BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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Order Instituting Rulemaking to Continue Oversight of Electric Integrated Resource Planning and Procurement Processes.	Rulemaking 25-06-019

2026 INTEGRATED RESOURCE PLAN OF 3 PHASES RENEWABLES INC.

(PUBLIC VERSION)

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August 10, 2026

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

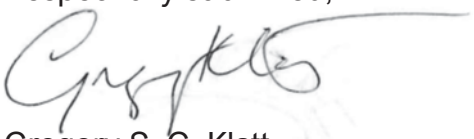
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In accordance with the schedule set forth in the January 26, 2026 *Administrative Law Judge's Ruling Setting Requirements for Individual Integrated Resource Pans Due June 1, 2026* and March 9, 2026 email ruling extending the filing due date to August 10, 2026, 3 Phases Renewables Inc. 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,



Gregory S. G. Klatt
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Attorneys for
3 PHASES RENEWABLES INC.

August 10, 2026

VERIFICATION

I, Michael Mazur, am authorized to make this verification on behalf of 3 Phases Renewables Inc. I have read the foregoing ***2026 Integrated Resource Plan of 3 Phases Renewables Inc.*** 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.



Michael Mazur
Principal
3 Phases Renewables Inc.

NARRATIVE

Standard LSE Plan

3 PHASES RENEWABLES INC.

2026 INTEGRATED RESOURCE PLAN

August 10, 2026

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I. Executive Summary

3 Phases Renewables Inc. (3PR) 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 3PR's complete Standard LSE Plan.

3PR 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 3PR's allocated share of Cost Allocation Mechanism (CAM) and Modified CAM resources), planned Mid-Term Reliability (MTR) resources, generic new resources (primarily new solar with deliveries beginning in 2030, multi-duration battery storage, limited geothermal, and 3PR's allocated share of AB 1373 offshore wind), 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 0.0078 MMT—well below 3PR's assigned benchmark of approximately 0.0122 MMT—while maintaining a non-negative net capacity position (effective MW) in every year from 2026 through 2045.

3PR'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, incorporates 3PR's AB 1373 allocation and its allocated share of CAM/Modified CAM resources as planning assumptions, avoids new natural-gas generation or long-term re-contracting of existing gas for five years or more, and positions 3PR to meet its remaining MTR and any future IRP procurement obligations with minimal reliance on system power.

The remainder of this Narrative describes 3PR's study design and methodology (Section II), the Preferred Conforming Portfolio and supporting quantitative results (Section III), 3PR's Action Plan for implementing the portfolio (Section IV), and lessons learned (Section V).

II. Study Design

3PR 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 3PR's individually calculated 2045 GHG Emissions Benchmark. From that fixed baseline, 3PR 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, limited new geothermal, and 3PR's allocated share of AB 1373 offshore wind; 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 well below 3PR's assigned benchmark.

No Alternative Portfolios were developed. 3PR 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 3PR'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 3PR's remaining MTR and Long-Lead-Time (LLT) procurement obligations (including the AB 1373 allocation), and
- remains simple and implementable for a relatively small electric service provider whose load is subject to customer turnover.

b. Methodology

i. Modeling Tool(s)

3PR 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 3PR 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

3PR 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 needs first with already-identified or generic new solar, limited clean-firm geothermal, and the AB 1373 offshore-wind allocation, 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 (under 5 %).
6. Transfer the final supply data into the CSP Calculator and confirm that 2045 emissions remain well 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

3PR 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 and the AB 1373 storage allocations. 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

3PR developed and submits one Conforming Portfolio for the 8 MMT by 2045 GHG target. That portfolio is also 3PR'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 3PR's allocated share of Cost Allocation Mechanism (CAM) and Modified CAM resources (approximately 2.2 MW effective capacity in total). The CAM/Modified CAM resources are included as Online resources on the basis of the staff-provided list and 3PR's load-share percentage; they are CapacityOnly and do not affect energy or GHG calculations.
- Resources under contract that are in advanced development.

- 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 3PR's allocated share of AB 1373 offshore wind.
- 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 3PR's reliability procurement requirement in every year from 2026 through 2045. The CSP Calculator confirms that 2045 greenhouse-gas emissions are well below 3PR's assigned benchmark.

3PR 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

3PR's Preferred Conforming Portfolio is the single 8 MMT by 2045 Conforming Portfolio described in Section III.a. 3PR selected this portfolio because it simultaneously satisfies four core requirements:

- It meets or beats 3PR's assigned 8 MMT by 2045 GHG Emissions Benchmark with substantial headroom (CSP result approximately 0.0078 MMT versus benchmark of approximately 0.0122 MMT; intermediate binding years likewise under their respective benchmarks: 2030 – 0.0300 vs. ~0.0365; 2035 – 0.0206 vs. ~0.0251; 2040 – 0.0189 vs. ~0.0201).
- It maintains a non-negative net capacity position (effective MW) in every study year.
- It supports 3PR'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, limited clean-firm geothermal, 3PR's obligations under D.26-02-057, and 3PR's allocated shares of AB 1373 resources.
- 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 + AB 1373 OSW) was sized and frozen, a pure capacity layer of Planned Existing gas RA and multi-duration battery storage 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)

3PR'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 3PR'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 3PR'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) 3PR's existing RPS portfolio already satisfies the long-term contracting requirement through the current and following 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, limited clean-firm geothermal, and the AB 1373 offshore-wind allocation, thereby mitigating 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 3PR 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

3PR's 2022 25 MMT Preferred Conforming Portfolio relied more heavily on planned new wind, geothermal, and hybrid resources for incremental Portfolio Content Category 1 energy. The 2026 portfolio shifts the incremental mix toward in-CAISO solar (stepped volumes beginning in 2030) paired with multi-duration battery storage, limited geothermal, and 3PR's allocated shares of AB 1373 offshore wind. 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, (3) the resource types selected in the Commission's updated 2025 Inputs & Assumptions and 2025-2026 TPP modeling, and (4) the availability of AB 1373 central-procurement allocations as a planning assumption. 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

3PR 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 3PR'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	0.1033	—
2030	0.0300	~0.0365
2035	0.0173	~0.0251
2040	0.0154	~0.0201
2045	0.0078	~0.0122

The 2045 result of approximately 0.0078 MMT is substantially below 3PR's assigned 8 MMT by 2045 GHG Emissions Benchmark. These results confirm that the Preferred Conforming Portfolio is not only conforming but has measurable headroom.

d. Local Air Pollutant Minimization and Disadvantaged Communities

i. Local Air Pollutants

3PR'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	8.39	2.57	2.03	0.08	0.73
PM2.5	6.42	1.84	1.15	1.04	0.63
SO_2	0.61	0.17	0.11	0.10	0.06

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, 3PR does not have a defined geographic service territory and therefore does not "serve" disadvantaged communities (DACs) in the sense used in the Narrative Template. 3PR 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 3PR'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, 3PR is not required to provide census-tract-level mapping of those customers or to operate DAC-specific retail programs.

3PR'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 3PR may contract in the future to meet RPS, MTR, or residual IRP needs. In such cases, 3PR will require the project developer to engage local community and environmental-justice stakeholders and will designate internal or external resources to coordinate that outreach. 3PR 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, 3PR's primary commercial objective is to offer clean electricity supply and 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 3PR charges its customers remain:

- the cost of energy procured in the CAISO day-ahead and real-time markets (or under relatively 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.23-02-040, and related decisions (including the AB 1373 allocation).

In developing the Preferred Conforming Portfolio, 3PR 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 was sized only to the residual, and the subsequent capacity layer was built year-by-year solely to keep the net capacity position non-negative; no excess 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 measurable headroom) and the reliability constraint in every study year.

