Staff Report Item 22

TO: East Bay Community Energy Board of Directors

FROM: Marie Fontenot, Sr. Director Power Resources

SUBJECT: **EBCE 2020 Integrated Resource Plan Compliance Filing (Action Item)**

DATE: July 15, 2020

Recommendation

A. Approve and use the analysis and findings resulting from the 2020 Integrated Resource Planning (IRP) study process;
B. Complete California Public Utilities Commission (CPUC) required IRP documents; and
C. Authorize the CEO to approve the final IRP reports and file two compliance portfolios by September 1, 2020.

Background and Discussion

The IRP proceeding includes two primary components: the biennial study workstream and the mandated procurement workstream. This memo refers only to the biennial study workstream.

The IRP is a long-term planning proceeding intending to evaluate all of the CPUC's electric procurement policies and programs and the reliability and cost-effectiveness of the CPUC-jurisdictional entities[1]' electric supply with the goal of reducing the cost of achieving GHG reductions and other CPUC policy goals. The IRP proceeding looks 10 years forward to determine the least-cost resource mix required to meet these goals while maintaining system reliability.

The IRP also evaluates the contribution of individual entities' resource portfolios to the State's greenhouse gas (GHG) emissions. This IRP cycle, the CPUC is requiring each entity to submit distinct portfolios that achieve their proportional share of two alternative statewide electric sector GHG targets. EBCE will report analysis results and proposed resource portfolios that address the question "what are the desired portfolios of resources based on a statewide

[1] In context of IRP requirements, includes Investor Owned Utilities (IOUs), Energy Service Providers (ESPs), and Community Choice Aggregators (CCAs).

electric sector goal of achieving (1) 46 million metric tons (MMT) of GHG emissions by 2030; and (2) a maximum of 38 MMT of GHG emissions by 2030." The inputs and assumptions used in the 46 MMT and 38 MMT scenario must be consistent with CPUC-assumptions; the required assumptions are discussed below. Entities are also permitted to submit an alternative portfolio that uses different assumptions, provided those assumptions are identified and justification for the discrepancies are described. EBCE is electing not to file an alternative portfolio and will instead focus its efforts on analysis to develop a portfolio of resources that would contribute to more aggressive GHG emissions reduction and organizational goal-setting related to achieving those reductions. This supplemental analysis and Staff recommendations for emissions reductions will be presented to the Board at a later date.

All CPUC-jurisdictional entities are required to file and serve their individual IRPs with the CPUC by September 1, 2020. The initial deadline for IRP submission was May 1, 2020, which was subsequently delayed first until July 1, 2020 and ultimately September 1, 2020 for several reasons, including the timing of the CEC's IEPR load forecast adoption, multiple delays in the CPUC's development of the IRP templates and filing requirements, and the late-added additional requirement to show a 38MMT portfolio. The filings must include three documents provided by the CPUC: the Narrative Template, the Resource Data Template, and the Clean System Power (CSP) Calculator.[2] Staff is seeking Board approval of the analysis and quantitative findings that will populate these required materials.[3] Each document and the associated data that will populate the document is described below.

Discussion

Compliance with the CPUC's IRP filing requires completion and submittal of three documents by September 1, 2020: the IRP Narrative Template, the Resource Data Template, and the Clean System Power Calculator. Each document is described below, followed by a discussion of the CPUC's modeling inputs and assumptions, an overview of EBCE's approach to IRP analysis and a discussion of the results of EBCE's analysis. Finally, Staff describes the next steps, including portfolio planning work beyond what is required for IRP compliance purposes.

Narrative Template

This document will provide written description of the approach EBCE took in performing its IRP including a description of the analytical work and EBCE's plan of action as a result.

Resource Data Template

This document is an excel workbook in which EBCE must report its existing energy and capacity contracts and identify the volumes of planned energy and capacity contracts that are indicated from the analysis as necessary to contribute to the 46 MMT and 38 MMT portfolios. The portfolios of resources must be described in terms of total annual contracted volumes and expected monthly volumes. The CPUC uses this document to analyze and aggregate individual entities' IRP portfolios

Clean System Power Calculator

[2] CPUC Decisions 18-02-018, 19-11-016, and 20-03-028 define these filing requirements.

[3] The Narrative Template, Resource Data Template and CSP Calculators for 46MMT and 38MMT portfolios were finalized by the CPUC and made available on June 15, 2020. Staff is currently in the process of populating the templates.

The document also takes the form of an excel workbook. It is used to calculate the estimated GHG and air pollutant emissions associated with the 46 MMT and 38 MMT resource portfolios detailed in the Resource Data Template. This workbook calculates the CPUC-determined implied emissions values associated with each type of generating resource. The CPUC uses this document to check that each entity meets the required GHG targets.

Required Assumptions

In this IRP cycle, the CPUC is requiring its jurisdictional entities use certain standardized inputs and assumptions. The required assumptions include:

- Load forecast: each load serving entity is required to use the CPUC-approved, California Energy Commission (CEC)-developed 2019 Integrated Energy Policy Report (IEPR) demand forecast update, as modified by CPUC Rulemaking 16-02-007. The 2019 IEPR forecast identified annual retail sales for entities out to 2030; then added and subtracted load to reflect the CEC's forecast for the expansion of Additional Achievable Energy Efficiency (AAEE), behind-the-meter solar PV generation, behind-the-meter combined heart & power generation, other self-generation, time of use rate effects, electric vehicle expansion, and other transport electrification. EBCE secured a correction from the CPUC to the approved IEPR forecast, bringing EBCE's load forecast more closely in line with internal assumptions.

- Baseline resources: represent generating resources that are currently online or are contracted to come online during the IRP's planning timeframe. This list includes generating resources inside and outside California, but within the Western Electricity Coordinating Council (WECC).

- Candidate resources: represent resources that have not yet been built or contracted. The CPUC provides the types of future generating resources that may be included in entities portfolios. The eligible resources types are natural gas generation (of various turbine and engine technologies), renewables (biomass, geothermal, solar pv, onshore wind, offshore wind), energy storage and demand response. The CPUC identified certain geographic assumptions related to the placement of these potential resources; the resources could be in California or out of state with eligible regions tied to existence or planned expansion of transmission lines. The CPUC also includes their own cost assumptions for each type of generating resource.

- Proforma Financial Model: used by the CPUC to create levelized fixed costs for each candidate resource type. These costs are then used as inputs to modeling to establish the least-cost portfolio.

- Operating Assumptions: the CPUC inputs resource-specific operating costs. Components of the operational costs are aggregated costs for classes of generation resources, unit commitment costs, costs associated with dispatching resources for energy or ancillary services, and transmission costs based on zones (i.e. costs to move electricity over the transmission system in WECC).

- Resource Adequacy Requirements: the CPUC assumptions require a 15% planning reserve margin, based on and consistent with the rules in place for System Resource Adequacy for CPUC-jurisdictional entities.

- GHG Emissions and Renewable Portfolio Standard: the 46 MMT and 38 MMT scenarios represent two different 2030 statewide electric sector GHG constraints under which least-cost resource portfolios are developed. The CPUC evaluated other potential GHG scenarios (including a 30 MMT scenario) before finalizing their selections. The emissions accounting is consistent with the California Air Resource Board's regulation of the electric sector under California's cap and trade program.

Reference System Plan

As part of the IRP process, the CPUC develops a Reference System Plan (RSP) which represents the total mix of resources at the system-level that the CPUC modeling shows is the most cost-effective way to achieve the 46 MMT scenarios. The RSP becomes formally adopted by the CPUC; following that, it is sent to the CAISO for inclusion in the CAISO's annual Transmission Planning Process.

The RSP includes four important elements. First, it identifies the 2030 statewide electric sector GHG planning target (in this case, 46 MMT). Second, it recommends a portfolio of resources that the CPUC believes represents the least-cost, least risk way to achieve the GHG target (these resources are identified based on the CPUC's required inputs and assumptions, described above). Third, a GHG planning price is reported that represents the marginal cost of GHG abatement associated with the RSP; this is intended to provide a consistent way to demonstrate the value of demand and supply resources. Fourth, near-term CPUC policy actions are incorporated with the stated intention of ensuring results from the IRP modeling inform other CPUC proceedings.

While the 46 MMT scenario was adopted as the RSP this cycle, the CPUC also developed a 38 MMT scenario and, in April of 2020, modified the filing requirements for entities to include both targets.

EBCE's Approach to IRP Compliance Analysis

EBCE staff developed recommended portfolios to meet the CPUC's 46 MMT (Scenario 1) and 38 MMT (Scenario 2) scenarios. Both of EBCE's recommended scenarios were developed based on the CPUC's system-level resource portfolios.

Working with our consultant, Ascend Analytics, staff incorporated details of EBCE's existing contracts as the baseline for the portfolios. The next step was to identify EBCE's proportional share of the nameplate capacity of each resource type in the 46 MMT RSP and 38 MMT scenario. Adjustments were then made to represent EBCE organization and customer preferences, as well as staff's knowledge of the electric system and resource availability (e.g. the likelihood that resources currently under contract will become available for re-contracting during the planning horizon). Some of these adjustments include: not selecting any energy to be produced directly by nuclear or natural gas generation facilities; assuming a lower volume of energy generated from/contracted with in-state hydro facilities due to the limited availability of these resources and the strong market appetite to contract with them; assuming a lower volume of energy generated from/contracted with out of state hydro resources due to strong appetite amongst California load serving entities, especially CCAs, to contract with these resources.

The baseline list of existing contract resources incorporated into both Scenarios 1 and 2 is listed in Appendix 1, Table 1.1.

The forecasted list of resources to build portfolios consistent with Scenarios 1 and 2 are described in Appendix 1, Tables 2 and 3, respectively.

Results of Analyses & Recommended Compliance Portfolios

Using the approach described herein, EBCE was able to achieve compliance with its share of the CPUC GHG emissions limits in both Scenarios 1 and 2. Specifically, by 2030 Scenario 1 will achieve a limit of 1.23 MMT of emissions and Scenario 2 will achieve a limit of 0.984 MMT. Both scenarios assume a 2030 load of 6,910 GWh.[4] A summary of results follows; additional details and visual aids are included as Attachment 1, "Integrated Resource Plan Compliance Results" PowerPoint.

- Forecast Costs of Portfolios
  - Scenario 1 (46 MMT) Portfolio: estimated cost $73.70/MWh to serve load. Average cost per year of $507 million over the 2021 – 2030 planning horizon. Note these values are calculated using the CPUC's resource cost assumptions which in many cases are higher than current values or internal projections.
  - Scenario 2 (38 MMT) Portfolio: estimated cost $75.00/MWh to serve load. Average cost per year of $516 million over the 2021 – 2030 planning horizon. Note these values are calculated using the CPUC's resource cost assumptions which in many cases are higher than current values or internal projections.

- Resource Mix of Portfolios
  - Scenario 1 (46 MMT) Portfolio: Total contracted nameplate capacity of 2,277 MW by 2030. 1,220 MW resulting from new-build resources. 1,057 MW expected to be contracted from existing resources.
  - Scenario 2 (38 MMT) Portfolio: Total contracted nameplate capacity of 2,578 MW by 2030. 1,486 MW resulting from new-build resources. 1,092 MW expected to be contracted from existing resources.[5]

- Risk Management associated with Portfolios
  - Overall: Both scenarios are trying to fill an energy need of approximately 6,900 GWh in 2030. Scenario 1 requires fewer resources under long-term contract to meet RPS and GHG emissions targets than are required in Scenario 2, the result is that a larger portion of Scenario 1 can be filled with Spot Market and/or Short-Term Contract transactions than can be utilized by Scenario 2.
  - EBCE staff intends to enter into Short Term Contracts in the form of fixed-price energy transactions to fill a portion of its un-hedged position to ensure EBCE is not overly relying on the CAISO system, providing negative contribution to system reliability and as a means of insurance, to protect its customers from volatility in Spot Market prices. Staff assessed the total position unhedged by long-term resources under Scenarios 1 and 2 and applied a 3:2 ratio (ratio of

[4] For reference, EBCE's forecast 2020 emissions for 5,900 GWh of load will be .970 MMT.

[5] "Existing resources" in both scenarios represents EBCE's existing long-term contracts with generating resources (as identified in Table 1.1) as well as resources currently built and operational within the CAISO but not yet under contract to EBCE. The total nameplate capacity of current EBCE resources under contract in both scenarios is 661MW. Note: EBCE's capacity-only contracts (as identified in Table 1.2) are not included as EBCE does not have contractual right to energy from these resources.

short-term contracts to spot market purchases) to both scenarios to fill the remaining open position.[6]

- Summary of Portfolios: Over the 2021-2030 study timeframe, the long-term resources that comprise the Scenario 1 portfolio are forecasted to provide approximately 4,150 GWh of energy per year that can be used to meet demand. This leaves an average forecasted open position in Scenario 1 of 2,700 GWh per year (1,800 GWh in Short-Term transactions; 900 GWh in Spot Market purchases). During the same timeframe, the resources that comprise the Scenario 2 portfolio are forecasted to provide approximately 4,500 GWh of energy per year that can be used to meet demand. This leaves an average forecasted open position in Scenario 2 of 2,400 GWh per year (1,625 in Short-Term transactions; 775 GWh in Spot Market purchases). The percent breakdowns of each portfolio's average contribution to demand from 2021 to 2030 is summarized here:

	% Long-Term	% Short-Term	% Spot Market
46 MMT	60.5%	26.5%	13%
38 MMT	65%	24%	11%

- Scenario 1 (46 MMT) Portfolio: Approximately 925 GWh or 13.5% of EBCE demand will need to be purchased in the Spot Market in 2030.
- Scenario 2 (38 MMT) Portfolio: Approximately 650 GWh or 9.5% of EBCE demand will need to be purchased in the Spot Market in 2030.

- Reliability of Portfolios
  - Staff evaluated portfolio reliability in relation to EBCE's ability to meet its CPUC-designated Resource Adequacy obligations on an annual basis and in the month of September for every year during the study period. The results indicate that RA obligations can be achieved through a combination of existing RA contracts, long-term generation contracts (i.e. the resources described in the portfolios of Scenarios 1 and 2) and with additional RA purchases, similar to those EBCE engages in today. The analyses also evaluated the number of "forced" & "simulated" hours of portfolio market exposure. In this case, "forced exposure" represents the number of hours where generating resources and energy storage are insufficient to meet demand. "Simulated exposure" represents the number of hours with net market purchases including energy storage charging.
  - Scenario 1 (46 MMT) Portfolio:
    - Resource Adequacy: The long-term contracts anticipated in this portfolio do not represent sufficient capacity to meet annual or September RA obligations. Additional RA procurement will be necessary for each year from 2021 to 2030. The forecast costs for each year and for the month of September are in Table 4.
    - Forced market exposure hours: Forecasted forced exposure hours decrease over time. By 2030 the mean forecasted forced exposure hours for this portfolio are approximately 6300 hours per year. Analysis indicated a range of expected outcomes for forced exposure hours; the

[6] 3:2 ratio of short term contracts to spot market purchases is included as an approximate representation of EBCE organizational risk tolerance. Actual ratios and risk tolerances incorporated into procurement strategy will be evaluated with EBCE's Risk Oversight Committee and approved by EBCE's Board.

P5 is approximately 6050 hour and P95 is approximately 6500 hours. For comparison, there are 8760 hours in a calendar year, thus 6300 hours of represents exposure in approximately 72% of hours in 2030.
        - Simulated market exposure hours: Forecasted simulated exposure hours decrease over time. By 2030 the mean forecasted simulated exposure hours for this portfolio are approximately 6700 hours per year. Analysis indicated a range of expected outcomes for simulated exposure hours; the P5 is approximately 6500 hours and P95 is approximately 6800 hours. 6700 hours of represents exposure in approximately 76% of hours in 2030.
    - Scenario 2 (38 MMT) Portfolio:
        - Resource Adequacy: The long-term contracts anticipated in this portfolio do not represent sufficient capacity to meet annual or September RA obligations. Additional RA procurement will be necessary for each year from 2021 to 2030. The forecast costs for each year and for the month of September are in Table 5.
        - Forced market exposure hours: Forecasted forced exposure hours decrease over time. By 2030 the mean forecasted forced exposure hours for this portfolio are approximately 6000 hours per year. Analysis indicated a range of expected outcomes for forced exposure hours; the P5 is approximately 5750 hours and P95 is approximately 6450 hours. 6000 hours of represents exposure in approximately 68% of hours in 2030.
        - Simulated market exposure hours: Forecasted simulated exposure hours decrease over time. By 2030 the mean forecasted simulated exposure hours for this portfolio are approximately 6400 hours per year. Analysis indicated a range of expected outcomes for simulated exposure hours; the P5 is approximately 6100 hours and P95 is approximately 6700 hours. 6400 hours of represents exposure in approximately 73% of hours in 2030.
    - It is important to note the term "hours of market exposure" refers solely to an hour where some portion of EBCE's demand is exposed to the market. It is not a representation of volume or severity of demand exposed to the market. An hour in which one MW of demand is exposed to the market would contribute to the market exposure hours the same as an hour where 600 MW of demand is exposed to the market. Table 6 provides an estimation of severity of exposure to the Spot Market associated with both Scenarios 1 and 2.

Fiscal Impact

There is no financial impact associated with the recommended action as this filing is intended to meet the CPUC compliance requirement and actual procurement authorization will be brought forth to the board in accordance to EBCE's risk management policies.

Next Steps

Staff will populate the three CPUC required documents with detail about EBCE's analysis and findings, have the CEO approve the final IRP reports, and tile two compliance portfolios by

September 1, 2020. Concurrently, Staff will initiate an additional study to evaluate the possibility of setting more aggressive organizational goals related to GHG emissions reduction. The results of this study will also identify: Carbon Free metrics of the proposed Portfolio, Forecast Costs, Resource Mix, Risk Management, and Reliability of the proposed portfolio. Staff will present these supplemental findings to the Board in the fall and will seek Board approval to establish an EBCE target for GHG emissions reduction.

Attachments

Attachment 1: Integrated Resource Plan Compliance Results PowerPoint
Attachment 2: CPUC Narrative Template
Attachment 3: CPUC Resource Data Template
Attachment 4.1: 46 MMT CPUC Clean System Power Calculator
Attachment 4.2: 38 MMT CPUC Clean System Power Calculator

Appendix 1

Table 1.1: Baseline List of EBCE's Existing Generating Contract Resources

Counterparty / Project	County	Location	Technology	Term (years)	COD	Renewable Capacity	Battery Capacity MW	Duration - Hours	Battery MWhs
Raceway	Kern	Southern_PGE	Solar + Storage	20	1/1/2023	125	80	2	160
Edwards	Kern	Southern_PGE	Solar	15	1/1/2023	100			
EDPR/Sonrisa	Fresno	Southern_PGE	Solar + Storage	20	1/1/2023	100	30	4	120
Rosamond	Kern	Southern_PGE	Solar	15	5/1/2021	112			
Tulare	Tulare	Southern_PGE	Solar	15	1/1/2022	56			
Salka	Alameda	Generic	Wind	20	1/1/2021	57.5			

Table 1.2: Baseline List of EBCE's Existing Capacity-Only Long-Term Contract Resources

Counterparty / Project	County	Technology	Term (years)	COD	Renewable Capacity	Battery Capacity MW	Duration - Hours	Battery MWhs
esVolta Tierra Robles	Alameda	Storage	13	12/1/2021	n/a	7	4	28
Sunrun PDR	Alameda	Storage	10	1/1/2022	n/a	.5	4	2
Vistra Oakland Energy Storage 1	Alameda	Storage	10	1/1/2022	n/a	36.25	4	145

Table 2: List of Resources included in EBCE Scenario 1 (46 MMT Portfolio)

			46 MMT Reference System Plan					EBCE RSP Pro-Rata Share					% of Pro-Rata	max allow-ed	Overall EBCE Pro Rata Portfolio			
Resource	MW/ GWh	Type	2020	2022	2026	2030		2020	2022	2026	2030				2020	2022	2026	2030
2-hr Battery Storage	MW	Storage	542	559	990	6727		20	19	33	225		125%		0	0	80	281
4-hr Battery Storage	MW	Storage	1304	4158	8075	5410		48	141	272	181		125%		0	176	226	226
Pumped Storage (long-duration)	MW	Storage	1599	1599	2573	2573		59	54	87	86		75%		0	0	0	64
Large Hydro	MW	Large Hydro	7070	7070	7070	7070		259	239	238	236		70%	100	0	100	100	100
Imported Hydro	MW	Imported Hydro	2852	2852	2852	2852		104	96	96	95		70%		0	67	67	67
Coal	MW	Coal	480	480	0	0		18	16				0%		0	0	0	0
Biogas	MW	Biogas	278	278	278	278		10	9	9	9		50%		0	0	0	5
Biomass	MW	Biomass	625	625	625	623		23	21	21	21		50%		0	0	0	10
Geothermal	MW	Geothermal	1851	1851	1851	1851		68	63	62	62		100%		0	12	75	75
Small Hydro	MW	Small Hydro	974	974	974	974		36	33	33	33		100%	20	0	20	20	20
Shed DR	MW	DR	2195	2418	2418	2418		80	82	81	81		50%		0	41	41	40
Nuclear	MW	Nuclear	2935	2935	635	635		107	99	21	21		0%		0	0	0	0
Candidate Wind Resources													112%					
Southern_CA_Desert_Southern_NV_Wind	MW	Wind	0	0	600	600		0	0	20	20				0	119	131	131
Sacramento_River_Wind	MW	Wind	0	1442	1442	1442		0	49	49	48				0	58	58	58
Tehachapi_Wind	MW	Wind	0	275	275	275		0	9	9	9				0	119	131	131
Generic_CA_Wind	MW	Wind	0	0	0	0		0	0	0	0				0	0	0	23
New_Mexico_Wind	MW	Wind	0	0	0	606		0	0	0	20				0	60	65	65
Candidate Solar Resources													113%					
Southern_PGE_Solar	MW	Solar	0	143	1895	2078		0	5	64	69				0	168	493	493
Southern_CA_Desert_Southern_NV_Solar	MW	Solar	1196	2058	2306	4340		44	70	78	145				0	187	187	187
Tehachapi_Solar	MW	Solar	804	3402	3402	4202		29	115	115	140				0	187	187	187
Generic_CA_Solar	MW	Solar						0	0	0	0	368			0	0	0	106

Table 3: List of Resources included in EBCE Scenario 2 (38 MMT Portfolio)

	38 MMT Reference System Plan						EBCE RSP Pro-Rata Share					% of Pro-Rata	max allow-ed	Overall EBCE Pro Rata Portfolio			
Resource	MW/ GWh	Type	2020	2022	2026	2030	2020	2022	2026	2030				2020	2022	2026	2030
2-hr Battery Storage	MW	Storage	541	559	990	5367	20	19	33	179		125%		0	0	80	224
4-hr Battery Storage	MW	Storage	1304	4158	6983	7612	48	141	235	254		125%		0	176	294	318
Pumped Storage (long-duration)	MW	Storage	1599	1599	3204	3204	59	54	108	107		75%		0	0	0	80
Large Hydro	MW	Large Hydro	7070	7070	7070	7070	259	239	238	236		74%	100	0	100	100	100
Imported Hydro	MW	Imported Hydro	2852	2852	2852	2852	104	96	96	95		74%		0	71	71	71
Coal	MW	Coal	480	480	0	0	18	16				0%		0	0	0	0
Biogas	MW	Biogas	278	278	278	278	10	9	9	9		50%		0	0	0	5
Biomass	MW	Biomass	625	625	625	623	23	21	21	21		50%		0	0	0	10
Geothermal	MW	Geother mal	1851	1851	1851	1851	68	63	62	62		100%		0	0	78	78
Small Hydro	MW	Small Hydro	974	974	974	974	36	33	33	33		100%	20	0	20	20	20
Shed DR	MW	DR	2195	2418	2418	2418	80	82	81	81		50%		0	41	41	40
Nuclear	MW	Nuclear	2935	2935	635	635	107	99	21	21		0%		0	0	0	0
Candidate Wind Resources												115%					
Southern_CA_Desert_Southern_NV_Wind	MW	Wind	0	442	1042	1042	0	15	35	35				0	125	152	152
Sacramento_River_Wind	MW	Wind	0	1442	1442	1442	0	49	49	48				0	58	58	58
Tehachapi_Wind	MW	Wind	0	275	275	275	0	9	9	9				0	125	152	152
Generic_CA_Wind	MW	Wind				0	0	0	0	0				0	0	0	168
New_Mexico_Wind	MW	Wind	0	0	0	1500	0	0	0	50				0	62	76	76
Candidate Solar Resources												114%					
Southern_PGE_Solar	MW	Solar	0	113	1865	3498	0	4	63	117				0	168	493	493
Southern_CA_Desert_Southern_NV_Solar	MW	Solar	1226	2088	3020	3898	45	71	102	130				0	205	205	205
Tehachapi_Solar	MW	Solar	774	3402	3402	4202	28	115	115	140				0	205	205	205
Generic_CA_Solar	MW	Solar	0	0	0	0	0	0	0	0	401			0	0	0	118

Table 4: Scenario 1 Forecast Supplemental RA procurement costs

Annual

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
$13M	$4M	$11M	$27M	$24M	$33M	$30M	$30M	$30M	$30M

September only

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
$2M	<$1M	$2M	$3M	$3M	$4M	$4M	$4M	$4M	$4M

Table 5: Scenario 2 Forecast Supplemental RA procurement costs

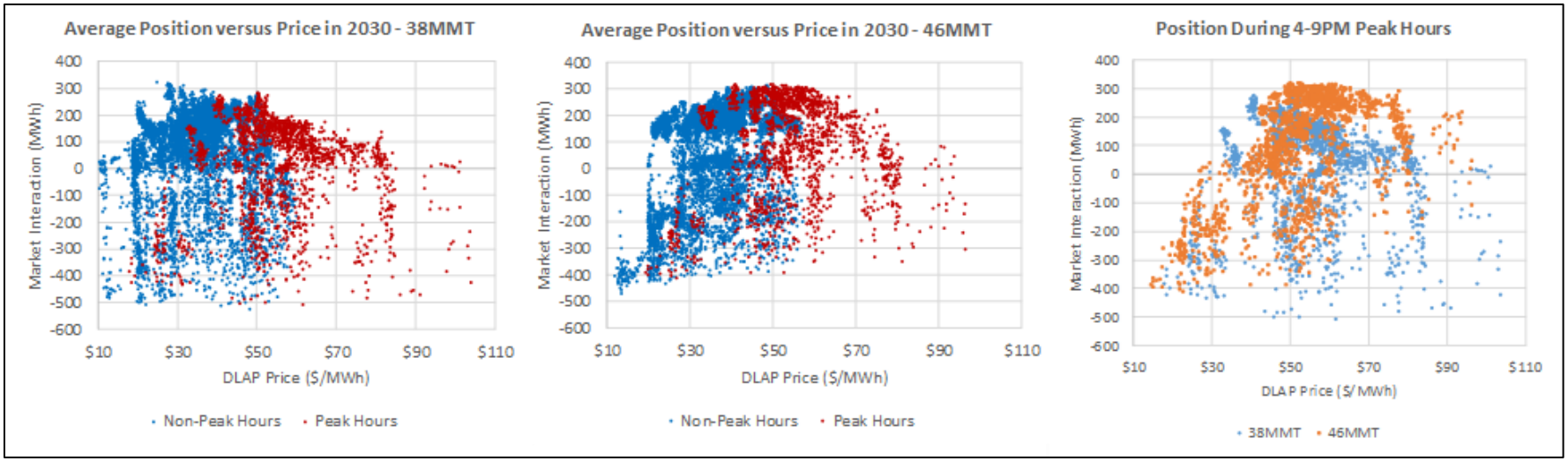
Annual

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
$13M	$4M	$18M	$23M	$20M	$27M	$24M	$24M	$23M	$23M

September only

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
$2M	<$1M	$2M	$3M	$3M	$3M	$3M	$3M	$3M	$3M

Table 6: Visual representation of portfolio interactions with Spot Market.
Note: hours of negative market interaction represent hours when EBCE is buying from the market; hours of positive interaction represent hours where EBCE is selling to the market. Tables assume EBCE has engaged in Short-Term Transactions as described in section titled “Risk Management associated with Portfolios”.



Attachments:

A. Resolution to Approve and use the results of the IRP analysis and Authorize the CEO to file the final results;
B. CPUC Narrative Template;
C. CPUC Resource Data Template;
D. CPUC CSP_46MMT_june_2020 (link);
E. CPUC CSP_38MMT_june_2020(link);
F. IRP Compliance Approval Presentation

RESOLUTION NO.__

A RESOLUTION OF THE BOARD OF DIRECTORS

OF THE EAST BAY COMMUNITY ENERGY AUTHORITY

WHEREAS The East Bay Community Energy Authority ("EBCE") was formed as a community choice aggregation agency ("CCA") on December 1, 2016, Under the Joint Exercise of Power Act, California Government Code sections 6500 *et seq.*, among the County of Alameda, and the Cities of Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Piedmont, Oakland, San Leandro, and Union City to study, promote, develop, conduct, operate, and manage energy-related climate change programs in all of the member jurisdictions. The cities of Newark and Pleasanton, located in Alameda County, along with the City of Tracy, located in San Joaquin County, were added as members of EBCE and parties to the JPA in March of 2020.

WHEREAS the California Public Utilities Commission (CPUC) issued Decisions 18-02-018, 19-11-016 and 20-03-028 requiring its jurisdictional load serving entities file their 2020 Integrated Resource Plans (IRP) with the CPUC on or before September 1, 2020; and

WHEREAS the CPUC further requires entities utilize three document templates to complete their filings: the Narrative Template, the Resource Data Template, and the Clean System Power (CSP) Calculator; and

WHEREAS EBCE staff worked with Ascend Analytics to perform analysis and develop IRP portfolios to meet the CPUC's requirements; and

WHEREAS, EBCE staff has presented the IRP analysis performed by Ascend Analytics and EBCE staff to the Board.

NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE EAST BAY COMMUNITY ENERGY AUTHORITY DOES HEREBY RESOLVE AS FOLLOWS:

Section 1. The Board hereby approves the results of the IRP analysis performed by Ascend Analytics and EBCE staff and presented at this Board meeting.

Section 2. The Board hereby authorizes staff to utilize the results of its IRP analysis to populate CPUC-required document templates, delegates authority to the CEO to approve the final IRP reports on behalf of the Board, and submit the 2020 IRP compliance filing by September 1, 2020.

ADOPTED AND APPROVED this 15th day of July, 2020.

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Dan Kalb, Chair

ATTEST:

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Stephanie Cabrera, Clerk of the Board

Date	Version	Change type	Release notes	Tab Name	Cell Reference	Link
12/26/2019	1	Initial release	Initial public release of template. Emailed to service list and posted to https://www.cpuc.ca.gov/General.aspx?id=6442459770	N/A	N/A	N/A
2/14/2020	2	General	Added version_notes tab for documenting changes between versions.	This tab	N/A	N/A
2/14/2020	2	General	Highlighted changes since v1 in yellow for ease of finding.	Throughout workbook; see below.	Throughout workbook; see below.	Throughout workbook; see below.
2/14/2020	2	General	Added hyperlinks to new changes for ease of finding (see columns to the right of this table).	This tab	N/A	N/A
2/14/2020	2	Instructions	General update to instructions tabs to reflect new changes listed below, and questions from the 1/16 webinar.	N/A	N/A	N/A
2/14/2020	2	Instructions	New deadline of July 1st, 2020 for submitting this workbook.	instructions_3_high_level_steps	D15	#instructions_3_high_level_steps!D15
2/14/2020	2	Instructions	Instructions now specify a cutoff date of 4/30/2020 for determining the set of contracts that are planned, online, or under development.	instructions_3_high_level_steps	D4	#instructions_3_high_level_steps!D4
2/14/2020	2	Instructions	Changed instructions to clarify, for storage_max_discharge: If the resource is a storage **or hybrid** resource, report **the battery's** maximum rate of discharge in MW here.	instructions_7_data_dict	D31	#instructions_7_data_dict!D31
2/14/2020	2	Hybrid / storage accounting	Reordered columns in unique_contracts to group the hybrid-resource related items together. All variables related to hybrids now have "hybrid" in the name.	unique_contracts	U:X	#unique_contracts!U:X
2/14/2020	2	Hybrid / storage accounting	Added **is_hybrid** field (1 or 0) to clearly identify hybrid resources.	unique_contracts	U1	#unique_contracts!U1
2/14/2020	2	Hybrid / storage accounting	Add a new hybrid resource variable: **hybrid_combined_max_mw** . This is the maximum rate of discharge of the hybrid resource (including generator + battery). E.g. a hybrid could be 100 MW solar, 20 MW 4-hr battery, but only have a max total MW of 110 MW. This field would contain 110.	unique_contracts	W1	#unique_contracts!W1
2/14/2020	2	Hybrid / storage accounting	Add new var, **hybrid_can_charge_from_grid** : 1/0 variable. 1 means can charge from grid as well as the resource to which it is paired, 0 means it can only charge from the paired resource.	unique_contracts	X1	#unique_contracts!X1
2/14/2020	2	Accounting for incremental resources per D. 19-11-016	Added instructions for the following special case resources counting towards the D.19-11-016 procurement requirement: new build resources that are energy-only in 2021, demand side resources, and upgrades to existing resources (including capacity increases or adding a battery to an existing resource to make a hybrid resouce).	instructions_10_incrementality	A1	#instructions_10_incrementality!A1
2/14/2020	2	Contract Types	The "planned" contract type is now split into planned_existing and planned_new. Definitions are provided in the contract_status tab.	contract_status	A5	#contract_status!A5
2/14/2020	2	monthly_gwh_mw tab	Template now prompts users to fill out a MW amount for ALL imports, unspecified and specified.	resources	D:D	#resources!D:D
2/14/2020	2	monthly_gwh_mw tab	For transfer_purchase and transfer_sale, template now asks for approximate resource mix in note.	resources	B:B	#resources!B:B
2/14/2020	2	Resource list	Updated baseline resources list in "resources" tab to reflect 1/3/2020 ALJ ruling finalizing baseline, available at https://www.cpuc.ca.gov/General.aspx?id=6442463413 . Staff crosswalked and combined this new list, the list included in v1, and the latest CAISO NQC list to get the most complete set of resource names possible. Note that some of these identifiers from these two datasets might be redundant and "point" to the same resource; LSEs can use whichever one they prefer. For resources in the baseline list with no CAISO ID, staff used the generator name as the identifier.	resources	A:I	#resources!A:I
2/14/2020	2	Resource list	Corrected note types for unspecified_imports	resources	B:B	#resources!B:B
2/14/2020	2	Resource list	Corrected note type for unbundled_rec	resources	B:B	#resources!B:B
2/14/2020	2	Resource list	Corrected note type for unspecified_non_import	resources	B:B	#resources!B:B
2/14/2020	2	Resource list	Changed supertype names for clarity.	instructions_8_supertypes	A:A	#instructions_8_supertypes!A:A
2/14/2020	2	Resource list	Added "sellers_choice" contract option for resource ("special" supertype).	instructions_9_special_notes	A9	#instructions_9_special_notes!A9
2/14/2020	2	unique_contracts tab	The unique_contracts tab now asks for online_date for new resources.	unique_contracts	F:F	#unique_contracts!F:F
2/14/2020	2	unique_contracts tab	Added columns to account for incrementality of resources per CPUC Decision 19-11-016.	unique_contracts	M:N	#unique_contracts!M:N
2/14/2020	2	unique_contracts tab	Template now requests contract execution date.	unique_contracts	G:G	#unique_contracts!G:G
2/14/2020	2	monthly_gwh_mw tab	Contract status is now a blue field rather than a purple one, meaning it is NOT auto-populated and the LSE must fill it out.	monthly_gwh_mw	I:I	#monthly_gwh_mw!I:I
2/14/2020	2	monthly_gwh_mw tab	Added currently_online field in purple.	monthly_gwh_mw	N:N	#monthly_gwh_mw!N:N
2/14/2020	2	Instructions	Added language to clarify the purpose of notes and why they are needed for staff to uniquely identify contracts	instructions_5_notes_explained	A5	#instructions_5_notes_explained!A5
2/25/2020	2a	Contracts tab	Added lookup formulas to show max MW (nameplate for physical resources) and NQC MW in the contracts tab. These are used 1) for LSE data checking and 2) summed up in the new incremental procurement dashboard in the "dashboard" tab.	unique_contracts	AJ:AQ	#unique_contracts!AJ:AQ
2/25/2020	2a	Dashboard tab	Added table to calculate incremental procurement per D.19-11-016 to "dashboard" tab.	dashboard	B15	#dashboard!B15
2/25/2020	2a	monthly_gwh_mw tab and unique_contracts tab	Added some example data to demonstrate new incremental procurement counting functionality, lines 49-51 in the monthly_gwh_mw tab	monthly_gwh_mw	49:51	#monthly_gwh_mw!49:51
2/25/2020	2a	Instructions	Added language to clarify that "baseline" refers to baseline in D.19-11-016 against which incremental procurement will be measured, not baseline for capacity expansion modeling purposes.	instructions_1_general	A9	#instructions_1_general!A9
2/25/2020	2a	Resource list	unspecified_import resource type is no longer counted as incremental for purposes of D.19-11-016.	resources	H1888	#resources!H1888
2/25/2020	2a	Instructions	Clarified language around contract time frames to report.	instructions_3_high_level_steps	D4	#instructions_3_high_level_steps!D4
2/25/2020	2a	Instructions	Corrected language around "new" contracts and RESOLVE-selected resources in instructions_8.	instructions_8_supertypes	B5:B6	#instructions_8_supertypes!B5:B6
2/25/2020	2b	Contracts tab	Wording tweaks to definition of "development" resources	contract_status	B3	#contract_status!B3
5/11/2020	3	Instructions	Updated due date for this data template to September 1, 2020.	instructions_1_general	A5	#instructions_1_general!A5
5/11/2020	3	Instructions	Cutoff for determining contract status is now June 30th, 2020.	instructions_3_high_level_steps	D8	#instructions_3_high_level_steps!D8
5/11/2020	3	Instructions	Added instructions for "opt-out" LSEs as identified in D.19-11-016.	instructions_3_high_level_steps	D8	#instructions_3_high_level_steps!D8
5/11/2020	3	Instructions	Per Ordering Paragraphs (OPs) 2 and 3 of D.20-03-028 and the latest Narrative Template, LSEs must now submit at least two data templates, one "preferred conforming" for a 46 MMT portfolio and another "preferred conforming" for a 38 MMT portfolio (and more than two if the LSE plans on submitting multiple conforming or alternative portfolios). Instructions are updated to reflect this.	instructions_3_high_level_steps	D3	#instructions_3_high_level_steps!D3
5/11/2020	3	Instructions	Updated submission instructions, including new rules on naming conventions for multiple conforming/preferred/alternative portfolios.	instructions_3_high_level_steps	D19	#instructions_3_high_level_steps!D19
5/11/2020	3	Instructions	Updated data dictionary to include fields added to template since v2.	instructions_7_data_dict	C17	#instructions_7_data_dict!C17
5/11/2020	3	Dashboard tab	Dashboard now contains a System Reliability Progress Tracking Table, displaying estimated NQC by resource type and planned/existing status for a given month. This table now uses the CPUC's currently adopted monthly average ELCC in the short term (2020-2023), and RESOLVE-calculated average ELCC in the long term (2024-2030). Wind has different ELCC values, a "high" and a "low" depending on its capacity factor; see the "resources" tab for an assignment of wind resources to ELCC values. Note that this table is different from the D.19-11-016 incremental procurement NQC, because that decision specifies different counting rules than the "standard" NQC used in PRM calculations.	dashboard	C6	#dashboard!C6
5/11/2020	3	monthly_gwh_mw tab	ELCC types are now assigned on a by-resource level, rather than by RESOLVE categories. This change was implemented to allow the updated NQC counting functionality described above.	resources	K:K	#resources!K:K
5/11/2020	3	monthly_gwh_mw tab	ELCC calculation logic is changed in monthly_gwh_mw to accommodate the changes above. This includes formulas for calculating storage NQC. If a battery resource is less than four hour duration, its NQC is derated by [duration in hours / 4 hours]. All storage of 4 hour or more duration has an NQC equal to 100% of its nameplate capacity.	monthly_gwh_mw	O:U	#monthly_gwh_mw!O:U
5/11/2020	3	monthly_gwh_mw tab	Added cns_mapping tab to allow users of this data template to map individual resources to categories in the CNS tool. This tab is for information only and is intended to help LSEs cross-reference their data in the CNS tool with their data in this template.	cns_mapping	A1	#cns_mapping!A1
5/11/2020	3	elcc	Updated ELCC values. ELCC is now dependent on the MMT of the portfolio (38 vs 46) and varies by both year and month. This tab assumes 0% NQC for unknown resources (i.e. the template cannot map a type) by default. If type is unknown and you want to get NQC from a resource, you must provide a contracted NQC value. Otherwise the template will estimate zero by default.	elcc	A1	#elcc!A1
5/11/2020	3	38 vs 46 MMT portfolio	You must now select 38 or 46 MMT in the portfolio_toggle tab, depending on which portfolio you are entering into this data template.	portfolio_toggle	A1	#portfolio_toggle!A1
5/11/2020	3	Reliability	The template now estimates a system RA obligation through 2030, based on a user-entered 2021 RA obligation. This will be kept confidential.	estimate_system_ra_requirement	B68	#estimate_system_ra_requirement!B68
5/11/2020	3	Error checking	Added formulas in Column T of the dashboard tab to test to see if there is a mismatch between the totals of the various tables. This is caused by improper data entry. All of the values here should read "TRUE." If you see FALSE, please correct underlying data. This is often caused by the template being unable to assign an ELCC type to a resource--a formula flags this.	dashboard	T:T	#dashboard!T:T

5/11/2020	3	Reliability	Summary table in dashboard can now display NQC MW for the System Reliability Progress Tracking Table. It will compare this to the RA obligation estimated in the estimate_system_ra_requirement tab. Note that this table can also display GWh by using the toggle in Cell A1.	dashboard	67:70	#dashboard!67:70
5/11/2020	3	List of LSEs	Updated list of filing LSEs to match new IRP OIR, available here: http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M333/K039/333039523.PDF	lse_names	A:A	#lse_names!A:A
5/11/2020	3	Q and A	Added link to CPUC Q&A on this workbook. Please review the Q&A after reviewing the instructions.	instructions_11_q_and_a	A1	#instructions_11_q_and_a!A1
5/11/2020	3	Instructions	Added new instructions tab for dealing with special case resources: CAM, PCIA, D.19-11-016 optout resources	instructions_12_cam_pcia_optout	A1	#instructions_12_cam_pcia_optout!A1

General instructions for Load Serving Entities (LSEs):

PURPOSE: This workbook is for reporting your existing and planned energy and capacity contracts in the context of Integrated Resource Planning (IRP).
Please review all the tabs in this workbook carefully before entering data. Follow all instructions.
Once you understand the structure of the workbook, please review the Q&A posted here for more detailed technical questions: ftp://ftp.cpuc.ca.gov/energy/modeling/Filling%20Requirement%20QA%20_%2004232020.pdf
Please send this Resource Data Template to irpdatarequest@cpuc.ca.gov via the CPUC's secure FTP application, following the instructions in Part 3. More information on using the FTP can be found in the Filing Requirements Standards document. You must submit at least two "preferred conforming" portfolios, one corresponding to your 38 MMT portfolio, the other to your 46 MMT portfolio. See instructions_3 for more detail on naming conventions and instructions for submitting optional additional portfolios.
Additional documentation can be found in the Glossary section of the Narrative Template.
Please reach out to IRPDataRequest@cpuc.ca.gov with any questions on the template. Write "2020 Data Template Question" in the subject line.
All numbers should be entered as zero or positive numbers. Do not enter negative numbers.
Only modify the four blue tabs: "portfolio_toggle","monthly_gwh_mw","unique_contracts","estimate_system_ra_requirement". More detailed instructions for using these tabs follows.
Note: all rererences in this template to "baseline" refer to the baseline in D.19-11-016 against which incremental procurement will be measured. It does NOT refer to the RESOLVE baseline, or, more generally, any other baseline used for capacity expansion modeling purposes.
Review, but **do not** modify, the orange, green and purple tabs.
Do not change the position or text of any of the column headers in any tab (i.e. do not insert rows above the headers; do not insert columns between existing headers). Do not change any of the tab names, or the order in which they appear. There is no need to mark this data as confidential; staff will treat it as confidential.
NOTE ON COLOR CODING: Tabs in this spreadsheet are color-coded to help the user understand and use them effectively. -Broadly speaking, the orange tabs are instructions, the blue tabs are for inputting and validating procurement data, the green tabs are standardized lists of acceptable values that can be entered into the blue tab, and the purple tabs are for error checking and creating summary statistics. -The orange, green and purple tabs should be reviewed, but not modified directly; LSEs should enter their data ONLY in the blue tabs, and use the green and purple tabs to ensure data quality. -More detail on how to use each tab is provided in the instructions.

Please review the instructions below to determine how to use the tabs of this workbook.

Tab name	Purpose	Description	Instructions to LSE
version_notes	Documentation	Description of v2,v2a,v2b,and v3 changes since initial informal release of workbook on Dec 26, 2019	Review; do not modify
instructions_1_general	Instructions	General instructions; Overview of purpose and structure of this workbook.	Review; do not modify
instructions_2_tab_overview	Instructions	Tab-specific documentation.	Review; do not modify
instructions_3_high_level_steps	Instructions	Instructions for entering data into this workbook.	Review; do not modify
instructions_4_cell_color_codes	Instructions	Describes the purpose and use of color-coding of cells.	Review; do not modify
instructions_5_notes_explained	Instructions	Describes the purpose of the "notes" column and how notes should be used when entering data.	Review; do not modify
instructions_6_types_of_notes	Instructions	Describes specific types of notes to be used.	Review; do not modify
instructions_7_data_dict	Instructions	Technical information on data fields.	Review; do not modify
instructions_8_supertypes	Instructions	Documentation on the different "supertypes" of resources in the "resources" tab. A supertype concerns whether a resource is new or baseline, physical or nonphysical, etc.	Review; do not modify
instructions_9_special_notes	Instructions	Documentation on different nonstandard resource types.	Review; do not modify
instructions_10_incrementality	Instructions	Instructions for how to enter certain nonstandard resources as being incremental to the procurement mandate in D.19-11-016	Review; do not modify
instructions_11_q_and_a	Instructions	Link to Q&A doc	Click the link and review the document that appears.
instructions_12_cam_pcia_optout	Instructions	Instructions for special case resouces such as PCIA, CAM, and D.19-11-016 opt-out	Review; do not modify
portfolio_toggle	Data input	Sheet for LSE to choose whether they are entering information for a 38 or 46 MMT portfolio	Select 38 or 46 MMT using the dropdown menu in Cell A1.
estimate_system_ra_requirement	Data input	Sheet for estimating the LSE's system RA requirement through 2030.	Please input your LSE's 2021 System RA allocation, NQC MW in Cell B68. This will be kept confidential.
monthly_gwh_mw	Data input & automatic validation	Sheet for LSE to enter their monthly procurement data. Contains pre-written formulas for error checking and validation.	Enter data and copy down formulas here, per Part 3 of the instructions.
unique_contracts	Data input & automatic validation	Sheet for LSE to enter data about unique contracts. Contains pre-written formulas for error checking and validation.	Enter data and copy down formulas here, per Part 3 of the instructions. As is described in Part 3, you must populate monthly_gwh_mw FIRST.
errors	Error checking dashboard	Automatically summarizes data errors from the blue data input tabs.	Review to ensure your portfolio is accurately entered. Do not modify this tab directly. Fix errors in blue data input tabs data where an error is identified.
fillmes	Error checking dashboard	Shows the LSE where they need to provide more information in cells containing "fillme."	Review to ensure your portfolio is accurately entered. Do not modify this tab directly. If you see errors, go back to the blue tab data and fill in cells marked "fillme."
dashboard	Error checking dashboard	Automatically generates a summary of the LSE's portfolio.	Review to ensure your portfolio is accurately entered. Do not modify this tab directly (you can, however, use the dropdown menus in Column B). Fix errors in blue tab data where an error is identified.
resources	List of acceptable values	List of acceptable generating resources, and supporting info	When entering data into the blue tabs, only use resource identifiers from Col A of this tab.
lse_names	List of acceptable values	List of acceptable LSE names, and supporting info	When entering data into the blue tabs, only use LSE names from Col A of this tab.
elcc	ELCC value lookup table	Used to assign an estimate of the NQC value of new resources	Review; do not modify
contract_status	List of acceptable values	List of acceptable contract statuses, and supporting info	When entering data into the blue tabs, only use contract statuses from Col A of this tab.
month_map	Month string to numeric lookup table	Map of month numbers to names	Review; do not modify
caiso_interconnection_queue	CAISO interconnection queue for assessing viability of new projects	Allow LSEs to identify where their project is in the CAISO queue.	Use Col A of this tab to identify where a new resource is in the interconnection queue.
cns_mapping	Information	Information-only table to help LSE's map the resources they have entered here to the resources in the CNS tool.	Review this table and use it to make sure your portfolios match between the CNS tool and this Resource Data Template.

The following is a summary list of high-level steps for using this workbook. Please review and understand the steps below. More documentation and detail is provided in the other "instructions" tabs.

Step number	Tab Name	Action	Instructions
Note: Per Decision 20-03-028 and the Narrative Template, LSEs are required to file at least two data templates, a preferred conforming 38 MMT version and a preferred conforming 46 MMT version (and more if they wish to do multiple conforming or alternative portfolios). The instructions below describe the preparation of one data template, so LSEs should follow them for each template. Note that the instructions are effectively the same for each individual template, except for the file naming convention in the last step.			
1	All	Review	Review all tabs in this workbook to ensure that you understand the instructions. Sample data is provided for illustrative purposes--you can clear it before you enter your data, but make sure you keep the first row of the pre-written formulas, as you will be copying these later. Note the error flagging formulas and understand why they are doing so.
2	N/A	Review	Review the CPUC Q&A for the Resource Data Template and Narrative Template, available here: ftp://ftp.cpuc.ca.gov/energy/modeling/Filling%20Requirement%20QA%20_%2004232020.pdf
3	portfolio_toggle	Enter Data	Select 38 or 46 MMT using the dropdown menu in Cell A1, as appropriate for the resources you are entering in this template.
4	estimate_system_ra_requirement	Enter Data	Please input your LSE's 2021 System RA allocation, NQC MW in Cell B68. This will be kept confidential.
5	monthly_gwh_mw	Enter data	Enter monthly energy and capacity procurement data, by contract, year, and month, into the light blue columns. Enter all contracts with delivery start dates on or after January 1st, 2020, and before January 1st, 2031. If an LSE opted-out of its procurement obligation under D.19-11-016, or was not assigned a procurement obligation under D.19-11-016, and thus will have a certain amount of procurement occurring on their behalf, the LSE must enter an amount and type of resource(s) communicated to it by Energy Division staff. Staff will coordinate LSEs that are not self-procuring and IOUs procuring on their behalf to prevent double counting and to ensure that reported resources align with procurement that has already occurred or is consistent with the RSP. Enter all contracts that fall into either of the following two categories. 1) You have already executed the contract as of this filing, regardless of whether the resource is currently online or will come online in the future. Note that this set of contracts should include the ones you are currently using to serve load (e.g. you must include a contract signed in 2017 that is serving your load as of this filing). 2) You plan to execute the contract in the future with a start date before January 1st, 2031. **For purposes of determining the contract_status (i.e. whether a resource is planned or in development or under review by decision-makers), use June 30th, 2020 as the cutoff date.** Each contract needs an energy value in GWh and a capacity value in MW, meaning that you must enter a number >=0 in the contract_gwh column, and a number >=0 in **EITHER** the contracted_nqc_mw_if_known column or the nqc_fraction_if_nqc_not_known column (but not both). **Note that where possible you should use only items from the list of identifiers in the green tabs (first green column of each green tab).**
6	monthly_gwh_mw	Copy formulas	To the right of the data just entered, in purple and gray columns, you will see some pre-written formulas in the first row. Copy these formulas down to the last row of data.
7	monthly_gwh_mw	Review	Review the formulas' results.
8	monthly_gwh_mw	Correct	Correct any data errors in the data you entered in Step 2 that was caught by the formulas. It is OK to overwrite default values in the purple columns, but do NOT overwrite formulas in the gray columns. If you see the text "fillme" displayed in any purple cell, overwrite it with the correct value.
9	unique_contracts	Copy formulas	In Columns B-E, copy down formulas in unique_contracts until all the unique contracts listed in monthly_gwh_mw are displayed. The template will automatically generate a list of unique contracts from the monthly data. Note this will only work if steps 1-5 are complete.
10	unique_contracts	Enter data	Enter contract data into the light blue columns.
11	unique_contracts	Copy formulas	Adjacent to the data just entered, you will see some pre-written formulas in the first row, in purple and gray. Copy these formulas down to the last row of data.
12	unique_contracts	Correct	Correct any data errors caught by the formulas. It is OK to overwrite default values in the purple columns, but do NOT overwrite formulas in the gray columns. If you see the text "fillme" displayed in any cell, overwrite it with the correct value.
13	errors	Review	Review. Where there are errors in the previous tabs, they are flagged here. Trace the errors and correct as needed in monthly_gwh_mw and unique_contracts.
14	fillmes	Review	Review. Where there are values that you need to populate in the previous tabs, they are flagged here. Trace the errors and populate values as needed in monthly_gwh_mw and unique_contracts.
15	dashboard	Review	Review and ensure your procurement is accurately reflected.
16	None	Submit	Send completed workbooks (using the CPUC's secure FTP application) to IRPDataRequest@cpuc.ca.gov by September 1st, 2020. NOTE: Per the Narrative Template, LSEs may study and report multiple "Conforming Portfolios" for each GHG target. LSEs are **required** to select two "Preferred Conforming Portfolios" among all "Conforming Portfolios" developed and submitted: one "Preferred Conforming Portfolio" to the 46 MMT GHG target, and a second "Preferred Conforming Portfolio" to the 38 MMT GHG target. LSE may also study and report additional "Alternative Portfolios" developed from different assumptions (including different load and load modifier assumptions) from the Reference System Plan. Before submitting, please change this template's file name using the following naming convention. The file name must contain the seven elements below, in the order provided. Use an underscore to separate each element (i.e. the final file name should have six underscores in it). All letters should be lower-case. 1) your lse's abbrevation, provided in this workbook in the "lse" tab 2) the letters "rdt" (denoting this Resource Data Template) 3) "38mmt" or "46mmt", as appropriate, depending on the carbon target corresponding to the portfolio. 4) if portfolio is preferred, write "preferred", else write "na" 5) if portfolio is conforming, write "conforming", else write "na" 6) if portfolio is alternative, write "alternative," else write "na" 7) version number, written as the letter "v", followed by a number. If you have to re-submit a file for any reason, increase this number by 1. For example, Southern California Edison could send the following five workbooks (although,at a minimum, they are only required to send the first two, a preferred conforming each for 38 and 46 MMT): sce_rdt_38mmt_preferred_conforming_na_v1.xlsx sce_rdt_46mmt_preferred_conforming_na_v1.xlsx sce_rdt_46mmt_na_conforming_na_v1.xlsx (this portfolio is conforming, but not preferred) sce_rdt_38mmt_na_na_alternative_v1.xlsx sce_rdt_46mmt_na_na_alternative_v1.xlsx

This tab contains a description of the meanings of color coding in different cells. Please enter data into the blue tabs according to the instructions below.

Step	Color	Purpose	Description	Instructions
1	Light Blue	LSE Data entry	Columns for LSE entry of procurement data (blank fields, **not** pre-populated)	Enter procurement data here. You must do this first for the formulas to work.
2	Purple	LSE Data entry	Columns for LSE entry of procurement data (with **pre-populated** default values). To reduce redundant data entry and the probability of error, staff has created lookup formulas to pre-populate certain fields with default values.	0) Ensure that you have entered correct data in the light blue columns, per Step 1. 1) Note the formulas adjacent to the light blue column data, which point to the first row of this data. Copy these formulas down from the first row all the way to the last row of the dataset. 2) Review the resultant values, and confirm that they are correct. 3) If you see a value that is incorrect, enter the correct data into the cell. It is OK to overwrite the formula with your values. **4) If you see a value of "fillme", this means the template cannot populate the value by default, and you need to enter the correct value. Enter the correct data into the cell. It is OK to overwrite the formula with your values.** **Note that these formulas are provided for your convenience and to demonstrate how staff plans to classify and aggregate the data. If you are manually entering data, it is probably easier to individually overwrite each "fillme" sell. If you are generating your data programatically, it might be easier to overwrite the purple columns wholesale.** 5) Review the resultant values, and confirm that they are correct.
3	Gray	Data Validation	Columns with pre-written formulas that perform testing, data validation (i.e. ensure that the data is in the range of acceptable values), and other calculations	1) Formulas are already populated in the first row of the data. Copy these formulas down from the first row all the way to the last row of the dataset. DO NOT overwrite these formulas. 2) Review the resultant values, and confirm that they are correct. 3) If you see a value that is incorrect, correct the data in the column that the cell is pointing to, but do not correct the gray cell itself. 4) If you see a value of 0 in the TEST column, that means that an invalid data point was supplied. Correct that data point so that the value = 1.

Resources that do not correspond to existing physical resources require a special note when reporting them. Please review the information below and follow the guidance below for these resources.
For the purposes of this template, a contract is defined as a unique combination of three columns: resource, cpuc_contract_id, and notes.
For the majority of existing physical resources or specified imports (i.e. has a CAISO ID), the resource and cpuc_contract_id alone will allow staff to uniquely identify a contract, so there is no need to provide a note.
However, staff requires an explanatory note to distinguish between different contracts for resources where the name and contract_id alone are not sufficient to identify the resource.
This is often the case for contract types such as unspecified power, behind-the-meter resources, new resources which do not exist yet, or very small or very recently online resources that do not appear in the CAISO generator list.
The template will automatically flag these as requiring a note. **Where you see the text "fillme", please provide a note following the guidance in the next tab.**
Important: The resource_contract_note column D in unique_contracts should reflect the set of contracts you are planning or have executed.
This column should NOT contain duplicates. If it does, this means you need to write a note in monthly_gwh_mw to distinguish between resources.
The calculator will then AUTOMATICALLY label these as two separate contracts, which should be reflected in the unique_contracts tab.

Review the table below to determine what type of note you should write if the UI prompts you to do so with "fillme" in a cell.

Item in note	Description	Example
approximate resource mix	Approximate mix of resources in a contract. One decimal place is sufficient.	90% solar, 10% firming natural gas
carbon content	Carbon content of this resource. Provide units, e.g. 0.428 MT CO2 / MWh	0.39 MT CO2/MWh
buyer	If you are selling energy, this is the name of the buyer.	Marin Clean Energy
seller	If you are buying energy, this is the name of the seller.	Pacific Gas and Electric
intertie	Name of the intertie over which you are importing power.	Malin Intertie
name	Resource name.	Iron Sun Solar
type	Type: solar, battery, wind, geothermal, etc.	Dual-axis solar PV
mw	MW. Please write the number of MW followed by "MW"	200 MW

For example, if you plan to build a a Gold Coast Solar Unit in an area corresponding to RESOLVE's Greater Imperial Solar area,
and a Silver Star Solar Unit also in the same area, these would both be listed as Greater_Imperial_Solar for the resource name, but they considered are two separate contracts.
You need to supply a note to help staff distinguish between these two, and to make sure that unique_contracts shows them as two separate resources.
The template will prompt you to do so by displaying "fillme_name,type,mw" in the "notes" column. Please fill out **at least** this information in-cell,
And anything else that will help staff understand the nature of the resource.
For example, the cell could read "Silver Star Solar, 100 MW dual-axis tracking PV, COD Nov 2021 in Sun County" or "Gold Coast Solar, 200 MW fixed PV, COD Dec 2022 in Moon County"

The table below explains the fields in the data template in more detail. Please review these definitions and the Acceptable Values carefully before entering data.

	tab	Field	Description	data type	units	Acceptable Values
1	monthly_gwh_mw	**lse**	Standardized abbreviation for the LSE. Where possible, please use names from Col A of lse_names tab	text string	na	Col A of lse_names tab
2	monthly_gwh_mw	**resource**	Canonical name for a specific generating resource. Where possible, please use names from the "resource" column in Column A of the "resources" tab.	text string	na	Col A of resources tab
3	monthly_gwh_mw	**cpuc_contract_id**	Contract ID matching Contract ID in CPUC Contracts Database	text string	na	#N/A
4	monthly_gwh_mw	**Year**	Year of the energy/capacity procured	integer	na	Integers 2020 to 2030
5	monthly_gwh_mw	**Month**	Month of the energy/capacity procured	integer	na	Integers 1 through 12
6	monthly_gwh_mw	**contract_gwh**	Enter the amount of energy contracted for, in GWh. If this is an RA only contract, enter zero here. **Do not leave this blank.**	numeric	GWh	Any number greater than or equal to zero
7	monthly_gwh_mw	**contracted_nqc_mw_if_known**	If the contract for this resource in this year and month contains an Net Qualifying Capacity (NQC) value that counts for Resource Adequacy (RA) credit, report it here in MW. DO NOT estimate this value if it is not explicitly reported in the contract. If the contract is energy only, enter 0 here. If you plan to buy capacity value but do not know the NQC (for example, because this is a to-be-built future resource), leave this column blank and use the nqc_fraction_if_nqc_not_known instead to report capacity.	numeric	MW (NQC)	Any number greater than or equal to zero
8	monthly_gwh_mw	**nqc_fraction_if_nqc_not_known**	The purpose of this field is to allow LSEs to report that they are buying RA capacity for a resource that either does not exist yet, or does not have a known NQC value. In this field, please enter a fraction between 0 and 1, where 0 means completely energy-only, and 1 means that the LSE plans to purchase all available RA capacity value from the resource. 0.5 means that the LSE is planning to purchase capacity value corresponding to half of total capacity value that is available. ONLY fill this field out if you plan on purchasing capacity value, but have not filled out the contracted_nqc_mw_if_known column. If you filled out contracted_nqc_mw already, leave this blank.	numeric	na	Decimal between 0 and 1. Do not enter a percent.
9	monthly_gwh_mw	**contract_status**	Status showing maturity of contracting process for this resource. Where possible, please match one of the entries in the "contract_status" column in the contract_status tab.	text string	na	Col A of contract_status tab
10	monthly_gwh_mw	**storage_duration_hours**	Storage duration in hours.	integer	hours	Positive integers
11	monthly_gwh_mw	**notes**	Notes explaining nonstandard resources. The UI will prompt you with "fillme" if you need to fill this out.	text string	na	See other parts of instruction for guidance.
12	monthly_gwh_mw	**max_mw**	If this is a physical resource, this is the resource's nameplate in MW. If it is not, enter the maximum MW it can deliver at any given time. The UI will prompt you with "fillme" if you need to fill this out.	numeric	MW (nameplate)	Any number greater than or equal to zero
13	monthly_gwh_mw	**resource_type**	Type of the resource (solar, wind, etc). Use types in Column E of resources to fill out "fillmes"	text string	na	Column E of "resources" tab
14	monthly_gwh_mw	**currently_online**	Indicator variable if unit is currently online or not. Automatically calculated for resources with a known ID, but the UI will prompt you with "fillme" if you need to fill this out.	1 or 0	na	1 or 0
15	monthly_gwh_mw	**elcc_type**	ELCC type of the resource (solar, wind, etc), used to estimate nqc. Use the types in Column A of the "elcc" tab to fill out "fillmes"	text string	na	Column A of elcc tab
16	monthly_gwh_mw	**elcc_type_year_month**	A string that consists of the ELCC Type, the year, and the month, separated by underscores. This is the key that is used to look up an ELCC % in the "elcc" tab	text string	na	Column D of elcc tab
17	monthly_gwh_mw	**elcc_percent**	The resource's Effective Load Carrying Capability, expressed as a percent. ELCC times a given resource's nameplate equals its NQC value in a given year and month.	numeric	percent	0 - 100%
18	monthly_gwh_mw	**battery_multiplier**	This is the template's method for derating the NQC of storage resources with durations of less than 4 hours. For example, a 3-hour resource gets an multiplier of 3/4 = 75%.	numeric	percent	0 - 100%
19	monthly_gwh_mw	**calculated_nqc_mw_for_resources_with_no_contracted_nqc**	If the LSE wishes to buy capacity from a certain resource, but they do not have a **contracted** NQC value (often the case for resources that are not built yet), the template will estimate an NQC value based on the ELCC fields described above.	numeric	MW (NQC)	Any number greater than or equal to zero
20	monthly_gwh_mw	**final_nqc_mw**	The NQC MW value that will be used for capacity counting. If the LSE reports a contracted NQC value, the template will use that as-is; else, the template will use the calculated estimate.	numeric	MW (NQC)	Any number greater than or equal to zero
21	monthly_gwh_mw	**test_nqc**	Ensures that NQC values are properly estimated. Flags errors.	string	N/A	Will display "OK" or "error"
22	unique_contracts	**online_date_for_new_resources**	Date the resource comes online. You only need this for resources that are not online as of this filing. NOTE: In Excel, dates are actually numbers that are formatted to be displayed as dates. This should be displayed in "Short Date" format (in Excel, go to Home->Number and display as Short Date)	Excel date	na	Dates; see note to left of this
23	unique_contracts	**contract_execution_date**	Date the contract was executed. NOTE: In Excel, dates are actually numbers that are formatted to be displayed as dates. This should be displayed in "Short Date" format (in Excel, go to Home->Number and display as Short Date)	Excel date	na	Dates; see note to left of this
24	unique_contracts	**contract_start**	Date energy/capacity deliveries are contracted to start. NOTE: In Excel, dates are actually numbers that are formatted to be displayed as dates. This should be displayed in "Short Date" format (in Excel, go to Home->Number and display as Short Date)	Excel date	na	Dates; see note to left of this
25	unique_contracts	**contract_end**	Date energy/capacity deliveries are contracted to end. NOTE: In Excel, dates are actually numbers that are formatted to be displayed as dates. This should be displayed in "Short Date" format (in Excel, go to Home->Number and display as Short Date)	Excel date	na	Dates; see note to left of this
26	unique_contracts	**interconnection_queue_position**	Queue position assigned by CAISO, ISO, or Utility. Enter "TBD" if developer hasn't applied yet. Enter "N/A" if a project never needed a queue position (e.g. Legacy QF contracts, REC only), if the queue position is unknown as the contract is already online or if project is out of CAISO area.	numeric	na	Col A in caiso_interconnection_queue tab, TBD, N/A
27	unique_contracts	**lse_owned**	Is the resource owned by the LSE? 1 = Yes, 0 or blank = no	1 or 0	na	1,0
28	unique_contracts	**cam**	Is the resource a Capacity Allocation Mechanism (CAM) resource? 1 = Yes, 0 or blank = no	1 or 0	na	1,0
29	unique_contracts	**is_incremental**	Is the resource incremental to the baseline established in D.19-11-016? 1=yes, 0=no. Note that this column is pre-populated via a formula.	1 or 0	na	1,0
30	unique_contracts	**incremental_explanation**	Explanation for why special case resources should be counted as incremental. See instructions_10_incrementality for guidance on filling this out.	text string	na	See instructions_10_incrementality for guidance
31	unique_contracts	**viability_cod_reasonableness**	Choose 1,2, or 3 below to report on project viability. **This is only necessary for projects not online yet.** • 1 - Interconnection Phase II study complete; permitting application approved; these support reported COD. • 2 - Interconnection Phase II study in progress; permitting application in progress; LSE has plan that supports reported COD. • 3 - One or more of criteria for rating "2" not in place.	Categorical	na	1,2,3
32	unique_contracts	**viability_technical_feasibility**	Choose 1 or 2 below to report on technical feasibility. **This is only necessary for resources not yet online.** • 1 - Project will use a commercialized technology solution that is currently in use at a minimum of two operating facilities of similar or larger size. • 2 – Criteria for rating 1 not in place.	Categorical	na	1,2
33	unique_contracts	**viability_resource_sufficiency**	Choose 1 or 2 below to report on resource sufficiency. **This is only necessary for resources not yet online.** • 1 - Project-specific independent engineering assessment is complete and supports the delivery profile (capacity and/or production). • 2 – Criteria for rating 1 not in place.	Categorical	na	1,2
34	unique_contracts	**viability_financing**	Choose 1,2,3,4 or N/A below to report on financing. **This is only necessary for resources not yet online.** • 1 - All Financing Secured. • 2 - Partial Financing Secured. • 3 - Seeking Financing. • 4 - Not Yet Seeking Financing. • N/A-No Financing Required.	Categorical	na	1,2,3,4,n/a
35	unique_contracts	**storage_max_discharge_mw**	If the resource is a standalone storage or a hybrid (generator + storage) resource, report the **battery's maximum rate of discharge in MW** here.	numeric	MW nameplate	Any number greater than or equal to zero
36	unique_contracts	**storage_depth_mwh**	If the resource is a standalone storage or a hybrid (generator + storage) resource, report the **battery's total depth in MWh** here.	numeric	MWh	Any number greater than or equal to zero
37	unique_contracts	**is_hybrid**	1 = resource is a hybrid, 0 = not (i.e. standalone storage is marked 0)	1 or 0	na	1,0
38	unique_contracts	**hybrid_generator_mw**	A hybrid resource consists of a generator and a battery. This is the nameplate of the **generator** portion of the resource, in MW. Only report this for hybrid resources.	numeric	MW nameplate	Any number greater than or equal to zero
39	unique_contracts	**hybrid_combined_max_mw**	The maximum rate the hybrid resource can send energy to the grid. In most cases this will be close to the sum of the generator portion of the hybrid, plus the battery portion of the hybrid.	numeric	MW nameplate	Any number greater than or equal to zero
40	unique_contracts	**hybrid_can_charge_from_grid**	1 = hybrid can charge from grid AND paired resource. 0 = hybrid can ONLY charge from paired resource	1 or 0	na	1,0

The table below describes the different types of resources in the "resources" tab. Please review and use the table below to guide your entry of procurement data.

resource_supertype	Description
physical	Physical resources from CAISO, RPS, and WECC datasets. Includes both existing resources and resources that are already contracted but not yet online.
existing_generic	Generic resource contract corresponding to a class of existing generators, but not any particular one. **The UI will prompt you for a note with "fillme."**
new_resolve	New resource that does not yet exist, corresponding to the set of physical candidate resources in RESOLVE. Note that the resources tab provides a list of all of these candidate resources, not only the ones selected in the Reference System Plan--you can choose to enter any of the candidate resources regardless of whether or not it was selected in the Reference System Plan.You **must** use this category for all new resources whose commercial operating date (COD) is **on or before** Dec 31st, 2026. NOTE: for new resources whose COD is **after** that date, you can also optionally specify the resource without a location, as new_generic (see definition below). The UI will prompt you for a note with "fillme."
new_generic	Generic resource contract corresponding to a class of new generators (have not been built yet), but not any particular one. You can use this category for all resources whose commercial operating date (COD) is **on or after** January 1st, 2027 (or, optionally, you can use "new_resolve" above if desired). **The UI will prompt you for a note with "fillme."**
new_loadmod	New load modifying resources procured as a result of the IRP procurement track decision. The UI will prompt you for a note with "fillme."
specified_imports	Specific resource with a CAISO ID that is imported from out of CAISO.
special	Nonstandard contracts not corresponding to a physical resource. Please explain these with a note in the "notes" column so that CPUC staff can understand the nature of the contract. **The UI will prompt you for a note with "fillme."**

Please review the table below, which describes the miscellaneous resources that fall under the "special" supertype that can be entered into the template.

resource	description	Example
unspecified_import	Imports from out of CAISO, over an intertie. Resource mix not known.	Unspecified power over MALIN500 Intertie
transfer_purchase	Your LSE is purchasing energy from another LSE.	example_lse buying 500 MWh solar from PG&E
transfer_sale	Your LSE is selling energy from another LSE.	example_lse selling 200 MWh geothermal to SDG&E
blended	Blended contracts, consisting of a mix of resources.	90% solar with 10% firming natural gas
unbundled_rec	PCC only resources (NOT bundled with energy)	PCC3, 60% solar 40% wind
unspecified_non_import	Unspecified System Power	low-carbon CAISO system energy, resource mix unknown, 0.06 MT CO2/MWh
sellers_choice	RA contract in which the seller chooses the resources that will provide RA credit to the buyer. The buyer does not necessarily know in advance exactly which resources these comprise.	Seller's choice contract between CCA and IOU for 100 NQC MW in March 2021

The instructions below pertain to filling out the "incremental_explanation" column in the unique_contracts tab, which is included in the template to allow LSEs to explain using nonstandard, special-case resources to count towards the incremental procurement requirement in D.19-11-016. **Please follow the instructions below for entering notes into this field.**
1) If the contract is for a new supply-side resource (i.e. corresponds to resolve_new or generic_new, resource type), and that resource will be energy-only in 2021, please write **"eo2021"**. Otherwise you can leave this column blank. For resources that fall into this category, please put a value of 1 in the nqc_fraction_if_nqc_not_known column in monthly_gwh_mw for the year 2021 ONLY. The purposes of this is to allow the NQC counting functions in unique_contracts to work.
2) If the contract is for demand-side resources such as demand response or energy efficiency (corresponds to new_loadmod resource type), please affirm that the resource is NOT already accounted for in the utility's IEPR demand forecast by writing **"not in IEPR demand forecast"** If the resource is already accounted for in the IEPR forecast, the resource is not incremental.
3) If you are upgrading an existing resource by adding capacity (for example, adding a battery to an existing resource to make a hybrid resource, or replacing a turbine to increase the nameplate of an existing gas-fired resource), please write **"adding [x] MW to existing resource [y],"** where X is the number of nameplate MW you are adding to the existing resource, and y is the name of the existing resource. Note that the template will label these as is_incremental = 0 (because the resource that the MW were added to is already in the baseline), but staff will treat the **added** MW as incremental.
4) If none of the special cases above apply, you can leave incremental_explanation blank.
5) If they DO apply, you can overwrite is_incremental with a value of 1.

ftp://ftp.cp <---Please review the information in this link before entering any data. It contains helpful Q&A's, compiled from ED webinars with LSEs.

