# Percent of Electricity Demand That Can be Met by Batteries and Battery Cost as a Percent of Electricity Price in States With Lots of Batteries


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**Table.** (a) Grid-scale battery peak nameplate capacity (peak discharge rate) in the state or grid region. (b) Grid-scale battery storage capacity. (c) Annual all-purpose grid (not including behind-the-meter) electricity demand, which equals retail electricity sales. (d) Annual-average grid power demand. (e) Grid battery cost as if the batteries are new per unit grid electricity consumed. (f) Residential retail electricity price. (g) Grid battery cost as if the batteries are new as a percent of residential retail electricity price. (h) Percent of annual grid electricity demand that can be met by batteries cycling once per day.

| | (a) Battery peak discharge rate (GW)[a] | (b) Battery storage capacity (GWh)[b] | (c) Annual grid electricity demand (GWh/y)[c] | (d) Annual-average grid power demand = c / 8760 h/y (GW) | (e) Battery cost (¢/kWh-grid-elec.-consumed)[d] | (f) Res. retail elec. price (¢/kWh-grid-elec.-consumed)[e] | (g) Battery cost as percent of electricity price = e/f (%) | (h) Percent of annual demand batteries can meet cycling once daily = b / (d x 24 h/d) (%) |
|---|---|---|---|---|---|---|---|---|
| CAISO | 16.25 | 60.6 | 208,586 | 23.8 | 0.271 | 32.8 | 0.83% | 10.6% |
| California | 16.95 | 63.4 | 237,830 | 27.1 | 0.249 | 32.8 | 0.76% | 9.7% |
| Arizona | 5.87 | 20.2 | 93,207 | 10.6 | 0.202 | 15.5 | 1.30% | 7.9% |
| Nevada | 1.70 | 6.3 | 40,187 | 4.6 | 0.146 | 13.3 | 1.10% | 5.7% |
| Texas | 16.32 | 29.2 | 516,196 | 58.9 | 0.053 | 15.7 | 0.34% | 2.1% |

[a]CAISO May 1, 2026 https://www.caiso.com/documents/key-statistics-apr-2026.pdf
California May 1, 2026 equals CAISO plus 0.694 GW of grid battery nameplate capacity on the LADWP grid.
Arizona Jun 1, 2026 https://cleanview.co/power-projects/operating/battery-storage-projects/arizona
Nevada Jun 1, 2026 https://cleanview.co/power-projects/operating/battery-storage-projects/nevada
Texas Jun 1, 2026 https://cleanview.co/power-projects/operating/battery-storage-projects/texas

[b]CAISO, Arizona, and Texas May 26, 2026 https://www.utilitydive.com/news/us-energy-storage-installations-hit-q1-record-up-32-year-over-year-seia/821133/
California May 1, 2026 equals CAISO plus 2.768 GWh of grid battery storage capacity on the LADWP grid.
Nevada Feb. 25, 2026 https://nevadacurrent.com/2026/02/25/nevada-does-its-bit-to-help-boost-record-energy-storage-in-2025/

[c]Electricity demand data from EIA: https://web.stanford.edu/group/efmh/jacobson/WWSBook/Countries100Pct.pdf, for the year Q2-2025 through Q1-2026 all except CAISO (compiled by M.Z. Jacobson). Data for CAISO compiled by M.Z. Jacobson daily from https://www.caiso.com/todays-outlook.

[d]Battery cost as if the batteries were new equals installed battery storage capacity (GWh) (b) multiplied by $140/kWh system cost and divided by the annual grid electricity demand (GWh/y) (c) and by battery life of 15 years. The system cost is assumed to be twice the pack cost of $70/kWh for stationary electricity storage https://about.bnef.com/insights/clean-transport/lithium-ion-battery-pack-prices-fall-to-108-per-kilowatt-hour-despite-rising-metal-prices-bloombergnef/

[e]Residential retail electricity price data for the year Q2-2025 through Q1-2026 for all except CAISO are from EIA, https://web.stanford.edu/group/efmh/jacobson/WWSBook/Countries100Pct.pdf. The CAISO price is assumed to be the same as the California price.