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OF THE STATE OF CALIFORNIA

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2026 INTEGRATED RESOURCE PLAN OF BP ENERGY RETAIL COMPANY CALIFORNIA LLC

(PUBLIC VERSION)

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August 10, 2026

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

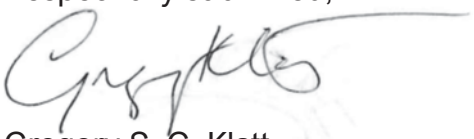
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2026 INTEGRATED RESOURCE PLAN OF BP ENERGY RETAIL COMPANY CALIFORNIA LLC

In accordance with the schedule set forth in the January 26, 2026 *Administrative Law Judge's Ruling Setting Requirements for Individual Integrated Resource Plans Due June 1, 2026* and March 9, 2026 email ruling extending the filing due date to August 10, 2026, BP Energy Retail Company California LLC hereby submits this 2026 Integrated Resource Plan, including the following documents incorporated herein by reference:

- Narrative Template
- Resource Data Template: 8 MMT Preferred Conforming Portfolio
- Clean System Power Calculator: 8 MMT Preferred Conforming Portfolio

Respectfully submitted,



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Attorneys for BP Energy Retail Company California LLC

August 10, 2026

VERIFICATION

I, Debbie Merril, am authorized to make this verification on behalf of BP Energy Retail Company California LLC. I have read the foregoing ***2026 Integrated Resource Plan of BP Energy Retail Company California LLC*** and declare under penalty of perjury that the contents thereof are true of my own knowledge, except as to matters which are therein stated on information or belief, and as to those matters, I believe them to be true.

Executed on August 8, 2026, at El Segundo, California.

-----/s/-----

Debbie Merril
President
BP Energy Retail Company California LLC

NARRATIVE

Standard LSE Plan

BP ENERGY RETAIL COMPANY CALIFORNIA LLC

2026 INTEGRATED RESOURCE PLAN

August 10, 2026

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I. Executive Summary

BP Energy Retail Company California LLC (BPERC), formerly EDF Industrial Power Services (CA), LLC, submits this 2026 Integrated Resource Plan (IRP) in accordance with the schedule and requirements established in Rulemaking 25-06-019 and the January 16, 2026 ALJ Ruling (as subsequently modified to set an August 10, 2026 filing deadline). This Narrative, together with the accompanying Resource Data Template (RDT) and Clean System Power (CSP) Calculator for the 8 MMT by 2045 Preferred Conforming Portfolio, constitutes BPERC's complete Standard LSE Plan.

BPERC developed its Preferred Conforming Portfolio through a transparent residual-need analysis that began with its assigned load forecast, BTM PV forecast, and 2045 GHG Emissions Benchmark, then layered existing and already-contracted resources (including CAM resources), planned Mid-Term Reliability (MTR) resources, generic new resources (primarily new solar with deliveries beginning in 2030, multi-duration battery storage, and limited geothermal), and residual existing resources (primarily short-term gas-fired RA capacity) until both the greenhouse gas (GHG) constraint and the system reliability constraint are satisfied in every study year. The resulting portfolio achieves 2045 GHG emissions of approximately 0.033 MMT—below BPERC's assigned benchmark of approximately 0.0344 MMT—while maintaining a non-negative net capacity position (effective MW) in every year from 2026 through 2045.

BPERC's Preferred Conforming Portfolio is deliberately conservative on the GHG side and tightly managed on the reliability side. It relies primarily on resources of the types selected in the Commission's most recent Preferred System Portfolio/2025-2026 Transmission Planning Process (TPP) Portfolio modeling, avoids new natural-gas generation or long-term re-contracting of existing gas for five years or more, and positions BPERC to meet its remaining MTR and any future IRP procurement obligations with minimal reliance on system power.

The remainder of this Narrative describes BPERC's study design and methodology (Section II), the Preferred Conforming Portfolio and supporting quantitative results (Section III), BPERC's Action Plan for implementing the portfolio (Section IV), and lessons learned (Section V).

II. Study Design

BPERC developed its 2026 IRP using a transparent residual-need analysis that is fully compatible with the official RDT and CSP. The analysis began with the Commission-assigned load forecast, peak-demand forecast, BTM PV forecast, and BPERC's individually calculated 2045 GHG Emissions Benchmark. From that fixed baseline, BPERC layered all Online and Development contracts, then constructed the portfolio in two sequential stages: (1) a clean-energy layer consisting of already-contracted online solar, stepped Planned New solar volumes (beginning 2030), new multi-duration battery storage, and limited new geothermal; and (2) a pure capacity layer of Planned Existing gas RA sized year-by-year solely to close residual reliability gaps after the clean-energy layer is locked. The resulting portfolio maintains a non-

negative net capacity position (effective MW) in every year 2026–2045 and produces 2045 GHG emissions below BPERC's assigned benchmark.

No Alternative Portfolios were developed. BPERC did not deviate from the assigned annual energy or peak forecasts, nor did it adopt resource types or locations inconsistent with the 2025 Inputs & Assumptions / 2025-2026 TPP Portfolio.

a. Objectives

The overarching objective of the analytical work resulting in this IRP was to produce a single Preferred Conforming Portfolio that:

- meets or beats BPERC's assigned 8 MMT by 2045 GHG Emissions Benchmark,
- maintains a non-negative net capacity position in every study year using resources of the types selected in the Commission's most recent Preferred System Portfolio modeling,
- supports BPERC's remaining MTR and Long-Lead-Time (LLT) procurement obligations, and
- remains simple and implementable for a relatively small electric service provider (ESP) whose load is subject to customer turnover.

b. Methodology

i. Modeling Tool(s)

BPERC used only the official tools provided by the Commission—the RDT (including the Reliability – Planning tab and CSPReportSheet) and the CSP_8MMT_v3 Calculator—together with standard Excel workbooks for residual-need calculations and portfolio iteration. No capacity-expansion model (RESOLVE or equivalent) or production-cost model (SERVM or equivalent) was employed. Because BPERC is a small ESP, the residual-need approach described in the Master Process guidance is both sufficient and proportionate; differences relative to RESOLVE/SERVM are therefore limited to the absence of system-wide optimization and the explicit year-by-year balancing of residual capacity with short-term gas RA.

ii. Modeling Approach

BPERC utilized the following modeling approach to develop its Preferred Conforming Portfolio:

1. Lock the official inputs (assigned annual energy, peak demand, BTM PV, and the ESP-specific 2045 GHG benchmark calculated from load shares within the three investor-owned utility service territories).

2. Project all Online and Development contracts forward, accounting for expected commercial operation dates and contract durations.

3. Calculate residual energy need (GWh) and residual reliability need (effective MW) in each study year after subtracting baseline resources and BTM PV contribution.

4. Fill residual energy need first with already-identified or generic new solar and limited clean-firm geothermal, and residual capacity need with multi-duration battery storage sized to the residual, consistent with MTR/LLT requirements.

5. After freezing the clean-energy layer, rebuild a pure capacity layer year-by-year solely to close any remaining reliability shortfalls, adding only the minimum additional Planned Existing gas RA required to keep the net capacity position non-negative (generally under 5 %).

6. Transfer the final supply data into the CSP Calculator and confirm that 2045 emissions remain below the assigned benchmark.

7. Confirm in the RDT Reliability–Planning tab that the net capacity position is non-negative in every year of the planning period from 2026 onward.

All quantitative results reported in Section III are taken directly from the RDT and CSP files in which this sequence was implemented.

iii. Alternative Assumptions

BPERC did not adopt alternative capital-cost, financing, or ELCC assumptions. All ELCC values, resource characterizations, and online-date conventions used in the RDT are those embedded in the official RDTv3 release (rdtv3_5_3). The only modeling choice that differs from a pure "least-cost RESOLVE" outcome is the explicit preference for a thin but consistently positive capacity margin and the decision to meet residual capacity need with short-term gas RA rather than additional long-duration storage or clean firm resources beyond the amounts already required for MTR/LLT compliance. That choice was made to keep the portfolio simple and cost-effective for a small ESP while still satisfying the reliability constraint in every study year.

III. Study Results

a. Conforming and Alternative Portfolios

BPERC developed and submits one Conforming Portfolio for the 8 MMT by 2045 GHG target. That portfolio is also BPERC's Preferred Conforming Portfolio. No Alternative Portfolios are submitted.

The Preferred Conforming Portfolio is built from four layers:

- Online resources already delivering energy or capacity under executed contracts (primarily solar energy contracts and a limited amount of paired or standalone storage), together with

BPERC's allocated share of Cost Allocation Mechanism (CAM) and Modified CAM resources. The CAM/Modified CAM resources are included as Online resources on the basis of the staff-provided list and BPERC's load-share percentage; they are CapacityOnly and do not affect energy or GHG calculations.

- Resources under contract that are in advanced development (including the Noosa energy-storage project scheduled for commercial operation in 2026).
- Planned New resources sized to residual energy and capacity need, consisting of stepped solar volumes (beginning 2030), selected tranches of multi-duration battery storage (including limited long-duration energy storage to satisfy MTR/LLT requirements), limited new geothermal for the clean-firm component, and BPERC's allocated shares of AB 1373 resources (12-hour and multi-day LDES, offshore wind, and geothermal).
- Planned Existing resources consisting of short-term gas RA capacity layered year-by-year solely to close residual reliability gaps after the clean-energy layer is accounted for.

All contracted and planned resources are reported in full detail in the accompanying RDT (unique_contracts tab). The RDT Reliability–Planning tab demonstrates that the portfolio's effective capacity meets or exceeds BPERC's reliability procurement requirement in every year from 2026 through 2045. The CSP Calculator confirms that 2045 greenhouse-gas emissions are below BPERC's assigned benchmark.

BPERC did not model portfolios that deviate from the assigned annual energy or peak forecasts, nor did it adopt resource types or locations inconsistent with the 2025 Inputs & Assumptions and the 2025-2026 TPP portfolio.

b. Preferred Conforming Portfolio

BPERC's Preferred Conforming Portfolio is the single 8 MMT by 2045 Conforming Portfolio described in Section III.a. BPERC selected this portfolio because it simultaneously satisfies four core requirements:

- It meets or beats BPERC's assigned 8 MMT by 2045 GHG Emissions Benchmark with thin but positive headroom (CSP result approximately 0.033 MMT versus benchmark of approximately 0.0344 MMT; intermediate binding years likewise under or essentially at their respective benchmarks).
- It maintains a non-negative net capacity position (effective MW) in every study year.
- It supports BPERC's remaining MTR and long-lead-time (LLT) obligations under D.21-06-035 and related decisions with a combination of multi-duration battery storage and limited clean-firm geothermal.
- It remains simple, transparent, and implementable for a small electric service provider whose load is modest and subject to customer turnover.

The portfolio was constructed through the residual-need methodology described in Section II. After the clean-energy layer (existing online solar + stepped Planned New solar volumes beginning 2030 +

limited geothermal) was sized and frozen, a pure capacity layer of Planned Existing gas RA was rebuilt year-by-year solely to close remaining reliability shortfalls. No new natural-gas generation is included, and no existing natural-gas resources are re-contracted for a term of five years or more. No new solar is introduced before 2030.

Consistency with Public Utilities Code Section 454.52(a)(1)

BPERC's Preferred Conforming Portfolio is consistent with the requirements of Public Utilities Code Section 454.52(a)(1), as described below with reference to the indicated subsection:

(A) The portfolio achieves greenhouse-gas emissions well below BPERC's proportional share of the statewide 8 MMT by 2045 electric-sector target.
(B) The portfolio maintains RPS procurement well above the statutory 60 percent by 2030 floor through a combination of existing solar contracts and planned new solar and geothermal energy.
(C) Not applicable to ESPs.
(D) By filling residual need first with resources of the types selected in the Commission's own modeling and by relying primarily on short-term RA for residual capacity, the portfolio is designed to minimize incremental cost and resulting impacts on customer bills relative to more aggressive or less diversified alternatives.
(E) The RDT Reliability–Planning tab confirms that effective capacity meets or exceeds BPERC's reliability procurement requirement in every planning year. The portfolio therefore supports system and local reliability on both a near-term and long-term basis, taking into account climate-driven load growth and electrification trends already embedded in the assigned forecasts.
(F) BPERC's existing RPS portfolio already satisfies the long-term contracting requirement through the current and next compliance periods. Incremental energy resources in the Preferred Conforming Portfolio are assumed to be procured under long-term contracts consistent with RPS rules.
(G) The portfolio strengthens the diversity and resilience of the system resource mix by combining solar, storage of multiple durations, and limited clean-firm geothermal, thereby mitigating the concentration risk relative to a solar-heavy portfolio.
(H) The portfolio relies exclusively on transmission-level deliveries and therefore has no direct impact on distribution systems or demand-side energy management that BPERC can assess.
(I) Localized air-pollutant emissions are minimized by sharply reducing reliance on system power (see Section III.d). No new emitting generation is planned. Any minimal emissions associated with geothermal resources will be controlled under applicable federal, state, and local air-quality regulations.
(J) The portfolio maintains a diverse mix of energy resources consistent with the Commission's most recent Preferred System Portfolio modeling.