Each LSE should input any eligible resources that are currently subject to the cost allocation mechanism (CAM). In estimating its share of resources subject to the CAM, each LSE should refer to the most recent year-ahead CAM resource list available on the Commission's Resource Adequacy Compliance Materials webpage. The year-ahead CAM list reflects the contract start and end dates of Commission approved CAM resources. The list itemizes the resource adequacy capacity value by month for each IOU service territory. An LSE's proportional share is determined by its year-ahead share of the total coincident peak load for each IOU service territory, as assigned in the Commission's annual resource adequacy process. The LSE's proportional share of that resource is assumed static through the IRP planning horizon, but it will be updated each IRP cycle based on the current proportional share assignment from the Commission's annual resource adequacy process. LSEs should not make assumptions or predictions on what resources may be procured on behalf of all load and subject to the CAM in the future beyond what is already included in the most recent year-ahead CAM resource list. **Note that, in the unique_contracts tab, an LSE labels resources as CAM in the "cam" column.**

PCIA resources must be included in the IOU baseline of resources in this template. Other LSEs should not include PCIA resources in their baseline resources, unless otherwise directed by the Commission in the PCIA proceeding or another venue.

If an LSE opted-out of its procurement obligation under D.19-11-016, or was not assigned a procurement obligation under D.19-11-016, and thus will have a certain amount of procurement occurring on their behalf, the LSE must enter an amount and type of resource(s) communicated to it by Energy Division staff. Staff will coordinate LSEs that are not self-procuring and IOUs procuring on their behalf to prevent double counting and to ensure that reported resources align with procurement that has already occurred or is consistent with the RSP.

46	<--- Select your MMT here using the dropdown.	38	MMT Portfolio
	Do not change other cells in this tab.	46	MMT Portfolio

Form 1.5b - STATEWIDE

California Energy Demand 2019-2030 Managed Forecast - Mid Demand / Mid AAEE Case

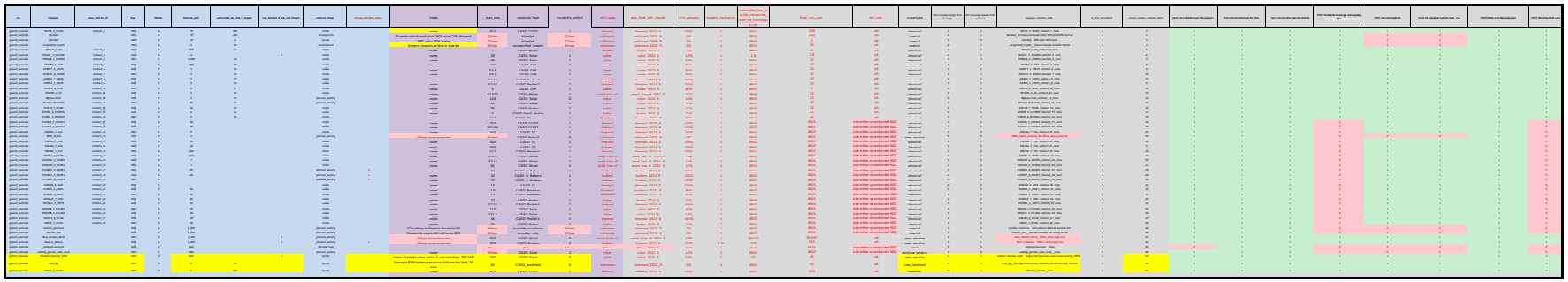
1-in-2 Net Electricity Peak Demand by Agency and Balancing Authority (MW)

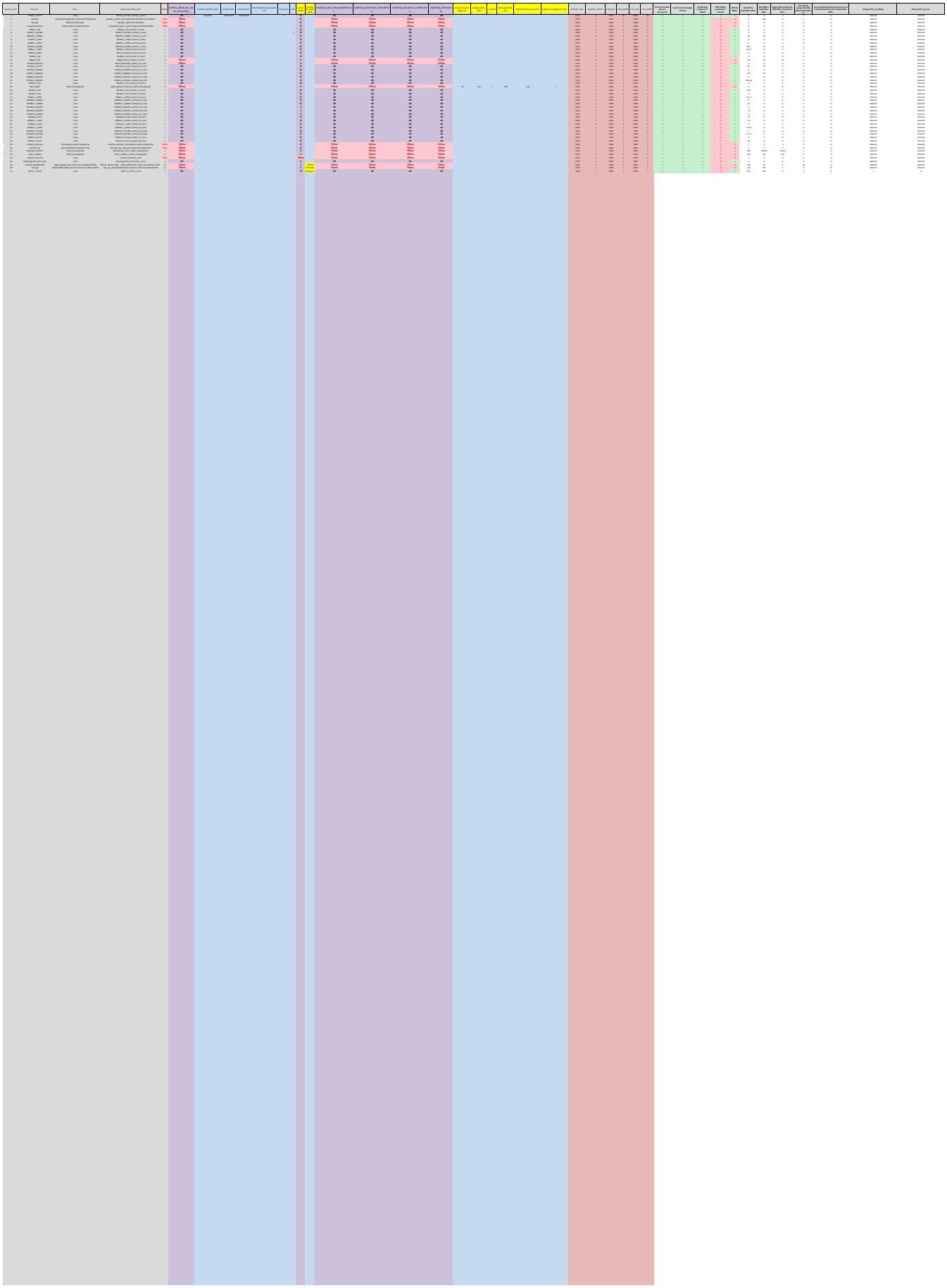
Balancing Authority	Agency	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Average Annual Growth (2019-2030)	CAISO area Non-IOU,CCA,ESP demand flag
	PG&E Service Area - Greater Bay Area	7,223	7,118	6,970	6,926	6,902	6,888	6,922	6,951	6,977	7,002	7,025	7,062	-0.20%	
	NCPA - Greater Bay Area	198	194	190	188	186	185	186	186	186	187	186	188	-0.49%	1
	Power Enterprise of the San Francisco PUC	125	120	120	118	117	117	117	117	117	118	118	118	-0.49%	1
	Silicon Valley Power	530	542	549	546	553	562	569	570	570	573	571	575	0.75%	1
	Other NP15 LSEs - Bay Area	5	5	5	5	5	5	5	5	5	5	5	5	-0.69%	1
	CDWR - Greater Bay Area	55	56	57	57	57	57	56	56	56	56	56	60	0.92%	1
	WAPA - Greater Bay Area	52	52	52	52	52	52	52	52	52	52	52	52	0.00%	1
Greater Bay Area Subtotal		**8,188**	**8,088**	**7,932**	**7,892**	**7,873**	**7,876**	**7,907**	**7,937**	**7,964**	**8,023**	**8,013**	**8,061**	**-0.14%**	
	PG&E Service Area - Non Bay Area	9,955	9,803	9,606	9,545	9,513	9,507	9,540	9,580	9,616	9,691	9,682	9,734	-0.20%	
	NCPA - Non Bay Area	211	207	202	200	199	198	198	198	199	200	199	200	-0.49%	1
	Other NP15 LSEs - Non Bay Area	7	7	7	7	7	7	7	7	7	7	7	7	-0.69%	1
	CDWR - Non Bay Area	55	55	57	57	57	57	56	56	56	56	56	60	0.92%	1
	WAPA - Non Bay Area	185	185	185	185	185	185	185	185	185	185	185	185	0.00%	1
Total North of Path 15		**18,602**	**18,341**	**17,991**	**17,886**	**17,822**	**17,829**	**17,893**	**17,964**	**18,026**	**18,161**	**18,142**	**18,247**	**-0.17%**	
	PG&E Service Area - ZP26	2,047	2,016	1,975	1,963	1,956	1,955	1,962	1,970	1,977	1,991	1,991	2,002	-0.20%	
	CDWR - ZP26	115	115	120	120	120	120	118	118	118	118	118	127	0.92%	1
	WAPA - ZP26	15	15	15	15	15	15	15	15	15	15	15	15	0.00%	1
Total Zone Path 26		**2,177**	**2,146**	**2,110**	**2,097**	**2,091**	**2,090**	**2,095**	**2,103**	**2,111**	**2,126**	**2,124**	**2,144**	**-0.14%**	
Total Valley		**12,591**	**12,469**	**12,167**	**12,091**	**12,050**	**12,043**	**12,081**	**12,130**	**12,173**	**12,265**	**12,253**	**12,330**	**-0.19%**	
Total North of Path 26 (Total PG&E TAC Area)		**20,779**	**20,486**	**20,100**	**19,983**	**19,923**	**19,919**	**19,988**	**20,067**	**20,137**	**20,287**	**20,266**	**20,391**	**-0.17%**	
	Turlock Irrigation District	543	535	531	530	528	527	526	524	524	524	525	527	-0.27%	
	Merced	109	108	107	107	106	106	106	106	106	106	106	106	-0.27%	
Total Turlock Irrigation District Control Area		**652**	**643**	**638**	**637**	**634**	**633**	**631**	**630**	**629**	**630**	**631**	**633**	**-0.27%**	
	SMUD	2,959	2,916	2,899	2,897	2,890	2,881	2,870	2,861	2,861	2,869	2,882	2,895	-0.20%	
	Modesto Irrigation District	674	664	659	658	656	654	652	651	650	651	652	654	-0.27%	
	Roseville	325	321	318	318	316	316	315	314	314	314	315	316	-0.27%	
	Redding	221	217	216	215	215	214	213	213	213	213	213	214	-0.27%	
	City of Shasta Lake	35	34	34	34	34	34	33	33	33	33	34	34	-0.27%	
	WAPA (BANC)	90	90	90	90	90	90	90	90	90	90	90	90	0.00%	
Total Balancing Authority of Northern California Control Area		**4,304**	**4,242**	**4,215**	**4,211**	**4,200**	**4,188**	**4,174**	**4,163**	**4,161**	**4,171**	**4,186**	**4,202**	**-0.22%**	
	SCE Service Area - LA Basin	16,297	16,159	15,975	15,861	15,856	15,796	15,753	15,748	15,769	15,789	15,883	16,027	-0.15%	
	Anaheim	526	520	515	512	513	509	508	508	509	509	512	517	-0.15%	1
	Pasadena Water and Power	273	270	267	265	265	264	264	264	264	264	266	268	-0.15%	1
	Riverside	594	587	582	578	577	575	574	574	574	575	579	584	-0.15%	1
	Vernon	349	347	173	170	169	169	169	169	169	169	170	171	1.26%	1
	Other SP15 LSEs - LA Basin	246	243	241	240	239	239	238	238	238	238	240	242	-0.15%	1
	MWD - LA Basin	20	20	20	20	20	20	20	20	20	20	20	20	0.00%	1
LA Basin Subtotal		**18,304**	**17,895**	**17,771**	**17,645**	**17,633**	**17,572**	**17,525**	**17,521**	**17,542**	**17,565**	**17,669**	**17,829**	**-0.14%**	
	SCE Service Area - Big Creek/Ventura	3,996	3,950	3,917	3,889	3,886	3,873	3,862	3,841	3,866	3,871	3,894	3,929	-0.15%	
	CDWR - Big Creek/Ventura	290	275	275	275	275	275	275	276	276	303	303	303	0.40%	1
Big Creek/Ventura Subtotal		**4,286**	**4,226**	**4,192**	**4,164**	**4,161**	**4,148**	**4,137**	**4,137**	**4,142**	**4,174**	**4,197**	**4,233**	**-0.11%**	
	SCE Service Area - Other	1,010	998	990	983	983	979	977	976	977	978	985	993	-0.15%	
	Other SP15 LSEs - Other	26	26	26	25	25	25	25	25	25	25	25	25	-0.15%	1
	CDWR - Other	47	45	45	45	45	45	45	45	45	50	50	50	0.40%	1
	MWD - Other	163	154	154	154	154	154	154	154	154	154	172	172	0.45%	1
Total SCE TAC Area		**23,637**	**23,343**	**23,177**	**23,015**	**23,000**	**22,923**	**22,862**	**22,859**	**22,886**	**22,904**	**23,097**	**23,301**	**-0.13%**	
SDG&E TAC Area		**4,196**	**4,138**	**4,158**	**4,194**	**4,224**	**4,250**	**4,271**	**4,292**	**4,313**	**4,334**	**4,354**	**4,373**	**0.38%**	
Valley Electric Association (CA + NV Territory)		**133**	**140**	**153**	**156**	**159**	**161**	**164**	**166**	**169**	**171**	**173**	**176**	**2.53%**	1
Total South of Path 26		**27,966**	**27,625**	**27,488**	**27,366**	**27,383**	**27,334**	**27,299**	**27,317**	**27,368**	**27,469**	**27,625**	**27,850**	**-0.04%**	
	LADWP	5,787	5,696	5,608	5,555	5,450	5,368	5,246	5,160	5,059	4,962	4,940	4,872	-1.55%	
	Burbank	286	284	284	285	283	282	281	279	279	279	281	282	-0.11%	
	Glendale	297	295	294	295	294	292	291	290	289	290	291	293	-0.11%	
Total LADWP Control Area		**6,370**	**6,275**	**6,186**	**6,135**	**6,028**	**5,942**	**5,818**	**5,729**	**5,627**	**5,561**	**5,512**	**5,448**	**-1.41%**	
Imperial Irrigation District Control Area		**1,071**	**1,058**	**1,045**	**1,037**	**1,030**	**1,024**	**1,018**	**1,017**	**1,017**	**1,020**	**1,024**	**1,033**	**-0.33%**	
Total California ISO Noncoincident Peak		**48,743**	**48,112**	**47,589**	**47,349**	**47,306**	**47,253**	**47,287**	**47,384**	**47,505**	**47,757**	**47,891**	**48,241**	**-0.09%**	
Total California ISO Coincident Peak		**46,117**	**45,647**	**45,184**	**45,280**	**45,447**	**45,610**	**45,827**	**46,031**	**46,227**	**46,493**	**46,702**	**47,014**	**0.18%**	
Total STATEWIDE Noncoincident Peak		**61,141**	**60,327**	**59,673**	**59,369**	**59,198**	**59,040**	**58,929**	**58,923**	**58,940**	**59,138**	**59,246**	**59,558**	**-0.24%**	
Total STATEWIDE Coincident Peak		**57,848**	**57,236**	**56,658**	**56,775**	**56,872**	**56,987**	**57,109**	**57,256**	**57,354**	**57,572**	**57,776**	**58,045**	**0.03%**	

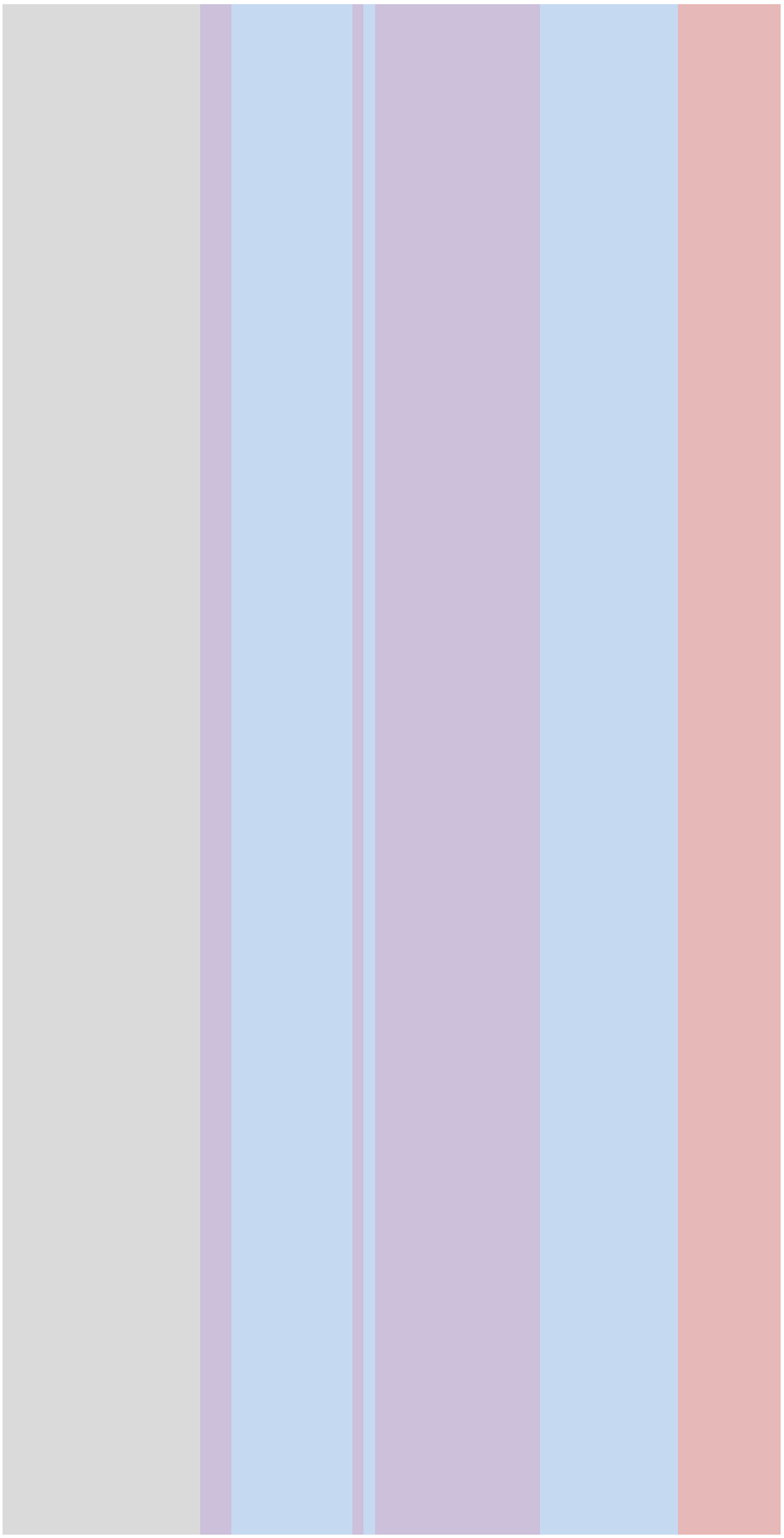
Table developed using weather normalized 2030 net peak demand values for each BA area. Includes the impact of IOU load-modifying demand response programs.
Agency peak demand within a BA area is adjusted to be coincident with the respective BA area net peak demand total.

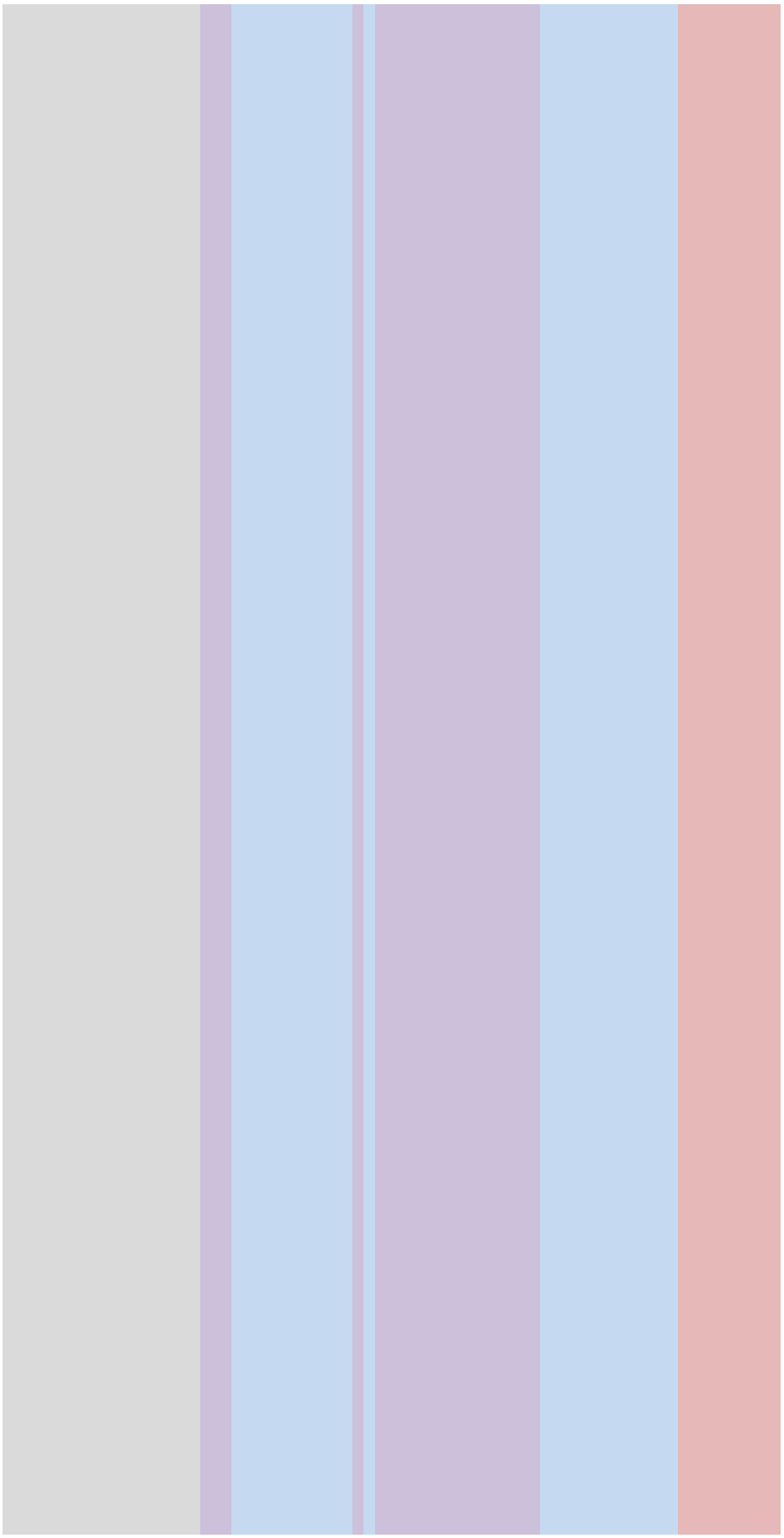
Please input your LSE's 2021 System RA allocation, NQC MW here. This will be kept confidential.	1,000

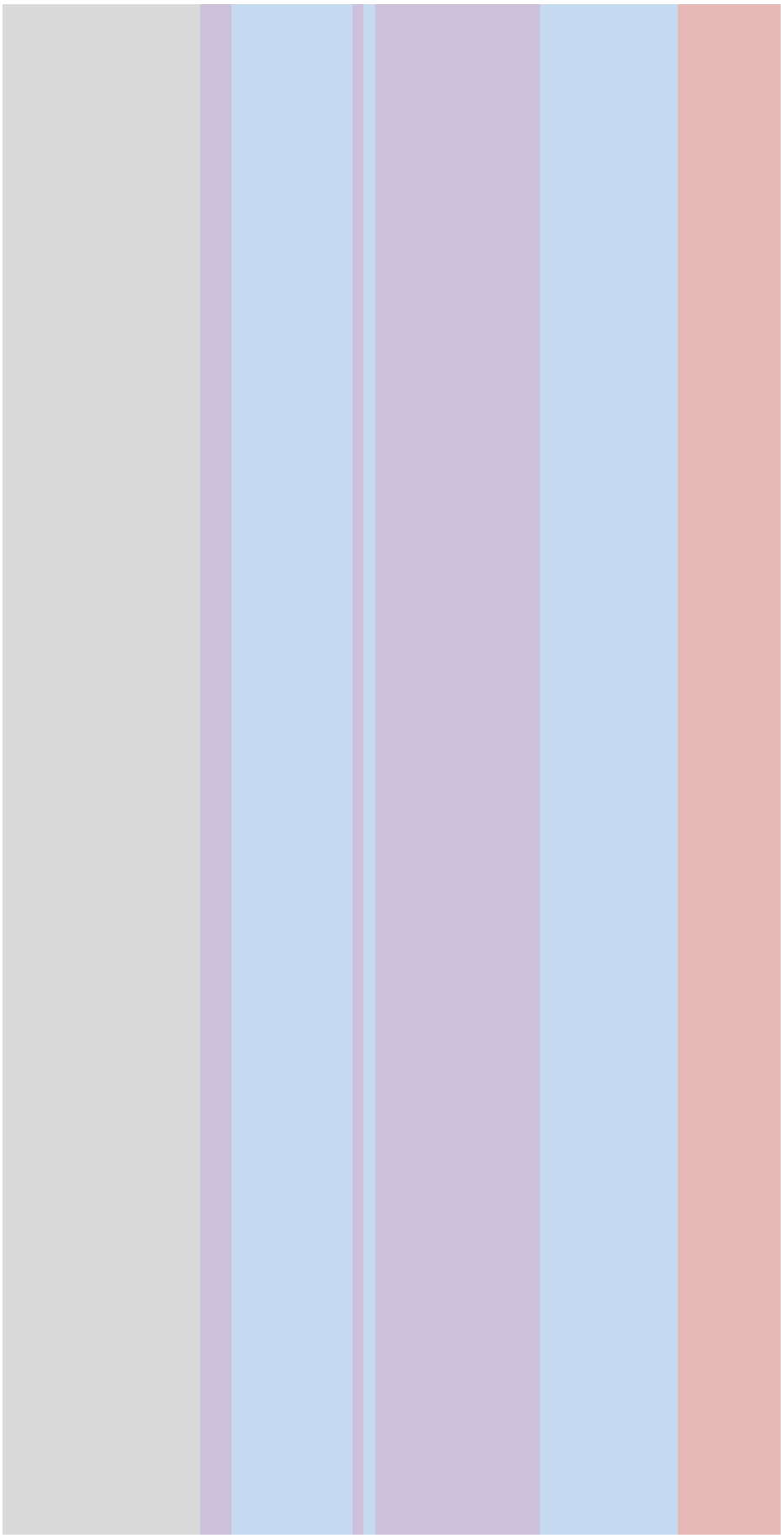
		2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
CAISO area Non-IOU,CCA,ESP non-coincident demand		3,985	3,997	3,969	3,992	3,990	3,990	4,004	4,009	4,004	4,077	4,120
CAISO area IOU,CCA,ESP non-coincident demand		44,127	43,592	43,361	43,314	43,259	43,288	43,380	43,496	43,689	43,813	44,121
coincident adjustment		95%	95%	96%	96%	97%	97%	97%	97%	97%	98%	97%
CAISO area IOU,CCA,ESP coincident demand		41,866	41,389	41,466	41,612	41,754	41,951	42,123	42,326	42,533	42,726	43,000
Your LSE's estimated percent of CAISO area IOU,CCA,ESP coincident demand	2%											
Your LSE's estimated system RA requirement, NQC MW		1,012	1,000	1,002	1,005	1,009	1,014	1,018	1,023	1,028	1,032	1,039
		Text	TRUE									

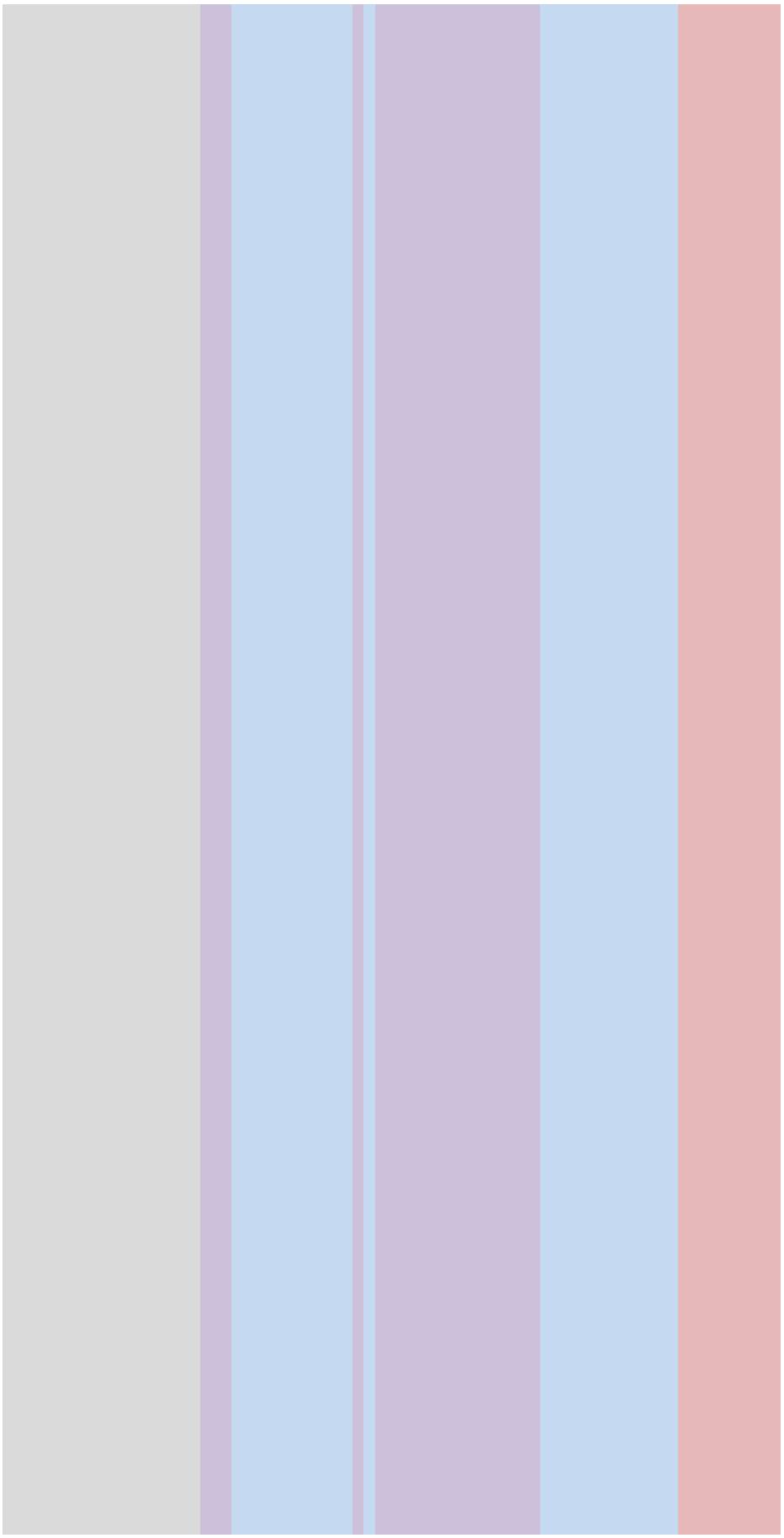


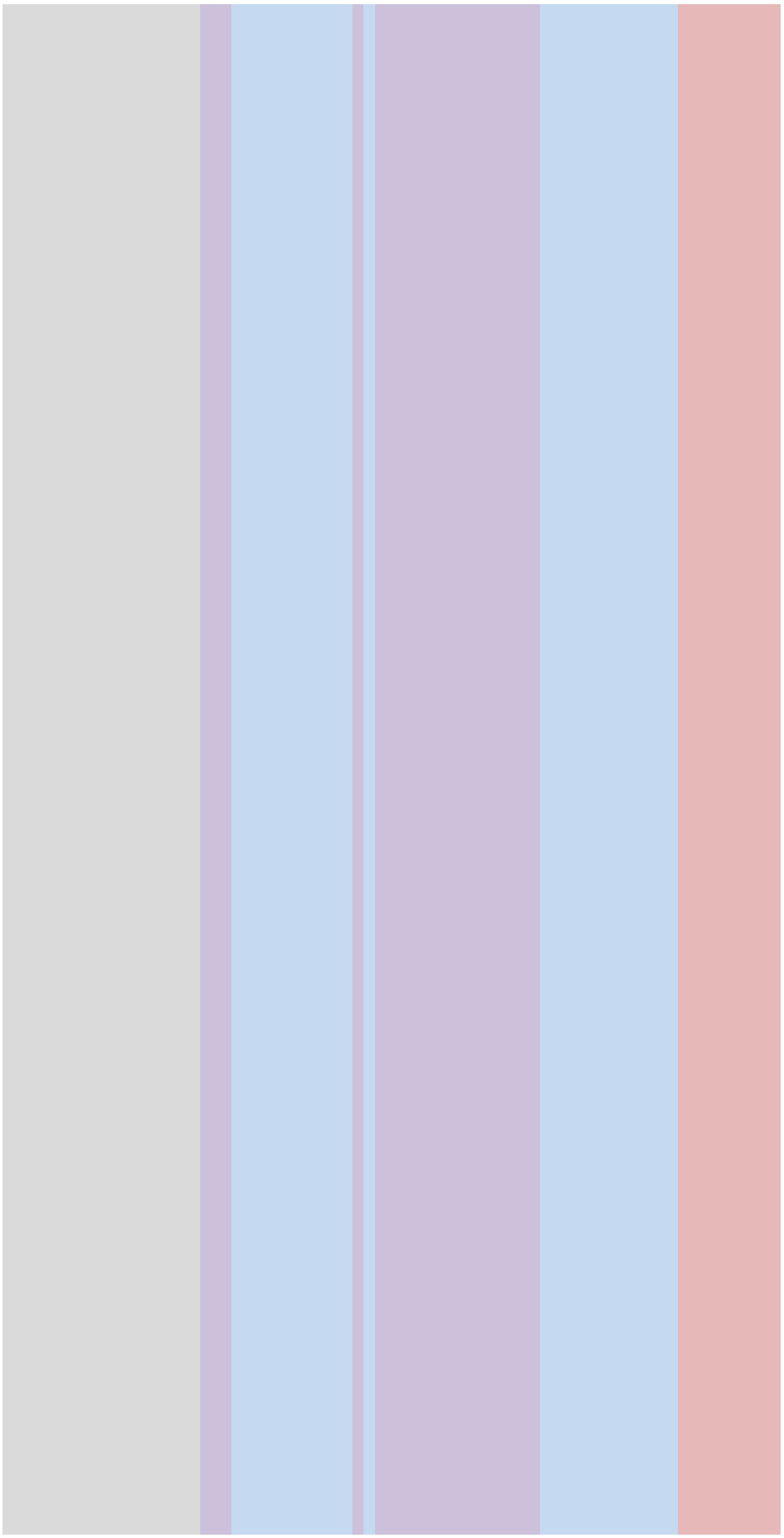


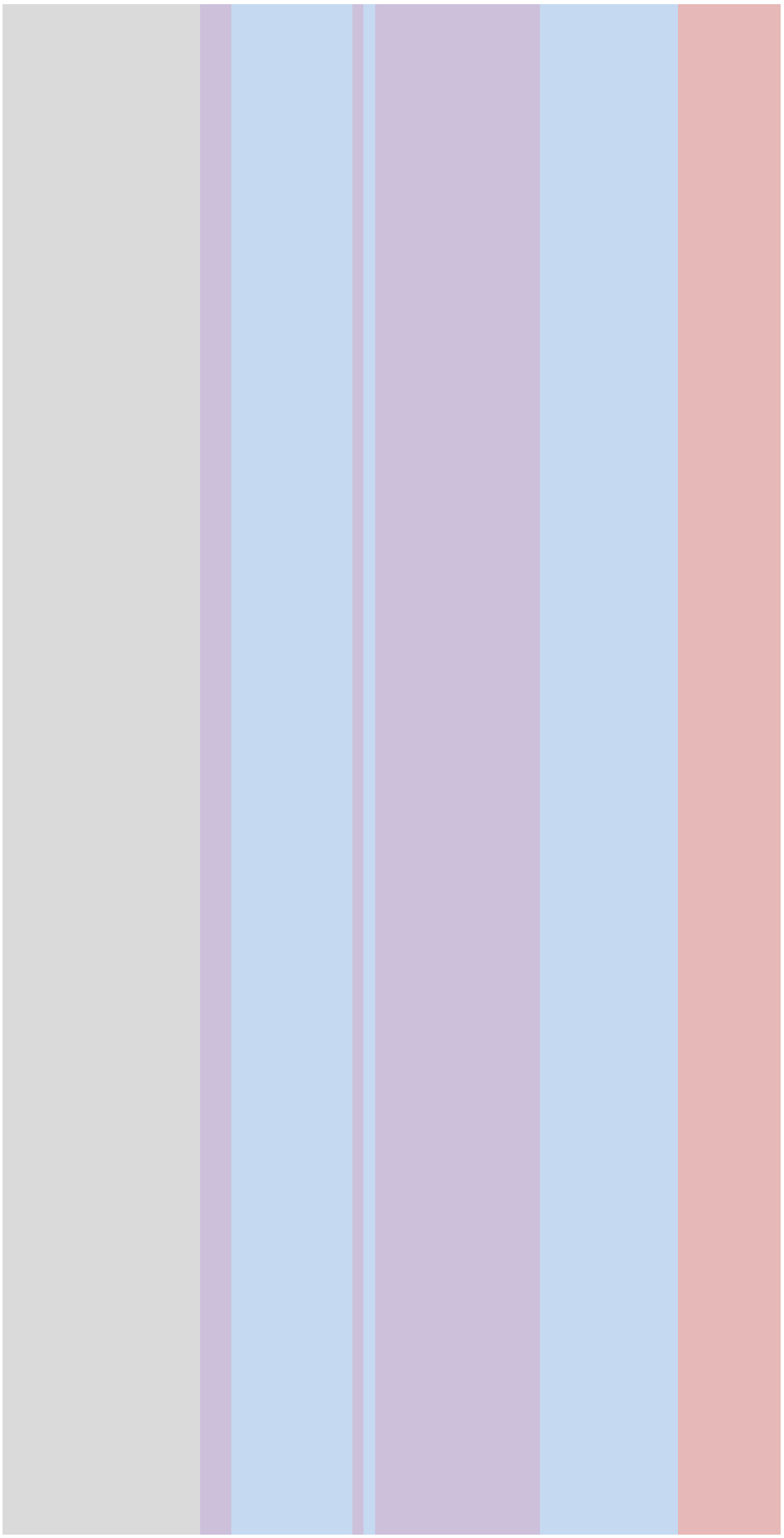


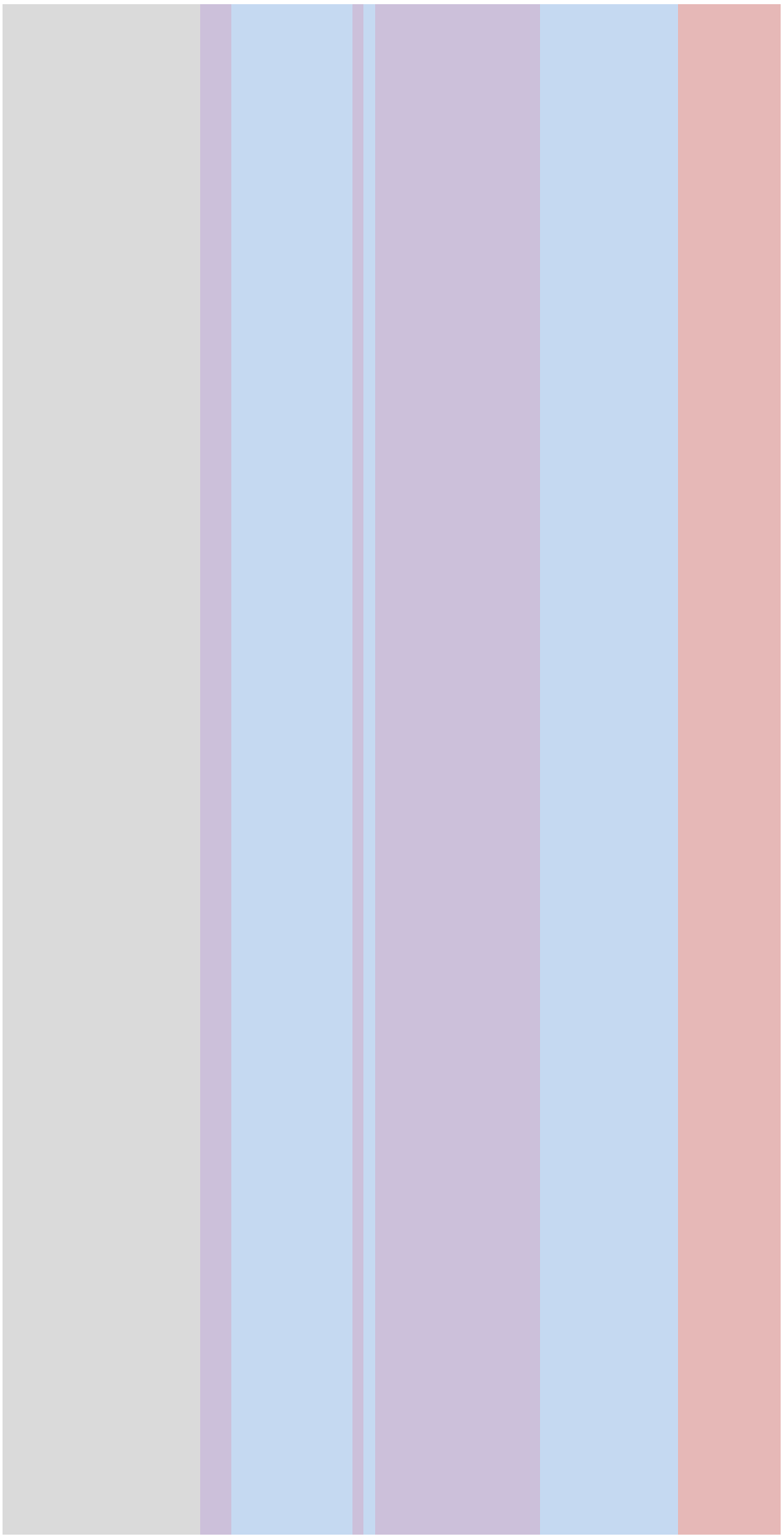


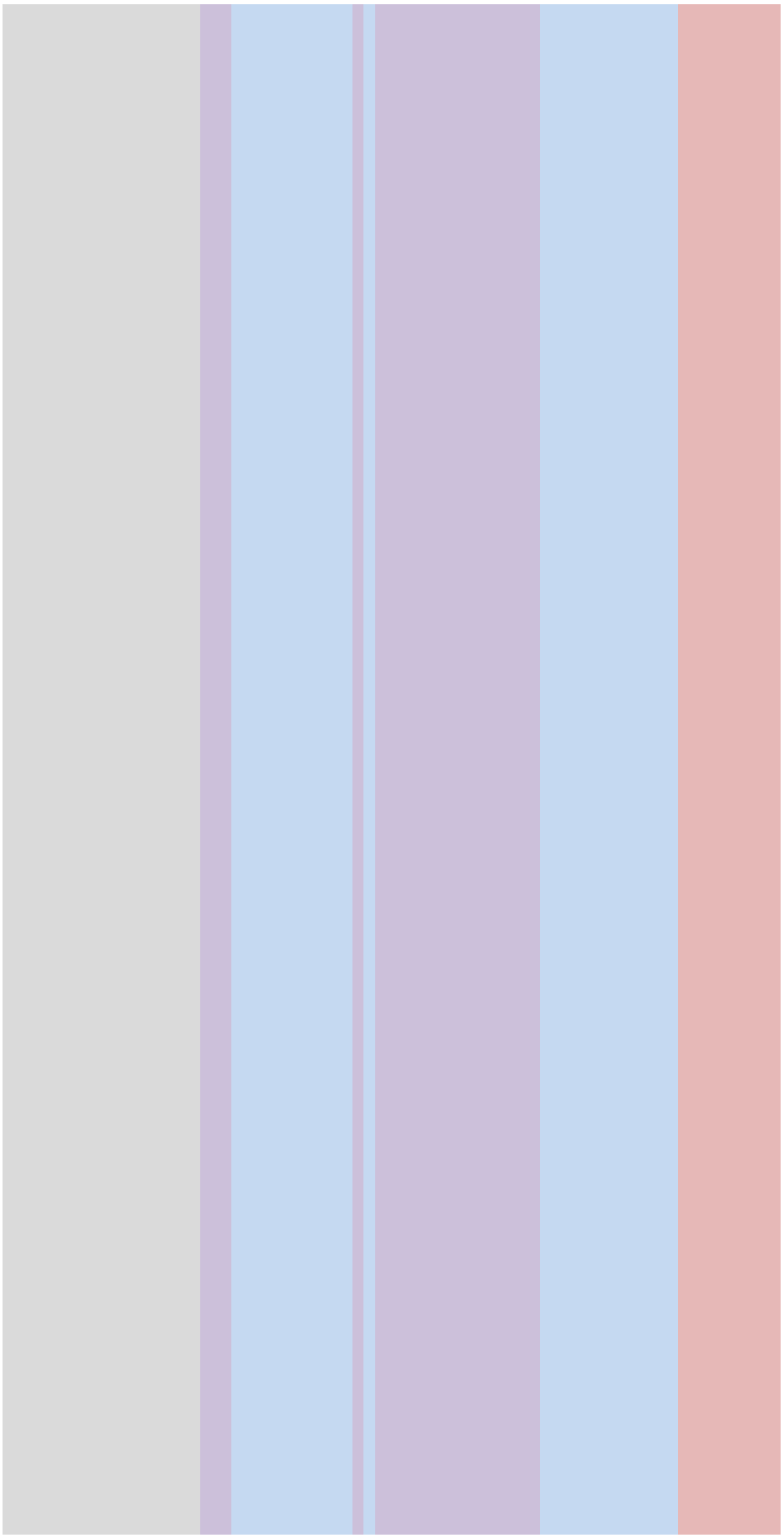


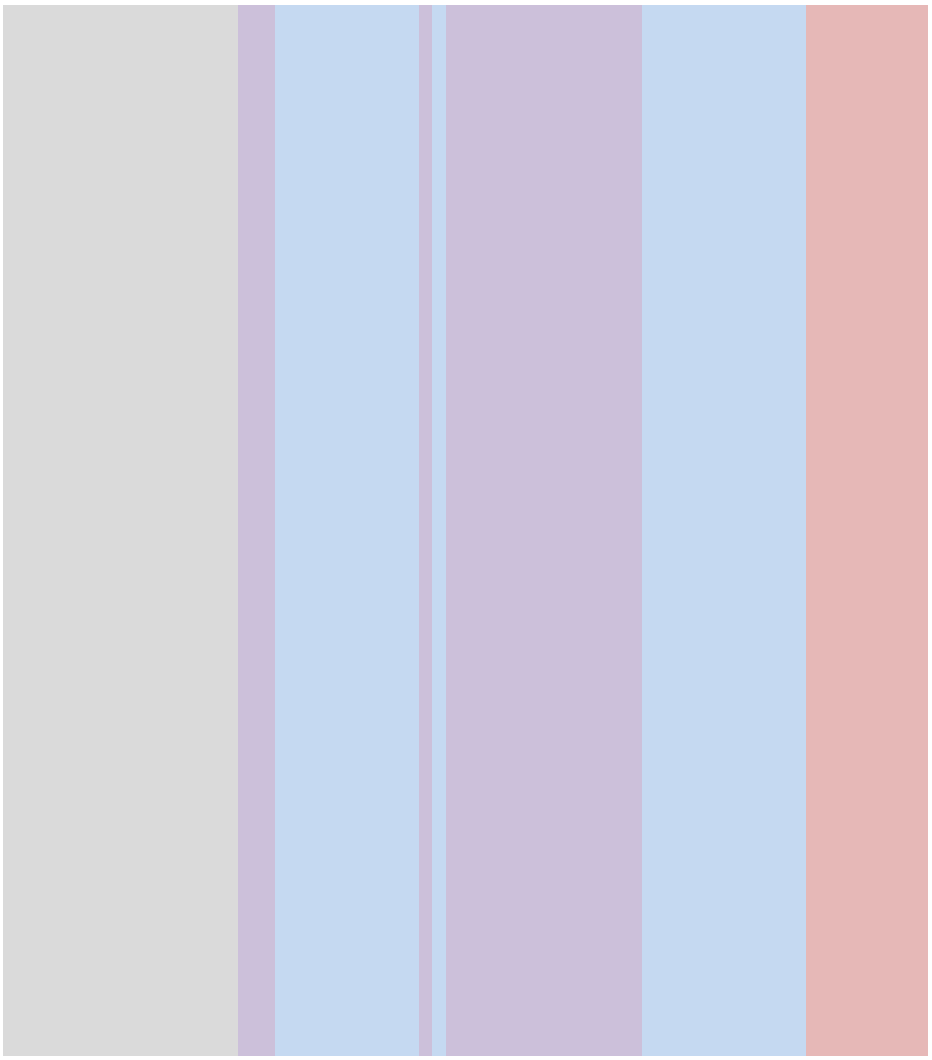












monthly_gwh_mw

Test: Correct data type for resource	Test: Correct data type for Year	Test: Correct data type for Month	TEST: No blanks in energy and capacity data	TEST: No missing data	Test: Correct data type for max_mw	TEST: NQC provided only once	TEST: Working ELCC type
1	0	0	26	8	8	0	26

unique_contracts

Test: Correct data type for lse_owned	Test: Correct data type for cam	Test:All data provided for hybrid	TEST: All data provided for contract	TEST: No fillmes
0	0	0	46	13

monthly_gwh_mw

notes	max_mw	resource_type	currently_online	elcc_type
3	8	1	6	1

unique_contracts

online_date_for_new_resources	is_incremental	viability_cod_reasonableness	viability_technical_feasibility	viability_resource_sufficiency	viability_financing
13	1	13	13	13	13

Show NQC for this month in System Reliability Progress Tracking Table -> September
Show 0-29-11-000 incremental procurement in this year -> 2025
Display NQC MW or GWh in System Reliability Progress Tracking Table? NQC MW

9

item	col	name
NQC MW	monthly	System Reliability Progress Tracking Table (NQC MW) for month of September by contract status. All MMT portfolio
GWh	monthly	Annual GWh by resource type

September 2025

System Reliability Progress Tracking Table (NQC MW) for month of September by contract status, RS MMT portfolio	NQC type	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
online	wind_low_cf	-	-	-	-	-	-	-	-	-	-	-
online	wind_high_cf	-	-	-	-	-	-	-	-	-	-	-
online	biomass	-	46	-	-	-	-	-	-	-	-	-
online	cogen	-	32	-	-	-	-	-	-	-	-	-
online	geothermal	-	-	-	-	-	-	-	-	-	-	-
online	hydro	-	19	-	-	-	-	-	-	-	-	-
online	thermal	-	50	-	-	-	-	-	-	-	-	-
online	battery	-	-	-	-	-	-	-	-	-	-	-
online	nuclear	-	-	-	-	-	-	-	-	-	-	-
online	solar	-	10	4	-	-	-	-	-	-	-	-
online	pch	-	-	-	-	-	-	-	-	-	-	-
online	unknown	-	-	-	-	-	-	-	-	-	-	-
development	wind_low_cf	-	-	-	-	-	-	-	-	-	-	-
development	wind_high_cf	-	-	-	-	-	-	-	-	-	-	-
development	biomass	-	-	-	-	-	-	-	-	-	-	-
development	cogen	-	-	-	-	-	-	-	-	-	-	-
development	geothermal	-	-	-	-	-	-	-	-	-	-	-
development	hydro	-	-	-	-	-	-	-	-	-	-	-
development	thermal	-	-	-	-	-	-	-	-	-	-	-
development	battery	-	-	-	-	-	-	-	-	-	-	-
development	nuclear	-	-	-	-	-	-	-	-	-	-	-
development	solar	-	-	-	-	-	-	-	-	-	-	-
development	pch	-	-	-	-	-	-	-	-	-	-	-
development	unknown	-	-	200	50	-	-	-	-	-	-	-
review	wind_low_cf	-	-	-	-	-	-	-	-	-	-	-
review	wind_high_cf	-	-	-	-	-	-	-	-	-	-	-
review	biomass	-	-	-	-	-	-	-	-	-	-	-
review	cogen	-	-	-	-	-	-	-	-	-	-	-
review	geothermal	-	-	-	-	-	-	-	-	-	-	-
review	hydro	-	-	-	-	-	-	-	-	-	-	-
review	thermal	-	660	-	-	-	-	-	-	-	-	-
review	battery	-	-	-	-	-	-	-	-	-	-	-
review	nuclear	-	-	-	-	-	-	-	-	-	-	-
review	solar	-	20	-	-	-	-	-	-	-	-	-
review	pch	-	-	-	-	-	-	-	-	-	-	-
review	unknown	-	50	-	-	-	-	-	-	-	-	-
planned_existing	wind_low_cf	-	-	-	-	-	-	-	-	-	-	-
planned_existing	wind_high_cf	-	65	-	-	-	-	-	-	-	-	-
planned_existing	biomass	-	-	-	-	-	-	-	-	-	-	-
planned_existing	cogen	-	-	-	-	-	-	-	-	-	-	-
planned_existing	geothermal	-	-	-	-	-	-	-	-	-	-	-
planned_existing	hydro	-	-	-	-	-	-	-	-	-	-	-
planned_existing	thermal	-	-	-	-	-	-	-	-	-	-	-
planned_existing	battery	-	500	-	-	-	-	-	-	-	-	-
planned_existing	nuclear	-	-	-	-	-	-	-	-	-	-	-
planned_existing	solar	-	30	-	-	-	-	-	-	-	-	-
planned_existing	pch	-	-	-	-	-	-	-	-	-	-	-
planned_existing	unknown	-	-	-	-	-	-	-	-	-	-	-
planned_new	wind_low_cf	-	-	-	-	-	-	-	-	-	-	-
planned_new	wind_high_cf	-	-	-	-	-	-	-	-	-	-	-
planned_new	biomass	-	-	-	-	-	-	-	-	-	-	-
planned_new	cogen	-	-	-	-	-	-	-	-	-	-	-
planned_new	geothermal	-	-	-	-	-	-	-	-	-	-	-
planned_new	hydro	-	-	-	-	-	-	-	-	-	-	-
planned_new	thermal	-	-	-	-	-	-	-	-	-	-	-
planned_new	battery	-	-	-	-	-	-	-	-	-	-	-
planned_new	nuclear	-	-	-	-	-	-	-	-	-	-	-
planned_new	solar	-	-	-	-	-	-	-	-	-	-	-
planned_new	pch	-	-	-	-	-	-	-	-	-	-	-
planned_new	unknown	-	-	-	-	-	-	-	-	-	-	-
TOTAL supply, NQC MW		-	1,501	93	-	-	-	-	-	-	-	-
Load (MW)		1,052	1,055	1,057	1,059	1,059	1,014	1,018	1,018	1,018	1,022	1,026
Load +15% PRM (MW)		1,209	1,213	1,216	1,218	1,218	1,166	1,170	1,170	1,170	1,175	1,180
Supply-minus-load, Shortfall(-) or Surplus(+), in MW		(1,169)	(117)	(1,124)	(1,218)	(1,218)	(1,166)	(1,170)	(1,170)	(1,170)	(1,175)	(1,180)

NQC MW from data	NQC MW displayed in table	difference calculation	match?
1,355	1,355		TRUE

0 <-- Number of resources with an RUCC type of "Hilmar". If this is nonzero, it can cause a mismatch above.

Incremental Procurement for 0-29-11-000, NQC MW	2025
Supply-side resource commissioned	275
New resource that is energy only in 2025	25
Demand-side ecosystem size-in-MW demand forecast (and thus effective incremental)	50
MW added in existing resource	100
Total NQC MW	450

Check match of incremental procurement data
TRUE

data_source	resource	generator_name	MAXGEN	resolve_final_group	resource_supertype	note_required	is_baseline	is_incremental	currently_online	elcc_type
template_list	CAPMAD_1_UNIT 1	0	4.64	0	physical	none	1	0	1	unknown
template_list	PIUTE_6_GNBSR1	0	3	0	physical	none	0	1	1	unknown
template_list	PRCTVY_1_MIGBT1	0	2	0	physical	none	0	0	1	unknown
template_list	RECTOR_2_TFDBM1	0	0.8	0	physical	none	0	1	1	unknown
template_list	TULARE_2_TULBM1	Tulare BioMAT Fuel Cell	2.8	0	physical	none	1	0	1	unknown
template_list	GUERNS_6_HD3BM3	Hanford Digester Genset 3	1.3	CAISO_Biogas	physical	none	1	0	1	biomass
template_list	GUERNS_6_VH2BM1	Hanford Digester Genset 2	1.1	CAISO_Biogas	physical	none	1	0	1	biomass
template_list	KYCORA_6_KMSBT1	Kearny Mesa Storage	1	CAISO_U_Battery	physical	none	1	0	1	battery
template_list	SANLOB_1_OSFBM1	HZIU Kompogas SLO	0.85	0	physical	none	1	0	1	unknown
ruling_list	SPIAND_1_ANDSN2	SPI Biomass Portfolio	58	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	WSENGY_1_UNIT 1	Wheelabrator Shasta	54.9	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	WALNUT_6_HILGEN	L.A. Co. Sanitation Dist (Puente Hills)	50	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	PANDOL_6_UNIT	Covanta Delano Inc (formerly AES Delano)	49	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	COGNAT_1_UNIT	DTE Stockton	45	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	MESAS_2_QF	Total Energy Facilities	38.4	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	OLINDA_2_LNDFL2	Brea Expansion Plant	32.8	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	HL Power	HL Power	32	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	BURNYF_2_UNIT 1	Burney Forest Products	31	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	WADHAM_6_UNIT	Wadham Energy LP	29.07	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	PACLUM_6_UNIT	Eel River Power LLC	28.8	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	ULTPFR_1_UNIT 1	Rio Bravo Fresno	26.5	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	H.W. Hill Landfill Gas Power Plant AKA ROOSEVELT BIOGAS	H.W. Hill Landfill Gas Power Plant AKA ROOSEVELT BIOGAS	26	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	BIOMAS_1_UNIT 1	Woodland Biomass	25.5	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	MENBIO_6_UNIT	Covanta Mendota L. P.	25	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	ULTRCK_2_UNIT	Rio Bravo Rocklin	25	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	STNRES_1_UNIT	Stanislaus Resource Recovery Facility	24	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	ULTPCH_1_UNIT 1	Pacific-Ultrapower Chinese Station	22	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	THMENG_1_UNIT 1	Thermal Energy Dev. Corp.	21	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	SANTGO_6_COYOTE	Coyote Canyon	20	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	SUNSHN_2_LNDFL	Sunshine Landfill	18.96	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	FAIRHV_6_UNIT	DG Fairhaven Power, LLC	18.75	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	MOORPK_2_CALABS	Calabasas Gas-to-Energy	13.8	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	USWND4_2_UNIT5	Waste Management Renewable Energy	13.2	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	COLPIN_6_COLLNS	Collins Pine	12	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	Orange County Sanitation District (F/k/a 1098)	Orange County Sanitation District (F/k/a 1098)	12	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	BLULKE_6_BLUELK	Blue Lake Power	12	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	CHWCHL_1_BIOMAS	Chowchilla Biomass Facility	10.8	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	OXMTN_6_LNDFIL	Ox Mountain Landfill aka Half Moon Bay	10.62	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	ELNIDP_6_BIOMAS	El Nido Biomass Facility	10.5	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	PEABDY_2_LNDFL1	Potrero Hills Landfill	8	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	CHINO_2_QF	L.A. Co. Sanitation Dist Spadra	8	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	SAUGUS_7_CHIQCN	Chiquita Canyon	8	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	WALNUT_7_WCOVST	MM West Covina LLC, Gen 2	7.1	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	OAKL_7_EBMUD	EBMUD WWTP Power Generation Station	6.45	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	CPSTNO_7_PRMADS	MM Prima Deshecha	6.1	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	SAUGUS_7_LOPE2	MM Lopez Energy LLC	6.1	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	CSTRVL_7_PLLX2	Marina Landfill Gas (Monterey Regional Waste Management Dist)	5.08	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	MSHGTS_6_MMARLF	MM San Diego-Miramar (RAM)	5	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	SMMALF_6_UNIT5	Sonoma County Landfill LFGTE Project	5	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	PLSNTG_7_UNCLND	Lincoln Landfill - WPWMA	4.98	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	CBRLLD_6_PLSTP1	City of San Diego - Point Loma	4.8	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	OAKL1_GTG1	EBMUD WWTP Digester Gas Turbine	4.6	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	CORMAL_6_SJOAQN	Amerescо San Joaquin LLC	4.34	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	CAYTNO_2_VASCO	Amerescо Vasco Road LLC	4.34	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	WEBER_6_FORWRD	Amerescо Forward LLC	4.34	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	Gas Recovery Sys. (Newby Island 2)	Gas Recovery Sys. (Newby Island 2)	4.2	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	RHONDO_6_PUENTE	L.A. Co. Sanitation Dist CSD 2&10	3.9	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	OTAY_7_UNITC1	Otay Landfill 3	3.8	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	VALLEY_7_UNITA1	WMIES El Sobrante	3.77	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	KIRKER_7_KELCYN	Keller Canyon Landfill (Pittsburg)	3.56	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	WHEATL_6_LNDFIL	Ostrom Road aka G2 Energy Project	3.55	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	TRANS JORDAN	TRANS JORDAN	3.36	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	GRNVLY_7_SCLAND	Amerescо Santa Cruz Energy	3.04	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	OTAY_6_UNITB1	Otay Landfill I	3	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	GOLETA_6_TAIGS	MM Taigpas Energy LLC	2.84	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	CHINO_7_MILIKN	MN Milliken Genco LLC, Unit 1-2	2.6	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	ETIWND_7_MIDVLY	MN Mid Valley Genco LLC, 1-2	2.6	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	RICHMN_7_BAYENV	Nove Power Plant	2.5	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	MOORPK_7_UNITA1	WMES Simi Valley	2.49	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	CHILLS_7_UNITA1	Sycamore Energy 2 LLC	2.25	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	Salt Lake Landfill Gas Recovery	Salt Lake Landfill Gas Recovery	2.24	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	ESQUON_6_LNDFIL	Butte County Neal Road Landfill	2.16	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	Southeast Digester Gas Cogen Plant	Southeast Digester Gas Cogen Plant	2.1	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	CSTRVL_7_GFLNTS	Monterey Regional Water	2	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	OLDRIV_6_BIOGAS	ABEC Bidart-Old River LLC	2	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	PEABDY_2_LNDFIL	Hay Road - Silicon Valley Biomass	1.6	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	Gas Recovery Sys. (American Cyn)	Gas Recovery Sys. (American Cyn)	1.5	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	SANLOB_1_LNDFIL	Toro SLO Landfill	1.5	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	SAUGUS_2_TOLAND	Toland Road Landfill	1.5	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	CHILLS_1_SYCENG	Sycamore Energy 1 LLC	1.5	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	SMRCOS_6_LNDFIL	San Marcos Energy	1.5	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	OTAY_6_LNDFL5	Otay Landfill V	1.5	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	OTAY_6_LNDFL6	Otay Landfill VI	1.5	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	Central Valley Ag Power	Central Valley Ag Power	1.5	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	SISQUC_1_SMARIA	Santa Maria II	1.42	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	GONZLS_6_UNIT	Amerescо Johnson Canyon	1.42	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	VALLEY_7_BADLND	Badlands Landfill (Riverside County San. District)	1.1	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	CSTOGA_6_LNDFIL	Clover Flat LFG	0.85	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	Ortigalita Power Company (Madera Project)	Ortigalita Power Company (Madera Project)	0.75	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	TUPMAN_1_BIOGAS	ABEC Bidart-Stockdale LLC	0.6	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	Inland Empire Utilities Agency	Inland Empire Utilities Agency	0.58	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	City Of Watsonville	City Of Watsonville	0.55	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	Castelanelli Bros. Biogas	Castelanelli Bros. Biogas	0.3	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	Royal Farms #2	Royal Farms #2	0.1	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	Blake's Landing - 80kW Generator	Blake's Landing - 80kW Generator	0.08	CAISO_Biomass	physical	none	1	0	1	biomass
ruling_list	Sierra Pacific Industries (SPI) REC Purchase Amended & Restated	Sierra Pacific Industries (SPI) REC Purchase Amended & Restated	0	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	blended	0	#N/A	blended	special	fillme_approximate resource mix, carbon content	1	0	fillme	unknown
template_list	New_Li_Battery	0	#N/A	CAISO_Battery	new_resolve	fillme_name,type,mw	0	1	0	battery
template_list	New_Flow_Battery	0	#N/A	CAISO_Battery	new_resolve	fillme_name,type,mw	0	1	0	battery
template_list	new_generic_battery_storage	0	#N/A	CAISO_Battery	new_generic	none	0	1	0	battery
added	existing_generic_battery_storage		#N/A	CAISO_Battery	existing_generic	none	0	1	1	battery
template_list	SANTGO_2_LNDFL1	Bowerman Power	19.6	CAISO_Biogas	physical	none	1	0	1	biomass
template_list	SANTR_6_UNIT5	LACSD CARSON WATER POLLUTION AGGREGATE	8	CAISO_Biogas	physical	none	1	0	1	biomass
template_list	USWND4_2_UNIT2	Altamont Landfill Gas to Energy	7.4	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	OAK C. 1_EBMUD	MWWTP PGS 1 - ENGINES	6.9	CAISO_Biogas	physical	none	1	0	1	biomass
template_list	DAVIS_7_MNMETH	MM Yolo Power LLC	4	CAISO_Biogas	physical	none	1	0	1	biomass
template_list	NOVATO_6_LNDFL	Redwood Renewable Energy	3.9	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	Central CA Fuel Cell 2	Central CA Fuel Cell 2	3	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	Lakeside Biogas LLC	Lakeside Biogas LLC	3	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	Santa Barbara County Public Works Department	Santa Barbara County Public Works Department	2.274	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	Diamond H Dairy Power	Diamond H Dairy Power	2	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	PSWEET_1_STCRUZ	Santa Cruz Energy LLC	1.6	CAISO_Biogas	physical	none	1	0	1	biomass
template_list	Organic Energy Solutions	Organic Energy Solutions	1.6	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	Verwey-Hanford Dairy Digester Genset #2	Verwey-Hanford Dairy Digester Genset #2	1.028	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	Verwey-Hanford Dairy Digester III	Verwey-Hanford Dairy Digester III	1.028	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	GANSO_1_WSTBM1	Weststar Dairy Biogas	1	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	OLDRIV_6_CESDBM	Ces Dairy Biogas	1	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	OLDRIV_6_LKVBM1	Lakeview Dairy Biogas	1	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	David Tevelde Dairy Digester	David Tevelde Dairy Digester	1	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	San Luis Obispo AD	San Luis Obispo AD	0.853	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	Open Sky Dairy Digester #2	Open Sky Dairy Digester #2	0.8	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	Van Der Kooi Dairy Digester	Van Der Kooi Dairy Digester	0.8	CAISO_Biogas	physical	none	0	1	0	biomass
template_list	Two Fiets	Two Fiets	0.8	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	SCHNDR_1_OS2BM2	Verwey Madera Dairy Digester Genset #2	0.8	CAISO_Biogas	physical	none	0	1	1	biomass
template_list	InState_Biomass	0	#N/A	CAISO_Biomass	new_resolve	fillme_name,type,mw	0	1	0	biomass
template_list	new_generic_biogas_landfillgas	0	#N/A	CAISO_Biomass	new_generic	none	0	1	0	biomass
template_list	new_generic_biomass/wood	0	#N/A	CAISO_Biomass	new_generic	none	0	0	0	biomass
template_list	LASSEN_6_UNIT5	Honey Lake Power	30	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	SPQUIN_6_SRPCQU	0	24	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	SPIBUR_2_UNIT 1	0	22	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	LAPAC_6_UNIT	LOUISIANA PACIFIC SAMOA	20	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	SPI LI_2_UNIT 1	0	17.2	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	BiomassOneGE1	Biomass One LP-GE	14.4	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	SNCLRA_2_HOWLNG	0	13	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	OLINDA_7_BLKSND	BlackSand Generating Facility	8	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	OLINDA_7_LNDFIL	OLINDA_7_LNDFIL	5.6	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	OtayLF3	Otay-OTA3_22604	3.75	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	Prima_Plant1	Prima Plant-UNIT1_22112	3	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	Prima_Plant2	Prima Plant-UNIT2_22112	3	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	Blue Mountain Electric Company	Blue Mountain Electric Company	3	CAISO_Biomass	physical	none	0	1	1	biomass
template_list	Hat Creek Bioenergy, LLC	Hat Creek Bioenergy, LLC	2.88	CAISO_Biomass	physical	none	0	1	0	biomass
template_list	PointLoma1	Point Loma 1_POINT LOMA WASTEWATER TREATMENT PLANT-1_CABRILLO_Point Loma	2.29	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	PointLoma2	Point Loma 2_POINT LOMA WASTEWATER TREATMENT PLANT-1	2.29	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	North Fork Community Power	North Fork Community Power	2	CAISO_Biomass	physical	none	0	1	1	biomass
template_list	OtayLF1	OTAY LANDFILL UNIT 1_22604	1.88	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	MM_SD_Miramar2	MM San Diego-Miramar-UNIT2_22448	1.6	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	DALYCT_1_FCELL	0	1.6	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	DIXNLD_1_LNDFL	Zero Waste Energy	1.6	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	DoubleADigester1	Double A Digester-1	1.5	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	DoubleADigester2	Double A Digester-2	1.5	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	DoubleADigester3	Double A Digester-3	1.5	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	RECTOR_7_TULARE	MM Tulare	1.5	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	CASTVL_2_FCELL	0	1.4	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	CargillB6Bio1	Cargill B6 Biofactory-1	1.1	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	CargillB6Bio2	Cargill B6 Biofactory-2	1.1	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	Napa Recycling Biomass Plant	Napa Recycling Biomass Plant	1	CAISO_Biomass	physical	none	0	1	0	biomass
template_list	DAIRLD_1_MD2BM1	0	0.8	CAISO_Biomass	physical	none	0	1	1	biomass
template_list	BigSky1	Big Sky Dairy Digester-GEN1	0.75	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	BigSky2	Big Sky Dairy Digester-GEN2	0.75	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	Pocatello_Waste	Pocatello Waste-1	0.46	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	HookeyDigester1	Hooley Digester-IC1	0.2	CAISO_Biomass	physical	none	1	0	1	biomass
template_list	HookeyDigester2	Hooley Digester-IC2	0.2	CAISO_Biomass	physical	none	1	0	1	biomass
added	existing_generic_biogas_landfillgas		#N/A	CAISO_Biomass	existing_generic	none	0	1	1	biomass
added	existing_generic_biomass/wood		#N/A	CAISO_Biomass	existing_generic	none	0	1	1	biomass
ruling_list	HIDSRT_2_UNIT5	HIGH DESERT POWER PROJECT AGGREGATE	830	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	DELTA_2_PL1X4	DELTA ENERGY CENTER AGGREGATE	813	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	LEBECS_2_UNIT5	Pastoria Energy Facility	765	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	HuntBeachCC-Total	Huntington Beach	644	CAISO_CCGT1	physical	none	1	0	0	thermal
ruling_list	COLUSA_2_PL1X3	Colusa Generating Station	641	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	AlamitosCC-Total	Alamitos	640	CAISO_CCGT1	physical	none	1	0	0	thermal
ruling_list	OTMESA_2_PL1X3	OTAY MESA ENERGY CENTER	603.6	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	TERMEX_2_PL1X3	TDM	596	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	METEC_2_PL1X3	Metcalf Energy Center	593.16	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	SUNRIS_2_PL1X3	Sunrise Power Project AGGREGATE II	586.02	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	GATWAY_2_PL1X3	GATEWAY GENERATING STATION	585	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	LMEC_1_PL1X3	Los Medanos Energy Center AGGREGATE	580	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	PALOMR_2_PL1X3	Palomar Energy Center	575	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	SBERDO_2_PSP3	Mountainview Gen Sta. Unit 3	555	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	SBERDO_2_PSP4	Mountainview Gen Sta. Unit 4	555	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	MOSSLD_2_PSP1	MOSS LANDING POWER BLOCK 1	510	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	MOSSLD_2_PSP2	MOSS LANDING POWER BLOCK 2	510	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	MRCHNT_2_PL1X3	Desert Star Energy Center	419.25	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	ELKHIL_2_PL1X3	ELK HILLS COMBINED CYCLE (AGGREGATE)	380	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	LODIEC_2_PL1X2	Lodi Energy Center	302.58	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	ELSEGN_2_UN2021	El Segundo Energy Center 7/8	263.68	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	LAPLMA_2_UNIT 2	La Paloma Generating Plant Unit #2	260.2	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	LAPLMA_2_UNIT 1	La Paloma Generating Plant Unit #1	259.8	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	LAPLMA_2_UNIT 3	La Paloma Generating Plant Unit #3	256.15	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	LAPLMA_2_UNIT 4	LA PALOMA GENERATING PLANT, UNIT #4	253.29	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	GILROY_1_UNIT	GILROY COGEN AGGREGATE	120	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	LGHTHP_6_ICEGEN	CARSON COGENERATION	48	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	CALPIN_1_AGNEW	Agnews Power Plant	28.56	CAISO_CCGT1	physical	none	1	0	1	thermal
ruling_list	Alamitos	0	640	CAISO_CCGT1	physical	none	1	0	0	thermal
ruling_list	Huntington Beach	0	644	CAISO_CCGT1	physical	none	1	0	0	thermal
ruling_list	Puente Power Project	0	262	CAISO_CCGT1	physical	none	1	0	0	thermal