Pending the Commission's adoption of a Reliability and Clean Power Procurement Program (RCPPP), 3PR expects to continue meeting the bulk of its residual energy needs through a combination of CAISO market purchases and short-term bilateral contracts. Likewise, 3PR 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 3PR'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, 3PR is not required to produce revenue-requirement or system-average-rate tables. The qualitative conclusion the Commission should infer from 3PR'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 3PR's commercial and industrial customers.

f. System Reliability Analysis

3PR 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	0.63
2027	0.74
2028	0.44
2029	0.53
2030	0.66
2031	0.77
2032	0.44
2033	0.58
2034	0.88
2035	0.09
2036	0.68
2037	0.57
2038	0.04
2039	0.69
2040	0.25
2041	0.45
2042	0.26
2043	0.25
2044	0.52
2045	0.28

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.[1]

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)	**85**	**87**	**89**	**83**	**76**	**79**	**82**	**85**	**88**	**91**	**94**	**97**	**100**	**104**	**107**	**109**	**112**	**115**	**117**	**120**
ELCC by contract status (effective MW)																				
Online	61	12	12	10	8	2	2	1	1	1	1	1	1	1	1	0	0	0	0	0
Development	-	21	19	12	6	5	5	5	4	4	4	-	-	-	-	-	-	-	-	-
Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PlannedExisting	21	43	14	31	20	27	30	35	41	34	37	45	47	51	43	47	51	55	66	51
PlannedNew	-	8	41	27	40	42	42	41	39	48	49	48	48	49	59	58	57	56	48	65
BTM PV	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	3	3
LSE total supply (effective MW)	**85**	**88**	**89**	**83**	**77**	**80**	**82**	**86**	**89**	**91**	**95**	**98**	**101**	**104**	**107**	**110**	**112**	**115**	**117**	**120**
Net capacity position (+ve = excess, -ve	**0.63**	**0.74**	**0.44**	**0.53**	**0.66**	**0.77**	**0.44**	**0.58**	**0.88**	**0.09**	**0.68**	**0.57**	**0.04**	**0.69**	**0.25**	**0.45**	**0.26**	**0.25**	**0.42**	**0.28**

g. Existing Resource Planning

3PR's Preferred Conforming Portfolio includes existing resources in three categories: (1) resources procured to meet 3PR's near-term RA requirements; (2) Online contracts already executed for solar energy and limited storage capacity, together with 3PR's allocated share of Cost Allocation

[1] The Load & Resource table and supporting chart generated by the RDT (by contract status) are set forth in the Reliability–Planning tab of the accompanying RDT file.

Mechanism (CAM) and Modified CAM resources (approximately 2.2 MW effective capacity in total, included as Online resources on the basis of the staff-provided list and 3PR's load-share percentage); and (3) Planned Existing short-term gas RA capacity layered solely to close residual reliability gaps after the clean-energy layer is accounted for.

3PR 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 (both existing and "new") under long-term contracts, Planned New solar (beginning 2030), Planned New geothermal, and 3PR's allocated share of AB 1373 offshore wind. This approach directly addresses the Commission's prior concern (noted in the 2021 Preferred System Plan) that aggregated LSE portfolios had over-relied on existing resources.

3PR relies on a combination of Planned New, Online (including the CAM/Modified CAM allocation), and Planned Existing resources to meet its reliability need. The Online resources consist primarily of existing solar contracts, a limited amount of "new" battery storage, and the small CAM/Modified CAM share. The Planned Existing resources consist almost entirely of generic existing combined-cycle natural-gas capacity procured on a year-by-year basis solely to close residual reliability gaps after the clean-energy and storage layers have been applied.

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 3PR's reliability procurement requirement (RPR): 3PR's RPR rises from approximately 76–90 MW in the early 2030s to approximately 120 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, 4-hour battery, offshore-wind, and geothermal resources in the portfolio contribute only approximately 5 MW of net effective capacity under the ELCC values used in the Reliability–Planning tab. Solar ELCCs decline significantly with rising system penetration; 4-hour 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, 120 MW reliability need in 2045 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.

3PR 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 3PR 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. 3PR'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, 3PR 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 3PR'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

3PR included limited quantities of longer-duration battery storage (including 8-hour lithium-ion) in the Preferred Conforming Portfolio solely to satisfy the LLT component of its MTR obligations and to provide higher-ELCC capacity in selected 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 residual gas-RA layers are accounted for.

3PR 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

3PR included a limited quantity of new geothermal capacity in the Preferred Conforming Portfolio to meet the clean-firm component of its MTR/LLT obligations, together with its allocated share of AB 1373 offshore wind (which provides long-duration, high-capacity-factor attributes).

3PR does not plan additional clean-firm procurement beyond the amounts shown in the RDT. The Planned New geothermal resource 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 targeted and is driven by the same MTR compliance rationale, updated for the current obligation quantities, the 2045 planning horizon, and the availability of the AB 1373 allocation as a planning assumption.

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

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, limited geothermal, and the AB 1373 offshore-wind allocation. This is a deliberate change from the 2022 Preferred Conforming Portfolio, which relied more heavily on New Mexico 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 and AB 1373 resources for residual capacity and clean firm attributes.

l. Offshore Wind Planning

3PR has included its allocated share of AB 1373 offshore-wind resources in the Preferred Conforming Portfolio as a planning assumption consistent with D.24-08-064 and the staff allocation methodology. The volumes are those assigned to 3PR under the capacity and energy allocation methods described in the AB 1373 Resource Allocation Methodology document.

3PR does not plan additional offshore-wind procurement beyond the AB 1373 allocation 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 3PR's final allocation differs from the planning assumption used here, 3PR will adjust its residual-need calculations and contract positions accordingly in a future filing or compliance report. Relative to the 2022 portfolio (which contained no offshore wind), this is a new element driven by the intervening AB 1373 central-procurement framework.

m. Transmission Planning

3PR'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 (including the solar tranches).

Because the volumes of new resources are modest and are of the types already selected in the Commission's own TPP portfolio, 3PR 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. 3PR 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; 3PR 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

3PR's Preferred Conforming Portfolio does not require major deviations from its current procurement practices. Pending the adoption of the RCPPP, 3PR 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. 3PR 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 3PR'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. 3PR mitigates these risks by maintaining procurement flexibility (short-term RA and market energy), 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:

3PR 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. 3PR has already conducted prior MTR solicitations on this basis and expects to continue the same approach.

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

3PR 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

3PR has no current plans to procure additional renewable or zero-carbon resources beyond residual need.

iv. Other energy storage not described above

3PR has no current plans to procure additional energy storage beyond residual need and MTR/LLT compliance.

v. Other demand response not described above

3PR has no current plans to procure demand response products.

vi. Other energy efficiency not described above

3PR has no current plans to procure energy efficiency products.

vii. Other distributed generation not described above

3PR 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)

3PR 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)

3PR 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

3PR has included its AB 1373 central-procurement resources in its Preferred Conforming Portfolio.

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, 3PR does not operate DAC-specific retail programs. A material share of 3PR's commercial and industrial load is associated with facilities located in or near DACs. 3PR's Preferred Conforming Portfolio contains no new emitting generation known to be located in DACs.

For any future renewable, storage, or hybrid projects that 3PR may contract and that are proposed to be sited in or near DACs, 3PR 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 (as supplemented by Advice 67-ESP).

c. LSEs' Tribal Customers

3PR currently has no tribal governmental or tribal-enterprise customers. 3PR has not conducted IRP-specific outreach to tribes. Should 3PR 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

3PR 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

3PR 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

3PR does not request any specific direction from the Commission at this time. 3PR will implement the Preferred Conforming Portfolio through ordinary commercial procurement. 3PR 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

3PR 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. 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 3PR 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. **The arithmetic of rising RPR + declining clean-resource ELCCs produces higher residual gas volumes in the outer years.**

   As documented in Section III.g, the higher Planned Existing gas numbers in the later years of the planning horizon are the direct arithmetic consequence of a rising reliability procurement requirement combined with the declining capacity value of the resources that deliver the bulk of the portfolio's clean energy. They are not the product of a change in procurement philosophy. Explicit recognition of this dynamic in future filing requirements or staff guidance would reduce the risk of misinterpretation.

4. **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.

5. **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.

6. **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.

3PR 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:	3 Phases Renewables Inc.
Load Serving Entity Abbreviation:	3PR
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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Phone:	(310) 939-1283
Signature:	M Mazur

Backup Contact Information

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LSE Address Line 2:	
LSE City:	El Segundo
LSE State:	California
LSE Zip:	90245

lse_unique_contract_id	resource	alternative_resource_name	contract_status	project_interconnection_position	interconnection_substation	marginal_addition	marginal_addition_to	total_nameplate_capacity	contracted_nameplate_capacity	sep_contracted_mw_nqc
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SDGE_CAM_9	-	NotHybrid							
SDGE_CAM_10	-	NotHybrid							
SDGE_CAM_11	-	NotHybrid							Li
SDGE_CAM_12	-	NotHybrid							Li
3PR_RA_2026_A	[redacted]	NotHybrid							
3PR_RA_2026_B		NotHybrid							
3PR_RA_2026_C		NotHybrid							
3PR_RA_2026_D		NotHybrid							Li
3PR_RA_2026_E		NotHybrid							
3PR_RA_2026_F		NotHybrid							
3PR_RA_2026_G		NotHybrid							Li
3PR50007		NotHybrid						1Axis	
3PR50010		NotHybrid						1Axis	
3PR90007		NotHybrid						1Axis	
3PR_FSB_2023		NotHybrid							Li
3PR_McFadden_2027		NotHybrid							Li
3PR_BESS_2028a		NotHybrid							Li
3PR_BESS_20230_2031_2032		NotHybrid							Li
3PR_LDES_2028_2032		NotHybrid							Li
3PR_CleanFirm_2028		NotHybrid							
3PR_BESS_2028b		NotHybrid							Li
3PR_LDES_12hr_AB1373		NotHybrid							Li
3PR_LDES_MDS_AB1373		NotHybrid							Li
3PR_OSW_AB1373		NotHybrid							
3PR_AB1373_Geothermal		NotHybrid							
3PR_Solar_New_2030		NotHybrid						1Axis	
3PR_Solar_New_2040		NotHybrid						1Axis	
3PR_Solar_New_2045		NotHybrid						1Axis	
3PR_RA_Gas_2026		NotHybrid							
3PR_RA_Gas_2027		NotHybrid							
3PR_RA_Gas_2028		NotHybrid							
3PR_RA_Gas_2029		NotHybrid							
3PR_RA_Gas_2030		NotHybrid							
3PR_RA_Gas_2031		NotHybrid							
3PR_RA_Gas_2032		NotHybrid							
3PR_RA_Gas_2033		NotHybrid							
3PR_RA_Gas_2034		NotHybrid							
3PR_RA_Gas_2035		NotHybrid							
3PR_RA_Gas_2036		NotHybrid							
3PR_RA_Gas_2037		NotHybrid							
3PR_RA_Gas_2038		NotHybrid							
3PR_RA_Gas_2039		NotHybrid							
3PR_RA_Gas_2040		NotHybrid							
3PR_RA_Gas_2041		NotHybrid							
3PR_RA_Gas_2042		NotHybrid							
3PR_RA_Gas_2043		NotHybrid							
3PR_RA_Gas_2044		NotHybrid							
3PR_RA_Gas_2045		NotHybrid							