Comparison to the 2022 Preferred Conforming Portfolio

BPERC's 2022 25 MMT Preferred Conforming Portfolio relied more heavily on out-of-state (Pacific Northwest/Idaho) wind and Imperial Valley geothermal for incremental Portfolio Content Category 1 energy. The 2026 portfolio shifts the incremental mix toward in-CAISO solar paired with multi-duration battery storage. This evolution reflects (1) the tighter reliability constraint out to 2045, (2) the addition of explicit long-duration storage and clean-firm obligations under subsequent MTR decisions, and (3) the resource types selected in the Commission's updated 2025 Inputs & Assumptions and 2025-2026 TPP modeling. The 2026 portfolio continues the 2022 approach of avoiding new natural-gas generation and long-term gas re-contracting while producing substantially lower 2045 emissions relative to the applicable benchmark.

c. GHG Emissions Results

BPERC used the official CSP_8MMT_v3 Calculator to estimate greenhouse-gas emissions associated with the Preferred Conforming Portfolio. No custom hourly load shapes or user-specified production profiles were employed; the default shapes embedded in the CSP tool were used together with BPERC's assigned annual managed sales and BTM PV forecasts.

The resulting emissions (million metric tons CO_2-equivalent per year) are:

Year	Emissions (MMT)	Benchmark (MMT)
2028	0.130	—
2030	0.052	~0.054
2035	0.039	~0.045
2040	0.031	~0.041
2045	0.033	~0.0344

The 2045 result of approximately 0.033 MMT is below BPERC's assigned 8 MMT by 2045 GHG Emissions Benchmark. Intermediate years are likewise under (or essentially at) their corresponding benchmarks. These results confirm that the Preferred Conforming Portfolio is conforming with thin but positive headroom.

d. Local Air Pollutant Minimization and Disadvantaged Communities

i. Local Air Pollutants

BPERC's only material contribution to localized air-pollutant emissions arises from residual reliance on system power. The Preferred Conforming Portfolio sharply reduces that reliance through a combination of existing solar contracts, planned new solar, multi-duration battery storage, and limited clean-firm geothermal. As a result, criteria-pollutant emissions decline steadily across the planning horizon.

CSP Calculator results for the Preferred Conforming Portfolio (tonnes per year, in-CAISO emissions only) are summarized below:

Pollutant	2028	2030	2035	2040	2045
NOx	10.46	6.42	3.72	3.34	1.12
PM2.5	8.05	4.08	1.44	–0.01	0.82
SO_2	0.76	0.4	0.15	0.01	0.08

These results demonstrate continuous reduction in local air pollutants relative to a higher-system-power counterfactual.

ii. Focus on Disadvantaged Communities

As an electric service provider, BPERC does not have a defined geographic service territory and therefore does not "serve" disadvantaged communities (DACs) in the sense used in the Narrative Template. BPERC offers direct-access service exclusively to commercial and industrial customers located in the service territories of the three large investor-owned utilities.

A material fraction of BPERC's current customer accounts (and a corresponding share of annual load) are associated with facilities located in, adjacent to, or within the same ZIP codes as DACs. Consistent with prior Commission guidance applicable to ESPs, BPERC is not required to provide census-tract-level mapping of those customers or to operate DAC-specific retail programs.

BPERC's Preferred Conforming Portfolio contains no new pollutant-emitting generation resources known to be located in DACs. The only resources that could theoretically be sited in or near DACs are new renewable generation, storage, or hybrid projects that BPERC may contract in the future to meet RPS, MTR, or residual IRP needs. In any such case, BPERC will require the project developer to engage local community and environmental-justice stakeholders and will designate internal or external resources to coordinate that outreach. BPERC currently has no planned procurement from fossil-fueled resources located in DACs and does not anticipate any such procurement under the Preferred Conforming Portfolio.

e. Cost and Rate Analysis

As an ESP operating in California's competitive and capped direct-access market, BPERC's primary commercial objective is to offer reliable service at the lowest achievable cost consistent with statutory and Commission-mandated procurement obligations. Affordability was therefore an explicit design criterion in the construction of the Preferred Conforming Portfolio.

The principal drivers of the prices BPERC charges its customers remain:

- the cost of energy procured in the California Independent System Operator (CAISO) day-ahead and real-time markets (or under short-term bilateral contracts) to serve customer demand;
- the cost of Portfolio Content Category 1 renewable products needed to meet RPS compliance obligations;
- the cost of qualifying capacity procured to meet Resource Adequacy requirements; and
- the cost of long-term contracts executed to satisfy the RPS long-term contracting requirement and the MTR/LLT procurement obligations under D.21-06-035. D.22-02-004, D.26-02-057, and related decisions.

In developing the Preferred Conforming Portfolio, BPERC deliberately limited incremental long-term commitments to the volumes required to close residual energy and capacity need after accounting for existing contracts and already-planned MTR resources. The clean-energy layer (new solar and multi-duration storage) was sized only to the residual, and the subsequent gas-RA capacity layer was built year-by-year solely to keep the net capacity position non-negative; no excess gas-RA capacity was added beyond the thin positive reliability positions already achieved. This residual-need approach avoids the cost of over-procurement while still satisfying both the 8 MMT by 2045 GHG benchmark (with substantial headroom) and the reliability constraint in every study year.

Pending the Commission's adoption of a Reliability and Clean Power Procurement Program (RCPPP), BPERC expects to continue meeting the bulk of its residual energy needs through a combination of CAISO market purchases and short-term bilateral contracts. Likewise, BPERC expects to continue meeting the bulk of its residual RA needs through short-term capacity contracts. Long-term contracts will be used primarily for RPS compliance (including the long-term contracting requirement) and for the specific MTR/LLT products already identified in the portfolio. Because BPERC's customer base and load shape can change materially from year to year, this mix of short-term flexibility and targeted long-term contracting remains the most cost-effective structure for a small ESP.

No quantitative customer-rate forecast is presented. As a non-IOU, BPERC is not required to produce revenue-requirement or system-average-rate tables.

The qualitative conclusion the Commission should infer from BPERC's analysis is that the Preferred Conforming Portfolio was explicitly designed to minimize incremental procurement cost relative to more aggressive or less residual-focused alternatives, thereby supporting continued affordability for BPERC's commercial and industrial customers.

f. System Reliability Analysis

BPERC used the official RDT Reliability–Planning tab to demonstrate that the Preferred Conforming Portfolio contributes its fair share to system reliability. The tab applies the Commission-adopted ELCC values to every contract and calculates, for each study year, total reliability need (effective MW), total supply (effective MW), and net capacity position (effective MW).

The net capacity position is non-negative in every year from 2026 through 2045. The annual results (effective MW) are:

Year	Net Capacity Position
2026	0.34
2027	0.14
2028	0.68
2029	0.14
2030	0.42
2031	0.14
2032	0.59
2033	0.53
2034	0.47
2035	0.56
2036	0.83
2037	0.98
2038	2.12
2039	0.48
2040	0.08
2041	0.12
2042	0.02
2043	0.97
2044	0.42
2045	0.29

The thin but consistently positive margins reflect a deliberate residual-need approach that avoids over-procurement of capacity while still satisfying the reliability constraint in every year.

The Load and Resource Table by Contract Status, as generated in the RDT's Reliability–Planning tab, is set forth below.

Load and Resource Table by Contract Status

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
LSE reliability need (MW)	**97**	**99**	**102**	**93**	**85**	**89**	**92**	**95**	**99**	**102**	**106**	**110**	**114**	**117**	**121**	**124**	**127**	**130**	**133**	**136**
ELCC by contract status (effective MW)																				
Online	26	4	4	4	3	3	3	3	3	3	3	3	3	3	1	0	0	0	0	0
Development	28	25	23	15	7	6	6	6	5	5	-	-	-	-	-	-	-	-	-	-
Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PlannedExisting	40	64	69	70	18	19	13	7	8	7	7	17	1	10	16	30	20	24	35	38
PlannedNew	-	2	2	1	54	56	66	75	78	83	92	85	106	99	99	89	101	101	93	93
BTM PV	4	4	4	4	4	4	4	5	5	5	5	5	5	6	6	5	5	5	5	5
LSE total supply (effective MW)	**97**	**99**	**102**	**94**	**86**	**89**	**93**	**96**	**99**	**103**	**107**	**111**	**116**	**118**	**121**	**124**	**127**	**131**	**133**	**136**
Net capacity position (+ve = excess, -ve	**0.34**	**0.14**	**0.68**	**0.14**	**0.42**	**0.14**	**0.59**	**0.53**	**0.47**	**0.56**	**0.83**	**0.98**	**2.12**	**0.48**	**0.08**	**0.12**	**0.02**	**0.97**	**0.42**	**0.29**

g. Existing Resource Planning

PERC's Preferred Conforming Portfolio includes existing resources in three categories: (1) resources procured to meet BPERC's near-term RA requirements; (2) Online contracts already executed for solar energy and limited storage capacity, together with BPERC's allocated share of Cost Allocation

Mechanism (CAM) and Modified CAM resources; and (3) Planned Existing short-term gas RA capacity layered solely to close residual reliability gaps after the clean-energy layer is accounted for.BPERC does not rely on large volumes of uncontracted existing resources to meet its energy needs. The clean-energy layer of the portfolio is met with a combination of online RPS resources under long-term contracts, Planned New solar (beginning 2030), limited Planned New geothermal, and BPERC's allocated shares of AB 1373 resources.

Relative to the 2022 Preferred Conforming Portfolio, the 2026 portfolio relies on more existing gas RA for reliability, especially in the outer years of the planning horizon. Those higher gas volumes in the outer years are the direct result of three structural factors:

1. Growth in BPERC's reliability procurement requirement (RPR): BPERC's RPR rises from the mid-80s MW range in the early 2030s to approximately 136 MW by 2045. This growth reflects the combination of load trajectory, planning-reserve-margin assumptions, and the LSE's share of system critical-hour load.

2. Sharp decline in effective capacity contribution from the clean-energy and storage layers: By 2045, the solar, multi-duration battery, offshore-wind, and geothermal resources in the portfolio contribute only a modest amount of net effective capacity under the ELCC values used in the Reliability–Planning tab. Solar ELCCs decline significantly with rising system penetration; battery ELCCs also decline. The AB 1373 slices, while valuable for energy and long-duration attributes, are too small to offset these declines. As a result, nearly the entire reliability need in the outer years must be met by Planned Existing gas.

3. Portfolio construction rule: Consistent with the two-stage process used for this filing, the clean-energy layer was sized and frozen first to meet GHG targets. The capacity layer was then built year-by-year solely to close residual reliability gaps while maintaining a small positive net capacity position (generally under 5 %). This disciplined approach produces the observed gas volumes; it does not reflect an intentional preference for gas.

In short, the higher Planned Existing gas numbers are not the product of a change in procurement philosophy. They are the arithmetic consequence of a rising reliability need combined with the declining capacity value of the resources that deliver the bulk of the portfolio's clean energy.

BPERC anticipates that sufficient short-term RA capacity from existing resources will remain available in the market throughout the planning horizon, particularly as many larger LSEs continue to reduce their reliance on emitting resources for RA. The principal challenges BPERC will face are the same ones faced by other small ESPs: competition for high-quality existing resources during tight RA years, potential price volatility, and the long-term uncertainty surrounding the economic life of gas units under California's decarbonization policies. BPERC's IRP mitigates these risks by limiting gas to residual capacity needs only and contracting on a relatively short-term, year-by-year basis where possible. In actual practice, BPERC will evaluate opportunities to substitute longer-duration storage or clean firm resources as they become commercially viable at scale.

h. Hydro Generation Risk Management

Not applicable. None of the resources in BPERC's Preferred Conforming Portfolio depends on in-state hydroelectric generation. Consequently, drought risk does not affect the portfolio's expected costs, GHG emissions, or reliability contribution.

i. Long-Duration Storage Planning

BPERC included limited quantities of 8-hour lithium-ion battery storage in the Preferred Conforming Portfolio solely to satisfy the LLT component of its MTR obligations and to provide higher-ELCC capacity in the later years of the planning horizon. The volumes are the minimum required to meet those obligations and to keep the net capacity position non-negative after the 4-hour storage and gas-RA layers are accounted for.

BPERC does not plan to procure 8-hour (or longer) storage beyond the amounts already identified in the RDT. The benefits of the included LDES are compliance with ordered procurement requirements and a modest improvement in later-year ELCC; the principal risk is the higher cost relative to 4-hour storage, which is why volumes were kept to the minimum. This represents a continuation and modest expansion of the limited LDES position shown in the 2022 portfolio, driven by the intervening MTR decisions and the longer planning horizon to 2045.

j. Clean Firm Power Planning

BPERC included a limited quantity of new geothermal capacity in the Preferred Conforming Portfolio to meet the clean-firm component of its MTR/LLT obligations. BPERC also included its allocated shares of AB 1373 geothermal and offshore wind as planning assumptions.

BPERC does not plan additional clean-firm procurement beyond the amount shown in the RDT. The Planned New geothermal resource to meet BPERC's LLT obligation is assumed to be located within the CAISO balancing authority area (or delivered with existing Maximum Import Capability); no new MIC expansion or major transmission upgrades are required for the modest volume involved. Relative to the 2022 portfolio, the clean-firm position remains small and is driven by the same MTR compliance rationale, updated for the current obligation quantities and the 2045 planning horizon.

k. Non-CAISO, including Out-of-State, Wind Planning

Not applicable. The Preferred Conforming Portfolio does not include any non-CAISO or out-of-state wind resources. Incremental renewable energy need is met with in-CAISO solar and the limited geothermal already described. This is a change from the 2022 Preferred Conforming Portfolio, which relied more heavily on Pacific Northwest/Idaho wind; the shift reflects the updated resource mix in the Commission's 2025 Inputs & Assumptions and 2025-2026 TPP modeling and the greater emphasis on multi-duration storage for residual capacity.

l. Offshore Wind Planning

Not applicable. Like its 2022 IRP portfolio, BPERC's Preferred Conforming Portfolio does not include any offshore wind resources, except for BPERC's allocation of AB 1373 OSW.

m. Transmission Planning

BPERC's Planned New resources are characterized in the RDT using generic or indicative locations consistent with the resource types and regional boundaries in the 2025 Inputs & Assumptions and the busbar-mapping results of the 2025-2026 TPP Base Case portfolio. No specific CAISO interconnection queue positions are claimed for the generic Planned New resources.