ruling_list	TBD (Alamitos)	0	640	CAISO_CCGT1	physical	none	1	0	0	thermal
ruling_list	TBD (HuntingtonBeach)	0	644	CAISO_CCGT1	physical	none	1	0	0	thermal
template_list	new_generic_combined_cycle	0	#N/A	CAISO_CCGT1	new_generic	none	0	1	0	thermal
template_list	INLDEM_5_UNIT 1	Inland Empire Energy Center, Unit 1	376.2	CAISO_CCGT1	physical	none	1	0	1	thermal
template_list	ALAMIT_2_PL1X3	Alamitos Energy Center Unit 7	680	CAISO_CCGT1	physical	none	1	0	1	thermal
template_list	HNTGBH_2_PL1X3	Huntington Beach Energy	669	CAISO_CCGT1	physical	none	1	0	1	thermal
template_list	MAGNLA_6_PASADENA	Magnolia Power Plant - PASADENA	18	CAISO_CCGT1	physical	none	1	0	1	thermal
template_list	MAGNLA_6_COLTON	Magnolia Power Project	10	CAISO_CCGT1	physical	none	1	0	1	thermal
added	existing_generic_combined_cycle		#N/A	CAISO_CCGT1	existing_generic	none	0	1	1	thermal
ruling_list	RUSCTY_2_UNIT5	Russell City Energy Center	613.22	CAISO_CCGT2	physical	none	1	0	1	thermal
ruling_list	BUCKBL_2_PL1X3	Blythe Energy Center	493.63	CAISO_CCGT2	physical	none	1	0	1	thermal
ruling_list	LAROA2_2_UNITA1	LR2	322	CAISO_CCGT2	physical	none	1	0	1	thermal
ruling_list	SCHLTE_1_PL1X3	Tracy Combined Cycle Power Plant	314.34	CAISO_CCGT2	physical	none	1	0	1	thermal
ruling_list	LECEF_1_UNITS	LOS ESTEROS ENERGY FACILITY AGGREGATE	304	CAISO_CCGT2	physical	none	1	0	1	thermal
ruling_list	ELSEGN_2_UNIT11	El Segundo Energy Center 5/6	263	CAISO_CCGT2	physical	none	1	0	1	thermal
ruling_list	DUANE_1_PL1X3	DONALD VON RAESFELD POWER PROJECT	143.5	CAISO_CCGT2	physical	none	1	0	1	thermal
ruling_list	VERNON_6_MALBRG	Malburg Generating Station	134	CAISO_CCGT2	physical	none	1	0	1	thermal
ruling_list	HARBGN_7_UNIT5	HARBOR COGEN COMBINED CYCLE	100	CAISO_CCGT2	physical	none	1	0	1	thermal
ruling_list	AGRICO_7_UNIT	Fresno Cogen	50.6	CAISO_CCGT2	physical	none	1	0	1	thermal
ruling_list	CORONS_6_CLRWTR	Clearwater Power Plant	28	CAISO_CCGT2	physical	none	1	0	1	thermal
ruling_list	LAROA1_2_UNITA1	LR1	0	CAISO_CCGT2	physical	none	1	0	1	thermal
ruling_list	ARCOGN_2_UNITS	WATSON COGENERATION	416.6	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	CROKET_7_UNIT	CROCKETT COGEN	240	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	CHEVMN_2_UNIT5	CHEVRON U.S.A. UNITS 1 & 2 AGGREGATE	124.87	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	BASICE_2_UNITS	CALPINE AMERICAN I COGEN.	120	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	TIDWTR_2_UNITS	MARTINEZ COGEN LIMITED PARTNERSHIP	114.8	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	SYCAMR_2_UNIT 1	Sycamore Cogeneration Unit 1	80	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	SYCAMR_2_UNIT 3	Sycamore Cogeneration Unit 3	80	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	STOILS_1_UNITS	Chevron Richmond Refinery	62.5	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	KERNRG_1_UNITS	South Belridge Cogen Facility	55.2	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	KERNFT_1_UNITS	KERN FRONT LIMITED	52.4	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	YUBACT_1_SUNSWT	YUBA CITY COGEN	49.97	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	ESCO_6_GILMOF	Goal Line Cogen	49.9	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	UNOCAL_1_UNITS	TOSCO (RODEO PLANT)	49.85	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	GRNLF2_1_UNIT	GREENLEAF II COGEN	49.5	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	SNCLRA_6_PROCGN	PROCTER AND GAMBLE CUNARD II	49.5	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	DISCOV_1_CHEVRN	CHEVRON USA (EASTRIDGE)	48.8	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	SNCLRA_6_OXGEN	E.F. OXNARD INCORPORATED	48.5	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	SUREGY_6_SANGER	DYNAMIS COGEN	48.3	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	GOLETA_6_EXGEN	EXXON COMPANY USA	48.2	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	HOLGAT_1_BORAX	U.S. Borax, Unit 1	48.2	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	MTNPOS_1_UNIT	MT. POSO COGENERATION CO.	46.64	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	SALIRV_2_UNIT	SALINAS RIVER COGEN CO.	39	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	UNVRSY_1_UNIT 1	Berry Cogen 3B - Unit 1	38	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	TENGEN_2_PL1X2	Berry Cogen 4Z	37.59	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	KINGCO_1_KINGBR	Kingsburg Cogen	34.5	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	VEDDER_1_SEKERN	TEXACO EXPLORATION & PROD (SE KERN RIVER	34.47	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	ETWIND_2_UNIT1	New-Indy Ontario, LLC	33.6	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	HINSON_6_CARBGN	BP WILMINGTON CALCINER	30	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	SNCLRA_2_UNIT1	New Indy Oxnard	27.8	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	GRIZZLY_1_BERKLY	PE - BERKELEY, INC.	26.35	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	CHINO_6_CIMGEN	O.L.S. ENERGY COMPANY -- CHINO	26	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	SAMPSN_6_KELCO1	KELCO QUALIFYING FACILITY	25	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	CHEVCT_1_UNIT	CHEVRON USA (CYMRIC)	24.3	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	PTLOMA_6_NTCQF	NTC/MCRD COGENERATION	22.3	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	DEXZEL_1_UNIT	Western Power and Steam Cogeneration	20	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	SEARLS_7_ARGUS	NORTH AMERICAN ARGUS	19	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	UNCHEM_1_UNIT	CONTRA COSTA CARBON PLANT	19	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	TANHIL_6_SOLART	BERRY PETROLEUM COGEN 1B AGGREGATE	17	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	CHEVCO_6_UNIT 1	CHEVRON USA (COALINGA)	16.5	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	CHEVCD_6_UNIT	CHEVRON USA (TAFT/CADET)	11.5	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	TXMCKT_6_UNIT	McKittrick Cogen	11.2	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	SBERDO_2_QF	SAN BERADINO QFS	10.6	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	GOLETA_6_GAVOTA	Point Arguello Pipeline Company	9.9	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	CHEVCO_6_UNIT 2	AERA ENERGY LLC. (COALINGA)	8.5	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	SRINTL_6_UNIT	SRI INTERNATIONAL	6.9	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	FELLOW_7_QFUNTS	Fellow QF Aggregate	6.2	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	FRITO_1_LAY	FRITO-LAY	6	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	STAUFF_1_UNIT	RHODIA INC. (RHONE-POULENC)	4.6	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	CLRMTK_1_QF	SMALL QF AGGREGATION - OAKLAND	1.25	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	MISSIX_1_QF	SMALL QF AGGREGATION - SAB FRABCUSCI	1	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	GRNLF1_1_UNITS	GREENLEAF #1 COGEN AGGREGATE	0	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	CENTER_2_QF	CENTER QFS	0	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	COLGA1_6_SHELLW	COALINGA COGENERATION COMPANY	0	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	DIVSON_6_NSQF	DIVISION NAVAL STATION COGEN	0	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	MIDSET_1_UNIT 1	MIDSET COGEN. CO.	0	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	MIRLOM_6_DELGEN	CORONA ENERGY PARTNERS LTD.	0	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	NIMTIG_6_INQF	NORTH ISLAND QF	0	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	PTLOMA_6_NTCCGN	AEI MCRD STEAM TURBINE	0	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	SARGNT_2_UNIT	SARGENT CANYON COGEN. COMPANY	0	CAISO_CHP	physical	none	1	0	1	cogen
ruling_list	SAUGUS_6_PTCHGN	COUNTY OF LOS ANGELES -- PITCHLE	0	CAISO_CHP	physical	none	1	0	1	cogen
template_list	new_generic_cogen	0	#N/A	CAISO_CHP	new_generic	none	0	1	0	cogen
template_list	HINSON_6_SERRGN	0	34	CAISO_CHP	physical	none	1	0	1	cogen
template_list	SNCLRA_2_UNIT	Channel Islands Power	27.5	CAISO_CHP	physical	none	1	0	1	cogen
template_list	SPIFBD_1_PL1X2	0	7.5	CAISO_CHP	physical	none	1	0	1	cogen
template_list	PLMSSR_6_HISIER	High Sierra Cogeneration Aggregate	6	CAISO_CHP	physical	none	1	0	1	cogen
template_list	MURRAY_6_UNIT	Grossmont Hospital	4.12	CAISO_CHP	physical	none	1	0	1	cogen
template_list	NIMTG_6_NICOGN	NORTH ISLAND COGEN	4.05	CAISO_CHP	physical	none	1	0	1	cogen
template_list	CUMMNG_6_SUNCT1	SunSelect 1	4	CAISO_CHP	physical	none	1	0	1	cogen
template_list	VISTA_2_PCELL	CSUSB fuel cell	1.4	CAISO_CHP	physical	none	1	0	1	cogen
template_list	NEWARK_1_QF	NEWARK 1 QF	1.1	CAISO_CHP	physical	none	1	0	1	cogen
template_list	MOSSLD_1_QF	SMALL QF AGGREGATION - SANTA CRUZ	1	CAISO_CHP	physical	none	1	0	1	cogen
template_list	MUPTAS_7_QFUNTS	MUPTAS_7_QFUNTS	1	CAISO_CHP	physical	none	1	0	1	cogen
template_list	PSWEET_7_QFUNTS	PSWEET_7_QFUNTS	1	CAISO_CHP	physical	none	1	0	1	cogen
template_list	CENTER_2_TECNG1	TECHNICAST	0.99	CAISO_CHP	physical	none	1	0	1	cogen
template_list	IGNACO_1_QF	SMALL QF AGGREGATION - VALLEJO/DINSMORE	0.5	CAISO_CHP	physical	none	1	0	1	cogen
template_list	LAGBEL_6_QF	LAGUNA BELL QFS	0.35	CAISO_CHP	physical	none	1	0	1	cogen
template_list	LAWRNC_7_SUNYVL	City of Sunnyvale Unit 1 and 2	0.3	CAISO_CHP	physical	none	1	0	1	cogen
added	existing_generic_cogen		#N/A	CAISO_CHP	existing_generic	none	0	1	1	cogen
template_list	new_generic_coal	0	#N/A	CAISO_Coal	new_generic	none	0	1	0	thermal
added	existing_generic_coal		#N/A	CAISO_Coal	existing_generic	none	0	1	1	thermal
template_list	new_generic_dr	0	#N/A	CAISO_DR	new_generic	none	0	1	0	unknown
added	existing_generic_dr		#N/A	CAISO_DR	existing_generic	none	0	1	1	unknown
template_list	Greater_Imperial_Geothermal	0	#N/A	CAISO_Geothermal	new_resolve	filme_name,type,mw	0	1	0	geothermal
template_list	Imperial_North_Kramer_Geothermal	0	#N/A	CAISO_Geothermal	new_resolve	filme_name,type,mw	0	1	0	geothermal
template_list	Northern_California_Ex_Geothermal	0	#N/A	CAISO_Geothermal	new_resolve	filme_name,type,mw	0	1	0	geothermal
template_list	Pacific_Northwest_Geothermal	0	#N/A	CAISO_Geothermal	new_resolve	filme_name,type,mw	0	1	0	geothermal
template_list	Riverside_Palm_Springs_Geothermal	0	#N/A	CAISO_Geothermal	new_resolve	filme_name,type,mw	0	1	0	geothermal
template_list	Solano_Geothermal	0	#N/A	CAISO_Geothermal	new_resolve	filme_name,type,mw	0	1	0	geothermal
template_list	Southern_Nevada_Geothermal	0	#N/A	CAISO_Geothermal	new_resolve	filme_name,type,mw	0	1	0	geothermal
template_list	new_generic_geothermal	0	#N/A	CAISO_Geothermal	new_generic	none	0	1	0	geothermal
template_list	GEYS13_7_UNIT13	GEYSERS UNIT 13 (HEALDSBURG)	95	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	SANTFG_7_UNIT5	GEYSERS CALISTOGA AGGREGATE	92.1	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	NAVYII_2_UNIT5	COSO POWER DEVELOPER (NAVY II) AGGREGATE	90	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	GEYS16_7_UNIT16	GEYSERS UNIT 16 (HEALDSBURG)	85	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	GYS7X8_7_UNIT5	GEYSERS UNITS 7 & 8 AGGREGATE	82	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	GEYS11_7_UNIT11	GEYSERS UNIT 11 (HEALDSBURG)	74.4	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	GEYS18_7_UNIT18	GEYSERS UNIT 18 (HEALDSBURG)	72	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	GEYS14_7_UNIT14	GEYSERS UNIT 14 (HEALDSBURG)	70	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	GEYS20_7_UNIT20	GEYSERS UNIT 20 (HEALDSBURG)	62	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	GEYS17_7_UNIT17	GEYSERS UNIT 17 (HEALDSBURG)	60	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	GEYS12_7_UNIT12	GEYSERS UNIT 12 (HEALDSBURG)	57	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	SMUDGO_7_UNIT 1	SONOMA POWER PLANT	53	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	NCPA_7_GP2UN4	NCPA GEO PLANT 2 UNIT 4	52.73	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	CerroPrieto1-1	Cerro Prieto I-1	35.7	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	CerroPrieto1-2	Cerro Prieto I-2	35.7	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	CerroPrieto1-3	Cerro Prieto I-3	35.7	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	CerroPrieto1-4	Cerro Prieto I-4	35.7	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	NCPA_7_GP1UN2	NCPA GEO PLANT 1 UNIT 2	34	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	MXI_GEO-U1-1	Assume Geo unit	30	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	ThermoNo1-2	Thermo No 1-2	14	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	NealHotSprings2	Neal Hot Springs Geothermal Project-NHS2	11	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	NealHotSprings3	Neal Hot Springs Geothermal Project-NHS3	11	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	GEYS17_2_BOTRCK	Bottle Rock Geothermal	10.01	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	WALNUT_7_WCDVCT	0	0	CAISO_Geothermal	physical	none	1	0	1	geothermal
added	existing_generic_geothermal		#N/A	CAISO_Geothermal	existing_generic	none	0	1	1	geothermal
template_list	New_Hybrid	0	#N/A	CAISO_Hybrid	new_resolve	filme_name,type,mw	0	1	0	unknown
ruling_list	BIGCRK_2_EXESWD	BIG CREEK HYDRO PROJECT PSP	773.6	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	HYTTHM_2_UNITS	HYATT-THERMALITO PUMP-GEN (AGGREGATE)	459.42	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	COLVIL_7_PL1X2	COLLIERVILLE HYDRO UNIT 1 & 2 AGGREGATE	246.86	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	INTKEP_2_UNITS	CCSF Hetch_Hetchy Hydro Aggregate	239	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	COLGAT_7_UNIT 1	Colgate Powerhouse Unit 1	176.72	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	COLGAT_7_UNIT 2	Colgate Powerhouse Unit 2	175.67	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	KERKHF_7_UNIT 1	KERKHOFF PH 2 UNIT #1	153.9	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	HAASPH_7_PL1X2	HAAS PH UNIT 1 & 2 AGGREGATE	144	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	CARIBOU_7_PL4X5	CARIBOU PH 2 UNIT 4 & 5 AGGREGATE	120	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	BELDEN_7_UNIT 1	BELDEN HYDRO	119	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	PIT4_7_PL1X2	PIT PH 4 UNITS 1 & 2 AGGREGATE	95	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	EXCHEC_7_UNIT 1	EICHEQUER HYDRO	94.5	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	ELECTR_7_PL1X3	ELECTRA PH UNIT 1 & 2 AGGREGATE	93	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	STANIS_7_UNIT 1	STANISLAUS HYDRO	91	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	BLACK_7_UNIT 1	JAMES B. BLACK 1	85	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	BLACK_7_UNIT 2	JAMES B. BLACK 2	84.1	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	PIT5_7_PL1X2	PIT PH 5 UNITS 1 & 2 AGGREGATE	82	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	PIT5_7_PL3X4	PIT PH 5 UNITS 3 & 4 AGGREGATE	82	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	DVLCYN_1_UNIT5	DEVIL CANYON HYDRO UNITS 1-4 AGGREGATE	80	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	DONNLS_7_UNIT	Donnells Hydro	72	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	PIT3_7_PL1X3	PIT PH 3 UNITS 1, 2 & 3 AGGREGATE	70.6	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	CRESTA_7_PL1X2	CRESTA PH UNIT 1 & 2 AGGREGATE	70.4	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	POEPH_7_UNIT 1	POE HYDRO UNIT 1	69	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	POEPH_7_UNIT 2	POE HYDRO UNIT 2	68.5	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	PINFLT_7_UNIT5	PINE FLAT HYDRO AGGREGATE	63.3	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	TIGRCK_7_UNIT5	TIGER CREEK HYDRO AGGREGATE	62	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	WDLEAF_7_UNIT 1	WOODLEAF HYDRO	60	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	BUCKCK_7_PL1X2	BUCKS CREEK AGGREGATE	57.25	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	PIT7_7_UNIT 1	PIT PH 7 UNIT 1	55.7	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	BALCHS_7_UNIT 3	BALCH 2 PH UNIT 3	54.6	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	PIT7_7_UNIT 2	PIT PH 7 UNIT 2	54.6	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	BALCHS_7_UNIT 2	BALCH 2 PH UNIT 2	52.5	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	DRUM_7_UNIT 5	DRUM PH 2 UNIT 5	50	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	CARBOU_7_PL2X3	CARIBOU PH 1 UNIT 2 & 3 AGGREGATE	49	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	SALTSP_7_UNIT5	SALT SPRINGS HYDRO AGGREGATE	46	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	CHICPK_7_UNIT 1	CHICAGO PARK 1_BEAR RIVER CA	42	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	PIT6_7_UNIT 2	PIT PH 6 UNIT 2	40	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	BUTTVL_7_UNIT 1	BUTT VALLEY HYDRO	39.5	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	WARNE_2_UNIT	WARNE HYDRO AGGREGATE	39.1	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	PIT6_7_UNIT 1	PIT PH 6 UNIT 1	39	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	FORBST_7_UNIT 1	FORBESTOWN HYDRO	37.5	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	VESTAL_2_KERN	KERN RIVER PH 3 UNITS 1 & 2 AGGREGATE	36.8	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	BALCHS_7_UNIT 1	BALCH 1 PH UNIT 1	33	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	MALCHQ_7_UNIT 1	MALACHA HYDRO L.P.	32.5	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	PIT1_7_UNIT 1	PIT PH 1 UNIT 1	32	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	PIT1_7_UNIT 2	PIT PH 1 UNIT 2	32	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	DRUM_7_PL3X4	Drum PH 1 Units 3 & 4 Aggregate	28.9	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	DRUM_7_PL1X2	Drum PH 1 Units 1 & 2 Aggregate	26	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	ONLLPP_6_UNITS	O'NEILL PUMP-GEN (AGGREGATE)	25.2	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	CARBOU_7_UNIT 1	CARIBOU PH 1 UNIT 1	24	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	ALAMO_6_UNIT	ALAMO POWER PLANT	17	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	RECTOR_2_QF	RECTOR QFS	17	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	MOJAVE_1_SIPHON	MOJAVE SIPHON POWER PLANT	14.36	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	FORKBU_6_UNIT	HYPOWER, INC. (FORKS OF BUTTE)	14.3	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	PARDEE_6_UNITS	Pardee Power House	14	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	LACIEN_2_VENICE	MWD Venice Hydroelectric Recovery Plant	9.95	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	PADUA_6_MWDSDM	San Dimas Hydroelectric Recovery Plant	9.9	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	CAMPFW_7_FARWST	CAMP FAR WEST HYDRO	8	CAISO_Hydro	physical	none	1	0	1	hydro
ruling_list	VALLEY_5_PERRIS	MWD Perris Hydroelectric Recovery Plant	7.94	CAISO_Hydro	physical	none	1	0	1	hydro

ruling_list	SOUTH_2_UNIT	SOUTH HYDRO	7.1	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	VALLEY_5_REDMTN	MWD Red Mountain Hydroelectric Recovery	5.9	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	KEKAWK_6_UNIT	STS HYDROPOWER LTD. (KEKAWAKA)	5.5	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	VILSPK_6_MWDYOR	Yorba Linda Hydroelectric Recovery Plant	5.1	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	GRSCRK_6_BGCKWW	BIG CREEK WATER WORKS - CEDAR FLAT	5	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	MRILOM_7_MWDLKM	Lake Mathews Hydroelectric Recovery Plan	5	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	PLACVL_1_BCKCRE	PLACER UNIT (ROCK CREEK)	5	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	VILLPK_2_VALLVV	MWD Valley View Hydroelectric Recovery P	4.1	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	OISFLD_7_QFUNTS	Nacimiento Hydroelectric Plant	3.8	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	HILAND_7_YOLOWD	CLEAR LAKE UNIT 1	3.75	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	DMDVLY_1_UNITS	DIAMOND VALLEY LAKE PUMP-GEN PLANT	3.3	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	OLINDA_2_COYCRK	MWD Coyote Creek Hydroelectric Recovery	3.13	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	INDVLY_1_UNITS	Indian Valley Hydro	3.01	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	SPBURN_7_SNOWMT	SPBURN_7_SNOWMT	3	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	MRILOM_2_CORONA	MWD Corona Hydroelectric Recovery Plant	2.85	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	MRILOM_2_TEMESC	MWD Temescal Hydroelectric Recovery Plan	2.85	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	MCCALL_1_QF	SMALL QF AGGREGATION - FRESNO	2.5	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	WRGHTP_7_AMENGY	SMALL QF AGGREGATION - LOS BANOS	2.5	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	SAUGUS_6_QF	SAUGUS QFS	2.19	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	DEADCK_1_UNIT	DEADCK_1_UNIT	2	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	TESLA_1_QF	SMALL QF AGGREGATION - STOCKTON	2	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	PADUA_2_ONTARO	ONTARIO/SIERRA HYDRO PSP	1.92	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	CENTER_2_RHONDO	MWD Rio Hondo Hydroelectric Recovery Pla	1.91	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	STOREY_7_MDRCHW	Madera Canal Site 980	1.84	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	PADUA_6_QF	PADUA QFS	1.82	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	HATLOS_6_LSCRK	Lost Creek 1 & 2 Hydro Conversion	1.7	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	RIDOSO_1_QF	SMALL QF AGGREGATION - GRASS VALLEY	1.7	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	TBLMTN_6_QF	SMALL QF AGGREGATION - PARADISE	1.7	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	FTSWRD_6_TRFORK	Three Forks Water Power Project	1.63	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	FTSWRD_7_QFUNITS	FTSWRD_7_QFUNITS	1.6	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	HIGGNS_1_COMBIE	Combie South	1.5	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	LOWGAP_7_QFUNTS	LOWGAP_7_QFUNTS	1.35	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	VOLTA_7_QFUNTS	VOLTA_7_QFUNTS	1.3	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	BIGCRK_7_MAMRES	0	1.25	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	HUMBSB_1_QF	SMALL QF AGGREGATION - TRINITY	1.25	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	POTTER_7_VECINO	Vecino Vineyards LLC	1.25	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	PITS_7_QFUNTS	PIT 5 HYDRO QF UNITS	1.1	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	PADUA_7_SDIMAS	San Dimas Wash Hydro	1.05	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	BANGOR_6_HYDRO	Virginia Ranch Dam Powerplant	1	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	FULTON_1_QF	SMALL QF AGGREGATION - ZENIA	1	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	GARNET_2_HYDRO	Whitewater Hydro	1	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	MESAP_1_QF	SMALL QF AGGREGATION - SAN LUIS OBISPO	1	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	SNCLRA_2_SPRHYD	Springville Hydroelectric Generator	1	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	CEDRCK_6_UNIT	Water Wheel Ranch	0.98	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	VOLTA_6_BALCK	0	0.63	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	FMEADO_6_HELLHL	FMEADO_6_HELLHL	0.6	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	ALGNY_6_HYDRO1	Salmon Creek Hydroelectric Project	0.52	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	HIGGNS_7_QFUNTS	HIGGNS_7_QFUNTS	0.5	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	ORLND_6_HIGHLI	High Line Canal Hydro	0.5	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	OLINDA_2_QF	OLINDA QFS	0.4	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	BIGCRK_7_DAM7	0	0.3	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	BOWMN_6_UNIT	BOWMAN	0	CAISO_Hydro	physical	none	1	0	1 hydro
ruling_list	n/a (Hoover share)	Hoover (CAISO Share)	0	CAISO_Hydro	physical	none	1	0	0 hydro
template_list	new_generic_instate_small_hydro	0	#N/A	CAISO_Hydro	new_generic	none	0	1	0 hydro
template_list	new_generic_instate_large_hydro	0	#N/A	CAISO_Hydro	new_generic	none	0	1	0 hydro
template_list	new_generic_nw_hydro	0	#N/A	CAISO_Hydro	new_generic	none	0	1	0 hydro
template_list	MIDFKL_2_PROJCT	MIDDLE FORK AND RALSTON PSP	210	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	RCKCRK_7_UNIT 1	ROCK CREEK HYDRO UNIT 1	57	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	NAROW2_2_UNIT	Narrows Powerhouse Unit 2	55	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	KINGRV_7_UNIT 1	KINGS RIVER HYDRO UNIT 1	51.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	TULLCK_7_UNITS	Tullock Hydro	25.9	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	WISHON_6_UNITS	Wishon/San Joaquin #1-A AGGREGATE	18.4	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	ROLLIN_6_UNIT	ROLLINS HYDRO	13.5	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	SLYCRK_1_UNIT 1	SLY CREEK HYDRO	13	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	KERKH1_7_UNIT 3	KERKHOFF PH 1 UNIT #3	12.8	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	BlackCanyon3	Black Canyon-3	12.5	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	SPAULD_6_UNIT12	SPAULDING HYDRO PH 1 & 2 AGGREGATE	11.4	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	ELDORO_7_UNIT 2	El Dorado Unit 2	11	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	POTTER_6_UNITS	Potter Valley	10.1	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	MCSWAN_6_UNITS	MC SWAIN HYDRO	10	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	CAMCHE_1_PLIX3	CAMANCHE UNITS 1, 2 & 3 AGGREGATE	9.99	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Ryan2_Upgrd	Ryan (post-upgrade)-RYA2	9.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	SAUGUS_6_MWDFTH	Foothill Hydroelectric Recovery Plant	9.1	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	HATCR2_7_UNIT	Hat Creek #2	8.5	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	LowerNo12	Lower No 1-2	8	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	UpperPwr4	Upper Power Plant-4	8	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Turnbull2	Turnbull Hydro-2	7.7	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	WOODWR_1_HYDRO	Quinten Luallen	7.3	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	TietonDamHydroUNIT2	Tieton Dam Hydro Electric Project-UNIT2	6.9	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	COVERD_2_HCKHY1	HATCHET CREEK	6.89	CAISO_Hydro	physical	none	0	1	1 hydro
template_list	RECTOR_2_KAWEAH	KAWEAH PH 2 & 3 PSP AGGREGATE	6.55	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Rush_Creek_2	Rush Creek-2_24783	6.37	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	SPICER_1_UNITS	SPICER HYDRO UNITS 1-3 AGGREGATE	6	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	OXBOW_6_DRUM	OXBOW HYDRO	5.8	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Borel3	Borel-3	5.5	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Turnbull1	Turnbull Hydro-1	5.3	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	COTTLE_2_FRNKNH	Frankenheimer Power Plant	5.3	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Clark_Canyon	Clark Canyon Dam-1	4.7	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	FallsRiver_ID1	Falls River Hydro-1	4.55	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	FallsRiver_ID2	Falls River Hydro-2	4.55	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	NHOGAN_6_UNITS	NEW HOGAN PH AGGREGATE	4	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	FROGTN_1_UTICAM	Murphys Powerhouse	3.6	CAISO_Hydro	physical	none	0	1	1 hydro
template_list	WISE_1_UNIT 2	WISE HYDRO UNIT 2	3.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Hauser_HAU6	Hauser-HAU6	3	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	LowerNo21	Lower No 2-1	3	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	VLYHOM_7_SLUID	Woodward Power Plant	3	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	CRESSY_1_PARKER	PARKER POWERHOUSE	2.83	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Hauser_HAU1	Hauser-HAU1	2.8	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Hauser_HAU2	Hauser-HAU2	2.8	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Hauser_HAU3	Hauser-HAU3	2.8	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Hauser_HAU4	Hauser-HAU4	2.8	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Hauser_HAU5	Hauser-HAU5	2.8	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	COVERD_2_MCKHY1	Montgomery Creek Hydro	2.8	CAISO_Hydro	physical	none	0	1	1 hydro
template_list	BishopCreek3-3	Bishop Creek 3-3	2.79	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Borel2	Borel-2	2.75	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	FeltHydro1	Felt Hydroelectric Plant-GEN1	2.7	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	FeltHydro2	Felt Hydroelectric Plant-GEN2	2.7	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	BishopCreek2-2	Bishop Creek 2-2	2.65	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	BishopCreek5-2	Bishop Creek 5-2	2.65	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	BirchCreek1	Birch Creek-1	2.6	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	BishopCreek2-3	Bishop Creek 2-3	2.43	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	BishopCreek3-2	Bishop Creek 3-2	2.37	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Madison_MAD1	Madison-MAD1	2.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Madison_MAD2	Madison-MAD2	2.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Madison_MAD3	Madison-MAD3	2.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Madison_MAD4	Madison-MAD4	2.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	BishopCreek5-1	Bishop Creek 5-1	2.12	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Elk_Creek	El Dorado Hydro Elk Creek-GEN1	2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	FlintCreek	Flint Creek Hydroelectric-1	2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	COVERD_2_RCKHY1	ROARING CREEK	2	CAISO_Hydro	physical	none	0	1	1 hydro
template_list	HATLOS_6_BWDHY1	Bidwell Ditch	2	CAISO_Hydro	physical	none	0	1	1 hydro
template_list	BishopCreek4-3	Bishop Creek 4-3	1.96	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	BishopCreek4-4	Bishop Creek 4-4	1.96	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	BishopCreek4-5	Bishop Creek 4-5	1.96	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	BishopCreek6-1	Bishop Creek 6-1	1.69	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Lundy2	Lundy 2_LUNDY HYDRO PLANT (AGGREGATE)-1_24784	1.5	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Mile2BWater1	Mile 2B Water Power Project-1	1.5	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Mile2BWater2	Mile 2B Water Power Project-2	1.5	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	FROGTN_1_UTICAA	Angels Powerhouse	1.4	CAISO_Hydro	physical	none	0	1	1 hydro
template_list	PointIzomaHY	POINT LOMA WASTEWATER PERP HYDRO_POINT LOMA WASTEWATER TREATMENT PLANT-1	1.35	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	FargoDrop	Fargo Drop Hydro-1_Fargo Drop-GEN1	1.27	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Sullivan_10	Sullivan-10	1.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Sullivan_11	Sullivan-11	1.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Sullivan_12	Sullivan-12	1.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Sullivan_13	Sullivan-13	1.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Sullivan_2	Sullivan-2	1.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Sullivan_3	Sullivan-3	1.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Sullivan_4	Sullivan-4	1.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Sullivan_5	Sullivan-5	1.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Sullivan_6	Sullivan-6	1.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Sullivan_7	Sullivan-7	1.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Sullivan_8	Sullivan-8	1.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	FeltHydro3	Felt Hydroelectric Plant-GEN3	1.1	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	BishopCreek4-1	Bishop Creek 4-1	1.03	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	BishopCreek4-2	Bishop Creek 4-2	1.03	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Sullivan_9	Sullivan-9	1	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	APLHIL_1_SLABCK	SLAB CREEK HYDRO	1	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	SAUGUS_6_CREST	0	1	CAISO_Hydro	physical	none	0	1	1 hydro
template_list	NotchButteGeoBon2	Notch Butte Hydro-HYD1 a.k.a. Geo Bon #2	0.93	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	CURTIS_1_FARFLD	Fairfield Powerhouse	0.9	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	RNDMTN_2_SLSPHY1	Silver Springs	0.6	CAISO_Hydro	physical	none	0	1	1 hydro
template_list	Bend3	Bend-3	0.56	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Schaffner_1	Schaffner-1	0.53	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	StrawberryCreek1	Strawberry Creek-1	0.5	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	StrawberryCreek2	Strawberry Creek-2	0.5	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	StrawberryCreek3	Strawberry Creek-3	0.5	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	ArenaDrop	Arena Drop-1	0.45	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Bend2	Bend-2	0.35	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Reynolds	Reynolds Irrigation-1	0.26	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Shingle_Creek_1	Shingle Creek-1	0.22	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	Rim_View_1	Rim View-1	0.2	CAISO_Hydro	physical	none	1	0	1 hydro
template_list	BlackCanyon3MV	Black Canyon #3-1	0.14	CAISO_Hydro	physical	none	1	0	1 hydro
added	existing_generic_instate_small_hydro		#N/A	CAISO_Hydro	existing_generic	none	0	1	1 hydro
added	existing_generic_instate_large_hydro		#N/A	CAISO_Hydro	existing_generic	none	0	1	1 hydro
added	existing_generic_nw_hydro		#N/A	CAISO_Hydro	existing_generic	none	0	1	1 hydro
template_list	DCI_Miles_City	Miles City DC Intertie (Fictional Resource)-1	#N/A	CAISO_Imports	physical	none	1	0	1 unknown
template_list	VISTAS_6_VESBT1	0	40	CAISO_Li_Battery	physical	none	0	1	1 battery
template_list	CHINO_2_APEBT1	Pomona Energy Storage	20	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	ESCNDO_6_EB1BT1	Escondido BESS 1	10	CAISO_Li_Battery	physical	none	0	1	1 battery
template_list	ESCNDO_6_EB2BT2	Escondido BESS 2	10	CAISO_Li_Battery	physical	none	0	1	1 battery
template_list	ESCNDO_6_EB3BT3	Escondido BESS 3	10	CAISO_Li_Battery	physical	none	0	1	1 battery
template_list	MRILOM_2_MLBBTA	Mira Loma BESS A	10	CAISO_Li_Battery	physical	none	0	1	1 battery
template_list	MRILOM_2_MLBBTB	Mira Loma BESS B	10	CAISO_Li_Battery	physical	none	0	1	1 battery
template_list	MONLTH_6_BATTRY	0	7.99	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	ELCAJN_6_EB1BT1	Eastern BESS 1	7.5	CAISO_Li_Battery	physical	none	0	1	1 battery
template_list	SWIFT_1_NAS	0	4.8	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	ELCAJN_6_DRGEN1	0	3	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	SANTGO_2_MABBT1	Millikan Avenue BESS	2	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	VACADX_1_NAS	VACA-DIXON BATTERY	1.85	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	ELCAJN_6_DRGEN2	0	1	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_4_unit_1	Base_battery_PGE_Valley_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_4_unit_2	Base_battery_PGE_Valley_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_4_unit_3	Base_battery_PGE_Valley_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_4_unit_4	Base_battery_PGE_Valley_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_4_unit_5	Base_battery_PGE_Valley_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_4_unit_6	Base_battery_PGE_Valley_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_4_unit_7	Base_battery_PGE_Valley_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_4_unit_8	Base_battery_PGE_Valley_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_4_unit_9	Base_battery_PGE_Valley_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_4_unit_10	Base_battery_PGE_Valley_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_4_unit_1	Base_battery_SCE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_4_unit_2	Base_battery_SCE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_4_unit_3	Base_battery_SCE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_4_unit_4	Base_battery_SCE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_4_unit_5	Base_battery_SCE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_4_unit_6	Base_battery_SCE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery

template_list	Base_battery_SCE_dur_4_unit_7	Base_battery_SCE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_4_unit_8	Base_battery_SCE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_4_unit_9	Base_battery_SCE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_4_unit_10	Base_battery_SCE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_4_unit_1	Base_battery_SDGE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_4_unit_2	Base_battery_SDGE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_4_unit_3	Base_battery_SDGE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_4_unit_4	Base_battery_SDGE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_4_unit_5	Base_battery_SDGE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_4_unit_6	Base_battery_SDGE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_4_unit_7	Base_battery_SDGE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_4_unit_8	Base_battery_SDGE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_4_unit_9	Base_battery_SDGE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_4_unit_10	Base_battery_SDGE_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_2_unit_1	Base_battery_PGE_Bay_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_2_unit_2	Base_battery_PGE_Bay_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_2_unit_3	Base_battery_PGE_Bay_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_2_unit_4	Base_battery_PGE_Bay_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_2_unit_5	Base_battery_PGE_Bay_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_2_unit_6	Base_battery_PGE_Bay_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_2_unit_7	Base_battery_PGE_Bay_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_2_unit_8	Base_battery_PGE_Bay_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_2_unit_9	Base_battery_PGE_Bay_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_2_unit_10	Base_battery_PGE_Bay_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_2_unit_1	Base_battery_PGE_Valley_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_2_unit_2	Base_battery_PGE_Valley_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_2_unit_3	Base_battery_PGE_Valley_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_2_unit_4	Base_battery_PGE_Valley_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_2_unit_5	Base_battery_PGE_Valley_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_2_unit_6	Base_battery_PGE_Valley_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_2_unit_7	Base_battery_PGE_Valley_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_2_unit_8	Base_battery_PGE_Valley_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_2_unit_9	Base_battery_PGE_Valley_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Valley_dur_2_unit_10	Base_battery_PGE_Valley_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_2_unit_1	Base_battery_SCE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_2_unit_2	Base_battery_SCE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_2_unit_3	Base_battery_SCE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_2_unit_4	Base_battery_SCE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_2_unit_5	Base_battery_SCE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_2_unit_6	Base_battery_SCE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_2_unit_7	Base_battery_SCE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_2_unit_8	Base_battery_SCE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_2_unit_9	Base_battery_SCE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SCE_dur_2_unit_10	Base_battery_SCE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_2_unit_1	Base_battery_SDGE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_2_unit_2	Base_battery_SDGE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_2_unit_3	Base_battery_SDGE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_2_unit_4	Base_battery_SDGE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_2_unit_5	Base_battery_SDGE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_2_unit_6	Base_battery_SDGE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_2_unit_7	Base_battery_SDGE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_2_unit_8	Base_battery_SDGE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_2_unit_9	Base_battery_SDGE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_SDGE_dur_2_unit_10	Base_battery_SDGE_dur_2	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_4_unit_1	Base_battery_PGE_Bay_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_4_unit_2	Base_battery_PGE_Bay_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_4_unit_3	Base_battery_PGE_Bay_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_4_unit_4	Base_battery_PGE_Bay_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_4_unit_5	Base_battery_PGE_Bay_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_4_unit_6	Base_battery_PGE_Bay_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_4_unit_7	Base_battery_PGE_Bay_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_4_unit_8	Base_battery_PGE_Bay_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_4_unit_9	Base_battery_PGE_Bay_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	Base_battery_PGE_Bay_dur_4_unit_10	Base_battery_PGE_Bay_dur_4	0	CAISO_Li_Battery	physical	none	1	0	1 battery
template_list	new_btm_resource	0	#N/A	CAISO_Loadmod	new_loadmod	fillme_name,type,mw	0	1	0 unknown
template_list	new_btm_ee	0	#N/A	CAISO_Loadmod	new_loadmod	fillme_name,type,mw	0	1	0 unknown
template_list	new_btm_dr	0	#N/A	CAISO_Loadmod	new_loadmod	fillme_name,type,mw	0	1	0 unknown
template_list	new_dg	0	#N/A	CAISO_Loadmod	new_loadmod	fillme_name,type,mw	0	1	0 unknown
template_list	new_ev	0	#N/A	CAISO_Loadmod	new_loadmod	fillme_name,type,mw	0	1	0 unknown
template_list	new_tou	0	#N/A	CAISO_Loadmod	new_loadmod	fillme_name,type,mw	0	1	0 unknown
ruling_list	DIABLO_7_UNIT 1	Diablo Canyon Unit 1	1150	CAISO_Nuclear	physical	none	1	0	1 nuclear
ruling_list	DIABLO_7_UNIT 2	Diablo Canyon Unit 2	1150	CAISO_Nuclear	physical	none	1	0	1 nuclear
ruling_list	n/a (Palo Verde)	Palo_Verde_1 (CAISO Share)	0	CAISO_Nuclear	physical	none	1	0	0 nuclear
template_list	new_generic_nuclear	0	#N/A	CAISO_Nuclear	new_generic	none	0	1	0 nuclear
added	existing_generic_nuclear		#N/A	CAISO_Nuclear	existing_generic	none	0	1	1 nuclear
ruling_list	CARLS1_2_CARCT1	Encina Gas Peaker	500	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	PNCHEG_2_PL1X4	PANOCHE ENERGY CENTER (Aggregated)	400.1	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	TBD (Puente)	Puente Power Project	262	CAISO_Peaker1	physical	none	1	0	0 thermal
ruling_list	SUNSET_2_UNIT5	MIDWAY SUNSET COGENERATION PLANT	248	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	COCOPP_2_CTG4	Marsh Landing 4	204.29	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	COCOPP_2_CTG1	Marsh Landing 1	204.2	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	COCOPP_2_CTG2	Marsh Landing 2	202.7	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	KELSO_2_UNIT5	Mariposa Energy	194.59	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	COCOPP_2_CTG3	Marsh Landing 3	190.4	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	PIOPIC_2_CTG2	Pio Pico Unit 2	112.7	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	PIOPIC_2_CTG3	Pio Pico Unit 3	112	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	PIOPIC_2_CTG1	Pio Pico Unit 1	111.3	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	SENTNL_2_CTG5	Sentinel Unit 5	103.81	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	SENTNL_2_CTG1	Sentinel Unit 1	103.76	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	SENTNL_2_CTG4	Sentinel Unit 4	102.47	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	SENTNL_2_CTG8	Sentinel Unit 8	101.8	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	SENTNL_2_CTG6	Sentinel Unit 6	100.99	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	TBD (Stanton)	Stanton Peaker Facility	98	CAISO_Peaker1	physical	none	1	0	0 thermal
ruling_list	SENTNL_2_CTG7	Sentinel Unit 7	97.06	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	WALCRK_2_CTG2	Walnut Creek Energy Park Unit 2	96.91	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	SENTNL_2_CTG3	Sentinel Unit 3	96.85	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	WALCRK_2_CTG3	Walnut Creek Energy Park Unit 3	96.65	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	WALCRK_2_CTG5	Walnut Creek Energy Park Unit 5	96.65	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	WALCRK_2_CTG4	Walnut Creek Energy Park Unit 4	96.49	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	WALCRK_2_CTG1	Walnut Creek Energy Park Unit 1	96.43	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	MALAGA_1_PL1X2	Malaga Power Aggregate	96	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	SENTNL_2_CTG2	Sentinel Unit 2	95.34	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	OMAR_2_UNIT 4	KERN RIVER COGENERATION CO. UNIT 4	81.44	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	OMAR_2_UNIT 3	KERN RIVER COGENERATION CO. UNIT 3	81.41	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	SYCAMR_2_UNIT 2	Sycamore Cogeneration Unit 2	80	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	SYCAMR_2_UNIT 4	Sycamore Cogeneration Unit 4	80	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	OMAR_2_UNIT 2	KERN RIVER COGENERATION CO. UNIT 2	78.11	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	OMAR_2_UNIT 1	KERN RIVER COGENERATION CO. UNIT 1	78	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	ANAHM_2_CANYN1	CANYON POWER PLANT UNIT 1	49.4	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	ANAHM_2_CANYN2	CANYON POWER PLANT UNIT 2	49.4	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	ANAHM_2_CANYN3	CANYON POWER PLANT UNIT 3	49.4	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	ANAHM_2_CANYN4	CANYON POWER PLANT UNIT 4	49.4	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	RVSIDE_2_RERCU3	Riverside Energy Res. Ctr Unit 3	49	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	RVSIDE_2_RERCU4	Riverside Energy Res. Ctr Unit 4	49	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	VESTAL_2_WELLHD	Wellhead Power Delano	49	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	RVSIDE_6_RERCU1	Riverside Energy Res. Ctr Unit 1	48.35	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	BDGRCK_1_UNIT5	BADGER CREEK LIMITED	48.08	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	LARKSP_6_UNIT 2	LARKSPUR PEAKER UNIT 2	47.98	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	BOGUE_1_UNITA1	Feather River Energy Center, Unit #1	47.6	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	ETHWND_6_GRPLND	Grapeland Peaker	47.39	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	MNDALY_6_MCGRTH	McGrath Beach Peaker	47.2	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	CENTER_6_PEAKER	Center Peaker	47.11	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	BARRE_6_PEAKER	Barre Peaker	47	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	LARKSP_6_UNIT 1	LARKSPUR PEAKER UNIT 1	46.1	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	SMPRIP_1_SMPSON	Ripon Cogeneration Unit 1	46.05	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	MIRLOM_6_PEAKER	Mira Loma Peaker	46	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	ELCAJN_6_UNITA1	Cuyamaca Peak Energy Plant	45.42	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	MIRGT_6_MIRAREF	Miramar Energy Facility	45	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	GLNARM_7_UNIT 3	GLEN ARM UNIT 3	44.83	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	MIRGT_6_MEF2	Miramar Energy Facility II	44	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	GLNARM_7_UNIT 4	GLEN ARM UNIT 4	42.42	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	CENTRY_6_PL1X4	CENTURY GENERATING PLANT (AGGREGATE)	41.4	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	RVSIDE_6_SPRING	SPRINGS GENERATION PROJECT AGGREGATE	36	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	DREWS_1_UNIT	DREWS UNIT AGGREGATE	36	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	CSCCOG_1_UNIT 1	SANTA CLARA CO-GEN	7	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	VERNON_6_GONZL2	H. Gonzales Unit #2	5.75	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	VERNON_6_GONZL1	H. Gonzales Unit #1	5.75	CAISO_Peaker1	physical	none	1	0	1 thermal
ruling_list	Encina Gas Peaker	0	500	CAISO_Peaker1	physical	none	1	0	0 thermal
ruling_list	Stanton Peaker Facility	0	98	CAISO_Peaker1	physical	none	1	0	0 thermal
ruling_list	TBD (Encina)	0	500	CAISO_Peaker1	physical	none	1	0	0 thermal
template_list	new_generic_peaker	0	#N/A	CAISO_Peaker1	new_generic	none	0	1	0 thermal
template_list	CARLS2_1_CARCT1	0	105.5	CAISO_Peaker1	physical	none	1	0	1 thermal
template_list	CHINO_6_SMPPAP	AltaGas Pomona Energy	44	CAISO_Peaker1	physical	none	1	0	1 thermal
template_list	ELLIS_2_QF	ELLIS QFS	12	CAISO_Peaker1	physical	none	1	0	1 thermal
added	existing_generic_peaker		#N/A	CAISO_Peaker1	existing_generic	none	0	1	1 thermal
ruling_list	PNCHPP_1_PL1X2	Midway Peaking Aggregate	119.91	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	GWFPWR_1_UNIT5	HANFORD PEAKER PLANT	98.46	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	OGROVE_6_PL1X2	Orange Grove Energy Center	96	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	GILRPP_1_PL1X2	GILROY ENERGY CENTER UNITS 1&2 AGGREGATE	95.2	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	GLNARM_2_UNIT 5	GLENARM UNIT 5	65.81	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	HINSON_6_LBECH1	HINSON_6_LBECH1	65	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	HINSON_6_LBECH2	HINSON_6_LBECH2	65	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	HINSON_6_LBECH3	HINSON_6_LBECH3	65	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	HINSON_6_LBECH4	HINSON_6_LBECH4	65	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	OAK C_7_UNIT 1	OAKLAND STATION C GT UNIT 1	55	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	OAK C_7_UNIT 2	OAKLAND STATION C GT UNIT 2	55	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	OAK C_7_UNIT 3	OAKLAND STATION C GT UNIT 3	55	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	GOLETA_6_ELLWOD	ELLWOOD ENERGY SUPPORT FACILITY	54	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	SIERRA_1_UNIT5	HIGH SIERRA LIMITED	52.43	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	DOUBLC_1_UNIT5	DOUBLE "C" LIMITED	52.23	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	PNOCHE_1_UNITA1	CalPeak Power Panoche Unit 1	52.01	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	BORDER_6_UNITA1	CalPeak Power Border Unit 1	51.25	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	VACADX_1_UNITA1	CalPeak Power Vaca Dixon Unit 1	50.61	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	HENRTA_6_UNITA1	GWF HENRIETTA PEAKER PLANT UNIT 1	49.98	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	PNOCHE_1_PL1X2	Panoche Peaker	49.97	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	STIGCT_2_LODI	LODI STIG UNIT	49.9	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	LIVOAK_1_UNIT 1	LIVE OAK LIMITED	49.7	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	HENRTA_6_UNITA2	GWF HENRIETTA PEAKER PLANT UNIT 2	49.42	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	BEARMT_1_UNIT	Bear Mountain Limited	49.21	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	ESCNDO_6_PL1X2	MMC Escondido Aggregate	48.71	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	CHALK_1_UNIT	CHALK CLIFF LIMITED	48.67	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	RVSIDE_6_RERCU2	Riverside Energy Res. Ctr Unit 2	48.5	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	ELCAJN_6_LMSK	El Cajon Energy Center	48.1	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	ESCNDO_6_UNITB1	CalPeak Power Enterprise Unit 1	48.04	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	RVRVEW_1_UNITA1	Riverview Energy Center (GP Antioch)	47.6	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	YUBACT_6_UNITA1	Yuba City Energy Center (Calpine)	47.6	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	LMBEPK_2_UNITA2	Creed Energy Center, Unit #1	47.6	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	LMBEPK_2_UNITA1	Lambie Energy Center, Unit #1	47.5	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	MKTTRCK_1_UNIT 1	MCKITTRICK LIMITED	47.49	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	LMBEPK_2_UNITA3	Goose Haven Energy Center, Unit #1	47.4	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	WOLFSK_1_UNITA1	Wolfskill Energy Center, Unit #1	46.9	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	GILRPP_1_PL3X4	GILROY ENERGY CENTER, UNIT #3	46.2	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	KNGCTY_6_UNITA1	King City Energy Center, Unit #1	44.6	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	INDIGO_1_UNIT 2	INDIGO PEAKER UNIT 2	44.53	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	INDIGO_1_UNIT 1	INDIGO PEAKER UNIT 1	44	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	INDIGO_1_UNIT 3	INDIGO PEAKER UNIT 3	43.69	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	COLTON_6_AGUAM1	AGUA MANSA UNIT 1 (CITY OF COLTON)	43	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	ANAHM_7_CT	ANAHEIM COMBUSTION TURBINE	42.81	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	OTAY_6_PL1X2	Chula Vista Energy Center, LLC	35.5	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	ALMEGT_1_UNIT 1	ALAMEDA GT UNIT 1	25	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	LODI25_2_UNIT 1	LODI GAS TURBINE	25	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	ALMEGT_1_UNIT 2	ALAMEDA GT UNIT 2	25	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	CSCGNR_1_UNIT 1	GIANERA PEAKER UNIT 1	24.75	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	CSCGNR_1_UNIT 2	GIANERA PEAKER UNIT 2	24.75	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	AGRICO_6_PL3N5	Fresno Peaker	22.69	CAISO_Peaker2	physical	none	1	0	1 thermal
ruling_list	GLNARM_7_UNIT 2	GLEN ARM UNIT 2	22.3	CAISO_Peaker2	physical	none	1	0	1 thermal

ruling_list	GLNARM_7_UNIT 1	GLEN ARM UNIT 1	22.07	CAISO_Peaker2	physical	none	1	0	1	thermal
ruling_list	ELCAJN_7_GT1	EL CAJON	0	CAISO_Peaker2	physical	none	1	0	1	thermal
ruling_list	KEARNY_7_KY3	KEARNY GT3 AGGREGATE	0	CAISO_Peaker2	physical	none	1	0	1	thermal
ruling_list	MRGT_7_UNIT5	MIRAMAR COMBUSTION TURBINE AGGREGATE	0	CAISO_Peaker2	physical	none	1	0	1	thermal
template_list	SHELRF_1_UNITS	SHELL OIL REFINERY AGGREGATE	100	CAISO_Peaker2	physical	none	1	0	1	thermal
template_list	ENCINA_7_GT1	0	14.5	CAISO_Peaker2	physical	none	1	0	1	thermal
template_list	PALALT_7_COBUG	Cooperatively Owned Back Up Generator	4.5	CAISO_Peaker2	physical	none	1	0	1	thermal
ruling_list	HELMPG_7_UNIT 1	HELMS PUMP-GEN UNIT 1	407	CAISO_Pumped_Hydro	physical	none	1	0	1	psh
ruling_list	HELMPG_7_UNIT 2	HELMS PUMP-GEN UNIT 2	407	CAISO_Pumped_Hydro	physical	none	1	0	1	psh
ruling_list	HELMPG_7_UNIT 3	HELMS PUMP-GEN UNIT 3	404	CAISO_Pumped_Hydro	physical	none	1	0	1	psh
ruling_list	EASTWD_7_UNIT	EASTWOOD PUMP-GEN	200	CAISO_Pumped_Hydro	physical	none	1	0	1	psh
ruling_list	SLUISP_2_UNITS	SAN LUIS (GIANELLI) PUMP-GEN (AGGREGATE)	53	CAISO_Pumped_Hydro	physical	none	1	0	1	psh
ruling_list	LAKHDG_6_UNIT 1	Lake Hodges Pumped Storage-Unit1	20	CAISO_Pumped_Hydro	physical	none	1	0	1	psh
ruling_list	LAKHDG_6_UNIT 2	Lake Hodges Pumped Storage-Unit2	20	CAISO_Pumped_Hydro	physical	none	1	0	1	psh
template_list	new_generic_pumped_storage_hydro	0	#N/A	CAISO_Pumped_Hydro	new_generic	none	0	1	0	psh
template_list	COWIND_2_GEN	WINDGPP_2_NSPIN	456	CAISO_Pumped_Hydro	physical	none	1	0	1	psh
template_list	EDMONS_2_NSPIN	EDMONS_2_NSPIN	840	CAISO_Pumped_Hydro	physical	none	1	0	1	ash
template_list	BANKPP_2_NSPIN	BANKPP_2_NSPIN	270	CAISO_Pumped_Hydro	physical	none	1	0	1	psh
template_list	DOSMGO_2_NSPIN	DOSMGO_2_NSPIN	159	CAISO_Pumped_Hydro	physical	none	1	0	1	psh
template_list	PEARBL_2_NSPIN	PEARBL_2_NSPIN	151.2	CAISO_Pumped_Hydro	physical	none	1	0	1	psh
template_list	OSO_6_NSPIN	OSO_6_NSPIN	70.8	CAISO_Pumped_Hydro	physical	none	1	0	1	psh
added	existing_generic_pumped_storage_hydro		#N/A	CAISO_Pumped_Hydro	existing_generic	none	0	1	1	psh
ruling_list	HUMBPP_6_UNITS	Humboldt Bay Generating Station 1	97.62	CAISO_Reciprocating_Engine	physical	none	1	0	1	thermal
ruling_list	HUMBPP_1_UNITS3	Humboldt Bay Generating Station 3	65.08	CAISO_Reciprocating_Engine	physical	none	1	0	1	thermal
ruling_list	CHWCHL_1_UNIT	CHOW 2 PEAKER PLANT	48.6	CAISO_Reciprocating_Engine	physical	none	1	0	1	thermal
ruling_list	REDBLF_6_UNIT	RED BLUFF PEAKER PLANT	44	CAISO_Reciprocating_Engine	physical	none	1	0	1	thermal
ruling_list	OROVIL_6_UNIT	Oroville Cogeneration, LP	7.5	CAISO_Reciprocating_Engine	physical	none	1	0	1	thermal
template_list	new_generic_ice	0	#N/A	CAISO_Reciprocating_Engine	new_generic	none	0	1	0	thermal
added	existing_generic_ice		#N/A	CAISO_Reciprocating_Engine	existing_generic	none	0	1	1	thermal
template_list	Grasshopper Flat	Grasshopper Flat	1.1	CAISO_Small_Hydro	physical	none	0	1	1	hydro
template_list	Carrizo_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Central_Valley_North_Los_Banos_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Distributed_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Greater_Imperial_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Inyokern_North_Kramer_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Kern_Greater_Carrizo_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Kramer_Inyokern_Ex_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	North_Victor_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Northern_California_Ex_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Riverside_Palm_Springs_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Sacramento_River_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Southern_CA_Desert_Southern_NV_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Solano_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Solano_subzone_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Greater_Kramer_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Southern_California_Desert_Ex_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Southern_Nevada_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Tehachapi_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Telhachapi_Ex_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Westlands_Ex_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Westlands_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Utah_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Arizona_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	New_Mexico_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	Baja_California_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	SCADSNV_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar
template_list	new_generic_solar_1axis	0	#N/A	CAISO_Solar	new_generic	none	0	1	0	solar
template_list	new_generic_solar_2axis	0	#N/A	CAISO_Solar	new_generic	none	0	1	0	solar
template_list	new_generic_solar_fixed	0	#N/A	CAISO_Solar	new_generic	none	0	1	0	solar
template_list	new_generic_solar_thermal	0	#N/A	CAISO_Solar	new_generic	none	0	1	0	solar
template_list	SURMS3_2_SRMSR1	SILVER RIDGE MOUNT SIGNAL 3	250	CAISO_Solar	physical	none	0	1	1	solar
template_list	TRNQLT_2_SOLAR	Tranquillity	200	CAISO_Solar	physical	none	1	0	1	solar
template_list	RATSIE_2_NROSR1	North Rosamond Solar, LLC	160	CAISO_Solar	physical	none	1	0	1	solar
template_list	RE Slate 1-2	RE Slate 1-2	150	CAISO_Solar	physical	none	0	1	0	solar
template_list	CALFTS_2_CFSSR1	0	150	CAISO_Solar	physical	none	1	0	1	solar
template_list	SevenSisters	Seven Sisters Solar	140	CAISO_Solar	physical	none	0	1	1	solar
template_list	Amercian Falls Solar II	0	140	CAISO_Solar	physical	none	1	0	1	solar
template_list	Clark Solar 1	0	140	CAISO_Solar	physical	none	1	0	1	solar
template_list	Clark Solar 2	0	140	CAISO_Solar	physical	none	1	0	1	solar
template_list	Clark Solar 3	0	140	CAISO_Solar	physical	none	1	0	1	solar
template_list	Clark Solar 4	0	140	CAISO_Solar	physical	none	1	0	1	solar
template_list	Orchard Ranch Solar	0	140	CAISO_Solar	physical	none	1	0	1	solar
template_list	Pocatello Solar 1	0	140	CAISO_Solar	physical	none	1	0	1	solar
template_list	Simco Solar	0	140	CAISO_Solar	physical	none	1	0	1	solar
template_list	PNCHVS_2_SOLAR	PNCHVS_2_SOLARB	140	CAISO_Solar	physical	none	1	0	1	solar
template_list	CALFTN_2_SOLAR	California Flats North	130	CAISO_Solar	physical	none	1	0	1	solar
template_list	BigBeau Solar	BigBeau Solar	128	CAISO_Solar	physical	none	0	1	0	solar
template_list	Beacon Solar B	Beacon Solar A\Beacon Solar\BCON18G	125	CAISO_Solar	physical	none	1	0	1	solar
template_list	Maverick Solar, LLC	Maverick Solar, LLC	125	CAISO_Solar	physical	none	0	1	0	solar
template_list	BGSKYN_2_AS2SR1	0	105	CAISO_Solar	physical	none	1	0	1	solar
template_list	MSQLAR_2_SOLAR2	Mesquite Solar 2	100.81	CAISO_Solar	physical	none	0	1	1	solar
template_list	TRNQLB_2_ROJSR1	Tranquillity 8 Rojo	100	CAISO_Solar	physical	none	1	0	1	solar
template_list	DSFLWR_2_WS2SR1	0	100	CAISO_Solar	physical	none	1	0	1	solar
template_list	WISTRA_2_WRSSR1	Wistaria Ranch Solar	100	CAISO_Solar	physical	none	0	1	1	solar
template_list	RE Slate (Stanford)	RE Slate (Stanford)	63	CAISO_Solar	physical	none	0	1	0	solar
template_list	TRNQLB_2_VERSR1	Tranquillity 8 Verde	60	CAISO_Solar	physical	none	1	0	1	solar
template_list	CAMLOT_2_SOLAR1	Camelot	45	CAISO_Solar	physical	none	1	0	1	solar
template_list	CUYAMS_6_CUYSR1	0	40	CAISO_Solar	physical	none	1	0	1	solar
template_list	CerroPrietoPV	Planta Fotovoltaica Cerro Prieto-1	35	CAISO_Solar	physical	none	1	0	1	solar
template_list	KRAMER_1_KX5SR5	Kramer Junction 5	30	CAISO_Solar	physical	none	1	0	1	solar
template_list	VICTOR_1_CREST	0	24.49	CAISO_Solar	physical	none	1	0	1	solar
template_list	RE Gaskell West 3	RE Gaskell West 3	20	CAISO_Solar	physical	none	0	1	0	solar
template_list	RE Gaskell West 4	RE Gaskell West 4	20	CAISO_Solar	physical	none	0	1	0	solar
template_list	RE Gaskell West 5	RE Gaskell West 5	20	CAISO_Solar	physical	none	0	1	0	solar
template_list	97WIBME LLC (Midway Solar Farm III)	97WIBME LLC (Midway Solar Farm III)	20	CAISO_Solar	physical	none	1	0	1	solar
template_list	ORN33_LLC	ORN33, LLC	20	CAISO_Solar	physical	none	0	1	1	solar
template_list	BIGSKY_2_BSKSR6	Big Sky Solar 6	20	CAISO_Solar	physical	none	0	1	1	solar
template_list	BIGSKY_2_BSKSR7	Big Sky Solar 7	20	CAISO_Solar	physical	none	0	1	1	solar
template_list	BIGSKY_2_BSKSR8	Big Sky Solar 8	20	CAISO_Solar	physical	none	0	1	1	solar
template_list	BIGSKY_2_SOLAR3	Big Sky Summer	20	CAISO_Solar	physical	none	1	0	1	solar
template_list	TRNQLB_2_AMASR1	Tranquillity 8 Amarillo	20	CAISO_Solar	physical	none	1	0	1	solar
template_list	TRNQLB_2_AZUSR1	Tranquillity 8 Azul	20	CAISO_Solar	physical	none	1	0	1	solar
template_list	FRNTBW_6_SOLAR1	Frontier Solar	20	CAISO_Solar	physical	none	0	1	1	solar
template_list	GASKW1_2_GW1SR1	Gaskell West 1	20	CAISO_Solar	physical	none	0	1	1	solar
template_list	GIFENG_6_BUGSL1	Burford Giffen	20	CAISO_Solar	physical	none	0	1	1	solar
template_list	JACMSR_1_JACSR1	Jacumba Solar Farm	20	CAISO_Solar	physical	none	0	1	1	solar
template_list	LAMONT_1_SOLAR2	Redwood Solar Farm 4	20	CAISO_Solar	physical	none	0	1	1	solar
template_list	SEGS_1_SPI2L2	Sunray 2	20	CAISO_Solar	physical	none	0	1	1	solar
template_list	WHITNY_6_SOLAR	Whitney Point Solar	20	CAISO_Solar	physical	none	1	0	1	solar
template_list	SUMHWT_6_SWSSR1	0	18.5	CAISO_Solar	physical	none	0	1	1	solar
template_list	VALCNTR_22870_DG	VALCNTR	14.5	CAISO_Solar	physical	none	1	0	1	solar
template_list	VEAVST_1_SOLAR	Community Solar	14.4	CAISO_Solar	physical	none	1	0	1	solar
template_list	RECTOR_2_CREST	0	14	CAISO_Solar	physical	none	1	0	1	solar
template_list	SPRGVL_2_CREST	0	14	CAISO_Solar	physical	none	1	0	1	solar
template_list	GALE_1_SR3SR3	Sunray 3	13.8	CAISO_Solar	physical	none	0	1	1	solar
template_list	OASIS_6_CREST	0	13.5	CAISO_Solar	physical	none	1	0	1	solar
template_list	BLCWKL_6_SOLAR1	0	12	CAISO_Solar	physical	none	1	0	1	solar
template_list	DELSUR_6_CREST	DELSUR_6_CREST1	10	CAISO_Solar	physical	none	1	0	1	solar
template_list	GIFFEN_6_SOLAR1	Aspiration Solar G	9	CAISO_Solar	physical	none	1	0	1	solar
template_list	RICHMN_1_CHVSR2	Chevron 8.5	8.5	CAISO_Solar	physical	none	0	1	1	solar
template_list	RDWAY_1_CREST	0	6.5	CAISO_Solar	physical	none	1	0	1	solar
template_list	LNCSTR_6_CREST	0	5.5	CAISO_Solar	physical	none	1	0	1	solar
template_list	MAGUND_1_BKSSR2	Bakersfield Solar 1	5.25	CAISO_Solar	physical	none	0	1	1	solar
template_list	VESTAL_2_UNIT1	0	5	CAISO_Solar	physical	none	1	0	1	solar
template_list	Energetics_PV	Energetics Solar-PV(22,000)	4.8	CAISO_Solar	physical	none	1	0	1	solar
template_list	CRELMN_6_RAMSR3	Ramona Solar Energy	4.32	CAISO_Solar	physical	none	0	1	1	solar
template_list	SHUTLE_6_CREST	0	4	CAISO_Solar	physical	none	1	0	1	solar
template_list	REDMAN_2_SOLAR	Lancaster East Avenue F	3.75	CAISO_Solar	physical	none	1	0	1	solar
template_list	DELSUR_6_BSOLAR	Central Antelope Dry Ranch B	3	CAISO_Solar	physical	none	0	1	1	solar
template_list	LITLRK_6_GBCSR1	Green Beanworks C	3	CAISO_Solar	physical	none	0	1	1	solar
template_list	MIRLDM_2_LNDFL	Millikan Landfill Solar	3	CAISO_Solar	physical	none	0	1	1	solar
template_list	OASIS_6_GBDSR4	Green Beanworks D	3	CAISO_Solar	physical	none	0	1	1	solar
template_list	OASIS_6_SOLAR3	Soccer Center	3	CAISO_Solar	physical	none	1	0	1	solar
template_list	ORTEGA_6_MES1L1	Merced 1	3	CAISO_Solar	physical	none	0	1	1	solar
template_list	REDMAN_6_AVSSR1	Antelope Valley Solar	3	CAISO_Solar	physical	none	0	1	1	solar
template_list	Eagle Solar	Eagle Solar	3	CAISO_Solar	physical	none	0	1	1	solar
template_list	NEENACH SOLAR	NEENACH SOLAR	3	CAISO_Solar	physical	none	0	1	1	solar
template_list	CalCity Solar I, LLC	CalCity Solar I, LLC	3	CAISO_Solar	physical	none	0	1	1	solar
template_list	Sheep Creek Road Solar Generation Facility Project	Sheep Creek Road Solar Generation Facility Project	3	CAISO_Solar	physical	none	0	1	1	solar
template_list	VACADX_1_SOLAR	0	2.5	CAISO_Solar	physical	none	1	0	1	solar
template_list	VLCNTR_6_VCSLR1	Valley Center 1	2.5	CAISO_Solar	physical	none	1	0	1	solar
template_list	Cameron	Cameron	2.4	CAISO_Solar	physical	none	0	1	0	solar
template_list	HENRTA_6_SOLAR2	Westside Solar Power PV1	2	CAISO_Solar	physical	none	1	0	1	solar
template_list	LITLRK_6_SOLAR3	One Ten Partners	2	CAISO_Solar	physical	none	0	1	1	solar
template_list	RICHMN_1_SOLAR	Chevron 2	2	CAISO_Solar	physical	none	0	1	1	solar
template_list	BellevueSolarINV1	Bellevue Solar Project-INV-1	1.6	CAISO_Solar	physical	none	1	0	1	solar
template_list	DAIRLD_1_MD1SL1	Madera 1	1.5	CAISO_Solar	physical	none	0	1	1	solar
template_list	DELSUR_6_SOLAR4	0	1.5	CAISO_Solar	physical	none	0	1	1	solar
template_list	DELSUR_6_SOLAR5	0	1.5	CAISO_Solar	physical	none	0	1	1	solar
template_list	MCARTH_6_FRIVRB	Fall River Mills Project B	1.5	CAISO_Solar	physical	none	1	0	1	solar
template_list	ORLND_6_SOLAR1	Enerparc California 2	1.5	CAISO_Solar	physical	none	1	0	1	solar
template_list	RIT1_6_FRIVRA	Fall River Mills Project A	1.5	CAISO_Solar	physical	none	1	0	1	solar
template_list	STROUD_6_WWHSR1	Winter Wheat Solar Farm	1.5	CAISO_Solar	physical	none	0	1	1	solar
template_list	CHINO_2_SOLAR2	Kona Solar - Terra Francesca	1.49	CAISO_Solar	physical	none	1	0	1	solar
template_list	VALLEY_5_SOLAR1	Kona Solar - Meridian #1	1.49	CAISO_Solar	physical	none	1	0	1	solar
template_list	DEVERS_2_DHSPG2	Desert Hot Springs 2	1.4	CAISO_Solar	physical	none	1	0	1	solar
template_list	ETIWND_2_SOLAR1	Dedeaux Ontario	1	CAISO_Solar	physical	none	1	0	1	solar
template_list	MAGUND_1_BKISR1	Bakersfield Industrial 1	1	CAISO_Solar	physical	none	0	1	1	solar
template_list	MANTEC_1_ML1SR1	Manteca Land 1	1	CAISO_Solar	physical	none	0	1	1	solar
template_list	SMYRNA_1_DL1SR1	Delano Land 1	1	CAISO_Solar	physical	none	0	1	1	solar
template_list	DEVERS_2_CS2SR4	Calente Solar 2	0.91	CAISO_Solar	physical	none	0	1	1	solar
template_list	WRGTSR_2_WSFSR1	Wright Solar Freeman	200	CAISO_Solar	physical	none	1	0	1	solar
template_list	IVSLR2_2_SM2SR1	Silver Ridge Mount Signal 2	150	CAISO_Solar	physical	none	0	1	1	solar
template_list	BGSKYN_2_ASPSR2	Antelope Solar 2 San Pablo	100	CAISO_Solar	physical	none	1	0	1	solar
template_list	VALTNE_2_AVASR1	Valentine Solar	100	CAISO_Solar	physical	none	1	0	1	solar
template_list	SUNSLR_1_SSVSR1	Sunshine Valley Solar 1	100	CAISO_Solar	physical	none	1	0	1	solar
template_list	BGSKYN_2_BSSSR3	Big Sky Solar 3	20	CAISO_Solar	physical	none	0	1	0	solar
template_list	SUNSPT_2_WNASR1	Windhub Solar A	20	CAISO_Solar	physical	none	1	0	1	solar
template_list	TX-ELK_6_ECKSR2	Eagle Creek	3	CAISO_Solar	physical	none	1	0	1	solar
template_list	RNDSBO_1_HZASR1	Hazel A	3	CAISO_Solar	physical	none	1	0	1	solar
added	existing_generic_solar_1axis		#N/A	CAISO_Solar	existing_generic	none	0	1	1	solar
added	existing_generic_solar_2axis		#N/A	CAISO_Solar	existing_generic	none	0	1	1	solar
added	existing_generic_solar_fixed		#N/A	CAISO_Solar	existing_generic	none	0	1	1	solar
added	existing_generic_solar_thermal		#N/A	CAISO_Solar	existing_generic	none	0	1	1	solar
ruling_list	ARLVAL_5_SOLAR	Arlington Valley Solar Energy II - AVS II	#N/A	CAISO_Specified_Imports	specified_imports	none	1	0	1	unknown
ruling_list	ALHMBR_1_AUHSLR	SG2 Imperial Valley	#N/A	CAISO_Specified_Imports	specified_imports	none	1	0	1	unknown
ruling_list	ARKANS_1_ARKSLR	SG2 Imperial Valley	#N/A	CAISO_Specified_Imports	specified_imports	none	1	0	1	unknown
ruling_list	SNORA_2_SNRSLR	SG2 Imperial Valley	#N/A	CAISO_Specified_Imports	specified_imports	none	1	0	1	unknown
ruling_list	CALPSS_6_SOLAR1	70SM1 BME, LLC (Gestamp Calipatria)	#N/A	CAISO_Specified_Imports	specified_imports	none	1	0	1	unknown
ruling_list	ANZA_6_SOLAR1	TallBear Seville	#N/A	CAISO_Specified_Imports	specified_imports	none	1	0	1	unknown
template_list	ARLINT_5_SCEDYN	0	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	COLGND_2_CNSSR1	0	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	GRADYW_5_GDYWD1	0	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	GRIFFI_2_LSPDYN	0	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	MAGNLA_6_ANAHEIM	0	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	MAGNLA_6_CERRITOS	0	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	MRCHNT_2_MELDYN	0	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	MSQUIT_5_SERDYN	0	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	NGILAA_5_SDGDYN	0	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	RANCHO_2_SMUDSYSDYN	0	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	SPOINT_2_MEADDYN	0	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	SPOINT_2_PARKERDYN	0	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	SUNSTR_5_SSSCEDYN	0	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	SUTTER_2_TESLADYN	0	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	SUTTER_2_WASNDYN	0	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	PVERDE_5_SCEDYN	PVERDE_5_SCEDYN	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown

template_list	BCTSYS_5_PWXDYN	BCTSYS_5_PWXDYN	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	RAMON_2_SCEDYN	RAMON_2_SCEDYN	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	ELCABO_5_ECWSCEDYN	El Cabo Wind	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	SCEHOV_2_HOOVER	SCEHOV_2_HOOVER	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	MALIN_5_BPADYN	MALIN_5_BPADYN	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	INTMNT_3_ANAHEIM	Intermountain Power Project	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	BEJNLS_5_BVJSCEDYN	Broadview 2	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	INTMNT_3_RIVERSIDE	IPPDYN	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	BEKWIS_5_BVJSCEDYN	Broadview 1	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	MALIN_5_GCPDDYN	Grant County Hydro Facilities	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	INTMNT_3_PASADENA	Intermountain Power Project	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	MALIN_5_IBERDR	Iberdrola Centroid Sytem Resource	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	MALIN_5_BHRED	CSF Columbia Gorge	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	MALIN_5_BHRRG	BIGLOW CANYON	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	MIDWYS_2_MIDSL1	Midway Solar Farm	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	AGCANA_X_HOOVER	Hoover Power Plant	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	MIDWYS_2_MDSSR1	Midway South Solar Farm	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	MILFRD_7_PASADENA	Milford I	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	WSNR_2_CUPOYN	Central Valley 1	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	WSNR_2_TESLADYN	Central Valley Tesla	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
template_list	WSNR_5_TRCYDYN	Central Valley Tracy	#N/A	CAISO_Specified_Imports	specified_imports	none	0	1	1	unknown
ruling_list	DINUBA_6_UNIT	DINUBA GENERATION PROJECT	12	CAISO_ST	physical	none	1	0	1	thermal
ruling_list	ETIWND_7_UNIT 3	ETIWANDA GEN STA. UNIT 3	0	CAISO_ST	physical	none	1	0	1	thermal
ruling_list	ETIWND_7_UNIT 4	ETIWANDA GEN STA. UNIT 4	0	CAISO_ST	physical	none	1	0	1	thermal
template_list	ORMOND_7_UNIT 2	ORMOND BEACH GEN STA. UNIT 2	750	CAISO_ST	physical	none	1	0	1	thermal
template_list	ORMOND_7_UNIT 1	ORMOND BEACH GEN STA. UNIT 1	741.27	CAISO_ST	physical	none	1	0	1	thermal
template_list	REDOND_7_UNIT 7	REDONDO GEN STA. UNIT 7	505.86	CAISO_ST	physical	none	1	0	1	thermal
template_list	ALAMIT_7_UNIT 5	ALAMITOS GEN STA. UNIT 5	497.97	CAISO_ST	physical	none	1	0	1	thermal
template_list	REDOND_7_UNIT 8	REDONDO GEN STA. UNIT 8	495.9	CAISO_ST	physical	none	1	0	1	thermal
template_list	ALAMIT_7_UNIT 6	ALAMITOS GEN STA. UNIT 6	495	CAISO_ST	physical	none	1	0	1	thermal
template_list	ALAMIT_7_UNIT 4	ALAMITOS GEN STA. UNIT 4	335.67	CAISO_ST	physical	none	1	0	1	thermal
template_list	ALAMIT_7_UNIT 3	ALAMITOS GEN STA. UNIT 3	332.18	CAISO_ST	physical	none	1	0	1	thermal
template_list	ENCINA_7_EA5	0	330	CAISO_ST	physical	none	1	0	1	thermal
template_list	ENCINA_7_EA4	0	300	CAISO_ST	physical	none	1	0	1	thermal
template_list	HNTGBH_7_UNIT 2	HUNTINGTON BEACH GEN STA. UNIT 2	225.8	CAISO_ST	physical	none	1	0	1	thermal
template_list	HNTGBH_7_UNIT 1	HUNTINGTON BEACH GEN STA. UNIT 1	225.75	CAISO_ST	physical	none	1	0	1	thermal
template_list	REDOND_7_UNIT 5	REDONDO GEN STA. UNIT 5	178.87	CAISO_ST	physical	none	1	0	1	thermal
template_list	ALAMIT_7_UNIT 2	ALAMITOS GEN STA. UNIT 2	175	CAISO_ST	physical	none	1	0	1	thermal
template_list	REDOND_7_UNIT 6	REDONDO GEN STA. UNIT 6	175	CAISO_ST	physical	none	1	0	1	thermal
template_list	ALAMIT_7_UNIT 1	ALAMITOS GEN STA. UNIT 1	174.56	CAISO_ST	physical	none	1	0	1	thermal
template_list	ENCINA_7_EA3	0	110	CAISO_ST	physical	none	1	0	1	thermal
template_list	ENCINA_7_EA2	0	104	CAISO_ST	physical	none	1	0	1	thermal
template_list	new_generic_steam	0	#N/A	CAISO_Steam	new_generic	none	0	1	0	thermal
template_list	ALAMIT_7_STG1S	ALAMIT_7_STG1S	241.5	CAISO_Steam	physical	none	1	0	1	thermal
template_list	HNTGBH_7_STG1S	HNTGBH_7_STG1S	241.5	CAISO_Steam	physical	none	1	0	1	thermal
template_list	ALAMIT_7_CTG1A	ALAMIT_7_CTG1A	234.5	CAISO_Steam	physical	none	1	0	1	thermal
template_list	HNTGBH_7_CTG1B	HNTGBH_7_CTG1B	234.5	CAISO_Steam	physical	none	1	0	1	thermal
template_list	HNTGBH_7_CTG1A	HNTGBH_7_CTG1A	234.5	CAISO_Steam	physical	none	1	0	1	thermal
template_list	ALAMIT_7_CTG1B	ALAMIT_7_CTG1B	234.5	CAISO_Steam	physical	none	1	0	1	thermal
added	existing_generic_steam		#N/A	CAISO_Steam	existing_generic	none	0	1	1	thermal
template_list	new_generic_unknown	0	#N/A	CAISO_Unknown	new_generic	none	0	1	0	unknown
template_list	SONOMA_1_PNSSR1	0	0	CAISO_Unknown	physical	none	1	0	1	unknown
added	existing_generic_unknown		#N/A	CAISO_Unknown	existing_generic	none	0	1	1	unknown
template_list	Carrizo_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Central_Valley_North_Los_Banos_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Distributed_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Greater_Imperial_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Greater_Kramer_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Humboldt_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Kern_Greater_Carrizo_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Kramer_Inyokern_Ex_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Northern_California_Ex_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Diablo_Canyon_Offshore_Wind_Ext_Tx	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind high cf
template_list	NW_Ext_Tx_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Sacramento_River_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Southern_CA_Desert_Southern_NV_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Solano_subzone_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Solano_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Southern_California_Desert_Ex_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Southern_Nevada_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	SW_Ext_Tx_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Tehachapi_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Westlands_Ex_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Cape_Mendocino_Offshore_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind high cf
template_list	Del_Norte_Offshore_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind high cf
template_list	Diablo_Canyon_Offshore_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind high cf
template_list	Humboldt_Bay_Offshore_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind high cf
template_list	Morro_Bay_Offshore_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind high cf
template_list	Baja_California_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Pacific_Northwest_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Idaho_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Utah_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	Wyoming_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind high cf
template_list	Arizona_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	New_Mexico_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind high cf
template_list	SCADSNV_Wind	0	#N/A	CAISO_Wind	new_resolve	fillme_name,type,mw	0	1	0	wind low cf
template_list	new_generic_wind	0	#N/A	CAISO_Wind	new_generic	none	0	1	0	wind low cf
template_list	VOYAGR_2_VOYWD2	0	128.7	CAISO_Wind	physical	none	0	1	1	wind low cf
template_list	USWNDR_2_SMUD2	Solano Wind Project Phase 3	127.8	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	TULEWD_1_TULWD1	Tule Wind	127.6	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	Musselshell Wind Two	0	106.5	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	Energia Sierra Juarez 2 US LLC	Energia Sierra Juarez 2 US LLC	105	CAISO_Wind	physical	none	0	1	0	wind low cf
template_list	WestButteWind	West Butte Wind Power Project-WB-1	104	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	USWNDR_2_SMUD	SOLANO WIND FARM	102.18	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	Three Mile Canyon	0	100	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	WHTWTR_1_WINDA1	Whitewater Hill Wind Project	61.5	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	USWND2_1_WIND3	Golden Hills C	46	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	VOYAGR_2_VOYWD3	0	43.2	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	CABZON_1_WINDA1	Cabazon Wind Project	41	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	TRANWND_25637_QF	TRANWND_25637	40	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	MORWD_6_QF	0	38.16	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	SANWD_1_QF	0	31	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	OAKWD_6_QF	0	27.87	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	FLOWD_2_RT2WD2	Ridgetop 2	27.39	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	GARNET_1_WIND5	Garnet Winds Aggregation	22.5	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	MTWIND_1_UNIT 2	Mountain View Power Project II	22.2	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	VOYAGR_2_VOYWD4	0	21.6	CAISO_Wind	physical	none	0	1	1	wind low cf
template_list	TEHAPI_2_WIND2	Wind Wall Monolith 2	21.24	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	VENWD_1_WIND3	Painted Hills Windpark	19.04	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	SpanishForkWind2	Spanish Fork Wind Park 2 LLC-1	19	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	BUCKWD_1_QF	0	16.5	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	VENWD_1_WIND2	Windpark Unlimited 2	16.05	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	TEHAPI_2_WIND1	Wind Wall Monolith 1	14.89	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	GARNET_2_WIND3	San Gorgonio East	12.6	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	GARNET_2_WIND2	Karen Avenue Wind Farm	11.7	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	Fairfield_Wind	Fairfield Wind-1	10	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	ParqueEolico	Parque Eolico Rumorosa-1	10	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	RENWD_1_QF	0	10	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	Gravcliff Wind Prime	0	9.7	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	VENWD_1_WIND1	Windpark Unlimited 1	9.43	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	GARNET_2_DIFWD1	Difwind	7.88	CAISO_Wind	physical	none	0	1	1	wind low cf
template_list	DTCHWD_2_BT4WND	Brookfield Tehachapi 4	6.52	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	NZWIND_2_WDSTR5	Windstream 6111	6.31	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	GARNET_2_WPMWD6	WINTEC PALM	5.93	CAISO_Wind	physical	none	0	1	1	wind low cf
template_list	MONLTS_2_MONWD6	Monolith 6	5.25	CAISO_Wind	physical	none	0	1	1	wind low cf
template_list	MONLTS_2_MONWD7	Monolith 7	4.76	CAISO_Wind	physical	none	0	1	1	wind low cf
template_list	MONLTS_2_MONWD4	Monolith 4	4.75	CAISO_Wind	physical	none	0	1	1	wind low cf
template_list	DTCHWD_2_BT3WND	Brookfield Tehachapi 3	4.5	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	MONLTS_2_MONWD5	Monolith 5	4.04	CAISO_Wind	physical	none	0	1	1	wind low cf
template_list	NZWIND_6_WDSTR	Windstream 39	3.35	CAISO_Wind	physical	none	1	0	1	wind low cf
template_list	WSTWND_2_MBYWD1	Mojave 89	88.5	CAISO_Wind	physical	none	0	1	1	wind low cf
template_list	USWNDR_2_LABWD1	LaBrisa Wind Project	9	CAISO_Wind	physical	none	1	0	1	wind low cf
added	existing_generic_wind		#N/A	CAISO_Wind	existing_generic	none	0	1	1	wind low cf
ruling_list	ADLIN_1_UNIT5	Geysers - 2010 - 50/250/425 MW	250	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	GYSSXG_7_UNIT5	Geysers Power Company, LLC (f/k/a 3107)	225	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	CALGEN_1_UNIT5	Coso Clean Power, LLC (f/k/a 3008,3209,3030)	204	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	Geysers 2008 (175 MW)	Geysers 2008 (175 MW)	175	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	BLM_2_UNIT5	Coso Energy Developers (BLM)	75	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	MIRAGE_2_COCHLA	Ormesa Geothermal I, II, GEM	63	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	CONTRL_1_CHBOW	Terra-Gen Dixie Valley, LLC (f/k/a 3011)	60	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	Heber Geothermal Company	Heber Geothermal Company	52	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	Geysers Power Company, LLC	Geysers Power Company, LLC	50	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	Salton Sea Unit 5	Salton Sea Unit 5	49.9	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	NCPA_7_GP2UN3	Geothermal 2	42.42	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	NCPA_7_GP1UN1	Geothermal 1	38.85	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	ORNI 18, LLC	ORNI 18, LLC	33.178	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	Thermo No.1 BE-01	Thermo No.1 BE-01	15	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	CONTRL_1_CASAD3	Mammoth G3 - RAM 1	14	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	CONTRL_1_QF	Mammoth Pacific I P II (MP2)	13.4	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	Calpine Geysers	Calpine Geysers	13	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	CONTRL_1_CASAD1	Mammoth G1 - RAM 2	10	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	Wendel Energy Operations 1, LLC	Wendel Energy Operations 1, LLC	0.7	CAISO_Geothermal	physical	none	1	0	1	geothermal
ruling_list	WINAMD_6_UNIT 1	Amedee Geothermal Venture 1 PURPA	0.69	CAISO_Geothermal	physical	none	1	0	1	geothermal
template_list	V3 GEN	SMALL GEN UNKNOWN	3.1	IID_Solar	physical	none	0	1	1	solar
template_list	Grayson CTBBC	Grayson BBC	68	LDWP_Peaker	physical	none	0	1	0	thermal
template_list	Milford Wind 3	Milford Wind Corridor Project III 1	100.5	LDWP_Wind	physical	none	0	1	0	wind low cf
template_list	Milford Wind 4	Milford Wind 4	100.5	LDWP_Wind	physical	none	0	1	0	wind low cf
template_list	Milford Wind 5	Milford Wind 5	100.5	LDWP_Wind	physical	none	0	1	0	wind low cf
ruling_list	Vistra Moss Landing Energy Storage	Vistra Moss Landing Energy Storage	300	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Moss Landing Energy Storage	Moss Landing Energy Storage	182.5	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	AES Alamitos ES	AES Alamitos ES	100	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Strata Saticoy, LLC	Strata Saticoy, LLC	100	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	SGIP-SCE	SGIP-SCE	96	CAISO_Li_Battery	physical	none	1	0	1	battery
ruling_list	Stem Energy DRES - 402040	Stem Energy DRES - 402040	78	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Hummingbird Energy Storage	HummingBird Energy Storage	75	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Diablo Energy Storage	Diablo Energy Storage	50	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	SGIP-PG&E	SGIP-PG&E	43.318	CAISO_Li_Battery	physical	none	1	0	1	battery
ruling_list	AltaGas Power Holdings (U.S.) Inc.	AltaGas Power Holdings (U.S.) Inc.	40	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Lake Hodges Contract	Lake Hodges Contract	40	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	expedited energy storage - distribution	expedited energy storage - distribution	37.5	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	SGIPSGIP-SDGE	SGIPSGIP-SDGE	30	CAISO_Li_Battery	physical	none	1	0	1	battery
ruling_list	Miramar BESS	Miramar BESS	30	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	HEBT WLA1 DRES	HEBT WLA1 DRES	25	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Cascade Energy Storage	Cascade Energy Storage	25	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	AltaGas Pomona Energy Inc. - Pomona battery storage 1 - ES004	AltaGas Pomona Energy Inc. - Pomona battery storage 1 - ES004	20	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Tesla - Mira Loma	Tesla - Mira Loma	20	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Convergent OCES 1	Convergent OCES 1	20	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Llagas Energy Storage	Llagas Energy Storage	20	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	HEBT WLA2 DRES	HEBT WLA2 DRES	15	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Swell Energy VPP Fund 2019-I LLC	Swell Energy VPP Fund 2019-I LLC	14	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Silverstrand Grid, LLC	Silverstrand Grid, LLC	11	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	2014 SGIP-SCE	2014 SGIP-SCE	10.8	CAISO_Li_Battery	physical	none	1	0	1	battery
ruling_list	Powin SBI, LLC	Powin SBI, LLC	10	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	HEJF1	HEJF1	10	CAISO_Li_Battery	physical	none	1	0	1	battery
ruling_list	SCE EGT - Grapeland	SCE EGT - Grapeland	10	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	SCE EGT - Center	SCE EGT - Center	10	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Painter Energy Storage, LLC	Painter Energy Storage, LLC	10	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Enel Bella Energy Storage, LLC	Enel Bella Energy Storage, LLC	10	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Orni 34 LLC	Orni 34 LLC	10	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Henrietta D Energy Storage	Henrietta D Energy Storage	10	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	mNOC AERS Energy Storage	mNOC AERS Energy Storage	10	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Convergent OCES 2	Convergent OCES 2	9	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Fallbrook BESS	Fallbrook BESS	8.85	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Tehachapi Storage Project (TSP)	Tehachapi Storage Project (TSP)	8	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Stem Energy DRES - 402039	Stem Energy DRES - 402039	7	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Don Lee BSS	Don Lee BSS	6.5	CAISO_Li_Battery	physical	none	1	0	0	battery

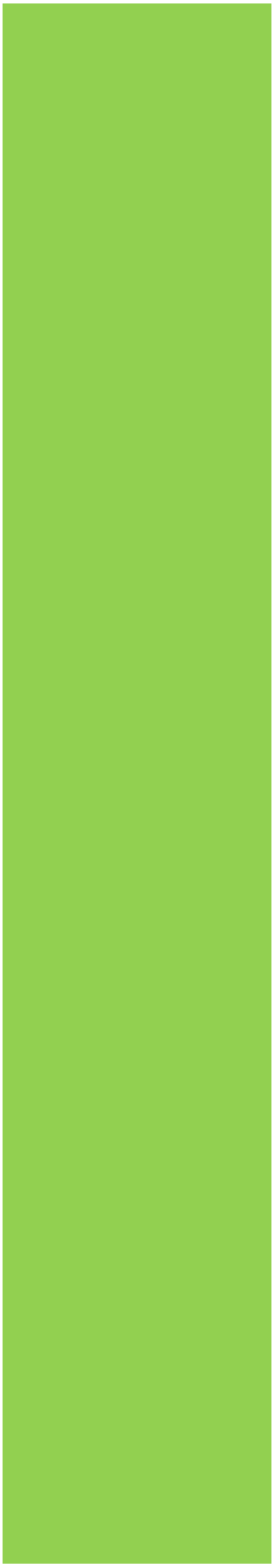
ruling_list	2012 GRC Energy storage - distribution	2012 GRC Energy storage - distribution	6.15	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Convergent OCES 3	Convergent OCES 3	6	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	HEBT Irvine1 DRES	HEBT Irvine1 DRES	5	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	HEBT Irvine2 DRES	HEBT Irvine2 DRES	5	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Swell Energy Fund 1	Swell Energy Fund 1	5	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	HEJF2	HEJF2	5	CAISO_Li_Battery	physical	none	1	0	1	batterv
ruling_list	Yerba Buena Battery Energy Storage System	Yerba Buena Battery Energy Storage System	4	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Capristrano Energy Storage	Capristrano Energy Storage	4	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Pomerado energy storage	Pomerado energy storage	3	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Mercury 4	Mercury 4	2.8	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Distribution Energy Storage Integration ("DESI") 1	Distribution Energy Storage Integration ("DESI") 1	2.4	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Powin Energy - Milligan ESS 1 - ESD01	Powin Energy - Milligan ESS 1 - ESD01	2	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Irvine Smart Grid-Containerized Energy Storage	Irvine Smart Grid-Containerized Energy Storage	2	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Vaca-Dixon Battery Energy Storage System	Vaca-Dixon Battery Energy Storage System	2	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Ice Bear PLS - 431058	Ice Bear PLS - 431058	1.92	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Ice Bear PLS - 431061	Ice Bear PLS - 431061	1.92	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Ice Bear PLS - 431064	Ice Bear PLS - 431064	1.92	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Ice Bear PLS - 431067	Ice Bear PLS - 431067	1.92	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Ice Bear PLS - 431070	Ice Bear PLS - 431070	1.92	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Gonzales Bank 4	Gonzales Bank 4	1.75	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	PLS/TES - Mt San Antonio College	PLS/TES - Mt San Antonio College	1.5	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Distribution Energy Storage Integration ("DESI") 2	Distribution Energy Storage Integration ("DESI") 2	1.4	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	W Power - Stanton - 1	W Power - Stanton - 1	1.3	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Ice Bear PLS - 431145	Ice Bear PLS - 431145	1.28	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Ice Bear PLS - 431148	Ice Bear PLS - 431148	1.28	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Ice Bear PLS - 431151	Ice Bear PLS - 431151	1.28	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Ice Bear PLS - 431154	Ice Bear PLS - 431154	1.28	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Ice Bear PLS - 431157	Ice Bear PLS - 431157	1.28	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Ice Bear PLS - 431163	Ice Bear PLS - 431163	1.28	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Ice Bear PLS - 431166	Ice Bear PLS - 431166	1.28	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	PLS/TES - Lockheed Martin	PLS/TES - Lockheed Martin	1.19	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	PLS/TES - Molina Healthcare	PLS/TES - Molina Healthcare	1.14	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Catalina Island Battery Storage	Catalina Island Battery Storage	1	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Gonzales Bank 3	Gonzales Bank 3	1	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	PLS/TES - Long Beach Convention Center	PLS/TES - Long Beach Convention Center	0.82	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	PLS/TES - Golden West College	PLS/TES - Golden West College	0.8	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	PLS/TES - Chaffey College	PLS/TES - Chaffey College	0.8	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	PLS/TES - Cypress College	PLS/TES - Cypress College	0.7	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	V2G-LA AFB	V2G-LA AFB	0.65	CAISO_Li_Battery	physical	none	1	0	1	battery
ruling_list	PLS/TES - Santa Ana College Central	PLS/TES - Santa Ana College Central	0.53	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Browns Valley Energy Storage	Browns Valley Energy Storage	0.5	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Discovery Science Center	Discovery Science Center	0.1	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Irvine Smart Grid- Residential ES Unit	Irvine Smart Grid- Residential ES Unit	0.06	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Irvine Smart Grid-Community Energy Storge	Irvine Smart Grid-Community Energy Storge	0.03	CAISO_Li_Battery	physical	none	1	0	0	battery
ruling_list	Grayson 3-5	Grayson 3-5	0	LDWP_CCGT	physical	none	1	0	1	thermal
ruling_list	BRDWAY_7_UNIT 1	Broadway Unit B-3	0	LDWP_CCGT	physical	none	1	0	1	thermal
ruling_list	Magnolia Power Project (Biomethane portion)	Magnolia Power Project (Biomethane portion)	0	LDWP_CCGT	physical	none	1	0	1	thermal
ruling_list	VERNON_7_CTG1	Malburg Generating Station	0	LDWP_CCGT	physical	none	1	0	1	thermal
added	sellers_choice		#N/A	sellers_choice	special	fillme_buyer, seller, approximate resource mix	1	0	fillme	unknown
ruling_list	ROCKCRK_7_UNIT 2	Rock Creek Powerhouse	56.9	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	DUTCH1_7_UNIT 1	Nevada Irrigation District (NID) (RPS) - Dutch Flat / Rollins / Bowman	42.6	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	FRIANT_6_UNITS	Friant-Kern Hydro Facility (River Outlet, Madera Canal, F-K)	30.57	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	DMDVAY_1_GEN 1	Diamond Valley Lake	29.7	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Tieton	Tieton	28.734	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	KERRGN_1_UNIT 1	Kern River No. 1	25.6	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	KERKH1_7_UNIT 1	Kerckhoff Powerhouse	25.4	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	FMEADO_7_UNIT	PCWA (RPS) - French Meadows / Oxbow / Hell Hole	24.6	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	ETIWND_6_MWDETI	Etiwanda - Metropolitan Water District (MWD)	24	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	PARDEE_2_UNIT 1	Pardee Power Plant	23.6	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	KELYRG_6_UNIT	SPWP (RPS) - Sly Creek / Kelly Ridge	23	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	DUTCH1_7_UNIT 1	Dutch Flat #1 Powerhouse	22	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	ELDORO_7_UNIT 1	El Dorado Irrigation District	22	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	GRIZLY_1_UNIT 1	Grizzly	21	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	WISHON_6_UNIT 1	Wishon Powerhouse	20	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	DSABLA_7_UNIT	DeSabla Powerhouse	18.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	TULLCK_7_UNIT 1	Tulloch	17.1	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	SNDBAR_7_UNIT 1	Tri-Dam Authority	16.2	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	RIOBRV_6_UNIT 1	Oloose Water District	16	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	BISHOP_1_UNITS	Bishop Creek No. 3	15.8	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	HAYPRS_6_QFUNTS	Eif Haypress, LLC (Lwr)	14.8	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	WISE_1_UNIT 1	Wise Powerhouse	14.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	WESTPT_2_UNIT	West Point Powerhouse	14.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	HALSEY_6_UNIT	Halsey Powerhouse	13.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	BISHOP_1_ALAMO	Bishop Creek No. 2	13.4	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	COLEMN_2_UNIT	Coleman Powerhouse	13	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	MONTPH_7_UNITS	Solano Irrigation District (SID)(ID/WA)	12.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	YESTAL_6_QF	Daniel M. Bates	12.3	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	NARONI_2_UNIT	Narrows #1 Powerhouse	12	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	NWCSTL_7_UNIT 1	Newcastle Powerhouse	12	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	CONTRL_1_RUSHCK	Rush Creek	11.94	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	MONTPH_7_UNIT 1	Solano Irrigation District (SID)(ID/WA)	11.9	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	KRNCNY_6_UNIT	Kern Canyon Powerhouse	11.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	BEARDS_7_UNIT 1	Beardsley	11.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	MONLTN_6_BOREL	Borel	11	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	CONTRL_1_POOLE	Poole Plant	10.9	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	POTTER_6_UNIT 1	Potter Valley Powerhouse	9.2	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	VOLTA_2_UNIT 1	Volta 1 Powerhouse	9.1	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	HATCR1_7_UNIT	Hat Creek #1 Powerhouse	8.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	PLACVL_1_CHILIB	Chili Bar Powerhouse	8.4	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	INSKIP_2_UNIT	Inskip Powerhouse	8	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	DEERCR_6_UNIT 1	Deer Creek Powerhouse	7	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	SPRGAP_1_UNIT 1	Spring Gap Powerhouse	7	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	SPAULD_6_UNIT 1	Spaulding #1 Powerhouse	7	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	COVERD_2_QFUNTS	Mega Renewables (Hatchet Crk)	7	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	SBERDO_2_SNTANA	Santa Ana No. 1	6.95	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	SPAULD_6_UNIT 3	Spaulding #3 Powerhouse	6.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	CNTRVL_6_UNIT	Centerville Powerhouse	6.4	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	SPRGVL_2_TULE	Tule Powerhouse	6.4	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	BLCKBT_2_STONEY	Black Butte	6.2	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	OLSEN_2_UNIT	Olsen Power Partners	5.8	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	CCKITA_7_RPPCHF	SDCWA - Rancho Penasquitos Hydro	5.25	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Rugraw Inc. (Lassen Lodge Hydro)	Rugraw Inc. (Lassen Lodge Hydro)	5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	ELKCRK_6_STONYG	Stony Gorge	5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	RHONDO_2_QF	LA CO Flood Control District **	4.975	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	HMLTBR_6_UNITS	Hamilton Branch Powerhouse	4.9	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	FROGTN_7_UTICA	Murphys	4.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	SPAULD_6_UNIT 2	Spaulding #2 Powerhouse	4.4	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	CRNEVL_6_SJQN 3	San Joaquin #3 Powerhouse	4.2	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	SBERDO_6_MILLCK	Mill Creek No. 1	3.93	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	GYSRVL_7_MSPRNG	Warm Springs	3.75	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	BOWMN_6_HYDRO	Nevada Irrigation District/Bowman Hyroelectric Project	3.6	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	MERCFL_6_UNIT	Merced Falls Powerhouse	3.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	UKIAH_7_LAKEMN	Lake Mendocino	3.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	KILARC_2_UNIT 1	Kilarc Powerhouse	3.2	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	CRNEVL_6_SJQN 2	San Joaquin #2 Powerhouse	3.2	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	TKOPWR_2_UNIT	Tko Power (South Bear Creek)	3	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	CONTRL_1_LUNDY	Lundy	3	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	AZUSA_2_HYDRO	Azusa	3	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	TKOPWR_6_HYDRO	TKO Power Inc. (South Bear Creek)	2.834	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	ETIWND_2_FONTNA	Fontana	2.56	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	SPRGVL_2_TULESC	Tule River	2.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	RECTOR_2_KAWH 1	Kawaiah No. 1	2.25	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	SPICER_1_UNIT 1	Spicer	2.2212	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	LOWGAP_7_MATHEW	Humboldt Bay MWD	2	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	CLNRID_6_LIMESD	Lime Saddle Powerhouse	2	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	COWCRK_2_UNIT	Cow Creek Powerhouse	2	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	PHOENX_1_UNIT	Phoenix Powerhouse	2	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	HATLDS_6_QFUNTS	Mega Renewables (Bidwell Ditch)	2	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	MSSION_2_QF	Badger Filtration Plant	2	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	SNCLRA_6_QF	Camrosa County Water District	1.65	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Nimbus	Nimbus	1.5687324	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	TOADTW_6_UNIT	Toadtown Powerhouse	1.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	City of Escondido - Bear Valley	City of Escondido - Bear Valley	1.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	BRDVLY_7_BAKER	Baker Creek Hydroelectric Project (SB32)	1.495	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	SPRGVL_2_QF	Lower Tule River Irrigation Dist. (f/k/a 4028)	1.4	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	BUCKCK_7_OAKFLT	Oak Flat Powerhouse	1.3	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Calleguas MWD (East Portal Hydroelectric Generating Station, f/k/a 4022)	Calleguas MWD (East Portal Hydroelectric Generating Station, f/k/a 4022)	1.25	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	KANAKA_1_UNIT	Sts Hydropower Ltd. (Kanaka)	1.1	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Browns Valley Irrigation District FIT	Browns Valley Irrigation District FIT	1.04	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	BNNEIN_7_ALTAPH	Alta Powerhouse	1	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	VOLTA_2_UNIT 2	Volta 2 Powerhouse	1	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Calleguas MWD (Springville Hydro) (f/k/a 4152)	Calleguas MWD (Springville Hydro) (f/k/a 4152)	1	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	CLOVER_2_UNIT	Hydro Partners (Clover Creek)	0.999	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Mill Sulphur Creek Project (SB32) (ReMAT)	Mill Sulphur Creek Project (SB32) (ReMAT)	0.995	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	LOWGAP_1_SUPHR	Mill & Sulphur Creek	0.995	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	BUCKCK_2_HYDRO	Lassen Station Hydro (SB32)	0.995	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Wolfsen Bypass FIT	Wolfsen Bypass FIT	0.98	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	STOREY_2_MDRCH4	Site 1923 (Madera Chowchilla)	0.92	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	CURTIS_1_CANLCK	Canal Creek Power Plant (RETA)	0.9	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	CRNEVL_6_CRNVA	Crane Valley Powerhouse	0.9	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Monte Vista Water District (f/k/a 4147)	Monte Vista Water District (f/k/a 4147)	0.865	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Isabella Fishflow Hydroelectric Project LLC	Isabella Fishflow Hydroelectric Project LLC	0.86	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	METCLF_2_QF	Santa Clara Valley Water Dist.	0.8	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	MOORPK_6_QF	Calleguas MWD (Conejos, f/k/a 4010)	0.8	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Gibralter Conduit Hydroelectric Plant (f/k/a 4012)	Gibralter Conduit Hydroelectric Plant (f/k/a 4012)	0.75	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	VOLTA_6_DIGHYD	Digger Creek Hydro	0.65	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	San Luis Bypass FIT	San Luis Bypass FIT	0.6	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Tunnel Hill Hydroelectric Project	Tunnel Hill Hydroelectric Project	0.6	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	STOREY_2_MDRCH2	Site 1174 (Madera Chowchilla)	0.563	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	T&G Hydro	T&G Hydro	0.52	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Three Valleys MWD (Miramar)	Three Valleys MWD (Miramar)	0.52	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	CTNWDP_1_QF	Hat Creek Hereford Ranch	0.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	CSCHYD_2_UNIT 2	High Line Canal	0.5	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Eagle Hydro	Eagle Hydro	0.48	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Olivenhain Municipal Water District	Olivenhain Municipal Water District	0.45	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Graeagle	Graeagle	0.44	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Stampede	Stampede	0.42431876	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	STOREY_2_MDRCH3	Site 1302 (Madera Chowchilla)	0.424	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	CRNEVL_6_SJQN 1	San Joaquin #1-A Powerhouse	0.4	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Buckeye Hydroelectric Project	Buckeye Hydroelectric Project	0.4	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	GOLETA_2_QF	Montecito Water District	0.4	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	McFadden Hydroelectric Facility (SB32)	McFadden Hydroelectric Facility (SB32)	0.356	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	City of Oceanside - San Francisco Peak Hydro Plant	City of Oceanside - San Francisco Peak Hydro Plant	0.35	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Vecino Vineyards FIT	Vecino Vineyards FIT	0.33	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	California Water Service Company (PV Station 37)	California Water Service Company (PV Station 37)	0.325	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	PCWA- Lincoln Metering and Hydroelectric Station	PCWA- Lincoln Metering and Hydroelectric Station	0.32	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Arbuckle Mountain Hydro	Arbuckle Mountain Hydro	0.3	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Cedar Flat	Cedar Flat	0.3	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	White Mountain Ranch LLC (f/k/a 4006)	White Mountain Ranch LLC (f/k/a 4006)	0.29	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Goose Valley Hydro (SB32)	Goose Valley Hydro (SB32)	0.28	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Eric And Debbie Wattenburg	Eric And Debbie Wattenburg	0.275	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Calleguas MWD - Unit 3 (Santa Rosa)	Calleguas MWD - Unit 3 (Santa Rosa)	0.25	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Bishop Tungsten Development, LLC	Bishop Tungsten Development, LLC	0.25	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Goleta Water District (Van Horne) (f/k/a 4055)	Goleta Water District (Van Horne) (f/k/a 4055)	0.25	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Clover Leaf	Clover Leaf	0.2	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	BARRE_2_QF	City of Santa Ana	0.2	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	VISTA_6_QF	San Bernardino MWD	0.18	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Richard Moss	Richard Moss	0.155	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Mini Hydro	Mini Hydro	0.15	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Walnut Valley Water District	Walnut Valley Water District	0.125	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Cox Ave Hydro	Cox Ave Hydro	0.112	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Steve & Bonnie Tetrick	Steve & Bonnie Tetrick	0.1	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	David O. Harde	David O. Harde	0.1	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Calaveras PUD-Hydro #1	Calaveras PUD-Hydro #1	0.09	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Calaveras PUD-Hydro #2	Calaveras PUD-Hydro #2	0.09	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Calaveras PUD-Hydro #3	Calaveras PUD-Hydro #3	0.09	CAISO_Small_Hydro	physical	none	1	0	1	hydro

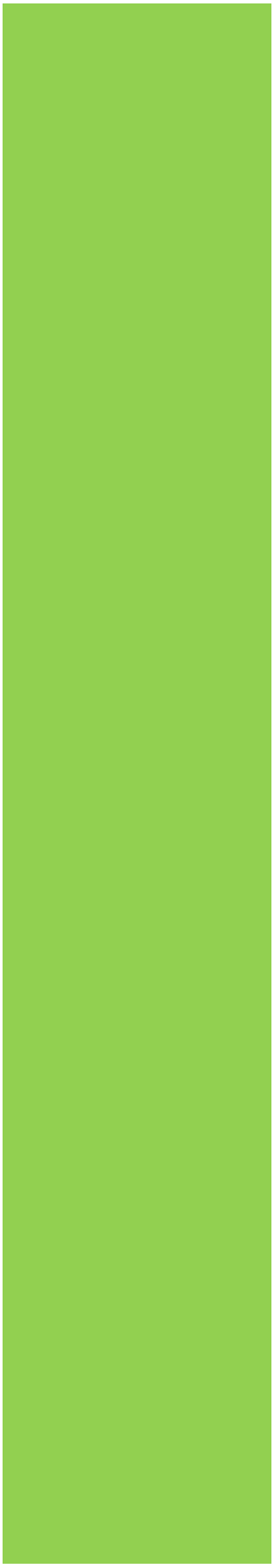
ruling_list	John Neerhout Jr.	John Neerhout Jr.	0.085	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	San Bernardino MWD (Unit 3)	San Bernardino MWD (Unit 3)	0.075	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Mesa Consolidated Water District	Mesa Consolidated Water District	0.05	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	LEWSTN_7_UNIT 1	Lewiston	0.04067084	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Wright Ranch Hydroelectric (fka Bertha Wright Bertillion)	Wright Ranch Hydroelectric (fka Bertha Wright Bertillion)	0.04	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	SGE Site 1	SGE Site 1	0.0375	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Walnut Valley Water District (#2)	Walnut Valley Water District (#2)	0.025	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	RECTOR_2_KAWH 2	Kawaah No. 2	0	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	RECTOR_2_KAWH 3	Kawaah No. 3	0	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	BGCRKL_7_PORTAL	Portal Power Plant	0	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	Desert Water Agency (Snow Creek)	Desert Water Agency (Snow Creek)	0	CAISO_Small_Hydro	physical	none	1	0	1	hydro
ruling_list	TOPAZ_2_SOLAR	Topaz Solar Farm	550	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Tribal Solar, LLC	Tribal Solar, LLC	328	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	SLSTR1_2_SOLAR1	Solar Star California XIX, LLC (AVPV I)	310	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	DSRTSN_2_SOLAR2	Desert Center Solar Farm	300	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	DSRTSL_2_SOLAR1	Desert Stateline	300	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	AGUCAL_5_SOLAR1	Agua Caliente Solar Project	290	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	SLSTR2_2_SOLAR2	Solar Star California XX, LLC (AVPV II)	276	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	SANDLT_2_SUNITS	Mojave Solar Project	275	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	93LF BME LLC (Mount Signal V)	93LF BME LLC (Mount Signal V)	252.32	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	GENESI_2_STG	Genesis Solar (Station) Energy Project	250	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	DSRTSN_2_SOLAR1	Desert Sunlight 250, LLC	250	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	PRIMM_2_SOLAR1	Silver State Solar Power, LLC	250	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	BLKCRK_2_SOLAR1	McCoy Solar, LLC	250	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Panoche Valley Solar, LLC	Panoche Valley Solar, LLC	246.713	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	AVSOLR_2_SOLAR	AV Solar Ranch One	241.5	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CAVLSR_2_BSOLAR	High Plains Ranch II	210	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	IVSLRP_2_SOLAR1	Imperial Valley Solar 1, LLC - Silver Ridge Mt. Signal	200	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	RE Tranquility 8	RE: Tranquility 8	200	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Wright Solar Park	Wright Solar Park	200	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	GARLND_2_GASLR	RE Garland, LLC	186.96	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	MSOLAR_2_SOLAR1	Mesquite Solar 1	165	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	North Rosamond Solar, LLC	North Rosamond Solar, LLC	160	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Sun Streams, LLC	Sun Streams, LLC	160	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	COPMT2_2_SOLAR2	Copper Mountain Solar 2	155	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	88FT BME LLC (Mount Signal II)	88FT BME LLC (Mount Signal II)	153.52	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	MSOLAR_2_SOLAR3	Mesquite Solar 3, LLC	152	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	California Flats Solar Project	California Flats Solar Project	150	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	IVWEST_2_SOLAR1	CSolar IV West - Imperial Solar Energy Center-West	150	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CPVERD_2_SOLAR	Campo Verde Solar	139	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Blythe Solar III, LLC	Blythe Solar III, LLC	136.8	CAISO_Solar	physical	none	1	0	0	solar
ruling_list	IVANPA_1_UNIT2	Solar Partners I, LLC (Ivanpah)	133	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	DRACKR_2_SOLAR2	Blythe Solar II, LLC	131.2	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CSLR4S_2_SOLAR	CSolar IV South - Imperial Solar Energy Center-South	130	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	American Kings Solar, LLC	American Kings Solar, LLC	128	CAISO_Solar	physical	none	1	0	0	solar
ruling_list	IVANPA_1_UNIT3	Ivanpah Unit 3	126.1	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CNTNLA_2_SOLAR1	Centinela Solar Energy Facility (Centinela I)	125	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	IVANPA_1_UNIT1	Ivanpah Unit 1	114.46	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Valentine Solar, LLC	Valentine Solar, LLC	111.2	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CATLNA_2_SOLAR	Catalina Solar	110	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	DRACKR_2_SOLAR1	Dracker Solar Unit 1	110	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	SLSTI3_2_SOLAR1	Solar Star California XIII, LLC (Quinto)	108	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Willow Springs Solar, LLC	Willow Springs Solar, LLC	108	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Antelope II Expansion	Antelope II Expansion	105	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Sunshine Valley Solar, LLC	Sunshine Valley Solar, LLC	104	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Mesquite Solar 2	Mesquite Solar 2	100.815	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	HENRTA_1_SOLAR	Henrietta Solar	100	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	ASTORA_2_SOLAR1	RE Astoria LLC	100	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Mustang 2	Mustang 2	100	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	COPMTN_2_SOLAR4	Copper Mountain Solar 4, LLC	93.6	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	KRAMER_2_SEGS8I9	Luz Solar Partners Ltd. VIII	92	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	BIGSKY_2_SOLAR6	Solverde 1	85	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Desert Harvest	Desert Harvest	80	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	ASTORA_2_SOLAR2	Astoria 2	75	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	NEENCH_6_SOLAR	Alpine Solar Project	66	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	MNDOTA_1_SOLAR1	North Star Solar	60	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	LAMONT_1_SOLAR1	Regulus Solar, LLC	60	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	EXCLSO_1_SOLAR	Excelsior Solar	60	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	RTEDDY_2_SOLAR2	Rosamond West Solar 2	55	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	RTEDDY_2_SOLAR1	Rosamond West Solar 1	54	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	41MB BME LLC	41MB BME LLC	51.3	CAISO_Solar	physical	none	1	0	0	solar
ruling_list	ALPSLR_1_SPSLR	Alpaugh 50	50	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Midway Solar Farm I	Midway Solar Farm I	50	CAISO_Solar	physical	none	1	0	0	solar
ruling_list	BIGSKY_2_SOLAR7	Big Sky Solar 1	50	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Little Bear 4	Little Bear 4	50	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Little Bear 5	Little Bear 5	50	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	COPMTN_2_SOLAR1	CM48 (fka Sempra Copper Mountain 1)	48	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CNTNLA_2_SOLAR2	Centinela Solar Energy Facility Expansion (Centinela II)	45.6	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Tierra del Sol Solar Farm	Tierra del Sol Solar Farm	45	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CAVLSR_2_BSOLAR	High Plains Ranch III	40	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Cuyama Solar Array	Cuyama Solar Array	40	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	BIGSKY_2_SOLAR2	Big Sky Solar 4	40	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	MSTANG_2_SOLAR3	Mustang 3	40	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Little Bear 1	Little Bear 1	40	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	KRAMER_1_SEGS37	Luz Solar Partners Ltd. VI	35	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	KRAMER_1_SEGS8I3	Luz Solar Partners Ltd, III (SEGS III) (f/k/a 5017)	30	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	KRAMER_1_SEGSR4	Luz Solar Partners Ltd, IV (SEGS IV) (f/k/a 5018)	30	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	MSTANG_2_SOLAR	Mustang	30	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	MSTANG_2_SOLAR4	Mustang 4	30	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	LAMONT_1_SOLAR4	Hayworth Solar Farm	27	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	BREGGO_6_SOLAR	NRG Solar Borrego	26	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	BLYTHE_1_SOLAR1	NRG Solar Blythe LLC	21	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	LHILLS_6_SOLAR1	CED Lost Hills Solar, LLC (fka Blackwell Solar Park, LLC) - RAM 4	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	STROUD_6_SOLAR	Stroud Solar Station	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CANTUA_1_SOLAR	Cantua Solar Station	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	HURON_6_SOLAR	Huron Solar Station	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	GATES_2_SOLAR	Gates Solar Station	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	GUERNS_6_SOLAR	Guernsey Solar Station	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Mariposa West Solar PV 2, LLC	Mariposa West Solar PV 2, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	OROLOM_1_SOLAR1	Sunray 20	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	KANSAS_6_SOLAR	Kansas South - PV 1	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	ALPSLR_1_NTHSLR	Alpaugh North	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	ATWELL_1_SOLAR	Atwell Island	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	WAUKNA_1_SOLAR	Corcoran	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	AVENAL_6_SUNCTY	Sun City Project (Eurus)	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	OLIVEP_1_SOLAR	White River	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	LEPRVO_1_KANSAS	Kansas	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Lost Hills Solar	Lost Hills Solar	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	ACACIA_6_SOLAR	West Antelope - RAM 1	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	PLAINV_6_BSOLAR	Western Antelope Blue Sky Ranch A - RAM 1	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	KNTSTH_6_SOLAR	Kent South - PV 2	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	SKERN_6_SOLAR1	Algonquin SKIC 20 Solar - PV 2	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	VICTOR_1_SOLAR2	Alamo Solar, LLC - RAM 2	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CORCAN_1_SOLAR1	CID Solar PV Project - RAM 2	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	7STDRD_1_SOLAR1	Shafter Solar - RAM 3	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	OLDRVS_6_SOLAR	RE Old River One - RAM 3	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	RSMSLR_6_SOLAR2	RE Rosamond Two, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	GLOW_6_SOLAR	TA - High Desert LLC (Antelope)	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	ADOBEE_1_SOLAR	Adobe Solar, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	PLAINV_6_SOLARC	Central Antelope Dry Ranch C, LLC (A&R)	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	PLAINV_6_NLRSR1	North Lancaster Ranch, LLC (A&R)	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	PLAINV_6_SOLAR3	Sierra Solar Greenworks, LLC (A&R)	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	VESTAL_2_SOLAR1	Nicolls, LLC (Weldon Solar)	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	VICTOR_1_LVSLR2	Lone Valley Solar Park II, LLC (f/k/a Marathon)	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	TWISSL_6_SOLAR1	Conrad Lost Hills, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	VEGA_6_SOLAR1	Vega Solar, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	PMPJCK_1_SOLAR1	Pumpjack Solar I, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	WLDWD_1_SOLAR1	Wildwood Solar I, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	VICTOR_1_SOLAR4	Adelanto Solar, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	OASIS_6_SOLAR2	NRG Solar Oasis LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	ATWELZ_1_SOLAR1	CED Atwell Island West, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	MOJAVW_2_SOLAR	SEPV Mojave West, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	ADERA_1_SOLAR1	Adera Solar	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	TORTLA_1_SOLAR	Longbeat Solar, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	GLDFGR_6_SOLAR1	Portal Ridge Solar B, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	PMPJCK_1_SOLAR2	Rio Bravo Solar I, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	PMPJCK_1_RBZSLR	Rio Bravo Solar II, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Jacumba Solar, LLC	Jacumba Solar, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	GARLND_2_GASLRA	RE Garland A, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CEDUCR_2_SOLAR1	SR Solis Vestal Almond, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CEDUCR_2_SOLAR2	SR Solis Vestal Herder, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CEDUCR_2_SOLAR4	SR Solis Vestal Fireman, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Joshua Tree Solar Farm, LLC	Joshua Tree Solar Farm, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	MARCPW_6_SOLAR1	Maricopa West	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	FRESHW_1_SOLAR1	CED Corcoran Solar 3, LLC (PV 3 RFO)	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	PAIGES_6_SOLAR	Westside Solar, LLC (1) (PV 3 RFO)	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	RE: Walker Pass	RE: Walker Pass	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Midway Solar Farm III	Midway Solar Farm III	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Bayshore Solar A	Bayshore Solar A	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Bayshore Solar C	Bayshore Solar C	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Bayshore Solar B	Bayshore Solar B	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	San Joaquin 1A	San Joaquin 1A	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Antelope DSR 3, LLC	Antelope DSR 3, LLC	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Windhub Solar A Solar Project	Windhub Solar A Solar Project	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	EEKTMN_6_SOLAR1	EE K Solar 1 - Kettleman Solar	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	VALLEY_5_SOLAR2	AP North Lake Solar - Diamond Valley Lake Solar	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	RSMSLR_6_SOLAR1	RE Rosamond One	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	BIGSKY_2_SOLAR1	Antelope Big Sky Ranch	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	BIGSKY_2_SOLAR4	Western Antelope Blue Sky Ranch B	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	BLYTHE_1_SOLAR2	Blythe Green 1	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CRWCKS_1_SOLAR1	Crow Creek Solar 1	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	KNGBRD_2_SOLAR1	Kingbird Solar A	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	KNGBRD_2_SOLAR2	Kingbird Solar B	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Little Bear 3	Little Bear 3	20	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	OLIVEP_1_SOLAR2	White River Solar 2 - RAM 2	19.75	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	WAUKNA_1_SOLAR2	CED Corcoran Solar 2, LLC	19.75	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	AVENAL_6_SANDDG	Sand Drag (Eurus)	19	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CUMBIA_1_SOLAR	Columbia Solar Energy	19	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	ADMEST_6_SOLAR	RE Adams East	19	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	DEVERS_1_SOLAR	Cascade Solar	18.5	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	JAYNE_6_WLSLR	Westlands Solar Farms PV1	18	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CATLNA_2_SOLAR2	Catalina Solar 2, LLC	18	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Mariciopa East Solar PV2, LLC	Mariciopa East Solar PV2, LLC	18	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	VICTOR_1_SOLAR1	RE Victor Phelan Solar One, LLC	17.5	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	SDG&E Solar Energy Project	SDG&E Solar Energy Project	17	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	LAMONT_1_SOLAR5	67RK BME, LLC	16.66	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	LAMONT_1_SOLAR3	Woodmere Solar Farm - RAM 4	15	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	SCHNDR_1_WSTSDE	Westside Solar Station	15	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	SCHNDR_1_FVPTS	Five Points Solar Station	15	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	MRLSDS_6_SOLAR1	Morelos Del Sol - RAM 3	15	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	WLDWD_1_SOLAR2	Wildwood Solar II, LLC	15	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CEDUCR_2_SOLAR3	SR Solis Crown, LLC	15	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CAMLOT_2_SOLAR2	Columbia Two, LLC	15	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	San Jacinto Solar 14.5, LLC	San Jacinto Solar 14.5, LLC	14.5	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	VESTAL_2_SOLAR2	Tropico, LLC (Great Lakes)	14	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	SEGS_1_SEGS2	Sunray Energy, Inc.	13.8	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	SUNRAY SEGS I	SUNRAY SEGS I	13.8	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Java Solar	Java Solar	13.5	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	ARVINN_6_ORION1	Orion Solar - PV 1	12	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	Blackwell Solar	Blackwell Solar	12	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	DEVERS_1_SOLAR1	SPVP008 - Ontario	12	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	GOOSLK_1_SOLAR1	Cottonwood Goose Lake LLC	12	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	GLDFGR_6_SOLAR2	Portal Ridge Solar C Project	11.4	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	CORCAN_1_SOLAR2	Corcoran City	11	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	GIFFEN_6_SOLAR	Giffen Solar Station	10	CAISO_Solar	physical	none	1	0	1	solar
ruling_list	GATES_2_WSOLAR	West Gates Solar Station	10	CAISO_Solar	physical	none	1	0	1	solar

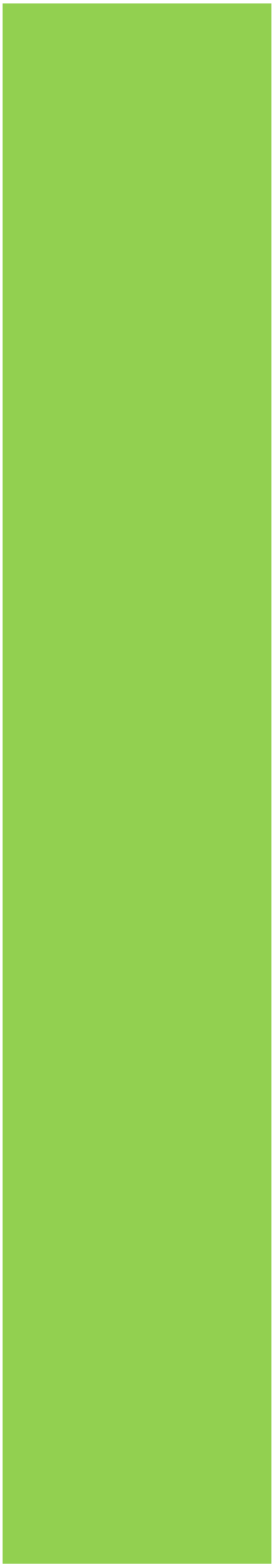
ruling_list	OROLOM_1_SOLAR2	SR Solis Oro Loma Teresina, LLC- Project B	10	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	COPMTN_2_CM10	CM10 (fka Sempra El Dorado Solar)	10	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	GLDTWN_6_COLUM3	RE Columbia Three LLC	10	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	VICTOR_1_LVSLR1	Lone Valley Solar Park I, LLC (F/K/a Agincourt)	10	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	PMDLET_6_SOLAR1	SEPV Palmdale East, LLC	10	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	SKERN_6_SOLAR2	Algonquin SKIC 10 Solar, LLC	10	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Sun Edison Victorville Solar	Sun Edison Victorville Solar	10	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	PLAINV_6_DSOLAR	Western Antelope Dry Ranch	10	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	PBLOSM_2_SOLAR	PearBlossom	9.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	DEVERS_1_SOLAR2	SPVP009 - Ontario	9	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Aspiration Solar G LLC (1) (PV 3 RFO)	Aspiration Solar G LLC (1) (PV 3 RFO)	9	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	VALLEY_5_RTS044	SPVP044 - Perris	8	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	ARVINN_6_ORION2	Orion Solar II, LLC	8	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	AVENAL_6_AVSLR1	SR Solis Rocket, LLC - Project A	7.9	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	AVENAL_6_AVSLR2	SR Solis Rocket, LLC - Project B	7.9	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	RVSIDE_6_SOLAR1	Tequesquite Landfill Solar Project	7.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	VICTOR_1_SOLAR3	Adelanto Solar 2	7	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	50001 SCWA North and South Ponds	50001 SCWA North and South Ponds	7	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	American Solar Greenworks, LLC (A&R)	American Solar Greenworks, LLC (A&R)	6.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	DELSUR_6_SOLAR1	FTS Project Owner 1, LLC (Summer North)	6.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	BREGGO_6_DEGRSL	Desert Green Solar Farm	6.3	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	AVENAL_6_AVPARK	Avenal Park (Eurus)	6	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	ETIWND_2_RTS026	SPVP026 - Rialto	6	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	MRLOM_2_ONTARO	SPVP006 - Ontario	5.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	San Jacinto Solar 5.5, LLC	San Jacinto Solar 5.5, LLC	5.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	MENBIO_6_RENEW1	CalRENEW-1 (1st Amended & Restated)	5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	VESTAL_2_RTSD42	SPVP042 - Porterville	5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	SBERDO_2_RTSD48	SPVP048 - Redlands	5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	GLDTWN_6_SOLAR	RE Rio Grande, LLC	5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	DELSUR_6_DRYFRB	Lancaster Dry Farm Ranch B, LLC	5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	VICTOR_1_VDRYFA	Victor Dry Farm Ranch A, LLC	5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	VICTOR_1_VDRYFB	Victor Dry Farm Ranch B, LLC	5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	MNDOTA_1_SOLAR2	Citizen Solar B, LLC	5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	LITLRK_6_SOLAR1	Lancaster Little Rock C LLC	5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	SunE- Victorville	SunE- Victorville	5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	CRELMN_6_RAMON2	Sol Orchard 21 - Ramona 2	5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	VLCNTR_6_VCSLR2	Sol Orchard 23 - Valley Center 2	5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	BIGSKY_2_SOLAR5	Big Sky Solar 2	5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	MARTIN_1_SUNSET	Sunset Reservoir North Basin	4.96	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	GARNET_1_SOLAR	North Palm Springs #4A	4.12	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	GARNET_1_SOLAR2	Garnet Solar Power Generation Station, 1 LLC	4	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Lancaster Solar 1	Lancaster Solar 1	3.75	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	SBERDO_2_RTS011	SPVP011 - Redlands	3.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	SBERDO_2_RTSD13	SPVP013 - Redlands	3.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	ETIWND_2_RTSD17	SPVP017 - Fontana	3.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	VISTA_2_RTSD28	SPVP028 - San Bernardino	3.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	SunE- Mission Pomona	SunE- Mission Pomona	3.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	ETIWND_2_RTSD15	SPVP015 - Fontana	3	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	LITLRK_6_SOLAR4	Little Rock - Pham Solar PV, LLC	3	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	US Topco Energy, Inc. (Soccer Center)	US Topco Energy, Inc. (Soccer Center)	3	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	PVNavitator, LLC	PVNavitator, LLC	3	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	ROSMND_6_SOLAR	Lancaster WAD B, LLC	3	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	LILIAC_6_SOLAR	NLP Granger AB2, LLC	3	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Central Antelope Dry Ranch B, LLC	Central Antelope Dry Ranch B, LLC	3	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Oak Leaf Solar X (SB32)	Oak Leaf Solar X (SB32)	3	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	AVS Phase 2	AVS Phase 2	3	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	SEPV Boulevard 2	SEPV Boulevard 2	2.9	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	SBERDO_2_RTS005	SPVP005 - Redlands	2.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	SBERDO_2_RTSD07	SPVP007 - Redlands	2.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	ETIWND_2_RTSD23	SPVP023 - Fontana	2.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Sol Orchard 22 - Valley Center 1	Sol Orchard 22 - Valley Center 1	2.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Colton Solar One LLC	Colton Solar One LLC	2.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	GRIDLY_6_SOLAR	Gridley Main Two	2.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	BUCKWD_1_NPALM1	North Palm Springs #1A	2.4	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	VLCNTR_6_VCSLR	NLP Valley Center Solar, LLC	2.33	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Pristine Sun - 2245 Gantry (SB32)	Pristine Sun - 2245 Gantry (SB32)	2.3	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	2241 Alavi (SB32)	2241 Alavi (SB32)	2.1	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	PUTHCR_1_SOLAR1	Putah Creek Solar Farms (SB32)	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Peterson Rd. Solar I (SB32) (ReMAT)	Peterson Rd. Solar I (SB32) (ReMAT)	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Camden 1 FIT (GASNA 30P)	Camden 1 FIT (GASNA 30P)	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Gustine 1 FIT 2 (GASNA 60P)	Gustine 1 FIT 2 (GASNA 60P)	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Vaca Dixon Solar Station	Vaca Dixon Solar Station	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	SBERDO_2_REDLND	SPVP022 - Redlands	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	ETIWND_2_RTSD27	SPVP027 - Rialto	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	LITLRK_6_SEPV01	SEPV1, LLC	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	DEVERS_1_SEPV05	SEPV2, LLC	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	VICTOR_1_EXSLRA	Expressway Solar A	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	VICTOR_1_EXSLRB	Expressway Solar B	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	LITLRK_6_SOLAR2	FTS Master Tenant 2, LLC (SEPV18)	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	CHINO_2_JURUPA	California PV Energy, LLC (Jurupa Ave)	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	DESAMO_2_SOLAR6	Freeway Springs	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	ETIWND_2_SOLAR5	Dulles	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	CRELMN_6_RAMON1	Sol Orchard 20 - Ramona 1	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	OCI Solar Lakeside	OCI Solar Lakeside	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Pala (SDG&E Solar Energy Project)	Pala (SDG&E Solar Energy Project)	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	One Ten Partners, LLC	One Ten Partners, LLC	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Anaheim Solar Energy Plant	Anaheim Solar Energy Plant	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Southeast Wastwater Treatment Plant/CCSF	Southeast Wastwater Treatment Plant/CCSF	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	50002 SCWA R1 & R2 Ponds	50002 SCWA R1 & R2 Ponds	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	50004 SCWA #5 Pond	50004 SCWA #5 Pond	2	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	2275 Hattesen (SB32)	2275 Hattesen (SB32)	1.88	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	SunE- Cucamonga Ontario West	SunE- Cucamonga Ontario West	1.88	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Boomer Solar 1B	Boomer Solar 1B	1.76	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	RGA2 Solar (SB32) (ReMAT)	RGA2 Solar (SB32) (ReMAT)	1.75	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	PADUA_2_SOLAR1	Rancho Cucamonga Distribution Center 1	1.75	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	DESAMO_2_SOLAR2	Golden Springs Bldg M	1.75	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	SunE- Quarry Corona	SunE- Quarry Corona	1.75	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	2235 Leong	2235 Leong	1.75	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	2184 Gruber (SB32)	2184 Gruber (SB32)	1.52	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	HENRTA_6_SOLAR1	ImMODO- Lemoore 1	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	S_RITA_6_SOLAR1	NDP1 (SB32)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	PEDRA_1_SOLAR	Fresh Air Energy IV, LLC - Sonora 1	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	LOCKFD_1_BEARCK	Bear Creek Solar Project	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Ignite Solar Holdings 1 - Achomawi	Ignite Solar Holdings 1 - Achomawi	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Ignite Solar Holdings 1 - Ahjumawi	Ignite Solar Holdings 1 - Ahjumawi	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	KNGBRG_1_KBSLR1	Kingsburg 1	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	KNGBRG_1_KBSLR2	Kingsburg 2	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	WYRESN_1_SOLAR	La Joya Del Sol #1	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	TWISSL_6_SOLAR	Nickel 1 (New)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	COCOSB_6_SOLAR	Oakley Executive Solar Project	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	ECAP_1_SOLAR	Pristine Sun Helios	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	HOLSTR_1_SOLAR	Enerpare CA1 (FKA San Benito Smart Park)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	TMPLTN_2_SOLAR	Vintner Solar Project	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	CLOVDL_1_SOLAR	Cloverdale Solar FSEC 1	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	HOLSTR_1_SOLAR2	Ecos Energy - Hollister Project	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	MERCED_1_SOLAR2	Ecos Energy - Merced Solar Project	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	MERCED_1_SOLAR1	Ecos Energy - Mission Solar	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	KERMAN_6_SOLAR1	Fresno Cogeneration - Fresno Solar South	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	KERMAN_6_SOLAR2	Fresno Cogeneration - Fresno Solar West	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	TX-ELK_6_SOLAR1	Greenlight - Castor Solar Project	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	ETIWND_2_RTSD10	SPVP010 - Fontana	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	SBERDO_2_RTSD16	SPVP016 - Redlands	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	ETIWND_2_RTSD18	SPVP018 - Fontana	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	MRLOM_2_RTSD32	SPVP032 - Ontario	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	WALNUT_2_SOLAR	Industry Metrolink PV 1	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	CHINO_2_SASOLR	SS San Antonio West LLC (Chino South Building E)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Neenach Solar 1B South, LLC	Neenach Solar 1B South, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	L-8 Solar Project, LLC	L-8 Solar Project, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Helliocentric, LLC	Helliocentric, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Annie Power, LLC	Annie Power, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	JRam Solar 1, LLC	JRam Solar 1, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	JRam Solar 2, LLC	JRam Solar 2, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Sandra Energy, LLC	Sandra Energy, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Dreamer Solar, LLC	Dreamer Solar, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Voyager Solar 1, LLC	Voyager Solar 1, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Voyager Solar 2, LLC	Voyager Solar 2, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Becca Solar, LLC	Becca Solar, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Toro Power 1, LLC	Toro Power 1, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Radiance Solar 5 LLC	Radiance Solar 5 LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Radiance Solar 4 LLC	Radiance Solar 4 LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Summer Solar C2, LLC	Summer Solar C2, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Summer Solar A2, LLC	Summer Solar A2, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Summer Solar B2, LLC	Summer Solar B2, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Rodeo Solar C2, LLC	Rodeo Solar C2, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Rodeo Solar D2, LLC	Rodeo Solar D2, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Expressway Solar C2, LLC	Expressway Solar C2, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Tulare PV1, LLC (Exeter 3)	Tulare PV1, LLC (Exeter 3)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Tulare PV1, LLC (Lindsay 1)	Tulare PV1, LLC (Lindsay 1)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Tulare PV1, LLC (Lindsay 3)	Tulare PV1, LLC (Lindsay 3)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Tulare PV1, LLC (Ivanhoe 1)	Tulare PV1, LLC (Ivanhoe 1)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Tulare PV1, LLC (Ivanhoe 3)	Tulare PV1, LLC (Ivanhoe 3)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Tulare PV1, LLC (Porterville 5)	Tulare PV1, LLC (Porterville 5)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Sequoia PV1, LLC (Tulare 1)	Sequoia PV1, LLC (Tulare 1)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Sequoia PV1, LLC (Tulare 2)	Sequoia PV1, LLC (Tulare 2)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Division 1 (f/k/a Ever CT Solar Farm, LLC - Site 2A)	Division 1 (f/k/a Ever CT Solar Farm, LLC - Site 2A)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Sequoia PV1, LLC (Farmersville 1)	Sequoia PV1, LLC (Farmersville 1)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Sequoia PV1, LLC (Farmersville 2)	Sequoia PV1, LLC (Farmersville 2)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Sequoia PV1, LLC (Farmersville 3)	Sequoia PV1, LLC (Farmersville 3)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Sequoia PV3 LLC (Porterville 6)	Sequoia PV3 LLC (Porterville 6)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Sequoia PV3 LLC (Porterville 7)	Sequoia PV3 LLC (Porterville 7)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	VICTOR_1_SLRHES	DG Solar Lessee, LLC (Hesperia)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	DG Solar Lessee, LLC (Snowline-Duncan Road North)	DG Solar Lessee, LLC (Snowline-Duncan Road North)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Victor Mesa Linda C2 LLC	Victor Mesa Linda C2 LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Victor Mesa Linda D2 LLC	Victor Mesa Linda D2 LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Victor Mesa Linda E2 LLC	Victor Mesa Linda E2 LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Sequoia PV2, LLC (Hanford 1)	Sequoia PV2, LLC (Hanford 1)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Sequoia PV2, LLC (Hanford 2)	Sequoia PV2, LLC (Hanford 2)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Coronus Joshua Tree East 5 LLC	Coronus Joshua Tree East 5 LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Desert Hot Springs 2	Desert Hot Springs 2	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Gales A West	Gales A West	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Gales B East	Gales B East	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	DG Solar Lessee, LLC (Snowline-White Road North)	DG Solar Lessee, LLC (Snowline-White Road North)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	DG Solar Lessee, LLC (Snowline-White Road Central)	DG Solar Lessee, LLC (Snowline-White Road Central)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Mitchell Solar, LLC	Mitchell Solar, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Rudy Solar, LLC	Rudy Solar, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Madelyn Solar, LLC	Madelyn Solar, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	DG Solar Lessee, LLC (Snowline-White Road South)	DG Solar Lessee, LLC (Snowline-White Road South)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Adelanto West 1	Adelanto West 1	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Adelanto West 2	Adelanto West 2	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Venable #1 North	Venable #1 North	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Venable #2 South	Venable #2 South	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Lancaster Solar 2	Lancaster Solar 2	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	OASIS_6_SOLAR1	Morgan Lancaster I, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	SunE - Redlands	SunE - Redlands	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	DESAMO_2_SOLAR1	Golden Springs Bldg H	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	SunE- Elm Fontana	SunE- Elm Fontana	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Buckman Springs PV 1	Buckman Springs PV 1	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Buckman Springs PV 2	Buckman Springs PV 2	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Viejas Blvd PV 1	Viejas Blvd PV 1	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Victor Mesa Linda B2 LLC	Victor Mesa Linda B2 LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Merced 2 - (SB32)	Merced 2 - (SB32)	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Summer Solar E2, LLC	Summer Solar E2, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Summer Solar F2, LLC	Summer Solar F2, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Summer Solar G2, LLC	Summer Solar G2, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Summer Solar H2, LLC	Summer Solar H2, LLC	1.5	CAISO_Solar	physical	none	1	0	1 solar
ruling_list	Madera 1	Madera 1	1.5	CAISO_Solar	physical	none	1	0	1 solar