lse_unique_contract_id	total_storage_depth_mwh	contracted_storage_depth_mwh	viability_cod_reasonableness	viability_technical_feasibility	viability_financing_sitecontrol	resource_mix	d1911016_vamo_ghgfree	buy_sell_own	counterparty	generator_supplier	developer_name
SCE_CAM_1	80	0.031164436					CAM		Southern California Edison		
SCE_CAM_2		0					CAM		Southern California Edison		
SCE_CAM_3		0					CAM		Southern California Edison		
SCE_CAM_4		0					CAM		Southern California Edison		
SCE_CAM_5		0					CAM		Southern California Edison		
SCE_CAM_6		0					CAM		Southern California Edison		
SCE_CAM_7	40	0.015582218					CAM		Southern California Edison		
SCE_CAM_8	40	0.015582218					CAM		Southern California Edison		
SCE_CAM_9		0					CAM		Southern California Edison		
SCE_CAM_10		0					CAM		Southern California Edison		
SCE_CAM_11		0					CAM		Southern California Edison		
SCE_CAM_12		0					CAM		Southern California Edison		
SCE_CAM_13		0					CAM		Southern California Edison		
SCE_CAM_14	401.8	0.156523382					CAM		Southern California Edison		
SCE_CAM_15	400	0.155822182					CAM		Southern California Edison		
SCE_CAM_16	160.133	0.062380684					CAM		Southern California Edison		
SCE_CAM_17	40	0.015582218					CAM		Southern California Edison		
SCE_CAM_18	44	0.01714044					CAM		Southern California Edison		
SCE_CAM_19	40	0.007791109					CAM		Southern California Edison		
SCE_CAM_20		0					CAM		Southern California Edison		
SCE_CAM_21		0					CAM		Southern California Edison		
PGE_CAM_1		0					CAM		Pacific Gas & Electric		
PGE_CAM_2		0					CAM		Pacific Gas & Electric		
PGE_CAM_3		0					CAM		Pacific Gas & Electric		
PGE_CAM_7	730	2.912094492					CAM		Pacific Gas & Electric		
SDGE_CAM_1		0					CAM		San Diego Gas & Electric		
SDGE_CAM_2		0					CAM		San Diego Gas & Electric		
SDGE_CAM_3		0					CAM		San Diego Gas & Electric		
SDGE_CAM_4		0					CAM		San Diego Gas & Electric		
SDGE_CAM_5	40	0.02195586					CAM		San Diego Gas & Electric		
SDGE_CAM_6	40	0.02195586					CAM		San Diego Gas & Electric		
SDGE_CAM_7	40	0.02195586					CAM		San Diego Gas & Electric		
SDGE_CAM_8	30	0.016466895					CAM		San Diego Gas & Electric		
SDGE_CAM_9		0					CAM		San Diego Gas & Electric		
SDGE_CAM_10		0					CAM		San Diego Gas & Electric		
SDGE_CAM_11	105.6	0.057963471					CAM		San Diego Gas & Electric		
SDGE_CAM_12	160	0.087823441					CAM		San Diego Gas & Electric		
3PR_RA_2026_A						ccgt		Buy	non-LSE supplier		
3PR_RA_2026_B						solar		Buy	non-LSE supplier		
3PR_RA_2026_C						biogas		Buy	non-LSE supplier		
3PR_RA_2026_D	920	7.12				battery		Buy	non-LSE supplier		
3PR_RA_2026_E						ct		Buy	non-LSE supplier		
3PR_RA_2026_F						hydro		Buy	non-LSE supplier		
3PR_RA_2026_G	140	20				battery		Buy	non-LSE supplier		
3PR50007						solar		Buy	non-LSE supplier	Apple Energy LLC	
3PR50010						solar		Buy	non-LSE supplier		Lost Dutchman Renewable Energy Complex,
3PR90007						solar		Buy	Southern California Edison		
3PR_FSB_2023	548	20.76843198				battery		Buy	Direct Energy Business		RWE
3PR_McFadden_2027	200	100	4	2	2	battery		Buy	non-LSE supplier		ENGIE North America
3PR_BESS_2028a	80	40	2	3	2	battery		Buy	non-LSE supplier		TBD
3PR_BESS_20230_2031_2032	200	164	2	3	2	battery		Buy	non-LSE supplier		TBD
3PR_LDES_2028_2032	400	64	2	3	2	battery		Buy	non-LSE supplier		TBD
3PR_CleanFirm_2028			2	3	2	geothermal		Buy	non-LSE supplier		TBD
3PR_BESS_2028b	180	180	2	3	2	battery		Buy	non-LSE supplier		TBD
3PR_LDES_12hr_AB1373	24	24	2	3	2	battery		Buy	non-LSE supplier		TBD
3PR_LDES_MDS_AB1373	48	48	2	2	2	battery		Buy	non-LSE supplier		TBD
3PR_OSW_AB1373			1	2	2	wind		Buy	non-LSE supplier		TBD
3PR_AB1373_Geothermal			2	2	2	geothermal		Buy	non-LSE supplier		TBD
3PR_Solar_New_2030			2	3	2	solar		Buy	non-LSE supplier		TBD
3PR_Solar_New_2040			2	3	2	solar		Buy	non-LSE supplier		TBD
3PR_Solar_New_2045			2	3	2	solar		Buy	non-LSE supplier		TBD
3PR_RA_Gas_2026						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2027						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2028						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2029						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2030						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2031						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2032						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2033						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2034						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2035						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2036						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2037						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2038						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2039						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2040						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2041						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2042						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2043						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2044						ccgt		Buy	non-LSE supplier	TBD	
3PR_RA_Gas_2045						ccgt		Buy	non-LSE supplier	TBD	