Because the volumes of new resources are modest and are of the types already selected in the Commission's own TPP portfolio, BPERC does not expect the Preferred Conforming Portfolio to trigger incremental transmission upgrades beyond those already identified in the CAISO Transmission Plan for the base-case resource portfolio. BPERC is not opposed to staff relocating any generic Planned New resources during future busbar-mapping exercises if doing so better aligns with available transmission capability.

For the limited Development and Online resources that already have identified points of interconnection, any required transmission upgrades are the responsibility of the project developer under the CAISO interconnection process; BPERC is not aware of any upgrades that would materially affect the commercial operation dates assumed in the RDT.

IV. Action Plan

a. Proposed Procurement Activities and Potential Barriers

BPERC's Preferred Conforming Portfolio does not require major deviations from its current procurement practices. BPERC has contracted sufficient volumes of new capacity and clean energy resources to meet its MTR generic and Diablo Canyon Replacement procurement obligations and is currently focused on contracting for LLT resources to meet its LLT procurement obligations.

Pending the adoption of the RCPPP, BPERC will continue to meet the bulk of its residual energy needs through CAISO market purchases and short-term bilateral contracts, and the bulk of its residual RA needs through short-term capacity contracts. Long-term contracts will be used primarily for RPS compliance (including the long-term contracting requirement) and for the specific MTR and LLT resources already identified in the portfolio.

The Planned New resources shown in the RDT (new 4-hour storage, 8-hour storage, solar, and limited geothermal) will be procured only as needed to close residual energy or capacity gaps or to satisfy remaining ordered MTR/LLT obligations. BPERC has not developed a detailed multi-year solicitation protocol for volumes beyond those required for compliance, because the residual

quantities are modest and the precise timing and product mix may shift with customer load changes and future Commission procurement directives.

The principal risks to implementation of BPERC's Preferred Conforming Portfolio are (1) delays in commercial operation of Planned New storage or geothermal projects, (2) tightening of the short-term RA market, and (3) load forecast or customer-mix changes that alter residual need. BPERC mitigates delay risks by closely monitoring development milestones, interconnection progress, permitting status, and financing conditions for contracted MTR resources. Where development delay risk emerges, BPERC evaluates replacement procurement, competitive solicitations, resource exchanges, bridge compliance mechanisms authorized by the Commission, and other eligible alternatives to maintain compliance with applicable procurement obligations. BPERC mitigates the other identified risks by maintaining procurement flexibility (short-term RA and market energy) and by sizing Planned New resources only to residual need, and by closely monitoring project development milestones for any contracts already executed.

i. Resources to meet IRP mandated procurement requirements, including D.21-06-035 and D.23-02-040:

BPERC will meet its remaining MTR and LLT procurement obligations under D.21-06-035 and D.23-02-040 with the combination of 4-hour battery storage, 8-hour battery storage, and limited geothermal already reflected in the RDT. Procurement will be conducted through competitive solicitations timed to the required commercial operation dates, with preference for projects that can offer slices of capacity to multiple off-takers and that are sponsored by developers with proven track records. BPERC has already conducted multiple MTR solicitations on this basis and evaluates replacement and LLT opportunities on an ongoing basis.

ii. Plans for resources that are currently non-candidate in CPUC's IRPs not described above

BPERC has no current plans to procure resources that are currently non-candidate in the Commission's IRP modeling.

iii. Other renewable and/or zero carbon resources not described above

BPERC has no current plans to procure additional renewable or zero-carbon resources beyond residual need.

iv. Other energy storage not described above

BPERC has no current plans to procure additional energy storage beyond residual need and MTR/LLT compliance.

v. Other demand response not described above

BPERC has no current plans to procure demand response products.

vi. Other energy efficiency not described above

BPERC has no current plans to procure energy efficiency products.

vii. Other distributed generation not described above

BPERC has no current plans to procure distributed generation.

viii. Transportation electrification, including any investments that correspond to different levels than what is included in Integrated Energy Policy Report (IEPR)

BPERC has no current plans for transportation electrification investments that are at different levels than those included in the IEPR.

ix. Building electrification, including any investments that correspond to different levels than what is included in Integrated Energy Policy Report (IEPR)

BPERC has no current plans for building electrification investments that are at different levels than those included in the IEPR.

x. Potential Centralized Procurement, pursuant to AB-1373

BPERC has included its allocated shares of AB 1373 central-procurement resources in the Preferred Conforming Portfolio as planning assumptions consistent with D.24-08-064 and the staff allocation methodology. The volumes are those assigned to BPERC under the capacity and energy allocation methods described in the AB 1373 Resource Allocation Methodology document (1.99 MW 12-hour LDES, 1.99 MW multi-day storage, 26.39 MW offshore wind, and 3.47 MW geothermal).

BPERC does not plan additional procurement of these resource types beyond the AB 1373 allocations already reflected in the RDT. The principal benefits are compliance with ordered LLT procurement, contribution to clean-firm and long-duration attributes, and diversification of the renewable portfolio. The principal risks are the same ones that apply to all AB 1373 resources: timing of commercial operation, final allocation quantities, and transmission deliverability. If the Department of Water Resources successfully procures the resources and BPERC's final allocation differs from the planning assumption used here, BPERC will adjust its residual-need calculations and contract positions accordingly in a future filing or compliance report.

xi. Other

No other material procurement activities are planned at this time.

b. Disadvantaged Communities (DACs)

As an ESP without a defined geographic service territory, BPERC does not operate DAC-specific retail programs. A material share of BPERC's commercial and industrial load is associated with facilities

located in or near DACs. BPERC's Preferred Conforming Portfolio contains no new emitting generation known to be located in DACs.

For any future renewable, storage, or hybrid projects that BPERC may contract and that are proposed to be sited in or near DACs, BPERC will require the developer to conduct community and environmental-justice outreach and will assign internal or external resources to monitor that engagement. This approach is unchanged in substance from the 2022 IRP.

c. LSEs' Tribal Customers

BPERC currently has no tribal governmental or tribal-enterprise customers. BPERC has not conducted IRP-specific outreach to tribes. Should BPERC contract for a project located on or near tribal lands, it will require the developer to engage the relevant tribal government(s) in accordance with applicable law and best practices.

d. Procurement Products

BPERC expects to continue using the following products in procurement activities associated with the Preferred Conforming Portfolio:

Product type	Description
CAISO market energy	Day-ahead and real-time purchases to balance residual load
Short-term bilateral energy	Fixed-price or index-based contracts for residual energy
Short-term RA capacity	System, local, and flexible RA with terms typically ≤ 1–3 years
Long-term RPS (PCC 1)	Bundled energy + RECs under contracts of 10 years or longer
Long-term storage / hybrid capacity	RA capacity (and, where economic, energy) from 4-hour and 8-hour batteries
Clean-firm capacity	RA capacity from geothermal resources to satisfy LLT obligations

BPERC does not currently anticipate using GHG products, financial transmission rights, or other specialized credit products beyond standard credit support for bilateral contracts.

e. Commission Direction of Actions

BPERC does not request any specific direction from the Commission at this time. BPERC will implement the Preferred Conforming Portfolio through ordinary commercial procurement. BPERC remains prepared to participate in future Commission processes concerning MTR compliance, LLT resource procurement, the integration of procurement program reporting, and other IRP-related topics.

V. Lessons Learned

BPERC offers the following observations from the 2026 IRP cycle and the preparation of the Preferred Conforming Portfolio:

1. **Residual-need analysis remains the most practical approach for small ESPs.**

   Full capacity-expansion modeling is neither necessary nor cost-effective for an ESP whose load is modest and subject to customer turnover. For BPERC, the transparent residual-need methodology—locking official load and GHG inputs, projecting existing contracts, then filling only the residual energy and capacity gaps—produced a portfolio that simultaneously satisfies the 8 MMT by 2045 GHG benchmark with substantial headroom and maintains a non-negative net capacity position in every study year. Retaining and explicitly endorsing this approach for small LSEs would improve both efficiency and transparency.

2. **Reliability is the binding constraint; GHG headroom is comparatively easy to achieve.**

   Once BPERC sized the clean-energy layer, the portfolio's GHG emissions fell well below the assigned benchmark. The tighter constraint was year-by-year effective capacity. A process that continues to treat reliability and GHG as co-equal but recognizes that, for many small LSEs, reliability will drive incremental procurement would help focus the modeling and review of resource portfolios where they add the most value.

3. **CAM resource data should be pre-populated by staff.**

   The Commission expects LSEs to include CAM and Modified CAM resources in their RDTs and IRP narratives, yet staff did not prepare or distribute LSE-specific allocation tables. In prior IRP cycles, staff provided pre-populated RDTs that already contained each LSE's CAM resource data. Requiring every LSE to locate, interpret, and manually enter those data is extremely time-consuming and, because the process is manual, inherently prone to errors. Those errors degrade the accuracy of both the RDT reliability calculations and the CSP emissions results. If non-IOU LSEs are to be required to include CAM resources, staff should resume the practice of supplying the CAM resource and allocation data in a form that can be directly imported into the LSEs' RDTs.

4. **RDT usability for Planned New contracts.**

   The RDT's error-checking macro appropriately flags missing execution dates and certain viability fields for Planned New resources. But for generic residual resources that are not yet under negotiation, many of those fields are necessarily "NA." A future RDT release that distinguishes more clearly between site-specific Development projects and generic residual Planned New resources would reduce soft-error clutter without sacrificing data quality.

5. **Continuity of ESP-specific guidance is helpful.**

   Prior Commission guidance confirming that ESPs without geographic service territories are not expected to operate DAC-specific retail programs, and that census-tract mapping of C&I customers is not required, remains useful. Maintaining that clarity in future filing requirements reduces unnecessary explanatory burden.

BPERC appreciates the Commission's continued refinement of the IRP process and stands ready to participate in future workshops or working groups on the "lessons learned" from this IRP cycle.

RESOURCE DATA TEMPLATE

RDT Certification Form – Verification Declaration

Load Serving Entity Full Name:	BP Energy Retail Company California LLC
Load Serving Entity Abbreviation:	BPERC
Submission Type:	IRP Biennial Planning
Date of Filing:	8/10/2026

Note: Consistent with Rules 1.1 & 1.11 of the CPUC's Rules of Practice and Procedure, this Procurement Showing has been verified by an officer of the corporation or organization, who expressly certifies, under penalty of perjury, the following:

1. I have responsibility for the activities reflected in this showing;
2. I have reviewed, or have caused to be reviewed, this showing;
3. Based on my knowledge, information, or belief, this filing does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made;
4. Based on my knowledge, information, or belief, this filing contains all of the information required to be provided by CPUC orders, rules, and regulations.

LSE Officer

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Load Serving Entity Information

LSE Address Line 1:	201 Helios Way
LSE Address Line 2:	
LSE City:	Houston
LSE State:	Texas
LSE Zip:	77079

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SCE_CAM_16		Li	160.133	0.361704879					CAM	
SCE_CAM_17		Li	40	0.090351115					CAM	
SCE_CAM_18		Li	44	0.099386227					CAM	
SCE_CAM_19		Li	40	0.045175558					CAM	
SCE_CAM_20				0					CAM	
SCE_CAM_21				0					CAM	
PGE_CAM_1				0					CAM	
PGE_CAM_2				0					CAM	
PGE_CAM_3				0					CAM	
PGE_CAM_7		Li	730	1.567903122					CAM	
13620937								ccgt		Buy
22617276-A								ct		Buy
22617276-B								ct		Buy
22617276-C								ct		Buy
22772432								import		Buy
22700EAF-6197-4EBA-A8EC-AE4B70676FE5	1Axis							solar		Buy
21805227								wind		Buy
22958536-A		Li						battery		Buy
22958536-B		Li						battery		Buy
13830784								import		Buy
13936630								import		Buy
EDF50003	1Axis							solar		Buy
EDF90014	1Axis							solar		Buy
EDF50002	1Axis							solar		Buy
BPERC_RWE_FSS	1Axis		600	148.8				solar		Buy
BPERC_Engie_Noosa_GEN		Li	300	120	4	3	5	battery		Buy
BPERC_BESS_2026_2027		Li	200	20	2	3	2	battery		Buy
BPERC_BESS_20230_2031_2032		Li	200	48	2	3	2	battery		Buy
BPERC_LDES_2028_2032		Li	400	48	2	3	2	battery		Buy
BPERC_CleanFirm_2028					2	3	2	geothermal		Buy
BPERC_LDES_12hr_AB1373		Li	23.88	23.88	2	2	2	battery		Buy
BPERC_LDES_MDS_AB1373		Li	47.76	47.76	2	2	2	battery		Buy
BPERC_OSW_AB1373					1	2	2	wind		Buy
BPERC_AB1373_Geothermal					2	2	2	geothermal		Buy
BPERC_Solar_New_2030	1Axis				2	3	2	solar		Buy
BPERC_Solar_New_2035	1Axis				2	3	2	solar		Buy
BPERC_Solar_New_2040	1Axis				2	3	2	solar		Buy
BPERC_RA_Gas_2026								ccgt		Buy
BPERC_RA_Gas_2027								ccgt		Buy
BPERC_RA_Gas_2028								ccgt		Buy
BPERC_RA_Gas_2029								ccgt		Buy
BPERC_RA_Gas_2030								ccgt		Buy
BPERC_RA_Gas_2031								ccgt		Buy
BPERC_RA_Gas_2032								ccgt		Buy
BPERC_RA_Gas_2033								ccgt		Buy
BPERC_RA_Gas_2034								ccgt		Buy
BPERC_RA_Gas_2035								ccgt		Buy
BPERC_RA_Gas_2036								ccgt		Buy
BPERC_RA_Gas_2037								ccgt		Buy
BPERC_RA_Gas_2038								ccgt		Buy
BPERC_RA_Gas_2039								ccgt		Buy
BPERC_RA_Gas_2040								ccgt		Buy
BPERC_RA_Gas_2041								ccgt		Buy
BPERC_RA_Gas_2042								ccgt		Buy
BPERC_RA_Gas_2043								ccgt		Buy
BPERC_RA_Gas_2044								ccgt		Buy
BPERC_RA_Gas_2045								ccgt		Buy

