

CNS Calculator Dashboard - PG&E Conforming Scenario (PUBLIC VERSION)

INPUTS

Notes: Input values (yellow cells) shown here are allocsholders. Users should replace all inputs with values specific to their system. Inputs and results are included for the 2018, 2022, 2026, and 2030 model years. Any intermediate years should be interpolated outside of this tool.

General Inputs						
Metric	Unit	2018	2022	2026	2030	Notes
Non-dispatchable CHP	MW					Perfect capacity - 100% CF, e.g. cogeneration
Emission Factor - Non-dispatchable CHP	kgCO2/MWh	0.15	0.15	0.15	0.15	For multiple resources, input weighted average
Fraction of Emissions that can charge at work	%	0%	10%	25%	30%	Values shown are "Max" from CHV, HP, BEV, EV, User Interface
Annual REC Sales	GWh	0	2,069	2,069	2,069	
Demand Inputs						
Estimated Load Forecast for IEP (i.e., Managed Retail Sales Forecast)	GWh	47,986	56,342	55,955	54,187	Includes effect of BTM PV, ABE, etc.
Default Demand Inputs (Based on sales-weighted share of total from IEP)						
Metric	Unit	2018	2022	2026	2030	Notes
Baseline net energy for load (no BTM PV, EV, electrification, energy efficiency)	GWh	54,926	43,806	45,276	45,986	Grossed up for T&D losses; demand met by BTM CHP excluded
Electric Vehicle Load - Home Charging Only	GWh	376	732	1,155	1,435	Grossed up for T&D losses
Electric Vehicle Load - Home + Work Charging	GWh	24	119	226	655	Grossed up for T&D losses
Other Electrification	GWh	26	53	89	115	Grossed up for T&D losses
Building Electrification	GWh					Grossed up for T&D losses
Energy Efficiency	GWh	(134)	(1,961)	(3,672)	(5,133)	Grossed up for T&D losses
BTM PV	GWh	(3,031)	(3,737)	(5,046)	(6,124)	Grossed up for T&D losses
Custom Demand Inputs (OPTIONAL) (overrides Assigned Load Forecast for IEP)						
Use Custom?	Unit	2018	2022	2026	2030	Notes
Baseline net energy for load (no BTM PV, EV, electrification, energy efficiency)	GWh	54,926	43,806	45,276	45,986	To overwrite, set "Use Custom" to "Yes" and input forecast. Custom demand values should be grossed up for T&D losses.
Electric Vehicle Load - Home Charging Only	GWh	376	732	1,155	1,435	User-specified load profiles should be input in the "Custom Profiles" tab. Energy efficiency and BTM PV subtract from demand and therefore should be entered as negative values.
Electric Vehicle Load - Home + Work Charging	GWh	24	119	226	655	
Other Electrification	GWh	26	53	89	115	
Building Electrification	GWh	0	0	0	0	
Energy Efficiency	GWh	(134)	(1,961)	(3,672)	(5,133)	
BTM PV	GWh	(3,031)	(3,737)	(5,046)	(6,124)	
Active Demand Inputs						
Source	Unit	2018	2022	2026	2030	Notes
Baseline net energy for load (no BTM PV, EV, electrification, energy efficiency)	GWh	55,969	43,806	45,276	45,986	
Other Electrification	IEPR	-	53	89	115	
Building Electrification	IEPR	3	-	-	-	
Energy Efficiency	IEPR	(1,394)	(1,961)	(3,672)	(5,133)	
BTM PV	IEPR	(3,261)	(3,737)	(5,046)	(6,124)	