lse_unique_contract_id	capacity_area	capacity_sub_area	cpuc_approval_ref	county	COD_year	COD_month	COD_day	contract_start_date_year	contract_start_date_month	contract_start_date_day	contract_end_date_year	contract_end_date_month	contract_end_date_day
SCE_CAM_1								2016	12	31	2026	12	31
SCE_CAM_2								2007	7	19	2045	12	31
SCE_CAM_3								2007	7	20	2045	12	31
SCE_CAM_4								2007	7	17	2045	12	31
SCE_CAM_5								2009	8	1	2045	12	31
SCE_CAM_6								2007	7	19	2045	12	31
SCE_CAM_7								2017	7	1	2045	12	31
SCE_CAM_8								2017	7	1	2045	12	31
SCE_CAM_9								1987	12	29	2026	8	31
SCE_CAM_10								2020	6	1	2040	5	31
SCE_CAM_11								2020	5	1	2040	4	30
SCE_CAM_12								2020	7	1	2040	6	30
SCE_CAM_13								2020	7	1	2040	6	30
SCE_CAM_14								2021	1	1	2040	12	31
SCE_CAM_15								2021	7	1	2041	3	31
SCE_CAM_16								2024	6	1	2040	10	31
SCE_CAM_17								2021	4	1	2041	3	31
SCE_CAM_18								2021	6	1	2041	3	31
SCE_CAM_19								2026	4	1	2035	10	31
SCE_CAM_20								2020	1	1	2026	12	31
SCE_CAM_21								2020	9	1	2027	7	31
PGE_CAM_1								2014	8	1	2026	7	31
PGE_CAM_2								2019	10	1	2026	9	30
PGE_CAM_3								2019	12	1	2026	11	30
PGE_CAM_7								2021	10	1	2050	12	31
SDGE_CAM_1								2014	5	1	2039	12	31
SDGE_CAM_2								2017	6	1	2037	12	31
SDGE_CAM_3								2017	6	1	2037	12	31
SDGE_CAM_4								2017	6	1	2037	12	31
SDGE_CAM_5								2017	3	6	2099	12	31
SDGE_CAM_6								2017	3	6	2099	12	31
SDGE_CAM_7								2017	3	6	2099	12	31
SDGE_CAM_8								2017	2	21	2099	12	31
SDGE_CAM_9								2018	12	1	2038	9	30
SDGE_CAM_10								2018	12	1	2038	9	30
SDGE_CAM_11								2021	8	1	2099	12	31
SDGE_CAM_12								2023	5	15	2099	12	31
3PR_RA_2026_A	PacGE	No_sub_area			2003	7	24	2026	6	1	2026	10	1
3PR_RA_2026_B	PacGE	No_sub_area			2017	11	29	2017	1	1	2030	12	31
3PR_RA_2026_C	SDGE	Diego/Imperial Valley San Diego			2004	7	14	2024	4	17	2026	12	31
3PR_RA_2026_D	SCE	No_sub_area			2021	6	30	2023	1	1	2041	10	1
3PR_RA_2026_E	PacGE	No_sub_area			2008	4	23	2026	1	1	2026	12	31
3PR_RA_2026_F	PacGE	No_sub_area			1989	6	15	2020	1	1	2026	12	31
3PR_RA_2026_G	SCE	No_sub_area			2021	6	10	2026	6	1	2026	10	1
3PR50007	PacGE	No_sub_area			2017	11	28	2020	10	29	2030	12	31
3PR50010	AZPS	No_sub_area		Arizona	2025	4	19	2025	5	1	2036	12	31
3PR90007	SCE	North Coast Eagle Rock			2010	1	1	2023	1	1	2040	12	31
3PR_FSB_2023	PacGE	No_sub_area			2023	9	15	2023	7	1	2033	6	30
3PR_McFadden_2027	SCE	No_sub_area			2027	6	1	2027	6	1	2037	5	31
3PR_BESS_2028a					2027	6	1	2027	6	1	2037	5	31
3PR_BESS_20230_2031_2032					2030	6	1	2030	6	1	2045	12	31
3PR_LDES_2028_2032					2030	6	1	2030	6	1	2045	12	31
3PR_CleanFirm_2028	SDGE	ın Diego/Imperial Valley Border		SanDiegoCounty	2031	6	1	2031	6	1	2045	12	31
3PR_BESS_2028b					2028	6	1	2028	6	1	2043	12	31
3PR_LDES_12hr_AB1373					2032	6	1	2032	6	1	2045	12	31
3PR_LDES_MDS_AB1373					2032	6	1	2032	6	1	2045	12	31
3PR_OSW_AB1373					2035	6	1	2035	6	1	2045	12	31
3PR_AB1373_Geothermal					2035	6	1	2035	6	1	2045	12	31
3PR_Solar_New_2030					2030	6	1	2030	6	1	2045	12	31
3PR_Solar_New_2040					2040	6	1	2040	6	1	2045	12	31
3PR_Solar_New_2045					2045	6	1	2045	6	1	2045	12	31
3PR_RA_Gas_2026					2010	1	1	2026	6	1	2026	10	1
3PR_RA_Gas_2027					2010	1	1	2027	1	1	2027	12	31
3PR_RA_Gas_2028					2010	1	1	2028	1	1	2028	12	31
3PR_RA_Gas_2029					2010	1	1	2029	1	1	2029	12	31
3PR_RA_Gas_2030					2010	1	1	2030	1	1	2030	12	31
3PR_RA_Gas_2031					2010	1	1	2031	1	1	2031	12	31
3PR_RA_Gas_2032					2010	1	1	2032	1	1	2032	12	31
3PR_RA_Gas_2033					2010	1	1	2033	1	1	2033	12	31
3PR_RA_Gas_2034					2010	1	1	2034	1	1	2034	12	31
3PR_RA_Gas_2035					2010	1	1	2035	1	1	2035	12	31
3PR_RA_Gas_2036					2010	1	1	2036	1	1	2036	12	31
3PR_RA_Gas_2037					2010	1	1	2037	1	1	2037	12	31
3PR_RA_Gas_2038					2010	1	1	2038	1	1	2038	12	31
3PR_RA_Gas_2039					2010	1	1	2039	1	1	2039	12	31
3PR_RA_Gas_2040					2010	1	1	2040	1	1	2040	12	31
3PR_RA_Gas_2041					2010	1	1	2041	1	1	2041	12	31
3PR_RA_Gas_2042					2010	1	1	2042	1	1	2042	12	31
3PR_RA_Gas_2043					2010	1	1	2043	1	1	2043	12	31
3PR_RA_Gas_2044					2010	1	1	2044	1	1	2044	12	31
3PR_RA_Gas_2045					2010	1	1	2045	1	1	2045	12	31

lse_unique_contract_id	contract_execution_date_year	contract_execution_date_month	contract_execution_date_day	tx_upgrades	tx_upgrade_date_year	tx_upgrade_date_month	tx_upgrade_date_day	tx_upgrade_description	d2106035_procurement_cat	mtr_tranche1_NQC	mtr_tranche2_NQC	mtr_tranche3_NQC	mtr_tranche4_NQC
SCE_CAM_1				NA					NA				
SCE_CAM_2				NA					NA				
SCE_CAM_3				NA					NA				
SCE_CAM_4				NA					NA				
SCE_CAM_5				NA					NA				
SCE_CAM_6				NA					NA				
SCE_CAM_7				NA					NA				
SCE_CAM_8				NA					NA				
SCE_CAM_9				NA					NA				
SCE_CAM_10				NA					NA				
SCE_CAM_11				NA					NA				
SCE_CAM_12				NA					NA				
SCE_CAM_13				NA					NA				
SCE_CAM_14				NA					NA				
SCE_CAM_15				NA					NA				
SCE_CAM_16				NA					NA				
SCE_CAM_17				NA					NA				
SCE_CAM_18				NA					NA				
SCE_CAM_19				NA					NA				
SCE_CAM_20				NA					NA				
SCE_CAM_21				NA					NA				
PGE_CAM_1				NA					NA				
PGE_CAM_2				NA					NA				
PGE_CAM_3				NA					NA				
PGE_CAM_7				NA					NA				
SDGE_CAM_1				NA					NA				
SDGE_CAM_2				NA					NA				
SDGE_CAM_3				NA					NA				
SDGE_CAM_4				NA					NA				
SDGE_CAM_5				NA					NA				
SDGE_CAM_6				NA					NA				
SDGE_CAM_7				NA					NA				
SDGE_CAM_8				NA					NA				
SDGE_CAM_9				NA					NA				
SDGE_CAM_10				NA					NA				
SDGE_CAM_11				NA					NA				
SDGE_CAM_12				NA					NA				
3PR_RA_2026_A	2026	7	2	NA									
3PR_RA_2026_B	2017	10	30	NA									
3PR_RA_2026_C	2023	10	31	NA									
3PR_RA_2026_D	2022	9	28	NA									
3PR_RA_2026_E	2025	7	15	NA									
3PR_RA_2026_F	2019	10	16	NA									
3PR_RA_2026_G	2026	7	1	NA									
3PR50007	2020	10	29	NA									
3PR50010	2022	3	7	NA									
3PR90007	2022	7	26	NA									
3PR_FSB_2023	2023	5	17	NA					general	5			
3PR_McFadden_2027	2025	8	26	NO					general		14	4	1.24
3PR_BESS_2028a	NA	NA	NA	NA					general				2.76
3PR_BESS_20230_2031_2032	NA	NA	NA	NA									
3PR_LDES_2028_2032	NA	NA	NA	NA					long_duration_storage				
3PR_CleanFirm_2028	NA	NA	NA	NA					firm_ZE				
3PR_BESS_2028b	NA	NA	NA	NA									
3PR_LDES_12hr_AB1373	NA	NA	NA	NA									
3PR_LDES_MDS_AB1373	NA	NA	NA	NA									
3PR_OSW_AB1373	NA	NA	NA	NA									
3PR_AB1373_Geothermal	NA	NA	NA	NA									
3PR_Solar_New_2030	NA	NA	NA	NA									
3PR_Solar_New_2040	NA	NA	NA	NA									
3PR_Solar_New_2045	NA	NA	NA	NA									
3PR_RA_Gas_2026	NA	NA	NA	NA									
3PR_RA_Gas_2027	NA	NA	NA	NA									
3PR_RA_Gas_2028	NA	NA	NA	NA									
3PR_RA_Gas_2029	NA	NA	NA	NA									
3PR_RA_Gas_2030	NA	NA	NA	NA									
3PR_RA_Gas_2031	NA	NA	NA	NA									
3PR_RA_Gas_2032	NA	NA	NA	NA									
3PR_RA_Gas_2033	NA	NA	NA	NA									
3PR_RA_Gas_2034	NA	NA	NA	NA									
3PR_RA_Gas_2035	NA	NA	NA	NA									
3PR_RA_Gas_2036	NA	NA	NA	NA									
3PR_RA_Gas_2037	NA	NA	NA	NA									
3PR_RA_Gas_2038	NA	NA	NA	NA									
3PR_RA_Gas_2039	NA	NA	NA	NA									
3PR_RA_Gas_2040	NA	NA	NA	NA									
3PR_RA_Gas_2041	NA	NA	NA	NA									
3PR_RA_Gas_2042	NA	NA	NA	NA									
3PR_RA_Gas_2043	NA	NA	NA	NA									
3PR_RA_Gas_2044	NA	NA	NA	NA									
3PR_RA_Gas_2045	NA	NA	NA	NA									