lse_unique_contract_id	counterparty	generator_supplier	developer_name	capacity_area	capacity_sub_area	cpuc_approval_ref	county	COD_year	COD_month	COD_day	contract_start_date_year
SCE_CAM_1	Southern California Edison										2016
SCE_CAM_2	Southern California Edison										2007
SCE_CAM_3	Southern California Edison										2007
SCE_CAM_4	Southern California Edison										2007
SCE_CAM_5	Southern California Edison										2009
SCE_CAM_6	Southern California Edison										2007
SCE_CAM_7	Southern California Edison										2017
SCE_CAM_8	Southern California Edison										2017
SCE_CAM_9	Southern California Edison										1987
SCE_CAM_10	Southern California Edison										2020
SCE_CAM_11	Southern California Edison										2020
SCE_CAM_12	Southern California Edison										2020
SCE_CAM_13	Southern California Edison										2020
SCE_CAM_14	Southern California Edison										2021
SCE_CAM_15	Southern California Edison										2021
SCE_CAM_16	Southern California Edison										2024
SCE_CAM_17	Southern California Edison										2021
SCE_CAM_18	Southern California Edison										2021
SCE_CAM_19	Southern California Edison										2026
SCE_CAM_20	Southern California Edison										2020
SCE_CAM_21	Southern California Edison										2020
PGE_CAM_1	Pacific Gas & Electric										2014
PGE_CAM_2	Pacific Gas & Electric										2019
PGE_CAM_3	Pacific Gas & Electric										2019
PGE_CAM_7	Pacific Gas & Electric										2021
13620937	non-LSE supplier	Dynegy Marketing		PacGE				2002	7	1	2026
22617276-A	non-LSE supplier	NRG Business Marketing		PacGE				2020	6	1	2026
22617276-B	non-LSE supplier	NRG Business Marketing		PacGE				2002	1	14	2026
22617276-C	non-LSE supplier	NRG Business Marketing		PacGE				2001	6	7	2026
22772432	Central Coast Community Energy			BPAT				2026	5	1	2026
22700EAF-6197-4EBA-A8EC-AE4B70676FE5	non-LSE supplier	RWE		PacGE				2023	9	29	2026
21805227	non-LSE supplier	Amazon Data Services, Inc		SCE				2021	3	30	2026
22958536-A	non-LSE supplier	IP Easley II, LLC		SCE				2026	6	1	2026
22958536-B	non-LSE supplier	IP Easley II, LLC		SCE				2026	6	1	2026
13830784	non-LSE supplier	BP Energy Company		BPAT				2026	9	1	2026
13936630	non-LSE supplier	BP Energy Company		BPAT				2026	9	1	2026
EDF50003	non-LSE supplier		RWE	GreaterFresno	Greater Fresno Reedley		FresnoCounty	2023	9	23	2023
EDF90014	non-LSE supplier		EDF RENEWABLES	SCE	No_sub_area		RiversideCounty	2020	12	11	2021
EDF50002	non-LSE supplier		CLEARWAY	SCE	No_sub_area		KernCounty	2020	12	21	2021
BPERC_RWE_FSS	non-LSE supplier		RWE	GreaterFresno	Greater Fresno Reedley		FresnoCounty	2023	9	23	2024
BPERC_Engie_Noosa_GEN	non-LSE supplier		ENGIE	Stockton	Stockton Lockeford		SanJoaquinCounty	2026	10	1	2025
BPERC_BESS_2026_2027	non-LSE supplier		TBD					2027	6	1	2027
BPERC_BESS_20230_2031_2032	non-LSE supplier		TBD					2032	6	1	2031
BPERC_LDES_2028_2032	non-LSE supplier		TBD					2030	6	1	2030
BPERC_CleanFirm_2028	non-LSE supplier		TBD	SDGE	in Diego/Imperial Valley Border		SanDiegoCounty	2031	6	1	2031
BPERC_LDES_12hr_AB1373	non-LSE supplier		TBD					2032	6	1	2032
BPERC_LDES_MDS_AB1373	non-LSE supplier		TBD					2032	6	1	2032
BPERC_OSW_AB1373	non-LSE supplier		TBD					2035	6	1	2035
BPERC_AB1373_Geothermal	non-LSE supplier		TBD					2035	6	1	2035
BPERC_Solar_New_2030	non-LSE supplier		TBD					2030	6	1	2030
BPERC_Solar_New_2035	non-LSE supplier		TBD					2035	6	1	2035
BPERC_Solar_New_2040	non-LSE supplier		TBD					2040	6	1	2040
BPERC_RA_Gas_2026	non-LSE supplier	TBD						2010	1	1	2026
BPERC_RA_Gas_2027	non-LSE supplier	TBD						2010	1	1	2027
BPERC_RA_Gas_2028	non-LSE supplier	TBD						2010	1	1	2028
BPERC_RA_Gas_2029	non-LSE supplier	TBD						2010	1	1	2029
BPERC_RA_Gas_2030	non-LSE supplier	TBD						2010	1	1	2030
BPERC_RA_Gas_2031	non-LSE supplier	TBD						2010	1	1	2031
BPERC_RA_Gas_2032	non-LSE supplier	TBD						2010	1	1	2032
BPERC_RA_Gas_2033	non-LSE supplier	TBD						2010	1	1	2033
BPERC_RA_Gas_2034	non-LSE supplier	TBD						2010	1	1	2034
BPERC_RA_Gas_2035	non-LSE supplier	TBD						2010	1	1	2035
BPERC_RA_Gas_2036	non-LSE supplier	TBD						2010	1	1	2036
BPERC_RA_Gas_2037	non-LSE supplier	TBD						2010	1	1	2037
BPERC_RA_Gas_2038	non-LSE supplier	TBD						2010	1	1	2038
BPERC_RA_Gas_2039	non-LSE supplier	TBD						2010	1	1	2039
BPERC_RA_Gas_2040	non-LSE supplier	TBD						2010	1	1	2040
BPERC_RA_Gas_2041	non-LSE supplier	TBD						2010	1	1	2041
BPERC_RA_Gas_2042	non-LSE supplier	TBD						2010	1	1	2042
BPERC_RA_Gas_2043	non-LSE supplier	TBD						2010	1	1	2043
BPERC_RA_Gas_2044	non-LSE supplier	TBD						2010	1	1	2044
BPERC_RA_Gas_2045	non-LSE supplier	TBD						2010	1	1	2045

lse_unique_contract_id	contract_start_date_month	contract_start_date_day	contract_end_date_year	contract_end_date_month	contract_end_date_day	contract_execution_date_year	contract_execution_date_month	contract_execution_date_day	tx_upgrades	tx_upgrade_date_year	tx_upgrade_date_month
SCE_CAM_1	12	31	2026	12	31				NA		
SCE_CAM_2	7	19	2045	12	31				NA		
SCE_CAM_3	7	20	2045	12	31				NA		
SCE_CAM_4	7	17	2045	12	31				NA		
SCE_CAM_5	8	1	2045	12	31				NA		
SCE_CAM_6	7	19	2045	12	31				NA		
SCE_CAM_7	7	1	2045	12	31				NA		
SCE_CAM_8	7	1	2045	12	31				NA		
SCE_CAM_9	12	29	2026	8	31				NA		
SCE_CAM_10	6	1	2040	5	31				NA		
SCE_CAM_11	5	1	2040	4	30				NA		
SCE_CAM_12	7	1	2040	6	30				NA		
SCE_CAM_13	7	1	2040	6	30				NA		
SCE_CAM_14	1	1	2040	12	31				NA		
SCE_CAM_15	7	1	2041	3	31				NA		
SCE_CAM_16	6	1	2040	10	31				NA		
SCE_CAM_17	4	1	2041	3	31				NA		
SCE_CAM_18	6	1	2041	3	31				NA		
SCE_CAM_19	4	1	2035	10	31				NA		
SCE_CAM_20	1	1	2026	12	31				NA		
SCE_CAM_21	9	1	2027	7	31				NA		
PGE_CAM_1	8	1	2026	7	31				NA		
PGE_CAM_2	10	1	2026	9	30				NA		
PGE_CAM_3	12	1	2026	11	30				NA		
PGE_CAM_7	10	1	2050	12	31				NA		
13620937	1	1	2026	12	31	2025	11	25	NA		
22617276-A	6	1	2026	9	31	2026	6	10	NA		
22617276-B	6	1	2026	9	31	2026	6	10	NA		
22617276-C	6	1	2026	9	31	2026	6	10	NA		
22772432	6	1	2026	9	31	2026	5	15	NA		
22700EAF-6197-4EBA-A8EC-AE4B70676FE5	6	1	2026	9	31	2024	4	14	NA		
21805227	6	1	2026	9	31	2025	12	14	NA		
22958536-A	6	1	2026	9	31	2026	6	16	NA		
22958536-B	6	1	2026	9	31	2026	6	16	NA		
13830784	6	1	2026	9	31	2026	4	30	NA		
13936630	6	1	2026	9	31	2026	7	26	NA		
EDF50003	1	1	2032	12	31	2022	2	27	NA		
EDF90014	1	1	2030	12	31	2020	12	18	NA		
EDF50002	5	1	2031	4	30	2021	5	1	NA		
BPERC_RWE_FSS	8	1	2034	7	31	2024	4	19	NA		
BPERC_Engie_Noosa_GEN	10	1	2035	10	1	2024	12	16	YES	2026	
BPERC_BESS_2026_2027	6	1	2037	5	31	NA	NA	NA	NA		
BPERC_BESS_20230_2031_2032	6	1	2041	5	31	NA	NA	NA	NA		
BPERC_LDES_2028_2032	6	1	2045	12	31	NA	NA	NA	NA		
BPERC_CleanFirm_2028	6	1	2045	12	31	NA	NA	NA	NA		
BPERC_LDES_12hr_AB1373	6	1	2045	12	31	NA	NA	NA	NA		
BPERC_LDES_MDS_AB1373	6	1	2045	12	31	NA	NA	NA	NA		
BPERC_OSW_AB1373	6	1	2045	12	31	NA	NA	NA	NA		
BPERC_AB1373_Geothermal	6	1	2045	12	31	NA	NA	NA	NA		
BPERC_Solar_New_2030	6	1	2045	12	31	NA	NA	NA	NA		
BPERC_Solar_New_2035	6	1	2045	12	31	NA	NA	NA	NA		
BPERC_Solar_New_2040	6	1	2045	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2026	6	1	2026	10	1	NA	NA	NA	NA		
BPERC_RA_Gas_2027	1	1	2027	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2028	1	1	2028	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2029	1	1	2029	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2030	1	1	2030	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2031	1	1	2031	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2032	1	1	2032	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2033	1	1	2033	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2034	1	1	2034	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2035	1	1	2035	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2036	1	1	2036	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2037	1	1	2037	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2038	1	1	2038	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2039	1	1	2039	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2040	1	1	2040	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2041	1	1	2041	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2042	1	1	2042	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2043	1	1	2043	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2044	1	1	2044	12	31	NA	NA	NA	NA		
BPERC_RA_Gas_2045	1	1	2045	12	31	NA	NA	NA	NA		