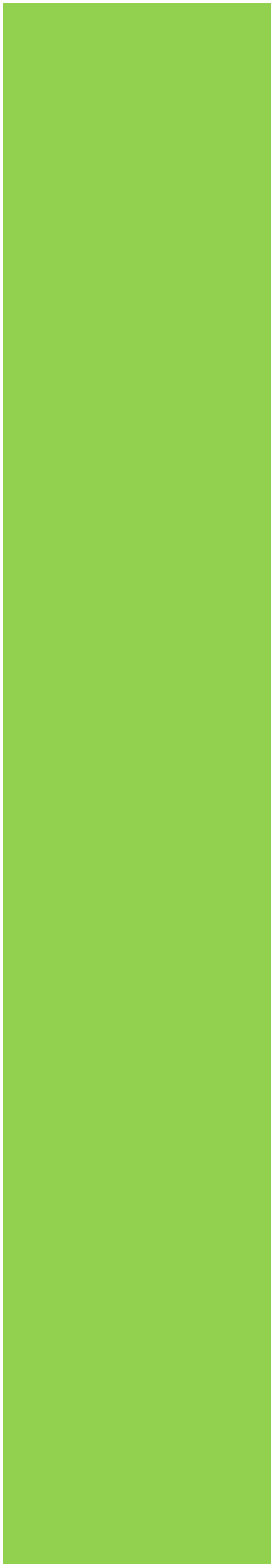
ruling_list	50003 SCWA R4 Pond	50003 SCWA R4 Pond	1.5	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	CORONS_2_SOLAR	Temescal Canyon	1.499278	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Powhatan Solar Power Generation Station 1, LLC	Powhatan Solar Power Generation Station 1, LLC	1.496	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Otoe Solar Power Generation Station 1, LLC	Otoe Solar Power Generation Station 1, LLC	1.496	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Navajo Solar Power Generation Station 1, LLC	Navajo Solar Power Generation Station 1, LLC	1.496	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Industry Solar Power Generation Station 1, LLC	Industry Solar Power Generation Station 1, LLC	1.496	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Newberry Solar 1, LLC	Newberry Solar 1, LLC	1.492	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Park Meridian 1	Park Meridian 1	1.49	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Terra Francesco 1	Terra Francesco 1	1.49	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	BKRFLD_2_SOLAR1	Bakersfield 111	1.4	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	SunE- Santa Ana	SunE- Santa Ana	1.4	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	DELAMO_2_SOLAR4	Golden Springs Building F	1.32	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	ETIWND_2_CHMPNE	California PV Energy, LLC (Champagne Ave)	1.3	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	DELAMO_2_SOLRD	Golden Springs, LLC, (Building D)	1.2599	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun - 2042 Baldwin (SB32)	Pristine Sun - 2042 Baldwin (SB32)	1.25	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	LIVECK_6_SOLAR	Pristine Sun Harris	1.25	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	REEDLY_6_SOLAR	Pristine Sun Terzian	1.25	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Diamond Valley Solar, LLC	Diamond Valley Solar, LLC	1.25	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	DELAMO_2_SOLAR3	Golden Springs Building G	1.25	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Milestone Wildomar, LLC	Milestone Wildomar, LLC	1.224	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	SunE- Jurupa Ontario	SunE- Jurupa Ontario	1.2	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Boomer Solar 7	Boomer Solar 7	1.2	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	DELAMO_2_SOLRC1	Golden Springs, LLC, (Building C1)	1.1815	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	SunE (Bell Tustin)	SunE (Bell Tustin)	1.131	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	SunE (Red Hill)	SunE (Red Hill)	1.036	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	LOCKFD_1_KSOLAR	Kettleman Solar Project	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	DAVIS_1_SOLAR1	Yolo County Grassland #3	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	DAVIS_1_SOLAR2	Yolo County Grassland #4	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	CHINO_2_SOLAR	SPVP002 - Chino	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	VISTA_2_RIALTO	SPVP003 - Rialto	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	MIRLOM_2_RTSD33	SPVP033 - Ontario	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Treen Solar 1, LLC	Treen Solar 1, LLC	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Treen Solar 2, LLC	Treen Solar 2, LLC	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	JRam Solar 3, LLC	JRam Solar 3, LLC	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Drew Energy, LLC	Drew Energy, LLC	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Voyager Solar 3, LLC	Voyager Solar 3, LLC	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Summer Solar D2, LLC	Summer Solar D2, LLC	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Tulare PV1, LLC (Exeter 1)	Tulare PV1, LLC (Exeter 1)	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Tulare PV1, LLC (Exeter 2)	Tulare PV1, LLC (Exeter 2)	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Tulare PV1, LLC (Lindsay 4)	Tulare PV1, LLC (Lindsay 4)	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Tulare PV1, LLC (Porterville 1)	Tulare PV1, LLC (Porterville 1)	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Tulare PV1, LLC (Porterville 2)	Tulare PV1, LLC (Porterville 2)	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Kettering 1 (f/k/a Ever CT Solar Farm, LLC - Site 1A)	Kettering 1 (f/k/a Ever CT Solar Farm, LLC - Site 1A)	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Kettering 2 (f/k/a Ever CT Solar Farm, LLC - Site 1B)	Kettering 2 (f/k/a Ever CT Solar Farm, LLC - Site 1B)	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Division 2 (f/k/a Ever CT Solar Farm, LLC - Site 2B)	Division 2 (f/k/a Ever CT Solar Farm, LLC - Site 2B)	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Division 3 (f/k/a Ever CT Solar Farm, LLC - Site 2C)	Division 3 (f/k/a Ever CT Solar Farm, LLC - Site 2C)	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	DG Solar Lessee, LLC (Snowline-Duncan Road South)	DG Solar Lessee, LLC (Snowline-Duncan Road South)	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Desert Hot Springs 1	Desert Hot Springs 1	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	ETIWND_2_SOLAR2	SunE - Rochester	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	SunE - E Philadelphia Ontario	SunE - E Philadelphia Ontario	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Boomer Solar 2	Boomer Solar 2	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	DELAMO_2_SOLAR5	Golden Springs Building L	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Calico Ranch Solar Project	Calico Ranch Solar Project	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Mirasol Murrieta 1	Mirasol Murrieta 1	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Freethy 1 (FIT)	Freethy 1 (FIT)	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Freethy 2 (FIT)	Freethy 2 (FIT)	1	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	GreenLight- Peacock Solar Project	GreenLight- Peacock Solar Project	0.999	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun Buzzelle	Pristine Sun Buzzelle	0.999	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun Christensen	Pristine Sun Christensen	0.999	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun Cotton	Pristine Sun Cotton	0.999	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun Fitzjarrell	Pristine Sun Fitzjarrell	0.999	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun Jardine	Pristine Sun Jardine	0.999	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun Jarvis	Pristine Sun Jarvis	0.999	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Greenlight - Sirius Solar Project	Greenlight - Sirius Solar Project	0.999	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	SunE W12DG-C, LLC	SunE W12DG-C, LLC	0.999	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Colton Solar Two LLC	Colton Solar Two LLC	0.998	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Caliente Springs, LLC	Caliente Springs, LLC	0.928	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	CENTER_2_SOLAR1	SunE - Pico Rivera	0.9	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	SunE- Fontana	SunE- Fontana	0.9	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Boomer Solar 15	Boomer Solar 15	0.9	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	CA - Port of Oakland - Site 1	CA - Port of Oakland - Site 1	0.899	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Boomer Solar 6	Boomer Solar 6	0.88	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Boomer Solar 17	Boomer Solar 17	0.88	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	2126 Lovell (SB32)	2126 Lovell (SB32)	0.833	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	SunE- Cherry Fontana	SunE- Cherry Fontana	0.8	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun - 2257 Campbell (SB32)	Pristine Sun - 2257 Campbell (SB32)	0.75	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Kingsburg 3	Kingsburg 3	0.75	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun Hill	Pristine Sun Hill	0.75	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun Stroing	Pristine Sun Stroing	0.75	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	APEX 646-460	APEX 646-460	0.75	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	One Miracle Property, LLC	One Miracle Property, LLC	0.75	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Boomer Solar 12	Boomer Solar 12	0.7	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Boomer Solar 22	Boomer Solar 22	0.56	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Innovative Cold Storage Enterprises (ICE)	Innovative Cold Storage Enterprises (ICE)	0.504	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun- 2192 Ramirez	Pristine Sun- 2192 Ramirez	0.5	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	3N Energy Woodland	3N Energy Woodland	0.5	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	2105 Hart (Pristine Sun)	2105 Hart (Pristine Sun)	0.5	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun - 2272 McCall (SB32)	Pristine Sun - 2272 McCall (SB32)	0.5	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun Scherz	Pristine Sun Scherz	0.5	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Toro Power 2, LLC	Toro Power 2, LLC	0.5	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Tulare PV1, LLC (Ivanhoe 2)	Tulare PV1, LLC (Ivanhoe 2)	0.5	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	SunE - Mira Loma	SunE - Mira Loma	0.5	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	SunE - Dupont Ontario	SunE - Dupont Ontario	0.5	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Mirasol Pomona 1	Mirasol Pomona 1	0.5	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Wilco Investments	Wilco Investments	0.3843	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	2207 Ritchie	2207 Ritchie	0.333	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Marinos Ventures, LLC	Marinos Ventures, LLC	0.2832	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun- 2154 Foote	Pristine Sun- 2154 Foote	0.25	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun Alvarez 2041	Pristine Sun Alvarez 2041	0.25	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun Rogers	Pristine Sun Rogers	0.25	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pristine Sun Smotherman	Pristine Sun Smotherman	0.25	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	USFS San Dimas Technology and Development Center	USFS San Dimas Technology and Development Center	0.25	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Sanford-Burnham Medical Research Institute I	Sanford-Burnham Medical Research Institute I	0.2002	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Amylin Pharmaceuticals	Amylin Pharmaceuticals	0.2	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	SF Service Center Solar Array 2	SF Service Center Solar Array 2	0.11	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	SF Service Center Solar Array 1	SF Service Center Solar Array 1	0.11	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Pacific Station	Pacific Station	0.10922	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Hunter Industries	Hunter Industries	0.102	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Towers at Bressi Ranch	Towers at Bressi Ranch	0.08	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	SCAQMD Solar Port	SCAQMD Solar Port	0.073	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	AT&T Park Solar Arrays	AT&T Park Solar Arrays	0.07	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Fairfield Grossmont Trolley	Fairfield Grossmont Trolley	0.0647	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	SDCCD - Skills Center	SDCCD - Skills Center	0.056	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Ladera Ranch I	Ladera Ranch I	0.05	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Del Sur Elementary School	Del Sur Elementary School	0.041	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	X-nth	X-nth	0.04	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Villa Sorriso Solar	Villa Sorriso Solar	0.0072	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Curtis, Edwin	Curtis, Edwin	0.0013	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	SPVP012 - Ontario	SPVP012 - Ontario	0	CAISO_Solar	physical	none	1	0	1	solar	
ruling_list	Green Beanworks C, LLC	Green Beanworks C, LLC	0	CAISO_Solar	physical	none	1	0	1	solar	
template_list	transfer_purchase	0	#N/A	transfer_purchase	special	fillme_buyer, seller, approximate resource mix	1	0	fillme	unknown	
template_list	transfer_sale	0	#N/A	transfer_sale	special	fillme_buyer, seller, approximate resource mix	1	0	fillme	unknown	
template_list	unbundled_rec	0	#N/A	unbundled_rec	special	fillme_approximate resource mix	1	0	fillme	unknown	
template_list	unspecified_import	0	#N/A	unspecified_import	special	fillme_intertie, carbon content	1	0	fillme	unknown	
template_list	unspecified_non_import	0	#N/A	unspecified_non_import	special	fillme_approximate resource mix, carbon content	1	0	fillme	unknown	
ruling_list	El Cabo Wind, LLC	El Cabo Wind, LLC	298	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	S. Hurlburt Wind, LLC	S. Hurlburt Wind, LLC	290	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Horseshoe Bend Wind, LLC	Horseshoe Bend Wind, LLC	290	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	N. Hurlburt Wind, LLC	N. Hurlburt Wind, LLC	265	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	OCTILO_5_WIND	Ocotillo Express Wind Project	265	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	VINCNT_2_QF	AES Tehachapi Wind, LLC - BS-A	207	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	NaturEner Rim Rock	NaturEner Rim Rock	189	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	MANZNA_2_WIND	Iberdrola - Manzana	189	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Broadview Energy JN, LLC	Broadview Energy JN, LLC	181.7	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ALTA3A_2_CPCE5	Alta Windpower V	168	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ALTGDN_2_WIND7	Pinyon Pines I	168	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	JAWBNE_2_NSRWND	North Sky River Energy Center	162	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	BRDSLD_2_HWIND	High Winds	162	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ENERSJ_2_WIND	Energia Sierra Juarez	155.1	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Blackspring Ridge IA	Blackspring Ridge IA	150	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Blackspring Ridge IB	Blackspring Ridge IB	150	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Halkirk I Wind Project	Halkirk I Wind Project	150	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	BRDSLD_2_SHILO2	Shiloh II Wind Project	150	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	BRDSLD_2_SHILO1	Shiloh I Wind Project	150	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ALTA4A_2_CPCW1	Alta Windpower I	150	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ALTA4B_2_CPCW2	Alta Windpower II	150	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ALTA4B_2_CPCW3	Alta Windpower III	150	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ALTA4B_2_CPCW6	Mustang Hills, LLC	150	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ALTA3A_2_CPCE8	Alta Windpower VIII	150	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Green Ridge Power LLC (110 MW)	Green Ridge Power LLC (110 MW)	144.1	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Broadview Energy KW, LLC	Broadview Energy KW, LLC	142.6	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ROSMDW_2_WIND1	Pacific Wind Project	140	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ALTA6E_2_WIND10	Alta Windpower X	138	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ALTGDS_2_WIND9	Pinyon Pines II	132	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Tule Wind	Tule Wind	132	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Voyager Wind I, LLC	Voyager Wind I, LLC	132	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Los Banos Wind	Los Banos Wind	125	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Goshen Phase II, LLC	Goshen Phase II, LLC	124.5	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	WINDSTR_2_WIND	Windstar Energy, LLC	120	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	NaturEner Glacier 1	NaturEner Glacier 1	106.5	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Big Horn 1	Big Horn 1	105	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Palouse Wind	Palouse Wind	104.4	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	NaturEner Glacier 2	NaturEner Glacier 2	103.5	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	HATRDG_2_WIND	Hatchet Ridge	103.2	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Rattlesnake Road (Arlington) Wind Power Project	Rattlesnake Road (Arlington) Wind Power Project	102.9	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	BRDSLD_2_SHLO3A	Shiloh III Wind Project	102.5	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	BRDDNE_2_WIND	Coram Brodie	102	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ALTA3A_2_CPCE4	Alta Windpower IV	102	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	BRDSLD_2_SHLO3B	Shiloh IV	100	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	RTREE_2_WIND3	Rising Tree Wind Farm III, LLC (f/k/a Alta XIII)	100	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Vantage Wind Energy Center	Vantage Wind Energy Center	90	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Klondike IIIA	Klondike IIIA	90	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ALTA6B_2_WIND11	Alta Windpower XI	90	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Klondike Wind Power Project III	Klondike Wind Power Project III	85	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	RTREE_2_WIND1	Rising Tree Wind Farm, LLC	80	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	USWPIR_2_UNIT5	Vasco Wind Energy Center	78.2	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	BRDSLD_2_MTZUM2	Montezuma II Wind Energy Center	78.2	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	JAWBNE_2_SRWND	Sky River Partnership (Wilderness I)	77	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	MTWIND_1_UNIT 1	Mountain View Power Partners, LLC	66.6	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ENWIND_2_WIND2	Ridgetop Energy, LLC (I)	65	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	VINCNT_2_WESTWD	Oasis Power	60	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ANTLPE_2_QF	Tehachapi Power Purchase Contract Trust	56	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Green Ridge Power LLC (70 MW)	Green Ridge Power LLC (70 MW)	54	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	CRSTWD_6_KUMYAY	Kumeyaay Wind Energy Facility	50	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	San Gorgonio Wind	San Gorgonio Wind	49.5	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	BLAST_1_WIND	Mountain View Power Partners IV, LLC	49	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Altamont Midway Ltd.	Altamont Midway Ltd.	48.9	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ENWIND_2_WIND1	Cameron Ridge LLC (III)	47.12	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	TIFFNY_1_DILLON	Dillon Wind LLC (A&R)	45	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Green Ridge Power LLC (100 MW - A)	Green Ridge Power LLC (100 MW - A)	43.1	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	WINDMAS_2_UNIT 1	Buena Vista	43	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	USWND2_1_WIND2	Golden Hills B	42.96	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	USWND2_1_WIND1	Golden Hills A	42.96	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Voyager Wind III	Voyager Wind III	42	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Golden Hills North	Golden Hills North	41.2	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	TRNSWD_1_QF	Cabazon Wind Partners, LLC	41	CAISO_Wind	physical	none	1	0	1	wind	low cf

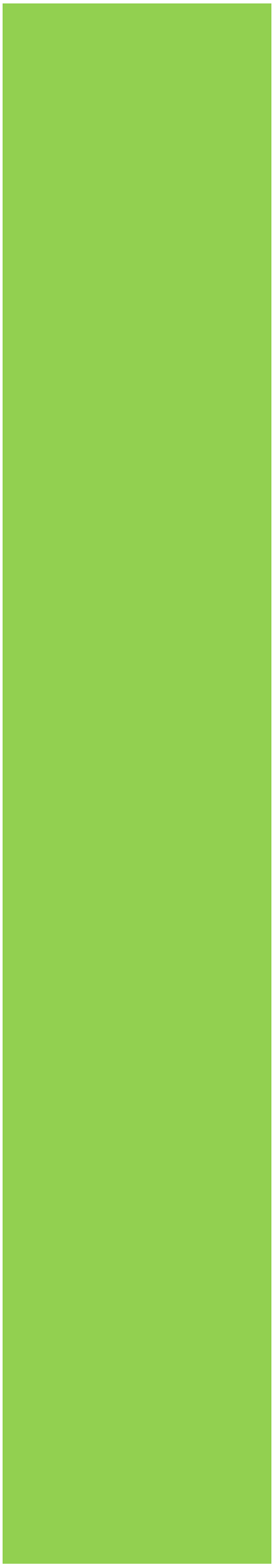
ruling_list	BRDSLD_2_MTZUMA	Montezuma Wind Energy Center	36.8	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	INTTRB_6_UNIT	International Turbine Research	34	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	DEVERS_1_QF	Section 16-29 Trust (Altech III)	32.874	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	PANSEA_1_PANARO	Mesa Wind Power Corporation	29.9	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Pleasant Valley (WEST Wyoming Wind Energy Center)	Pleasant Valley (WEST Wyoming Wind Energy Center)	29.89263055	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Tres Vaqueros Wind Farms, LLC	Tres Vaqueros Wind Farms, LLC	28	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Northwind Energy	Northwind Energy	27	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Alta Mesa Pwr. Purch. Contract Trust	Alta Mesa Pwr. Purch. Contract Trust	27	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	MTWIND_1_UNIT 3	Iberdrola - Mountain Wind	22.8	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Patterson Pass Wind Farm LLC	Patterson Pass Wind Farm LLC	22	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Altech III - RAM 5	Altech III - RAM 5	20	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Sand Hill Wind, LLC - RAM 3	Sand Hill Wind, LLC - RAM 3	20	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ARBWD_8_QF	Wind Resource II - RAM 2	19.955	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	RTREE_2_WIND2	Rising Tree Wind Farm II LLC - RAM 4	19.8	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Pebble Springs	Pebble Springs	19.74	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	CAPWD_1_QF	Edom Hills Project 1, LLC	19.55	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Altamont Power LLC (4-4)	Altamont Power LLC (4-4)	19	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Altamont Power LLC (6-4)	Altamont Power LLC (6-4)	19	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	FLOWD2_2_PPLWND	Diablo Winds (2)	18	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ZOND_6_UNIT	Santa Clara BSC	18	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Big Horn 2	Big Horn 2	17.5	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	GARNET_1_UNITS	FPL Energy Green Power Wind	16.5	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Smoke Tree Wind, LLC	Smoke Tree Wind, LLC	16	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Horse Butte Wind	Horse Butte Wind	15.19655504	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	ALTWD_1_QF	Difwind Partners	15.063	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Green Ridge Power LLC (100 MW - D)	Green Ridge Power LLC (100 MW - D)	15	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Section 20 Trust	Section 20 Trust	13.51	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	FLOWD_2_WIND1	Cameron Ridge II, LLC (f/k/a 6091)	11.9	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Energy Development & Const. Corp. (f/k/a 6062)	Energy Development & Const. Corp. (f/k/a 6062)	11.7	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	GARNET_2_WIND1	San Gorgonio	11.2	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Green Ridge Power LLC (23.8 MW)	Green Ridge Power LLC (23.8 MW)	10.8	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	USWNDR_2_UNITS	Edf Renewable Windfarm V, Inc. (10 MW)	10	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	GARNET_2_WIND4	San Gorgonio Westwinds II- Windustries, LLC (f/k/a 6058)	9.8	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	NZWIND_6_CALWND	Wind Resource I - RAM 1	9	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	MIDWD_2_WIND1	Windland Refresh 2, LLC (f/k/a 6097)	7.81	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	MIDWD_7_CORAMB	Coram Energy	7.5	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	MIDWD_6_WNDLND	Windland Refresh, LLC	7.46	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	NZWIND_6_WDSTR2	Wind Stream Operations, LLC (VG # 2)	6.925	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	NZWIND_6_WDSTR4	Wind Stream Operations, LLC (VG # 4)	6.77	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	GARNET_1_WIND	Garnet Wind Energy Center	6.5	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	NZWIND_6_WDSTR3	Wind Stream Operations, LLC (VG # 3)	6.015	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	GARNET_1_WT3WND	WAGNER WIND, LLC	6	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	BNY Western Trust Company	BNY Western Trust Company	5.93	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Green Ridge Power LLC (5.9 MW)	Green Ridge Power LLC (5.9 MW)	5.9	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Forebay Wind LLC - Altech	Forebay Wind LLC - Altech	5.76	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Milford Wind WT11	Milford Wind WT11	5.0875	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Juniper Canyon Wind Power	Juniper Canyon Wind Power	4.67208	CAISO_Wind	physical	none	1	0	0	wind	low cf
ruling_list	Western Wind Energy Corp (Windridge)	Western Wind Energy Corp (Windridge)	4.5	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Altamont Power LLC (3-4)	Altamont Power LLC (3-4)	4.05	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Mogul Energy Partnership I	Mogul Energy Partnership I	4	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	OAKWD_6_ZEPHWD	Oak Creek Wind - Zephyr	3.5	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	MIDWD_2_WIND2	Coram Energy, LLC	3	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Coram Energy LLC	Coram Energy LLC	3	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	GARNET_2_WIND5	Yavi Energy (f/k/a 6052)	3	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Forebay Wind LLC - Western	Forebay Wind LLC - Western	2.7	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Forebay Wind LLC - Cwes	Forebay Wind LLC - Cwes	2.1	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	PWEST_1_UNIT	Iberdrola - Phoenix West	2.1	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Forebay Wind LLC - Viking	Forebay Wind LLC - Viking	1.69	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	BUCKWD_7_WINTCV	Wintec Energy #2-A	1.32	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Forebay Wind LLC - Taxwest	Forebay Wind LLC - Taxwest	0.715	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Forebay Wind LLC - Seawest	Forebay Wind LLC - Seawest	0.065	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Donald R. Chenoweth	Donald R. Chenoweth	0.01	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Bennett Creek Windfarm, LLC	Bennett Creek Windfarm, LLC	0	CAISO_Wind	physical	none	1	0	1	wind	low cf
ruling_list	Hot Springs Windfarm, LLC, Mountain Wind Power II; Nine Canyon Wind Project - Phase 3	Hot Springs Windfarm, LLC, Mountain Wind Power II; Nine Canyon Wind Project - Phase 3	0	CAISO_Wind	physical	none	1	0	1	wind	low cf
added	SutterEnergyCC-Total		525	BANC_CCGT	physical	none	0	1	1	thermal	
template_list	Mountain_Pass_El_Dorado_Solar	0	#N/A	CAISO_Solar	new_resolve	fillme_name,type,mw	0	1	0	solar	

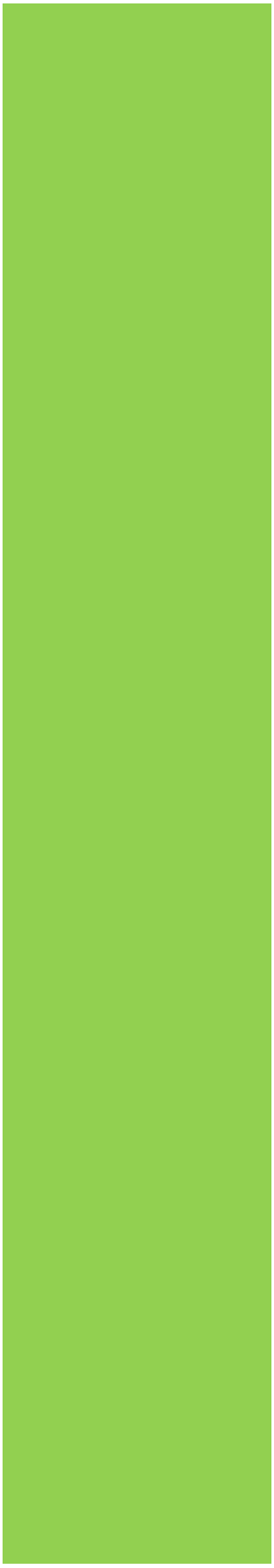


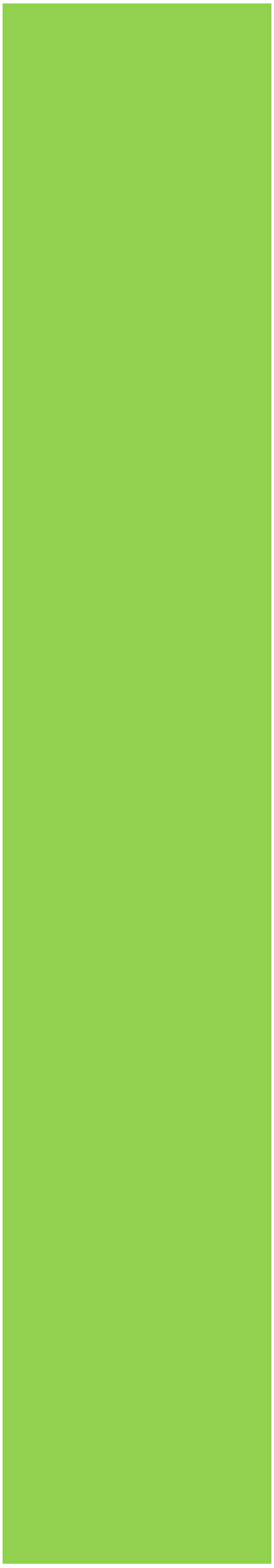


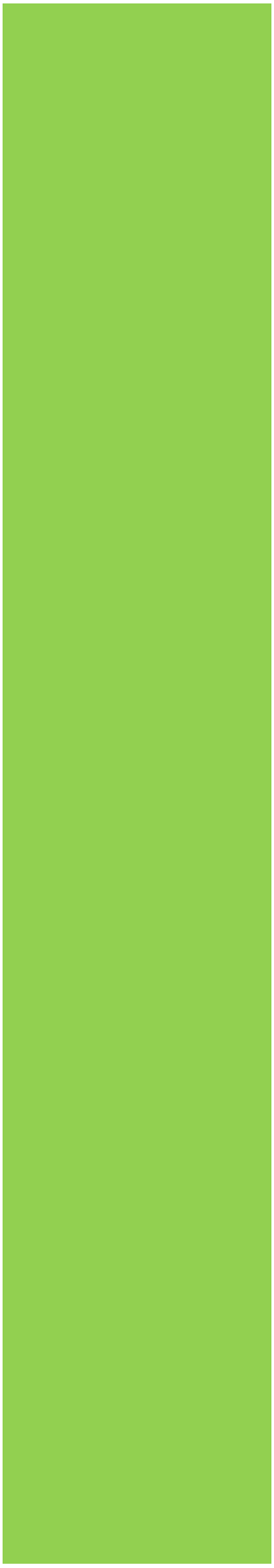


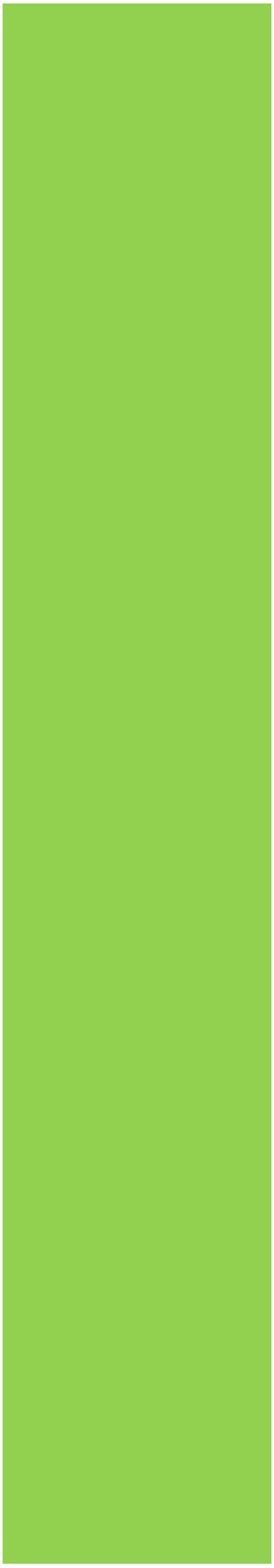


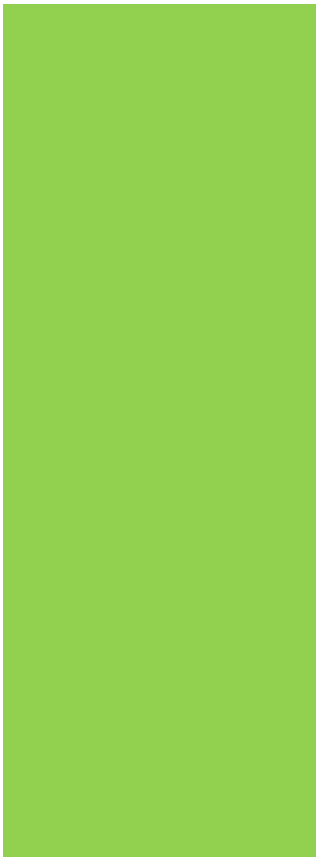












lse	NAME	LSE Type
3PR	3 Phases Renewables	ESP
APN	American PowerNet Management	ESP
AVCE	Apple Valley Choice Energy	CCA
CEI	Just Energy Solutions	ESP
CES	Commercial Energy of Montana	ESP
CNE	Constellation New Energy	ESP
COBP	City of Baldwin Park	CCA
COSB	City of Solana Beach	CCA
CPA	Calpine Power America	ESP
CPASC	Clean Power Alliance of Southern California	CCA
CPSF	CleanPowerSF	CCA
DCE	Desert Community Energy	CCA
DEB	Direct Energy Business	ESP
EBCE	East Bay Community Energy	CCA
EIPS	EDF Industrial Power Services	ESP
HANFORD	City of Hanford	CCA
KCCP	King City Community Power	CCA
LCE	Lancaster Choice Energy	CCA
LPH	Liberty Power Holdings	ESP
MBCPA	Monterey Bay Community Power Authority	CCA
MCE	Marin Clean Energy	CCA
NES	Calpine Energy Solutions	ESP
PALMDALE	City of Palmdale	CCA
PCEA	Peninsula Clean Energy Authority	CCA
PGE	Pacific Gas & Electric	IOU
PIONEER	Pioneer Community Energy	CCA
POMONA	City of Pomona	CCA
PPG	Pilot Power Group	ESP
PRIME	Pico Rivera Innovative Municipal Energy	CCA
RCEA	Redwood Coast Energy Authority	CCA
RMEA	Rancho Mirage Energy Authority	CCA
SCE	Southern California Edison	IOU
SDGE	San Diego Gas & Electric	IOU
SENA	Shell Energy North America	ESP
SJCE	San Jose Clean Energy	CCA
SJP	San Jacinto Power	CCA
SOMA	Sonoma Clean Power Authority	CCA
SVCEA	Silicon Valley Clean Energy Authority	CCA
TNG	Tiger Natural Gas	ESP
UCOP	University of California	ESP
VCEA	Valley Clean Energy Alliance	CCA
WCE	Western Community Energy	CCA
generic_example	Example LSE for illustrative purposes	None
PCORP	PacifiCorp	IOU
BEAR	Bear Valley Electric Service	IOU
LIB	Liberty Utilities	IOU

BCE	Butte Choice Energy	CCA
CEA	Clean Energy Alliance	CCA
COM	City of Commerce	CCA
SDCP	San Diego Community Power	CCA
SBCE	Santa Barbara Clean Energy	CCA
AGERA	Agera Energy, LLC	ESP
GEXA	Gexa Energy California, LLC	ESP
LPD	Liberty Power Delaware, LLC	ESP
PALMCO	Palmco Power CA	ESP
PRAX	Praxair Plainfield, Inc.	ESP
TENA	Tenaska Power Services Co.	ESP
YEP	Yep Energy	ESP
ANZA	Anza Electric Cooperative	COOP
PLUMAS	Plumas Sierra Rural Electric Cooperative	COOP
SURPRISE	Surprise Valley Electrification Corporation	COOP
VEA	Valley Electric Association	COOP

46 <- current portfolio

Values through 2023 from: https://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442463337
Values 2024 and after from RESOLVE.

type	year	month	elcc_type_year_month	elcc_percent_46mmt	elcc_percent_38mmt	selected_elcc: 46 mmt
wind_low_cf	2020	1	wind_low_cf_2020_1	14%	14%	14%
wind_low_cf	2020	2	wind_low_cf_2020_2	12%	12%	12%
wind_low_cf	2020	3	wind_low_cf_2020_3	28%	28%	28%
wind_low_cf	2020	4	wind_low_cf_2020_4	25%	25%	25%
wind_low_cf	2020	5	wind_low_cf_2020_5	25%	25%	25%
wind_low_cf	2020	6	wind_low_cf_2020_6	33%	33%	33%
wind_low_cf	2020	7	wind_low_cf_2020_7	23%	23%	23%
wind_low_cf	2020	8	wind_low_cf_2020_8	21%	21%	21%
wind_low_cf	2020	9	wind_low_cf_2020_9	15%	15%	15%
wind_low_cf	2020	10	wind_low_cf_2020_10	8%	8%	8%
wind_low_cf	2020	11	wind_low_cf_2020_11	12%	12%	12%
wind_low_cf	2020	12	wind_low_cf_2020_12	13%	13%	13%
wind_low_cf	2021	1	wind_low_cf_2021_1	14%	14%	14%
wind_low_cf	2021	2	wind_low_cf_2021_2	12%	12%	12%
wind_low_cf	2021	3	wind_low_cf_2021_3	28%	28%	28%
wind_low_cf	2021	4	wind_low_cf_2021_4	25%	25%	25%
wind_low_cf	2021	5	wind_low_cf_2021_5	25%	25%	25%
wind_low_cf	2021	6	wind_low_cf_2021_6	33%	33%	33%
wind_low_cf	2021	7	wind_low_cf_2021_7	23%	23%	23%
wind_low_cf	2021	8	wind_low_cf_2021_8	21%	21%	21%
wind_low_cf	2021	9	wind_low_cf_2021_9	15%	15%	15%
wind_low_cf	2021	10	wind_low_cf_2021_10	8%	8%	8%
wind_low_cf	2021	11	wind_low_cf_2021_11	12%	12%	12%
wind_low_cf	2021	12	wind_low_cf_2021_12	13%	13%	13%
wind_low_cf	2022	1	wind_low_cf_2022_1	14%	14%	14%
wind_low_cf	2022	2	wind_low_cf_2022_2	12%	12%	12%
wind_low_cf	2022	3	wind_low_cf_2022_3	28%	28%	28%
wind_low_cf	2022	4	wind_low_cf_2022_4	25%	25%	25%
wind_low_cf	2022	5	wind_low_cf_2022_5	25%	25%	25%
wind_low_cf	2022	6	wind_low_cf_2022_6	33%	33%	33%
wind_low_cf	2022	7	wind_low_cf_2022_7	23%	23%	23%
wind_low_cf	2022	8	wind_low_cf_2022_8	21%	21%	21%
wind_low_cf	2022	9	wind_low_cf_2022_9	15%	15%	15%
wind_low_cf	2022	10	wind_low_cf_2022_10	8%	8%	8%
wind_low_cf	2022	11	wind_low_cf_2022_11	12%	12%	12%
wind_low_cf	2022	12	wind_low_cf_2022_12	13%	13%	13%
wind_low_cf	2023	1	wind_low_cf_2023_1	14%	14%	14%
wind_low_cf	2023	2	wind_low_cf_2023_2	12%	12%	12%
wind_low_cf	2023	3	wind_low_cf_2023_3	28%	28%	28%
wind_low_cf	2023	4	wind_low_cf_2023_4	25%	25%	25%
wind_low_cf	2023	5	wind_low_cf_2023_5	25%	25%	25%
wind_low_cf	2023	6	wind_low_cf_2023_6	33%	33%	33%
wind_low_cf	2023	7	wind_low_cf_2023_7	23%	23%	23%
wind_low_cf	2023	8	wind_low_cf_2023_8	21%	21%	21%
wind_low_cf	2023	9	wind_low_cf_2023_9	15%	15%	15%
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wind_low_cf	2023	11	wind_low_cf_2023_11	12%	12%	12%
wind_low_cf	2023	12	wind_low_cf_2023_12	13%	13%	13%
wind_low_cf	2024	1	wind_low_cf_2024_1	16%	16%	16%
wind_low_cf	2024	2	wind_low_cf_2024_2	14%	14%	14%
wind_low_cf	2024	3	wind_low_cf_2024_3	32%	32%	32%
wind_low_cf	2024	4	wind_low_cf_2024_4	28%	29%	28%
wind_low_cf	2024	5	wind_low_cf_2024_5	28%	29%	28%
wind_low_cf	2024	6	wind_low_cf_2024_6	37%	38%	37%
wind_low_cf	2024	7	wind_low_cf_2024_7	26%	26%	26%
wind_low_cf	2024	8	wind_low_cf_2024_8	24%	24%	24%
wind_low_cf	2024	9	wind_low_cf_2024_9	17%	17%	17%
wind_low_cf	2024	10	wind_low_cf_2024_10	9%	9%	9%
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wind_low_cf	2025	2	wind_low_cf_2025_2	16%	16%	16%
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wind_low_cf	2026	4	wind_low_cf_2026_4	37%	36%	37%
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wind_low_cf	2026	11	wind_low_cf_2026_11	18%	17%	18%
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wind_high_cf	2026	2	wind_high_cf_2026_2	22%	22%	22%
wind_high_cf	2026	3	wind_high_cf_2026_3	52%	51%	52%
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wind_high_cf	2026	5	wind_high_cf_2026_5	47%	46%	47%
wind_high_cf	2026	6	wind_high_cf_2026_6	62%	60%	62%
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wind_high_cf	2027	3	wind_high_cf_2027_3	52%	51%	52%
wind_high_cf	2027	4	wind_high_cf_2027_4	47%	46%	47%
wind_high_cf	2027	5	wind_high_cf_2027_5	47%	46%	47%
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wind_high_cf	2027	7	wind_high_cf_2027_7	43%	42%	43%
wind_high_cf	2027	8	wind_high_cf_2027_8	39%	38%	39%
wind_high_cf	2027	9	wind_high_cf_2027_9	28%	27%	28%
wind_high_cf	2027	10	wind_high_cf_2027_10	15%	15%	15%
wind_high_cf	2027	11	wind_high_cf_2027_11	22%	22%	22%
wind_high_cf	2027	12	wind_high_cf_2027_12	24%	24%	24%
wind_low_cf	2028	1	wind_low_cf_2028_1	21%	20%	21%
wind_low_cf	2028	2	wind_low_cf_2028_2	18%	17%	18%

wind_low_cf	2028	3	wind_low_cf_2028_3	41%	41%	41%
wind_low_cf	2028	4	wind_low_cf_2028_4	37%	36%	37%
wind_low_cf	2028	5	wind_low_cf_2028_5	37%	36%	37%
wind_low_cf	2028	6	wind_low_cf_2028_6	48%	48%	48%
wind_low_cf	2028	7	wind_low_cf_2028_7	34%	33%	34%
wind_low_cf	2028	8	wind_low_cf_2028_8	31%	30%	31%
wind_low_cf	2028	9	wind_low_cf_2028_9	22%	22%	22%
wind_low_cf	2028	10	wind_low_cf_2028_10	12%	12%	12%
wind_low_cf	2028	11	wind_low_cf_2028_11	18%	17%	18%
wind_low_cf	2028	12	wind_low_cf_2028_12	19%	19%	19%
wind_high_cf	2028	1	wind_high_cf_2028_1	26%	26%	26%
wind_high_cf	2028	2	wind_high_cf_2028_2	22%	22%	22%
wind_high_cf	2028	3	wind_high_cf_2028_3	52%	51%	52%
wind_high_cf	2028	4	wind_high_cf_2028_4	47%	46%	47%
wind_high_cf	2028	5	wind_high_cf_2028_5	47%	46%	47%
wind_high_cf	2028	6	wind_high_cf_2028_6	62%	60%	62%
wind_high_cf	2028	7	wind_high_cf_2028_7	43%	42%	43%
wind_high_cf	2028	8	wind_high_cf_2028_8	39%	38%	39%
wind_high_cf	2028	9	wind_high_cf_2028_9	28%	27%	28%
wind_high_cf	2028	10	wind_high_cf_2028_10	15%	15%	15%
wind_high_cf	2028	11	wind_high_cf_2028_11	22%	22%	22%
wind_high_cf	2028	12	wind_high_cf_2028_12	24%	24%	24%
wind_low_cf	2029	1	wind_low_cf_2029_1	21%	20%	21%
wind_low_cf	2029	2	wind_low_cf_2029_2	18%	17%	18%
wind_low_cf	2029	3	wind_low_cf_2029_3	41%	41%	41%
wind_low_cf	2029	4	wind_low_cf_2029_4	37%	36%	37%
wind_low_cf	2029	5	wind_low_cf_2029_5	37%	36%	37%
wind_low_cf	2029	6	wind_low_cf_2029_6	48%	48%	48%
wind_low_cf	2029	7	wind_low_cf_2029_7	34%	33%	34%
wind_low_cf	2029	8	wind_low_cf_2029_8	31%	30%	31%
wind_low_cf	2029	9	wind_low_cf_2029_9	22%	22%	22%
wind_low_cf	2029	10	wind_low_cf_2029_10	12%	12%	12%
wind_low_cf	2029	11	wind_low_cf_2029_11	18%	17%	18%
wind_low_cf	2029	12	wind_low_cf_2029_12	19%	19%	19%
wind_high_cf	2029	1	wind_high_cf_2029_1	26%	26%	26%
wind_high_cf	2029	2	wind_high_cf_2029_2	22%	22%	22%
wind_high_cf	2029	3	wind_high_cf_2029_3	52%	51%	52%
wind_high_cf	2029	4	wind_high_cf_2029_4	47%	46%	47%
wind_high_cf	2029	5	wind_high_cf_2029_5	47%	46%	47%
wind_high_cf	2029	6	wind_high_cf_2029_6	62%	60%	62%
wind_high_cf	2029	7	wind_high_cf_2029_7	43%	42%	43%
wind_high_cf	2029	8	wind_high_cf_2029_8	39%	38%	39%
wind_high_cf	2029	9	wind_high_cf_2029_9	28%	27%	28%
wind_high_cf	2029	10	wind_high_cf_2029_10	15%	15%	15%
wind_high_cf	2029	11	wind_high_cf_2029_11	22%	22%	22%
wind_high_cf	2029	12	wind_high_cf_2029_12	24%	24%	24%
wind_low_cf	2030	1	wind_low_cf_2030_1	21%	20%	21%
wind_low_cf	2030	2	wind_low_cf_2030_2	18%	17%	18%
wind_low_cf	2030	3	wind_low_cf_2030_3	41%	40%	41%
wind_low_cf	2030	4	wind_low_cf_2030_4	37%	36%	37%
wind_low_cf	2030	5	wind_low_cf_2030_5	37%	36%	37%
wind_low_cf	2030	6	wind_low_cf_2030_6	48%	48%	48%
wind_low_cf	2030	7	wind_low_cf_2030_7	34%	33%	34%
wind_low_cf	2030	8	wind_low_cf_2030_8	31%	30%	31%
wind_low_cf	2030	9	wind_low_cf_2030_9	22%	22%	22%
wind_low_cf	2030	10	wind_low_cf_2030_10	12%	12%	12%
wind_low_cf	2030	11	wind_low_cf_2030_11	18%	17%	18%
wind_low_cf	2030	12	wind_low_cf_2030_12	19%	19%	19%
wind_high_cf	2030	1	wind_high_cf_2030_1	26%	26%	26%
wind_high_cf	2030	2	wind_high_cf_2030_2	22%	22%	22%
wind_high_cf	2030	3	wind_high_cf_2030_3	52%	51%	52%
wind_high_cf	2030	4	wind_high_cf_2030_4	47%	46%	47%
wind_high_cf	2030	5	wind_high_cf_2030_5	47%	46%	47%
wind_high_cf	2030	6	wind_high_cf_2030_6	62%	60%	62%
wind_high_cf	2030	7	wind_high_cf_2030_7	43%	42%	43%
wind_high_cf	2030	8	wind_high_cf_2030_8	39%	38%	39%
wind_high_cf	2030	9	wind_high_cf_2030_9	28%	27%	28%
wind_high_cf	2030	10	wind_high_cf_2030_10	15%	15%	15%
wind_high_cf	2030	11	wind_high_cf_2030_11	22%	22%	22%
wind_high_cf	2030	12	wind_high_cf_2030_12	24%	24%	24%
biomass	2020	1	biomass_2020_1	82%	82%	82%
biomass	2020	2	biomass_2020_2	86%	86%	86%
biomass	2020	3	biomass_2020_3	84%	84%	84%
biomass	2020	4	biomass_2020_4	76%	76%	76%
biomass	2020	5	biomass_2020_5	83%	83%	83%
biomass	2020	6	biomass_2020_6	89%	89%	89%
biomass	2020	7	biomass_2020_7	87%	87%	87%
biomass	2020	8	biomass_2020_8	90%	90%	90%
biomass	2020	9	biomass_2020_9	90%	90%	90%
biomass	2020	10	biomass_2020_10	81%	81%	81%
biomass	2020	11	biomass_2020_11	85%	85%	85%
biomass	2020	12	biomass_2020_12	86%	86%	86%
cogen	2020	1	cogen_2020_1	81%	81%	81%
cogen	2020	2	cogen_2020_2	79%	79%	79%
cogen	2020	3	cogen_2020_3	73%	73%	73%
cogen	2020	4	cogen_2020_4	66%	66%	66%
cogen	2020	5	cogen_2020_5	79%	79%	79%
cogen	2020	6	cogen_2020_6	85%	85%	85%
cogen	2020	7	cogen_2020_7	83%	83%	83%
cogen	2020	8	cogen_2020_8	83%	83%	83%
cogen	2020	9	cogen_2020_9	80%	80%	80%
cogen	2020	10	cogen_2020_10	72%	72%	72%
cogen	2020	11	cogen_2020_11	78%	78%	78%
cogen	2020	12	cogen_2020_12	82%	82%	82%
geothermal	2020	1	geothermal_2020_1	95%	95%	95%
geothermal	2020	2	geothermal_2020_2	92%	92%	92%
geothermal	2020	3	geothermal_2020_3	88%	88%	88%
geothermal	2020	4	geothermal_2020_4	76%	76%	76%
geothermal	2020	5	geothermal_2020_5	74%	74%	74%
geothermal	2020	6	geothermal_2020_6	70%	70%	70%
geothermal	2020	7	geothermal_2020_7	84%	84%	84%
geothermal	2020	8	geothermal_2020_8	82%	82%	82%
geothermal	2020	9	geothermal_2020_9	83%	83%	83%
geothermal	2020	10	geothermal_2020_10	86%	86%	86%
geothermal	2020	11	geothermal_2020_11	93%	93%	93%
geothermal	2020	12	geothermal_2020_12	95%	95%	95%
hydro	2020	1	hydro_2020_1	60%	60%	60%
hydro	2020	2	hydro_2020_2	70%	70%	70%
hydro	2020	3	hydro_2020_3	73%	73%	73%
hydro	2020	4	hydro_2020_4	72%	72%	72%
hydro	2020	5	hydro_2020_5	69%	69%	69%
hydro	2020	6	hydro_2020_6	74%	74%	74%
hydro	2020	7	hydro_2020_7	73%	73%	73%
hydro	2020	8	hydro_2020_8	72%	72%	72%
hydro	2020	9	hydro_2020_9	71%	71%	71%
hydro	2020	10	hydro_2020_10	64%	64%	64%
hydro	2020	11	hydro_2020_11	56%	56%	56%
hydro	2020	12	hydro_2020_12	64%	64%	64%
thermal	2020	1	thermal_2020_1	100%	100%	100%
thermal	2020	2	thermal_2020_2	100%	100%	100%
thermal	2020	3	thermal_2020_3	100%	100%	100%
thermal	2020	4	thermal_2020_4	100%	100%	100%
thermal	2020	5	thermal_2020_5	100%	100%	100%

thermal	2020	6	thermal_2020_6	100%	100%	100%
thermal	2020	7	thermal_2020_7	100%	100%	100%
thermal	2020	8	thermal_2020_8	100%	100%	100%
thermal	2020	9	thermal_2020_9	100%	100%	100%
thermal	2020	10	thermal_2020_10	100%	100%	100%
thermal	2020	11	thermal_2020_11	100%	100%	100%
thermal	2020	12	thermal_2020_12	100%	100%	100%
battery	2020	1	battery_2020_1	100%	100%	100%
battery	2020	2	battery_2020_2	100%	100%	100%
battery	2020	3	battery_2020_3	100%	100%	100%
battery	2020	4	battery_2020_4	100%	100%	100%
battery	2020	5	battery_2020_5	100%	100%	100%
battery	2020	6	battery_2020_6	100%	100%	100%
battery	2020	7	battery_2020_7	100%	100%	100%
battery	2020	8	battery_2020_8	100%	100%	100%
battery	2020	9	battery_2020_9	100%	100%	100%
battery	2020	10	battery_2020_10	100%	100%	100%
battery	2020	11	battery_2020_11	100%	100%	100%
battery	2020	12	battery_2020_12	100%	100%	100%
nuclear	2020	1	nuclear_2020_1	100%	100%	100%
nuclear	2020	2	nuclear_2020_2	100%	100%	100%
nuclear	2020	3	nuclear_2020_3	100%	100%	100%
nuclear	2020	4	nuclear_2020_4	100%	100%	100%
nuclear	2020	5	nuclear_2020_5	100%	100%	100%
nuclear	2020	6	nuclear_2020_6	100%	100%	100%
nuclear	2020	7	nuclear_2020_7	100%	100%	100%
nuclear	2020	8	nuclear_2020_8	100%	100%	100%
nuclear	2020	9	nuclear_2020_9	100%	100%	100%
nuclear	2020	10	nuclear_2020_10	100%	100%	100%
nuclear	2020	11	nuclear_2020_11	100%	100%	100%
nuclear	2020	12	nuclear_2020_12	100%	100%	100%
biomass	2021	1	biomass_2021_1	82%	82%	82%
biomass	2021	2	biomass_2021_2	86%	86%	86%
biomass	2021	3	biomass_2021_3	84%	84%	84%
biomass	2021	4	biomass_2021_4	76%	76%	76%
biomass	2021	5	biomass_2021_5	83%	83%	83%
biomass	2021	6	biomass_2021_6	89%	89%	89%
biomass	2021	7	biomass_2021_7	87%	87%	87%
biomass	2021	8	biomass_2021_8	90%	90%	90%
biomass	2021	9	biomass_2021_9	90%	90%	90%
biomass	2021	10	biomass_2021_10	81%	81%	81%
biomass	2021	11	biomass_2021_11	85%	85%	85%
biomass	2021	12	biomass_2021_12	86%	86%	86%
cogen	2021	1	cogen_2021_1	81%	81%	81%
cogen	2021	2	cogen_2021_2	79%	79%	79%
cogen	2021	3	cogen_2021_3	73%	73%	73%
cogen	2021	4	cogen_2021_4	66%	66%	66%
cogen	2021	5	cogen_2021_5	79%	79%	79%
cogen	2021	6	cogen_2021_6	85%	85%	85%
cogen	2021	7	cogen_2021_7	83%	83%	83%
cogen	2021	8	cogen_2021_8	83%	83%	83%
cogen	2021	9	cogen_2021_9	80%	80%	80%
cogen	2021	10	cogen_2021_10	72%	72%	72%
cogen	2021	11	cogen_2021_11	78%	78%	78%
cogen	2021	12	cogen_2021_12	82%	82%	82%
geothermal	2021	1	geothermal_2021_1	95%	95%	95%
geothermal	2021	2	geothermal_2021_2	92%	92%	92%
geothermal	2021	3	geothermal_2021_3	88%	88%	88%
geothermal	2021	4	geothermal_2021_4	76%	76%	76%
geothermal	2021	5	geothermal_2021_5	74%	74%	74%
geothermal	2021	6	geothermal_2021_6	70%	70%	70%
geothermal	2021	7	geothermal_2021_7	84%	84%	84%
geothermal	2021	8	geothermal_2021_8	82%	82%	82%
geothermal	2021	9	geothermal_2021_9	83%	83%	83%
geothermal	2021	10	geothermal_2021_10	86%	86%	86%
geothermal	2021	11	geothermal_2021_11	93%	93%	93%
geothermal	2021	12	geothermal_2021_12	95%	95%	95%
hydro	2021	1	hydro_2021_1	60%	60%	60%
hydro	2021	2	hydro_2021_2	70%	70%	70%
hydro	2021	3	hydro_2021_3	73%	73%	73%
hydro	2021	4	hydro_2021_4	72%	72%	72%
hydro	2021	5	hydro_2021_5	69%	69%	69%
hydro	2021	6	hydro_2021_6	74%	74%	74%
hydro	2021	7	hydro_2021_7	73%	73%	73%
hydro	2021	8	hydro_2021_8	72%	72%	72%
hydro	2021	9	hydro_2021_9	71%	71%	71%
hydro	2021	10	hydro_2021_10	64%	64%	64%
hydro	2021	11	hydro_2021_11	56%	56%	56%
hydro	2021	12	hydro_2021_12	64%	64%	64%
thermal	2021	1	thermal_2021_1	100%	100%	100%
thermal	2021	2	thermal_2021_2	100%	100%	100%
thermal	2021	3	thermal_2021_3	100%	100%	100%
thermal	2021	4	thermal_2021_4	100%	100%	100%
thermal	2021	5	thermal_2021_5	100%	100%	100%
thermal	2021	6	thermal_2021_6	100%	100%	100%
thermal	2021	7	thermal_2021_7	100%	100%	100%
thermal	2021	8	thermal_2021_8	100%	100%	100%
thermal	2021	9	thermal_2021_9	100%	100%	100%
thermal	2021	10	thermal_2021_10	100%	100%	100%
thermal	2021	11	thermal_2021_11	100%	100%	100%
thermal	2021	12	thermal_2021_12	100%	100%	100%
battery	2021	1	battery_2021_1	100%	100%	100%
battery	2021	2	battery_2021_2	100%	100%	100%
battery	2021	3	battery_2021_3	100%	100%	100%
battery	2021	4	battery_2021_4	100%	100%	100%
battery	2021	5	battery_2021_5	100%	100%	100%
battery	2021	6	battery_2021_6	100%	100%	100%
battery	2021	7	battery_2021_7	100%	100%	100%
battery	2021	8	battery_2021_8	100%	100%	100%
battery	2021	9	battery_2021_9	100%	100%	100%
battery	2021	10	battery_2021_10	100%	100%	100%
battery	2021	11	battery_2021_11	100%	100%	100%
battery	2021	12	battery_2021_12	100%	100%	100%
nuclear	2021	1	nuclear_2021_1	100%	100%	100%
nuclear	2021	2	nuclear_2021_2	100%	100%	100%
nuclear	2021	3	nuclear_2021_3	100%	100%	100%
nuclear	2021	4	nuclear_2021_4	100%	100%	100%
nuclear	2021	5	nuclear_2021_5	100%	100%	100%
nuclear	2021	6	nuclear_2021_6	100%	100%	100%
nuclear	2021	7	nuclear_2021_7	100%	100%	100%
nuclear	2021	8	nuclear_2021_8	100%	100%	100%
nuclear	2021	9	nuclear_2021_9	100%	100%	100%
nuclear	2021	10	nuclear_2021_10	100%	100%	100%
nuclear	2021	11	nuclear_2021_11	100%	100%	100%
nuclear	2021	12	nuclear_2021_12	100%	100%	100%
biomass	2022	1	biomass_2022_1	82%	82%	82%
biomass	2022	2	biomass_2022_2	86%	86%	86%
biomass	2022	3	biomass_2022_3	84%	84%	84%
biomass	2022	4	biomass_2022_4	76%	76%	76%
biomass	2022	5	biomass_2022_5	83%	83%	83%
biomass	2022	6	biomass_2022_6	89%	89%	89%
biomass	2022	7	biomass_2022_7	87%	87%	87%
biomass	2022	8	biomass_2022_8	90%	90%	90%

biomass	2022	9	biomass_2022_9	90%	90%	90%
biomass	2022	10	biomass_2022_10	81%	81%	81%
biomass	2022	11	biomass_2022_11	85%	85%	85%
biomass	2022	12	biomass_2022_12	86%	86%	86%
cogen	2022	1	cogen_2022_1	81%	81%	81%
cogen	2022	2	cogen_2022_2	79%	79%	79%
cogen	2022	3	cogen_2022_3	73%	73%	73%
cogen	2022	4	cogen_2022_4	66%	66%	66%
cogen	2022	5	cogen_2022_5	79%	79%	79%
cogen	2022	6	cogen_2022_6	85%	85%	85%
cogen	2022	7	cogen_2022_7	83%	83%	83%
cogen	2022	8	cogen_2022_8	83%	83%	83%
cogen	2022	9	cogen_2022_9	80%	80%	80%
cogen	2022	10	cogen_2022_10	72%	72%	72%
cogen	2022	11	cogen_2022_11	78%	78%	78%
cogen	2022	12	cogen_2022_12	82%	82%	82%
geothermal	2022	1	geothermal_2022_1	95%	95%	95%
geothermal	2022	2	geothermal_2022_2	92%	92%	92%
geothermal	2022	3	geothermal_2022_3	88%	88%	88%
geothermal	2022	4	geothermal_2022_4	76%	76%	76%
geothermal	2022	5	geothermal_2022_5	74%	74%	74%
geothermal	2022	6	geothermal_2022_6	70%	70%	70%
geothermal	2022	7	geothermal_2022_7	84%	84%	84%
geothermal	2022	8	geothermal_2022_8	82%	82%	82%
geothermal	2022	9	geothermal_2022_9	83%	83%	83%
geothermal	2022	10	geothermal_2022_10	86%	86%	86%
geothermal	2022	11	geothermal_2022_11	93%	93%	93%
geothermal	2022	12	geothermal_2022_12	95%	95%	95%
hydro	2022	1	hydro_2022_1	60%	60%	60%
hydro	2022	2	hydro_2022_2	70%	70%	70%
hydro	2022	3	hydro_2022_3	73%	73%	73%
hydro	2022	4	hydro_2022_4	72%	72%	72%
hydro	2022	5	hydro_2022_5	69%	69%	69%
hydro	2022	6	hydro_2022_6	74%	74%	74%
hydro	2022	7	hydro_2022_7	73%	73%	73%
hydro	2022	8	hydro_2022_8	72%	72%	72%
hydro	2022	9	hydro_2022_9	71%	71%	71%
hydro	2022	10	hydro_2022_10	64%	64%	64%
hydro	2022	11	hydro_2022_11	56%	56%	56%
hydro	2022	12	hydro_2022_12	64%	64%	64%
thermal	2022	1	thermal_2022_1	100%	100%	100%
thermal	2022	2	thermal_2022_2	100%	100%	100%
thermal	2022	3	thermal_2022_3	100%	100%	100%
thermal	2022	4	thermal_2022_4	100%	100%	100%
thermal	2022	5	thermal_2022_5	100%	100%	100%
thermal	2022	6	thermal_2022_6	100%	100%	100%
thermal	2022	7	thermal_2022_7	100%	100%	100%
thermal	2022	8	thermal_2022_8	100%	100%	100%
thermal	2022	9	thermal_2022_9	100%	100%	100%
thermal	2022	10	thermal_2022_10	100%	100%	100%
thermal	2022	11	thermal_2022_11	100%	100%	100%
thermal	2022	12	thermal_2022_12	100%	100%	100%
battery	2022	1	battery_2022_1	100%	100%	100%
battery	2022	2	battery_2022_2	100%	100%	100%
battery	2022	3	battery_2022_3	100%	100%	100%
battery	2022	4	battery_2022_4	100%	100%	100%
battery	2022	5	battery_2022_5	100%	100%	100%
battery	2022	6	battery_2022_6	100%	100%	100%
battery	2022	7	battery_2022_7	100%	100%	100%
battery	2022	8	battery_2022_8	100%	100%	100%
battery	2022	9	battery_2022_9	100%	100%	100%
battery	2022	10	battery_2022_10	100%	100%	100%
battery	2022	11	battery_2022_11	100%	100%	100%
battery	2022	12	battery_2022_12	100%	100%	100%
nuclear	2022	1	nuclear_2022_1	100%	100%	100%
nuclear	2022	2	nuclear_2022_2	100%	100%	100%
nuclear	2022	3	nuclear_2022_3	100%	100%	100%
nuclear	2022	4	nuclear_2022_4	100%	100%	100%
nuclear	2022	5	nuclear_2022_5	100%	100%	100%
nuclear	2022	6	nuclear_2022_6	100%	100%	100%
nuclear	2022	7	nuclear_2022_7	100%	100%	100%
nuclear	2022	8	nuclear_2022_8	100%	100%	100%
nuclear	2022	9	nuclear_2022_9	100%	100%	100%
nuclear	2022	10	nuclear_2022_10	100%	100%	100%
nuclear	2022	11	nuclear_2022_11	100%	100%	100%
nuclear	2022	12	nuclear_2022_12	100%	100%	100%
biomass	2023	1	biomass_2023_1	82%	82%	82%
biomass	2023	2	biomass_2023_2	86%	86%	86%
biomass	2023	3	biomass_2023_3	84%	84%	84%
biomass	2023	4	biomass_2023_4	76%	76%	76%
biomass	2023	5	biomass_2023_5	83%	83%	83%
biomass	2023	6	biomass_2023_6	89%	89%	89%
biomass	2023	7	biomass_2023_7	87%	87%	87%
biomass	2023	8	biomass_2023_8	90%	90%	90%
biomass	2023	9	biomass_2023_9	90%	90%	90%
biomass	2023	10	biomass_2023_10	81%	81%	81%
biomass	2023	11	biomass_2023_11	85%	85%	85%
biomass	2023	12	biomass_2023_12	86%	86%	86%
cogen	2023	1	cogen_2023_1	81%	81%	81%
cogen	2023	2	cogen_2023_2	79%	79%	79%
cogen	2023	3	cogen_2023_3	73%	73%	73%
cogen	2023	4	cogen_2023_4	66%	66%	66%
cogen	2023	5	cogen_2023_5	79%	79%	79%
cogen	2023	6	cogen_2023_6	85%	85%	85%
cogen	2023	7	cogen_2023_7	83%	83%	83%
cogen	2023	8	cogen_2023_8	83%	83%	83%
cogen	2023	9	cogen_2023_9	80%	80%	80%
cogen	2023	10	cogen_2023_10	72%	72%	72%
cogen	2023	11	cogen_2023_11	78%	78%	78%
cogen	2023	12	cogen_2023_12	82%	82%	82%
geothermal	2023	1	geothermal_2023_1	95%	95%	95%
geothermal	2023	2	geothermal_2023_2	92%	92%	92%
geothermal	2023	3	geothermal_2023_3	88%	88%	88%
geothermal	2023	4	geothermal_2023_4	76%	76%	76%
geothermal	2023	5	geothermal_2023_5	74%	74%	74%
geothermal	2023	6	geothermal_2023_6	70%	70%	70%
geothermal	2023	7	geothermal_2023_7	84%	84%	84%
geothermal	2023	8	geothermal_2023_8	82%	82%	82%
geothermal	2023	9	geothermal_2023_9	83%	83%	83%
geothermal	2023	10	geothermal_2023_10	86%	86%	86%
geothermal	2023	11	geothermal_2023_11	93%	93%	93%
geothermal	2023	12	geothermal_2023_12	95%	95%	95%
hydro	2023	1	hydro_2023_1	60%	60%	60%
hydro	2023	2	hydro_2023_2	70%	70%	70%
hydro	2023	3	hydro_2023_3	73%	73%	73%
hydro	2023	4	hydro_2023_4	72%	72%	72%
hydro	2023	5	hydro_2023_5	69%	69%	69%
hydro	2023	6	hydro_2023_6	74%	74%	74%
hydro	2023	7	hydro_2023_7	73%	73%	73%
hydro	2023	8	hydro_2023_8	72%	72%	72%
hydro	2023	9	hydro_2023_9	71%	71%	71%
hydro	2023	10	hydro_2023_10	64%	64%	64%
hydro	2023	11	hydro_2023_11	56%	56%	56%

hydro	2023	12	hydro_2023_12	64%	64%	64%
thermal	2023	1	thermal_2023_1	100%	100%	100%
thermal	2023	2	thermal_2023_2	100%	100%	100%
thermal	2023	3	thermal_2023_3	100%	100%	100%
thermal	2023	4	thermal_2023_4	100%	100%	100%
thermal	2023	5	thermal_2023_5	100%	100%	100%
thermal	2023	6	thermal_2023_6	100%	100%	100%
thermal	2023	7	thermal_2023_7	100%	100%	100%
thermal	2023	8	thermal_2023_8	100%	100%	100%
thermal	2023	9	thermal_2023_9	100%	100%	100%
thermal	2023	10	thermal_2023_10	100%	100%	100%
thermal	2023	11	thermal_2023_11	100%	100%	100%
thermal	2023	12	thermal_2023_12	100%	100%	100%
battery	2023	1	battery_2023_1	100%	100%	100%
battery	2023	2	battery_2023_2	100%	100%	100%
battery	2023	3	battery_2023_3	100%	100%	100%
battery	2023	4	battery_2023_4	100%	100%	100%
battery	2023	5	battery_2023_5	100%	100%	100%
battery	2023	6	battery_2023_6	100%	100%	100%
battery	2023	7	battery_2023_7	100%	100%	100%
battery	2023	8	battery_2023_8	100%	100%	100%
battery	2023	9	battery_2023_9	100%	100%	100%
battery	2023	10	battery_2023_10	100%	100%	100%
battery	2023	11	battery_2023_11	100%	100%	100%
battery	2023	12	battery_2023_12	100%	100%	100%
nuclear	2023	1	nuclear_2023_1	100%	100%	100%
nuclear	2023	2	nuclear_2023_2	100%	100%	100%
nuclear	2023	3	nuclear_2023_3	100%	100%	100%
nuclear	2023	4	nuclear_2023_4	100%	100%	100%
nuclear	2023	5	nuclear_2023_5	100%	100%	100%
nuclear	2023	6	nuclear_2023_6	100%	100%	100%
nuclear	2023	7	nuclear_2023_7	100%	100%	100%
nuclear	2023	8	nuclear_2023_8	100%	100%	100%
nuclear	2023	9	nuclear_2023_9	100%	100%	100%
nuclear	2023	10	nuclear_2023_10	100%	100%	100%
nuclear	2023	11	nuclear_2023_11	100%	100%	100%
nuclear	2023	12	nuclear_2023_12	100%	100%	100%
biomass	2024	1	biomass_2024_1	82%	82%	82%
biomass	2024	2	biomass_2024_2	86%	86%	86%
biomass	2024	3	biomass_2024_3	84%	84%	84%
biomass	2024	4	biomass_2024_4	76%	76%	76%
biomass	2024	5	biomass_2024_5	83%	83%	83%
biomass	2024	6	biomass_2024_6	89%	89%	89%
biomass	2024	7	biomass_2024_7	87%	87%	87%
biomass	2024	8	biomass_2024_8	90%	90%	90%
biomass	2024	9	biomass_2024_9	90%	90%	90%
biomass	2024	10	biomass_2024_10	81%	81%	81%
biomass	2024	11	biomass_2024_11	85%	85%	85%
biomass	2024	12	biomass_2024_12	86%	86%	86%
cogen	2024	1	cogen_2024_1	81%	81%	81%
cogen	2024	2	cogen_2024_2	79%	79%	79%
cogen	2024	3	cogen_2024_3	73%	73%	73%
cogen	2024	4	cogen_2024_4	66%	66%	66%
cogen	2024	5	cogen_2024_5	79%	79%	79%
cogen	2024	6	cogen_2024_6	85%	85%	85%
cogen	2024	7	cogen_2024_7	83%	83%	83%
cogen	2024	8	cogen_2024_8	83%	83%	83%
cogen	2024	9	cogen_2024_9	80%	80%	80%
cogen	2024	10	cogen_2024_10	72%	72%	72%
cogen	2024	11	cogen_2024_11	78%	78%	78%
cogen	2024	12	cogen_2024_12	82%	82%	82%
geothermal	2024	1	geothermal_2024_1	95%	95%	95%
geothermal	2024	2	geothermal_2024_2	92%	92%	92%
geothermal	2024	3	geothermal_2024_3	88%	88%	88%
geothermal	2024	4	geothermal_2024_4	76%	76%	76%
geothermal	2024	5	geothermal_2024_5	74%	74%	74%
geothermal	2024	6	geothermal_2024_6	70%	70%	70%
geothermal	2024	7	geothermal_2024_7	84%	84%	84%
geothermal	2024	8	geothermal_2024_8	82%	82%	82%
geothermal	2024	9	geothermal_2024_9	83%	83%	83%
geothermal	2024	10	geothermal_2024_10	86%	86%	86%
geothermal	2024	11	geothermal_2024_11	93%	93%	93%
geothermal	2024	12	geothermal_2024_12	95%	95%	95%
hydro	2024	1	hydro_2024_1	60%	60%	60%
hydro	2024	2	hydro_2024_2	70%	70%	70%
hydro	2024	3	hydro_2024_3	73%	73%	73%
hydro	2024	4	hydro_2024_4	72%	72%	72%
hydro	2024	5	hydro_2024_5	69%	69%	69%
hydro	2024	6	hydro_2024_6	74%	74%	74%
hydro	2024	7	hydro_2024_7	73%	73%	73%
hydro	2024	8	hydro_2024_8	72%	72%	72%
hydro	2024	9	hydro_2024_9	71%	71%	71%
hydro	2024	10	hydro_2024_10	64%	64%	64%
hydro	2024	11	hydro_2024_11	56%	56%	56%
hydro	2024	12	hydro_2024_12	64%	64%	64%
thermal	2024	1	thermal_2024_1	100%	100%	100%
thermal	2024	2	thermal_2024_2	100%	100%	100%
thermal	2024	3	thermal_2024_3	100%	100%	100%
thermal	2024	4	thermal_2024_4	100%	100%	100%
thermal	2024	5	thermal_2024_5	100%	100%	100%
thermal	2024	6	thermal_2024_6	100%	100%	100%
thermal	2024	7	thermal_2024_7	100%	100%	100%
thermal	2024	8	thermal_2024_8	100%	100%	100%
thermal	2024	9	thermal_2024_9	100%	100%	100%
thermal	2024	10	thermal_2024_10	100%	100%	100%
thermal	2024	11	thermal_2024_11	100%	100%	100%
thermal	2024	12	thermal_2024_12	100%	100%	100%
battery	2024	1	battery_2024_1	100%	100%	100%
battery	2024	2	battery_2024_2	100%	100%	100%
battery	2024	3	battery_2024_3	100%	100%	100%
battery	2024	4	battery_2024_4	100%	100%	100%
battery	2024	5	battery_2024_5	100%	100%	100%
battery	2024	6	battery_2024_6	100%	100%	100%
battery	2024	7	battery_2024_7	100%	100%	100%
battery	2024	8	battery_2024_8	100%	100%	100%
battery	2024	9	battery_2024_9	100%	100%	100%
battery	2024	10	battery_2024_10	100%	100%	100%
battery	2024	11	battery_2024_11	100%	100%	100%
battery	2024	12	battery_2024_12	100%	100%	100%
nuclear	2024	1	nuclear_2024_1	100%	100%	100%
nuclear	2024	2	nuclear_2024_2	100%	100%	100%
nuclear	2024	3	nuclear_2024_3	100%	100%	100%
nuclear	2024	4	nuclear_2024_4	100%	100%	100%
nuclear	2024	5	nuclear_2024_5	100%	100%	100%
nuclear	2024	6	nuclear_2024_6	100%	100%	100%
nuclear	2024	7	nuclear_2024_7	100%	100%	100%
nuclear	2024	8	nuclear_2024_8	100%	100%	100%
nuclear	2024	9	nuclear_2024_9	100%	100%	100%
nuclear	2024	10	nuclear_2024_10	100%	100%	100%
nuclear	2024	11	nuclear_2024_11	100%	100%	100%
nuclear	2024	12	nuclear_2024_12	100%	100%	100%
biomass	2025	1	biomass_2025_1	82%	82%	82%
biomass	2025	2	biomass_2025_2	86%	86%	86%

biomass	2025	3	biomass_2025_3	84%	84%	84%
biomass	2025	4	biomass_2025_4	76%	76%	76%
biomass	2025	5	biomass_2025_5	83%	83%	83%
biomass	2025	6	biomass_2025_6	89%	89%	89%
biomass	2025	7	biomass_2025_7	87%	87%	87%
biomass	2025	8	biomass_2025_8	90%	90%	90%
biomass	2025	9	biomass_2025_9	90%	90%	90%
biomass	2025	10	biomass_2025_10	81%	81%	81%
biomass	2025	11	biomass_2025_11	85%	85%	85%
biomass	2025	12	biomass_2025_12	86%	86%	86%
cogen	2025	1	cogen_2025_1	81%	81%	81%
cogen	2025	2	cogen_2025_2	79%	79%	79%
cogen	2025	3	cogen_2025_3	73%	73%	73%
cogen	2025	4	cogen_2025_4	66%	66%	66%
cogen	2025	5	cogen_2025_5	79%	79%	79%
cogen	2025	6	cogen_2025_6	85%	85%	85%
cogen	2025	7	cogen_2025_7	83%	83%	83%
cogen	2025	8	cogen_2025_8	83%	83%	83%
cogen	2025	9	cogen_2025_9	80%	80%	80%
cogen	2025	10	cogen_2025_10	72%	72%	72%
cogen	2025	11	cogen_2025_11	78%	78%	78%
cogen	2025	12	cogen_2025_12	82%	82%	82%
geothermal	2025	1	geothermal_2025_1	95%	95%	95%
geothermal	2025	2	geothermal_2025_2	92%	92%	92%
geothermal	2025	3	geothermal_2025_3	88%	88%	88%
geothermal	2025	4	geothermal_2025_4	76%	76%	76%
geothermal	2025	5	geothermal_2025_5	74%	74%	74%
geothermal	2025	6	geothermal_2025_6	70%	70%	70%
geothermal	2025	7	geothermal_2025_7	84%	84%	84%
geothermal	2025	8	geothermal_2025_8	82%	82%	82%
geothermal	2025	9	geothermal_2025_9	83%	83%	83%
geothermal	2025	10	geothermal_2025_10	86%	86%	86%
geothermal	2025	11	geothermal_2025_11	93%	93%	93%
geothermal	2025	12	geothermal_2025_12	95%	95%	95%
hydro	2025	1	hydro_2025_1	60%	60%	60%
hydro	2025	2	hydro_2025_2	70%	70%	70%
hydro	2025	3	hydro_2025_3	73%	73%	73%
hydro	2025	4	hydro_2025_4	72%	72%	72%
hydro	2025	5	hydro_2025_5	69%	69%	69%
hydro	2025	6	hydro_2025_6	74%	74%	74%
hydro	2025	7	hydro_2025_7	73%	73%	73%
hydro	2025	8	hydro_2025_8	72%	72%	72%
hydro	2025	9	hydro_2025_9	71%	71%	71%
hydro	2025	10	hydro_2025_10	64%	64%	64%
hydro	2025	11	hydro_2025_11	56%	56%	56%
hydro	2025	12	hydro_2025_12	64%	64%	64%
thermal	2025	1	thermal_2025_1	100%	100%	100%
thermal	2025	2	thermal_2025_2	100%	100%	100%
thermal	2025	3	thermal_2025_3	100%	100%	100%
thermal	2025	4	thermal_2025_4	100%	100%	100%
thermal	2025	5	thermal_2025_5	100%	100%	100%
thermal	2025	6	thermal_2025_6	100%	100%	100%
thermal	2025	7	thermal_2025_7	100%	100%	100%
thermal	2025	8	thermal_2025_8	100%	100%	100%
thermal	2025	9	thermal_2025_9	100%	100%	100%
thermal	2025	10	thermal_2025_10	100%	100%	100%
thermal	2025	11	thermal_2025_11	100%	100%	100%
thermal	2025	12	thermal_2025_12	100%	100%	100%
battery	2025	1	battery_2025_1	98%	100%	98%
battery	2025	2	battery_2025_2	98%	100%	98%
battery	2025	3	battery_2025_3	98%	100%	98%
battery	2025	4	battery_2025_4	98%	100%	98%
battery	2025	5	battery_2025_5	98%	100%	98%
battery	2025	6	battery_2025_6	98%	100%	98%
battery	2025	7	battery_2025_7	98%	100%	98%
battery	2025	8	battery_2025_8	98%	100%	98%
battery	2025	9	battery_2025_9	98%	100%	98%
battery	2025	10	battery_2025_10	98%	100%	98%
battery	2025	11	battery_2025_11	98%	100%	98%
battery	2025	12	battery_2025_12	98%	100%	98%
nuclear	2025	1	nuclear_2025_1	100%	100%	100%
nuclear	2025	2	nuclear_2025_2	100%	100%	100%
nuclear	2025	3	nuclear_2025_3	100%	100%	100%
nuclear	2025	4	nuclear_2025_4	100%	100%	100%
nuclear	2025	5	nuclear_2025_5	100%	100%	100%
nuclear	2025	6	nuclear_2025_6	100%	100%	100%
nuclear	2025	7	nuclear_2025_7	100%	100%	100%
nuclear	2025	8	nuclear_2025_8	100%	100%	100%
nuclear	2025	9	nuclear_2025_9	100%	100%	100%
nuclear	2025	10	nuclear_2025_10	100%	100%	100%
nuclear	2025	11	nuclear_2025_11	100%	100%	100%
nuclear	2025	12	nuclear_2025_12	100%	100%	100%
biomass	2026	1	biomass_2026_1	82%	82%	82%
biomass	2026	2	biomass_2026_2	86%	86%	86%
biomass	2026	3	biomass_2026_3	84%	84%	84%
biomass	2026	4	biomass_2026_4	76%	76%	76%
biomass	2026	5	biomass_2026_5	83%	83%	83%
biomass	2026	6	biomass_2026_6	89%	89%	89%
biomass	2026	7	biomass_2026_7	87%	87%	87%
biomass	2026	8	biomass_2026_8	90%	90%	90%
biomass	2026	9	biomass_2026_9	90%	90%	90%
biomass	2026	10	biomass_2026_10	81%	81%	81%
biomass	2026	11	biomass_2026_11	85%	85%	85%
biomass	2026	12	biomass_2026_12	86%	86%	86%
cogen	2026	1	cogen_2026_1	81%	81%	81%
cogen	2026	2	cogen_2026_2	79%	79%	79%
cogen	2026	3	cogen_2026_3	73%	73%	73%
cogen	2026	4	cogen_2026_4	66%	66%	66%
cogen	2026	5	cogen_2026_5	79%	79%	79%
cogen	2026	6	cogen_2026_6	85%	85%	85%
cogen	2026	7	cogen_2026_7	83%	83%	83%
cogen	2026	8	cogen_2026_8	83%	83%	83%
cogen	2026	9	cogen_2026_9	80%	80%	80%
cogen	2026	10	cogen_2026_10	72%	72%	72%
cogen	2026	11	cogen_2026_11	78%	78%	78%
cogen	2026	12	cogen_2026_12	82%	82%	82%
geothermal	2026	1	geothermal_2026_1	95%	95%	95%
geothermal	2026	2	geothermal_2026_2	92%	92%	92%
geothermal	2026	3	geothermal_2026_3	88%	88%	88%
geothermal	2026	4	geothermal_2026_4	76%	76%	76%
geothermal	2026	5	geothermal_2026_5	74%	74%	74%
geothermal	2026	6	geothermal_2026_6	70%	70%	70%
geothermal	2026	7	geothermal_2026_7	84%	84%	84%
geothermal	2026	8	geothermal_2026_8	82%	82%	82%
geothermal	2026	9	geothermal_2026_9	83%	83%	83%
geothermal	2026	10	geothermal_2026_10	86%	86%	86%
geothermal	2026	11	geothermal_2026_11	93%	93%	93%
geothermal	2026	12	geothermal_2026_12	95%	95%	95%
hydro	2026	1	hydro_2026_1	60%	60%	60%
hydro	2026	2	hydro_2026_2	70%	70%	70%
hydro	2026	3	hydro_2026_3	73%	73%	73%
hydro	2026	4	hydro_2026_4	72%	72%	72%
hydro	2026	5	hydro_2026_5	69%	69%	69%