lse_unique_contract_id	mtr_tranche5_NQC	mtr_tranche6_NQC	mtr_NQC_ZE_gen_paired_dr	mtr_bridge_to	contract_changed	previous_COD_year	previous_COD_month	previous_COD_day	remediation_plan	signed_contract	notice_to_proceed	public_contract
SCE_CAM_1												
SCE_CAM_2												
SCE_CAM_3												
SCE_CAM_4												
SCE_CAM_5												
SCE_CAM_6												
SCE_CAM_7												
SCE_CAM_8												
SCE_CAM_9												
SCE_CAM_10												
SCE_CAM_11												
SCE_CAM_12												
SCE_CAM_13												
SCE_CAM_14												
SCE_CAM_15												
SCE_CAM_16												
SCE_CAM_17												
SCE_CAM_18												
SCE_CAM_19												
SCE_CAM_20												
SCE_CAM_21												
PGE_CAM_1												
PGE_CAM_2												
PGE_CAM_3												
PGE_CAM_7												
SDGE_CAM_1												
SDGE_CAM_2												
SDGE_CAM_3												
SDGE_CAM_4												
SDGE_CAM_5												
SDGE_CAM_6												
SDGE_CAM_7												
SDGE_CAM_8												
SDGE_CAM_9												
SDGE_CAM_10												
SDGE_CAM_11												
SDGE_CAM_12												
3PR_RA_2026_A										YES		NO
3PR_RA_2026_B										YES		NO
3PR_RA_2026_C										YES		NO
3PR_RA_2026_D										YES		NO
3PR_RA_2026_E										YES		NO
3PR_RA_2026_F										YES		NO
3PR_RA_2026_G										YES		NO
3PR50007										YES		NO
3PR50010										YES		NO
3PR90007										YES		NO
3PR_FSB_2023			6							YES		NO
3PR_McFadden_2027										YES	YES	NO
3PR_BESS_2028a	4									NO	NO	NO
3PR_BESS_20230_2031_2032					NO					NO	NO	NO
3PR_LDES_2028_2032		2.5			NO					NO	NO	NO
3PR_CleanFirm_2028		2.5			NO					NO	NO	NO
3PR_BESS_2028b										NO	NO	NO
3PR_LDES_12hr_AB1373										NO	NO	NO
3PR_LDES_MDS_AB1373										NO	NO	NO
3PR_OSW_AB1373										NO	NO	NO
3PR_AB1373_Geothermal										NO	NO	NO
3PR_Solar_New_2030										NO	NO	NO
3PR_Solar_New_2040										NO	NO	NO
3PR_Solar_New_2045										NO	NO	NO
3PR_RA_Gas_2026										NO		NO
3PR_RA_Gas_2027										NO		NO
3PR_RA_Gas_2028										NO		NO
3PR_RA_Gas_2029										NO		NO
3PR_RA_Gas_2030										NO		NO
3PR_RA_Gas_2031										NO		NO
3PR_RA_Gas_2032										NO		NO
3PR_RA_Gas_2033										NO		NO
3PR_RA_Gas_2034										NO		NO
3PR_RA_Gas_2035										NO		NO
3PR_RA_Gas_2036										NO		NO
3PR_RA_Gas_2037										NO		NO
3PR_RA_Gas_2038										NO		NO
3PR_RA_Gas_2039										NO		NO
3PR_RA_Gas_2040										NO		NO
3PR_RA_Gas_2041										NO		NO
3PR_RA_Gas_2042										NO		NO
3PR_RA_Gas_2043										NO		NO
3PR_RA_Gas_2044										NO		NO
3PR_RA_Gas_2045										NO		NO

lse_unique_contract_id	buying_energy_capacity	NQC_reporting_source	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	CapacityOnly		CAM		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	physical	
SCE_CAM_2	CapacityOnly		CAM		NA						physical	
SCE_CAM_3	CapacityOnly		CAM		NA						physical	
SCE_CAM_4	CapacityOnly		CAM		NA						physical	
SCE_CAM_5	CapacityOnly		CAM		NA						physical	
SCE_CAM_6	CapacityOnly		CAM		NA						physical	
SCE_CAM_7	CapacityOnly		CAM		Battery Storage (MWh Energy Capacity)	0.02	0.02	0.02	0.02	0.02	physical	
SCE_CAM_8	CapacityOnly		CAM		Battery Storage (MWh Energy Capacity)	0.02	0.02	0.02	0.02	0.02	physical	
SCE_CAM_9	CapacityOnly		CAM		NA						physical	
SCE_CAM_10	CapacityOnly		CAM		NA						physical	
SCE_CAM_11	CapacityOnly		CAM		NA						physical	
SCE_CAM_12	CapacityOnly		CAM		NA						physical	
SCE_CAM_13	CapacityOnly		CAM		NA						physical	
SCE_CAM_14	CapacityOnly		CAM		Battery Storage (MWh Energy Capacity)	0.16	0.16	0.16	0.16	-	physical	
SCE_CAM_15	CapacityOnly		CAM		Battery Storage (MWh Energy Capacity)	0.16	0.16	0.16	0.16	-	physical	
SCE_CAM_16	CapacityOnly		CAM		Battery Storage (MWh Energy Capacity)	0.06	0.06	0.06	0.06	-	physical	
SCE_CAM_17	CapacityOnly		CAM		Battery Storage (MWh Energy Capacity)	0.02	0.02	0.02	0.02	-	physical	
SCE_CAM_18	CapacityOnly		CAM		Battery Storage (MWh Energy Capacity)	0.02	0.02	0.02	0.02	-	physical	
SCE_CAM_19	CapacityOnly		CAM		Battery Storage (MWh Energy Capacity)	0.01	0.01	0.01	-	-	physical	
SCE_CAM_20	CapacityOnly		CAM		NA						physical	
SCE_CAM_21	CapacityOnly		CAM		NA						physical	
PGE_CAM_1	CapacityOnly		CAM		NA						physical	
PGE_CAM_2	CapacityOnly		CAM		NA						physical	
PGE_CAM_3	CapacityOnly		CAM		NA						physical	
PGE_CAM_7	CapacityOnly		CAM		Battery Storage (MWh Energy Capacity)	2.91	2.91	2.91	2.91	2.91	physical	
SDGE_CAM_1	CapacityOnly		CAM		NA						physical	
SDGE_CAM_2	CapacityOnly		CAM		NA						physical	
SDGE_CAM_3	CapacityOnly		CAM		NA						physical	
SDGE_CAM_4	CapacityOnly		CAM		NA						physical	
SDGE_CAM_5	CapacityOnly		CAM		Battery Storage (MWh Energy Capacity)	0.02	0.02	0.02	0.02	0.02	physical	
SDGE_CAM_6	CapacityOnly		CAM		Battery Storage (MWh Energy Capacity)	0.02	0.02	0.02	0.02	0.02	physical	
SDGE_CAM_7	CapacityOnly		CAM		Battery Storage (MWh Energy Capacity)	0.02	0.02	0.02	0.02	0.02	physical	
SDGE_CAM_8	CapacityOnly		CAM		Battery Storage (MWh Energy Capacity)	0.02	0.02	0.02	0.02	0.02	physical	
SDGE_CAM_9	CapacityOnly		CAM		NA						physical	
SDGE_CAM_10	CapacityOnly		CAM		NA						physical	
SDGE_CAM_11	CapacityOnly		CAM		Battery Storage (MWh Energy Capacity)	0.06	0.06	0.06	0.06	0.06	physical	
SDGE_CAM_12	CapacityOnly		CAM		Battery Storage (MWh Energy Capacity)	0.09	0.09	0.09	0.09	0.09	physical	
3PR_RA_2026_A	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	physical	
3PR_RA_2026_B	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	physical	
3PR_RA_2026_C	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	physical	
3PR_RA_2026_D	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	physical	
3PR_RA_2026_E	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	physical	
3PR_RA_2026_F	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	physical	
3PR_RA_2026_G	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	physical	
3PR50007	EnergyOnly		RPS		Solar Baseline California (GWh)	135.42	143.67	-	-	-	physical	
3PR50010	EnergyOnly		RPS		Solar New SCE SDG&E (GWh)	55.00	55.00	55.00	-	-	newgeneric	
3PR90007	EnergyOnly		RPS		Solar Baseline California (GWh)	11.97	11.53	7.79	-	-	supplierschoice	
3PR_FSB_2023	CapacityOnly	Calculated	MTR		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	physical	
3PR_McFadden_2027	CapacityOnly	Calculated	MTR		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	newgeneric	
3PR_BESS_2028a	CapacityOnly	Calculated	D2202004		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	newgeneric	
3PR_BESS_20230_2031_2032	CapacityOnly	Calculated	D2602057		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	newgeneric	
3PR_LDES_2028_2032	CapacityOnly	Calculated	D2106035, D2602057		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	newgeneric	
3PR_CleanFirm_2028	EnergyCapacity	Calculated	D2106035		Geothermal (GWh)	21.02	21.02	21.02	21.02	21.02	newgeneric	
3PR_BESS_2028b	CapacityOnly	Calculated	IRP		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	newgeneric	
3PR_LDES_12hr_AB1373	CapacityOnly	Calculated	IRP		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	newgeneric	
3PR_LDES_MDS_AB1373	CapacityOnly	Calculated	IRP		Battery Storage (MWh Energy Capacity)	-	-	-	-	-	newgeneric	
3PR_OSW_AB1373	EnergyCapacity	Calculated	IRP		Wind Offshore Humboldt (GWh)	-	-	70.00	70.00	70.00	newgeneric	
3PR_AB1373_Geothermal	EnergyCapacity	Calculated	AB 1373		Geothermal (GWh)	-	-	14.90	14.90	14.90	newgeneric	
3PR_Solar_New_2030	EnergyCapacity	Calculated	IRP		Solar New PG&E (GWh)		400.00	400.00	400.00	400.00	newgeneric	
3PR_Solar_New_2040	EnergyCapacity	Calculated	IRP		Solar New PG&E (GWh)	-	-	-	200.00	200.00	newgeneric	
3PR_Solar_New_2045	EnergyCapacity	Calculated	IRP		Solar New PG&E (GWh)	-	-	-	-	450.00	newgeneric	
3PR_RA_Gas_2026	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2027	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2028	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2029	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2030	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2031	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2032	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2033	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2034	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2035	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2036	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2037	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2038	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2039	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2040	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2041	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2042	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2043	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2044	CapacityOnly	Calculated	RA		NA	-	-	-	-	-	existinggeneric	
3PR_RA_Gas_2045	CapacityOnly	Calculated	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	68,093	69,939	71,976	73,218	74,668	76,057	77,338	78,968	79,726	80,523	81,423	82,089	82,936
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)	64,088	65,238	67,457	69,522	71,997	73,685	75,771	78,127	80,290	82,674	83,983	85,527	86,996	88,337	90,073	90,937	91,846	92,873	93,633	94,599
CAISO Reliability Procurement Need (RPN) (MW)	53,361	54,394	55,427	50,516	45,606	47,269	48,932	50,595	52,259	53,922	55,180	56,437	57,695	58,953	60,210	60,949	61,688	62,427	63,167	63,906
LSE share of load during critical hours (%)	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
LSE reliability procurement requirement (RPR) (MW)	85	87	89	83	76	79	82	85	88	91	94	97	100	104	107	109	112	115	117	120