lse_unique_contract_id	tx_upgrade_date_day	tx_upgrade_description	d2106035_procurement_cat	mtr_tranche1_NQC	mtr_tranche2_NQC	mtr_tranche3_NQC	mtr_tranche4_NQC	mtr_tranche5_NQC	mtr_tranche6_NQC	mtr_NQC_ZE_gen_paired_dr
SCE_CAM_1			NA							
SCE_CAM_2			NA							
SCE_CAM_3			NA							
SCE_CAM_4			NA							
SCE_CAM_5			NA							
SCE_CAM_6			NA							
SCE_CAM_7			NA							
SCE_CAM_8			NA							
SCE_CAM_9			NA							
SCE_CAM_10			NA							
SCE_CAM_11			NA							
SCE_CAM_12			NA							
SCE_CAM_13			NA							
SCE_CAM_14			NA							
SCE_CAM_15			NA							
SCE_CAM_16			NA							
SCE_CAM_17			NA							
SCE_CAM_18			NA							
SCE_CAM_19			NA							
SCE_CAM_20			NA							
SCE_CAM_21			NA							
PGE_CAM_1			NA							
PGE_CAM_2			NA							
PGE_CAM_3			NA							
PGE_CAM_7			NA							
13620937			NA							
22617276-A			NA							
22617276-B			NA							
22617276-C			NA							
22772432			NA							
22700EAF-6197-4EBA-A8EC-AE4B70676FE5			NA							
21805227			NA							
22958536-A			NA							
22958536-B			NA							
13830784			NA							
13936630			NA							
EDF50003			ZE_gen_paired_dr							
EDF90014										
EDF50002										
BPERC_RWE_FSS			general	2.4552						
BPERC_Engie_Noosa_GEN			general	2.5448	14	4	1.9852			
BPERC_BESS_2026_2027			general				1.1	4		
BPERC_BESS_20230_2031_2032										
BPERC_LDES_2028_2032			long_duration_storage						2.5	
BPERC_CleanFirm_2028			firm_ZE						2.5	
BPERC_LDES_12hr_AB1373										
BPERC_LDES_MDS_AB1373										
BPERC_OSW_AB1373										
BPERC_AB1373_Geothermal										
BPERC_Solar_New_2030										
BPERC_Solar_New_2035										
BPERC_Solar_New_2040										
BPERC_RA_Gas_2026										
BPERC_RA_Gas_2027										
BPERC_RA_Gas_2028										
BPERC_RA_Gas_2029										
BPERC_RA_Gas_2030										
BPERC_RA_Gas_2031										
BPERC_RA_Gas_2032										
BPERC_RA_Gas_2033										
BPERC_RA_Gas_2034										
BPERC_RA_Gas_2035										
BPERC_RA_Gas_2036										
BPERC_RA_Gas_2037										
BPERC_RA_Gas_2038										
BPERC_RA_Gas_2039										
BPERC_RA_Gas_2040										
BPERC_RA_Gas_2041										
BPERC_RA_Gas_2042										
BPERC_RA_Gas_2043										
BPERC_RA_Gas_2044										
BPERC_RA_Gas_2045										

lse_unique_contract_id	mtr_bridge_to	contract_changed	previous_COD_year	previous_COD_month	previous_COD_day	remediation_plan	signed_contract	notice_to_proceed	public_contract	buying_energy_capacity	NQC_reporting_source
SCE_CAM_1										CapacityOnly	
SCE_CAM_2										CapacityOnly	
SCE_CAM_3										CapacityOnly	
SCE_CAM_4										CapacityOnly	
SCE_CAM_5										CapacityOnly	
SCE_CAM_6										CapacityOnly	
SCE_CAM_7										CapacityOnly	
SCE_CAM_8										CapacityOnly	
SCE_CAM_9										CapacityOnly	
SCE_CAM_10										CapacityOnly	
SCE_CAM_11										CapacityOnly	
SCE_CAM_12										CapacityOnly	
SCE_CAM_13										CapacityOnly	
SCE_CAM_14										CapacityOnly	
SCE_CAM_15										CapacityOnly	
SCE_CAM_16										CapacityOnly	
SCE_CAM_17										CapacityOnly	
SCE_CAM_18										CapacityOnly	
SCE_CAM_19										CapacityOnly	
SCE_CAM_20										CapacityOnly	
SCE_CAM_21										CapacityOnly	
PGE_CAM_1										CapacityOnly	
PGE_CAM_2										CapacityOnly	
PGE_CAM_3										CapacityOnly	
PGE_CAM_7										CapacityOnly	
13620937							YES		NO	CapacityOnly	Calculated
22617276-A							YES		NO	CapacityOnly	Calculated
22617276-B							YES		NO	CapacityOnly	Calculated
22617276-C							YES		NO	CapacityOnly	Calculated
22772432							YES		NO	CapacityOnly	Calculated
22700EAF-6197-4EBA-A8EC-AE4B70676FE5							YES		NO	CapacityOnly	Calculated
21805227							YES		NO	CapacityOnly	Calculated
22958536-A							YES		NO	CapacityOnly	Calculated
22958536-B							YES		NO	CapacityOnly	Calculated
13830784							YES		NO	CapacityOnly	Calculated
13936630							YES		NO	CapacityOnly	Calculated
EDF50003		NO					YES		NO	EnergyOnly	
EDF90014		NO					YES		NO	EnergyOnly	
EDF50002		NO					YES		NO	EnergyOnly	
BPERC_RWE_FSS		NO					YES		NO	CapacityOnly	Calculated
BPERC_Engie_Noosa_GEN		NO	2025	6	1	YES	YES	YES	NO	CapacityOnly	Calculated
BPERC_BESS_2026_2027		NO					NO	NO	NO	CapacityOnly	Calculated
BPERC_BESS_20230_2031_2032		NO					NO	NO	NO	CapacityOnly	Calculated
BPERC_LDES_2028_2032		NO					NO	NO	NO	CapacityOnly	Calculated
BPERC_CleanFirm_2028		NO					NO	NO	NO	EnergyCapacity	Calculated
BPERC_LDES_12hr_AB1373							NO	NO	NO	CapacityOnly	Calculated
BPERC_LDES_MDS_AB1373							NO	NO	NO	CapacityOnly	Calculated
BPERC_OSW_AB1373							NO	NO	NO	EnergyCapacity	Calculated
BPERC_AB1373_Geothermal							NO	NO	NO	EnergyCapacity	Calculated
BPERC_Solar_New_2030							NO	NO	NO	EnergyCapacity	Calculated
BPERC_Solar_New_2035							NO	NO	NO	EnergyCapacity	Calculated
BPERC_Solar_New_2040							NO	NO	NO	EnergyCapacity	Calculated
BPERC_RA_Gas_2026							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2027							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2028							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2029							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2030							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2031							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2032							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2033							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2034							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2035							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2036							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2037							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2038							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2039							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2040							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2041							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2042							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2043							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2044							NO		NO	CapacityOnly	Calculated
BPERC_RA_Gas_2045							NO		NO	CapacityOnly	Calculated

lse_unique_contract_id	procurement_origin	planned_project_retention_priority	csp_resource_category	csp_annual_2028	csp_annual_2030	csp_annual_2035	csp_annual_2040	csp_annual_2045	macro_supertype	notes
SCE_CAM_1	CAM		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	physical	
SCE_CAM_2	CAM		NA						physical	
SCE_CAM_3	CAM		NA						physical	
SCE_CAM_4	CAM		NA						physical	
SCE_CAM_5	CAM		NA						physical	
SCE_CAM_6	CAM		NA						physical	
SCE_CAM_7	CAM		Battery Storage (MWh Energy Capacity)	0.09	0.09	0.09	0.09	0.09	physical	
SCE_CAM_8	CAM		Battery Storage (MWh Energy Capacity)	0.09	0.09	0.09	0.09	0.09	physical	
SCE_CAM_9	CAM		NA						physical	
SCE_CAM_10	CAM		NA						physical	
SCE_CAM_11	CAM		NA						physical	
SCE_CAM_12	CAM		NA						physical	
SCE_CAM_13	CAM		NA						physical	
SCE_CAM_14	CAM		Battery Storage (MWh Energy Capacity)	0.91	0.91	0.91	0.91	-	physical	
SCE_CAM_15	CAM		Battery Storage (MWh Energy Capacity)	0.90	0.90	0.90	0.90	-	physical	
SCE_CAM_16	CAM		Battery Storage (MWh Energy Capacity)	0.36	0.36	0.36	0.36	-	physical	
SCE_CAM_17	CAM		Battery Storage (MWh Energy Capacity)	0.09	0.09	0.09	0.09	-	physical	
SCE_CAM_18	CAM		Battery Storage (MWh Energy Capacity)	0.10	0.10	0.10	0.10	-	physical	
SCE_CAM_19	CAM		Battery Storage (MWh Energy Capacity)	0.05	0.05	0.05	-	-	physical	
SCE_CAM_20	CAM		NA						physical	
SCE_CAM_21	CAM		NA						physical	
PGE_CAM_1	CAM		NA						physical	
PGE_CAM_2	CAM		NA						physical	
PGE_CAM_3	CAM		NA						physical	
PGE_CAM_7	CAM		Battery Storage (MWh Energy Capacity)	1.57	1.57	1.57	1.57	1.57	physical	
13620937	RA		NA	-	-	-	-	-	physical	
22617276-A	RA		NA	-	-	-	-	-	physical	
22617276-B	RA		NA	-	-	-	-	-	physical	
22617276-C	RA		NA	-	-	-	-	-	physical	
22772432	RA		NA	-	-	-	-	-	unspecifiedimport	
22700EAF-6197-4EBA-A8EC-AE4B70676FE5	RA		NA	-	-	-	-	-	physical	
21805227	RA		NA	-	-	-	-	-	physical	
22958536-A	RA		NA	-	-	-	-	-	newgeneric	
22958536-B	RA		NA	-	-	-	-	-	newgeneric	
13830784	RA		NA	-	-	-	-	-	unspecifiedimport	
13936630	RA		NA	-	-	-	-	-	unspecifiedimport	
EDF50003	RPS		Solar New PG&E (GWh)	361.25	361.25	-	-	-	physical	
EDF90014	RPS		Solar Baseline California (GWh)	5.00	5.00	-	-	-	physical	
EDF50002	RPS		Solar Baseline California (GWh)	33.66	33.55	-	-	-	physical	
BPERC_RWE_FSS	D2106035		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	physical	
BPERC_Engie_Noosa_GEN	D2106035		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	physical	
BPERC_BESS_2026_2027	D2202004		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	newgeneric	
BPERC_BESS_20230_2031_2032	D2202004		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	newgeneric	
BPERC_LDES_2028_2032	D2106035, D2602057		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	newgeneric	
BPERC_CleanFirm_2028	D2106035		Geothermal (GWh)	21.02	21.02	21.02	21.02	21.02	newgeneric	
BPERC_LDES_12hr_AB1373	AB 1373		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	newgeneric	
BPERC_LDES_MD5_AB1373	AB 1373		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	newgeneric	
BPERC_OSW_AB1373	AB 1373		Wind Offshore Humboldt (GWh)	-	-	97.00	97.00	97.00	newgeneric	
BPERC_AB1373_Geothermal	AB 1373		Geothermal (GWh)	-	-	14.90	14.90	14.90	newgeneric	
BPERC_Solar_New_2030	IRP		Solar New PG&E (GWh)	-	591	591	591	591	newgeneric	
BPERC_Solar_New_2035	IRP		Solar New PG&E (GWh)	-	-	473	473	473	newgeneric	
BPERC_Solar_New_2040	IRP		Solar New PG&E (GWh)	-	-	-	260	260	newgeneric	
BPERC_RA_Gas_2026	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2027	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2028	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2029	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2030	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2031	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2032	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2033	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2034	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2035	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2036	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2037	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2038	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2039	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2040	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2041	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2042	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2043	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2044	RA		NA	-	-	-	-	-	existinggeneric	
BPERC_RA_Gas_2045	RA		NA	-	-	-	-	-	existinggeneric	

Reliability Need - updated with 2025 Filing Requirements release

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
CAISO gross peak (MW)	55,445	56,568	58,624	60,556	62,505	64,292	66,076	68,095	69,939	71,976	73,218	74,668	76,057	77,358	78,968	79,726	80,523	81,423	82,089	82,916
PRM (%)	16%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	14%	14%	14%	14%	14%	14%	14%	14%
CAISO Total Reliability Need (TRN) (MW)	64,668	65,238	67,457	69,522	71,597	73,685	75,771	78,127	80,390	82,676	83,983	85,527	86,996	88,337	90,073	90,903	91,846	92,823	93,633	94,506
CAISO Reliability Procurement Need (RPN) (MW)	53,361	54,394	55,427	50,516	45,606	47,269	48,932	50,593	52,259	53,922	55,180	56,437	57,695	58,953	60,210	60,949	61,687	62,423	63,167	63,906
LSE share of load during critical hours (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
LSE reliability procurement requirement (RPR) (MW)	97	99	102	93	85	89	92	95	99	102	106	110	114	117	121	124	127	130	133	136

BTM PV Forecast - updated with 2025 Filing Requirements release

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Capacity (MW)	50	57	56	55	53	55	55	55	54	52	52	51	50	51	50	50	51	51	51	52

