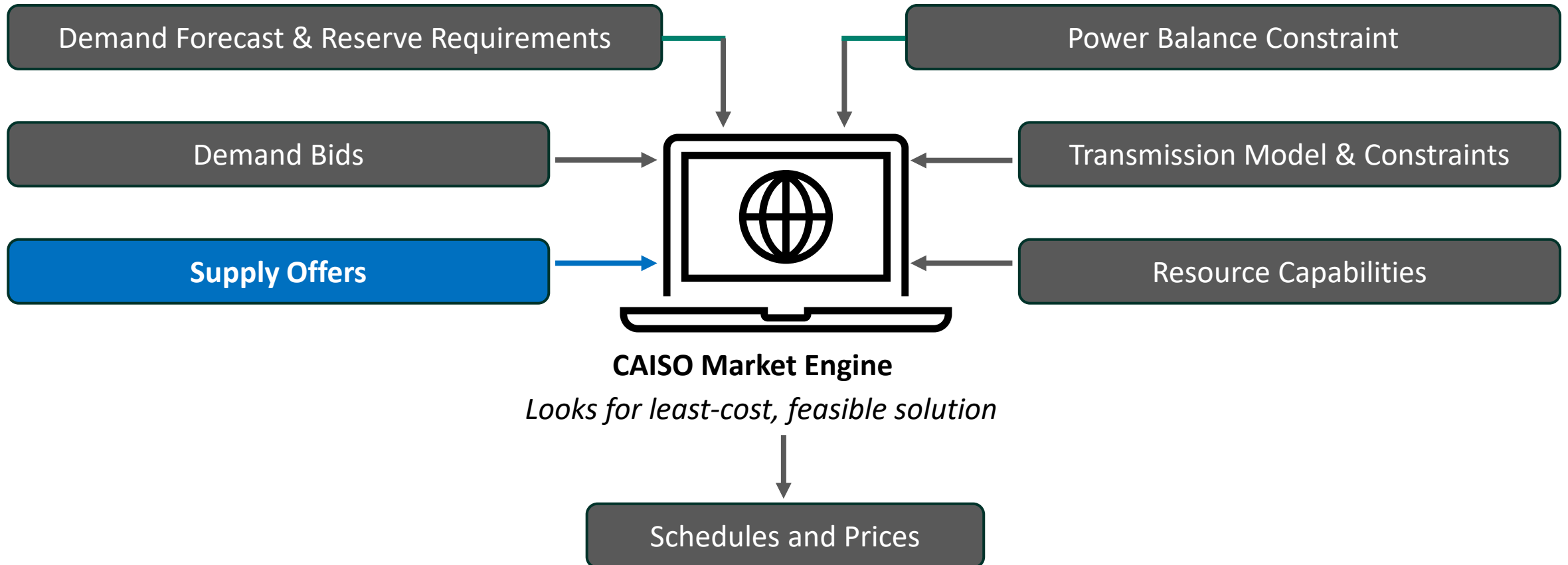
System (S): 90% of summer months shown year-ahead (YA); 100% shown month-ahead (MA)

Flex (F): 90% of all months shown year-ahead (YA); 100% shown month-ahead (MA)

Filing	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	YA							S x 0.9	S x 0.9	S x 0.9	S x 0.9	S x 0.9			
1	YA			F x 0.9	F x 0.9	F x 0.9	F x 0.9	F x 0.9	F x 0.9	F x 0.9	F x 0.9	F x 0.9	F x 0.9	F x 0.9	F x 0.9
2		MA		S,F x 1											
3			MA		S,F x 1										
4				MA		S,F x 1									
5					MA		S,F x 1								
6						MA		S,F x 1							
7							MA		S,F x 1						
8								MA		S,F x 1					
9									MA		S,F x 1				
10										MA		S,F x 1			
11											MA		S,F x 1		
12												MA		S,F x 1	
13													MA		S,F x 1

F CAISO Obligations

- Each RA resource must offer all of its capability into CAISO's markets for the amount shown
- This **must-offer obligation** is the crux of the RA program. It ensures that the CAISO will have enough supply offers to clear demand bids + incremental demand forecast & reserve requirements (illustration directly below)



Thank you



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Glossary

Asset Controlling Supplier (ACS)

An Asset Controlling Supplier is an electric power entity approved by the California Air Resources Board that owns or operates interconnected generation facilities, or serves as the exclusive marketer, and is assigned a supplier-specific greenhouse gas emissions factor for wholesale electricity imported into California. ACS energy is mostly large hydroelectric energy but also includes nuclear energy and unspecified market purchases.