hydro	2026	6	hydro_2026_6	74%	74%	74%
hydro	2026	7	hydro_2026_7	73%	73%	73%
hydro	2026	8	hydro_2026_8	72%	72%	72%
hydro	2026	9	hydro_2026_9	71%	71%	71%
hydro	2026	10	hydro_2026_10	64%	64%	64%
hydro	2026	11	hydro_2026_11	56%	56%	56%
hydro	2026	12	hydro_2026_12	64%	64%	64%
thermal	2026	1	thermal_2026_1	100%	100%	100%
thermal	2026	2	thermal_2026_2	100%	100%	100%
thermal	2026	3	thermal_2026_3	100%	100%	100%
thermal	2026	4	thermal_2026_4	100%	100%	100%
thermal	2026	5	thermal_2026_5	100%	100%	100%
thermal	2026	6	thermal_2026_6	100%	100%	100%
thermal	2026	7	thermal_2026_7	100%	100%	100%
thermal	2026	8	thermal_2026_8	100%	100%	100%
thermal	2026	9	thermal_2026_9	100%	100%	100%
thermal	2026	10	thermal_2026_10	100%	100%	100%
thermal	2026	11	thermal_2026_11	100%	100%	100%
thermal	2026	12	thermal_2026_12	100%	100%	100%
battery	2026	1	battery_2026_1	97%	100%	97%
battery	2026	2	battery_2026_2	97%	100%	97%
battery	2026	3	battery_2026_3	97%	100%	97%
battery	2026	4	battery_2026_4	97%	100%	97%
battery	2026	5	battery_2026_5	97%	100%	97%
battery	2026	6	battery_2026_6	97%	100%	97%
battery	2026	7	battery_2026_7	97%	100%	97%
battery	2026	8	battery_2026_8	97%	100%	97%
battery	2026	9	battery_2026_9	97%	100%	97%
battery	2026	10	battery_2026_10	97%	100%	97%
battery	2026	11	battery_2026_11	97%	100%	97%
battery	2026	12	battery_2026_12	97%	100%	97%
nuclear	2026	1	nuclear_2026_1	100%	100%	100%
nuclear	2026	2	nuclear_2026_2	100%	100%	100%
nuclear	2026	3	nuclear_2026_3	100%	100%	100%
nuclear	2026	4	nuclear_2026_4	100%	100%	100%
nuclear	2026	5	nuclear_2026_5	100%	100%	100%
nuclear	2026	6	nuclear_2026_6	100%	100%	100%
nuclear	2026	7	nuclear_2026_7	100%	100%	100%
nuclear	2026	8	nuclear_2026_8	100%	100%	100%
nuclear	2026	9	nuclear_2026_9	100%	100%	100%
nuclear	2026	10	nuclear_2026_10	100%	100%	100%
nuclear	2026	11	nuclear_2026_11	100%	100%	100%
nuclear	2026	12	nuclear_2026_12	100%	100%	100%
biomass	2027	1	biomass_2027_1	82%	82%	82%
biomass	2027	2	biomass_2027_2	86%	86%	86%
biomass	2027	3	biomass_2027_3	84%	84%	84%
biomass	2027	4	biomass_2027_4	76%	76%	76%
biomass	2027	5	biomass_2027_5	83%	83%	83%
biomass	2027	6	biomass_2027_6	89%	89%	89%
biomass	2027	7	biomass_2027_7	87%	87%	87%
biomass	2027	8	biomass_2027_8	90%	90%	90%
biomass	2027	9	biomass_2027_9	90%	90%	90%
biomass	2027	10	biomass_2027_10	81%	81%	81%
biomass	2027	11	biomass_2027_11	85%	85%	85%
biomass	2027	12	biomass_2027_12	86%	86%	86%
cogen	2027	1	cogen_2027_1	81%	81%	81%
cogen	2027	2	cogen_2027_2	79%	79%	79%
cogen	2027	3	cogen_2027_3	73%	73%	73%
cogen	2027	4	cogen_2027_4	66%	66%	66%
cogen	2027	5	cogen_2027_5	79%	79%	79%
cogen	2027	6	cogen_2027_6	85%	85%	85%
cogen	2027	7	cogen_2027_7	83%	83%	83%
cogen	2027	8	cogen_2027_8	83%	83%	83%
cogen	2027	9	cogen_2027_9	80%	80%	80%
cogen	2027	10	cogen_2027_10	72%	72%	72%
cogen	2027	11	cogen_2027_11	78%	78%	78%
cogen	2027	12	cogen_2027_12	82%	82%	82%
geothermal	2027	1	geothermal_2027_1	95%	95%	95%
geothermal	2027	2	geothermal_2027_2	92%	92%	92%
geothermal	2027	3	geothermal_2027_3	88%	88%	88%
geothermal	2027	4	geothermal_2027_4	76%	76%	76%
geothermal	2027	5	geothermal_2027_5	74%	74%	74%
geothermal	2027	6	geothermal_2027_6	70%	70%	70%
geothermal	2027	7	geothermal_2027_7	84%	84%	84%
geothermal	2027	8	geothermal_2027_8	82%	82%	82%
geothermal	2027	9	geothermal_2027_9	83%	83%	83%
geothermal	2027	10	geothermal_2027_10	86%	86%	86%
geothermal	2027	11	geothermal_2027_11	93%	93%	93%
geothermal	2027	12	geothermal_2027_12	95%	95%	95%
hydro	2027	1	hydro_2027_1	60%	60%	60%
hydro	2027	2	hydro_2027_2	70%	70%	70%
hydro	2027	3	hydro_2027_3	73%	73%	73%
hydro	2027	4	hydro_2027_4	72%	72%	72%
hydro	2027	5	hydro_2027_5	69%	69%	69%
hydro	2027	6	hydro_2027_6	74%	74%	74%
hydro	2027	7	hydro_2027_7	73%	73%	73%
hydro	2027	8	hydro_2027_8	72%	72%	72%
hydro	2027	9	hydro_2027_9	71%	71%	71%
hydro	2027	10	hydro_2027_10	64%	64%	64%
hydro	2027	11	hydro_2027_11	56%	56%	56%
hydro	2027	12	hydro_2027_12	64%	64%	64%
thermal	2027	1	thermal_2027_1	100%	100%	100%
thermal	2027	2	thermal_2027_2	100%	100%	100%
thermal	2027	3	thermal_2027_3	100%	100%	100%
thermal	2027	4	thermal_2027_4	100%	100%	100%
thermal	2027	5	thermal_2027_5	100%	100%	100%
thermal	2027	6	thermal_2027_6	100%	100%	100%
thermal	2027	7	thermal_2027_7	100%	100%	100%
thermal	2027	8	thermal_2027_8	100%	100%	100%
thermal	2027	9	thermal_2027_9	100%	100%	100%
thermal	2027	10	thermal_2027_10	100%	100%	100%
thermal	2027	11	thermal_2027_11	100%	100%	100%
thermal	2027	12	thermal_2027_12	100%	100%	100%
battery	2027	1	battery_2027_1	97%	98%	97%
battery	2027	2	battery_2027_2	97%	98%	97%
battery	2027	3	battery_2027_3	97%	98%	97%
battery	2027	4	battery_2027_4	97%	98%	97%
battery	2027	5	battery_2027_5	97%	98%	97%
battery	2027	6	battery_2027_6	97%	98%	97%
battery	2027	7	battery_2027_7	97%	98%	97%
battery	2027	8	battery_2027_8	97%	98%	97%
battery	2027	9	battery_2027_9	97%	98%	97%
battery	2027	10	battery_2027_10	97%	98%	97%
battery	2027	11	battery_2027_11	97%	98%	97%
battery	2027	12	battery_2027_12	97%	98%	97%
nuclear	2027	1	nuclear_2027_1	100%	100%	100%
nuclear	2027	2	nuclear_2027_2	100%	100%	100%
nuclear	2027	3	nuclear_2027_3	100%	100%	100%
nuclear	2027	4	nuclear_2027_4	100%	100%	100%
nuclear	2027	5	nuclear_2027_5	100%	100%	100%
nuclear	2027	6	nuclear_2027_6	100%	100%	100%
nuclear	2027	7	nuclear_2027_7	100%	100%	100%
nuclear	2027	8	nuclear_2027_8	100%	100%	100%

nuclear	2027	9	nuclear_2027_9	100%	100%	100%
nuclear	2027	10	nuclear_2027_10	100%	100%	100%
nuclear	2027	11	nuclear_2027_11	100%	100%	100%
nuclear	2027	12	nuclear_2027_12	100%	100%	100%
biomass	2028	1	biomass_2028_1	82%	82%	82%
biomass	2028	2	biomass_2028_2	86%	86%	86%
biomass	2028	3	biomass_2028_3	84%	84%	84%
biomass	2028	4	biomass_2028_4	76%	76%	76%
biomass	2028	5	biomass_2028_5	83%	83%	83%
biomass	2028	6	biomass_2028_6	89%	89%	89%
biomass	2028	7	biomass_2028_7	87%	87%	87%
biomass	2028	8	biomass_2028_8	90%	90%	90%
biomass	2028	9	biomass_2028_9	90%	90%	90%
biomass	2028	10	biomass_2028_10	81%	81%	81%
biomass	2028	11	biomass_2028_11	85%	85%	85%
biomass	2028	12	biomass_2028_12	86%	86%	86%
cogen	2028	1	cogen_2028_1	81%	81%	81%
cogen	2028	2	cogen_2028_2	79%	79%	79%
cogen	2028	3	cogen_2028_3	73%	73%	73%
cogen	2028	4	cogen_2028_4	66%	66%	66%
cogen	2028	5	cogen_2028_5	79%	79%	79%
cogen	2028	6	cogen_2028_6	85%	85%	85%
cogen	2028	7	cogen_2028_7	83%	83%	83%
cogen	2028	8	cogen_2028_8	83%	83%	83%
cogen	2028	9	cogen_2028_9	80%	80%	80%
cogen	2028	10	cogen_2028_10	72%	72%	72%
cogen	2028	11	cogen_2028_11	78%	78%	78%
cogen	2028	12	cogen_2028_12	82%	82%	82%
geothermal	2028	1	geothermal_2028_1	95%	95%	95%
geothermal	2028	2	geothermal_2028_2	92%	92%	92%
geothermal	2028	3	geothermal_2028_3	88%	88%	88%
geothermal	2028	4	geothermal_2028_4	76%	76%	76%
geothermal	2028	5	geothermal_2028_5	74%	74%	74%
geothermal	2028	6	geothermal_2028_6	70%	70%	70%
geothermal	2028	7	geothermal_2028_7	84%	84%	84%
geothermal	2028	8	geothermal_2028_8	82%	82%	82%
geothermal	2028	9	geothermal_2028_9	83%	83%	83%
geothermal	2028	10	geothermal_2028_10	86%	86%	86%
geothermal	2028	11	geothermal_2028_11	93%	93%	93%
geothermal	2028	12	geothermal_2028_12	95%	95%	95%
hydro	2028	1	hydro_2028_1	60%	60%	60%
hydro	2028	2	hydro_2028_2	70%	70%	70%
hydro	2028	3	hydro_2028_3	73%	73%	73%
hydro	2028	4	hydro_2028_4	72%	72%	72%
hydro	2028	5	hydro_2028_5	69%	69%	69%
hydro	2028	6	hydro_2028_6	74%	74%	74%
hydro	2028	7	hydro_2028_7	73%	73%	73%
hydro	2028	8	hydro_2028_8	72%	72%	72%
hydro	2028	9	hydro_2028_9	71%	71%	71%
hydro	2028	10	hydro_2028_10	64%	64%	64%
hydro	2028	11	hydro_2028_11	56%	56%	56%
hydro	2028	12	hydro_2028_12	64%	64%	64%
thermal	2028	1	thermal_2028_1	100%	100%	100%
thermal	2028	2	thermal_2028_2	100%	100%	100%
thermal	2028	3	thermal_2028_3	100%	100%	100%
thermal	2028	4	thermal_2028_4	100%	100%	100%
thermal	2028	5	thermal_2028_5	100%	100%	100%
thermal	2028	6	thermal_2028_6	100%	100%	100%
thermal	2028	7	thermal_2028_7	100%	100%	100%
thermal	2028	8	thermal_2028_8	100%	100%	100%
thermal	2028	9	thermal_2028_9	100%	100%	100%
thermal	2028	10	thermal_2028_10	100%	100%	100%
thermal	2028	11	thermal_2028_11	100%	100%	100%
thermal	2028	12	thermal_2028_12	100%	100%	100%
battery	2028	1	battery_2028_1	97%	97%	97%
battery	2028	2	battery_2028_2	97%	97%	97%
battery	2028	3	battery_2028_3	97%	97%	97%
battery	2028	4	battery_2028_4	97%	97%	97%
battery	2028	5	battery_2028_5	97%	97%	97%
battery	2028	6	battery_2028_6	97%	97%	97%
battery	2028	7	battery_2028_7	97%	97%	97%
battery	2028	8	battery_2028_8	97%	97%	97%
battery	2028	9	battery_2028_9	97%	97%	97%
battery	2028	10	battery_2028_10	97%	97%	97%
battery	2028	11	battery_2028_11	97%	97%	97%
battery	2028	12	battery_2028_12	97%	97%	97%
nuclear	2028	1	nuclear_2028_1	100%	100%	100%
nuclear	2028	2	nuclear_2028_2	100%	100%	100%
nuclear	2028	3	nuclear_2028_3	100%	100%	100%
nuclear	2028	4	nuclear_2028_4	100%	100%	100%
nuclear	2028	5	nuclear_2028_5	100%	100%	100%
nuclear	2028	6	nuclear_2028_6	100%	100%	100%
nuclear	2028	7	nuclear_2028_7	100%	100%	100%
nuclear	2028	8	nuclear_2028_8	100%	100%	100%
nuclear	2028	9	nuclear_2028_9	100%	100%	100%
nuclear	2028	10	nuclear_2028_10	100%	100%	100%
nuclear	2028	11	nuclear_2028_11	100%	100%	100%
nuclear	2028	12	nuclear_2028_12	100%	100%	100%
biomass	2029	1	biomass_2029_1	82%	82%	82%
biomass	2029	2	biomass_2029_2	86%	86%	86%
biomass	2029	3	biomass_2029_3	84%	84%	84%
biomass	2029	4	biomass_2029_4	76%	76%	76%
biomass	2029	5	biomass_2029_5	83%	83%	83%
biomass	2029	6	biomass_2029_6	89%	89%	89%
biomass	2029	7	biomass_2029_7	87%	87%	87%
biomass	2029	8	biomass_2029_8	90%	90%	90%
biomass	2029	9	biomass_2029_9	90%	90%	90%
biomass	2029	10	biomass_2029_10	81%	81%	81%
biomass	2029	11	biomass_2029_11	85%	85%	85%
biomass	2029	12	biomass_2029_12	86%	86%	86%
cogen	2029	1	cogen_2029_1	81%	81%	81%
cogen	2029	2	cogen_2029_2	79%	79%	79%
cogen	2029	3	cogen_2029_3	73%	73%	73%
cogen	2029	4	cogen_2029_4	66%	66%	66%
cogen	2029	5	cogen_2029_5	79%	79%	79%
cogen	2029	6	cogen_2029_6	85%	85%	85%
cogen	2029	7	cogen_2029_7	83%	83%	83%
cogen	2029	8	cogen_2029_8	83%	83%	83%
cogen	2029	9	cogen_2029_9	80%	80%	80%
cogen	2029	10	cogen_2029_10	72%	72%	72%
cogen	2029	11	cogen_2029_11	78%	78%	78%
cogen	2029	12	cogen_2029_12	82%	82%	82%
geothermal	2029	1	geothermal_2029_1	95%	95%	95%
geothermal	2029	2	geothermal_2029_2	92%	92%	92%
geothermal	2029	3	geothermal_2029_3	88%	88%	88%
geothermal	2029	4	geothermal_2029_4	76%	76%	76%
geothermal	2029	5	geothermal_2029_5	74%	74%	74%
geothermal	2029	6	geothermal_2029_6	70%	70%	70%
geothermal	2029	7	geothermal_2029_7	84%	84%	84%
geothermal	2029	8	geothermal_2029_8	82%	82%	82%
geothermal	2029	9	geothermal_2029_9	83%	83%	83%
geothermal	2029	10	geothermal_2029_10	86%	86%	86%
geothermal	2029	11	geothermal_2029_11	93%	93%	93%

geothermal	2029	12	geothermal_2029_12	95%	95%	95%
hydro	2029	1	hydro_2029_1	60%	60%	60%
hydro	2029	2	hydro_2029_2	70%	70%	70%
hydro	2029	3	hydro_2029_3	73%	73%	73%
hydro	2029	4	hydro_2029_4	72%	72%	72%
hydro	2029	5	hydro_2029_5	69%	69%	69%
hydro	2029	6	hydro_2029_6	74%	74%	74%
hydro	2029	7	hydro_2029_7	73%	73%	73%
hydro	2029	8	hydro_2029_8	72%	72%	72%
hydro	2029	9	hydro_2029_9	71%	71%	71%
hydro	2029	10	hydro_2029_10	64%	64%	64%
hydro	2029	11	hydro_2029_11	56%	56%	56%
hydro	2029	12	hydro_2029_12	64%	64%	64%
thermal	2029	1	thermal_2029_1	100%	100%	100%
thermal	2029	2	thermal_2029_2	100%	100%	100%
thermal	2029	3	thermal_2029_3	100%	100%	100%
thermal	2029	4	thermal_2029_4	100%	100%	100%
thermal	2029	5	thermal_2029_5	100%	100%	100%
thermal	2029	6	thermal_2029_6	100%	100%	100%
thermal	2029	7	thermal_2029_7	100%	100%	100%
thermal	2029	8	thermal_2029_8	100%	100%	100%
thermal	2029	9	thermal_2029_9	100%	100%	100%
thermal	2029	10	thermal_2029_10	100%	100%	100%
thermal	2029	11	thermal_2029_11	100%	100%	100%
thermal	2029	12	thermal_2029_12	100%	100%	100%
battery	2029	1	battery_2029_1	97%	95%	97%
battery	2029	2	battery_2029_2	97%	95%	97%
battery	2029	3	battery_2029_3	97%	95%	97%
battery	2029	4	battery_2029_4	97%	95%	97%
battery	2029	5	battery_2029_5	97%	95%	97%
battery	2029	6	battery_2029_6	97%	95%	97%
battery	2029	7	battery_2029_7	97%	95%	97%
battery	2029	8	battery_2029_8	97%	95%	97%
battery	2029	9	battery_2029_9	97%	95%	97%
battery	2029	10	battery_2029_10	97%	95%	97%
battery	2029	11	battery_2029_11	97%	95%	97%
battery	2029	12	battery_2029_12	97%	95%	97%
nuclear	2029	1	nuclear_2029_1	100%	100%	100%
nuclear	2029	2	nuclear_2029_2	100%	100%	100%
nuclear	2029	3	nuclear_2029_3	100%	100%	100%
nuclear	2029	4	nuclear_2029_4	100%	100%	100%
nuclear	2029	5	nuclear_2029_5	100%	100%	100%
nuclear	2029	6	nuclear_2029_6	100%	100%	100%
nuclear	2029	7	nuclear_2029_7	100%	100%	100%
nuclear	2029	8	nuclear_2029_8	100%	100%	100%
nuclear	2029	9	nuclear_2029_9	100%	100%	100%
nuclear	2029	10	nuclear_2029_10	100%	100%	100%
nuclear	2029	11	nuclear_2029_11	100%	100%	100%
nuclear	2029	12	nuclear_2029_12	100%	100%	100%
biomass	2030	1	biomass_2030_1	82%	82%	82%
biomass	2030	2	biomass_2030_2	86%	86%	86%
biomass	2030	3	biomass_2030_3	84%	84%	84%
biomass	2030	4	biomass_2030_4	76%	76%	76%
biomass	2030	5	biomass_2030_5	83%	83%	83%
biomass	2030	6	biomass_2030_6	89%	89%	89%
biomass	2030	7	biomass_2030_7	87%	87%	87%
biomass	2030	8	biomass_2030_8	90%	90%	90%
biomass	2030	9	biomass_2030_9	90%	90%	90%
biomass	2030	10	biomass_2030_10	81%	81%	81%
biomass	2030	11	biomass_2030_11	85%	85%	85%
biomass	2030	12	biomass_2030_12	86%	86%	86%
cogen	2030	1	cogen_2030_1	81%	81%	81%
cogen	2030	2	cogen_2030_2	79%	79%	79%
cogen	2030	3	cogen_2030_3	73%	73%	73%
cogen	2030	4	cogen_2030_4	66%	66%	66%
cogen	2030	5	cogen_2030_5	79%	79%	79%
cogen	2030	6	cogen_2030_6	85%	85%	85%
cogen	2030	7	cogen_2030_7	83%	83%	83%
cogen	2030	8	cogen_2030_8	83%	83%	83%
cogen	2030	9	cogen_2030_9	80%	80%	80%
cogen	2030	10	cogen_2030_10	72%	72%	72%
cogen	2030	11	cogen_2030_11	78%	78%	78%
cogen	2030	12	cogen_2030_12	82%	82%	82%
geothermal	2030	1	geothermal_2030_1	95%	95%	95%
geothermal	2030	2	geothermal_2030_2	92%	92%	92%
geothermal	2030	3	geothermal_2030_3	88%	88%	88%
geothermal	2030	4	geothermal_2030_4	76%	76%	76%
geothermal	2030	5	geothermal_2030_5	74%	74%	74%
geothermal	2030	6	geothermal_2030_6	70%	70%	70%
geothermal	2030	7	geothermal_2030_7	84%	84%	84%
geothermal	2030	8	geothermal_2030_8	82%	82%	82%
geothermal	2030	9	geothermal_2030_9	83%	83%	83%
geothermal	2030	10	geothermal_2030_10	86%	86%	86%
geothermal	2030	11	geothermal_2030_11	93%	93%	93%
geothermal	2030	12	geothermal_2030_12	95%	95%	95%
hydro	2030	1	hydro_2030_1	60%	60%	60%
hydro	2030	2	hydro_2030_2	70%	70%	70%
hydro	2030	3	hydro_2030_3	73%	73%	73%
hydro	2030	4	hydro_2030_4	72%	72%	72%
hydro	2030	5	hydro_2030_5	69%	69%	69%
hydro	2030	6	hydro_2030_6	74%	74%	74%
hydro	2030	7	hydro_2030_7	73%	73%	73%
hydro	2030	8	hydro_2030_8	72%	72%	72%
hydro	2030	9	hydro_2030_9	71%	71%	71%
hydro	2030	10	hydro_2030_10	64%	64%	64%
hydro	2030	11	hydro_2030_11	56%	56%	56%
hydro	2030	12	hydro_2030_12	64%	64%	64%
thermal	2030	1	thermal_2030_1	100%	100%	100%
thermal	2030	2	thermal_2030_2	100%	100%	100%
thermal	2030	3	thermal_2030_3	100%	100%	100%
thermal	2030	4	thermal_2030_4	100%	100%	100%
thermal	2030	5	thermal_2030_5	100%	100%	100%
thermal	2030	6	thermal_2030_6	100%	100%	100%
thermal	2030	7	thermal_2030_7	100%	100%	100%
thermal	2030	8	thermal_2030_8	100%	100%	100%
thermal	2030	9	thermal_2030_9	100%	100%	100%
thermal	2030	10	thermal_2030_10	100%	100%	100%
thermal	2030	11	thermal_2030_11	100%	100%	100%
thermal	2030	12	thermal_2030_12	100%	100%	100%
battery	2030	1	battery_2030_1	97%	93%	97%
battery	2030	2	battery_2030_2	97%	93%	97%
battery	2030	3	battery_2030_3	97%	93%	97%
battery	2030	4	battery_2030_4	97%	93%	97%
battery	2030	5	battery_2030_5	97%	93%	97%
battery	2030	6	battery_2030_6	97%	93%	97%
battery	2030	7	battery_2030_7	97%	93%	97%
battery	2030	8	battery_2030_8	97%	93%	97%
battery	2030	9	battery_2030_9	97%	93%	97%
battery	2030	10	battery_2030_10	97%	93%	97%
battery	2030	11	battery_2030_11	97%	93%	97%
battery	2030	12	battery_2030_12	97%	93%	97%
nuclear	2030	1	nuclear_2030_1	100%	100%	100%
nuclear	2030	2	nuclear_2030_2	100%	100%	100%

nuclear	2030	3	nuclear_2030_3	100%	100%	100%
nuclear	2030	4	nuclear_2030_4	100%	100%	100%
nuclear	2030	5	nuclear_2030_5	100%	100%	100%
nuclear	2030	6	nuclear_2030_6	100%	100%	100%
nuclear	2030	7	nuclear_2030_7	100%	100%	100%
nuclear	2030	8	nuclear_2030_8	100%	100%	100%
nuclear	2030	9	nuclear_2030_9	100%	100%	100%
nuclear	2030	10	nuclear_2030_10	100%	100%	100%
nuclear	2030	11	nuclear_2030_11	100%	100%	100%
nuclear	2030	12	nuclear_2030_12	100%	100%	100%
solar	2020	1	solar_2020_1	4%	4%	4%
solar	2020	2	solar_2020_2	3%	3%	3%
solar	2020	3	solar_2020_3	18%	18%	18%
solar	2020	4	solar_2020_4	15%	15%	15%
solar	2020	5	solar_2020_5	16%	16%	16%
solar	2020	6	solar_2020_6	31%	31%	31%
solar	2020	7	solar_2020_7	39%	39%	39%
solar	2020	8	solar_2020_8	27%	27%	27%
solar	2020	9	solar_2020_9	14%	14%	14%
solar	2020	10	solar_2020_10	2%	2%	2%
solar	2020	11	solar_2020_11	2%	2%	2%
solar	2020	12	solar_2020_12	0%	0%	0%
solar	2021	1	solar_2021_1	4%	4%	4%
solar	2021	2	solar_2021_2	3%	3%	3%
solar	2021	3	solar_2021_3	18%	18%	18%
solar	2021	4	solar_2021_4	15%	15%	15%
solar	2021	5	solar_2021_5	16%	16%	16%
solar	2021	6	solar_2021_6	31%	31%	31%
solar	2021	7	solar_2021_7	39%	39%	39%
solar	2021	8	solar_2021_8	27%	27%	27%
solar	2021	9	solar_2021_9	14%	14%	14%
solar	2021	10	solar_2021_10	2%	2%	2%
solar	2021	11	solar_2021_11	2%	2%	2%
solar	2021	12	solar_2021_12	0%	0%	0%
solar	2022	1	solar_2022_1	4%	4%	4%
solar	2022	2	solar_2022_2	3%	3%	3%
solar	2022	3	solar_2022_3	18%	18%	18%
solar	2022	4	solar_2022_4	15%	15%	15%
solar	2022	5	solar_2022_5	16%	16%	16%
solar	2022	6	solar_2022_6	31%	31%	31%
solar	2022	7	solar_2022_7	39%	39%	39%
solar	2022	8	solar_2022_8	27%	27%	27%
solar	2022	9	solar_2022_9	14%	14%	14%
solar	2022	10	solar_2022_10	2%	2%	2%
solar	2022	11	solar_2022_11	2%	2%	2%
solar	2022	12	solar_2022_12	0%	0%	0%
solar	2023	1	solar_2023_1	4%	4%	4%
solar	2023	2	solar_2023_2	3%	3%	3%
solar	2023	3	solar_2023_3	18%	18%	18%
solar	2023	4	solar_2023_4	15%	15%	15%
solar	2023	5	solar_2023_5	16%	16%	16%
solar	2023	6	solar_2023_6	31%	31%	31%
solar	2023	7	solar_2023_7	39%	39%	39%
solar	2023	8	solar_2023_8	27%	27%	27%
solar	2023	9	solar_2023_9	14%	14%	14%
solar	2023	10	solar_2023_10	2%	2%	2%
solar	2023	11	solar_2023_11	2%	2%	2%
solar	2023	12	solar_2023_12	0%	0%	0%
solar	2024	1	solar_2024_1	3%	3%	3%
solar	2024	2	solar_2024_2	3%	3%	3%
solar	2024	3	solar_2024_3	15%	16%	15%
solar	2024	4	solar_2024_4	13%	13%	13%
solar	2024	5	solar_2024_5	14%	14%	14%
solar	2024	6	solar_2024_6	27%	27%	27%
solar	2024	7	solar_2024_7	33%	34%	33%
solar	2024	8	solar_2024_8	23%	23%	23%
solar	2024	9	solar_2024_9	12%	12%	12%
solar	2024	10	solar_2024_10	2%	2%	2%
solar	2024	11	solar_2024_11	2%	2%	2%
solar	2024	12	solar_2024_12	0%	0%	0%
solar	2025	1	solar_2025_1	3%	3%	3%
solar	2025	2	solar_2025_2	2%	2%	2%
solar	2025	3	solar_2025_3	14%	13%	14%
solar	2025	4	solar_2025_4	12%	11%	12%
solar	2025	5	solar_2025_5	13%	12%	13%
solar	2025	6	solar_2025_6	24%	23%	24%
solar	2025	7	solar_2025_7	31%	29%	31%
solar	2025	8	solar_2025_8	21%	20%	21%
solar	2025	9	solar_2025_9	11%	10%	11%
solar	2025	10	solar_2025_10	2%	1%	2%
solar	2025	11	solar_2025_11	2%	1%	2%
solar	2025	12	solar_2025_12	0%	0%	0%
solar	2026	1	solar_2026_1	3%	2%	3%
solar	2026	2	solar_2026_2	2%	2%	2%
solar	2026	3	solar_2026_3	12%	11%	12%
solar	2026	4	solar_2026_4	10%	9%	10%
solar	2026	5	solar_2026_5	10%	10%	10%
solar	2026	6	solar_2026_6	20%	19%	20%
solar	2026	7	solar_2026_7	25%	24%	25%
solar	2026	8	solar_2026_8	17%	16%	17%
solar	2026	9	solar_2026_9	9%	8%	9%
solar	2026	10	solar_2026_10	1%	1%	1%
solar	2026	11	solar_2026_11	1%	1%	1%
solar	2026	12	solar_2026_12	0%	0%	0%
solar	2027	1	solar_2027_1	3%	2%	3%
solar	2027	2	solar_2027_2	2%	2%	2%
solar	2027	3	solar_2027_3	12%	10%	12%
solar	2027	4	solar_2027_4	10%	8%	10%
solar	2027	5	solar_2027_5	10%	9%	10%
solar	2027	6	solar_2027_6	20%	17%	20%
solar	2027	7	solar_2027_7	25%	21%	25%
solar	2027	8	solar_2027_8	17%	15%	17%
solar	2027	9	solar_2027_9	9%	8%	9%
solar	2027	10	solar_2027_10	1%	1%	1%
solar	2027	11	solar_2027_11	1%	1%	1%
solar	2027	12	solar_2027_12	0%	0%	0%
solar	2028	1	solar_2028_1	3%	2%	3%
solar	2028	2	solar_2028_2	2%	1%	2%
solar	2028	3	solar_2028_3	12%	8%	12%
solar	2028	4	solar_2028_4	10%	7%	10%
solar	2028	5	solar_2028_5	10%	8%	10%
solar	2028	6	solar_2028_6	20%	15%	20%
solar	2028	7	solar_2028_7	25%	18%	25%
solar	2028	8	solar_2028_8	17%	13%	17%
solar	2028	9	solar_2028_9	9%	7%	9%
solar	2028	10	solar_2028_10	1%	1%	1%
solar	2028	11	solar_2028_11	1%	1%	1%
solar	2028	12	solar_2028_12	0%	0%	0%
solar	2029	1	solar_2029_1	3%	2%	3%
solar	2029	2	solar_2029_2	2%	1%	2%
solar	2029	3	solar_2029_3	12%	7%	12%
solar	2029	4	solar_2029_4	10%	6%	10%
solar	2029	5	solar_2029_5	10%	6%	10%

solar	2029	6	solar_2029_6	20%	12%	20%
solar	2029	7	solar_2029_7	25%	16%	25%
solar	2029	8	solar_2029_8	17%	11%	17%
solar	2029	9	solar_2029_9	9%	6%	9%
solar	2029	10	solar_2029_10	1%	1%	1%
solar	2029	11	solar_2029_11	1%	1%	1%
solar	2029	12	solar_2029_12	0%	0%	0%
solar	2030	1	solar_2030_1	3%	1%	3%
solar	2030	2	solar_2030_2	2%	1%	2%
solar	2030	3	solar_2030_3	12%	6%	12%
solar	2030	4	solar_2030_4	10%	5%	10%
solar	2030	5	solar_2030_5	10%	5%	10%
solar	2030	6	solar_2030_6	20%	10%	20%
solar	2030	7	solar_2030_7	25%	13%	25%
solar	2030	8	solar_2030_8	17%	9%	17%
solar	2030	9	solar_2030_9	9%	5%	9%
solar	2030	10	solar_2030_10	1%	1%	1%
solar	2030	11	solar_2030_11	1%	1%	1%
solar	2030	12	solar_2030_12	0%	0%	0%
psh	2020	1	psh_2020_1	100%	100%	100%
psh	2020	2	psh_2020_2	100%	100%	100%
psh	2020	3	psh_2020_3	100%	100%	100%
psh	2020	4	psh_2020_4	100%	100%	100%
psh	2020	5	psh_2020_5	100%	100%	100%
psh	2020	6	psh_2020_6	100%	100%	100%
psh	2020	7	psh_2020_7	100%	100%	100%
psh	2020	8	psh_2020_8	100%	100%	100%
psh	2020	9	psh_2020_9	100%	100%	100%
psh	2020	10	psh_2020_10	100%	100%	100%
psh	2020	11	psh_2020_11	100%	100%	100%
psh	2020	12	psh_2020_12	100%	100%	100%
psh	2021	1	psh_2021_1	100%	100%	100%
psh	2021	2	psh_2021_2	100%	100%	100%
psh	2021	3	psh_2021_3	100%	100%	100%
psh	2021	4	psh_2021_4	100%	100%	100%
psh	2021	5	psh_2021_5	100%	100%	100%
psh	2021	6	psh_2021_6	100%	100%	100%
psh	2021	7	psh_2021_7	100%	100%	100%
psh	2021	8	psh_2021_8	100%	100%	100%
psh	2021	9	psh_2021_9	100%	100%	100%
psh	2021	10	psh_2021_10	100%	100%	100%
psh	2021	11	psh_2021_11	100%	100%	100%
psh	2021	12	psh_2021_12	100%	100%	100%
psh	2022	1	psh_2022_1	100%	100%	100%
psh	2022	2	psh_2022_2	100%	100%	100%
psh	2022	3	psh_2022_3	100%	100%	100%
psh	2022	4	psh_2022_4	100%	100%	100%
psh	2022	5	psh_2022_5	100%	100%	100%
psh	2022	6	psh_2022_6	100%	100%	100%
psh	2022	7	psh_2022_7	100%	100%	100%
psh	2022	8	psh_2022_8	100%	100%	100%
psh	2022	9	psh_2022_9	100%	100%	100%
psh	2022	10	psh_2022_10	100%	100%	100%
psh	2022	11	psh_2022_11	100%	100%	100%
psh	2022	12	psh_2022_12	100%	100%	100%
psh	2023	1	psh_2023_1	100%	100%	100%
psh	2023	2	psh_2023_2	100%	100%	100%
psh	2023	3	psh_2023_3	100%	100%	100%
psh	2023	4	psh_2023_4	100%	100%	100%
psh	2023	5	psh_2023_5	100%	100%	100%
psh	2023	6	psh_2023_6	100%	100%	100%
psh	2023	7	psh_2023_7	100%	100%	100%
psh	2023	8	psh_2023_8	100%	100%	100%
psh	2023	9	psh_2023_9	100%	100%	100%
psh	2023	10	psh_2023_10	100%	100%	100%
psh	2023	11	psh_2023_11	100%	100%	100%
psh	2023	12	psh_2023_12	100%	100%	100%
psh	2024	1	psh_2024_1	100%	100%	100%
psh	2024	2	psh_2024_2	100%	100%	100%
psh	2024	3	psh_2024_3	100%	100%	100%
psh	2024	4	psh_2024_4	100%	100%	100%
psh	2024	5	psh_2024_5	100%	100%	100%
psh	2024	6	psh_2024_6	100%	100%	100%
psh	2024	7	psh_2024_7	100%	100%	100%
psh	2024	8	psh_2024_8	100%	100%	100%
psh	2024	9	psh_2024_9	100%	100%	100%
psh	2024	10	psh_2024_10	100%	100%	100%
psh	2024	11	psh_2024_11	100%	100%	100%
psh	2024	12	psh_2024_12	100%	100%	100%
psh	2025	1	psh_2025_1	100%	100%	100%
psh	2025	2	psh_2025_2	100%	100%	100%
psh	2025	3	psh_2025_3	100%	100%	100%
psh	2025	4	psh_2025_4	100%	100%	100%
psh	2025	5	psh_2025_5	100%	100%	100%
psh	2025	6	psh_2025_6	100%	100%	100%
psh	2025	7	psh_2025_7	100%	100%	100%
psh	2025	8	psh_2025_8	100%	100%	100%
psh	2025	9	psh_2025_9	100%	100%	100%
psh	2025	10	psh_2025_10	100%	100%	100%
psh	2025	11	psh_2025_11	100%	100%	100%
psh	2025	12	psh_2025_12	100%	100%	100%
psh	2026	1	psh_2026_1	100%	100%	100%
psh	2026	2	psh_2026_2	100%	100%	100%
psh	2026	3	psh_2026_3	100%	100%	100%
psh	2026	4	psh_2026_4	100%	100%	100%
psh	2026	5	psh_2026_5	100%	100%	100%
psh	2026	6	psh_2026_6	100%	100%	100%
psh	2026	7	psh_2026_7	100%	100%	100%
psh	2026	8	psh_2026_8	100%	100%	100%
psh	2026	9	psh_2026_9	100%	100%	100%
psh	2026	10	psh_2026_10	100%	100%	100%
psh	2026	11	psh_2026_11	100%	100%	100%
psh	2026	12	psh_2026_12	100%	100%	100%
psh	2027	1	psh_2027_1	100%	100%	100%
psh	2027	2	psh_2027_2	100%	100%	100%
psh	2027	3	psh_2027_3	100%	100%	100%
psh	2027	4	psh_2027_4	100%	100%	100%
psh	2027	5	psh_2027_5	100%	100%	100%
psh	2027	6	psh_2027_6	100%	100%	100%
psh	2027	7	psh_2027_7	100%	100%	100%
psh	2027	8	psh_2027_8	100%	100%	100%
psh	2027	9	psh_2027_9	100%	100%	100%
psh	2027	10	psh_2027_10	100%	100%	100%
psh	2027	11	psh_2027_11	100%	100%	100%
psh	2027	12	psh_2027_12	100%	100%	100%
psh	2028	1	psh_2028_1	100%	100%	100%
psh	2028	2	psh_2028_2	100%	100%	100%
psh	2028	3	psh_2028_3	100%	100%	100%
psh	2028	4	psh_2028_4	100%	100%	100%
psh	2028	5	psh_2028_5	100%	100%	100%
psh	2028	6	psh_2028_6	100%	100%	100%
psh	2028	7	psh_2028_7	100%	100%	100%
psh	2028	8	psh_2028_8	100%	100%	100%

psh	2028	9	psh_2028_9	100%	100%	100%
psh	2028	10	psh_2028_10	100%	100%	100%
psh	2028	11	psh_2028_11	100%	100%	100%
psh	2028	12	psh_2028_12	100%	100%	100%
psh	2029	1	psh_2029_1	100%	100%	100%
psh	2029	2	psh_2029_2	100%	100%	100%
psh	2029	3	psh_2029_3	100%	100%	100%
psh	2029	4	psh_2029_4	100%	100%	100%
psh	2029	5	psh_2029_5	100%	100%	100%
psh	2029	6	psh_2029_6	100%	100%	100%
psh	2029	7	psh_2029_7	100%	100%	100%
psh	2029	8	psh_2029_8	100%	100%	100%
psh	2029	9	psh_2029_9	100%	100%	100%
psh	2029	10	psh_2029_10	100%	100%	100%
psh	2029	11	psh_2029_11	100%	100%	100%
psh	2029	12	psh_2029_12	100%	100%	100%
psh	2030	1	psh_2030_1	100%	100%	100%
psh	2030	2	psh_2030_2	100%	100%	100%
psh	2030	3	psh_2030_3	100%	100%	100%
psh	2030	4	psh_2030_4	100%	100%	100%
psh	2030	5	psh_2030_5	100%	100%	100%
psh	2030	6	psh_2030_6	100%	100%	100%
psh	2030	7	psh_2030_7	100%	100%	100%
psh	2030	8	psh_2030_8	100%	100%	100%
psh	2030	9	psh_2030_9	100%	100%	100%
psh	2030	10	psh_2030_10	100%	100%	100%
psh	2030	11	psh_2030_11	100%	100%	100%
psh	2030	12	psh_2030_12	100%	100%	100%
unknown	2020	1	unknown_2020_1	0%	0%	0%
unknown	2020	2	unknown_2020_2	0%	0%	0%
unknown	2020	3	unknown_2020_3	0%	0%	0%
unknown	2020	4	unknown_2020_4	0%	0%	0%
unknown	2020	5	unknown_2020_5	0%	0%	0%
unknown	2020	6	unknown_2020_6	0%	0%	0%
unknown	2020	7	unknown_2020_7	0%	0%	0%
unknown	2020	8	unknown_2020_8	0%	0%	0%
unknown	2020	9	unknown_2020_9	0%	0%	0%
unknown	2020	10	unknown_2020_10	0%	0%	0%
unknown	2020	11	unknown_2020_11	0%	0%	0%
unknown	2020	12	unknown_2020_12	0%	0%	0%
unknown	2021	1	unknown_2021_1	0%	0%	0%
unknown	2021	2	unknown_2021_2	0%	0%	0%
unknown	2021	3	unknown_2021_3	0%	0%	0%
unknown	2021	4	unknown_2021_4	0%	0%	0%
unknown	2021	5	unknown_2021_5	0%	0%	0%
unknown	2021	6	unknown_2021_6	0%	0%	0%
unknown	2021	7	unknown_2021_7	0%	0%	0%
unknown	2021	8	unknown_2021_8	0%	0%	0%
unknown	2021	9	unknown_2021_9	0%	0%	0%
unknown	2021	10	unknown_2021_10	0%	0%	0%
unknown	2021	11	unknown_2021_11	0%	0%	0%
unknown	2021	12	unknown_2021_12	0%	0%	0%
unknown	2022	1	unknown_2022_1	0%	0%	0%
unknown	2022	2	unknown_2022_2	0%	0%	0%
unknown	2022	3	unknown_2022_3	0%	0%	0%
unknown	2022	4	unknown_2022_4	0%	0%	0%
unknown	2022	5	unknown_2022_5	0%	0%	0%
unknown	2022	6	unknown_2022_6	0%	0%	0%
unknown	2022	7	unknown_2022_7	0%	0%	0%
unknown	2022	8	unknown_2022_8	0%	0%	0%
unknown	2022	9	unknown_2022_9	0%	0%	0%
unknown	2022	10	unknown_2022_10	0%	0%	0%
unknown	2022	11	unknown_2022_11	0%	0%	0%
unknown	2022	12	unknown_2022_12	0%	0%	0%
unknown	2023	1	unknown_2023_1	0%	0%	0%
unknown	2023	2	unknown_2023_2	0%	0%	0%
unknown	2023	3	unknown_2023_3	0%	0%	0%
unknown	2023	4	unknown_2023_4	0%	0%	0%
unknown	2023	5	unknown_2023_5	0%	0%	0%
unknown	2023	6	unknown_2023_6	0%	0%	0%
unknown	2023	7	unknown_2023_7	0%	0%	0%
unknown	2023	8	unknown_2023_8	0%	0%	0%
unknown	2023	9	unknown_2023_9	0%	0%	0%
unknown	2023	10	unknown_2023_10	0%	0%	0%
unknown	2023	11	unknown_2023_11	0%	0%	0%
unknown	2023	12	unknown_2023_12	0%	0%	0%
unknown	2024	1	unknown_2024_1	0%	0%	0%
unknown	2024	2	unknown_2024_2	0%	0%	0%
unknown	2024	3	unknown_2024_3	0%	0%	0%
unknown	2024	4	unknown_2024_4	0%	0%	0%
unknown	2024	5	unknown_2024_5	0%	0%	0%
unknown	2024	6	unknown_2024_6	0%	0%	0%
unknown	2024	7	unknown_2024_7	0%	0%	0%
unknown	2024	8	unknown_2024_8	0%	0%	0%
unknown	2024	9	unknown_2024_9	0%	0%	0%
unknown	2024	10	unknown_2024_10	0%	0%	0%
unknown	2024	11	unknown_2024_11	0%	0%	0%
unknown	2024	12	unknown_2024_12	0%	0%	0%
unknown	2025	1	unknown_2025_1	0%	0%	0%
unknown	2025	2	unknown_2025_2	0%	0%	0%
unknown	2025	3	unknown_2025_3	0%	0%	0%
unknown	2025	4	unknown_2025_4	0%	0%	0%
unknown	2025	5	unknown_2025_5	0%	0%	0%
unknown	2025	6	unknown_2025_6	0%	0%	0%
unknown	2025	7	unknown_2025_7	0%	0%	0%
unknown	2025	8	unknown_2025_8	0%	0%	0%
unknown	2025	9	unknown_2025_9	0%	0%	0%
unknown	2025	10	unknown_2025_10	0%	0%	0%
unknown	2025	11	unknown_2025_11	0%	0%	0%
unknown	2025	12	unknown_2025_12	0%	0%	0%
unknown	2026	1	unknown_2026_1	0%	0%	0%
unknown	2026	2	unknown_2026_2	0%	0%	0%
unknown	2026	3	unknown_2026_3	0%	0%	0%
unknown	2026	4	unknown_2026_4	0%	0%	0%
unknown	2026	5	unknown_2026_5	0%	0%	0%
unknown	2026	6	unknown_2026_6	0%	0%	0%
unknown	2026	7	unknown_2026_7	0%	0%	0%
unknown	2026	8	unknown_2026_8	0%	0%	0%
unknown	2026	9	unknown_2026_9	0%	0%	0%
unknown	2026	10	unknown_2026_10	0%	0%	0%
unknown	2026	11	unknown_2026_11	0%	0%	0%
unknown	2026	12	unknown_2026_12	0%	0%	0%
unknown	2027	1	unknown_2027_1	0%	0%	0%
unknown	2027	2	unknown_2027_2	0%	0%	0%
unknown	2027	3	unknown_2027_3	0%	0%	0%
unknown	2027	4	unknown_2027_4	0%	0%	0%
unknown	2027	5	unknown_2027_5	0%	0%	0%
unknown	2027	6	unknown_2027_6	0%	0%	0%
unknown	2027	7	unknown_2027_7	0%	0%	0%
unknown	2027	8	unknown_2027_8	0%	0%	0%
unknown	2027	9	unknown_2027_9	0%	0%	0%
unknown	2027	10	unknown_2027_10	0%	0%	0%
unknown	2027	11	unknown_2027_11	0%	0%	0%

unknown	2027	12	unknown_2027_12	0%	0%	0%
unknown	2028	1	unknown_2028_1	0%	0%	0%
unknown	2028	2	unknown_2028_2	0%	0%	0%
unknown	2028	3	unknown_2028_3	0%	0%	0%
unknown	2028	4	unknown_2028_4	0%	0%	0%
unknown	2028	5	unknown_2028_5	0%	0%	0%
unknown	2028	6	unknown_2028_6	0%	0%	0%
unknown	2028	7	unknown_2028_7	0%	0%	0%
unknown	2028	8	unknown_2028_8	0%	0%	0%
unknown	2028	9	unknown_2028_9	0%	0%	0%
unknown	2028	10	unknown_2028_10	0%	0%	0%
unknown	2028	11	unknown_2028_11	0%	0%	0%
unknown	2028	12	unknown_2028_12	0%	0%	0%
unknown	2029	1	unknown_2029_1	0%	0%	0%
unknown	2029	2	unknown_2029_2	0%	0%	0%
unknown	2029	3	unknown_2029_3	0%	0%	0%
unknown	2029	4	unknown_2029_4	0%	0%	0%
unknown	2029	5	unknown_2029_5	0%	0%	0%
unknown	2029	6	unknown_2029_6	0%	0%	0%
unknown	2029	7	unknown_2029_7	0%	0%	0%
unknown	2029	8	unknown_2029_8	0%	0%	0%
unknown	2029	9	unknown_2029_9	0%	0%	0%
unknown	2029	10	unknown_2029_10	0%	0%	0%
unknown	2029	11	unknown_2029_11	0%	0%	0%
unknown	2029	12	unknown_2029_12	0%	0%	0%
unknown	2030	1	unknown_2030_1	0%	0%	0%
unknown	2030	2	unknown_2030_2	0%	0%	0%
unknown	2030	3	unknown_2030_3	0%	0%	0%
unknown	2030	4	unknown_2030_4	0%	0%	0%
unknown	2030	5	unknown_2030_5	0%	0%	0%
unknown	2030	6	unknown_2030_6	0%	0%	0%
unknown	2030	7	unknown_2030_7	0%	0%	0%
unknown	2030	8	unknown_2030_8	0%	0%	0%
unknown	2030	9	unknown_2030_9	0%	0%	0%
unknown	2030	10	unknown_2030_10	0%	0%	0%
unknown	2030	11	unknown_2030_11	0%	0%	0%
unknown	2030	12	unknown_2030_12	0%	0%	0%
wind_high_cf	2020	1	wind_high_cf_2020_1	18%	18%	18%
wind_high_cf	2020	2	wind_high_cf_2020_2	15%	15%	15%
wind_high_cf	2020	3	wind_high_cf_2020_3	36%	35%	36%
wind_high_cf	2020	4	wind_high_cf_2020_4	32%	31%	32%
wind_high_cf	2020	5	wind_high_cf_2020_5	32%	31%	32%
wind_high_cf	2020	6	wind_high_cf_2020_6	42%	42%	42%
wind_high_cf	2020	7	wind_high_cf_2020_7	29%	29%	29%
wind_high_cf	2020	8	wind_high_cf_2020_8	27%	26%	27%
wind_high_cf	2020	9	wind_high_cf_2020_9	19%	19%	19%
wind_high_cf	2020	10	wind_high_cf_2020_10	10%	10%	10%
wind_high_cf	2020	11	wind_high_cf_2020_11	15%	15%	15%
wind_high_cf	2020	12	wind_high_cf_2020_12	17%	16%	17%
wind_high_cf	2021	1	wind_high_cf_2021_1	18%	18%	18%
wind_high_cf	2021	2	wind_high_cf_2021_2	15%	15%	15%
wind_high_cf	2021	3	wind_high_cf_2021_3	36%	35%	36%
wind_high_cf	2021	4	wind_high_cf_2021_4	32%	31%	32%
wind_high_cf	2021	5	wind_high_cf_2021_5	32%	31%	32%
wind_high_cf	2021	6	wind_high_cf_2021_6	42%	42%	42%
wind_high_cf	2021	7	wind_high_cf_2021_7	29%	29%	29%
wind_high_cf	2021	8	wind_high_cf_2021_8	27%	26%	27%
wind_high_cf	2021	9	wind_high_cf_2021_9	19%	19%	19%
wind_high_cf	2021	10	wind_high_cf_2021_10	10%	10%	10%
wind_high_cf	2021	11	wind_high_cf_2021_11	15%	15%	15%
wind_high_cf	2021	12	wind_high_cf_2021_12	17%	16%	17%
wind_high_cf	2022	1	wind_high_cf_2022_1	18%	18%	18%
wind_high_cf	2022	2	wind_high_cf_2022_2	15%	15%	15%
wind_high_cf	2022	3	wind_high_cf_2022_3	36%	35%	36%
wind_high_cf	2022	4	wind_high_cf_2022_4	32%	31%	32%
wind_high_cf	2022	5	wind_high_cf_2022_5	32%	31%	32%
wind_high_cf	2022	6	wind_high_cf_2022_6	42%	42%	42%
wind_high_cf	2022	7	wind_high_cf_2022_7	29%	29%	29%
wind_high_cf	2022	8	wind_high_cf_2022_8	27%	26%	27%
wind_high_cf	2022	9	wind_high_cf_2022_9	19%	19%	19%
wind_high_cf	2022	10	wind_high_cf_2022_10	10%	10%	10%
wind_high_cf	2022	11	wind_high_cf_2022_11	15%	15%	15%
wind_high_cf	2022	12	wind_high_cf_2022_12	17%	16%	17%
wind_high_cf	2023	1	wind_high_cf_2023_1	18%	18%	18%
wind_high_cf	2023	2	wind_high_cf_2023_2	15%	15%	15%
wind_high_cf	2023	3	wind_high_cf_2023_3	36%	35%	36%
wind_high_cf	2023	4	wind_high_cf_2023_4	32%	31%	32%
wind_high_cf	2023	5	wind_high_cf_2023_5	32%	31%	32%
wind_high_cf	2023	6	wind_high_cf_2023_6	42%	42%	42%
wind_high_cf	2023	7	wind_high_cf_2023_7	29%	29%	29%
wind_high_cf	2023	8	wind_high_cf_2023_8	27%	26%	27%
wind_high_cf	2023	9	wind_high_cf_2023_9	19%	19%	19%
wind_high_cf	2023	10	wind_high_cf_2023_10	10%	10%	10%
wind_high_cf	2023	11	wind_high_cf_2023_11	15%	15%	15%
wind_high_cf	2023	12	wind_high_cf_2023_12	17%	16%	17%
wind_high_cf	2024	1	wind_high_cf_2024_1	21%	20%	21%
wind_high_cf	2024	2	wind_high_cf_2024_2	18%	17%	18%
wind_high_cf	2024	3	wind_high_cf_2024_3	41%	41%	41%
wind_high_cf	2024	4	wind_high_cf_2024_4	37%	36%	37%
wind_high_cf	2024	5	wind_high_cf_2024_5	37%	36%	37%
wind_high_cf	2024	6	wind_high_cf_2024_6	49%	48%	49%
wind_high_cf	2024	7	wind_high_cf_2024_7	34%	33%	34%
wind_high_cf	2024	8	wind_high_cf_2024_8	31%	30%	31%
wind_high_cf	2024	9	wind_high_cf_2024_9	22%	22%	22%
wind_high_cf	2024	10	wind_high_cf_2024_10	12%	12%	12%
wind_high_cf	2024	11	wind_high_cf_2024_11	18%	17%	18%
wind_high_cf	2024	12	wind_high_cf_2024_12	19%	19%	19%
wind_high_cf	2025	1	wind_high_cf_2025_1	23%	23%	23%
wind_high_cf	2025	2	wind_high_cf_2025_2	20%	20%	20%
wind_high_cf	2025	3	wind_high_cf_2025_3	47%	46%	47%
wind_high_cf	2025	4	wind_high_cf_2025_4	42%	41%	42%
wind_high_cf	2025	5	wind_high_cf_2025_5	42%	41%	42%
wind_high_cf	2025	6	wind_high_cf_2025_6	55%	54%	55%
wind_high_cf	2025	7	wind_high_cf_2025_7	38%	38%	38%
wind_high_cf	2025	8	wind_high_cf_2025_8	35%	34%	35%
wind_high_cf	2025	9	wind_high_cf_2025_9	25%	25%	25%
wind_high_cf	2025	10	wind_high_cf_2025_10	13%	13%	13%
wind_high_cf	2025	11	wind_high_cf_2025_11	20%	20%	20%
wind_high_cf	2025	12	wind_high_cf_2025_12	22%	21%	22%

contract_status	description
online	Contract has been signed (or LSE owns the resource) and the resource is online as of 6/30/2020.
development	Contract has been signed and approved by CPUC and/or LSE's highest decision-making authority as applicable (or LSE owns the resource), but resource is still under development and not yet online (as of 6/30/2020). If the resource is planned to come online in phases, report Commercial Operating Date for each phase in the Notes column.
review	Contract has been selected and is under review by LSE's highest decision-making authority (e.g. board of directors) as of 6/30/2020. For LSE-owned resources, this means that the decision-making authority is reviewing whether to authorize an LSE-owned resource. This includes contracts shortlisted as a result of an RFO or a similar procurement method. It can also include bilateral contracts not resulting from a Request for Offer (RFO).
planned_existing	Contract (or decision to own resource) is planned for the future, and is not captured by the previous categories as of 6/30/2020. Report both planned bilateral contracts and planned RFOs here. **Use this for EXISTING resources which are online as of 6/30/2020.**
planned_new	Contract (or decision to own resource) is planned for the future, and is not captured by the previous categories as of 6/30/2020. Report both planned bilateral contracts and planned RFOs here. **Use this for FUTURE resources which are NOT online as of 6/30/2020.**

1. January
2. February
3. March
4. April
5. May
6. June
7. July
8. August
9. September
10. October
11. November
12. December