ELCC (%) - updated with 2025 Filing Requirements release

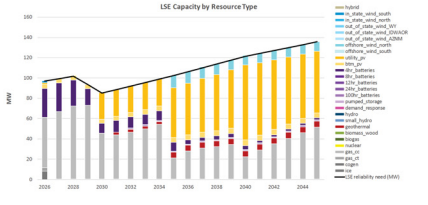
Resource Type	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
in_state_wind_south	20%	18%	15%	15%	15%	16%	17%	18%	19%	19%	18%	16%	14%	12%	11%	11%	11%	11%	12%	12%
in_state_wind_north	30%	28%	26%	31%	35%	35%	35%	35%	35%	35%	33%	31%	28%	26%	24%	24%	24%	25%	25%	26%
out_of_state_wind_WY	44%	44%	44%	41%	37%	38%	39%	40%	41%	41%	39%	37%	35%	33%	30%	32%	33%	35%	36%	38%
out_of_state_wind_IDWAOR	27%	22%	17%	21%	25%	26%	27%	27%	28%	29%	27%	25%	23%	22%	20%	20%	20%	19%	19%	19%
out_of_state_wind_AZNM	43%	43%	43%	39%	36%	37%	38%	40%	41%	42%	39%	37%	34%	32%	29%	30%	31%	32%	33%	34%
offshore_wind_north	62%	65%	69%	63%	57%	55%	53%	51%	48%	46%	44%	42%	40%	38%	36%	36%	36%	36%	36%	36%
offshore_wind_south	42%	45%	47%	39%	30%	29%	28%	26%	25%	23%	22%	20%	19%	18%	16%	17%	19%	20%	21%	22%
utility_pv	8%	9%	10%	10%	10%	11%	11%	11%	11%	11%	11%	12%	12%	13%	13%	13%	12%	12%	11%	11%
btm_pv	7%	8%	8%	8%	7%	8%	8%	8%	9%	9%	10%	10%	10%	11%	11%	11%	10%	10%	9%	9%
4hr_batteries	92%	84%	75%	69%	22%	21%	20%	19%	18%	17%	17%	17%	17%	17%	17%	17%	17%	17%	16%	16%
8hr_batteries	97%	92%	87%	63%	39%	36%	32%	29%	25%	22%	24%	25%	27%	28%	30%	30%	31%	31%	32%	32%
12hr_batteries	94%	92%	91%	69%	47%	42%	37%	32%	27%	22%	24%	25%	27%	28%	30%	30%	31%	31%	32%	32%
24hr_batteries	96%	96%	92%	74%	56%	50%	44%	37%	31%	25%	27%	29%	30%	32%	34%	34%	34%	34%	34%	35%
100hr_batteries	99%	99%	98%	86%	74%	69%	64%	58%	53%	48%	49%	50%	51%	52%	53%	53%	52%	52%	51%	51%
pumped_storage	90%	87%	85%	66%	48%	43%	37%	32%	27%	22%	24%	25%	27%	28%	30%	30%	31%	31%	32%	32%
demand_response	94%	85%	76%	59%	42%	36%	30%	24%	18%	12%	12%	11%	11%	11%	11%	10%	10%	10%	9%	9%
hydro	69%	66%	63%	57%	50%	48%	46%	44%	43%	41%	40%	39%	39%	38%	37%	36%	36%	35%	35%	34%
small_hydro	42%	39%	36%	33%	30%	28%	26%	24%	22%	21%	21%	21%	21%	21%	21%	20%	20%	20%	19%	19%
geothermal	91%	91%	92%	89%	87%	87%	87%	87%	87%	87%	87%	88%	88%	88%	89%	89%	89%	89%	90%	
biomass_wood	100%	99%	99%	99%	99%	99%	99%	98%	98%	98%	98%	98%	99%	99%	99%	99%	98%	98%	98%	98%
biogas	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
nuclear	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
gas_cc	86%	85%	85%	83%	82%	82%	82%	83%	83%	83%	84%	85%	86%	87%	88%	87%	87%	86%	85%	84%
gas_ct	69%	69%	69%	65%	62%	62%	62%	62%	62%	61%	64%	66%	69%	71%	74%	72%	71%	70%	68%	67%
cogen	92%	91%	91%	91%	90%	90%	90%	90%	90%	90%	91%	92%	92%	93%	N/A	N/A	N/A	N/A	N/A	N/A
ice	94%	94%	94%	94%	93%	93%	93%	93%	93%	93%	94%	94%	95%	95%	96%	95%	95%	95%	94%	94%

Contract ELCC (effective MW)

Resource Type	Contract Status	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
hybrid	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
in_state_wind_south	Online	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
in_state_wind_north	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_WY	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_IDWAOR	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_AZNM	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
offshore_wind_north	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
offshore_wind_south	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
utility_pv	Online	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
btm_pv	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4hr_batteries	Online	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8hr_batteries	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12hr_batteries	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24hr_batteries	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100hr_batteries	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pumped_storage	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
demand_response	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
hydro	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
small_hydro	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
geothermal	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
biomass_wood	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
biogas	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
nuclear	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
gas_cc	Online	40	3	3	3	2	2	3	3	3	3	3	3	3	3	-	-	-	-	-	-
gas_ct	Online	3	1	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0
cogen	Online	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ice	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
hybrid	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
in_state_wind_south	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
in_state_wind_north	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_WY	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_IDWAOR	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_AZNM	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
offshore_wind_north	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
offshore_wind_south	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
utility_pv	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
btm_pv	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4hr_batteries	Development	28	25	23	15	7	6	6	6	5	5	-	-	-	-	-	-	-	-	-	-
8hr_batteries	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12hr_batteries	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24hr_batteries	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100hr_batteries	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pumped_storage	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
demand_response	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
hydro	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
small_hydro	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
geothermal	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
biomass_wood	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
biogas	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
nuclear	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
gas_cc	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
gas_ct	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cogen	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ice	Development	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
hybrid	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
in_state_wind_south	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
in_state_wind_north	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_WY	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_IDWAOR	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_AZNM	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
offshore_wind_north	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
offshore_wind_south	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
utility_pv	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
btm_pv	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4hr_batteries	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8hr_batteries	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12hr_batteries	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24hr_batteries	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100hr_batteries	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pumped_storage	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
demand_response	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
hydro	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
small_hydro	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
geothermal	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
biomass_wood	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
biogas	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
nuclear	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
gas_cc	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
gas_ct	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cogen	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ice	Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
hybrid	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
in_state_wind_south	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
in_state_wind_north	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_WY	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_IDWAOR	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_AZNM	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
offshore_wind_north	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
offshore_wind_south	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
utility_pv	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
btm_pv	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4hr_batteries	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8hr_batteries	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12hr_batteries	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24hr_batteries	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100hr_batteries	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pumped_storage	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
demand_response	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
hydro	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
small_hydro	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
geothermal	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
biomass_wood	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
biogas	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
nuclear	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
gas_cc	PlannedExisting	9	64	69	70	43	41	44	47	51	18	25	28	29	31	22	29	35	40	46	51
gas_ct	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cogen	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ice	PlannedExisting	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
hybrid	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
in_state_wind_south	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
in_state_wind_north	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_WY	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_IDWAOR	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_AZNM	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
offshore_wind_north	PlannedNew	-	-	-	-	-	-	-	-	-	12	12	11	11	10	9	9	9	9	9	9
offshore_wind_south	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
utility_pv	PlannedNew	-	-	-	-	26	26	27	27	27	49	51	53	55	57	74	71	69	66	63	61
btm_pv	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4hr_batteries	PlannedNew	-	2	2	1	3	5	5	4	4	4	4	3	3	4	4	2	2	2	2	2
8hr_batteries	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12hr_batteries	PlannedNew	-	-	-	-	-	-	1	1	1	0	0	0	1	1	1	1	1	1	1	1
24hr_batteries	PlannedNew	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1
100hr_batteries	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pumped_storage	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
demand_response	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
hydro	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
small_hydro	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
geothermal	PlannedNew	-	-	-	-	-	3	3	3	3	6	6	6	6	6	6	6	6	6	6	6
biomass_wood	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
biogas	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
nuclear	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
gas_cc	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
gas_ct	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cogen	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ice	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LSE total supply (effective MW)		**93**	**95**	**98**	**89**	**82**	**85**	**88**	**91**	**95**	**98**	**101**	**106**	**109**	**112**	**116**	**119**	**122**	**125**	**128**	**131**

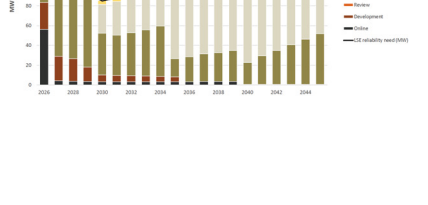
Load and Resource Table by Resource Type

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
LSE reliability need (MW)	97	99	102	93	85	89	92	95	99	102	106	110	114	117	121	124	127	130	133	136
ELCC by resource type (effective MW)																				
hybrid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
in_state_wind_south	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
in_state_wind_north	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_WY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_IDWAOR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_AZNM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
offshore_wind_north	-	-	-	-	-	-	-	-	-	12	12	11	11	10	9	9	9	9	9	9
offshore_wind_south	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
utility_pv	1	-	-	-	26	26	27	27	27	49	51	53	55	57	74	71	69	66	63	61
btm_pv	4	4	4	4	4	4	4	5	5	5	5	5	5	6	6	5	5	5	5	5
4hr_batteries	29	28	25	16	10	12	11	10	9	9	8	8	8	8	8	7	7	7	7	7
8hr_batteries	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12hr_batteries	-	-	-	-	-	-	1	1	1	1	0	0	0	1	1	1	1	1	1	1
24hr_batteries	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1
100hr_batteries	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pumped_storage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
demand_response	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
hydro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
small_hydro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
geothermal	-	-	-	-	-	3	3	3	3	6	6	6	6	6	6	6	6	6	6	6
biomass_wood	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
biogas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
nuclear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
gas_cc	50	66	72	72	45	44	46	50	54	21	28	31	32	34	22	29	35	40	46	51
gas_ct	3	1	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0
cogen	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LSE total supply (effective MW)	**97**	**99**	**102**	**94**	**86**	**89**	**93**	**96**	**99**	**103**	**106**	**111**	**114**	**118**	**122**	**124**	**127**	**130**	**133**	**136**
Net capacity position (+ve = excess, -ve = shortfall) (effective MW)	0	0	1	0	1	0	1	0	0	0	0	1	0	1	1	0	0	0	0	0



Load and Resource Table by Contract Status

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
LSE reliability need (MW)	97	99	102	93	85	89	92	95	99	102	106	110	114	117	121	124	127	130	133	136
ELCC by contract status (effective MW)																				
Online	56	4	4	4	3	3	3	3	3	3	3	3	3	3	1	0	0	0	0	0
Development	28	25	23	15	7	6	6	6	5	5	-	-	-	-	-	-	-	-	-	-
Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PlannedExisting	9	64	69	70	43	41	44	47	51	18	25	28	29	31	22	29	35	40	46	51
PlannedNew	-	2	2	1	3	5	5	4	4	4	4	3	3	4	4	2	2	2	2	2
BTM PV	4	4	4	4	4	4	5	5	5	5	5	5	6	6	5	5	5	5	5	5
LSE total supply (effective MW)	**97**	**99**	**102**	**94**	**86**	**89**	**93**	**96**	**99**	**103**	**106**	**111**	**114**	**118**	**122**	**124**	**127**	**130**	**133**	**136**
Net capacity position (+ve = excess, -ve = shortfall) (effective MW)	0.21	0.14	0.68	0.14	0.51	0.20	0.70	0.17	0.37	0.16	0.39	0.96	0.28	0.42	0.70	0.10	0.30	0.35	0.26	0.00



Full Portfolio (Online + In-Development + Review + Planned)

Full Portfolio Supply Inputs: Values should be pasted directly from the Resource Data Template using Excel's "Paste Values" option

Resource	2028	2030	2035	2040	2045	Units	*Type*
Large Hydro	-	-	-	-	-	GWh	GHG-Free
Imported Hydro	-	-	-	-	-	GWh	GHG-Free
Asset Controlling Supplier	-	-	-	-	-	GWh	GHG-Free (Partial)
Nuclear	-	-	-	-	-	GWh	GHG-Free
Biogas	-	-	-	-	-	GWh	RPS Eligible
Biomass	-	-	-	-	-	GWh	RPS Eligible
Geothermal	-	-	36	36	36	GWh	RPS Eligible
Small Hydro	-	-	-	-	-	GWh	RPS Eligible
Wind Resources							
Wind Baseline California	-	-	-	-	-	GWh	RPS Eligible
Wind New PG&E	-	-	-	-	-	GWh	RPS Eligible
Wind New SCE SDG&E	-	-	-	-	-	GWh	RPS Eligible
Wind Pacific Northwest	-	-	-	-	-	GWh	RPS Eligible
Wind Wyoming	-	-	-	-	-	GWh	RPS Eligible
Wind New Mexico	-	-	-	-	-	GWh	RPS Eligible
Wind Offshore Morro Bay	-	-	-	-	-	GWh	RPS Eligible
Wind Offshore Humboldt	-	-	97	97	97	GWh	RPS Eligible
Solar Resources							
Solar Baseline California	39	39	-	-	-	GWh	RPS Eligible
Solar New PG&E	361	952	1,064	1,324	1,324	GWh	RPS Eligible
Solar New SCE SDG&E	-	-	-	-	-	GWh	RPS Eligible
Solar Distributed	-	-	-	-	-	GWh	RPS Eligible
Hybrid							
Hybrid_or_Paired_Solar_and_Battery	-	-	-	-	-	GWh	RPS Eligible
Storage & DR							
Shed DR	-	-	-	-	-	MW	GHG-Free
Pumped Storage	-	-	-	-	-	MW	n/a
Battery Storage	293	341	312	172	121	MWh Energy Capacity	n/a
User-Specified Profiles							
Storage Resource Custom Profile	-	-	-	-	-	MW	n/a
RPS Resource Custom Profile	-	-	-	-	-	GWh	RPS Eligible
GHG-free non-RPS Resource	-	-	-	-	-	GWh	GHG-Free
Coal							
Coal	-	-	-	-	-	GWh	n/a

NOTE: *the below data is provided for troubleshooting purposes only.*

	Bought/Owned					Sold					Net				
	2028	2030	2035	2040	2045	2028	2030	2035	2040	2045	2028	2030	2035	2040	2045
Large Hydro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Imported Hydro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asset Controlling Supplier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biogas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biomass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Geothermal	-	-	36	36	36	-	-	-	-	-	-	-	36	36	36
Small Hydro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind Resources															
Wind Baseline California	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind New PG&E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind New SCE SDG&E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind Pacific Northwest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind Wyoming	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind New Mexico	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind Offshore Morro Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind Offshore Humboldt	-	-	97	97	97	-	-	-	-	-	-	-	97	97	97
Solar Resources															
Solar Baseline California	39	39	-	-	-	-	-	-	-	-	39	39	-	-	-
Solar New PG&E	361	952	1,064	1,324	1,324	-	-	-	-	-	361	952	1,064	1,324	1,324
Solar New SCE SDG&E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solar Distributed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hybrid															
Hybrid_or_Paired_Solar_and_Battery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Storage & DR															
Shed DR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumped Storage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Battery Storage	4	4	4	4	2	-	-	-	-	-	4	4	4	4	2
User-Specified Profiles															
Storage Resource Custom Profile	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPS Resource Custom Profile	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GHG-free non-RPS Resource	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coal															
Coal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Online + In-Development Only

