

Resource Tracking Data

Data current as of December 2024



California Public
Utilities Commission



Notes on Resource Tracking Data

- **Notes on Online MWs data**

- All data are derived from CAISO [Master Generating Capability List](#), and CPUC [NQC Lists](#) with online dates between **Jan 1, 2020 – December 31, 2024**
- 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 2024 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 December 2024 and any subsequent postings will supersede prior postings.
- **Data included here are only the projects under contract to CPUC jurisdictional LSEs, and do not include all resources being developed in the state nor the CAISO footprint.**

- **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 irpdatarequest@cpuc.ca.gov

Part 1: New MW Online

- New Resources Online from 1/1/2020 to 12/31/2024
 - By Nameplate, NQC, and Number of Projects
- New Resources Online by Year and Resource Type
 - By Nameplate and NQC
- New IRP Procurement Resources Online by Year and Resource Type
 - By Nameplate and NQC

Data includes projects online as of December 31, 2024

New MWs - Key Takeaways

Total New MW Online between 1/1/2020 - 12/31/2024

	Nameplate Capacity (MW)	Estimated Sept. Net Qualifying Capacity (NQC) MW	Number of Projects by Resource IDs
New SB100 Resources, IN-CAISO	20,926	13,027	319
New Resources, IN-CAISO (includes Natural Gas)	22,466	14,514	336
Total New Reliability Resources, including Imports	24,346	15,575	351

Note: SB100 resources include all eligible renewable energy resources and zero-carbon resources for compliance with California's SB 100 clean energy targets.

Total Storage Online (all time)

	Nameplate Capacity (MW)	Estimated Sept. Net Qualifying Capacity (NQC) MW	Number of Projects by Resource IDs
Battery Energy Storage Systems (BESS) Projects (Including Standalone BESS & Hybrids)	11,136	10,376	177 (incl. 27 hybrids)

Note: MW only include storage portion of hybrids. Includes CAISO imports.

New Energy Resources Online

Data includes projects online as of December 31, 2024

New Resources Additions, Jan 1, 2020 – December 31, 2024, Cumulative

Technology Type	Nameplate Capacity MW	Estimated Sept. Net Qualifying Capacity (NQC) MW	Number of Projects
STORAGE	9,918	9,245	139
SOLAR	7,970	2,239	121
HYBRID (STORAGE/SOLAR)	1,841	1,253	25
WIND	1,118	259	22
GEOHERMAL	41	31	1
BIOGAS, BIOMAS, HYDRO	39	0	11
Subtotal Total New SB100 Resources, IN-CAISO	20,926	13,027	319
NATURAL GAS, incl. Alamitos & Huntington Beach	1,539	1,487	17
Total New Resources, IN-CAISO	22,466	14,514	336
New Imports, Pseudo-Tie or Dynamically Scheduled	1,881	1,061	15
Total New Resources, including Imports	24,346	15,575	351

Notes:

All data shown derived from CAISO [Master Generating Capability List](#), and CPUC [NQC Lists](#).

Nameplate Capacity is shown as "Net Dependable Capacity" in the CAISO Master Generating List file. Data shown excludes imports, except where specified. All NQC values are "September NQC" and subject to change based on counting rules and additions to monthly CPUC NQC Lists. "Project" is defined as a unique CAISO resource ID. "Natural Gas" includes Alamitos Unit 7 (675 MW) and Huntington Beach (674 MW) added in Feb 2020. SB100 resources include all eligible renewable energy resources and zero-carbon resources for compliance with California's SB 100 clean energy targets.



