Resource Tracking Data

Data current as of November 2022

Note: This data set matches the data used in the SB 846 <u>Joint Agency Reliability Report</u>, issued in February 2023



Notes: Data Considerations

Notes on Online MWs data

- All data are derived from CAISO <u>Master Generating Capability List</u>, and CPUC <u>NQC Lists</u> with online dates between Jan 1, 2020 Oct. 31, 2022.
- Nameplate Capacity is shown as "Net Dependable Capacity" in the CAISO Master Generating List file.
- Data shown excludes imports, except where specified.
- NQC values are "Estimated September NQC" and subject to change based on counting rules or changes to resource configurations.
- Data showing "Number of Projects" is derived by counting each unique CAISO resource ID as a project.
- "Natural Gas" includes Alamitos Unit 7 (675 MW) and Huntington Beach (674 MW), online in Feb 2020.

Notes on Expected New MWs

- All data are from LSE self-reported contracting for projects expected to come online between 2020 and ~2028.
 - Data are subject to change as the CPUC gets updated information from LSEs, IOU interconnection departments, developers and others.
 - CPUC staff continue to refine the data included herein. Data in this presentation are current up until the posting date and any subsequent postings will supersede prior postings.

Notes on Differences between Resource Tracking Data and IRP Compliance

• Due to numerous differences, such as varied baselines and resource eligibility for compliance, data on New MW Online plus New MW Expected do not exactly match progress towards IRP compliance orders. For information on compliance with IRP Procurement orders, see compliance updates at IRP Procurement Track (ca.gov).

Notes on Updates and Questions

- For the most up-to-date data publicly available, please visit the CPUC's Summer Reliability page.
- For any questions about the data, please contact <u>procurementstatusreports@cpuc.ca.gov</u>

Part 1: New MW Online

New Resources Online since January 2020 to Sept. 30, 2022– by Nameplate, NQC, and # of Projects

New Resources Online by Quarter (Nameplate)

New Resource Online by Quarter (NQC)

Data Vintage: November 2022

New MWs - Key Takeaways

• Total New MW Online between 1/1/2020 thru 10/31/2022

	Nameplate Capacity (MW)	Estimated Sept. Net Qualifying Capacity (NQC) MW	Number of Projects by Resource IDs
New SB100 Resources, IN-CAISO	8,092 Nameplate MW	4,151 Sept. NQC MW	130
New Resources, IN-CAISO (includes Natural Gas)	9,569 Nameplate MW	5,627 Sept. NQC MW	142
Total New Reliability Resources, including Imports	11,092 Nameplate MW	6,312 Sept. NQC MW	153

Online New Resources, Jan 2020-Oct 2022

Technology Type	Nameplate Capacity (MW)	Sept. NQC (MW) Capacity (Estimated)	Number of New Projects (# CAISO Resource IDs)
Storage	3,521	3,339	50
Solar	2,901	282	41
Hybrid (storage/solar)	786	395	11
Wind	810	103	19
Geothermal	40	31	1
Biogas, biomass, hydro	31	1	8
Subtotal Total New SB 100 Resources, IN-CAISO	8,092	4,151	130
Natural gas, incl. Alamitos & Huntington Beach, CAISO	1,477	1,476	12
Total New Resources, IN-CAISO	9,569	5,627	142
New Imports, Pseudo-tie or dynamically scheduled into CAISO	1,532	685	11
Total New Resources, including imports	11,092	6,312	153

CPUC Staff Analysis, also shown in Joint Agency Planning Report, SB 846 Report, Page 30

Data Vintage: November 2022

Online New Resources: By Resource Type Nameplate (MWs)

Net Dependable Capac	ity (MW)	new onli	ne since	1/1/2020		Quarter o	of Commo						
Including Imports (TG)													
	2020	2020	2020	2020	2021	2021	2021	2021	2022	2022	2022	2022	
Energy Source	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Total
BIOGAS		1								2			3
BIOMASS								2			3		5
GEOTHERMAL								17			40		57
HYBRID								114	250	243	166	103	876
LESR	1			100	212	641	338	584	440	259	946		3,521
NATURAL GAS	1,349	99	275				16	1	3	5	4		1,752
SUN		175	63	1,132	40	170	105	733	115	306	154		2,991
WATER	1	22		3									26
WIND			74	415	91	144	10	760	256	45	67		1,861
Grand Total	1,351	297	411	1,650	343	955	469	2,211	1,063	860	1,380	103	11,092
total by year				3,709				3,977				3,405	

Reference: CPUC Staff Analysis, same data set as on page 30 of SB 846 Report (issued February 2023). Note these totals include imports so the per resource totals do not match the totals on slide 4.