Online and In-Development Portfolio Supply Inputs: Values should be pasted directly from the Resource Data Template using Excel's "Paste Values" option

Resource	2028	2030	2035	2040	2045	Units	*RPS or GHG-Free*
Large Hydro	-	-	-	-	-	GWh	GHG-Free
Imported Hydro	-	-	-	-	-	GWh	GHG-Free
Asset Controlling Supplier	-	-	-	-	-	GWh	GHG-Free (Partial)
Nuclear	-	-	-	-	-	GWh	GHG-Free
Biogas	-	-	-	-	-	GWh	RPS
Biomass	-	-	-	-	-	GWh	RPS
Geothermal	-	-	-	-	-	GWh	RPS
Small Hydro	-	-	-	-	-	GWh	RPS
Wind Resources							
Wind Baseline California	-	-	-	-	-	GWh	RPS
Wind New PG&E	-	-	-	-	-	GWh	RPS
Wind New SCE SDG&E	-	-	-	-	-	GWh	RPS
Wind Pacific Northwest	-	-	-	-	-	GWh	RPS
Wind Wyoming	-	-	-	-	-	GWh	RPS
Wind New Mexico	-	-	-	-	-	GWh	RPS
Wind Offshore Morro Bay	-	-	-	-	-	GWh	RPS
Wind Offshore Humboldt	-	-	-	-	-	GWh	RPS
Solar Resources							
Solar Baseline California	39	39	-	-	-	GWh	RPS
Solar New PG&E	361	361	-	-	-	GWh	RPS
Solar New SCE SDG&E	-	-	-	-	-	GWh	RPS
Solar Distributed	-	-	-	-	-	GWh	RPS
Hybrid/Paired							
Hybrid or Paired Solar and Battery	-	-	-	-	-	GWh	RPS
Storage & DR							
Shed DR	-	-	-	-	-	MW	GHG-Free
Pumped Storage	-	-	-	-	-	MW	n/a
Battery Storage	273	273	124	4	2	MWh Energy Capacity	n/a
User-Specified Profiles							
Storage Resource Custom Profile	-	-	-	-	-	MW	n/a
RPS Resource Custom Profile	-	-	-	-	-	GWh	RPS
GHG-free non-RPS Resource Custom Profile	-	-	-	-	-	GWh	GHG-Free
Coal							
Coal	-	-	-	-	-	GWh	n/a

	2028	2030	2035	2040	2045	2028	2030	2035	2040	2045	2028	2030	2035	2040	2045
Large Hydro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Imported Hydro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asset Controlling Supplier	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nuclear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biogas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biomass	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Geothermal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Small Hydro	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind Resources															
Wind Baseline California	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind New PG&E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind New SCE SDG&E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind Pacific Northwest	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind Wyoming	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind New Mexico	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind Offshore Morro Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind Offshore Humboldt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solar Resources															
Solar Baseline California	39	39	-	-	-	-	-	-	-	-	39	39	-	-	-
Solar New PG&E	361	361	-	-	-	-	-	-	-	-	361	361	-	-	-
Solar New SCE SDG&E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solar Distributed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hybrid/Paired															
Hybrid or Paired Solar and Battery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Storage & DR															
Shed DR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumped Storage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Battery Storage	4	4	4	4	2	-	-	-	-	-	4	4	4	4	2
User-Specified Profiles															
Storage Resource Custom Profile	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPS Resource Custom Profile	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GHG-free non-RPS Resource Custom Profile	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coal															
Coal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CLEAN POWER SYSTEM CALCULATOR

Step 1: Enter portfolio inputs for both portfolios from the Resource Data Template

Full Portfolio Supply Inputs: Values should be pasted directly from the Resource Data Template using Excel's "Paste Values" option

Full Portfolio (Online + In-Development + Review + Planned)

Resource	2028	2030	2035	2040	2045	Units	Type
Large Hydro	-	-	-	-	-	GWh	GHG-Free
Imported Hydro	-	-	-	-	-	GWh	GHG-Free
Asset Controlling Supplier	0	0	0	0	0	GWh	GHG-Free (Partial)
Nuclear	-	-	-	-	-	GWh	GHG-Free
Biogas	-	0	0	-	-	GWh	RPS Eligible
Biomass	-	-	-	-	-	GWh	RPS Eligible
Geothermal	-	-	36	36	36	GWh	RPS Eligible
Small Hydro	-	-	-	-	-	GWh	RPS Eligible
Wind Resources							
Wind Baseline California	-	-	-	-	-	GWh	RPS Eligible
Wind New PG&E	-	-	-	-	-	GWh	RPS Eligible
Wind New SCE SDG&E	-	-	-	-	-	GWh	RPS Eligible
Wind Pacific Northwest	-	-	-	-	-	GWh	RPS Eligible
Wind Wyoming	-	-	-	-	-	GWh	RPS Eligible
Wind New Mexico	-	-	-	-	-	GWh	RPS Eligible
Wind Offshore Morro Bay	-	-	-	-	-	GWh	RPS Eligible
Wind Offshore Humboldt	-	-	97	97	97	GWh	RPS Eligible
Solar Resources							
Solar Baseline California	39	39	-	-	-	GWh	RPS Eligible
Solar New PG&E	361	952	1,064	1,324	1,324	GWh	RPS Eligible
Solar New SCE SDG&E	-	-	-	-	-	GWh	RPS Eligible
Solar Distributed	-	-	-	-	-	GWh	RPS Eligible
Hybrid							
Hybrid_or_Paired_Solar_and_Battery	-	-	-	-	-	GWh	RPS Eligible
Storage & DR							
Shed DR	-	-	-	-	-	MW	GHG-Free
Pumped Storage	-	-	-	-	-	MW	n/a
Battery Storage	293	341	312	172	121	MWh Energy Capacity	n/a
User-Specified Profies							
Storage Resource Custom Profile	-	-	-	-	-	MW	n/a
RPS Resource Custom Profile	-	-	-	-	-	GWh	RPS Eligible
GHG-free non-RPS Resource	-	-	-	-	-	GWh	GHG-Free
Coal							
Coal	-	-	-	-	-	GWh	n/a

Online and In-Development Portfolio Supply Inputs: Values should be pasted directly from the Resource Data Template using Excel's "Paste Val

Online + In-Development Only

Resource	2028	2030	2035	2040	2045	Units	RPS or GHG-Free
Large Hydro	-	-	-	-	-	GWh	GHG-Free
Imported Hydro	-	-	-	-	-	GWh	GHG-Free
Asset Controlling Supplier	0	0	0	0	0	GWh	GHG-Free (Partial)
Nuclear	-	-	-	-	-	GWh	GHG-Free
Biogas	-	-	-	-	-	GWh	RPS
Biomass	-	-	-	-	-	GWh	RPS
Geothermal	-	-	-	-	-	GWh	RPS
Small Hydro	-	-	-	-	-	GWh	RPS
Wind Resources							
Wind Baseline California	-	-	-	-	-	GWh	RPS
Wind New PG&E	-	-	-	-	-	GWh	RPS
Wind New SCE SDG&E	-	-	-	-	-	GWh	RPS
Wind Pacific Northwest	-	-	-	-	-	GWh	RPS
Wind Wyoming	-	-	-	-	-	GWh	RPS
Wind New Mexico	-	-	-	-	-	GWh	RPS
Wind Offshore Morro Bay	-	-	-	-	-	GWh	RPS
Wind Offshore Humboldt	-	-	-	-	-	GWh	RPS
Solar Resources							
Solar Baseline California	39	39	-	-	-	GWh	RPS
Solar New PG&E	361	361	-	-	-	GWh	RPS
Solar New SCE SDG&E	-	-	-	-	-	GWh	RPS
Solar Distributed	-	-	-	-	-	GWh	RPS
Hybrid/Paired							
Hybrid or Paired Solar and Battery	-	-	-	-	-	GWh	RPS
Storage & DR							
Shed DR	-	-	-	-	-	MW	GHG-Free
Pumped Storage	-	-	-	-	-	MW	n/a
Battery Storage	273	273	124	4	2	MWh Energy Capacity	n/a
User-Specified Profiles							
Storage Resource Custom Profile	-	-	-	-	-	MW	n/a
RPS Resource Custom Profile	-	-	-	-	-	GWh	RPS
GHG-free non-RPS Resource Custom Profile	-	-	-	-	-	GWh	GHG-Free
Coal							
Coal	-	-	-	-	-	GWh	n/a

Step 2: Select a portfolio to run view the results

Select a portfolio to run:	Full Portfolio (Online + In-Development + Review + Planned)

Supply Inputs: Values should be pasted directly from the Resource Data Template using Excel's "Paste Values" option

Resource	2028	2030	2035	2040	2045	Units	RPS or GHG-Free
Large Hydro	-	-	-	-	-	GWh	GHG-Free
Imported Hydro	-	-	-	-	-	GWh	GHG-Free
Asset Controlling Supplier	-	-	-	-	-	GWh	GHG-Free (Partial)
Nuclear	-	-	-	-	-	GWh	GHG-Free
Biogas	-	-	-	-	-	GWh	RPS
Biomass	-	-	-	-	-	GWh	RPS
Geothermal	-	-	*36*	*36*	*36*	GWh	RPS
Small Hydro	-	-	-	-	-	GWh	RPS
Wind Resources							
Wind Baseline California	-	-	-	-	-	GWh	RPS
Wind New PG&E	-	-	-	-	-	GWh	RPS
Wind New SCE SDG&E	-	-	-	-	-	GWh	RPS
Wind Pacific Northwest	-	-	-	-	-	GWh	RPS
Wind Wyoming	-	-	-	-	-	GWh	RPS
Wind New Mexico	-	-	-	-	-	GWh	RPS
Wind Offshore Morro Bay	-	-	-	-	-	GWh	RPS
Wind Offshore Humboldt	-	-	*97*	*97*	*97*	GWh	RPS
Solar Resources							
Solar Baseline California	*39*	*39*	-	-	-	GWh	RPS
Solar New PG&E	*361*	*952*	*1,064*	*1,324*	*1,324*	GWh	RPS
Solar New SCE SDG&E	-	-	-	-	-	GWh	RPS
Solar Distributed	-	-	-	-	-	GWh	RPS
Hybrid/Paired							
Hybrid or Paired Solar and Battery	-	-	-	-	-	GWh	RPS
Storage & DR							
Shed DR	-	-	-	-	-	MW	GHG-Free
Pumped Storage	-	-	-	-	-	MW	n/a
Battery Storage	*293*	*341*	*312*	*172*	*121*	MWh Energy Capacity	n/a
User-Specified Profiles							
Storage Resource Custom Profile	-	-	-	-	-	MW Power Capacity	n/a
RPS Resource Custom Profile	-	-	-	-	-	GWh	RPS
GHG-free non-RPS Resource Custom Profile	-	-	-	-	-	GWh	GHG-Free
Coal							
Coal	-	-	-	-	-	GWh	n/a

Calculated Share of IFM CHP - do not edit

IFM CHP	*23*	*19*	*16*	-	-	GWh	n/a

Checks	2028	2030	2035	2040	2045
No negative supply inputs	*TRUE*	*TRUE*	*TRUE*	*TRUE*	*TRUE*
Storage Resource Custom Profile does not produce power on a net basis	*TRUE*	*TRUE*	*TRUE*	*TRUE*	*TRUE*
Storage Resource Custom Profile has values between -1 and 1	*TRUE*	*TRUE*	*TRUE*	*TRUE*	*TRUE*
Sum of hourly RPS Resource Custom Profile equals annual input	*TRUE*	*TRUE*	*TRUE*	*TRUE*	*TRUE*
Sum of hourly GHG-free non-RPS Resource Custom Profile equals annual input	*TRUE*	*TRUE*	*TRUE*	*TRUE*	*TRUE*

Demand Inputs

		Units	2028	2030	2035	2040	2045
Managed Retail Sales Forecast (assigned to LSE)		GWh	631	631	631	631	631
Behind-The-Meter Photovoltaics (BTM PV) Forecast (assigned to LSE)		GWh	83	82	78	73	73
Retail Sales without BTM PV reduction		GWh	715	713	709	705	705
Behind-The-Meter Photovoltaics (BTM PV) grossed up for T&D losses		GWh	90	88	84	79	79
Calculated share of CAISO system demand (% of Retail Sales)		%	0%	0%	0%	0%	0%

Commercial & Industrial Fraction of Baseline Demand	*Use Custom?*	*Units*	2028	2030	2035	2040	2045
Default C&I Percentage of Total	No	%	51%	52%	55%	55%	55%
Custom C&I Percentage of Total (OPTIONAL)		%					