New MWs Online - Nameplate

By Year and Resource Type

Data includes projects online as of December 31, 2024

Technology Type	2020	2021	2022	2023	2024	Total MW	# Projects
SOLAR	1,300	1,048	913	2,482	2,227	7,970	121
STORAGE	101	1,703	1,907	2,528	3,678	9,918	139
HYBRID (SOLAR + STORAGE)	0	26	890	470	503	1,841	25
WIND	16	304	367	171	260	1,118	22
GEOTHERMAL	0	0	0	0	41	41	1
HYDRO	26	0	0	0	0	26	4
BIOMASS	0	2	3	3	0.5	8	4
BIOGAS	1	0	2	3	0	6	3
Subtotal Total New SB100 Resources, IN-CAISO	1,444	3,083	4,082	5,607	6,709	20,926	319
NATURAL GAS, incl. Alamitos & Huntington Beach	1,448	17	12	0	63	1,539	17
Total New Resources, IN-CAISO	2,892	3,100	4,094	5,607	6,772	22,466	336
New Imports, Pseudo-Tie or Dynamically Scheduled	695	807	49	50	280	1,881	15
Total New Resources, including Imports	3,587	3,907	4,143	5,657	7,052	24,346	351

New MWs Online – Sept NQC

By Year and Resource Type

Data includes projects online as of December 31, 2024

Technology Type	2020	2021	2022	2023	2024*	Total MW	# Projects
SOLAR	490	435	327	655	331	2,239	121
STORAGE	100	1,612	1,906	2,448	3,180	9,245	139
HYBRID (SOLAR + STORAGE)	0	15	668	283	286	1,253	25
WIND	7	71	80	38	63	259	22
GEOHERMAL	0	0	0	0	31	31	1
HYDRO	0	0	0	0	0	0	4
BIOMASS	0	0	0	0	0	0	4
BIOGAS	0	0	0	0	0	0	3
Subtotal Total New SB100 Resources, IN-CAISO	597	2,134	2,981	3,424	3,892	13,027	319
NATURAL GAS, incl. Alamitos & Huntington Beach	1,448	15	11	0	13	1,487	17
Total New Resources, IN-CAISO	2,045	2,149	2,992	3,424	3,905	14,514	336
New Imports, Pseudo-Tie or Dynamically Scheduled	390	387	33	50	201	1,061	15
Total New Resources, including Imports	2,435	2,536	3,025	3,474	4,105	15,575	351