California Carbon Allowances

California Carbon Allowances are tradable compliance instruments issued under California's Cap-and-Invest program. One allowance represents authorization to emit one metric ton of carbon dioxide equivalent, and covered entities must obtain enough allowances to cover their verified greenhouse gas emissions.

California Independent System Operator (CAISO)

The CAISO is one of 38 balancing authorities (or "grid operators") that comprise the western grid. To help manage grid reliability, the CAISO operates wholesale electricity markets. In the day-ahead market, CAISO schedules electricity resources one day in advance based on forecasted demand and generation availability, allowing load-serving entities and generators to plan and secure energy at predictable prices. In the real-time markets, CAISO makes adjustments in near real time, typically in 5 to 15 minute intervals, to respond to actual grid conditions. These markets help ensure that supply and demand remain balanced at all times, making CAISO both a grid and a market operator. Load-serving entities, typically through a Scheduling Coordinator (definition below), schedule their load and transact in day-ahead and real-time markets to stay balanced.

Glossary

CAISO Revenue

CAISO Revenue generally refers to payments, credits, or other settlement proceeds assigned by CAISO to a resource or scheduling coordinator for market activities such as energy deliveries, dispatches, imbalance energy, ancillary services, or other CAISO-settled transactions.

CAISO Load Payments

CAISO Load Payments are the settlement charges paid by load-serving entities or their scheduling coordinators for serving customer demand through the CAISO markets. These payments generally reflect energy consumed by load, market prices, imbalance charges, congestion, losses, and other CAISO settlement components.

California Energy Commission (CEC)

The CEC is California's primary energy policy and planning agency. It has responsibility for activities that include forecasting future energy needs, promoting energy efficiency and supporting renewable energy technologies. The CEC is also responsible for managing the Power Source Disclosure program, which provides retail electricity customers with information about their sources of energy and associated greenhouse gas emissions.

Cost Allocation Mechanism (CAM)

The California Public Utilities Commission's Cost Allocation Mechanism (CAM) ensures the costs and capacity benefits of new or backstop electricity generation (such as local Resource Adequacy) are shared fairly among all customers in an Investor-Owned Utility's (IOU) service territory

Glossary

Load-Serving Entity (LSE)

LSEs are a categorization term that includes investor-owned utilities (IOUs), electric service providers (ESPs), and CCAs, all three of which offer power supply service within the IOU's service territory.

PMax

The maximum normal capability of a generating unit, as measured at the point of interconnection or point of delivery, as applicable.

Portfolio Content Categories

Under CPUC rules, renewable energy is segmented into three Portfolio Content Category (PCC) types depending on a variety of factors including location of the resource and whether the renewable energy is delivered into one of the California balancing authority areas (i.e., into one of the California grids). Any time a megawatt-hour of renewable energy is generated, a corresponding renewable energy certificate (REC) is generated.

- PCC 1 renewable energy is directly interconnected or directly scheduled into one of the California grids. PCC 1 renewable energy is a “bundled product,” as the buyer takes title to both the energy and the renewable energy certificate. MCE today procures PCC 1 renewable energy

Glossary

Portfolio Content Categories (continued)

- PCC2 renewable energy is neither directly interconnected to one of the California grids, nor is it directly scheduled into one of the California grids. Instead, the renewable energy is consumed outside of California, and substitute energy is imported into one of the California grids. PCC 2 renewable energy is considered bundled because the buyer takes title to both the REC and the energy, even though the renewable energy, itself, is not delivered to a California grid. MCE today does not procure PCC 2 renewable energy.
- PCC3 renewable energy is defined as a product where the RECs and the underlying energy are sold separately – referred to as “unbundled RECs” because the energy and RECs are not bundled together in a purchase. MCE today does not procure PCC 3 renewable energy.