Calculated Demand, based on sales-weighted share of total from IEPR		*Units*	2028	2030	2035	2040	2045
Baseline net energy for load		GWh	695	639	547	506	483
Electric Vehicle Load		GWh	44	69	123	155	174
Building Electrification		GWh	20	35	61	66	70
Energy Efficiency		GWh	(18)	(21)	(22)	(19)	(19)
Data Center Load		GWh	33	50	57	54	51
Climate Change Impact Load Increases		GWh	2	3	4	5	6
Climate Change Impact Load Decreases		GWh	(1)	(1)	(1)	(1)	(1)
Behind-The-Meter Photovoltaics (BTM PV)		GWh	(90)	(88)	(84)	(79)	(79)
Behind-The-Meter Storage Losses (BTM Storage)		GWh	1	1	1	1	1
Behind-The-Meter Storage Capacity (BTM Storage)		Nameplate MW	11	12	13	13	14
Custom Demand Inputs (OPTIONAL; overwrites sales-weighted IEPR values from Calculated Demand sec	*Use Custom?*	*Units*	2028	2030	2035	2040	2045
Baseline net energy for load	No	GWh					
Electric Vehicle Load	No	GWh					
Building Electrification	No	GWh					
Energy Efficiency	No	GWh					
Data Center Load	No	GWh					
Climate Change Impact Load Increases	No	GWh					
Climate Change Impact Load Decreases	No	GWh					
Behind-The-Meter Photovoltaics (BTM PV)	No	GWh					
Behind-The-Meter Storage Capacity (BTM Storage)	No	Nameplate MW					
Behind-The-Meter Storage Losses (BTM Storage)		GWh					
Active Demand Inputs	*Source*	*Units*	2028	2030	2035	2040	2045
Baseline net energy for load	IEPR	GWh	695	639	547	506	483
Non-commercial/industrial portion of baseline (included in baseline total)	IEPR	GWh	341	304	249	229	219
Commercial/industrial portion of baseline (included in baseline total)	IEPR	GWh	354	335	299	277	264
Electric Vehicle Load	IEPR	GWh	44	69	123	155	174
Building Electrification	IEPR	GWh	20	35	61	66	70
Energy Efficiency	IEPR	GWh	(18)	(21)	(22)	(19)	(19)
Data Center Load	IEPR	GWh	33	50	57	54	51
Climate Change Impact Load Increases	IEPR	GWh	2	3	4	5	6
Climate Change Impact Load Decreases	IEPR	GWh	(1)	(1)	(1)	(1)	(1)
Behind-The-Meter Photovoltaics (BTM PV)	IEPR	GWh	(90)	(88)	(84)	(79)	(79)
Behind-The-Meter Storage Losses (BTM Storage)	IEPR	GWh	1	1	1	1	1

Calculated demand at utility-scale generator bus-bar		GWh	687	687	687	687	687
Total Load (demand at utility-scale generator bus-bar + BTM PV)		GWh	777	775	771	766	766

IFM CHP Calculation			2028	2030	2035	2040	2045
CASIO-wide In front of the meter (IFM) Combined Heat and Power (CHP) generation		GWh	8347	7644	7705	0	0
LSE share of IFM CHP		GWh	23	19	16	-	-

Checks	2028	2030	2035	2040	2045
Correct sign (positive/negative) on demand inputs	TRUE	TRUE	TRUE	TRUE	TRUE
If custom C&I percentage is used, positive percentage is used	TRUE	TRUE	TRUE	TRUE	TRUE

	2030	2035	2040	2045	2030	2035	2040	2045	2030	2035	2040	2045	2030	2035	2040	2045
LSEs within Utility Territory	**2030 GHG Emissions Benchmark (MMT)**	**2035 GHG Emissions Benchmark (MMT)**	**2040 GHG Emissions Benchmark (MMT)**	**2045 GHG Emissions Benchmark (MMT)**	**2030 DA Sales (GWh)**	**2035 DA Sales (GWh)**	**2040 DA Sales (GWh)**	**2045 DA Sales (GWh)**	**ESP 2030 sales within each IOU territory (GWh)**	**ESP 2035 sales within each IOU territory (GWh)**	**ESP 2040 sales within each IOU territory (GWh)**	**ESP 2045 sales within each IOU territory (GWh)**	**ESP 2030 benchmark for each IOU territory (MMT)**	**ESP 2035 benchmark for each IOU territory (MMT)**	**ESP 2040 benchmark for each IOU territory (MMT)**	**ESP 2045 benchmark for each IOU territory (MMT)**
Pacific Gas & Electric Company (Direct Access)	*0.9185*	*0.5888*	*0.4447*	*0.2156*	*11,393*	*11,393*	*11,393*	*11,393*	319	319	319	319	*0.026*	*0.016*	*0.012*	*0.006*
Southern California Edison Company (Direct Access)	*1.1123*	*1.1123*	*1.1123*	*1.1123*	*12,230*	*12,230*	*12,230*	*12,230*	312	312	312	312	*0.028*	*0.028*	*0.028*	*0.028*
San Diego Gas & Electric Company (Direct Access)	*0.4392*	*0.4392*	*0.4392*	*0.4392*	*3,942*	*3,942*	*3,942*	*3,942*	0	0	0	0	*0.000*	*0.000*	*0.000*	*0.000*
TOTAL									*631*	*631*	*631*	*631*	*0.054*	*0.045*	*0.041*	*0.034*

Each ESP is required to calculate its own confidential GHG Emissions Benchmark based on its 2030, 2035, 2040, and 2045 load share within the host IOU's territory. For any ESP that serves load in more than one IOU service territory, that ESP should add up the separate GHG Emissions Benchmarks calculated based on its share of direct access load for each IOU service territory to result in a single benchmark.When filling out Columns F through 2045 -- "ESP 20## load within each IOU territory" -- each ESP should utilize the confidential load forecast communicated to it by Energy Division staff.

Emissions Summary

Emissions Total	Unit	2028	2030	2035	2040	2045	Notes
CO_2	MMt/yr	0.139	0.057	0.039	0.033	0.033	Includes both in-CAISO and import emissions
PM2.5	tonnes/yr	8	3	3	2	2	Only In-CAISO emissions
SO_2	tonnes/yr	1	0	0	0	0	Only In-CAISO emissions
NOx	tonnes/yr	10	3	3	(0)	3	Only In-CAISO emissions

Emissions by resource type

CO_2	Unit	2028	2030	2035	2040	2045	Notes
Coal	MMt/yr	-	-	-	-	-	Included in GHG emissions total
IPM CHP	MMt/yr	0.01	0.01	0.01	-	-	
Biogas	MMt/yr	-	-	-	-	-	
Biomass	MMt/yr	-	-	-	-	-	
System Power Unadjusted	MMt/yr	0.13	0.05	0.04	0.04	0.05	Includes emissions from in-CAISO dispatchable gas and unspecified imports
System Power	MMt/yr	0.12	0.04	0.03	0.03	0.03	Includes emissions from in-CAISO dispatchable gas and unspecified imports. After CSP - RESOLVE adjustment.
Asset Controlling Supplier	MMt/yr	-	-	-	-	-	
Total	**MMt/yr**	0.13	0.05	0.04	0.03	0.03	Includes both in-CAISO and import emissions
Average emissions intensity	tCO2/MWh	0.206	0.083	0.062	0.049	0.051	Emissions per MWh of sales
Oversupply Emissions Credits	MMt/yr	0.00	0.00	0.04	0.06	0.04	When hourly supply exceeds hourly load and system power is on the margin, LSE recieves credit at the system power emissions rate. Impact included in Total.

PM2.5	Unit	2028	2030	2035	2040	2045	Notes
Coal	tonnes/yr	-	-	-	-	-	Information only, not included in total
IPM CHP	tonnes/yr	1	1	1	-	-	
Biogas	tonnes/yr	-	-	-	-	-	
Biomass	tonnes/yr	-	-	-	-	-	
System Power	tonnes/yr	7	3	2	2	1	In-CAISO emissions only - unspecified import emissions excluded
Total	**tonnes/yr**	8	3	3	2	2	Only In-CAISO emissions
Average emissions intensity	kg/MWh	0.0127	0.0051	0.0043	0.0033	0.0042	Emissions per MWh of sales

SO_2	Unit	2028	2030	2035	2040	2045	Notes
Coal	tonnes/yr	-	-	-	-	-	Information only, not included in total
IPM CHP	tonnes/yr	0	0	0	-	-	
Biogas	tonnes/yr	-	-	-	-	-	
Biomass	tonnes/yr	-	-	-	-	-	
System Power	tonnes/yr	1	0	0	0	0	In-CAISO emissions only - unspecified import emissions excluded
Total	**tonnes/yr**	1	0	0	0	0	Only In-CAISO emissions
Average emissions intensity	kg/MWh	0.0012	0.0005	0.0004	0.0003	0.0004	Emissions per MWh of sales

NOx	Unit	2028	2030	2035	2040	2045	Notes
Coal	tonnes/yr	-	-	-	-	-	Information only, not included in total
IPM CHP	tonnes/yr	2	2	2	-	-	
Biogas	tonnes/yr	-	-	-	-	-	
Biomass	tonnes/yr	-	-	-	-	-	
System Power	tonnes/yr	8	2	2	(1)	3	In-CAISO emissions only - unspecified import emissions excluded
Total	**tonnes/yr**	10	3	3	(1)	3	Only In-CAISO emissions
Average emissions intensity	kg/MWh	0.0166	0.0054	0.0048	(0.0013)	0.0047	Emissions per MWh of sales

Supply and Demand Balance

Demand Summary	Unit	2028	2030	2035	2040	2045	
Managed Retail Sales Forecast (assigned to LSE)	GWh	631	631	631	631	631	Sales forecast (before T&D losses increase demand at generator bus-bar)
Baseline Demand, non-C&I	GWh	341	304	249	229	219	
Baseline Demand, C&I	GWh	164	135	299	277	264	
Electric Vehicle Load	GWh	44	69	123	155	176	
Building Electrification	GWh	20	35	61	66	70	
Energy Efficiency	GWh	(18)	(21)	(23)	(18)	(18)	Summary of active inputs from Demand Inputs tab
Data Center Load	GWh	33	50	57	54	51	
Climate Change Impact	GWh	2	3	4	5	6	
BTM PV	GWh	(90)	(88)	(84)	(79)	(79)	
Demand (at generator bus-bar)	GWh	687	687	687	687	687	

Supply Summary	Unit	2028	2030	2035	2040	2045	Notes
Large Hydro	GWh	-	-	-	-	-	
Imported Hydro	GWh	-	-	-	-	-	
Asset Controlling Supplier	GWh	-	-	-	-	-	
Nuclear	GWh	-	-	-	-	-	
Biogas	GWh	-	-	-	-	-	
Biomass	GWh	-	-	-	-	-	
Geothermal	GWh	-	-	86	86	86	
Small Hydro	GWh	-	-	-	-	-	
Wind CAISO	GWh	-	-	-	-	-	
Wind Out Of State	GWh	-	-	-	-	-	Wind and solar values represent production potential (pre-curtailment).
Wind Offshore	GWh	-	-	97	97	97	Curtailment is calculated at the portfolio level (as opposed to the resource level), and is included as a line item below
Solar Utility Scale	GWh	405	991	1,064	1,124	1,124	
Solar Distributed	GWh	-	-	-	-	-	Distributed solar generation that is in front of the meter
Hybrid or Paired Solar and Battery	GWh	-	-	-	-	-	
Shed DR	GWh	-	-	-	-	-	
Pumped Storage	GWh	-	-	-	-	-	Negative because storage losses represent net negative energy production
Battery Storage	GWh	(45)	(67)	(68)	(9)	(8)	Negative because storage losses represent net negative energy production
Storage Resource Custom Profile	GWh	-	-	-	-	-	Negative because storage losses represent net negative energy production
RPS Resource Custom Profile	GWh	-	-	-	-	-	
GHG-free non-RPS Resource Custom Profile	GWh	-	-	-	-	-	
Coal	GWh	-	-	-	-	-	
IPM CHP	GWh	23	19	16	-	-	

Supply Demand Balance Summary	Unit	2028	2030	2035	2040	2045	Notes
LSE Supply, before curtailment and exports	GWh	605	1,102	1,337	1,468	1,457	Represents LSE's net power production, before curtailment and exports reduce the power available to dispace CAISO dispatchable gas/unspecified imports
Net Purchases, before curtailment and exports	GWh	278	(306)	(510)	(761)	(764)	The net system power that the LSE would consume (positive = consume from system, negative = supply to system) if dispatchable gas/unspecified imports were on the margin at the system level in all hours. For information only - not directly used to calculate LSE emissions.
Curtailment	GWh	(36)	(415)	(578)	(839)	(880)	Power that, if supplied to the system, would not displace CAISO dispatchable gas and/or unspecified import emissions and would instead be curtailed
Exports	GWh	(13)	(14)	(14)	(14)	(13)	Power that, if supplied to the system, would not displace CAISO dispatchable gas and/or unspecified import emissions and would instead be exported
Zero Emissions Power From System	GWh	4	1	1	1	1	Power supplied to meet LSE demand that does not incur emissions. Oversupply conditions at the system level result in surplus zero emissions power in some hours.
Net System Power (incurs emissions)	**GWh**	322	122	81	91	141	Power supplied by the system (or sent back to the system from if negative) in hours when CAISO dispatchable gas and/or unspecified imports are on the margin. The net system power produced or consumed is multiplied by the system power emissions rate in each hour.
Check: Supply equals demand		TRUE	TRUE	TRUE	TRUE	TRUE	

Renewable and GHG-Free %	Unit	2028	2030	2035	2040	2045	Notes
Retail Sales	GWh	631	631	631	631	631	
RPS-Eligible Delivered Renewable	GWh	364	576	619	618	567	Represents delivered renewable energy. Not directly comparable to production from an LSE's RPS-eligible resources.
GHG-free	GWh	368	577	620	619	568	A small fraction of Asset Controlling Supplier imports are not counted as GHG-free
RPS-Eligible Delivered Renewable Percentage	% of retail sales	58%	91%	98%	98%	90%	Represents delivered renewable energy. Not directly comparable to production from an LSE's RPS-eligible resources.
GHG-free Percentage	% of retail sales	58%	91%	98%	98%	90%	