New MWs Online

December 2024 Additions

Data includes projects online as of December 31, 2024

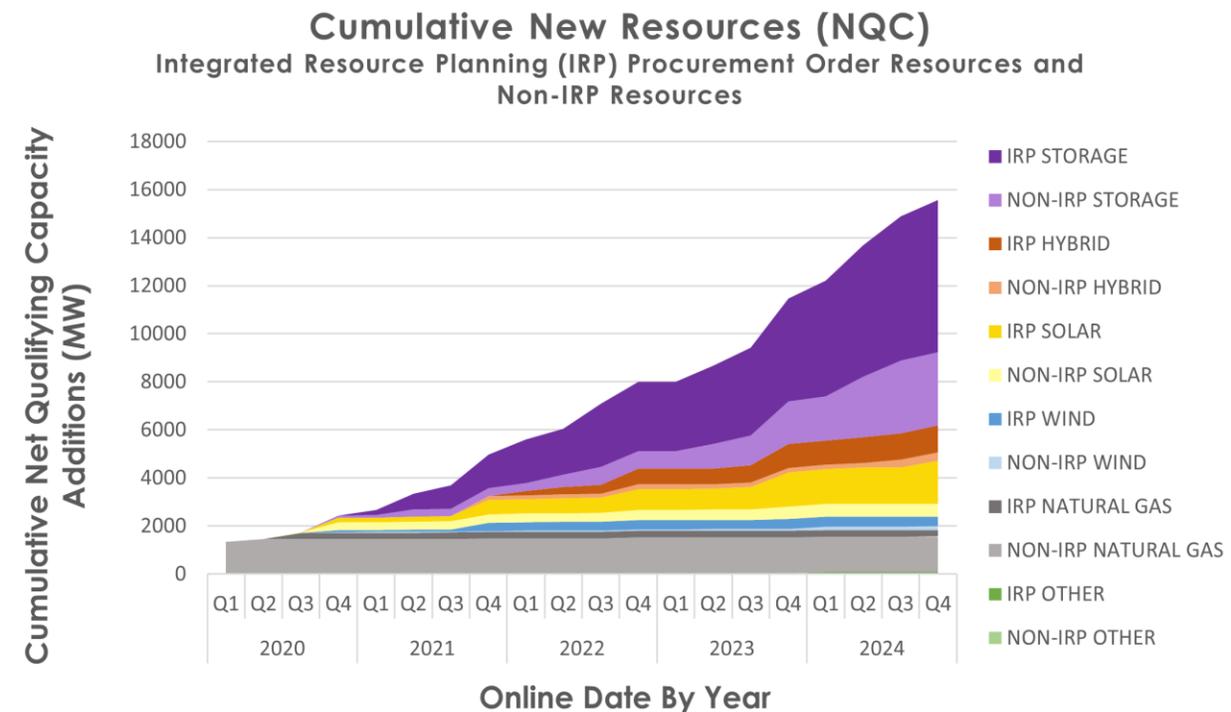
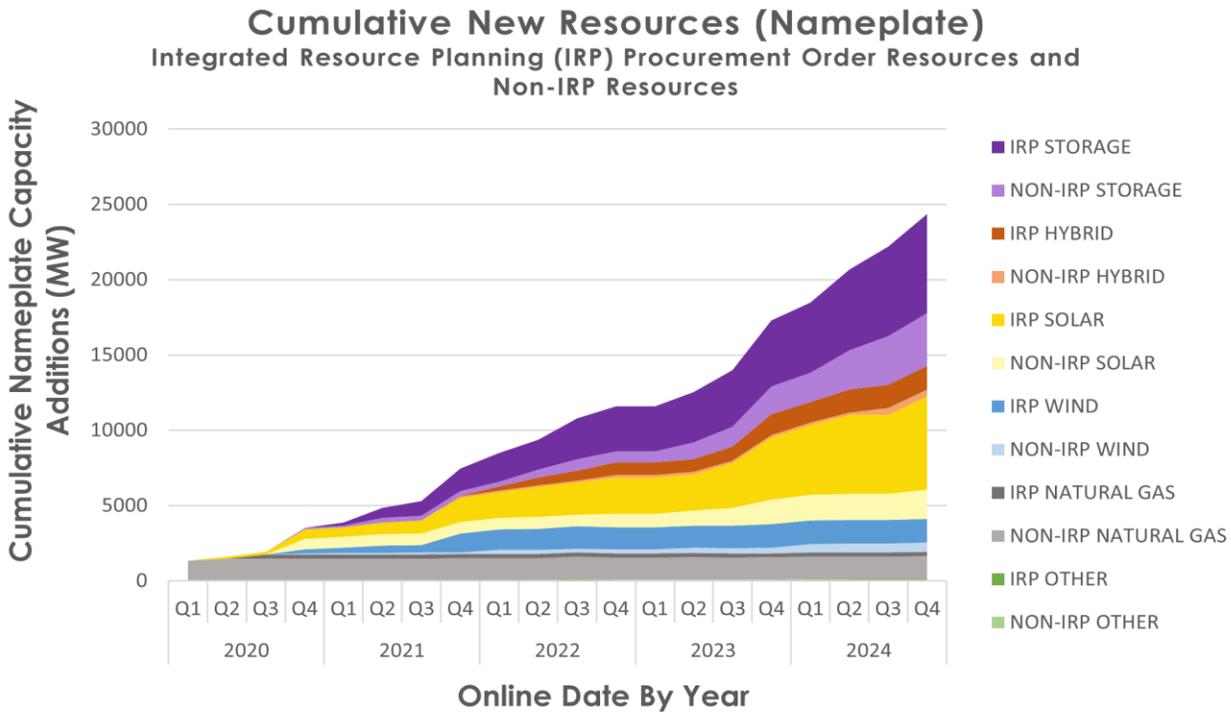
Technology Type	Nameplate Capacity MW	Estimated Sept. Net Qualifying Capacity (NQC) MW	# Projects
STORAGE	419	0*	3
SOLAR	632	0*	5
HYBRID	50	0*	1
Total New Resources, IN-CAISO	1,101	0*	9
New Imports, Pseudo-Tie or Dynamically Scheduled	0	0	0
Total New Resources, including Imports	1,101	0*	9