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)	44	45	44	43	42	41	41	41	39	38	38	37	37	37	36	36	36	36	36	37

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%	49%	22%	21%	20%	19%	18%	17%	17%	17%	17%	17%	17%	17%	17%	16%	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%	94%	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%	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%	61%	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%

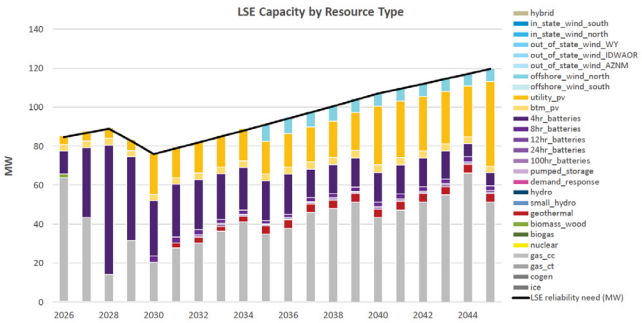
Contract ELCC (effective MW)

Resource Type	Conrtact 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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	4	5	5	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
btm_pv	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4hr_batteries	Online	12	7	6	4	2	2	2	1	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	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
geothermal	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
biomass_wood	Online	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
biogas	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
nuclear	Online	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
gas_cc	Online	42	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-
gas_ct	Online	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
cogen	Online	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	-	21	19	12	6	5	5	5	4	4	4	-	-	-	-	-	-	-	-	-
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	21	43	14	31	20	27	30	35	41	34	37	45	47	51	43	47	51	55	66	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	-	-	-	-	-	-	-	-	-	9	8	8	8	7	7	7	7	7	7	7
offshore_wind_south	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
utility_pv	PlannedNew	-	-	-	-	16	16	16	16	16	17	17	18	19	19	30	29	28	27	26	43
btm_pv	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4hr_batteries	PlannedNew	-	8	41	27	21	20	19	18	17	16	16	14	14	14	15	14	14	14	7	7
8hr_batteries	PlannedNew	-	-	-	-	3	3	3	2	2	2	2	2	2	2	2	2	2	3	3	3
12hr_batteries	PlannedNew	-	-	-	-	-	-	1	1	1	0	0	1	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	4	4	4	4	4	4	4	4	4	4	4
biomass_wood	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
biogas	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
nuclear	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
gas_cc	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
gas_ct	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cogen	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ice	PlannedNew	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LSE total supply (effective MW)		**82**	**84**	**86**	**80**	**74**	**77**	**79**	**82**	**85**	**88**	**91**	**94**	**97**	**100**	**103**	**106**	**109**	**111**	**114**	**117**

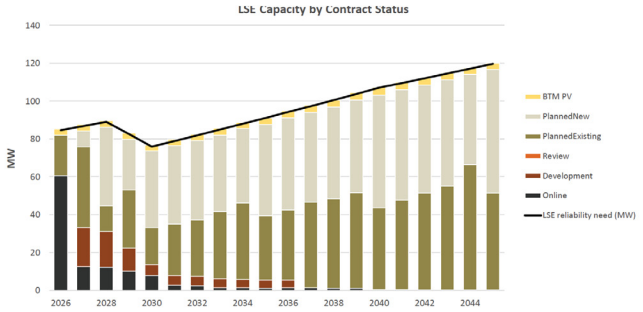
Load and Resource Table by Resource Type

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
LSE reliability need (MW)	**85**	**87**	**89**	**83**	**76**	**79**	**82**	**85**	**88**	**91**	**94**	**97**	**100**	**104**	**107**	**109**	**112**	**115**	**117**	**120**
ELCC by resource type (effective MW)																				
hybrid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
in_state_wind_south	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
in_state_wind_north	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_WY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_IDWAOR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
out_of_state_wind_AZNM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
offshore_wind_north	-	-	-	-	-	-	-	-	-	9	8	8	8	7	7	7	7	7	7	7
offshore_wind_south	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
utility_pv	4	5	5	5	21	16	16	16	16	17	17	18	19	19	30	29	28	27	26	43
btm_pv	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	3	3
4hr_batteries	12	36	66	43	29	27	26	23	22	20	21	15	15	15	15	15	14	14	7	7
8hr_batteries	-	-	-	-	3	3	3	2	2	2	2	2	2	2	2	2	2	3	3	3
12hr_batteries	-	-	-	-	-	-	1	1	1	0	0	1	1	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	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
geothermal	-	-	-	-	-	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4
biomass_wood	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
biogas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
nuclear	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
gas_cc	63	43	14	31	20	28	30	36	41	34	37	46	48	51	43	47	51	55	66	51
gas_ct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
cogen	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ice	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LSE total supply (effective MW)	**85**	**88**	**89**	**83**	**77**	**80**	**82**	**86**	**89**	**91**	**95**	**98**	**101**	**104**	**107**	**110**	**112**	**115**	**117**	**120**
Net capacity position (+ve = excess, -ve = shortfall) (effective MW)	**0.63**	**0.74**	**0.44**	**0.53**	**0.66**	**0.77**	**0.44**	**0.58**	**0.88**	**0.09**	**0.68**	**0.57**	**0.04**	**0.69**	**0.25**	**0.45**	**0.26**	**0.25**	**0.42**	**0.28**



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)	85	87	89	83	76	79	82	85	88	91	94	97	100	104	107	109	112	115	117	120
ELCC by contract status (effective MW)																				
Online	61	12	12	10	8	2	2	1	1	1	1	1	1	1	1	0	0	0	0	0
Development	-	21	19	12	6	5	5	5	4	4	4	-	-	-	-	-	-	-	-	-
Review	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PlannedExisting	21	43	14	31	20	27	30	35	41	34	37	45	47	51	43	47	51	55	66	51
PlannedNew	-	8	41	27	40	42	42	41	39	48	49	48	48	49	59	58	57	56	48	65
BTM PV	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	3	3
LSE total supply (effective MW)	85	88	89	83	77	80	82	86	89	91	95	98	101	104	107	110	112	115	117	120
Net capacity position (+ve = excess, -ve = shortfall) (effective MW)	0.63	0.74	0.44	0.53	0.66	0.77	0.44	0.58	0.88	0.09	0.68	0.57	0.04	0.69	0.25	0.45	0.26	0.25	0.42	0.28