In California, a PCC3 REC does not provide LSEs with the same environmental benefit as a PCC1 REC. While cheaper than PCC1 and PCC2 resources, this type of resource does not provide the same environmental or economic benefits. PCC3 resources are assigned a separate emissions factor that is greater than the renewable energy resource that originally generated the energy underlying the REC. PCC3 resources are the only resource type that can be considered “attribute-only”, meaning that an LSE is purchasing some portion of the attributes of renewable energy without paying for the cost of the underlying power (though they are required to buy an equivalent volume of power from any resource type).

Glossary

Portfolio Content Categories (continued)

This means if an LSE wants to purchase unbundled RECs to use as a method for reducing greenhouse gas emissions, LSEs do not receive a 1-to-1 greenhouse gas reduction benefit and must procure more PCC3 RECs in order to have a similar emissions profile to PCC1 resources.

MCE does not make any net-specific purchases of unbundled RECs. MCE may receive small amounts of unbundled RECs as a byproduct of broader portfolio transactions. For example, MCE's 2024 power content label reported 2% unbundled RECs. These RECs were not directly procured by MCE but part of a larger allocation via a CPUC mechanism (i.e. the Voluntary Allocation & Market Offer or VAMO framework).

Power Charge Indifference Adjustment (PCIA)

The PCIA is an “exit fee” that is intended to protect bundled utility customers from paying the “stranded costs” associated with the IOU previously procuring energy on behalf of the customer now being served by a CCA. When customers leave bundled service to purchase electricity from an alternative supplier, such as MCE, the IOU, which had previously contracted for wholesale energy generation to serve these customers, is able to charge these departing customers the cost of that power.

Glossary

Power Charge Indifference Adjustment (PCIA) Allocations

PCIA Allocations refer to the assignment of costs, credits, and resource attributes from investor-owned utility legacy procurement portfolios to customers or load-serving entities based on the applicable PCIA vintage and regulatory methodology. These allocations are intended to ensure departing and remaining bundled customers pay or receive their fair share of above- or below-market portfolio value.

Mid-Term Reliability (MTR)

Mid-Term Reliability is a CPUC procurement framework that requires load-serving entities to procure additional net qualifying capacity from new or eligible resources to maintain electric system reliability in the mid-term planning period, particularly as demand grows and older resources retire. MTR resources are generally expected to support reliability while advancing California's clean energy goals.

Renewable Portfolio Standard (RPS)

California's RPS program was established in 2002 by Senate Bill 1078 with a requirement that 20% of electricity retail sales be served by renewable resources by 2017. The program was accelerated in 2015 with SB 350, which mandated a 50% RPS by 2030. SB 350 includes interim annual RPS targets with three-year compliance periods and requires 65% of RPS procurement to be derived from long-term contracts of 10 or more years. In 2018, SB 100 increased the RPS requirement to **60% by 2030** and requires **all the state's electricity to come from carbon-free resources by 2045**.^{*} RPS-eligible resource types are listed in the CEC's RPS Eligibility Guidebook.^{**}

^{*}<https://www.cpuc.ca.gov/rps/> ^{**}<https://www.energy.ca.gov/publications/2025/rps-eligibility-guidebook-tenth-edition-commission-guidebook>

Glossary

Resource Adequacy (RA)

RA refers to a statewide mandate for all load-serving entities (LSEs) to obtain (through ownership or procurement) specific quantities of power capacity to ensure that the CAISO will have enough power supply to meet power demand. The CPUC and other local regulatory authorities are responsible for setting RA requirements and supply counting rules. The requirements are based on LSE demand forecasts and a **planning reserve margin (PRM)** that represents required capacity above and beyond the forecasted demand.

More specifically, there three types of required capacity: (1) **system capacity**, which is capacity that is required to meet CAISO system-wide demand; (2) **local capacity**, which is capacity located within specific transmission-constrained geographic areas; (3) **flexible capacity**, which is capacity that is capable of ramping up or down quickly to handle changes in net demand.

LSEs must demonstrate that they have met such requirements by making compliance showings in the years and months ahead of when the power actually flows. Resource capacity that is shown in such compliance filings must be offered into the CAISO's day-ahead and real-time markets, so that it can be used to clear demand. RA also provides incentives for the siting and construction of new resources needed for reliability in the future.

Scheduling Coordinator

A Scheduling Coordinator is an entity certified by CAISO to act on behalf of market participants. Scheduling Coordinators submit bids and schedules, manage market communications and settlements, and are responsible for complying with CAISO tariff requirements for the resources or load they represent.