IRP Procurement

Technology Type	Nameplate Capacity MW	Estimated Sept. Net Qualifying Capacity (NQC) MW	# Projects
STORAGE	300	0*	2
SOLAR	600	0*	3
HYBRID	50	0*	1
Total New IRP Procurement	950	0*	6

Total New Procurement By Year and Resource Type

Data includes projects online
as of December 31, 2024

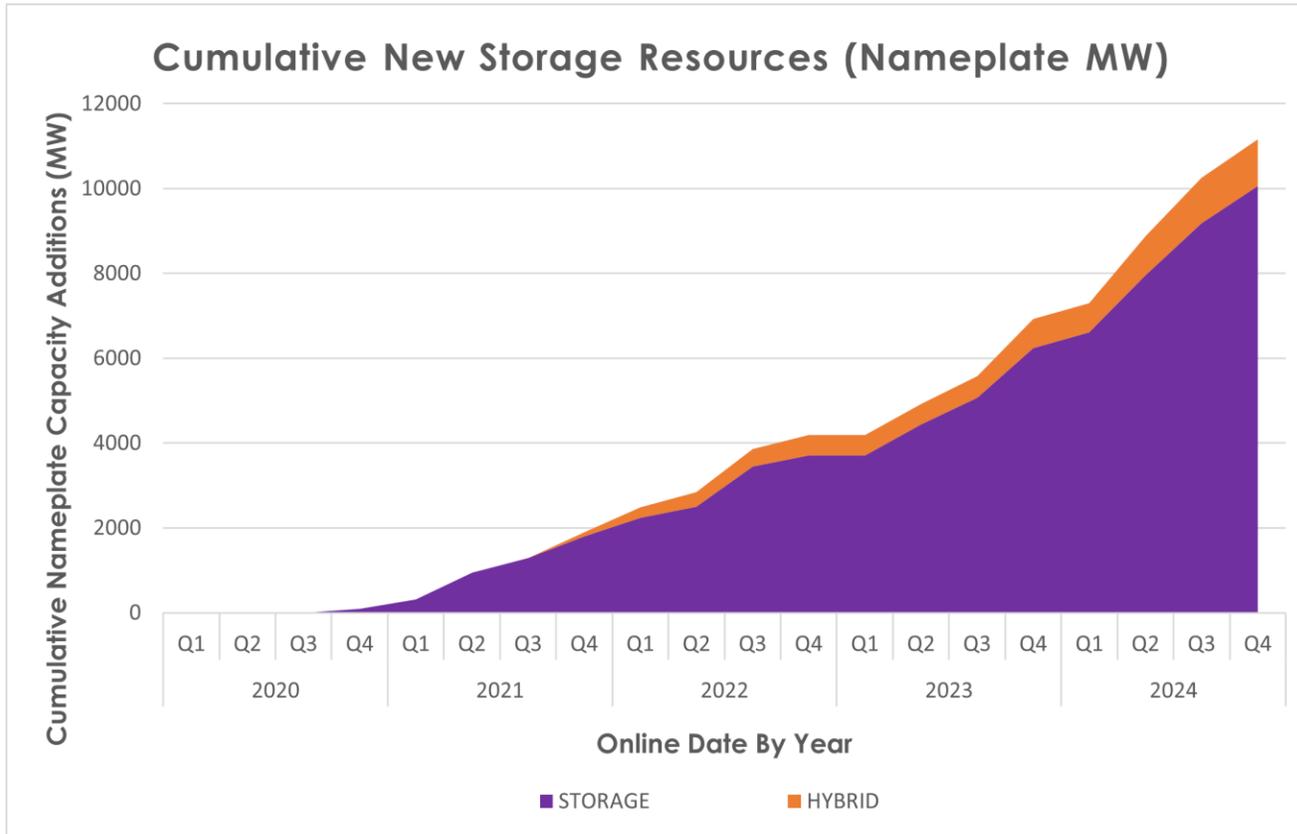


Note: Data shown here shows a snapshot of new resources added to the CAISO grid Q12020 – Q4 2024, including specified CAISO imports. "Other" resources include geothermal, biomass, biogas, and hydropower. Hybrids include some storage, and some other (usually solar) technology. "IRP Procurement Order Resources" refer to resources claimed for compliance with IRP Procurement Orders; "Non-IRP Resources" include resources that are not counting towards IRP Procurement order compliance, which occurs for a variety of reasons such as the resource was in development prior to IRP orders, the resource is energy-only, the resource is not under contract to a CPUC jurisdictional entity, etc.