Capacity Inputs (MW)						
Resource	Type	2018	2022	2026	2030	Notes
Battery Storage	Storage					Assumes 4-hr battery storage duration
Pumped Storage	Storage					Assumes at least 12-hr pumped storage duration
Large Hydro	Hydro	1,076	1,390			Assumes average dispatch based on RESOLVE
Small Hydro	Hydro					Perfect capacity - 100% CF
CASO Wind for CASO	Wind	1,180	1,090	973	809	Existing wind located in CASO
SW Wind for CASO	Wind	-	-	-	-	Existing wind located in SW and delivered to CASO
Contracted NW Wind	Wind	-	-	-	-	Existing wind located in NW and delivered to CASO
Northern California Wind	Wind	-	-	-	-	
Solano Wind	Wind	-	-	-	-	
Central Valley North Los Banos Wind	Wind	-	-	-	-	
Greater Carrizo Wind	Wind	-	-	-	-	
Tehachapi Wind	Wind	-	-	-	-	
Kramer Inverness Wind	Wind	-	-	-	-	
Southern California Desert Wind	Wind	-	-	-	-	
Riverside East Palm Springs Wind	Wind	-	-	-	-	
Greater Imperial Wind	Wind	-	-	-	-	
Distributed Wind	Wind	-	-	-	-	
Baja California Wind	Wind	-	-	-	-	
Pacific Northwest Wind	Wind	-	-	-	-	
NW Int Tx Wind	Wind	-	-	-	-	
Idaho Wind	Wind	-	-	-	-	
Utah Wind	Wind	-	-	-	-	
Wyoming Wind	Wind	-	-	-	-	
Southern Nevada Northwest Arizona Wind	Wind	-	-	-	-	
Arizona Wind	Wind	-	-	-	-	
New Mexico Wind	Wind	-	-	-	-	
SW Int Tx Wind	Wind	-	-	-	-	
BTM Distributed PV	Solar	1,620	1,856	2,507	3,042	Derived from demand inputs, grossed up for T&D losses. DO NOT EDIT
CASO Solar for CASO	Solar	3,491	3,980	3,921	3,832	Existing solar located in CASO
SW Solar for CASO	Solar	-	-	-	-	Existing solar located in SW and delivered to CASO
HD Solar for CASO	Solar	-	-	-	-	Existing solar located in HD and delivered to CASO
Northern California Solar	Solar	-	-	-	-	
Solano Solar	Solar	-	-	-	-	
Central Valley North Los Banos Solar	Solar	-	-	-	-	
Westlands Solar	Solar	-	-	-	-	
Greater Carrizo Solar	Solar	-	-	-	-	
Tehachapi Solar	Solar	-	-	-	-	
Kramer Inverness Solar	Solar	-	-	-	-	
Mountain Pass El Dorado Solar	Solar	-	-	-	-	
Southern California Desert Solar	Solar	-	-	-	-	
Riverside East Palm Springs Solar	Solar	-	-	-	-	
Greater Imperial Solar	Solar	-	-	-	-	
Baja California Solar	Solar	-	-	-	-	
Utah Solar	Solar	-	-	-	-	
Southern Nevada Solar	Solar	-	-	-	-	
Arizona Solar	Solar	-	-	-	-	
New Mexico Solar	Solar	-	-	-	-	
Geothermal	Geothermal	265	17	17	17	Perfect capacity - 100% CF
Biomass	Biomass	211	250	238	215	Perfect capacity - 100% CF
Small Hydro	Small Hydro	224	184	180	174	Perfect capacity - 100% CF

RESULTS

Energy Balance						
Metric	Unit	2018	2022	2026	2030	Notes
Energy for Load (excluding BTM PV)	GWh	55,042	42,751	41,376	42,881	
Owned or contracted non-dispatchable GHG-emitting re	GWh	-	-	-	-	
Lane Hydro	GWh	-	-	-	-	
Nuclear	GWh	-	-	-	-	
Renewable Generation (including BTM PV)	GWh	21,703	18,812	19,536	19,706	Includes oversupply
User-specified GHG-free Power	GWh	-	-	-	-	
Storage Energy Imbalance	GWh	-	-	-	-	Due to storage losses and subhourly reserves.
Clean Net Short	GWh	348	(3,969)	14,812	14,686	
Emissions						
Metric	Unit	2018	2022	2026	2030	Notes
Clean Net Short	MtMCO2/yr	-	-	-	-	Includes oversupply emissions credits
Owned or contracted non-dispatchable GHG-emitting re	MtMCO2/yr	-	-	-	-	
Emissions offset for NW hydroelectric imports	MtMCO2/yr	(0.6)	(0.5)	(0.5)	(0.5)	Scaled to LSE load ratio share within CASO
Total	MtMCO2/yr	1.3	(0.5)	1.3	1.7	
Average emission intensity	kgCO2/MWh	0.02	(0.01)	0.12	0.11	
Oversupply						
Metric	Unit	2018	2022	2026	2030	Notes
Oversupply	GWh	4,514	6,320	614	594	Occurs when hourly supply exceeds hourly load
Oversupply Emission Credits	MtMCO2/yr	1.7	1.7	0.1	0.0	
Capacity/Peak						
Metric	Unit	2018	2022	2026	2030	Notes
Profile Peak Load	MW	11,155	8,650	8,774	8,774	Peak of hourly load profile - not a 1:10 peak
Owned or contracted non-dispatchable GHG-emitting re	MW	-	-	-	-	
Large Hydro	MW	-	-	-	-	
Total Variable Renewables	MW	6,291	6,926	7,401	7,683	Includes BTM PV
User-specified GHG-free Power	MW	-	-	-	-	
Energy Storage	MW	-	-	-	-	
Maximum Clean Net Short	MW	5,143	3,928	6,249	6,017	