Online New Resources: By Resource Type Estimated Sept. NQC (MWs)

Including Imports (TG)													
including imports (19)													
	2020	2020	2020	2020	2021	2021	2021	2021	2022	2022	2022	2022	
Energy Source	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Total
BIOGAS		-											-
BIOMASS													-
GEOTHERMAL								17			31		48
HYBRID								98	159	121	81	26	485
LESR	-			100	211	641	338	426	440	238	946		3,339
NATURAL GAS	1,349	99	275				16	1	3	5	4		1,751
SUN		6	4	121	4	19	8	74	5	34	17		292
WATER	0	0		-									1
WIND			9	105	10	16	2	207	29	10	7		396
Grand Total	1,349	105	289	326	226	676	364	823	636	407	1,086	26	6,312
total by year				2,068				2,089				2,155	

Reference: CPUC Staff Analysis, same data set as on page 30 of SB 846 Report (issued February 2023)

Part 2: Expected New MWs based on LSE Contracts to date

(1) Tables from SB 846 – November 2022 vintage data but publicly published – by TAC Area and by LSE Type

Expected New Resources: By Resource Type Nameplate MWs Under Contract to CPUC Jurisdictional LSEs

Resource Type		20	23			20	24			20	25		2026			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
solar	221	500	803	819	1,014	1,019	1,037	1,037	1,082	1,109	1,109	1,109	1,109	1,109	1,109	1,109
battery	301	2,115	2,204	2,273	3,254	4,643	4,718	4,729	5,003	5,191	5,191	5,191	5,206	5,309	5,324	5,324
paired/hybrid	400	972	1,487	2,165	2,689	3,247	3,337	4,038	4,333	4,396	4,396	4,471	4,471	4,471	4,471	4,471
wind	-	93	96	246	246	246	246	246	246	323	323	323	323	323	323	323
geothermal	26	26	26	26	26	111	111	128	137	141	144	147	147	207	207	213
biomass/biogas	5	10	10	19	25	25	25	25	25	25	25	25	25	25	25	25
total	953	3,716	4,662	5,548	7,255	9,292	9,475	10,248	10,827	11,185	11,188	11,266	11,281	11,444	11,459	11,464

Expected New Resources: By Resource Type Estimated Sept. NQC (MWs) Under Contract to CPUC Jurisdictional LSEs

Resource		20	23			20	24			20	25		2026			
Туре	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
solar	78	130	171	184	214	216	234	234	240	267	26	267	267	267	267	267
battery	288	1,678	1,830	1,834	2,816	4,201	4.276	4,286	4,561	4,747	4,747	4,747	4,762	4,860	4,875	4,875
paired/hybrid	164	478	695	1,004	1,452	1,879	1,955	2,338	2,615	2,638	2,638	2,713	2,713	2,713	2,713	2,713
wind	-	14	14	14	14	14	14	14	14	31	31	31	31	31	31	31
geothermal	21	21	21	21	21	76	76	91	99	102	104	106	107	165	165	170
biomass/biogas	-	5	5	14	20	20	20	20	20	20	20	20	20	20	20	20
total	551	2,325	2,708	3,072	4,536	6,406	6,575	6,982	7,549	7,805	7,807	7,885	7,900	8,057	8,072	8,077

Note 1: CPUC Staff Analysis, Uses same data set shown in Joint Agency Planning Report, SB 846 Report, Page 35.

Note 2: Paired/Hybrid is solar+battery either co-located on hybrid; MWs shown are incremental to any existing resources at same locations.

Data Vintage: November 2022

Expected New Resources: By TAC Area Estimated Sept. NQC (MWs) Under Contract to CPUC Jurisdictional LSEs

Resource Type		20	23			2024				20	25		2026				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
SCE TAC	371	1,263	1,535	1,757	2,585	4,123	4,173	4,431	4,741	4,729	4,729	4,729	4,744	4,812	4,827	4,827	
PG&E TAC	49	766	827	889	1,010	1,094	1,213	1,348	1,623	1,816	1,816	1,891	1,891	1,923	1,923	1,925	
SDG&E TAC	131	226	276	356	696	796	796	796	796	842	842	842	842	842	843	843	
Outside CAISO	-	71	71	71	246	394	394	408	417	419	421	424	424	480	480	482	
total	551	2,326	2,709	3,072	4,537	6,407	6,576	6,983	7,549	7,806	7,808	7,885	7,901	8,058	8,073	8,077	

Note: CPUC Staff Analysis, Data as shown in Joint Agency Planning Report, SB 846 Report, Page 35.

Links to Other Key References related to Resource Tracking Data

References to Related Information

- (1) Tracking Energy Development Task Force <u>- Tracking Energy Development (ca.gov)</u>
- (2) Joint Agency Reliability Report pursuant to SB846, February 2023
- (3) California Energy Commission's Energy Almanac Energy Almanac (ca.gov)
- (4) Overview of CPUC IRP Procurement Orders IRP Procurement Track (ca.gov)
- (5) Overview of CPUC Jurisdictional LSE Procurement in Compliance with IRP Procurement Orders
 - Procurement in Compliance with D.19-11-016 per August 1, 2022 Fillings, 2/13/2023
 - Procurement in Compliance with D.19-11-016 per February 1, 2022 Filings, 7/22/2022
 - Procurement in Compliance with D.19-11-016 per February 1, 2021 Filings, 8/23/2021

For any questions about the data, please contact <u>procurementstatusreports@cpuc.ca.gov</u>