NQC = Net qualifying capacity (NQC) and represents the amount the resource contributes to reliability; NQC can vary over time, and for each month of the year; the values shown are indicative of September NQC values for the resources.

Total Storage Online By Year

Data includes projects online as of December 31, 2024



Note: Data shown here shows a snapshot of new resources added to the CAISO grid Q12020 – Q4 2024, including specified CAISO imports. Hybrids include some storage, and some other (usually solar) technology. MW shown here only include the storage portion of hybrids.

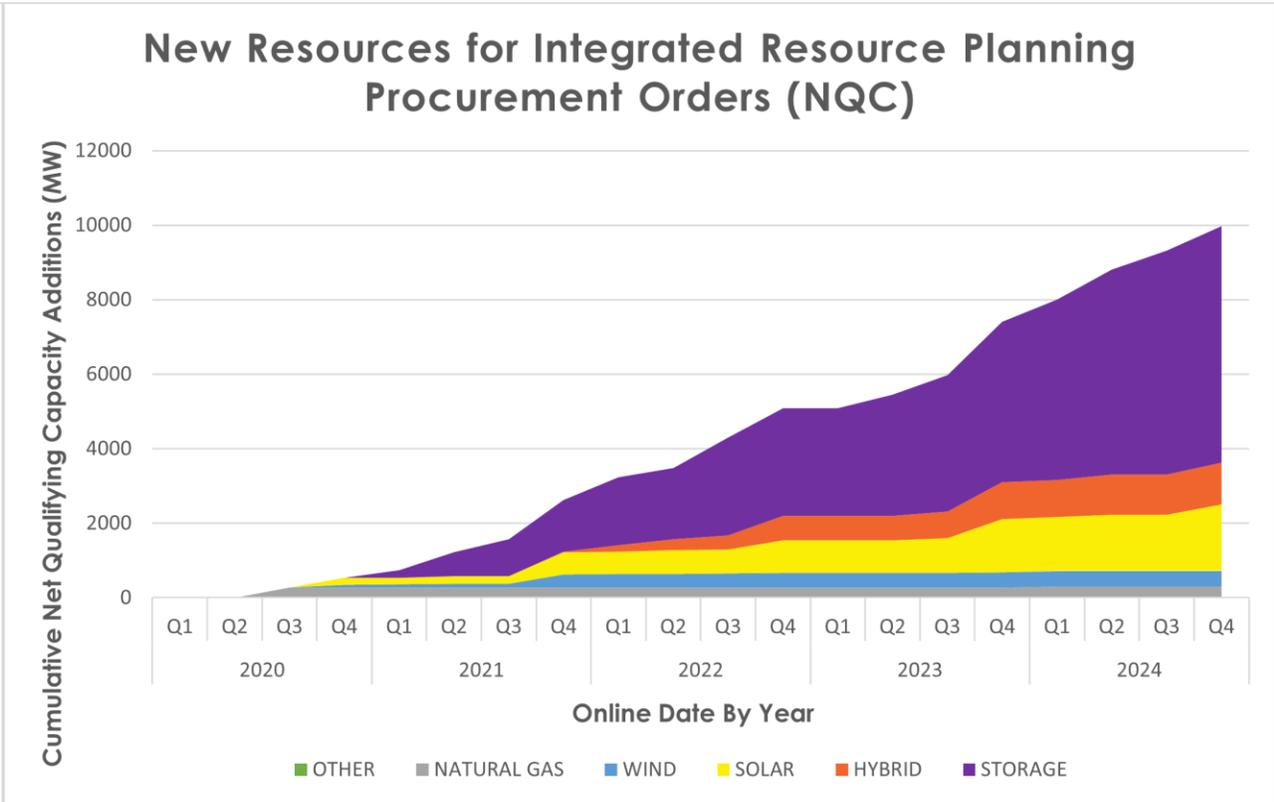
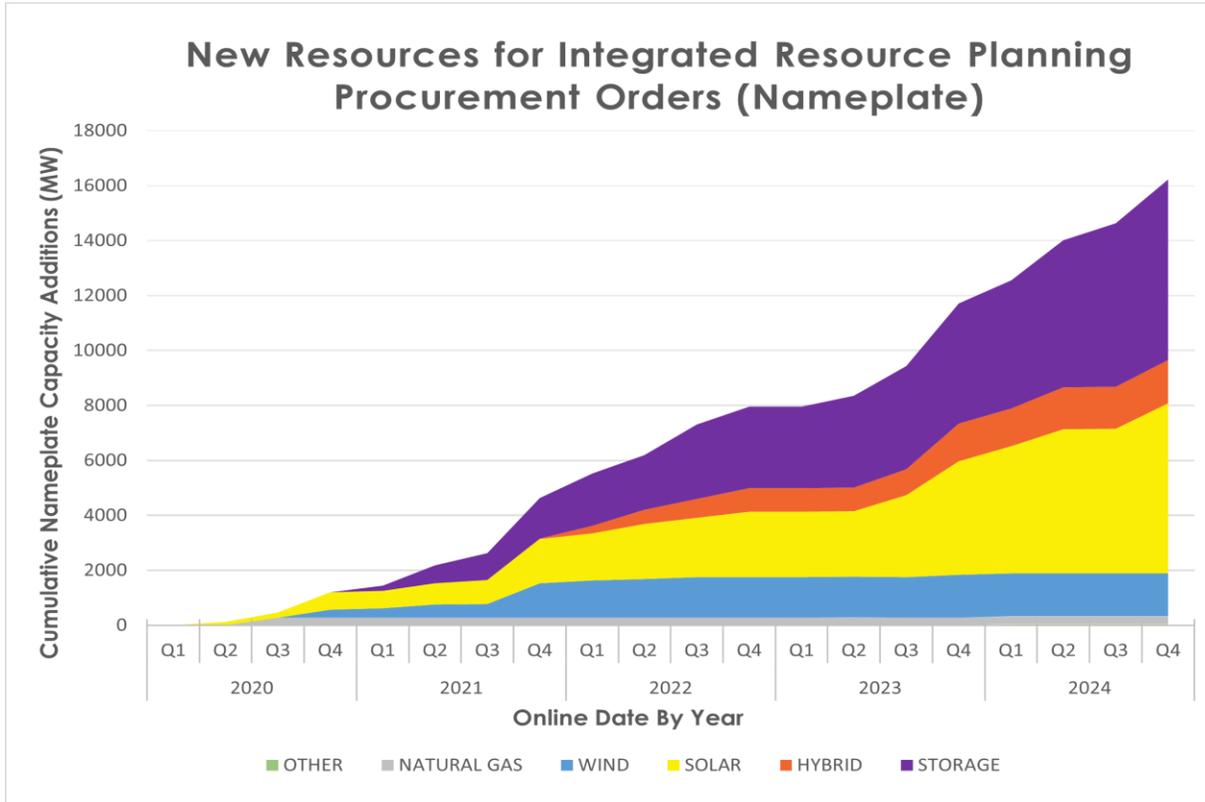
- **Installed to date:** Over 11,000 MW of storage nameplate capacity is online serving the grid as of December 2024, including imports.
 - Includes ~150 MW of storage added prior to 2020
 - Includes standalone battery storage and the storage component of hybrid resources
- **Expected future installs:** ~15,000 MW nameplate capacity of additional storage resources are under contract and expected to come online by 2028.