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	-	-	-	-	-	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	-	-	70	70	70	GWh	RPS Eligible
Solar Resources							
Solar Baseline California	147	155	8	-	-	GWh	RPS Eligible
Solar New PG&E	-	400	400	600	1,050	GWh	RPS Eligible
Solar New SCE SDG&E	55	55	55	-	-	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	344	572	624	484	303	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

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

	Bought/Owned					Sold					Net				
Resource	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	-	-	70	70	70	-	-	-	-	-	-	-	70	70	70
Solar Resources															
Solar Baseline California	147	155	8	-	-	-	-	-	-	-	147	155	8	-	-
Solar New PG&E	-	400	400	600	1,050	-	-	-	-	-	-	400	400	600	1,050
Solar New SCE SDG&E	55	55	55	-	-	-	-	-	-	-	55	55	55	-	-
Solar Distributed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hybrid															
Hybrid_or_Paired_Solar_and_Battery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Storage & DR															
Shed DR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumped Storage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Battery Storage	4	4	4	4	3	-	-	-	-	-	4	4	4	4	3
User-Specified Profies															
Storage Resource Custom Profile	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPS Resource Custom Profile	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GHG-free non-RPS Resource	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coal															
Coal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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	-	-	-	-	-	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	147	155	8	-	-	GWh	RPS
Solar New PG&E	-	-	-	-	-	GWh	RPS
Solar New SCE SDG&E	55	55	55	-	-	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	124	124	104	4	3	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

	Bought/Owned					Sold					Net				
Resource	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	147	155	8	-	-	-	-	-	-	-	147	155	8	-	-
Solar New PG&E	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solar New SCE SDG&E	55	55	55	-	-	-	-	-	-	-	55	55	55	-	-
Solar Distributed	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hybrid/Paired															
Hybrid or Paired Solar and Battery	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Storage & DR															
Shed DR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumped Storage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Battery Storage	4	4	4	4	3	-	-	-	-	-	4	4	4	4	3
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	-	-	70	70	70	GWh	RPS Eligible
Solar Resources							
Solar Baseline California	147	155	8	-	-	GWh	RPS Eligible
Solar New PG&E	-	400	400	600	1,050	GWh	RPS Eligible
Solar New SCE SDG&E	55	55	55	-	-	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	344	572	624	484	303	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	147	155	8	-	-	GWh	RPS
Solar New PG&E	-	-	-	-	-	GWh	RPS
Solar New SCE SDG&E	55	55	55	-	-	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	124	124	104	4	3	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	-	-	*70*	*70*	*70*	GWh	RPS
Solar Resources							
Solar Baseline California	*147*	*155*	*8*	-	-	GWh	RPS
Solar New PG&E	-	*400*	*400*	*600*	*1,050*	GWh	RPS
Solar New SCE SDG&E	*55*	*55*	*55*	-	-	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	*344*	*572*	*624*	*484*	*303*	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	*16*	*14*	*11*	-	-	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	Notes
Managed Retail Sales Forecast (assigned to LSE)	GWh	443	443	443	443	443	Must be entered regardless of demand modifiers selected. Includes impact of BTM PV, Energy
Behind-The-Meter Photovoltaics (BTM PV) Forecast (assigned to LSE)	GWh	64	61	56	52	51	Measured at customer, not grossed up for T&D losses
Retail Sales without BTM PV reduction	GWh	508	505	499	495	495	Used to allocate demand modifiers
Behind-The-Meter Photovoltaics (BTM PV) grossed up for T&D losses	GWh	70	66	60	56	55	At generator bus-bar
Calculated share of CAISO system demand (% of Retail Sales)	%	0%	0%	0%	0%	0%	Do not edit

Commercial & Industrial Fraction of Baseline Demand	Use Custom?	Units	2028	2030	2035	2040	2045	Notes
Default C&I Percentage of Total	No	%	51%	52%	55%	55%	55%	Default, do not change. Does not include demand from Light Duty EVs.
Custom C&I Percentage of Total (OPTIONAL)		%						Will be used instead of default if "Use Custom?" = Yes

Calculated Demand, based on sales-weighted share of total from IEPR	Units	2028	2030	2035	2040	2045	Notes
Baseline net energy for load	GWh	494	452	386	356	339	Grossed up for T&D losses; demand met by BTM CHP excluded
Electric Vehicle Load	GWh	31	49	87	109	122	Grossed up for T&D losses
Building Electrification	GWh	14	25	43	46	49	Grossed up for T&D losses
Energy Efficiency	GWh	(13)	(15)	(15)	(13)	(13)	Grossed up for T&D losses
Data Center Load	GWh	24	35	40	38	36	Grossed up for T&D losses
Climate Change Impact Load Increases	GWh	1	2	3	3	4	Grossed up for T&D losses
Climate Change Impact Load Decreases	GWh	(0)	(0)	(1)	(1)	(1)	Grossed up for T&D losses
Behind-The-Meter Photovoltaics (BTM PV)	GWh	(70)	(66)	(60)	(56)	(55)	Grossed up for T&D losses
Behind-The-Meter Storage Losses (BTM Storage)	GWh	1	1	1	1	1	Grossed up for T&D losses
Behind-The-Meter Storage Capacity (BTM Storage)	Nameplate MW	8	9	9	9	10	For information only

Custom Demand Inputs (OPTIONAL; overwrites sales-weighted IEPR values from Calculated Demand sectio	Use Custom?	Units	2028	2030	2035	2040	2045	Notes
Baseline net energy for load	No	GWh						To overwrite, set "Use Custom" to "Yes" and input forecast. For use in Alternative Plans only.
Electric Vehicle Load	No	GWh						Custom demand values should be grossed up for T&D losses.
Building Electrification	No	GWh						User-specified demand profiles should be input in the "Custom Profiles" tab.
Energy Efficiency	No	GWh						Energy efficiency and BTM PV subtract from demand and therefore should be entered as
Data Center Load	No	GWh						negative values.
Climate Change Impact Load Increases	No	GWh						Demand categories should be non-overlapping (e.g., baseline net energy for load does not
Climate Change Impact Load Decreases	No	GWh						inclue EV load, climage change impacts, etc.)
Behind-The-Meter Photovoltaics (BTM PV)	No	GWh						
Behind-The-Meter Storage Capacity (BTM Storage)	No	Nameplate MW						Custom BTM storage should be entered in terms of Nameplate MW
Behind-The-Meter Storage Losses (BTM Storage)		GWh						

Active Demand Inputs	Source	Units	2028	2030	2035	2040	2045	Notes
Baseline net energy for load	IEPR	GWh	494	452	386	356	339	Grossed up for T&D losses; demand met by BTM CHP excluded
Non-commercial/industrial portion of baseline (included in baseline total)	IEPR	GWh	242	215	175	161	154	Grossed up for T&D losses; demand met by BTM CHP excluded
Commercial/industrial portion of baseline (included in baseline total)	IEPR	GWh	252	237	210	195	186	Grossed up for T&D losses; demand met by BTM CHP excluded
Electric Vehicle Load	IEPR	GWh	31	49	87	109	122	Grossed up for T&D losses
Building Electrification	IEPR	GWh	14	25	43	46	49	Grossed up for T&D losses
Energy Efficiency	IEPR	GWh	(13)	(15)	(15)	(13)	(13)	Grossed up for T&D losses
Data Center Load	IEPR	GWh	24	35	40	38	36	Grossed up for T&D losses
Climate Change Impact Load Increases	IEPR	GWh	1	2	3	3	4	Grossed up for T&D losses
Climate Change Impact Load Decreases	IEPR	GWh	(0)	(0)	(1)	(1)	(1)	Grossed up for T&D losses
Behind-The-Meter Photovoltaics (BTM PV)	IEPR	GWh	(70)	(66)	(60)	(56)	(55)	Grossed up for T&D losses
Behind-The-Meter Storage Losses (BTM Storage)	IEPR	GWh	1	1	1	1	1	Grossed up for T&D losses

	Units	2028	2030	2035	2040	2045	Notes
Calculated demand at utility-scale generator bus-bar	GWh	483	483	483	483	483	Total of "Active Demand Inputs"
Total Load (demand at utility-scale generator bus-bar + BTM PV)	GWh	552	549	543	539	538	For reference

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	Input data - do not change. Values are from SERVM disparch
LSE share of IFM CHP	GWh	16	14	11	-	-	Calculation - do not change