Queue Pos	Project Name	Interconnection Request Receive Date	Queue Date	Applicatio	Study Process	Type-1	Type-2	Fuel-1	Fuel-2	MW-1	MW-2	MW Total	Full Capac	County	State	Utility	Station or	Proposed On-line Date (as filed with IR)	Current On-line Date	Feasibility	System Impact Study or Phase I Cluster Study	Facilities Study (FAS) or Phase II Cluster Study	Optional Study (OS)	Interconnection Agreement Status
32	TULE WIND	5/12/2004	5/24/2004	ACTIVE	Serial LGIF	Wind Turbine		Wind Turbine		193.8		193.8	Partial Del	SAN DIEG(	CA	SDGE	Boulevard	9/1/2007	########	Waived	Complete	Complete	None	Executed
72	LAKE ELSINORE ADVANCED PUMPED STORAGE PROJECT	4/26/2005	6/21/2005	ACTIVE	Serial LGIF	Storage		Pumped-Storage hyd		500		500	Full Capac	RIVERSIDE	CA	SDGE	Proposed	########	########	Waived	Complete	Re-Study	None	Executed
93	VOYAGER WIND	2/15/2006	3/1/2006	ACTIVE	Serial LGIF	Wind Turbine		Wind Turbine		220		220	Full Capac	KERN	CA	SCE	Windhub	########	########	Waived	Complete	Complete	None	Executed
119	VOYAGER WIND 2	8/8/2006	8/8/2006	ACTIVE	Serial LGIF	Wind Turbine		Wind Turbine		500		500	Full Capac	KERN	CA	SCE	Windhub	########	########	Required	Complete	Complete	None	Executed
138	SANDSTORM WIND POWER	10/23/2006	10/23/2006	ACTIVE	Serial LGIF	Wind Turbine		Wind Turbine		150		150	Full Capac	RIVERSIDE	CA	SCE	Devers-Vis	########	########	Waived	Complete	Complete	None	Executed
159A	ENERGIA SIERRA JUAREZ WIND	12/6/2006	12/22/2006	ACTIVE	Serial LGIF	Wind Turbine		Wind Turbine		256		256	Full Capac	BAJA CALII	MX	SDGE	East Coun	6/1/2009	########	Required	Complete	Complete	None	Executed
272	AMERICAN KINGS SOLAR	11/1/2007	11/1/2007	ACTIVE	TC	Photovoltaic		Solar		123		123	Full Capac	KINGS	CA	PGAE	Henrietta	6/1/2012	########	NA	Complete	Complete	NA	Executed
294	DRACKER SOLAR	1/15/2008	1/16/2008	ACTIVE	TC	Photovoltaic		Solar		485		485	Full Capac	RIVERSIDE	CA	SCE	Colorado I	6/1/2012	########	NA	Complete	Complete	NA	Executed
365	ALMASOL	5/6/2008	5/12/2008	ACTIVE	TC	Photovolt	Storage	Solar	Battery	500	250	500	Full Capac	RIVERSIDE	CA	SCE	Red Bluff	########	########	NA	Complete	Complete	NA	Executed
421	SLOTH	5/30/2008	5/30/2008	ACTIVE	TC	Steam Turbine		Solar		49.5		49.5	Full Capac	RIVERSIDE	CA	SCE	Red Bluff	2/1/2012	########	NA	Complete	Complete	NA	Executed
506	ROSAMOND WEST SOLAR	7/30/2009	7/31/2009	ACTIVE	C01	Photovoltaic		Solar		300		300	Full Capac	KERN	CA	SCE	Whirlwind	########	7/1/2022	NA	Complete	Complete	NA	Executed
552	ORD MOUNTAIN	10/2/2009	2/1/2010	ACTIVE	C02	Photovolt	Storage	Solar	Battery	60	60	60	Energy On	SAN BERN.	CA	SCE	Calcite Sul	3/1/2012	9/6/2022	NA	Complete	Complete	NA	Executed
576	BLYTHE MESA SOLAR	1/29/2010	2/1/2010	ACTIVE	C02	Photovoltaic		Solar		224		224	Full Capac	RIVERSIDE	CA	SCE	Colorado I	########	########	NA	Complete	Complete	NA	Executed
602	CATALINA SOLAR	1/30/2010	2/1/2010	ACTIVE	C02	Photovoltaic		Solar		150		150	Full Capac	KERN	CA	SCE	Whirlwind	7/1/2013	########	NA	Complete	Complete	NA	Executed
643AE	DESERT HARVEST	7/30/2010	7/31/2010	ACTIVE	C03	Photovolt	Storage	Solar	Battery	150	35	150	Full Capac	RIVERSIDE	CA	SCE	Red Bluff	1/1/2014	########	NA	Complete	Complete	NA	Executed
653F	APPARENT FIRST HYBRID	10/7/2010	10/13/2010	ACTIVE	SGIP-TC	Photovolt	Storage	Solar	Battery	12	12.1	12	Full Capac	YOLO	CA	PGAE	Woodland	5/1/2012	########	NA	Complete	Complete	NA	Executed
720	LASSEN LODGE HYDROELECTRIC	3/31/2011	3/31/2011	ACTIVE	C04	Hydro		Water		4.5		4.5	Energy On	TEHAMA	CA	PGAE	Vota - Sou	########	########	NA	Complete	Complete	NA	Executed
723	LOTUS SOLAR FARM	3/31/2011	3/31/2011	ACTIVE	C04	Photovoltaic		Solar		50		50	Full Capac	MADERA	CA	PGAE	Borden Su	7/1/2014	########	NA	Complete	Complete	NA	Executed
744	REDWOOD SOLAR FARM	3/31/2011	3/31/2011	ACTIVE	C04	Photovoltaic		Solar		90		90	Full Capac	KERN	CA	PGAE	Lamont Su	7/1/2014	########	NA	Complete	Complete	NA	Executed
779	WRIGHT SOLAR	3/31/2011	3/31/2011	ACTIVE	C04	Photovoltaic		Solar		200		200	Full Capac	MERCED	CA	PGAE	Los Banos	1/6/2014	########	NA	Complete	Complete	NA	Executed
789	RUGGED SOLAR FARM	3/30/2011	3/31/2011	ACTIVE	C04	Photovoltaic		Solar		71.88		71.88	Energy On	SAN DIEG(	CA	SDGE	Boulevard	########	########	NA	Complete	Complete	NA	Executed
838	BLUE HORNET SOLAR	3/31/2011	3/31/2011	ACTIVE	C04	Photovoltaic		Solar		100		100	Full Capac	IMPERIAL	CA	SDGE	Imperial V	########	########	NA	Complete	Complete	NA	Executed
897	SORREL I SOLAR FARM	4/2/2012	4/2/2012	ACTIVE	C05	Photovoltaic		Solar		200		200	Full Capac	SAN BERN.	CA	SCE	Calcite Sul	########	8/1/2022	NA	Complete	Complete	NA	Executed
946	NORTHERN ORCHARD SOLAR	4/23/2013	4/30/2013	ACTIVE	C06	Photovoltaic		Solar		100		100	Full Capac	KERN	CA	PGAE	Midway- V	########	########	NA	Complete	Complete	NA	Executed
954	FIFTH STANDARD SOLAR	4/29/2013	4/30/2013	ACTIVE	C06	Photovoltaic		Solar		150		150	Full Capac	FRESNO	CA	PGAE	Gates Sub	7/1/2016	########	NA	Complete	Complete	NA	Executed
955	ALGONQUIN POWER SANGER 2	4/30/2013	4/30/2013	ACTIVE	C06	Combined Cycle		Natural Gas		60		60	Full Capac	FRESNO	CA	PGAE	Sanger Co	5/1/2014	########	NA	Complete	Complete	NA	Executed
965	JAVA SOLAR	4/30/2013	4/30/2013	ACTIVE	C06	Photovoltaic		Solar		13.5		13.5	Full Capac	KINGS	CA	PGAE	Henrietta-	########	########	NA	Complete	Complete	NA	Executed
968	PALOMAR ENERGY CENTER 2	4/30/2013	4/30/2013	ACTIVE	C06	Combined Cycle		Natural Gas		35		35	Full Capac	SAN DIEG(	CA	SDGE	Palomar E	3/1/2015	########	NA	Complete	Complete	NA	Executed
1002	LASSEN LODGE HYDROELECTRIC 2	5/1/2013	4/30/2013	ACTIVE	C06	Hydro		Water		0.5		0.5	Energy On	TEHAMA	CA	PGAE	Volta-Sout	########	########	NA	Complete	Complete	NA	Executed
1010	DYER SUMMIT WIND REPOWER	4/28/2014	4/30/2014	ACTIVE	C07	Wind Turbine		Wind Turbine		46.1		44.8	Full Capac	SAN JOAQ	CA	PGAE	Vasco-Her	########	########	NA	Complete	Complete	NA	Executed
1011	COLINAS DE ORO	4/28/2014	4/30/2014	ACTIVE	C07	Storage		Battery		30		30	Full Capac	ALAMEDA	CA	PGAE	Tesla Subs	########	3/1/2021	NA	Complete	Complete	NA	Executed
1027	BLACKBRIAR	5/1/2014	4/30/2014	ACTIVE	C07	Storage		Battery		20		20	Full Capac	FRESNO	CA	PGAE	Gates Sub	6/1/2016	########	NA	Complete	Complete	NA	Executed
1028	LITTLE BEAR SOLAR 1	4/30/2014	4/30/2014	ACTIVE	C07	Photovoltaic		Solar		20		20	Full Capac	FRESNO	CA	PGAE	Mendota	########	9/1/2020	NA	Complete	Complete	NA	Executed
1029	LITTLE BEAR SOLAR 2	4/30/2014	4/30/2014	ACTIVE	C07	Photovoltaic		Solar		20		20	Full Capac	FRESNO	CA	PGAE	Mendota	9/1/2018	9/1/2020	NA	Complete	Complete	NA	Executed
1030	SOUTH LAKE SOLAR	4/30/2014	4/30/2014	ACTIVE	C07	Photovolt	Storage	Solar	Battery	15	5	20	Energy On	FRESNO	CA	PGAE	Schindler-	########	########	NA	Complete	Complete	NA	Executed
1036	MUSTANG 2	4/30/2014	4/30/2014	ACTIVE	C07	Photovolt	Storage	Solar	Battery	153.4	150	153.4	Full Capac	KINGS	CA	PGAE	Mustang	########	########	NA	Complete	Complete	NA	Executed
1045	CHULA VISTA ENERGY CENTER 2	4/30/2014	4/30/2014	ACTIVE	C07	Storage		Battery		50		50	Energy On	SAN DIEG(	CA	SDGE	Otay Subs	########	########	NA	Complete	Complete	NA	In Progress
1047	NORTH JOHNSON ENERGY CENTER	4/30/2014	4/30/2014	ACTIVE	C07	Storage		Battery		50		50	Energy On	SAN DIEG(	CA	SDGE	El Cajon S	########	########	NA	Complete	Complete	NA	In Progress
1048	ESCONDIDO ENERGY CENTER 2	4/30/2014	4/30/2014	ACTIVE	C07	Storage		Battery		50		50	Energy On	SAN DIEG(	CA	SDGE	Escondido	########	########	NA	Complete	Complete	NA	In Progress
1062	WHITE WING RANCH SOLAR	4/30/2014	4/30/2014	ACTIVE	C07	Photovoltaic		Solar		200		200	Energy On	YUMA	AZ	SDGE	Hoodoo W	########	########	NA	Complete	Complete	NA	In Progress
1064	ARES NEVADA	4/30/2014	4/30/2014	ACTIVE	C07	Storage		Gravity via Rail		44		44	Full Capac	NYE	NV	GWT	Gamebird	1/1/2017	########	NA	Complete	Complete	NA	Executed
1074	GASKELL WEST	4/30/2014	4/30/2014	ACTIVE	C07	Photovoltaic		Solar		128.1		128.07	Full Capac	KERN	CA	SCE	Whirlwind	########	########	NA	Complete	Complete	NA	Executed
1076	WILLOW SPRINGS SOLAR 3	4/30/2014	4/30/2014	ACTIVE	C07	Photovoltaic		Solar		50		50	Full Capac	KERN	CA	SCE	Whirlwind	########	########	NA	Complete	Complete	NA	Executed
1096	ALTAMONT MIDWAY LTD	2/24/2015	4/13/2015	ACTIVE	FT	Wind Turbine		Wind Turbine		5		5	Energy On	ALAMEDA	CA	PGAE	Altamont I	########	########	None	NA	NA	NA	Executed
1097	BEAR CANYON ENERGY STORAGE	4/29/2015	4/30/2015	ACTIVE	C08	Storage		Battery		13.25		13	Full Capac	LAKE	CA	PGAE	Geysers #:	1/1/2018	9/1/2021	NA	Complete	Complete	NA	Executed
1103	CENTRAL 40	4/30/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		40		40	Full Capac	STANISLAU	CA	PGAE	Miller #1 1	8/1/2017	########	NA	Complete	Complete	NA	Executed
1106	FOUNTAIN WIND	4/30/2015	4/30/2015	ACTIVE	C08	Wind Turbine		Wind Turbine		206		200	Full Capac	SHASTA	CA	PGAE	Pit1-Cotto	########	########	NA	Complete	Complete	NA	Executed
1109	NORTH CENTRAL VALLEY	4/30/2015	4/30/2015	ACTIVE	C08	Storage		Battery		150		132	Full Capac	SAN JOAQ	CA	PGAE	Belotta Su	6/1/2021	4/1/2022	NA	Complete	Complete	NA	Executed
1111	BLACK DIAMOND ENERGY STORAGE	4/30/2015	4/30/2015	ACTIVE	C08	Storage		Battery		200		200	Full Capac	CONTRA C	CA	PGAE	Pittsburgh	6/1/2018	5/1/2021	NA	Complete	Complete	NA	Executed
1116	ULTRAPOWER CHINESE STATION BESS	4/30/2015	4/30/2015	ACTIVE	C08	Storage		Battery		10		10	Full Capac	TUOLUMN	CA	PGAE	Melones-(	########	########	NA	Complete	Complete	NA	Executed
1117	AQUAMARINE WESTSIDE	4/30/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		254		250	Full Capac	KINGS	CA	PGAE	Gates Sub	########	########	NA	Complete	Complete	NA	Executed
1120	CHESTNUT WESTSIDE	4/30/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		152		150	Full Capac	KINGS	CA	PGAE	Gates Sub	########	########	NA	Complete	Complete	NA	Executed
1127	LITTLE BEAR 3	4/28/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		20.44		20	Full Capac	FRESNO	CA	PGAE	Mendota	8/1/2020	8/1/2020	NA	Complete	Complete	NA	Executed
1128	LITTLE BEAR 4	4/28/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		103.1		100	Full Capac	FRESNO	CA	PGAE	Mendota	########	8/1/2020	NA	Complete	Complete	NA	Executed
1129	LUNA VALLEY SOLAR	4/30/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		204		200	Full Capac	FRESNO	CA	PGAE	Tranquility	########	########	NA	Complete	Complete	NA	Executed
1135	SCARLET	4/29/2015	4/30/2015	ACTIVE	C08	Photovolt	Storage	Solar	Battery	417.9	420	400	Full Capac	FRESNO	CA	PGAE	Tranquillit	########	########	NA	Complete	Complete	NA	Executed
1136	WESTLANDS ALMOND	4/30/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		20		20	Energy On	KINGS	CA	PGAE	Kent SW S	########	########	NA	Complete	Complete	NA	Executed
1139	WESTLANDS SOLAR BLUE	4/30/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		252		250	Full Capac	KINGS	CA	PGAE	Gates Sub	########	########	NA	Complete	Complete	NA	Executed
1141	ALAMO SPRINGS SOLAR 1	4/30/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		80		80	Full Capac	KERN	CA	PGAE	Arco Subst	########	########	NA	Complete	Complete	NA	Executed
1143	LAKE ALPAUGH BATTERY STORAGE	4/29/2015	4/30/2015	ACTIVE	C08	Storage		Battery		10		10	Full Capac	TULARE	CA	PGAE	Corcoran-(	########	########	NA	Complete	Complete	NA	Executed
1157	ALAMO SPRINGS SOLAR 2	4/22/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		50		50	Full Capac	KERN	CA	PGAE	Arco Subst	########	########	NA	Complete	Complete	NA	Executed
1158	SLATE	4/29/2015	4/30/2015	ACTIVE	C08	Photovolt	Storage	Solar	Battery	308.5	308.7	300	Full Capac	KINGS	CA	PGAE	Mustang	########	########	NA	Complete	Complete	NA	Executed
1166	BIG ROCK SOLAR FARM	4/30/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		200		200	Full Capac	IMPERIAL	CA	SDGE	Imperial V	6/1/2020	########	NA	Complete	Complete	NA	Executed
1169	FALLBROOK ENERGY STORAGE	4/30/2015	4/30/2015	ACTIVE	C08	Storage		Battery		70		69.6	Full Capac	SAN DIEG(	CA	SDGE	Avocado S	2/1/2020	########	NA	Complete	Complete	NA	Executed
1170	GATEWAY ENERGY STORAGE	4/30/2015	4/30/2015	ACTIVE	C08	Storage		Battery		250		250	Full Capac	SAN DIEG(	CA	SDGE	Otay Mes:	9/1/2018	1/1/2020	NA	Complete	Complete	NA	Executed
1171	MCFARLAND SOLAR	4/30/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		500		500	Full Capac	YUMA	AZ	SDGE	Hoodoo W	########	6/1/2021	NA	Complete	Complete	NA	In Progress
1175	LA CONTE ENERGY STORAGE	4/29/2015	4/30/2015	ACTIVE	C08	Storage		Battery		125		125	Energy On	IMPERIAL	CA	SDGE	Imperial V	9/1/2018	########	NA	Complete	Complete	NA	In Progress
1189	SUN STREAMS SOLAR 2	4/28/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		150		150	Full Capac	MARICOP/	AZ	SDGE	Hassayam	########	########	NA	Complete	Complete	NA	In Progress
1191	VALLEY CENTER RENEWABLE	4/30/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		120		120	Full Capac	SAN DIEG(	CA	SDGE	Valley Cen	########	########	NA	Complete	Complete	NA	In Progress
1192	CRIMSON	4/29/2015	4/30/2015	ACTIVE	C08	Photovolt	Storage	Solar	Battery	359.6	365	350	Full Capac	RIVERSIDE	CA	SCE	Colorado I	########	########	NA	Complete	Complete	NA	Executed
1196	ARLINGTON	4/30/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		409.9		409.9	Full Capac	RIVERSIDE	CA	SCE	Colorado I	7/1/2021	7/1/2023	NA	Complete	Complete	NA	Executed
1198	QUARTZITE SOLAR 8	4/28/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		150		150	Full Capac	RIVERSIDE	CA	SCE	Colorado I	########	########	NA	Complete	Complete	NA	Executed
1200	VICTORY PASS SOLAR	4/30/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		200		200	Full Capac	RIVERSIDE	CA	SCE	Red Bluff	########	########	NA	Complete	Complete	NA	Executed
1204	PEAK VALLEY SOLAR FARM	4/30/2015	4/30/2015	ACTIVE	C08	Photovolt	Storage	Solar	Battery	200	200	200	Partial Del	SAN BERN.	CA	SCE	Kramer Su	6/1/2020	########	NA	Complete	Complete	NA	Executed
1207	SIENNA SOLAR FARM	4/30/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		200		200	Full Capac	SAN BERN.	CA	SCE	Calcite Sul	6/1/2020	########	NA	Complete	Complete	NA	Executed
1208	ANTELOPE SOLAR 2	4/30/2015	4/30/2015	ACTIVE	C08	Storage	Photovolt	Battery	Solar	200	450	650	Full Capac	LOS ANGE	CA	SCE	Antelope	########	########	NA	Complete	Complete	NA	Executed
1211	ROSAMOND SOUTH EAST	4/30/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		101.7		101.7	Full Capac	KERN	CA	SCE	Whirlwind	########	########	NA	Complete	Complete	NA	Executed
1212	GOLDEN FIELDS SOLAR	4/30/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		101.7		101.7	Full Capac	KERN	CA	SCE	Whirlwind	########	########	NA	Complete	Complete	NA	Executed
1215	RABBITBRUSH SOLAR	4/28/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		153.7		153.73	Full Capac	KERN	CA	SCE	Whirlwind	########	########	NA	Complete	Complete	NA	Executed
1217	WILLOW SPRINGS SOLAR 4	4/28/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		102		75	Full Capac	KERN	CA	SCE	Whirlwind	########	########	NA	Complete	Complete	NA	Executed
1218	NEVADA MOHAVE SOLAR	4/28/2015	4/30/2015	ACTIVE	C08	Photovoltaic		Solar		400		400	Energy On	CLARK	NV	SCE	Jointly-ow	########	########	NA	Complete	Complete	NA	In Progress
1222	AGUA CALIENTE SOLAR 2	3/1/2016	3/8/2016	ACTIVE	ISP	Photovoltaic		Solar		20		20	Energy On	MARICOP/	AZ	SDGE	Hoodoo W	########	########	NA			NA	
1223	AMERICAN KINGS 9	4/22/2016	5/2/2016	ACTIVE	C09	Photovoltaic		Solar		310.7		300	Energy On	KINGS	CA	PGAE	Mustang	########	########	NA	Complete	Complete	NA	In Progress
1225	CINCO	4/27/2016	5/2/2016	ACTIVE	C09	Storage	Photovolt	Battery	Solar	10.45	53.2	60	Energy On	FRESNO	CA	PGAE	Five Point:	6/1/2019	########	NA	Complete	Complete	NA	
1235	HUDSON SOLAR 1	4/21/2016	5/2/2016	ACTIVE	C09	Photovolt	Storage	Solar	Battery	86.64	99	85	Energy On	FRESNO	CA	PGAE	Panoche S	########	########	NA	Complete	Complete	NA	Executed
1239	MEDEIROS SOLAR	5/3/2016	5/2/2016	ACTIVE	C09	Photovoltaic		Solar		28.35		26.5	Energy On	MERCED	CA	PGAE	Los Banos	8/1/2019	8/1/2019	NA	Complete	Complete	NA	In Progress
1242	PLUOT	5/3/2016	5/2/2016	ACTIVE	C09	Photovoltaic		Solar		254		246.4	Energy On	KINGS	CA	PGAE	Gates 230	4/5/2023	4/5/2023	NA	Complete	Complete	NA	In Progress
1243	POMEGRANATE	5/3/2016	5/2/2016	ACTIVE	C09	Photovoltaic		Solar		254		249.7	Energy On	KINGS	CA	PGAE	Gates Sub	4/6/2022	4/5/2023	NA	Complete	Complete	NA	In Progress
1244	PROXIMA SOLAR	4/30/2016	5/2/2016	ACTIVE	C09	Photovolt	Storage	Solar	Battery	220	104.5	300	Full Capac	STANISLAU	CA	PGAE	Quinto-W	########	########	NA	Complete	Complete	NA	Executed
1259	NORTHERN ORCHARD SOLAR 2	4/27/2016	5/2/2016	ACTIVE	C09	Photovoltaic		Solar		133.6		130	Energy On	KERN	CA	PGAE	Midway -	########	########	NA	Complete	Complete	NA	In Progress
1260	NORTHERN ORCHARD SOLAR 3	4/27/2016	5/2/2016	ACTIVE	C09	Photovoltaic		Solar		102		100	Energy On	KERN	CA	PGAE	Midway -	########	########	NA	Complete	Complete	NA	In Progress
1269	CAPETOWN HYBRID	4/29/2016	5/2/2016	ACTIVE	C09	Wind Turbine		Wind Turbine		135.3		125	Energy On	HUMBOLD	CA	PGAE	Bridgeville	########	########	NA	Complete	Complete	NA	Executed
1270	CORBY	4/27/2016	5/2/2016	ACTIVE	C09	Storage		Battery		313.5		300	Full Capac	SOLANO	CA	PGAE	Vaca-Dixo	########	6/1/2022	NA	Complete	Complete	NA	In Progress
1272	CASCADE ENERGY STORAGE	5/2/2016	5/2/2016	ACTIVE	C09	Storage		Battery		25.2		25	Full Capac	SAN JOAQ	CA	PGAE	Weber Sul	########	########	NA	Complete	Complete	NA	Executed
1275	KOLA	4/26/2016	5/2/2016	ACTIVE	C09	Storage		Battery		418		418	Full Capac	ALAMEDA	CA	PGAE	Tesla Subs	########	########	NA	Complete	Complete	NA	Executed
1277	MULQUEENEY RANCH WIND	5/2/2016	5/2/2016	ACTIVE	C09	Wind Turbine		Wind Turbine		114		20	Full Capac	ALAMEDA	CA	PGAE	Tesla 230	3/1/2020	########	NA	Complete	Complete	NA	Executed
1284	WALKER RIDGE	5/23/2016	5/2/2016	ACTIVE	C09	Wind Turbine		Wind Turbine		144.9		140.9	Partial Del	LAKE	CA	PGAE	Cortina-M	2/1/2019	########	NA	Complete	Complete	NA	Executed
1291	MESQUITE SOLAR 5	4/28/2016	5/2/2016	ACTIVE	C09	Storage	Photovolt	Battery	Solar	20	300	300	Full Capac	MARICOP/	AZ	SDGE	Hassayam	########	########	NA	Complete	Complete	NA	Executed
1293	SIGNAL PEAK	4/28/2016	5/2/2016	ACTIVE	C09	Photovoltaic		Solar		400		400	Energy On	YUMA	AZ	SDGE	Hoodoo W	########	########	NA	Complete	Complete	NA	In Progress
1295	MARVEL	4/26/2016	5/2/2016	ACTIVE	C09	Storage		Battery		405.9		400	Full Capac	RIVERSIDE	CA	SCE	Devers Sul	4/1/2022	1/1/2023	NA	Complete	Complete	NA	Executed
1302	SOL CATCHER BESS	5/3/2016	5/2/2016	ACTIVE	C09	Storage		Battery		220		213.5	Energy On	RIVERSIDE	CA	SCE	Red Bluff	########	########	NA	Complete	Complete	NA	In Progress
1305	CALCITE SOLAR 1	4/22/2016	5/2/2016	ACTIVE	C09	Photovolt	Storage	Solar	Battery	102.9	20.7	100	Energy On	SAN BERN.	CA	SCE	Calcite 23(	8/1/2020	########	NA	Complete	Complete	NA	In Progress
1312	DAGGETT SOLAR 1	4/28/2016	5/2/2016	ACTIVE	C09	Photovolt	Storage	Solar	Battery	156	72	144	Full Capac	SAN BERN.	CA	SCE	Coolwater	########	########	NA	Complete	Complete	NA	Executed
1313	DAGGETT SOLAR 2	4/28/2016	5/2/2016	ACTIVE	C09	Photovolt	Storage	Solar	Battery	197.6	96	182	Full Capac	SAN BERN.	CA	SCE	Kramer Su	########	########	NA	Complete	Complete	NA	Executed
1314	DAGGETT SOLAR 3	4/28/2016	5/2/2016	ACTIVE	C09	Photovolt	Storage	Solar	Battery	324.5	150	300	Full Capac	SAN BERN.	CA	SCE	Kramer Su	########	########	NA	Complete	Complete	NA	Executed
1319	WILLY 9	4/25/2016	5/2/2016	ACTIVE	C09	Photovoltaic		Solar		259.8		250	Full Capac	KERN	CA	SCE	Whirlwind	########	########	NA	Complete	Complete	NA	Executed
1322	SOLAR STAR 3	4/25/2016	5/2/2016	ACTIVE	C09	Storage	Photovolt	Battery	Solar	24.95	25	24	Full Capac	KERN	CA	SCE	Whirlwind	########	########	NA	Complete	Complete	NA	Executed
1323	SOLAR STAR 4	4/25/2016	5/2/2016	ACTIVE	C09	Storage	Photovolt	Battery	Solar	24.95	25.05	24	Full Capac	KERN	CA	SCE	Whirlwind	########	########	NA	Complete	Complete	NA	Executed
1324	SAGEBRUSH SOLAR 3	4/27/2016	5/2/2016	ACTIVE	C09	Photovoltaic		Solar		311.4		300	Full Capac	KERN	CA	SCE	Windhub	########	6/1/2022	NA	Complete	Complete	NA	In Progress
1325	SAGEBRUSH SOLAR 2	4/27/2016	5/2/2016	ACTIVE	C09	Photovoltaic		Solar		208		200	Energy On	KERN	CA	SCE	Vincent Su	########	6/1/2022	NA	Complete	Complete	NA	In Progress
1327	CYCLONE SOLAR	4/29/2016	5/2/2016	ACTIVE	C09	Photovoltaic		Solar		57.95		56.87	Full Capac	KERN	CA	SCE	Whirlwind	7/1/2019	########	NA	Complete	Complete	NA	In Progress
1329	TROPICO SOLAR	4/29/2016	5/2/2016	ACTIVE	C09	Photovolt	Storage	Solar	Battery	112.3	40	110	Full Capac	KERN	CA	SCE	Whirlwind	########	########	NA	Complete	Complete	NA	Executed
1330	CLOVER ENERGY STORAGE PLANT	5/2/2016	5/2/2016	ACTIVE	C09	Storage		Battery		300		120	Full Capac	LOS ANGE	CA	SCE	Antelope	6/1/2019	########	NA	Complete	Complete	NA	Executed
1335	PASTORIA SOLAR	5/2/2016	5/2/2016	ACTIVE	C09	Photovoltaic		Solar		106.9		105.2	Full Capac	KERN	CA	SCE	Pastoria S	9/1/2019	########	NA	Complete	Complete	NA	Executed
1336	SOUTHLAND	4/27/2016	5/2/2016	ACTIVE	C09	Photovoltaic		Solar		380.1		375	Full Capac	CLARK	NV	SCE	Mohave S	########	########	NA	Complete	Complete	NA	In Progress
1339	TECHREN SOLAR	4/29/2016	5/2/2016	ACTIVE	C09	Photovoltaic		Solar		300		300	Full Capac	CLARK	NV	SCE	SCE owne	########	########	NA	Complete	Complete	NA	Executed
1341	YELLOW PINE 2	4/26/2016	5/2/2016	ACTIVE	C09	Photovoltaic		Solar		254.1		250	Full Capac	CLARK	NV	GWT	Crazy Eyes	########	########	NA	Complete	Complete	NA	Executed
1347	CRESCENT PEAK	5/2/2016	5/2/2016	ACTIVE	C09	Wind Turbine		Wind Turbine		310		303	Partial Del	CLARK	NV	GWT	Sloan Can	########	########	NA	Complete	Complete	NA	Executed
1349	ARAMIS POWER PLANT	4/28/2017	5/1/2017	ACTIVE	C10	Photovolt	Storage	Solar	Battery	101.4	101.3	100	Full Capac	ALAMEDA	CA	PGAE	Cayetano	########	########	NA	Complete	Complete	NA	Executed
1350	BELTRAN CENTRAL SOLAR	5/1/2017	5/1/2017	ACTIVE	C10	Photovoltaic		Solar		20.32		20	Full Capac	STANISLAU	CA	PGAE	Crow Cree	########	########	NA	Complete	Complete	NA	In Progress
1354	EAST-BAY-WIND	4/25/2017	5/1/2017	ACTIVE	C10	Wind Turbine		Wind Turbine		153		150	Full Capac	ALAMEDA	CA	PGAE	Tesla Subs	########	########	NA	Complete	Complete	NA	
1363	SAND HILL C	4/29/2017	5/1/2017	ACTIVE	C10	Wind Turbine		Wind Turbine		84.25		80.8	Full Capac	ALAMEDA	CA	PGAE	Delta Swit	########	########	NA	Complete	Complete	NA	Executed
1367	WEST FORD FLAT ENERGY STORAGE	4/28/2017	5/1/2017	ACTIVE	C10	Storage		Battery		26.25		25	Full Capac	LAKE	CA	PGAE	Fulton Sut	1/1/2020	########	NA	Complete	Complete	NA	
1368	WILBUR ENERGY STORAGE	5/1/2017	5/1/2017	ACTIVE	C10	Storage		Battery		94.5		91.3	Full Capac	CONTRA C	CA	PGAE	Contra Co:	########	########	NA	Complete	Complete	NA	
1374	ELKHORN ENERGY STORAGE	5/1/2017	5/1/2017	ACTIVE	C10	Storage		Battery		189		182.5	Full Capac	MONTERE	CA	PGAE	Moss Lanc	########	########	NA	Complete	Complete	NA	Executed
1378	GONZAGA WIND FARM	4/27/2017	5/1/2017	ACTIVE	C10	Wind Turbine		Wind Turbine		80		76.35	Energy On	MERCED	CA	PGAE	Los Banos	########	########	NA	Complete	Complete	NA	Executed
1379	HEARTLAND 1	4/26/2017	5/1/2017	ACTIVE	C10	Photovoltaic		Solar		156		150	Energy On	FRESNO	CA	PGAE	Tranquility	9/1/2021	########	NA	Complete	Complete	NA	In Progress
1380	HEARTLAND 2	4/26/2017	5/1/2017	ACTIVE	C10	Photovoltaic		Solar		156.1		150	Energy On	FRESNO	CA	PGAE	Tranquility	9/1/2021	9/1/2021	NA	Complete	Complete	NA	In Progress
1382	LAS CAMAS 1	4/29/2017	5/1/2017	ACTIVE	C10	Photovoltaic		Solar		102.5		100	Full Capac	MERCED	CA	PGAE	Los Banos	########	########	NA	Complete	Complete	NA	
1385	VANGUARD SOLAR BESS	4/29/2017	5/1/2017	ACTIVE	C10	Storage	Photovolt	Battery	Solar	47	153.32	150	Full Capac	FRESNO	CA	PGAE	Mustang	7/1/2020	########	NA	Complete	Complete	NA	
1389	REDUX SOLAR	5/1/2017	5/1/2017	ACTIVE	C10	Photovoltaic		Solar		128.2		125	Full Capac	FRESNO	CA	PGAE	Gates Sub	########	########	NA	Complete	Complete	NA	
1391	SONRISA	4/29/2017	5/1/2017	ACTIVE	C10	Photovoltaic		Solar		205.1		200	Full Capac	FRESNO	CA	PGAE	Tranquility	########	########	NA	Complete	Complete	NA	
1392	WARRIORS SOLAR	4/28/2017	5/1/2017	ACTIVE	C10	Photovoltaic		Solar		40.69		40	Full Capac	FRESNO	CA	PGAE	Crescent S	########	########	NA	Complete	Complete	NA	
1394	DRIFTWOOD STELLA	4/29/2017	5/1/2017	ACTIVE	C10	Photovoltaic		Solar		207.4		200	Full Capac	KERN	CA	PGAE	Midway S	########	########	NA	Complete	Complete	NA	In Progress
1397	SANDRINI SOL 1	4/29/2017	5/1/2017	ACTIVE	C10	Photovoltaic		Solar		104.2		100	Full Capac	KERN	CA	PGAE	Wheeler R	########	########	NA	Complete	Complete	NA	In Progress
1398	SANDRINI SOL 2	4/29/2017	5/1/2017	ACTIVE	C10	Photovoltaic		Solar		205.1		200	Full Capac	KERN	CA	PGAE	Wheeler R	########	########	NA	Complete	Complete	NA	In Progress

1402	ATLAS SOLAR	4/28/2017	5/1/2017	ACTIVE	C10	Storage	Photovolt	Battery	Solar	1920	3200	3200	Full Capac	LA PAZ	AZ	DCRT	Delaney-C	########	########	NA	Complete	Complete	NA	
1403	HARQUAHALA FLATS	5/1/2017	5/1/2017	ACTIVE	C10	Photovolt	Storage	Solar	Battery	450	450	450	Full Capac	MARICOP	AZ	DCRT	Colorado I	########	########	NA	Complete	Complete	NA	
1405	ATHOS POWER PLANT	4/28/2017	5/1/2017	ACTIVE	C10	Photovoltaic		Solar		458		450	Full Capac	RIVERSIDE	CA	SCE	Red Bluff S	########	########	NA	Complete	Complete	NA	Executed
1406	MESAVILLE SOLAR	5/1/2017	5/1/2017	ACTIVE	C10	Photovolt	Storage	Solar	Battery	476.3	229.9	675	Full Capac	RIVERSIDE	CA	SCE	Colorado I	9/1/2021	########	NA	Complete	Complete	NA	In Progress
1413	BALDY MESA	4/29/2017	5/1/2017	ACTIVE	C10	Storage	Photovolt	Battery	Solar	110	110.04	100	Full Capac	SAN BERN	CA	SCE	Roadway S	########	########	NA	Complete	Complete	NA	In Progress
1414	HIGH 5 SOLAR	4/28/2017	5/1/2017	ACTIVE	C10	Photovoltaic		Solar		100		100	Full Capac	SAN BERN	CA	SCE	Victor Sub	########	########	NA	Complete	Complete	NA	Executed
1415	RUBITA	4/28/2017	5/1/2017	ACTIVE	C10	Photovoltaic		Solar		102.2		100	Full Capac	SAN BERN	CA	SCE	Kramer-In	########	########	NA	Complete	Complete	NA	
1419	CAMINO SOLAR	4/27/2017	5/1/2017	ACTIVE	C10	Photovolt	Storage	Solar	Battery	44.88	22.44	54.28	Full Capac	KERN	CA	SCE	Whirlwind	########	########	NA	Complete	Complete	NA	Executed
1424	SAGEBRUSH SOLAR 4	4/28/2017	5/1/2017	ACTIVE	C10	Photovoltaic		Solar		524		500	Energy On	KERN	CA	SCE	Windhub S	########	########	NA	Complete	Complete	NA	
1427	DARLINGTON BALLEY SOLAR ENERGY 1	5/1/2017	5/1/2017	ACTIVE	C10	Photovolt	Storage	Solar	Battery	125	60	125	Full Capac	MARICOP	AZ	SDGE	Hassayam	########	########	NA	Complete	Complete	NA	
1428	MAVERICK	4/27/2017	5/1/2017	ACTIVE	C10	Storage		Battery		10		10	Full Capac	SAN DIEG	CA	SDGE	Miramar G	########	########	NA	Complete	Complete	NA	
1429	MOUNT LAGUNA WIND 2	4/28/2017	5/1/2017	ACTIVE	C10	Wind Turbine		Wind Turbine		400		400	Full Capac	SAN DIEG	CA	SDGE	Suncrest-C	6/1/2020	6/1/2020	NA	Complete	Complete	NA	In Progress
1431	ROSEBUD	4/27/2017	5/1/2017	ACTIVE	C10	Storage		Battery		10		10	Full Capac	SAN DIEG	CA	SDGE	Kearny 69	########	########	NA	Complete	Complete	NA	
1432	STARLIGHT SOLAR	5/1/2017	5/1/2017	ACTIVE	C10	Photovoltaic		Solar		20		20	Full Capac	SAN DIEG	CA	SDGE	Boulevard	6/1/2020	########	NA	Complete	Complete	NA	
1434	TOP GUN ENERGY STORAGE	4/28/2017	5/1/2017	ACTIVE	C10	Storage		Battery		30		30	Full Capac	SAN DIEG	CA	SDGE	Mirmar GT	########	########	NA	Complete	Complete	NA	Executed
1435	VIKTORIA SOLAR	4/24/2017	5/1/2017	ACTIVE	C10	Photovolt	Storage	Solar	Battery	250	100	250	Full Capac	YUMA	AZ	SDGE	Hoodoo W	########	########	NA	Complete	Complete	NA	
1437	WESTSIDE CANAL ENERGY CENTER	5/1/2017	5/1/2017	ACTIVE	C10	Storage	Photovolt	Battery	Solar	400	25	425	Full Capac	IMPERIAL	CA	SDGE	Imperial V	########	########	NA	Complete	Complete	NA	
1439	WIND WALL MONOLITH 1	4/30/2018	4/17/2018	ACTIVE	FT	Wind Turbine		Wind Turbine		4.96		4.96	Energy On	KERN	CA	SCE	Vincent Su	########	########	Offered	NA	NA	NA	Executed
1440	WIND WALL MONOLITH 2	4/30/2018	4/17/2018	ACTIVE	FT	Wind Turbine		Wind Turbine		3.7		3.7	Energy On	KERN	CA	SCE	Vincent Su	########	########	Offered	NA	NA	NA	
1441	KERNRIDGE EXPANSION	2/20/2018	5/17/2018	ACTIVE	ISP	Photovoltaic		Solar		26.5		0	Energy On	KERN	CA	PGAE	Kern Ridge	########	########	NA			NA	
1442	AJO POWER BANK	4/5/2018	4/16/2018	ACTIVE	C11	Storage		Battery		124.3		120	Full Capac	SANTA CL	CA	PGAE	Llagas-Gilr	########	########	NA	Complete		NA	
1443	ANGELA	4/13/2018	4/16/2018	ACTIVE	C11	Photovoltaic		Solar		141.1		40	Full Capac	TULARE	CA	PGAE	Olive Swit	########	########	NA	Complete		NA	
1444	BEAUCHAMP SOLAR	4/4/2018	4/16/2018	ACTIVE	C11	Photovoltaic		Solar		150		150	Full Capac	COLUSA	CA	PGAE	Cortina Su	########	########	NA	Complete		NA	
1454	HUMMINGBIRD ENERGY STORAGE	4/9/2018	4/16/2018	ACTIVE	C11	Storage		Battery		75		75	Full Capac	SANTA CL	CA	PGAE	Metcalf 11	########	########	NA	Complete		NA	
1455	JANUS	4/12/2018	4/16/2018	ACTIVE	C11	Storage	Photovolt	Battery	Solar	15	83.54	80	Full Capac	COLUSA	CA	PGAE	Cortina Su	########	########	NA	Complete		NA	
1456	LAS CAMAS 3	4/10/2018	4/16/2018	ACTIVE	C11	Photovoltaic		Solar		102.5		100	Full Capac	MERCED	CA	PGAE	Los Banos	########	########	NA	Complete		NA	
1457	MILPA POWER BANK	4/9/2018	4/16/2018	ACTIVE	C11	Storage		Battery		3		3	Full Capac	SANTA CL	CA	PGAE	Los Estero	########	########	NA	Complete		NA	
1459	MULQUEENEY RANCH WIND 2	4/12/2018	4/16/2018	ACTIVE	C11	Wind Turbine		Wind Turbine		62.5		60	Full Capac	ALAMEDA	CA	PGAE	Tesla Subs	########	########	NA	Complete		NA	
1460	PINTO PASS	4/12/2018	4/16/2018	ACTIVE	C11	Storage		Battery		20		20	Full Capac	CONTRA C	CA	PGAE	Christie Su	########	########	NA	Complete		NA	
1461	RECLAIMED WIND	4/4/2018	4/16/2018	ACTIVE	C11	Wind Turbine		Wind Turbine		112.2		90.7	Full Capac	ALAMEDA	CA	PGAE	Kelso - Tes	########	########	NA	Complete		NA	
1463	SOLANO 4 WIND	4/4/2018	4/16/2018	ACTIVE	C11	Wind Turbine		Wind Turbine		92.35		90.8	Full Capac	SOLANO	CA	PGAE	Birds Land	########	########	NA	Complete		NA	
1470	CABALLERO STORAGE	4/13/2018	4/16/2018	ACTIVE	C11	Storage		Battery		106.2		99.7	Full Capac	SAN LUIS (	CA	PGAE	Mesa Subs	########	########	NA	Complete		NA	
1472	DALLAS ENERGY STORAGE	4/11/2018	4/18/2018	ACTIVE	C11	Storage		Battery		500		400	Full Capac	MONTERE	CA	PGAE	Moss Lanc	########	########	NA	Complete	Complete	NA	In Progress
1479	KEY STORAGE 1	4/11/2018	4/16/2018	ACTIVE	C11	Storage		Battery		309.3		300	Full Capac	FRESNO	CA	PGAE	Gates Sub	########	########	NA	Complete		NA	
1484	PANOCHE ENERGY CENTER C11	4/10/2018	4/16/2018	ACTIVE	C11	Gas Turbine		Natural Gas		63		63	Full Capac	FRESNO	CA	PGAE	Panoche S	7/1/2020	7/1/2020	NA	Complete		NA	
1491	TEPONA OFF-SHORE WIND	4/14/2018	4/16/2018	ACTIVE	C11	Wind Turbine		Wind Turbine		161.9		156	Full Capac	HUMBOLD	CA	PGAE	Humboldt	########	########	NA	Complete		NA	
1492	WINDCHARGER ESS	4/12/2018	4/16/2018	ACTIVE	C11	Storage		Battery		150		150	Full Capac	SOLANO	CA	PGAE	Birds Land	########	########	NA	Complete		NA	
1493	AZALEA	4/16/2018	4/16/2018	ACTIVE	C11	Photovoltaic		Solar		61.3		60	Full Capac	KERN	CA	PGAE	Arco Subs	########	########	NA	Complete		NA	
1495	CHALAN SOLAR	4/13/2018	4/16/2018	ACTIVE	C11	Storage	Photovolt	Battery	Solar	25.2	66.6	64.9	Full Capac	KERN	CA	PGAE	Arco Subs	########	########	NA	Complete		NA	
1496	DESCENDANT RANCH 1	4/11/2018	4/16/2018	ACTIVE	C11	Storage	Photovolt	Battery	Solar	510	513.5	500	Full Capac	COLUSA	CA	PGAE	Delevan Si	########	########	NA	Complete		NA	
1499	JASMINE	4/16/2018	4/16/2018	ACTIVE	C11	Photovoltaic		Solar		71.16		70	Full Capac	KERN	CA	PGAE	Lakeview S	########	########	NA	Complete		NA	
1507	PROSPECT ENERGY STORAGE	4/16/2018	4/16/2018	ACTIVE	C11	Storage		Battery		58.75		49.9	Full Capac	SACRAME	CA	PGAE	Gold Hill S	6/1/2022	6/1/2022	NA	Complete		NA	
1510	BELLEFIELD SOLAR FARM	4/16/2018	4/16/2018	ACTIVE	C11	Photovolt	Storage	Solar	Battery	500	500	500	Full Capac	KERN	CA	SCE	Windhub S	########	########	NA	Complete		NA	
1516	REXFORD SOLAR FARM	4/16/2018	4/16/2018	ACTIVE	C11	Photovolt	Storage	Solar	Battery	300	300	300	Full Capac	TULARE	CA	SCE	Vestal Sub	########	########	NA	Complete		NA	
1518	SANBORN SOLAR 2	4/13/2018	4/16/2018	ACTIVE	C11	Photovoltaic		Solar		518.5		500	Full Capac	KERN	CA	SCE	Windhub S	########	########	NA	Complete		NA	
1519	BALDY MESA 2	4/15/2018	4/16/2018	ACTIVE	C11	Photovoltaic		Solar		110.9		100	Full Capac	SAN BERN	CA	SCE	Roadway S	########	########	NA	Complete		NA	
1522	ARIDA SOLAR FARM	4/16/2018	4/16/2018	ACTIVE	C11	Storage	Photovolt	Battery	Solar	370	370	370	Full Capac	CLARK	NV	SCE	Mohave S	########	########	NA	Complete		NA	
1524	SUNVALE SOLAR FARM	4/16/2018	4/16/2018	ACTIVE	C11	Storage	Photovolt	Battery	Solar	600	600	600	Full Capac	CLARK	NV	SCE	Eldorado S	########	########	NA	Complete		NA	
1526	QUARTZITE SOLAR 11	4/11/2018	4/16/2018	ACTIVE	C11	Storage	Photovolt	Battery	Solar	46.05	155.43	150	Full Capac	RIVERSIDE	CA	SCE	Colorado I	########	########	NA	Complete		NA	
1528	WINDY WASH SOLAR	4/13/2018	4/16/2018	ACTIVE	C11	Photovoltaic		Solar		79		79	Full Capac	RIVERSIDE	CA	SCE	Devers Sul	########	2/1/2023	NA	Complete		NA	
1529	CENTENNIAL FLATS	4/17/2018	4/16/2018	ACTIVE	C11	Photovolt	Storage	Solar	Battery	514.6	257.28	500	Full Capac	LA PAZ	AZ	DCRT	Delaney-C	########	########	NA	Complete		NA	
1531	BATERIA DEL SUR	4/16/2018	4/16/2018	ACTIVE	C11	Storage		Battery		350		350	Full Capac	TBD	MX	SDGE	Imperial V	5/1/2022	########	NA	Complete		NA	
1532	KETTLE SOLAR ONE	4/16/2018	4/16/2018	ACTIVE	C11	Photovolt	Storage	Solar	Battery	90	20	90	Full Capac	SAN DIEG	CA	SDGE	New Switc	########	########	NA	Complete		NA	
1534	VULCAN	4/11/2018	4/16/2018	ACTIVE	C11	Storage	Photovolt	Battery	Solar	28.8	225	250	Full Capac	MARICOP	AZ	SDGE	Hassayam	5/1/2021	########	NA	Complete		NA	
1537	CAMPTONVILLE BIOPOWER1	3/4/2019	4/5/2019	ACTIVE	ISP	Steam Turbine		Biofuel		5.5		5	Full Capac	YUBA	CA	PGAE	COLGATE-	########	########	NA			NA	
1538	KUIPER ENERGY STORAGE	11/19/2018	4/5/2019	ACTIVE	ISP	Storage		Battery		40.5		40	Full Capac	SONOMA	CA	PGAE	Geysers #	########	########	NA			NA	
1539	IRVING STORAGE	3/5/2019	5/7/2019	ACTIVE	ISP	Storage		Battery		782.8		750	Full Capac	MONTERE	CA	PGAE	Moss Lanc	########	########	NA	Complete	Complete	NA	
1540	PLANO STORAGE	3/5/2019	5/7/2019	ACTIVE	ISP	Storage		Battery		365		350	Full Capac	MONTERE	CA	PGAE	Moss Lanc	########	########	NA	Complete	Complete	NA	
1541	BRIGHT STAR HYBRID	4/5/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	356.8	361.74	350	Full Capac	SAN JOAQ	CA	PGAE	Brighton-E	########	########	NA			NA	
1542	CAPETOWN 2 HYBRID	4/5/2019	4/15/2019	ACTIVE	C12	Storage	Wind Turb	Battery	Wind Turb	50.88	54.6	100	Full Capac	HUMBOLD	CA	PGAE	Bridgeville	########	########	NA			NA	
1543	BEAUCHAMP 2 SOLAR	4/4/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	150	75	150	Full Capac	COLUSA	CA	PGAE	Cortina Su	########	########	NA			NA	
1545	MARESTE BESS	4/12/2019	4/15/2019	ACTIVE	C12	Storage		Battery		100.4		100	Full Capac	ALAMEDA	NN	PGAE	Grant East	########	########	NA			NA	
1546	TATTON STORAGE 1	4/14/2019	4/15/2019	ACTIVE	C12	Storage		Battery		30.58		30	Full Capac	MENDOCI	CA	PGAE	Elk-Guala	########	########	NA			NA	
1548	LORINER STORAGE	4/6/2019	4/15/2019	ACTIVE	C12	Storage		Battery		30.48		30	Full Capac	SANTA CL	CA	PGAE	Morgan Hi	########	########	NA			NA	
1549	MIRANDA ESS	4/4/2019	4/15/2019	ACTIVE	C12	Storage		Battery		200		200	Full Capac	SANTA CL	CA	PGAE	Los Estero	########	########	NA			NA	
1550	TANAGER STORAGE	4/2/2019	4/15/2019	ACTIVE	C12	Storage		Battery		200		200	Full Capac	SANTA CL	CA	PGAE	Los Estero	########	########	NA			NA	
1552	CORMORANT STORAGE	4/2/2019	4/15/2019	ACTIVE	C12	Storage		Battery		250		250	Full Capac	SAN FRAN	CA	PGAE	Martin Sul	########	########	NA			NA	
1553	JEWELFLOWER STORAGE	4/5/2019	4/15/2019	ACTIVE	C12	Storage		Battery		354.9		350	Full Capac	SANTA CL	CA	PGAE	Metcalf Su	########	########	NA			NA	
1554	HERCULIS	4/5/2019	4/15/2019	ACTIVE	C12	Storage		Battery		101.2		100	Full Capac	ALAMEDA	CA	PGAE	Oakland J-	########	########	NA			NA	
1555	STEEL CITY ENERGY STORAGE	4/4/2019	4/15/2019	ACTIVE	C12	Storage		Battery		1361		1311	Full Capac	CONTRA C	CA	PGAE	Pittsburg S	4/1/2022	4/1/2022	NA			NA	
1556	SPINDRIFT HYBRID SOLAR	4/6/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	101.7	101.73	100	Full Capac	SUTTER	CA	PGAE	Rio Oso Su	########	########	NA			NA	
1557	NOOSA ENERGY STORAGE	4/15/2019	4/15/2019	ACTIVE	C12	Storage		Battery		100		100	Full Capac	SAN JOAQ	CA	PGAE	Ripon Sub	########	########	NA			NA	
1558	HYDASPES	4/4/2019	4/15/2018	ACTIVE	C12	Storage	Photovolt	Battery	Solar	41.44	40.562	40	Full Capac	STANISLAU	CA	PGAE	Miller #1 T	########	########	NA			NA	
1559	TEMPEST GENERATION	4/8/2019	4/15/2019	ACTIVE	C12	Wind Turb	Storage	Wind Turb	Battery	1568	319.35	1500	Full Capac	HUMBOLD	CA	PGAE	Round Mc	########	########	NA			NA	
1561	TESOSTER	4/13/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	61.26	244.26	240	Full Capac	SAN JOAQ	NN	PGAE	Tesla-Wet	########	########	NA			NA	
1564	TRIM BESS	4/13/2019	4/15/2019	ACTIVE	C12	Storage		Battery		100.4		100	Full Capac	SANTA CL	NN	PGAE	Trimble Su	########	########	NA			NA	
1565	DYNAMO SOLAR	4/8/2019	4/15/2019	ACTIVE	C12	Photovoltaic		Solar		30		30	Full Capac	NAPA	CA	PGAE	Tulucay Su	########	########	NA			NA	
1566	TYRE	4/4/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	55.73	55.656	55	Full Capac	SAN JOAQ	CA	PGAE	Valley Spri	########	########	NA			NA	
1568	AIR STATION 1	4/16/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	21.05	21.05	40	Full Capac	KINGS	NN	PGAE	Henrietta-	########	########	NA			NA	
1572	OSO ROJO POPPY	4/5/2019	4/15/2019	ACTIVE	C12	Photovoltaic		Solar		184.5		190	Full Capac	FRESNO	CA	PGAE	Gates Sub	########	########	NA			NA	
1573	BOYCE SOLAR HYBRID	4/15/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	27.5	27.5	23	Full Capac	FRESNO	CA	PGAE	Jayne Sub	########	########	NA			NA	
1574	BIG DUCK STORAGE	4/15/2019	4/15/2019	ACTIVE	C12	Storage		Battery		462		400	Full Capac	FRESNO	CA	PGAE	Panoche S	7/1/2022	7/1/2022	NA			NA	
1578	JOURNEY STORAGE	4/5/2019	4/15/2019	ACTIVE	C12	Storage		Battery		354.9		350	Full Capac	KINGS	CA	PGAE	Henrietta	########	########	NA			NA	
1581	PINEBROOK SOLAR HYBRID ENERGY CENTER	4/1/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	1537	1537	1500	Full Capac	FRESNO	CA	PGAE	Los Banos	########	########	NA			NA	
1582	SUGARLOAF HYBRID SOLAR	4/9/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	152.8	150	150	Full Capac	FRESNO	CA	PGAE	Panoche S	########	########	NA			NA	
1584	RIVIERA SOLAR	12/27/2018	4/15/2019	ACTIVE	C12	Photovoltaic		Solar		75		75	Full Capac	MADERA	CA	PGAE	Wilson-Or	########	########	NA			NA	
1586	ARCTURUS	4/4/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	152.3	151.79	150	Full Capac	KERN	CA	PGAE	Arco Subs	########	########	NA			NA	
1587	KINGSROAD HYBRID SOLAR	4/16/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	101.8	101.78	100	Full Capac	KERN	CA	PGAE	Arco Subs	########	########	NA			NA	
1590	NIMITZ 2 GENERATION	4/8/2019	4/15/2019	ACTIVE	C12	Wind Turb	Storage	Wind Turb	Battery	1568	319.35	1500	Full Capac	SAN LUIS (	CA	PGAE	Diablo Car	4/1/2026	4/1/2026	NA			NA	
1591	CARTHAGE	4/4/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	55.9	55.8	55	Full Capac	KERN	CA	PGAE	Midway-T	########	########	NA			NA	
1592	OATFIELD HYBRID SOLAR	4/5/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	500	500	500	Full Capac	KINGS	CA	PGAE	Gates-Ten	########	########	NA			NA	
1593	PELICANS JAW HYBRID SOLAR	4/9/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	500	500	500	Full Capac	KINGS	CA	PGAE	Gates-Mid	########	########	NA			NA	
1594	GRAND LAKE HYBRID SOLAR	4/15/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	250	254	250	Full Capac	KINGS	CA	PGAE	Gates-Mid	########	########	NA			NA	
1595	OSO ROJO PEONY	4/5/2019	4/15/2019	ACTIVE	C12	Photovoltaic		Solar		358.9		350	Full Capac	KERN	CA	PGAE	Midway 2	########	########	NA			NA	
1596	BUTTONBUSH SOLAR HYBRID ENERGY CENTER	4/1/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	818	818	800	Full Capac	KERN	CA	PGAE	Midway Su	########	########	NA			NA	
1597	OSO ROJO GOLF COURSE	4/5/2019	4/15/2019	ACTIVE	C12	Photovoltaic		Solar		139.7		138	Full Capac	KERN	CA	PGAE	Midway-W	########	########	NA			NA	
1598	AGUA AMARGA WIND	4/12/2019	4/15/2019	ACTIVE	C12	Wind Turbine		Wind Turbine		403.2		400	Full Capac	SAN LUIS (	CA	PGAE	SOLARSS S	########	########	NA			NA	
1599	LION ROCK OFFSHORE WIND	4/15/2019	4/15/2019	ACTIVE	C12	Wind Turbine		Wind Turbine		627		605	Full Capac	SAN LUIS (	CA	PGAE	Morro Bay	4/1/2026	4/1/2026	NA			NA	
1600	SEAWOLF GENERATION	4/8/2019	4/15/2019	ACTIVE	C12	Storage	Wind Turb	Battery	Wind Turb	319.4	1568	1500	Full Capac	SAN LUIS (	CA	PGAE	Midway-D	########	########	NA			NA	
1601	FAMILIA HYBRID SOLAR	4/15/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	202.5	202.5	200	Full Capac	MARICOP	CA	PGAE	Midway-W	########	########	NA			NA	
1603	RIGAL	4/8/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	203	203	200	Full Capac	KERN	CA	SCE	Inyokern-I	########	########	NA			NA	
1604	ARATINA SOLAR FARM	4/1/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	200	200	200	Full Capac	KERN	CA	SCE	Kramer Su	6/1/2022	6/1/2022	NA			NA	
1605	CAYENNE ENERGY STORAGE	4/16/2019	4/15/2019	ACTIVE	C12	Storage		Battery		102.1		100	Full Capac	LOS ANGE	CA	SCE	Chino Sub	########	########	NA			NA	
1608	AVOCET STORAGE	4/1/2019	4/15/2019	ACTIVE	C12	Storage		Battery		200		200	Full Capac	LOS ANGE	CA	SCE	Hinson Su	########	########	NA			NA	
1609	HINSON BESS	4/10/2019	4/15/2019	ACTIVE	C12	Storage		Battery		308.1		300	Full Capac	LOS ANGE	CA	SCE	Hinson Su	########	########	NA			NA	
1610	SUPERBA STORAGE 1	4/11/2019	4/15/2019	ACTIVE	C12	Storage		Battery		305		300	Full Capac	ORANGE	CA	SCE	Johanna S	########	########	NA			NA	
1611	COMMERCE ENERGY STORAGE	4/9/2019	4/15/2019	ACTIVE	C12	Storage		Battery		250		250	Full Capac	LOS ANGE	CA	SCE	Laguna Be	1/1/2023	1/1/2023	NA			NA	
1612	SPEEDWAY ESS	4/5/2019	4/15/2019	ACTIVE	C12	Storage		Battery		200		200	Full Capac	LOS ANGE	CA	SCE	Rio Hondc	########	########	NA			NA	
1613	TRESTLES ENERGY STORAGE	4/16/2019	4/15/2019	ACTIVE	C12	Storage		Battery		433.8		400	Full Capac	LOS ANGE	CA	SCE	Rio Hondc	########	########	NA			NA	
1615	KESTREL STORAGE	4/1/2019	4/15/2019	ACTIVE	C12	Storage		Battery		200		200	Full Capac	LOS ANGE	CA	SCE	Walnut Su	########	########	NA			NA	
1616	HIGHWIND ENERGY CENTER	4/13/2019	4/15/2019	ACTIVE	C12	Storage	Wind Turb	Battery	Wind Turb	28.38	64.8	115	Full Capac	KERN	CA	SCE	Highwind	########	########	NA			NA	
1617	SEGS EXPANSION HYBRID	4/5/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	73.26	82.434	150	Full Capac	SAN BERN	CA	SCE	Kramer Su	########	########	NA			NA	
1618	DORADUS	4/4/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	203	203	200	Full Capac	KERN	CA	SCE	Magunder	########	########	NA			NA	
1619	GOLDBACK SOLAR CENTER	4/12/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	500	500	500	Full Capac	VENTURA	CA	SCE	Moorpark	6/1/2023	6/1/2023	NA			NA	
1620	ROCKY HILL SOLAR	4/5/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	102	51.56	100	Full Capac	TULARE	CA	SCE	Rector Sut	########	########	NA			NA	
1621	YELLOW HAY HYBRID SOLAR	4/5/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	200	200	200	Full Capac	TULARE	CA	SCE	Magunder	########	########	NA			NA	
1622	BARRENSPRING	4/13/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	64.17	244.26	240	Full Capac	TULARE C	NN	SCE	Springville	########	########	NA			NA	
1625	ANGELENO SOLAR FARM	3/31/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	1150	1150	1150	Full Capac	LOS ANGE	CA	SCE	Vincent Su	6/1/2023	6/1/2023	NA			NA	
1626	SAGEBRUSH 6 HYBRID	4/5/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	116	113.96	200	Full Capac	KERN	CA	SCE	Vincent Su	########	########	NA			NA	
1628	FORT TEJON SOLAR	4/5/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	310.2	306.26	300	Full Capac	LOS ANGE	CA	SCE	Vincent Su	########	########	NA			NA	
1629	HUMIDOR STORAGE 1	4/11/2019	4/15/2019	ACTIVE	C12	Storage		Battery		305		300	Full Capac	LOS ANGE	CA	SCE	Vincent Su	########	########	NA			NA	
1631	GLENFELIZ SOLAR FARM	4/1/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	500	500	500	Full Capac	KERN	CA	SCE	Windhub S	########	########	NA			NA	
1632	SANBORN HYBRID 3	4/5/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	671.6	778.55	1500	Full Capac	KERN	CA	SCE	Windhub S	########	########	NA			NA	
1635	YEAGER HYBRID SOLAR	4/15/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	406.6	406.56	400	Full Capac	KERN	CA	SCE	Windhub S	########	########	NA			NA	
1636	CALYPSO SOLAR	4/4/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	200	400	400	Full Capac	RIVERSIDE	CA	SCE	Colorado I	########	########	NA			NA	
1637	SOLO	4/5/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	518.4	518.4	500	Full Capac	RIVERSIDE	CA	SCE	Colorado I	########	########	NA			NA	
1640	SUNNYNOOK SOLAR CENTER	4/12/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	514.4	514.35	500	Full Capac	RIVERSIDE	CA	SCE	Devers-Sai	6/1/2023	6/1/2023	NA			NA	
1641	RAMPA	4/5/2019	4/15/2019	ACTIVE	C12	Storage		Battery		101		100	Full Capac	SAN BERN	CA	SCE	Etiwanda S	########	########	NA			NA	
1642	OBERON	4/2/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	518.4	518.4	500	Full Capac	RIVERSIDE	CA	SCE	Red Bluff S	########	########	NA			NA	
1643	LYCAN SOLAR	4/4/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	400	200	400	Full Capac	RIVERSIDE	CA	SCE	Red Bluff S	########	########	NA			NA	
1644	SAN BERNARDINO BESS	4/10/2019	4/15/2019	ACTIVE	C12	Storage		Battery		308.1		300	Full Capac	SAN BERN	CA	SCE	San Berna	########	########	NA			NA	
1645	MENIFEE POWER BANK	4/10/2019	4/15/2019	ACTIVE	C12	Storage		Battery		725		705	Full Capac	RIVERSIDE	CA	SCE	Valley Sub	########	########	NA			NA	
1646	DOUBLE BUTTE STORAGE	4/5/2019	4/15/2019	ACTIVE	C12	Storage		Battery		507.6		500	Full Capac	RIVERSIDE	CA	SCE	Valley Sub	########	########	NA			NA	
1647	ANGORA SOLAR FARM	4/2/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	700	700	700	Full Capac	CLARK	NV	SCE	Mohave S	########	########	NA			NA	
1648	BULLHEAD SOLAR	4/5/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	400	200	400	Full Capac	CLARK	NV	SCE	Mohave S	########	########	NA			NA	
1649	BONANZA SOLAR	4/5/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	150	300	300	Full Capac	CLARK/NY	NV	GWT	Innovatior	########	########	NA			NA	
1650	ROUGH HAT HYBRID SOLAR	4/15/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	204	200	200	Full Capac	NYE	NV	GWT	Trout Cany	########	########	NA			NA	
1653	SLOAN ENERGY CENTER	4/13/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	118.6	459.54	448	Full Capac	CLARK	NN	GWT	Sloan Cany	########	########	NA			NA	
1654	YELLOW PINE 3	4/9/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	262	254.98	250	Full Capac	CLARK	NV	GWT	Trout Cany	########	########	NA			NA	
1655	BONANZA PEAK SOLAR FARM	4/12/2019	4/12/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	200	441	400	Full Capac	CLARK AN	NV	GWT	Trout Cany	########	########	NA			NA	
1656	GYPSY ESS	4/4/2019	4/15/2019	ACTIVE	C12	Storage		Battery		200		200	Full Capac	SAN DIEG	CA	SDGE	Bay-Boule	########	########	NA			NA	
1657	SANDPIPER STORAGE	4/2/2019	4/15/2019	ACTIVE	C12	Storage		Battery		200		200	Full Capac	ORANGE	CA	SDGE	Capistranc	########	########	NA			NA	

1658	CARDINAL STORAGE	4/1/2019	4/15/2019	ACTIVE	C12	Storage		Battery		200		200	Full Capac	IMPERIAL	CA		SDGE	Imperial V	########	########	NA	NA
1660	ENERGIA SIERRA JUAREZ WIND 3	3/29/2019	4/15/2019	ACTIVE	C12	Wind Turbine		Wind Turbine		352.5		300	Full Capac	TIJUANA	MX		SDGE	ECO Subst	########	########	NA	NA
1661	OBSIDIAN WIND	4/5/2019	4/15/2019	ACTIVE	C12	Wind Turbine		Wind Turbine		300		300	Full Capac	BAJA CALII	MX		SDGE	ECO Subst	########	########	NA	NA
1662	VENTASSO ENERGY STORAGE	4/6/2019	4/15/2019	ACTIVE	C12	Storage		Battery		50.77		50	Full Capac	SAN DIEG(	CA		SDGE	El Cajon Su	########	########	NA	NA
1663	HOODINI	4/13/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	112.6	459.54	450	Full Capac	YUMA COI	NN		SDGE	Hoodoo W	########	########	NA	NA
1664	TERMOELECTRICA DE MEXICALI STORAGE	3/29/2019	4/15/2019	ACTIVE	C12	Storage		Battery		500		500	Full Capac	SONORA	MX		SDGE	Imperial V	########	########	NA	NA
1665	KINGSLEY SOLAR FARM	4/1/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	360	360	360	Full Capac	IMPERIAL	CA		SDGE	Imperial V	6/1/2023	6/1/2023	NA	NA
1666	SALTON SOLAR	4/5/2019	4/15/2019	ACTIVE	C12	Storage	Photovolt	Battery	Solar	210.6	421.2	400	Full Capac	IMPERIAL	CA		SDGE	Imperial V	########	########	NA	NA
1667	WISTARIA RANCH SOLAR 2	4/12/2019	4/15/2019	ACTIVE	C12	Photovolt	Storage	Solar	Battery	153.7	52.13	150	Full Capac	IMPERIAL	CA		SDGE	Imperial V	########	########	NA	NA
1668	SUFFOLK STORAGE	4/12/2019	4/15/2019	ACTIVE	C12	Storage		Battery		51		50	Full Capac	SAN DIEG(	CA		SDGE	Mesa Heig	########	########	NA	NA
1669	POME BESS	4/13/2019	4/15/2019	ACTIVE	C12	Storage		Battery		101.5		100	Full Capac	SAN DIEG(	NN		SDGE	Pomerado	########	########	NA	NA
1670	PEREGRINE STORAGE	4/1/2019	4/15/2019	ACTIVE	C12	Storage		Battery		200		200	Full Capac	SAN DIEG(	CA		SDGE	Silvergate	########	########	NA	NA
1671	MARINE DEPOT	4/16/2019	4/15/2019	ACTIVE	C12	Storage		Battery		26.6		25	Full Capac	SAN DIEG(	NN		SDGE	Point Lom	########	########	NA	NA
1672	BOULDER OAKS HYBRID	4/5/2019	4/15/2019	ACTIVE	C12	Wind Turb	Storage	Wind Turb	Battery	205.8	205	400	Full Capac	SAN DIEG(	CA		SDGE	ECO-Migu	########	########	NA	NA
1673	NIGHTHAWK STORAGE	4/2/2019	4/15/2019	ACTIVE	C12	Storage		Battery		300		300	Full Capac	SAN DIEG(	CA		SDGE	Sycamore	########	########	NA	NA
1674	SV ENERGY STORAGE FACILITY	4/12/2019	4/15/2019	ACTIVE	C12	Storage		Pumped-Storage hyd		500		500	Full Capac	SAN DIEG(	CA		SDGE	Sycamore	4/1/2026	4/1/2026	NA	NA
1675	RESAVA ENERGY STORAGE	4/5/2019	4/15/2019	ACTIVE	C12	Storage		Battery		122		120	Full Capac	SAN DIEG(	CA		SDGE	Valley Cen	########	########	NA	NA
N/A	Project not in queue																					
TBD	To be determined																					

CSP Category	RESOLVE Resource
Southern_PGE_Wind	Carrizo_Wind
Southern_PGE_Wind	Central_Valley_North_Los_Banos_Wind
Southern_PGE_Wind	Kern_Greater_Carrizo_Wind
Southern_PGE_Wind	Westlands_Ex_Wind
Southern_CA_Desert_South	Greater_Imperial_Wind
Southern_CA_Desert_South	SCADSNV_Wind
Southern_CA_Desert_South	Southern_California_Desert_Ex_Wind
Southern_CA_Desert_South	Southern_Nevada_Wind
Greater_Kramer_Wind	Greater_Kramer_Wind
Greater_Kramer_Wind	Kramer_Inyokern_Ex_Wind
Sacramento_River_Wind	Humboldt_Wind
Sacramento_River_Wind	Northern_California_Ex_Wind
Sacramento_River_Wind	Sacramento_River_Wind
Sacramento_River_Wind	Solano_subzone_Wind
Sacramento_River_Wind	Solano_Wind
Tehachapi_Wind	Tehachapi_Wind
Wyoming_Wind	Wyoming_Wind
New_Mexico_Wind	New_Mexico_Wind
NW_Ext_Tx_Wind	NW_Ext_Tx_Wind
SW_Ext_Tx_Wind	SW_Ext_Tx_Wind
Humboldt_Bay_Offshore_Wi	Cape_Mendocino_Offshore_Wind
Humboldt_Bay_Offshore_Wi	Del_Norte_Offshore_Wind
Humboldt_Bay_Offshore_Wi	Humboldt_Bay_Offshore_Wind
Diablo_Canyon_Offshore_W	Diablo_Canyon_Offshore_Wind_Ext_Tx
Diablo_Canyon_Offshore_W	Diablo_Canyon_Offshore_Wind
Diablo_Canyon_Offshore_W	Morro_Bay_Offshore_Wind
Southern_PGE_Solar	Carrizo_Solar
Southern_PGE_Solar	Central_Valley_North_Los_Banos_Solar
Southern_PGE_Solar	Kern_Greater_Carrizo_Solar
Southern_PGE_Solar	Westlands_Ex_Solar
Southern_PGE_Solar	Westlands_Solar
Southern_CA_Desert_South	Greater_Imperial_Solar
Southern_CA_Desert_South	Riverside_Palm_Springs_Solar
Southern_CA_Desert_South	SCADSNV_Solar
Southern_CA_Desert_South	Southern_California_Desert_Ex_Solar
Southern_CA_Desert_South	Southern_Nevada_Solar
Southern_CA_Desert_South	Mountain_Pass_El_Dorado_Solar
Southern_CA_Desert_South	Arizona_Solar
Greater_Kramer_Solar	Inyokern_North_Kramer_Solar
Greater_Kramer_Solar	Kramer_Inyokern_Ex_Solar
Greater_Kramer_Solar	North_Victor_Solar
Sacramento_River_Solar	Northern_California_Ex_Solar
Sacramento_River_Solar	Sacramento_River_Solar
Sacramento_River_Solar	Solano_Solar
Sacramento_River_Solar	Solano_subzone_Solar
Tehachapi_Solar	Tehachapi_Solar

Tehachapi_Solar Tehachapi_Ex_Solar

Attachment 22A

Template updated by Commission on June 15, 2020

Standard LSE Plan

[NAME OF FILING ENTITY]

2020 INTEGRATED RESOURCE PLAN

[DATE]

Table of Contents

How to use this template:

- *All LSEs required to file a Standard LSE Plan must use this template, as well as the accompanying Resource Data Template and Clean System Power calculator provided by staff.*
- *All LSEs filing a Non-Standard Plan may use this template. If Non-Standard LSE Plan filers choose to submit this template, they do not have to submit the Clean System Power calculator tool, the Resource Data Template, or address any of the requirements based on contracted or planned resource information.*
- *Instructions are provided in italics under each section. Delete all instructions before submitting the form, but preserve the numbered section headings.*
- *Complete each section. If the section is not applicable to the LSE, simply indicate "Not applicable" and provide a brief explanation.*
- *Definitions are provided in the Glossary of Terms at the end of this template.*

I. Executive Summary

Use this section to provide an overview of the process used by the LSE to develop its plan and summarize the LSE's findings, including a brief overview of the LSE's Preferred Conforming Portfolio and Action Plan.

II. Study Design

Use this section to describe how the LSE approached the process of developing its LSE Plan.

Load Assignments for Each LSE

IOUs and CCAs should use the "mid Baseline mid AAEE" version of Form 1.1c of the California Energy Commission's (CEC) 2019 IEPR demand forecast for planning purposes across the IRP planning horizon (i.e., until 2030, for the purposes of 2020 IRP Filings), unless a different load forecast has been approved through an ALJ Ruling finalizing load forecasts and GHG benchmarks.

ESPs should utilize load forecasts confidentially communicated to each ESP individually by Commission staff. Staff will aggregate any ESP submittals to protect confidentiality.

LSEs may provide their own load or load modifier shapes in the Clean System Power (CSP) calculator, but, for "Conforming Portfolios," the total annual energy volumes for both load and load modifiers must remain consistent with their assigned forecast. If using their own shapes, LSEs must provide detailed explanations as to how their load or load modifier shapes were developed, including data sources. If LSEs to not provide their own specific shapes, they will be automatically assigned the default hourly shapes in the CSP calculator, which reflects the 2019 IEPR "mid Baseline mid AAEE" hourly forecast for the CAISO system average.

LSEs are not be permitted to use an annual load forecast (MWh) that differs from the one assigned to it in IRP.

Required and Optional Portfolios

Each LSE must produce and submit at least two "Conforming Portfolios:" one that addresses the LSE's proportional share of the 46 MMT GHG target, and another that addresses the LSE's proportional share of a 38 MMT target. A Conforming Portfolio is one that utilizes the LSE's assigned load forecast and is consistent with the Commission-adopted Reference System Portfolio according to the following criteria:

- *For the 46 MMT conforming portfolio, achieves emissions equal to the LSE's 46 MMT 2030 GHG Emissions Benchmark.*
- *For the 38 MMT conforming portfolio, achieves emissions equal to or less than the LSE's 38 MMT 2030 GHG Emissions Benchmark.*
- *LSEs should use their individual load assignment as indicated above*
- *Uses inputs and assumptions consistent with those used by staff to develop the Reference System Portfolio, with the following exceptions based on updated information:*
    - *If the LSE has better capital cost and financing information that more accurately reflects its situation, the LSE is free to use those inputs and/or assumptions. For example, an LSE may have its own view of future resource levelized costs and it is free to use this information to develop its portfolio. LSEs should clearly identify, and provide an explanation for, instances where it used its own assumption in lieu of the default used by staff to develop the RSP.*
    - *Baseline resources – An LSE may have progressed with the development of resources since the formation of the baseline used in the Reference System Portfolio. The LSE is free to determine which of its resources are in its baseline when developing its portfolio, based on their latest information.*
- *Completing all three filing items (Resource Data Template, CSP calculator, and Narrative template) according to completeness definition which has been provided in the "Filing Requirements Standards" document.*

For a more comprehensive definition of a conforming portfolio refer to the "Filing Requirements Overview" document.

LSEs may study and report multiple Conforming Portfolios for each 2030 GHG target. LSEs are required to select two "Preferred Conforming Portfolios" among all Conforming Portfolios developed and submitted. One Preferred Conforming Portfolio that achieves emissions equal to the LSE's share of the 46 MMT GHG target, and a second Preferred Conforming Portfolio that achieves emissions equal to or less than the LSE's share of the 38 MMT GHG target. LSEs should justify the selections for each GHG target, including why the portfolio is consistent with all state goals and is the best representation for how the LSE plans to meet state goals. LSEs that submit a Preferred Conforming Portfolio that achieves less than its share of the 38 MMT target must also explain whether and how that portfolio might operate differently, from a reliability perspective, depending on whether other LSEs procure in a manner consistent with a 46 MMT or 38 MMT target.

LSEs may also study and report additional "Alternative Portfolios" developed from different assumptions (including different annual levels of load modifiers) from the Reference System Plan. LSEs may propose to

meet their load and GHG requirements with both supply-side and demand-side investments and must explain how these resources meet or beat their assigned load levels and GHG target.

For all Alternative Portfolios developed, any deviations from the Conforming Portfolio must be explained and justified. If the LSE uses different annual levels of load modifiers as part of any Alternative Portfolio the LSE should report that information using the standard IEPR filing form templates[1] associated with that information. All Alternative and Conforming Portfolios must use the same assigned load forecast as a starting point, but Alternative Portfolios can use demand-side resources such as energy efficiency or electrification to deviate from the annual levels of load modifiers assigned to them for their Conforming Portfolios.

CCAs are permitted, in the Action Plan section of this template, to also describe a procurement strategy certified by their governing board if it differs from the one associated with their Preferred Conforming Portfolio.

IOUs should assume no procurement on behalf of non-bundled customers would be needed unless specifically required by the Commission.

Additionally, each LSE should account for the costs and benefits of any resources subject to the cost allocation mechanism (CAM) in its Conforming Portfolios. In estimating its share of resources subject to the CAM, including for the purposes of entry into the Resource Data Template and Clean System Power calculator, each LSE should refer to the most recent year-ahead CAM resource list available on the Commission's Resource Adequacy Compliance Materials webpage. The year-ahead CAM list reflects the contract start and end dates of Commission approved CAM resources. The list itemizes the resource adequacy capacity value by month for each IOU service territory. In developing its Conforming Portfolios, each LSE should assume its future resource adequacy obligations are reduced by its proportional share of the resource adequacy capacity value reflected in the year-ahead CAM list, and then use the same methodology for estimating other costs and benefits associated with those resources. An LSE's proportional share is determined by its year-ahead share of the total coincident peak load for each IOU service territory, as assigned in the Commission's annual resource adequacy process. The LSE's proportional share of that resource is assumed static through the IRP planning horizon, but it will be updated each IRP cycle based on the current proportional share assignment from the Commission's annual resource adequacy process. LSEs should not make assumptions or predictions on what resources may be procured on behalf of all load and subject to the CAM in the future.

GHG Emissions Benchmark

LSEs have been assigned a new 2030 GHG Emissions Benchmark based on the results of the Reference System Portfolio, specifically the 2030 GHG planning target adopted by the Commission for the electric sector, calculated using the same methodology from the previous IRP cycle, and as established by the California Air Resources Board (CARB) 2018 Staff Report, "Senate Bill 350 Integrated Resource Planning

[1] Forms used for the 2019 IEPR cycle are available here: https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report/2019-iepr ; see the October 2018 Webinar on Forms and Instructions to Collect Electricity Demand Forecast and Electricity Resource Plan Data from Load-Serving Entities

Electricity Sector Greenhouse Gas Planning Targets."[2] *LSE GHG Benchmarks were assigned via ALJ Ruling on April 15, 2020 and are posted on the IRP website.*

Because the IEPR does not include load forecasts for individual ESPs, each ESP is required to calculate its own confidential GHG Emissions Benchmark based on its 2030 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. The CSP calculator includes a table for performing this calculation in the tab titled "ESP GHG Benchmark."

LSEs filing a Standard LSE Plan should use the CSP methodology and calculator for estimating their GHG emissions across the IRP planning horizon. It is important to note that neither emissions from, nor demand met by, Behind-the-Meter Combined Heat and Power (BTM CHP) resources are included in the CSP calculator. While individual LSEs are not required to plan to reduce BTM CHP emissions, these emissions nevertheless count towards the electric sector emissions total and are included in LSE GHG Benchmarks. Commission staff plans to account for 5.5 MMT of BTM CHP emissions when calculating electric sector emissions of the aggregated LSE portfolios during the development of the Preferred System Plan.

When calculating emissions in the CSP calculator, LSEs should achieve GHG emissions results that are slightly below their GHG benchmarks to leave room in the system for BTM CHP emissions that will be added during the portfolio aggregation process. The CSP calculator tab titled "Benchmarks Net BTM CHP" contains the LSE-specific benchmarks that LSEs should use for planning when using the CSP calculator. LSEs should use this worksheet to look up the maximum GHG emissions that its portfolio in the calculator can achieve.

a. Objectives

Provide a description of the LSE's objectives for the analytical work it is documenting in the IRP.

b. Methodology

i. Modeling Tool(s)

Name all modeling software used by LSE to develop its IRP, if any, and include the vendor and version number. Provide an explanation of differences between the LSE's modeling tool and RESOLVE, and an explanation of how those differences should be considered during evaluation of the LSE's portfolio(s).

[2] Available at https://ww3.arb.ca.gov/cc/sb350/staffreport_sb350_irp.pdf.

ii. Modeling Approach

Describe the LSE's overall approach to developing the scenarios it evaluated, and explain why each scenario was considered. Also describe any calculations, including post-processing calculations, used to generate metrics for portfolio analysis.

III. Study Results

Use this section to present the results of the analytical work described in Section 2: Study Design.

a. Conforming and Alternative Portfolios

Provide a list of all Conforming Portfolios and Alternative Portfolios developed. The portfolios should clearly identify and distinguish between the following:

- *Existing resources that the LSE owns or contracts with, consistent with definitions provided in the Resource Data Template.*
- *Existing resources that the LSE plans to contract with in the future.*
- *New resources that the LSE plans to invest in.*

For new resources, LSEs should provide a description in table form of how those planned resources compare to the mix of new resources identified in the Reference System Portfolio and comment on the significance of the variances, if any.

LSEs should report all contracted and planned resources for each plan filed in the Resource Data Template and provide a narrative summary of those reported resources in this section.

For the Alternative Portfolios, deviations from the Conforming Portfolio need to be explained and justified.

b. Preferred Conforming Portfolios

Provide a detailed description of the two Conforming Portfolios, one for the 46 MMT GHG target and another for the 38 MMT GHG target for which the LSE seeks Commission approval or certification. LSE should justify the portfolio selections for each GHG target. Explain the reasons for the LSE's preference and how its selections are consistent with each relevant statutory and administrative requirement (refer to PU Code Section 454.52(a)(1)). In providing its rationale, the LSE should assume that other LSEs procure in a manner consistent with the Reference System Plan. If the LSE submits a portfolio that achieves emissions reductions less than its 38 MMT benchmark, the LSE should explain and justify its selection of that portfolio, and explain whether and how that portfolio might operate differently, from a reliability perspective, depending on whether other LSEs procure in a manner consistent with a 46 MMT or 38 MMT target. If the LSE has a preference, it should also state in its

Narrative Template which Preferred Conforming Portfolio it prefers as a blueprint for its own procurement, and justify that choice.

c. GHG Emissions Results

Use the CSP calculator to estimate the GHG emissions associated with each portfolio and report those results in this section. There are two versions of the CSP calculator, one for the 46 MMT GHG target and another for the 38 MMT GHG target. LSEs should use the associated version for each GHG target for their reporting. If the LSE submits the a conforming portfolio that achieves less than its 38 MMT benchmark, it should estimate emissions for that portfolio using the 38 MMT version.

If an LSE uses a custom hourly load shape or GHG-free production profile in the CSP calculator for any portfolio, it must provide a detailed explanation as to how its load shape or production profile was developed, including the source of the data used.

d. Local Air Pollutant Minimization and Disadvantaged Communities

i. Local Air Pollutants

Use the CSP calculator to estimate the NOx, PM2.5, and SO2 emissions associated with the LSE's Preferred Conforming Portfolios and report those results in this section. If the LSE's only contribution to air pollutants are a result from reliance on system power, then the LSE should provide explanation in the Action Plan Section of its plan of how it plans to reduce reliance on system power.

ii. Focus on Disadvantaged Communities

Use this section to describe and provide quantitative evidence to support how the LSE's Preferred Conforming Portfolios minimizes local air pollutants with early priority on disadvantaged communities. The LSE must provide a description of which disadvantaged communities, if any, it serves. LSEs must also specify customers served in disadvantaged communities along with total disadvantaged population number served as a percentage of total number of customers served. Finally, LSEs must specify what current and planned LSE activities/programs, if any, address disadvantaged communities, and describe how the LSE's actions and engagement have changed over time. Please also describe any analysis or activities targeted at identifying feasible procurement opportunities to reduce reliance on fossil-fueled power plants, particularly those that are located within disadvantaged communities.

For purposes of IRP, a disadvantaged community is defined as any community statewide scoring in the top 25 percent statewide or in one of the 22 census tracts within the top five percent of communities with the highest pollution burden that do not have an overall score,

using the most recent version (CalEnviroScreen 3.0) of the California Environmental Protection Agency's CalEnviroScreen tool.

e. Cost and Rate Analysis

Describe and provide quantitative information to reflect how the LSE anticipates that its Preferred Conforming Portfolios will affect the costs for its customers. For this analysis, assume other LSEs procure resources in a manner consistent with the Reference System Plan.

Requirements for IOUs Only

Data must be provided showing the forecasted revenue requirement and system average rate for bundled customers for all portfolios developed by the IOU. The costs should be forecasted consistently with the categories covered by each IOU in its general rate case. The data should reflect the IOU's assigned load forecast (for the conforming portfolio), and revenue requirements for each portfolio should be broken down by the following categories:

- *Transmission*
- *Distribution (e.g. includes costs from distribution upgrades driven by customer-generation)*
- *DSM Programs (e.g. includes costs of energy-efficiency, demand response, and other programs)*
- *Generation (e.g. includes costs of utility-owned generation, bilateral contracts, renewables contracts, and storage contracts, net of revenue from EDU allowances)*
- *Other (e.g. includes nuclear decommissioning, DWR bonds, public purpose programs, and other miscellaneous)*

In presenting revenue requirement data, IOUs should clearly distinguish between current (baseline) projected revenue requirement broken down by the categories above, and the incremental projected revenue requirement broken down by the same categories. For each new resource portfolio that the IOU is showing results for in its Plan report all assumptions used such as cost escalation rate, inflation rate, levelization period, discount rate, taxes, financing, etc.

IOUs should complete the following tables, adhering as closely as possible to the units and categories listed. If the IOU is unable to report data in this exact format, it is permitted to deviate but must provide an explanation.

System Average Rates Associated with Preferred Conforming Portfolio (2019 $)

	2020	*2021*	*2022*	*2023*	*…*	*2030*
¢/kWh						
Rev. Req. $						

Revenue Requirements and System Average Bundled Rates for Preferred Conforming Portfolio (2019 $)

Line No.	*Cost Category*	*2020*	*…*	*2030*
1	*Distribution*			
2	*Transmission*			
3	*Generation*			
4	*Demand Side Programs*			
5	*Other*			
6 (sum lines 1-5)	*Baseline Revenue Requirement*			
7	*System Sales (GWh)*			
8	*Bundled Sales (GWh)*			
9	*System Average Delivery Rate (¢/kWh)*			
10	*Bundled Generation Rate (¢/kWh)*			
11	*System Average Bundled Rate (¢/kWh)*			

Requirements for All LSEs

All LSEs should consider cost and rate impacts on their customers when planning and submitting their individual IRPs, and, at a minimum, include a narrative description of their approach in support of this requirement.

f. System Reliability Analysis

Use this section to describe how the LSE's Preferred Conforming Portfolios contribute its fair share to system reliability and renewables integration. Whether the LSE's portfolios contribute its fair share

or not will not be judged based solely on the content of this section. System reliability and adequate renewables integration cannot be conclusively assessed until all LSEs' portfolios are combined and CPUC staff conducts LOLE studies on that aggregation.

However, requiring the LSE to report a quantitative summary of the effective capacity in its portfolios is a useful means to track the LSE's progress in contributing to reliability, in advance of a more conclusive assessment by CPUC staff after aggregating all LSEs' portfolios. To that end, the LSE shall include its "System Reliability Progress Tracking Table" from the LSE's Resource Data Template dashboard here, except for the row containing peak demand, as that data is based on confidential 2021 resource adequacy peak demand allocations (more detail below). This row can be omitted from this (public) Narrative Template, but must be included in the (confidential) Resource Data Template.

The amount of effective capacity in the System Reliability Progress Tracking Table will be auto-calculated based on the portfolio the LSE enters into the Resource Data Template. Following the instructions in the Resource Data Template, the LSE shall enter its confidential 2021 resource adequacy peak demand allocation for September in MW. The Resource Data Template will automatically calculate the LSE's share of peak in MW for all years by prorating the forecasted CAISO managed coincident peak demand (net of non-CPUC jurisdictional demand) using the ratio of the LSE's 2021 resource adequacy peak demand allocation to the 2021 CAISO managed coincident peak demand (net of non-CPUC jurisdictional demand). Because the resource adequacy peak demand allocations are confidential, the LSE need only include that information in its confidential version of the Resource Data Template. The row containing peak demand may be redacted from the System Reliability Progress Tracking Table inserted in this section of the Narrative Template, as described earlier. An example table is provided below; note that the confidential load-related rows are excised, and the table only displays procurement. Please provide one table per Preferred Conforming Portfolio.