Part 2: Integrated Resource Planning Compliance

- New IRP Procurement MW by Year and Resource Type- Nameplate
- New IRP Procurement MW by Year and Resource Type – NQC

New IRP Procurement By Year and Resource Type

Data includes projects online as of December 31, 2024



Note: Data shown here shows a snapshot of new resources added to the CAISO grid Q1 2020 – Q4 2024 for compliance with Integrated Resource Planning (IRP) procurement orders, including specified CAISO imports. "Other" resources includes geothermal, biomass, biogas, and hydropower. Hybrids include some storage, and some other (usually solar). Additional resources have come online for other reasons in this time period but are not included in these figures. See: [IRP Procurement Track \(ca.gov\)](https://www.cpuc.ca.gov/IRP-Procurement-Track) for more information about IRP Procurement Order Compliance.

Part 3: Expected New MWs based on LSE Contracts to date

- Expected New MW by Year and Resource Type- Nameplate
- Expected New MW by Year and Resource Type – NQC
- Total New Energy Resources Online and Under Contract - Nameplate

New MWs Expected - Nameplate

By Year and Resource Type, including imports

Data includes projects expected/under contract as of December 12, 2024

Resource Type	Q4 2024	2025	2026	2027	2028	Total
Solar	225	1,279	1,338	320	0	3,162
Battery Storage	59	4,218	2,473	4,198	690	11,637
Paired/Hybrid	13	1,005	907	1,089	70	3,083
Wind	0	71	1,435	250	0	1,756
Geothermal	0	20	110	77	301	507
Biomass/Biogas	0	13	0	0	0	13
Totals	297	6,605	6,263	5,934	1,061	20,159

- Over 20,000 MW nameplate of future contracts are executed to meet CPUC's procurement order obligations.
- Majority of new resource MWs are expected to be battery storage.
- Other types of resources are eligible to meet orders and may be contracted in the future.

New MWs Expected - NQC

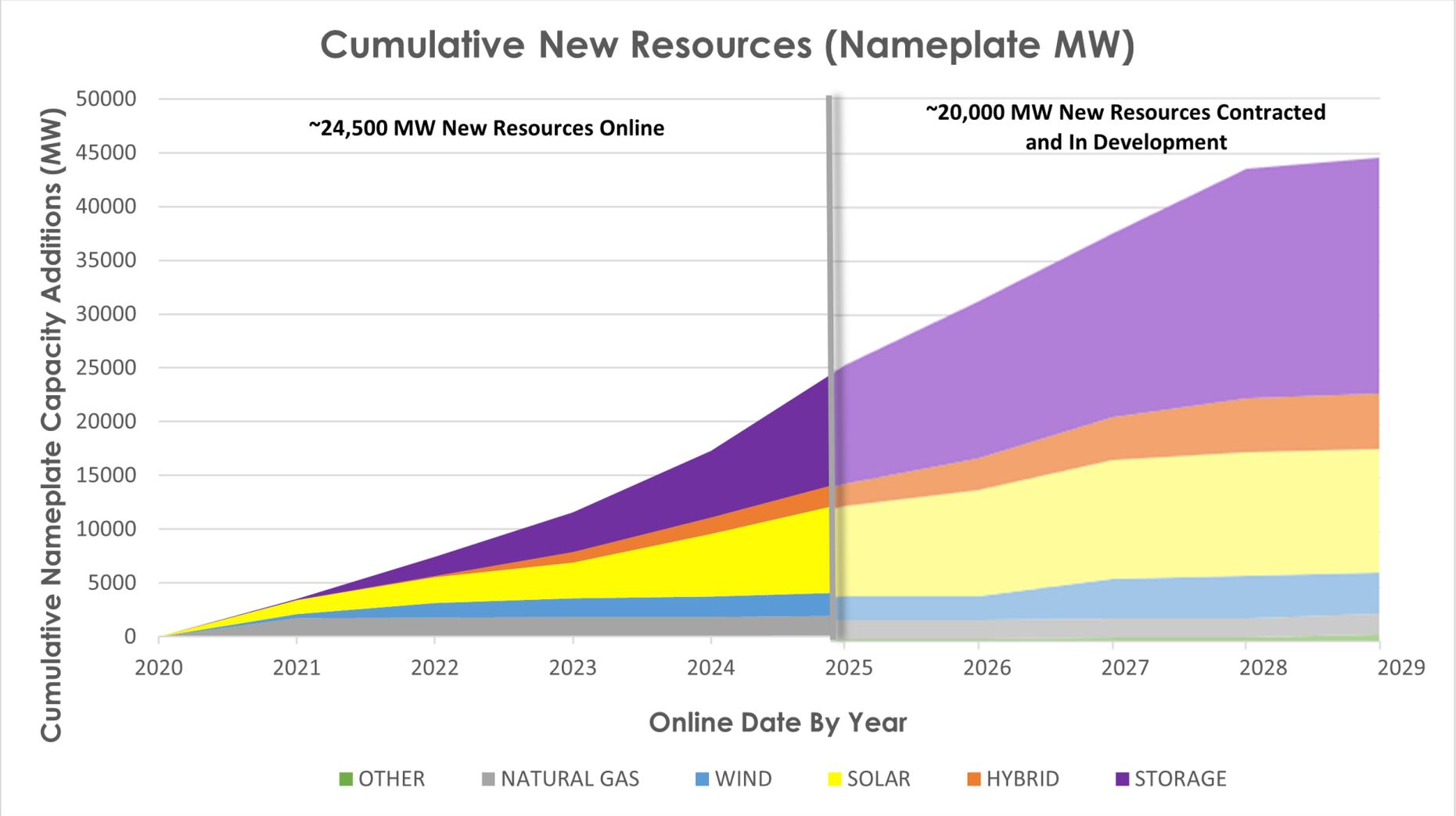
By Year and Resource Type, including imports