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

Custom Demand Shapes (OPTIONAL; overwrites default demand shapes)	Custom Hourly Demand Profiles							
Use Custom Shape?	No	No	No	No	No	No	No	No
Notes:	*Set "Use Custom Shape" toggle to "Yes" to override default shape with custom shape below.* *Shape should be normalized - the sum of the hourly values over the entire year should equal 1 with the exception of BTM Storage.* *For all profiles except BTM Storage, normalize by dividing every hour of the original non-normalized shape (in MW) by the annual total (in MWh/yr).* *BTM Storage should be entered in units of MW per MW of installed nameplate capacity.*							
Check: Sums to 1 if custom shape is defined?	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE

BTM Storage Check: Betwee

	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*	395	395	395	395	*0.032*	*0.020*	*0.015*	*0.007*
Southern California Edison Company (Direct Access)	*1.1123*	*1.1123*	*1.1123*	*1.1123*	*12,230*	*12,230*	*12,230*	*12,230*	36	36	36	36	*0.003*	*0.003*	*0.003*	*0.003*
San Diego Gas & Electric Company (Direct Access)	*0.4392*	*0.4392*	*0.4392*	*0.4392*	*3,942*	*3,942*	*3,942*	*3,942*	13	13	13	13	*0.001*	*0.001*	*0.001*	*0.001*
TOTAL									*443*	*443*	*443*	*443*	*0.037*	*0.025*	*0.020*	*0.012*

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**
CO_2	*MMt/yr*	*0.1033*	*0.0300*	*0.0173*	*0.0154*	*0.0078*
PM2.5	*tonnes/yr*	*6.42*	*1.84*	*1.15*	*1.04*	*0.63*
SO_2	*tonnes/yr*	*0.61*	*0.17*	*0.11*	*0.10*	*0.06*
NOx	*tonnes/yr*	*8.39*	*2.57*	*2.03*	*0.08*	*0.73*

Emissions by resource type

CO_2	***Unit***	**2028**	**2030**	**2035**	**2040**	**2045**
Coal	*MMt/yr*	-	-	-	-	-
IFM CHP	*MMt/yr*	*0.01*	*0.01*	*0.01*	-	-
Biogas	*MMt/yr*	-	-	-	-	-
Biomass	*MMt/yr*	-	-	-	-	-
System Power Unadjusted	*MMt/yr*	*0.10*	*0.03*	*0.01*	*0.02*	*0.01*
System Power	*MMt/yr*	*0.09*	*0.02*	*0.01*	*0.02*	*0.01*
Asset Controlling Supplier	*MMt/yr*	-	-	-	-	-
Total	***MMt/yr***	*0.10*	*0.03*	*0.02*	*0.02*	*0.01*
Average emissions intensity	*tCO2/MWh*	*0.233*	*0.068*	*0.039*	*0.035*	*0.017*
Oversupply Emissions Credits	*MMt/yr*	-	*0.02*	*0.01*	*0.01*	*0.03*

PM2.5	***Unit***	**2028**	**2030**	**2035**	**2040**	**2045**
Coal	*tonnes/yr*	-	-	-	-	-
IFM CHP	*tonnes/yr*	*1*	*0*	*0*	-	-
Biogas	*tonnes/yr*	-	-	-	-	-
Biomass	*tonnes/yr*	-	-	-	-	-
System Power	*tonnes/yr*	*6*	*1*	*1*	*1*	*1*
Total	***tonnes/yr***	*6*	*2*	*1*	*1*	*1*
Average emissions intensity	*kg/MWh*	*0.0145*	*0.0041*	*0.0026*	*0.0024*	*0.0014*

SO_2	***Unit***	**2028**	**2030**	**2035**	**2040**	**2045**
Coal	*tonnes/yr*	-	-	-	-	-
IFM CHP	*tonnes/yr*	*0*	*0*	*0*	-	-
Biogas	*tonnes/yr*	-	-	-	-	-
Biomass	*tonnes/yr*	-	-	-	-	-
System Power	*tonnes/yr*	*1*	*0*	*0*	*0*	*0*
Total	***tonnes/yr***	*1*	*0*	*0*	*0*	*0*
Average emissions intensity	*kg/MWh*	*0.0014*	*0.0004*	*0.0003*	*0.0002*	*0.0001*

NOx	***Unit***	**2028**	**2030**	**2035**	**2040**	**2045**
Coal	*tonnes/yr*	-	-	-	-	-
IFM CHP	*tonnes/yr*	*2*	*1*	*1*	-	-
Biogas	*tonnes/yr*	-	-	-	-	-
Biomass	*tonnes/yr*	-	-	-	-	-
System Power	*tonnes/yr*	*7*	*1*	*1*	*0*	*1*
Total	***tonnes/yr***	*8*	*3*	*2*	*0*	*1*
Average emissions intensity	*kg/MWh*	*0.0189*	*0.0058*	*0.0046*	*0.0002*	*0.0016*

Supply and Demand Balance

Demand Summary	***Unit***	**2028**	**2030**	**2035**	**2040**	**2045**
Managed Retail Sales Forecast (assigned to LSE)	*GWh*	*443*	*443*	*443*	*443*	*443*
Baseline Demand, non-C&I	*GWh*	*242*	*215*	*175*	*161*	*154*
Baseline Demand, C&I	*GWh*	*252*	*237*	*210*	*195*	*186*
Electric Vehicle Load	*GWh*	*31*	*49*	*87*	*109*	*122*
Building Electrification	*GWh*	*14*	*25*	*43*	*46*	*49*
Energy Efficiency	*GWh*	*(13)*	*(15)*	*(15)*	*(13)*	*(13)*
Data Center Load	*GWh*	*24*	*35*	*40*	*38*	*36*
Climate Change Impact	*GWh*	*1*	*2*	*3*	*3*	*4*
BTM PV	*GWh*	*(70)*	*(66)*	*(60)*	*(56)*	*(55)*
Demand (at generator bus-bar)	*GWh*	*483*	*483*	*483*	*483*	*483*

Supply Summary	***Unit***	**2028**	**2030**	**2035**	**2040**	**2045**
Large Hydro	*GWh*	-	-	-	-	-
Imported Hydro	*GWh*	-	-	-	-	-
Asset Controlling Supplier	*GWh*	-	-	-	-	-
Nuclear	*GWh*	-	-	-	-	-
Biogas	*GWh*	-	-	-	-	-
Biomass	*GWh*	-	-	-	-	-
Geothermal	*GWh*	-	-	*36*	*36*	*36*
Small Hydro	*GWh*	-	-	-	-	-
Wind CAISO	*GWh*	-	-	-	-	-
Wind Out Of State	*GWh*	-	-	-	-	-
Wind Offshore	*GWh*	-	-	*70*	*70*	*70*
Solar Utility Scale	*GWh*	*202*	*610*	*463*	*600*	*1,050*
Solar Distributed	*GWh*	-	-	-	-	-
Hybrid or Paired Solar and Battery	*GWh*	-	-	-	-	-
Shed DR	*GWh*	-	-	-	-	-
Pumped Storage	*GWh*	-	-	-	-	-
Battery Storage	*GWh*	*(17)*	*(29)*	*(32)*	*(25)*	*(15)*
Storage Resource Custom Profile	*GWh*	-	-	-	-	-
RPS Resource Custom Profile	*GWh*	-	-	-	-	-
GHG-free non-RPS Resource Custom Profile	*GWh*	-	-	-	-	-
Coal	*GWh*	-	-	-	-	-
IFM CHP	*GWh*	*16*	*14*	*11*	-	-

Supply Demand Balance Summary	***Unit***	**2028**	**2030**	**2035**	**2040**	**2045**
LSE Supply, before curtailment and exports	*GWh*	*202*	*594*	*548*	*681*	*1,141*
Net Purchases, before curtailment and exports	*GWh*	*281*	*(112)*	*(65)*	*(198)*	*(658)*
Curtailment	*GWh*	*(3)*	*(169)*	*(101)*	*(238)*	*(671)*
Exports	*GWh*	*(3)*	*(10)*	*(8)*	*(9)*	*(11)*
Zero Emissions Power From System	*GWh*	*27*	*2*	*10*	*4*	*1*
Net System Power (incurs emissions)	***GWh***	*260*	*65*	*34*	*45*	*23*
Check: Supply equals demand		*TRUE*	*TRUE*	*TRUE*	*TRUE*	*TRUE*

Renewable and GHG-Free %	***Unit***	**2028**	**2030**	**2035**	**2040**	**2045**
Retail Sales	GWh	*443*	*443*	*443*	*443*	*443*
RPS-Eligible Delivered Renewable	GWh	*200*	*441*	*468*	*468*	*485*
GHG free	GWh	*226*	*443*	*478*	*472*	*486*
RPS-Eligible Delivered Renewable Percentage	*% of retail sales*	*45%*	*99%*	*106%*	*106%*	*109%*
GHG-free Percentage	*% of retail sales*	*51%*	*100%*	*108%*	*107%*	*110%*