System Reliability Progress Tracking Table (NQC MW) for month of September by contract status, 46 MMT portfolio	ELCC type	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
online	wind_low_cf	-	-	-	-	-	-	-	-	-	-	-
online	wind_high_cf	-	-	-	-	-	-	-	-	-	-	-
online	biomass	-	-	-	-	-	-	-	-	-	-	-
online	cogen	-	-	-	-	-	-	-	-	-	-	-
online	geothermal	-	-	-	-	-	-	-	-	-	-	-
online	hydro	-	-	-	-	-	-	-	-	-	-	-
online	thermal	-	-	-	-	-	-	-	-	-	-	-
online	battery	-	-	-	-	-	-	-	-	-	-	-
online	nuclear	-	-	-	-	-	-	-	-	-	-	-
online	solar	-	-	-	-	-	-	-	-	-	-	-
online	psh	-	-	-	-	-	-	-	-	-	-	-
online	unknown	-	-	-	-	-	-	-	-	-	-	-
development	wind_low_cf	-	-	-	-	-	-	-	-	-	-	-
development	wind_high_cf	-	-	-	-	-	-	-	-	-	-	-
development	biomass	-	-	-	-	-	-	-	-	-	-	-
development	cogen	-	-	-	-	-	-	-	-	-	-	-
development	geothermal	-	-	-	-	-	-	-	-	-	-	-
development	hydro	-	-	-	-	-	-	-	-	-	-	-
development	thermal	-	-	-	-	-	-	-	-	-	-	-
development	battery	-	-	-	-	-	-	-	-	-	-	-
development	nuclear	-	-	-	-	-	-	-	-	-	-	-
development	solar	-	-	-	-	-	-	-	-	-	-	-
development	psh	-	-	-	-	-	-	-	-	-	-	-
development	unknown	-	-	-	-	-	-	-	-	-	-	-
review	wind_low_cf	-	-	-	-	-	-	-	-	-	-	-
review	wind_high_cf	-	-	-	-	-	-	-	-	-	-	-
review	biomass	-	-	-	-	-	-	-	-	-	-	-
review	cogen	-	-	-	-	-	-	-	-	-	-	-
review	geothermal	-	-	-	-	-	-	-	-	-	-	-
review	hydro	-	-	-	-	-	-	-	-	-	-	-
review	thermal	-	-	-	-	-	-	-	-	-	-	-
review	battery	-	-	-	-	-	-	-	-	-	-	-
review	nuclear	-	-	-	-	-	-	-	-	-	-	-
review	solar	-	-	-	-	-	-	-	-	-	-	-
review	psh	-	-	-	-	-	-	-	-	-	-	-
review	unknown	-	-	-	-	-	-	-	-	-	-	-
planned_existing	wind_low_cf	-	-	-	-	-	-	-	-	-	-	-
planned_existing	wind_high_cf	-	-	-	-	-	-	-	-	-	-	-
planned_existing	biomass	-	-	-	-	-	-	-	-	-	-	-
planned_existing	cogen	-	-	-	-	-	-	-	-	-	-	-
planned_existing	geothermal	-	-	-	-	-	-	-	-	-	-	-
planned_existing	hydro	-	-	-	-	-	-	-	-	-	-	-
planned_existing	thermal	-	-	-	-	-	-	-	-	-	-	-
planned_existing	battery	-	-	-	-	-	-	-	-	-	-	-
planned_existing	nuclear	-	-	-	-	-	-	-	-	-	-	-
planned_existing	solar	-	-	-	-	-	-	-	-	-	-	-
planned_existing	psh	-	-	-	-	-	-	-	-	-	-	-
planned_existing	unknown	-	-	-	-	-	-	-	-	-	-	-
planned_new	wind_low_cf	-	-	-	-	-	-	-	-	-	-	-
planned_new	wind_high_cf	-	-	-	-	-	-	-	-	-	-	-
planned_new	biomass	-	-	-	-	-	-	-	-	-	-	-
planned_new	cogen	-	-	-	-	-	-	-	-	-	-	-
planned_new	geothermal	-	-	-	-	-	-	-	-	-	-	-
planned_new	hydro	-	-	-	-	-	-	-	-	-	-	-
planned_new	thermal	-	-	-	-	-	-	-	-	-	-	-
planned_new	battery	-	-	-	-	-	-	-	-	-	-	-
planned_new	nuclear	-	-	-	-	-	-	-	-	-	-	-
planned_new	solar	-	-	-	-	-	-	-	-	-	-	-
planned_new	psh	-	-	-	-	-	-	-	-	-	-	-
planned_new	unknown	-	-	-	-	-	-	-	-	-	-	-

In this section, the LSE shall also provide an explanation of any capacity shortages relative to its share of CAISO managed coincident peak demand. The LSE shall explain how it plans to address shortages in the Action Plan section of this document, below.

g. Hydro Generation Risk Management

Provide a narrative analysis and discussion of the risk that in-state drought poses to the LSE's Preferred Conforming Portfolios, including the controls and strategies the LSE has in place to manage such risk. Using quantitative analysis, identify whether and how the LSE's Preferred Conforming Portfolios differ from the Reference System Portfolio in terms of the amount of hydro generation proposed, and the level of risk thus incurred. Describe the degree to which the LSE's expected costs, GHG emissions, and reliability are dependent on in-state hydro availability, and the controls such as hedging strategies or contingency plans.

h. Long-Duration Storage Development

Use this section to discuss the activities the LSE is pursuing or intends to pursue to support the development of pumped storage, or other long-duration storage with similar attributes to meet medium- and long-term needs. The LSE should discuss the potential it sees and the efforts it has undertaken or will undertake.

i. Out-of-State Wind Development

Use this section to discuss the activities the LSE is pursuing or intends to pursue to support the development of out-of-state wind resources out to 2030. The LSE should discuss the potential it sees and the efforts it has undertaken or will undertake.

j. Transmission Development

Provide commentary that supports resource location information provided in the Resource Data Template. Such commentary may be important to transmission planning, given the following:

- *Busbar mapping methodology[3] criteria include consideration of commercial interest. This interest can be inferred from LSEs' plans, as well as interconnection queues. LSEs can identify which resources in their plans have been contracted since the IRP baseline was formed, and should therefore be included in the baseline for modeling in the transmission planning process. Further, LSEs can identify which resources, whilst not yet contracted, have specific locations intended. The details of these resources should be included in the Resource Data*

[3] Available for "Modeling Assumptions for the 2020-2021 Transmission Planning Process" at: https://www.cpuc.ca.gov/General.aspx?id=6442464144

Template, specifically by identifying the interconnection queue position. This section of the Narrative Template should summarize the data, and in the case of resources which do not yet have an interconnection queue position, provide as specific location as appropriate for the LSE's stage of planning.

- *Transmission upgrades may be cost-effective ways for LSEs to access new resources. The principles for aggregating LSEs' plans[4] include generally avoiding exceeding transmission capability limits[5] where possible, unless LSEs demonstrate that they are actively planning for upgrades and can justify the costs, timeline, and risks.*

IV. Action Plan

Use this section to demonstrate to the Commission and to stakeholders how feasible the LSE's planning strategy is, what barriers it envisions to implementing its plan, and what actions the Commission should consider in order to facilitate plan implementation.

a. Proposed Activities

Describe all the activities the LSE proposes to undertake across resource types in order to implement its Preferred Conforming Portfolios, including any proposed procurement-related activities as required by Commission decision. Describe how each planned resource identified in the Study Results section corresponds to proposed activities. For each new resource identified, provide a narrative description of procurement plans, potential barriers, and resource viability, consistent with what is reported in the Resource Data Template.

Additionally, use this section to describe planned activities to conduct outreach and seek input from any disadvantaged communities that could be impacted by procurement resulting from the implementation of the LSE's Plan. Please also include LSE's activities to minimize criteria air pollutants with priority on disadvantaged communities and LSE's activities targeted at identifying feasible procurement opportunities to reduce reliance on fossil-fueled power plants, particularly those located within disadvantaged communities.

b. Procurement Activities

Identify when and how the LSE proposes to undertake resource procurement that it has identified in its Preferred Conforming Portfolios. Describe the type of solicitation(s), when the solicitation(s) is

[4] Available In section 8 of the November 2019 "Ruling Seeking Comment on Proposed Reference System Portfolio and Related Policy Actions" at: https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/UtilitiesIndustries/Energy/EnergyPrograms/ElectPowerProcurementGeneration/irp/2018/2019_RSP_Ruling.pdf

[5] Available in the "2019-20 Inputs and Assumptions" at: ftp://ftp.cpuc.ca.gov/energy/modeling/Inputs%20%20Assumptions%202019-2020%20CPUC%20IRP%202020-02-27.pdf

expected to take place, the desired online dates of projects requested, and other relevant procurement planning information.

c. Potential Barriers

Identify key market, regulatory, financial, or other resource viability barriers or risks associated with the resources coming online as identified in the LSE's Preferred Conforming Portfolios. Include an analysis of key risks associated with potential retirement of existing resources on which the LSE intends to rely in the future.

d. Commission Direction or Actions

If applicable, describe any direction that the LSE seeks from the Commission, including consideration in the IRP Procurement Track, new spending authorizations, changes to existing authorizations, or changes to existing programmatic goals or budgets. Draw clear connections between any requested direction and the study results, proposed activities, and barrier analysis presented above.

e. Diablo Canyon Power Plant Replacement

All LSEs should describe how their plans assist in replacing the flexible baseload and/or firm low-emissions energy characteristic of Diablo Canyon when it retires in 2024 and 2025. Because the Diablo Canyon power plant (DCPP) is a system resource adequacy resource within the balancing area of the CAISO, all LSEs are required to provide narrative description explaining which specific resources are planned to be procured to serve their load in the absence of DCPP. Consistent with decision D.19-04-040, those LSEs will have to demonstrate that new resources are suitable substitutes and are able to maintain system reliability without increasing GHG emissions (i.e., renewable energy credits alone do not satisfy this requirement, nor do natural gas resources).

V. Lessons Learned

Document any suggested changes to the IRP process for consideration by the Commission. Explain how the change would facilitate the ability of the Commission and LSEs to achieve state policy goals.

Glossary of Terms

Alternative Portfolio: *LSEs are permitted to submit "Alternative Portfolios" developed from scenarios using different assumptions from those used in the Reference System Plan. Any deviations from the "Conforming Portfolio" must be explained and justified.*

Approve (Plan)*: the CPUC's obligation to approve an LSE's integrated resource plan derives from Public Utilities Code Section 454.52(b)(2) and the procurement planning process described in Public Utilities Code Section 454.5, in addition to the CPUC obligation to ensure safe and reliable service at just and reasonable rates under Public Utilities Code Section 451.*

Balancing Authority Area (CAISO): *the collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.*

Baseline resources: *Those resources assumed to be fixed as a capacity expansion model input, as opposed to Candidate resources, which are selected by the model and are incremental to the Baseline. Baseline resources are existing (already online) or owned or contracted to come online within the planning horizon. Existing resources with announced retirements are excluded from the Baseline for the applicable years. Being "contracted" refers to a resource holding signed contract/s with an LSE/s for much of its energy and capacity, as applicable, for a significant portion of its useful life. The contracts refer to those approved by the CPUC and/or the LSE's governing board, as applicable. These criteria indicate the resource is relatively certain to come online. Baseline resources that are not online at the time of modeling may have a failure rate applied to their nameplate capacity to allow for the risk of them failing to come online.*

Candidate resource: *those resources, such as renewables, energy storage, natural gas generation, and demand response, available for selection in IRP capacity expansion modeling, incremental to the Baseline resources.*

Capacity Expansion Model: *a capacity expansion model is a computer model that simulates generation and transmission investment to meet forecast electric load over many years, usually with the objective of minimizing the total cost of owning and operating the electrical system. Capacity expansion models can also be configured to only allow solutions that meet specific requirements, such as providing a minimum amount of capacity to ensure the reliability of the system or maintaining greenhouse gas emissions below an established level.*

Certify (a Community Choice Aggregator Plan)*: Public Utilities Code 454.52(b)(3) requires the CPUC to certify the integrated resource plans of CCAs. "Certify" requires a formal act of the Commission to determine that the CCA's Plan complies with the requirements of the statute and the process established via Public Utilities Code 454.51(a). In addition, the Commission must review the CCA Plans to determine any potential impacts on public utility bundled customers under Public Utilities Code Sections 451 and 454, among others.*

Clean System Power (CSP, formerly "Clean Net Short") methodology*: the methodology used to estimate GHG emissions associated with an LSE's Portfolio based on how the LSE will expect to rely on system power on an hourly basis.*

Community Choice Aggregator*: a governmental entity formed by a city or county to procure electricity for its residents, businesses, and municipal facilities.*

Conforming Portfolio*: the LSE portfolio that conforms to IRP Planning Standards, the 2030 LSE-specific GHG Emissions Benchmark, use of the LSE's assigned load forecast, use of inputs and assumptions matching those used in developing the Reference System Portfolio, as well as other IRP requirements including the filing of a complete Narrative Template, a Resource Data Template and Clean System Power Calculator*.

Effective Load Carrying Capacity*: a percentage that expresses how well a resource is able avoid loss-of-load events (considering availability and use limitations). The percentage is relative to a reference resource, for example a resource that is always available with no use limitations. It is calculated via probabilistic reliability modeling, and yields a single percentage value for a given resource or grouping of resources.*

Electric Service Provider*: an entity that offers electric service to a retail or end-use customer, but which does not fall within the definition of an electrical corporation under Public Utilities Code Section 218.*

Filing Entity*: an entity required by statute to file an integrated resource plan with CPUC.*

Future*: a set of assumptions about future conditions, such as load or gas prices.*

GHG Benchmark (or LSE-specific 2030 GHG Benchmark)*: the mass-based GHG emission planning targets calculated by staff for each LSE based on the methodology established by the California Air Resources Board and required for use in LSE Portfolio development in IRP.*

GHG Planning Price: *the systemwide marginal GHG abatement cost associated with achieving a specific electric sector 2030 GHG planning target.*

Integrated Resources Planning Standards (Planning Standards)*: the set of CPUC IRP rules, guidelines, formulas and metrics that LSEs must include in their LSE Plans.*

Integrated Resource Planning (IRP) process*: integrated resource planning process; the repeating cycle through which integrated resource plans are prepared, submitted, and reviewed by the CPUC*

Long term*: more than 5 years unless otherwise specified.*

Load Serving Entity*: an electrical corporation, electric service provider, community choice aggregator, or electric cooperative.*

Load Serving Entity (LSE) Plan*: an LSE's integrated resource plan; the full set of documents and information submitted by an LSE to the CPUC as part of the IRP process.*

Load Serving Entity (LSE) Portfolio*: a set of supply- and/or demand-side resources with certain attributes that together serve the LSE's assigned load over the IRP planning horizon.*

Loss of Load Expectation (LOLE): *a metric that quantifies the expected frequency of loss-of-load events per year. Loss-of-load is any instance where available generating capacity is insufficient to serve electric demand. If one or more instances of loss-of-load occurring within the same day regardless of duration are counted as one loss-of-load event, then the LOLE metric can be compared to a reference point such as the industry probabilistic reliability standard of "one expected day in 10 years," i.e. an LOLE of 0.1.*

Net Qualifying Capacity: *Qualifying Capacity reduced, as applicable, based on: (1) testing and verification; (2) application of performance criteria; and (3) deliverability restrictions. The Net Qualifying Capacity determination shall be made by the California ISO pursuant to the provisions of this California ISO Tariff and the applicable Business Practice Manual.*

Non-modeled costs*: embedded fixed costs in today's energy system (e.g., existing distribution revenue requirement, existing transmission revenue requirement, and energy efficiency program cost).*

Nonstandard LSE Plan*: type of integrated resource plan that an LSE may be eligible to file if it serves load outside the CAISO balancing authority area.*

Optimization*: an exercise undertaken in the CPUC's Integrated Resource Planning (IRP) process using a capacity expansion model to identify a least-cost portfolio of electricity resources for meeting specific policy constraints, such as GHG reduction or RPS targets, while maintaining reliability given a set of assumptions about the future. Optimization in IRP considers resources assumed to be online over the planning horizon (baseline resources), some of which the model may choose not to retain, and additional resources (candidate resources) that the model is able to select to meet future grid needs.*

Planned resource: *any resource included in an LSE portfolio, whether already online or not, that is yet to be procured. Relating this to capacity expansion modeling terms, planned resources can be baseline resources (needing contract renewal, or currently owned/contracted by another LSE), candidate resources, or possibly resources that were not considered by the modeling, e.g., due to the passage of time between the modeling taking place and LSEs developing their plans. Planned resources can be specific (e.g., with a CAISO ID) or generic, with only the type, size and some geographic information identified.*

Qualifying capacity*: the maximum amount of Resource Adequacy Benefits a generating facility could provide before an assessment of its net qualifying capacity.*

Preferred Conforming Portfolio*: the conforming portfolio preferred by an LSE as the most suitable to its own needs; submitted to CPUC for review as one element of the LSE's overall IRP plan.*

Preferred System Plan: *the Commission's integrated resource plan composed of both the aggregation of LSE portfolios (i.e., Preferred System Portfolio) and the set of actions necessary to implement that portfolio (i.e., Preferred System Action Plan).*

Preferred System Portfolio: *the combined portfolios of individual LSEs within the CAISO, aggregated, reviewed and possibly modified by Commission staff as a proposal to the Commission, and adopted by the Commission as most responsive to statutory requirements per Pub. Util. Code 454.51; part of the Preferred System Plan.*

Reference System Plan: *the Commission's integrated resource plan that includes an optimal portfolio (Reference System Portfolio) of resources for serving load in the CAISO balancing authority area and meeting multiple state goals, including meeting GHG reduction and reliability targets at least cost.*

Reference System Portfolio*: the multi-LSE portfolio identified by staff for Commission review and adopted/modified by the Commission as most responsive to statutory requirements per Pub. Util. Code 454.51; part of the Reference System Plan.*

Short term*: 1 to 3 years (unless otherwise specified).*

***Staff**: CPUC Energy Division staff (unless otherwise specified).*

***Standard LSE Plan**: type of integrated resource plan that an LSE is required to file if it serves load within the CAISO balancing authority area (unless the LSE demonstrates exemption from the IRP process).*

EAST BAY COMMUNITY ENERGY

Integrated Resource Plan Compliance Results

PRESENTED BY: Marie Fontenot & Stefanie Tanenhaus

DATE: July 15, 2020

Deliverables

Phase 1: CPUC IRP Compliance Filing

- Analysis based on prescriptive assumptions
- Narrative – analysis, process, results, lessons learned
- Resource Data – conforming & “preferred” portfolios, if applicable
- Clean System Power Calculator

Phase 2: Establish EBCE Organizational Goals

- Additional analysis
- Identify reliability needs
- Define trade-offs between organizational objectives
- Inform procurement recommendations
- Develop path to expedited GHG reduction

EAST BAY COMMUNITY ENERGY

Revised CPUC Requirements

- 46 MMT *and* 38 MMT scenarios

LSE	2030 Load (GWh)	Share of 2030 load in IOU territory	2030 GHG emissions benchmark – 46 MMT scenario	2030 GHG emissions benchmark – 38 MMT scenario
PG&E Bundled	26,777	35.2%	5.479	4.526
EBCE	6,910[1]	9.08%	1.23[2]	0.984 [2]
SCE Bundled	54,393	63.49%	9.687	8.003
SDG&E Bundled	5,366	29.46	1.198	0.990

[1] Load represents CPUC approved load forecast as of 5/20/20.
[2] Reflects requirement after behind the meter Combined Heat & Power emissions are removed from target.

- Specific Input Requirements
- Filing date: September 1, 2020

EAST BAY COMMUNITY ENERGY

Scenario Analysis Will Evaluate…

Key Evaluation Metrics	Scenario 1: 46 MMT / i.e. 1.23 MMT	Scenario 2: 38 MMT / i.e. 0.984 MMT	Scenario 3: EBCE aggressive 30 MMT i.e. 0.74 MMT
Carbon Free	-	↓ GHGs	*↓↓ GHGs*
Affordability (Cost)	-	↑ cost	*↑↑ cost*
Resource Mix (incl. New build vs existing)	-	↑ new build	*↑↑ new build* *↑ resource diversity*
Risk Mgmt: Spot Market vs Short-Term vs Long-Term Contracts	-	↓ reliance on market ↑ impact of intermittency	*↓↓ reliance on market* *↑↑ impact of intermittency*
Reliability	-	↑ RA contribution	*↑↑ RA contribution*

Arrows are indicative of observed (Scenario 2) and expected (Scenario 3) trends, relative to Scenario 1

EAST BAY COMMUNITY ENERGY

Developing Conforming Portfolios

CPUC compliance portfolios developed based on the CPUC's "Reference System Plan"

Benefits:

- Consistent with CPUC view of reliability
- Conforms with CPUC requirements
- Defensible: Tied to CPUC-expectations of resource availability (defensible)
- Able to incorporate EBCE-views of availability & portfolio-fit

Limitations:

- Not directly tied to EBCE organizational goals
- Final results & comparison across all 3 scenarios will not be true "apples to apples"

	2020	2022	2026	2030
CAISO Load (GWh)	205,907	204,065	205,132	206,953
EBCE Load (GWh)	7,535	6,894	6,906	6,910
EBCE % of CAISO	3.66%	3.38%	3.37%	3.34%

EAST BAY COMMUNITY ENERGY

Draft Conforming Portfolios

46 MMT Scenario: EBCE = 1.23 MMT in 2030

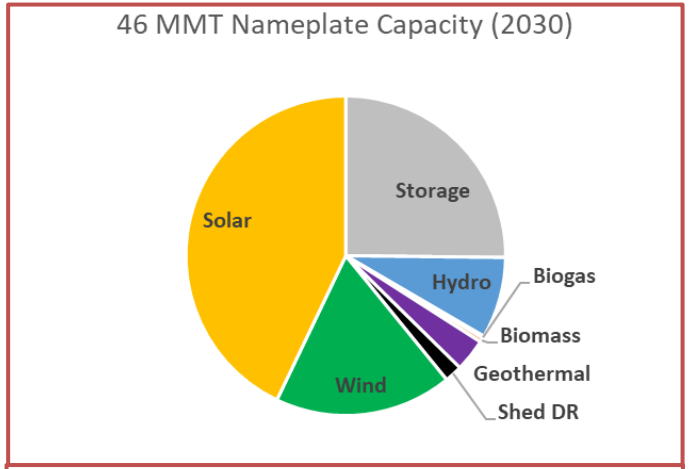
	% of Pro-Rata	max allow-ed	Overall EBCE Pro Rata Portfolio			
Resource			2020	2022	2026	2030
2-hr Battery Storage	125%		0	0	80	281
4-hr Battery Storage	125%		0	176	226	226
Pumped Storage (long-duration)	75%		0	0	0	64
Large Hydro	70%	100	0	100	100	100
Imported Hydro	70%		0	67	67	67
Biogas	50%		0	0	0	5
Biomass	50%		0	0	0	10
Geothermal	100%		0	12	75	75
Small Hydro	100%	20	0	20	20	20
Shed DR	50%		0	41	41	40
Candidate Wind Resources	112%					
Southern_CA_Desert_Southern_NV			0	119	131	131
Sacramento_River_Wind			0	58	58	58
Tehachapi_Wind			0	119	131	131
Generic_CA_Wind			0	0	0	23
New_Mexico_Wind			0	60	65	65
Candidate Solar Resources	113%					
Southern_PGE_Solar			0	168	493	493
Southern_CA_Desert_Southern_NV			0	187	187	187
Tehachapi_Solar			0	187	187	187
Generic_CA_Solar			0	0	0	106

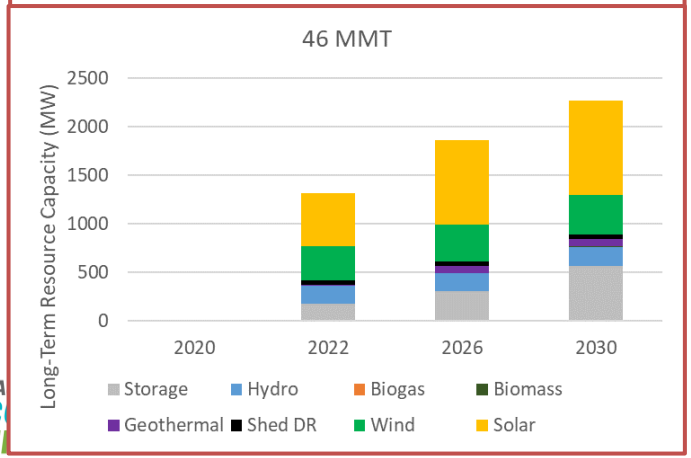
38 MMT Scenario: EBCE = .984 MMT in 2030

	% of Pro-Rata	max allow-ed	Overall EBCE Pro Rata Portfolio			
Resource			2020	2022	2026	2030
2-hr Battery Storage	125%		0	0	80	224
4-hr Battery Storage	125%		0	176	294	318
Pumped Storage (long-duration)	75%		0	0	0	80
Large Hydro	74%	100	0	100	100	100
Imported Hydro	74%		0	71	71	71
Coal	0%		0	0	0	0
Biogas	50%		0	0	0	5
Biomass	50%		0	0	0	10
Geothermal	100%		0	0	78	78
Small Hydro	100%	20	0	20	20	20
Shed DR	50%		0	41	41	40
Candidate Wind Resources	115%					
Southern_CA_Desert_Southern_NV			0	125	152	152
Sacramento_River_Wind			0	58	58	58
Tehachapi_Wind			0	125	152	152
Generic_CA_Wind			0	0	0	168
New_Mexico_Wind			0	62	76	76
Candidate Solar Resources	114%					
Southern_PGE_Solar			0	168	493	493
Southern_CA_Desert_Southern_NV			0	205	205	205
Tehachapi_Solar			0	205	205	205
Generic_CA_Solar			0	0	0	118

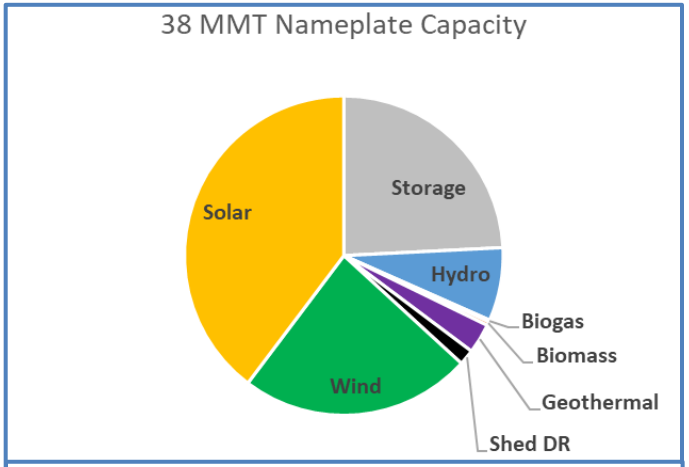
Draft Conforming Portfolios – Capacity

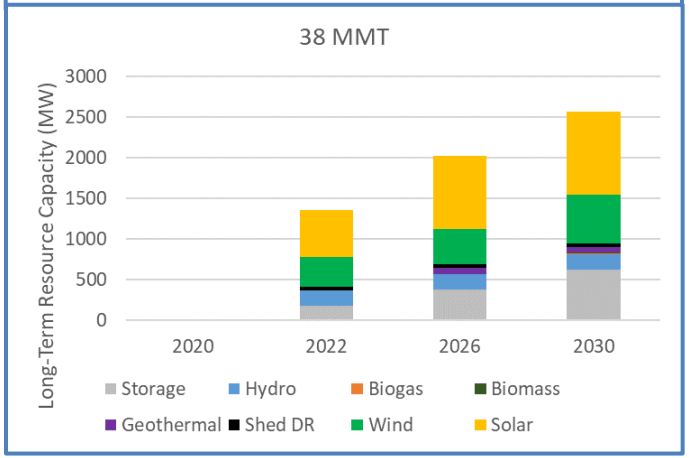
46 MMT Scenario: EBCE = 1.23 MMT in 2030





38 MMT Scenario: EBCE = .984 MMT in 2030

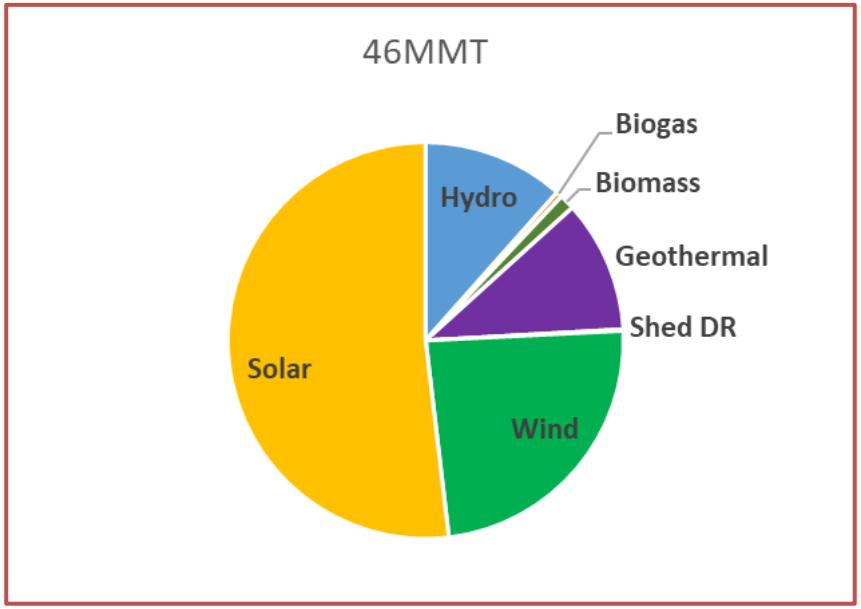




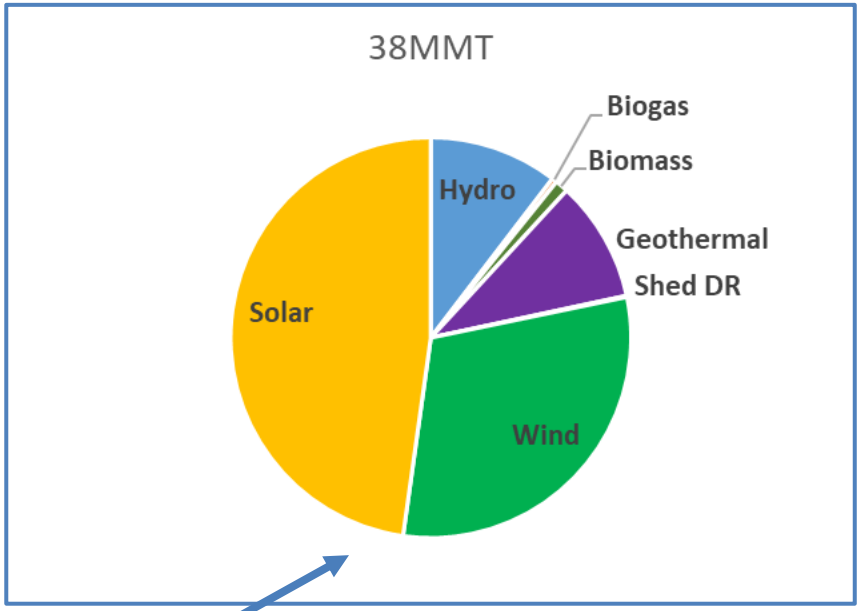
Note: scales on Y-axes are different btw graphs

Draft Conforming Portfolios – Energy Supply

46 MMT Scenario: EBCE = 1.23 MMT in 2030



38 MMT Scenario: EBCE = .984 MMT in 2030



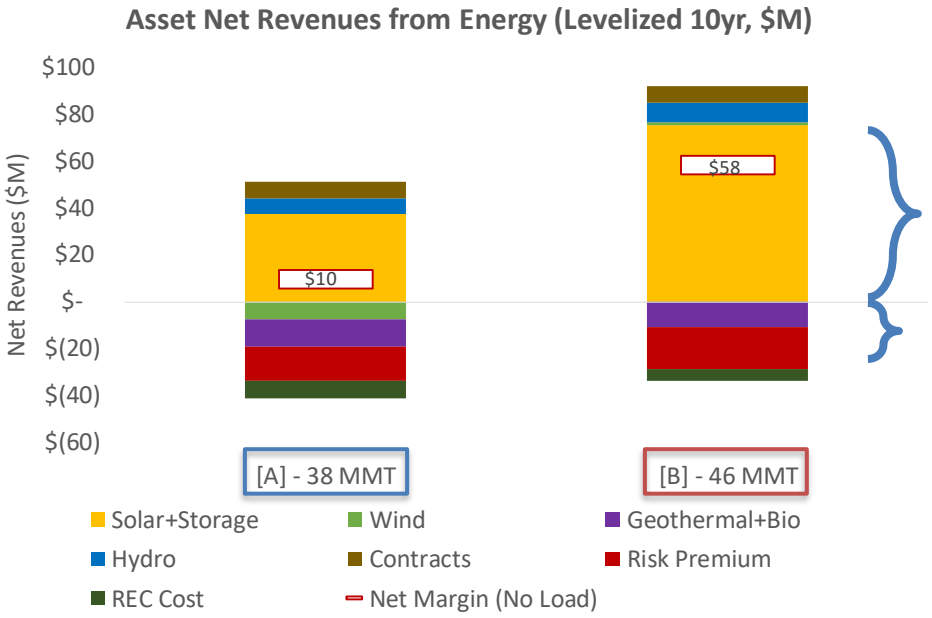
38 MMT requires more wind and less solar to reduce emissions from night-time energy purchases

Reminder: ELCC (effective load carrying capability) is greater for wind than solar. If a wind resource and a solar resource are the same size, over time we expect to get more energy supply to match customer demand from the wind resource

EAST BAY COMMUNITY ENERGY

Forecast: Costs & Revenues of Conforming Portfolios

Revenues



Positive value for hydro, solar/storage because of high power price forecast to align with CPUC natural gas prices

Negative/near-zero value for wind and geothermal indicates a premium on the implied REC value for sundown clean energy

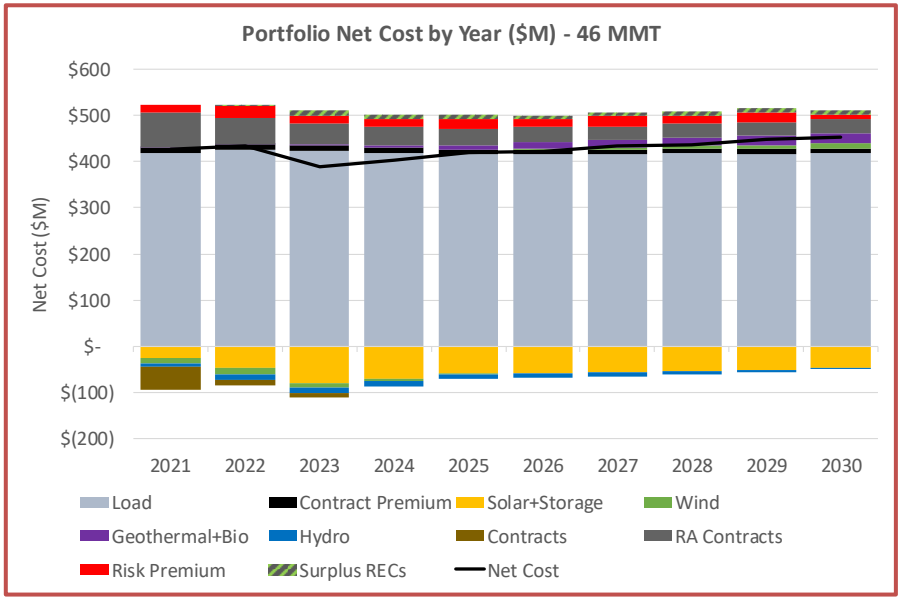
Total Costs per MWh Load (Levelized 10yr)

	Supply Resources	Risk Premium	RA Contracts	Load	Net Cost
[A] - 38 MMT	$ (3.5)	$2.1	$5.3	$71.1	**$75.0**
[B] - 46 MMT	$ (11.1)	$2.6	$6.0	$76.2	**$73.7**

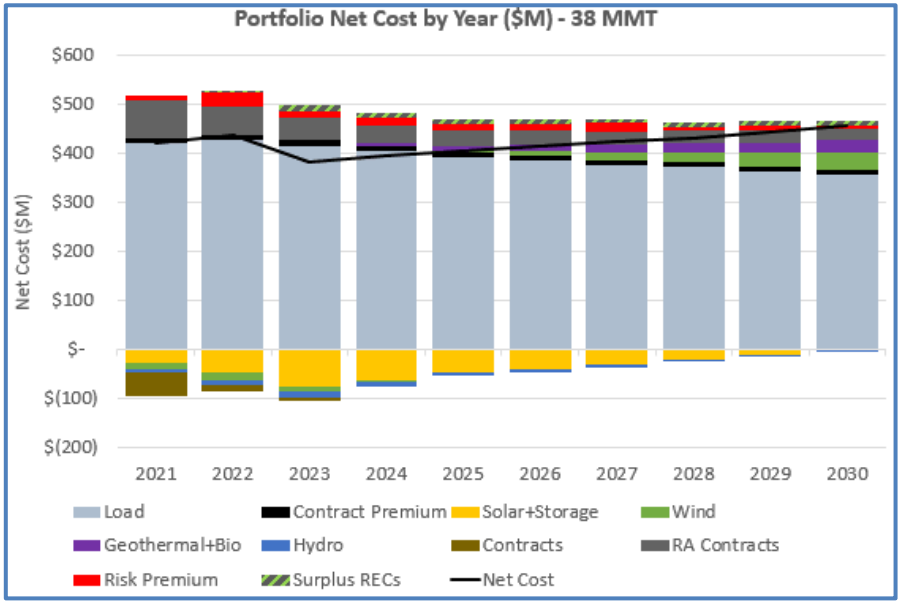
EAST BAY COMMUNITY ENERGY

Forecast: Total Costs of Conforming Portfolios

46 MMT Scenario: EBCE = 1.23 MMT in 2030



38 MMT Scenario: EBCE = .984 MMT in 2030



Declining prices in 38MMT scenario reduce both generation value and load costs.

Total Costs (Levelized 10yr, $M)

	Supply Resources	Risk Premium	RA Contracts	Load	Net Cost
[A] - 38 MMT	$ (24)	$14	$37	$489	**$516**
[B] - 46 MMT	$ (77)	$18	$41	$524	**$507**

"Surplus RECs" is the value that could be gained by swapping surplus recs for general GHG-free energy
"Contract Premium" is the extra cost associated with hedging energy costs via short-term contracts

EAST BAY COMMUNITY ENERGY

Next Steps

EBCE IRP filing due to CPUC Sept 1, 2020 is required to be a formulaic response to very specific inputs and analytical methods that are set by the CPUC. As a result, there is little room to deviate to assess priorities like 1) emphasis on local development, 2) deeper levels of decarbonization, 3) use of different resource types. Staff recommends that EBCE proceed through a two-step process. Step 1 is to complete a compliance filing to the CPUC by September 1, 2020. Step 2 is to analyze a deeper decarbonization pathway (30 MMT by 2030) and engage Board and Community in discussion of costs of benefits of more aggressive pathway in fall 2020. Based on feedback, Board will review EBCE IRP procurement plans and approve procurement targets for next round of long term clean energy procurement. Based on the above, staff is requesting the following:

- Board to delegate final CPUC compliance IRP approval authority to the CEO
- Board to review and approve EBCE's next round of clean energy procurement based on a review of three decarbonization pathways (46, 38 and 30 MMT by 2030)

APPENDIX

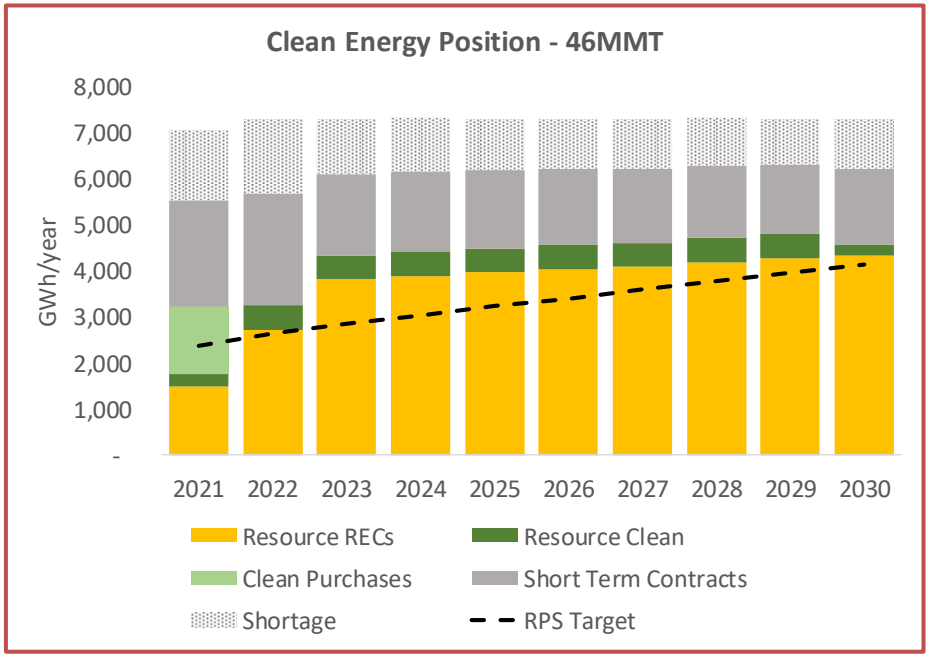
Scenario Analysis Evaluates…

Key Evaluation Metrics	Scenario 1: 46 MMT / i.e. 1.23 MMT	Scenario 2: 38 MMT / i.e. .984 MMT	Scenario 3: EBCE aggressive 30 MMT i.e. .74 MMT
Carbon Free			
Affordability (Cost)			
Resource Mix (incl. New build vs existing)			
Risk Mgmt: Spot Market vs Short-Term vs Long-Term Contracts			
Reliability			

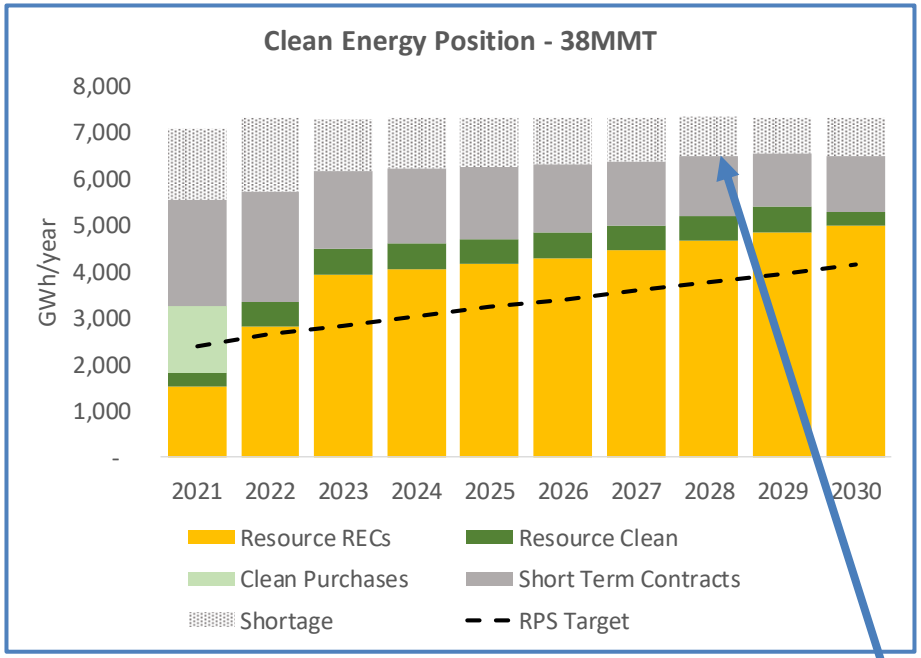
EAST BAY COMMUNITY ENERGY

Clean Position

46 MMT Scenario: EBCE = 1.23 MMT in 2030



38 MMT Scenario: EBCE = .984 MMT in 2030

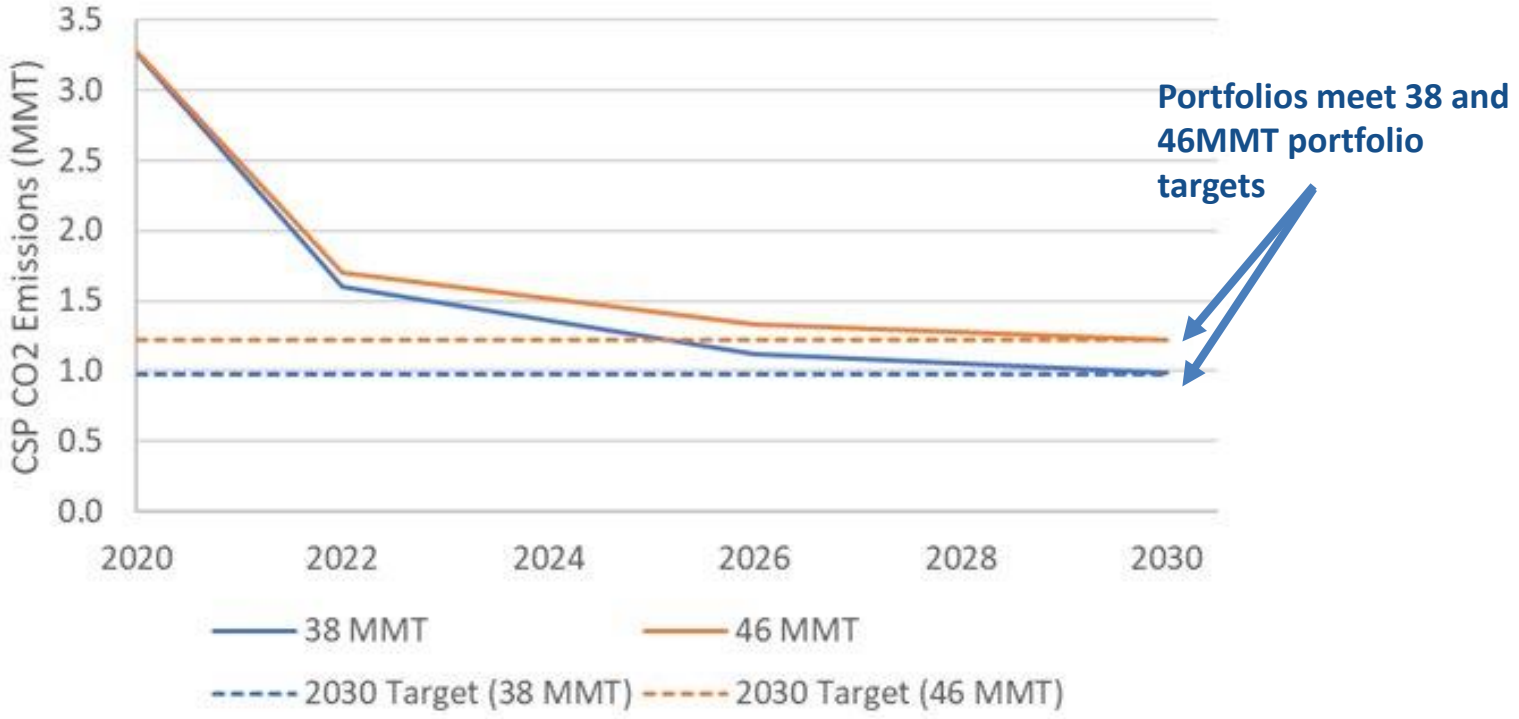


Resource buildout over time increases clean generation within the portfolio

Both portfolios exceed RPS requirements

EAST BAY COMMUNITY ENERGY

Clean Position: Emissions from Market Purchases



EAST BAY COMMUNITY ENERGY

Scenario Analysis Evaluates…

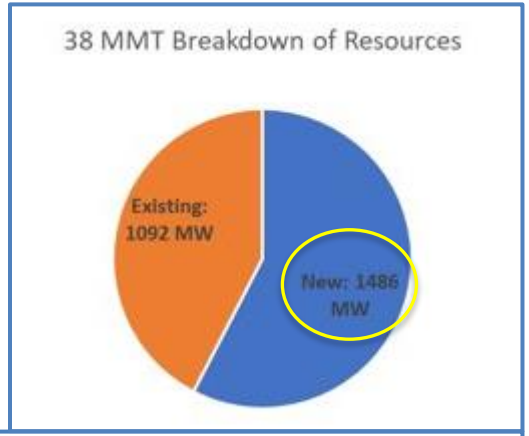
Key Evaluation Metrics	Scenario 1: 46 MMT / i.e. 1.23 MMT	Scenario 2: 38 MMT / i.e. .984 MMT	Scenario 3: EBCE aggressive 30 MMT i.e. .74 MMT
Carbon Free			
Affordability (Cost)			
Resource Mix (incl. New build vs existing)			
Risk Mgmt: Spot Market vs Short-Term vs Long-Term Contracts			
Reliability			

EAST BAY COMMUNITY ENERGY

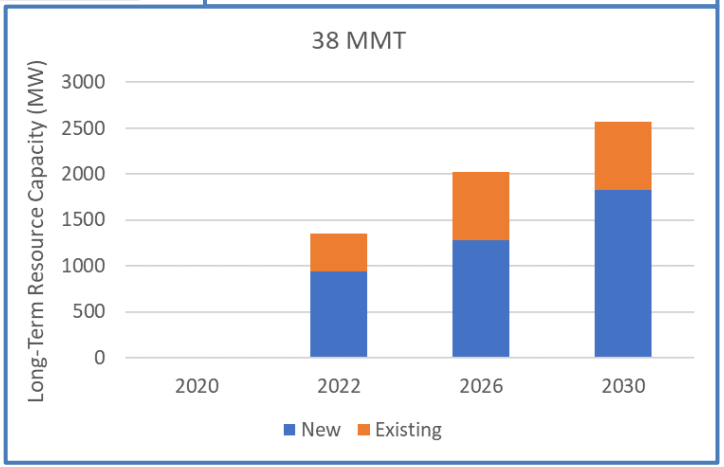
Draft Conforming Portfolios – Resource Mix

New vs. Existing Capacity in 2030

New	Existing
Uncontracted Storage	Hydro (large/imported/small)
Uncontracted Wind/Solar	Geothermal
Shed DR	Biomass/Biogas
	Contracted Wind, Solar, storage



Note: scales on Y-axes are different btw graphs



Scenario Analysis Evaluates…

Key Evaluation Metrics	Scenario 1: 46 MMT / i.e. 1.23 MMT	Scenario 2: 38 MMT / i.e. .984 MMT	Scenario 3: EBCE aggressive 30 MMT i.e. .74 MMT
Carbon Free			
Affordability (Cost)	$73.7/MWh demand *Average* over 2021-2030	$75 / MWh demand *Average* over 2021-2030	
Resource Mix (incl. New build vs existing)			
Risk Mgmt: Spot Market vs Short-Term vs Long-Term Contracts			
Reliability			

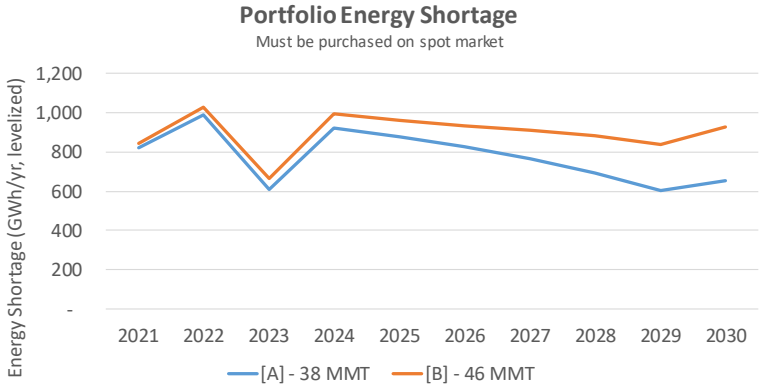
COMMUNITY ENERGY

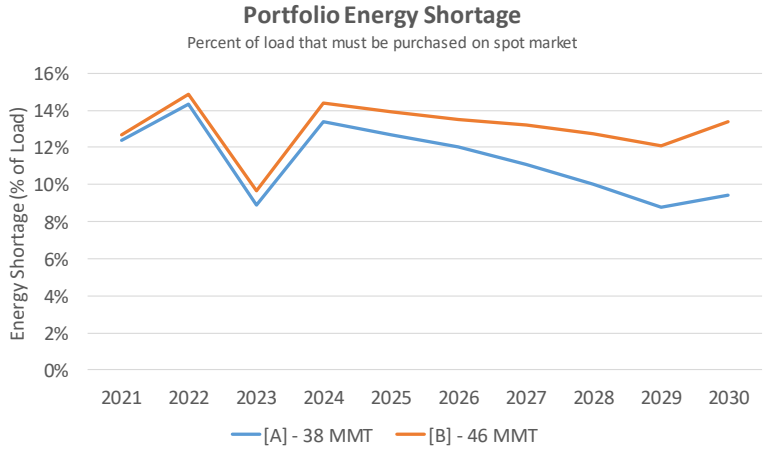
Scenario Analysis Evaluates…

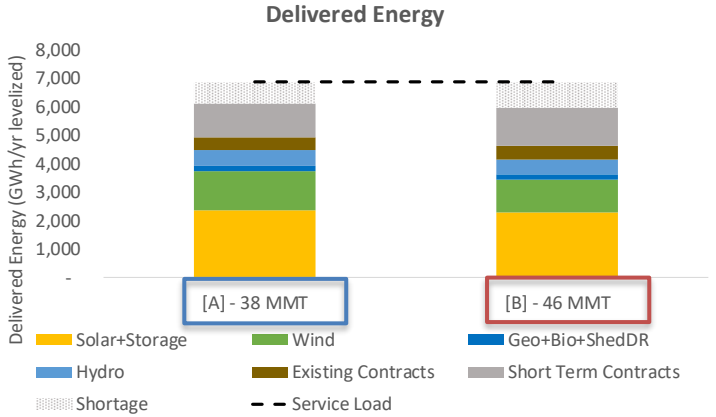
Key Evaluation Metrics	Scenario 1: 46 MMT / i.e. 1.23 MMT	Scenario 2: 38 MMT / i.e. .984 MMT	Scenario 3: EBCE aggressive 30 MMT i.e. .74 MMT
Carbon Free			
Affordability (Cost)			
Resource Mix (incl. New build vs existing)			
Risk Mgmt: Spot Market vs Short-Term vs Long-Term Contracts			
Reliability			

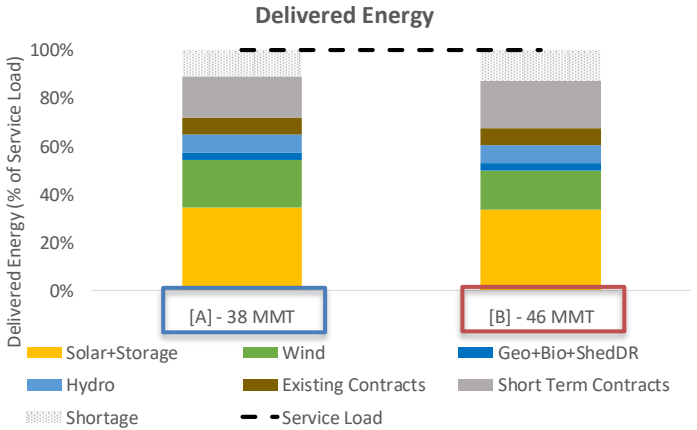
EAST BAY COMMUNITY ENERGY

Risk Mgmt: Annual Net Energy Position





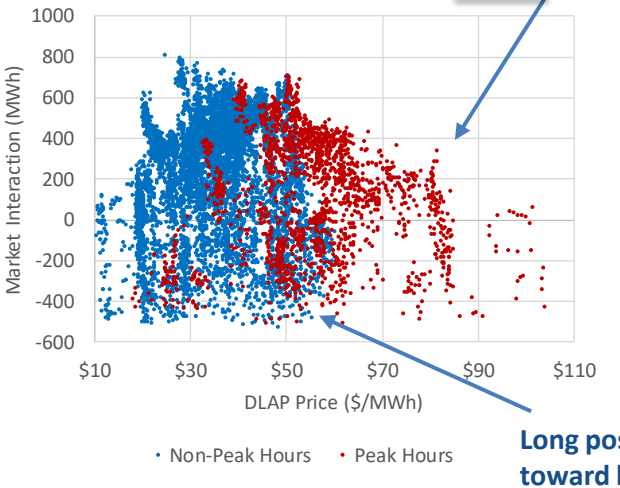


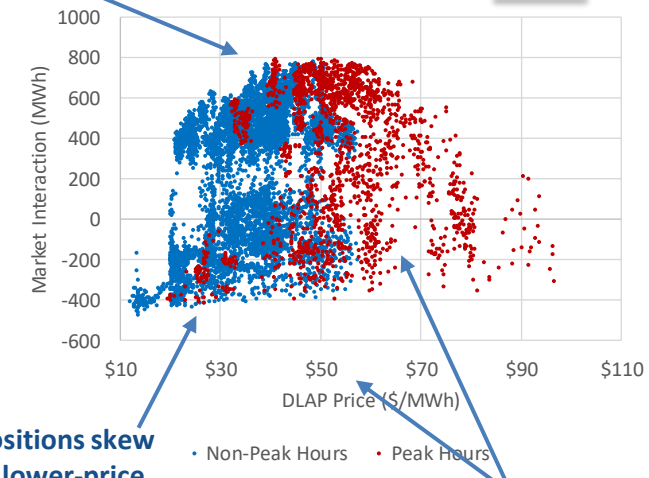


EAST COMMUNITY ENERGY

Risk Mgmt: 2030 Net Position w/out Short-Term Contracts

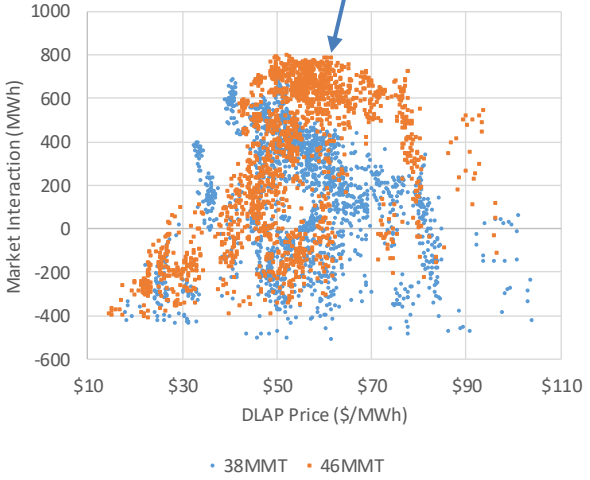
Short positions skew toward higher-price and peak hours





Long positions skew toward lower-price hours

38 MMT has lower reliance on market purchases (and associated grid emissions)



Lower amount of storage in 46MMT results in greater division between short and long positions

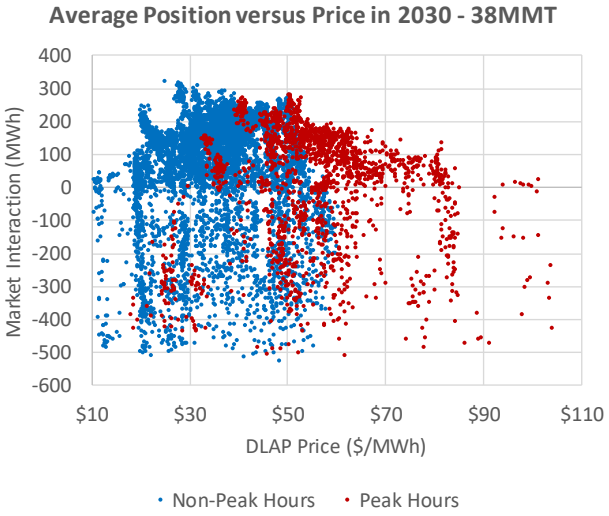
Implication: heavy reliance on solar has negative hedge value. Can reduce risk by incorporating more dispatchable resources during peak (battery and eventually green hydrogen in gas turbines).

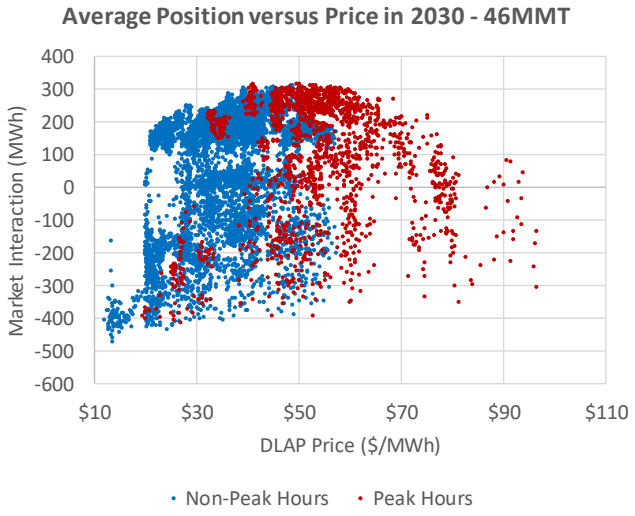
**Positive means short*
**Peak Hours 4-9pm*

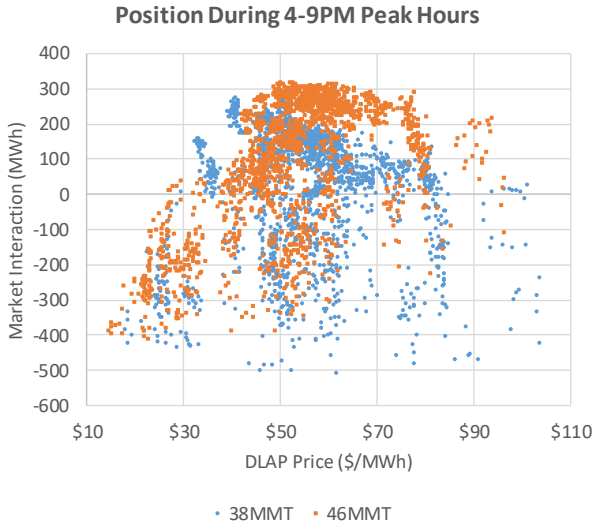
EAST BAY COMMUNITY ENERGY

Risk Mgmt: 2030 Net Position with Short-Term Contracts*

Note: scale on Y-axes differs from previous slide; indicates fewer hours of market exposure







**Assumes that short-term contracts would be pursued in a way that does not change the hours of spot purchases, but reduces the MWh purchased on the spot market*

EAST BAY COMMUNITY ENERGY

Risk Mgmt: Transaction Tenors

Average Delivered Energy per Year

46 MMT Scenario: EBCE = 1.23 MMT in 2030

Tenor	% or GWh
Spot Market*	13% | 900
Short-Term*	26.5% | 1,800
Long-Term	60.5% | 4,150

38 MMT Scenario: EBCE = .984 MMT in 2030

Tenor	% or GWh
Spot Market*	11% | 775
Short-Term*	24% | 1,625
Long-Term	65% | 4,500

**Short-Term Contract & Spot Market %s are based on EBCE staff-applied ratio of 3:2 (short-term transactions : spot market purchases).*
Ratio represents an estimate for IRP purposes only. Any commercial application would be based on Risk Oversight Committee-reviewed & EBCE Board-approved Risk Framework.

EAST BAY COMMUNITY ENERGY

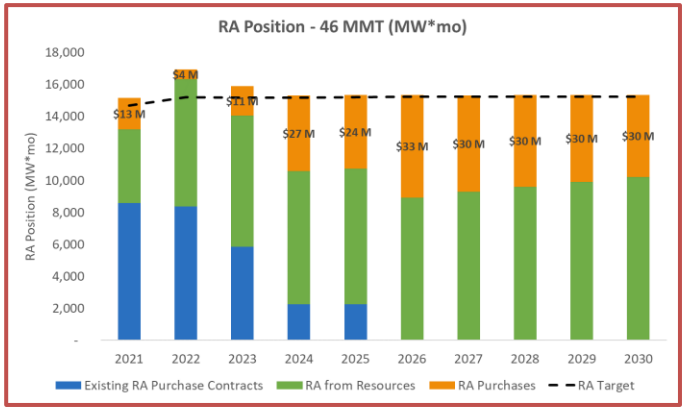
Scenario Analysis Evaluates…

Key Evaluation Metrics	Scenario 1: 46 MMT / i.e. 1.23 MMT	Scenario 2: 38 MMT / i.e. .984 MMT	Scenario 3: EBCE aggressive 30 MMT i.e. .74 MMT
Carbon Free			
Affordability (Cost)			
Resource Mix (incl. New build vs existing)			
Risk Mgmt: Spot Market vs Short-Term vs Long-Term Contracts			
Reliability			

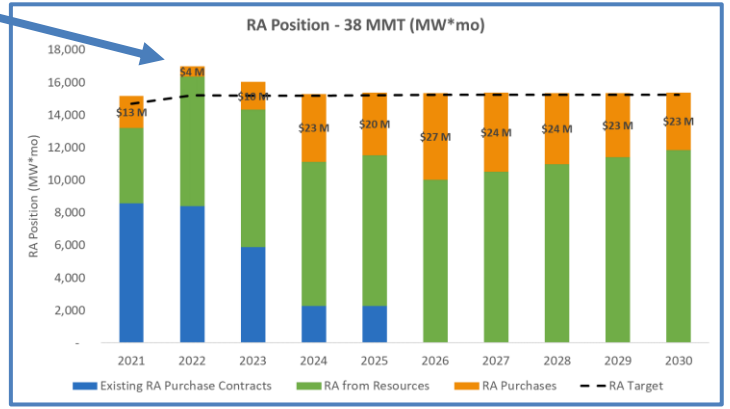
EAST BAY COMMUNITY ENERGY

Reliability: Resource Adequacy Position

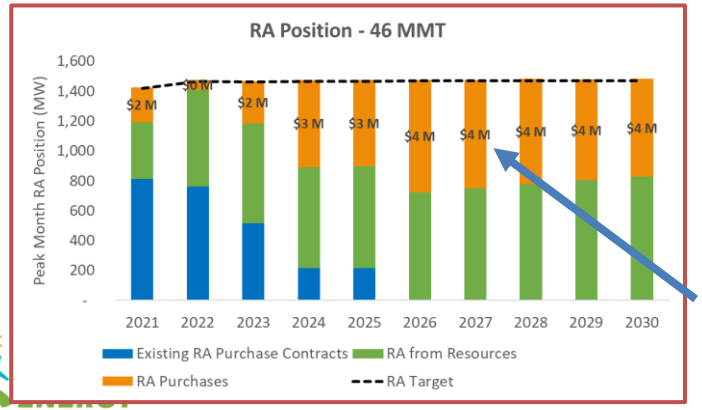
Annual



RA position exceeds annual target because some months are "long"

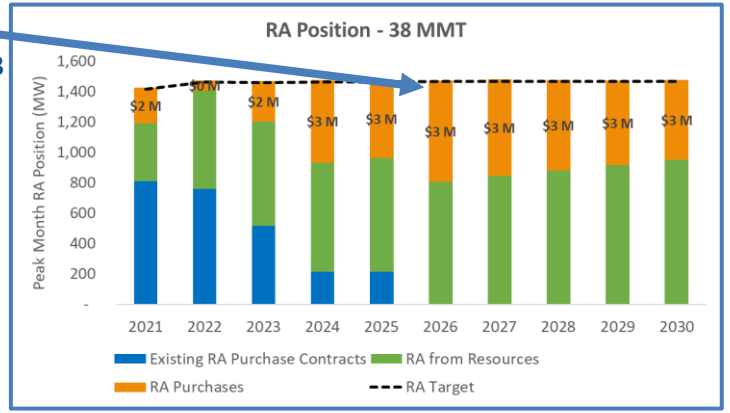


System Peak Demand Month: September



2028: Long-term resources provide ~2/3 of RA capacity in 38MMT portfolio due to lower market reliance

2027: Long-term resources provide ~1/2 of RA capacity in 46MMT portfolio

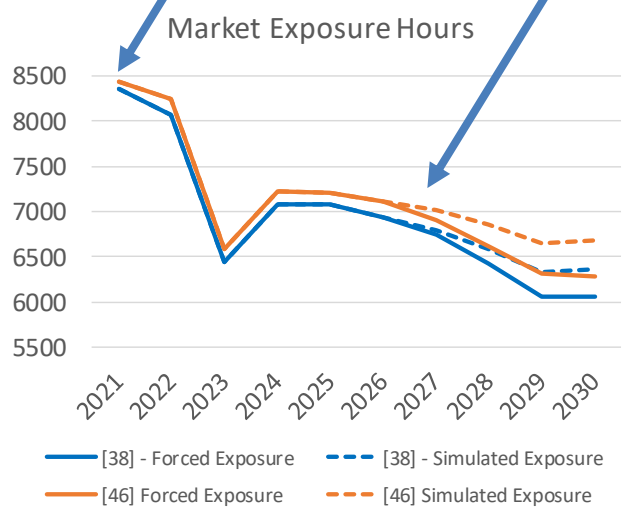


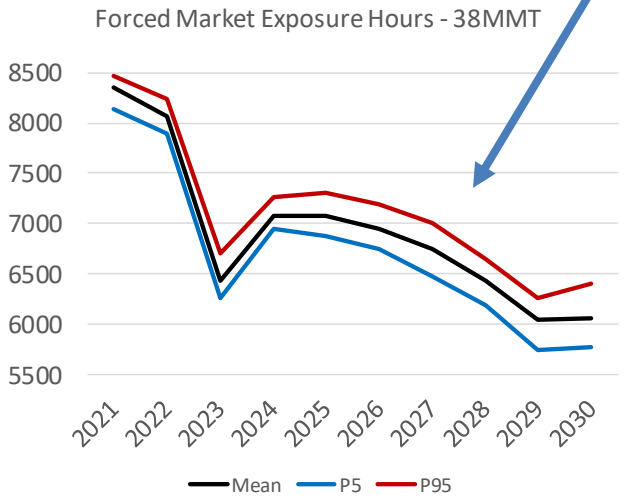
Reliability: Portfolio Market Exposure Hours – Forced*

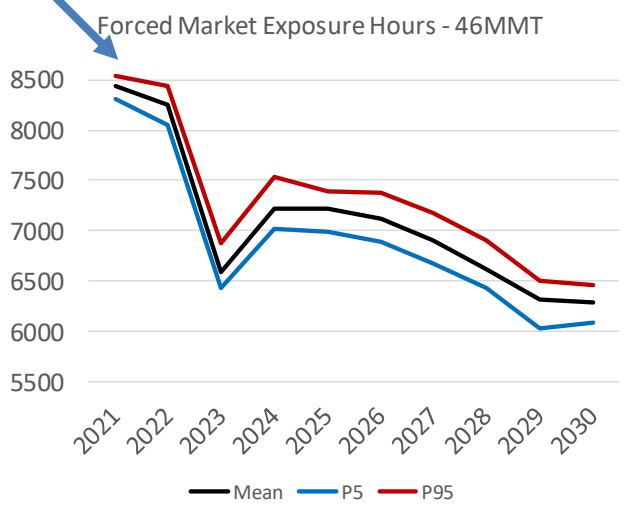
Current portfolios are consistently short, but small MWh

Both portfolios are short throughout outside of solar hours

Market exposure hours similar across stochastic simulations

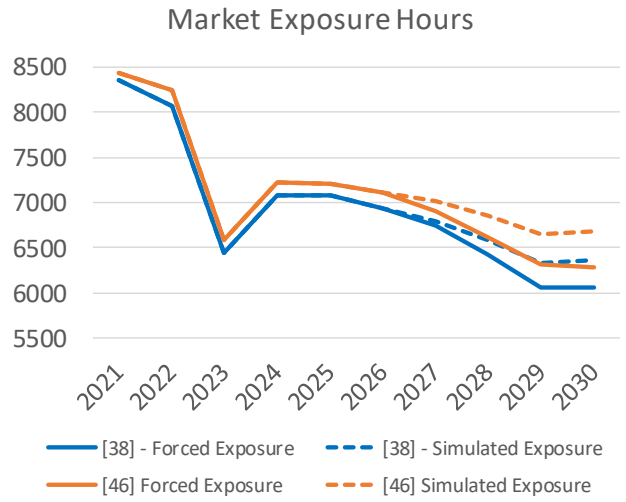


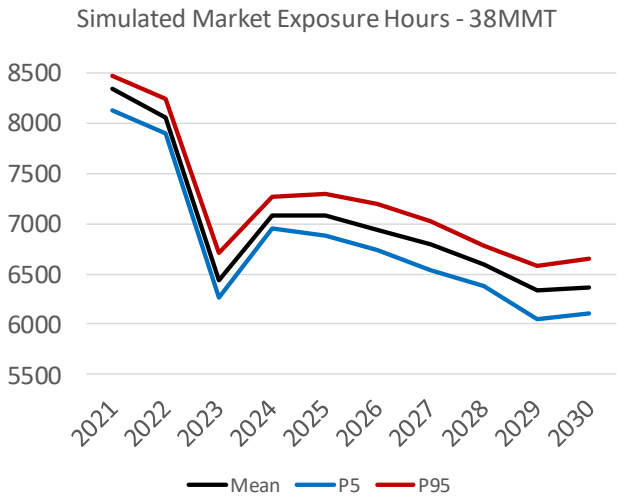


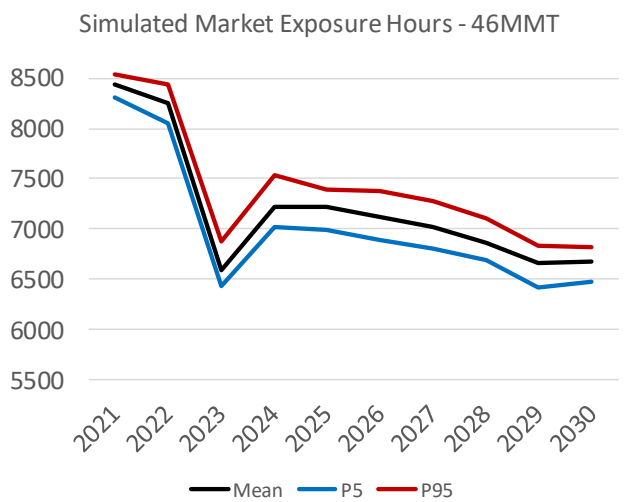


*"Forced Exposure" is the number of hours where resources and storage cannot meet load
"Simulated Exposure" is the number of hours with net market purchases in the simulation, which includes storage charging

Reliability: Portfolio Market Exposure Hours – Simulated*







EAST BAY COMMUNITY ENERGY

*"Forced Exposure" is the number of hours where resources and storage cannot meet load
"Simulated Exposure" is the number of hours with net market purchases in the simulation, which includes storage charging