Data includes projects expected/under contract as of December 12, 2024

Resource Type	Q4 2024	2025	2026	2027	2028	Total
Solar	88	666	212	150	0	1,115
Battery Storage	54	3,840	2,318	3,827	643	10,682
Paired/Hybrid	8	504	591	719	33	1,856
Wind	0	16	398	84	0	498
Geothermal	0	18	105	71	297	492
Biomass/Biogas	0	13	0	0	0	13
Totals	150	5,057	3,624	4,852	973	14,656

- Nearly 15,000 MW NQC of future contracts are executed to meet CPUC's procurement order obligations.
- Majority of new resource MWs are expected to be battery storage.
- Other types of resources are eligible to meet orders and may be contracted in the future.

Total New Energy Resources Online and Under Contract



Note: Data shown here shows a snapshot of new resources added to CAISO grid Q12020 – Q4 2024, including specified CAISO imports. Also shown is a projection of future new resources based on contracts in place by December 2024. "Other" resources includes geothermal, biomass, biogas, and hydropower.

Links to Other Key References on New Resource Development

References to Related Information

- (1) Tracking Energy Development Task Force – [Tracking Energy Development \(ca.gov\)](#)
- (2) Joint Agency Reliability Planning Assessments – pursuant to SB 846
 - [February 2023 Report](#)
 - [May 2023 Report](#)
 - [August 2023 Report](#)
 - [December 2023 Report](#)
 - [May 2024 Report](#)
 - [August 2024 Report](#)
- (3) California Energy Commission’s Energy Almanac - [Energy Almanac \(ca.gov\)](#)
- (4) CAISO Key Energy Statistics: [Media resources | California ISO \(caiso.com\)](#)
- (5) Overview of CPUC IRP Procurement Orders – [IRP Procurement Track \(ca.gov\)](#)
- (6) Overview of CPUC Jurisdictional LSE Procurement in Compliance with IRP Procurement Orders
 - [Procurement in Compliance with D.19-11-016 and Mid Term Reliability \(D.21-06-035\) per December 1, 2023, 10/9/2024](#)
 - [Procurement in Compliance with D.19-11-016 and Mid Term Reliability \(D.21-06-035\) per August 1, 2023, 4/22/2024](#)
 - [Procurement in Compliance with D.19-11-016 and Mid Term Reliability \(D.21-06-035\) per February 1, 2023, 11/2/2023](#)
 - [Procurement in Compliance with D.19-11-016 per August 1, 2022 Filings, 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 irpdatarequest@cpuc.ca.gov