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Emerging Trends for the California Energy Demand Forecast

Forecasting Community Choice Aggregation



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CED Forecast Overview

Odd-IEPR

- Data collected through IEPR Forms and Instructions
- Full sector model runs

Even-IEPR

- Economic update of previous forecast
- Includes updated selfgeneration and transportation forecasts







Adopted Demand Forecast Forms

- -Baseline and managed scenarios by PA
- -Hourly Forecast and monthly peaks for CAISO territory
- -LSE and BA tables





LSE and BA Table: Form 1.1c

LSE Sales Forecasts

- Historical data collected from QFER
- Disaggregation of PA forecasts
- PA growth applied to respective LSEs
- If needed, incremental load growth adjustments

					Form 1.1c	- STATEW	/IDE								
		Californ	ia Energy D	emand 201	9-2030 Prel	liminary Bas	eline Forec	ast - Mid D	emand Case						
Electricity Deliveries to End Users by Agency (GWh)															
															Average An
															Growt
Planning Area	Agency	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	(2019-20
PG&E Pacific	Gas & Electric Company (Bundled)	48,847	35,067	33,689	32,680	32,847	33,106	33,432	33,789	34,080	34,396	34,670	34,937	35,196	C
Pacific	Gas & Electric Company (Direct Access)	9,410	9,520	10,418	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	11,400	
Pacific	Gas & Electric Company (BART)	377	380	380	380	380	380	380	380	380	380	380	380	380	1
CCA-0	CleanPowerSF	1,239	2,562	2,927	2,932	2,946	2,966	2,990	3,014	3,033	3,051	3,067	3,082	3,097	
CCA-E	East Bay Community Energy	1,990	5,583	5,637	5,646	5,674	5,713	5,759	5,805	5,840	5,875	5,906	5,936	5,965	
CCA-H	King City Community Power	23	23	23	23	23	23	24	24	24	24	24	24	25	
CCA-N	Marin Clean Energy	4,329	5,216	5,267	5,276	5,302	5,338	5,381	5,424	5,457	5,490	5,519	5,547	5,574	
CCA-N	Monterrey Bay Community Power	1,999	3,183	3,303	3,308	3,325	3,347	3,374	3,401	3,422	3,443	3,461	3,478	3,495	
CCA-F	Peninsula Clean Energy Authority	3,519	3,459	3,492	3,498	3,515	3,539	3,568	3,596	3,618	3,640	3,659	3,678	3,696	
CCA-F	Pioneer Community Energy	936	1,095	1,106	1,108	1,113	1,121	1,130	1,139	1,146	1,153	1,159	1,164	1,170	
CCA-F	Redwood Coast Energy Authority	640	680	686	687	691	696	701	707	711	715	719	723	726	
CCA-S	Ban José Clean Energy	50	4,051	4,419	4,426	4,448	4,478	4,514	4,551	4,578	4,606	4,630	4,653	4,676	
CCA-S	Bilicon Valley Clean Energy	3,643	3,931	3,969	3,976	3,995	4,022	4,055	4,087	4,112	4,137	4,158	4,180	4,200	
CCA-S	Sonoma Clean Power	2,372	2,528	2,552	2,556	2,569	2,586	2,607	2,628	2,644	2,660	2,674	2,688	2,701	
CCA-V	/alley Clean Energy Alliance	399	695	702	703	707	712	717	723	727	732	736	739	743	
Alamec	la Municipal Power	346	340	343	344	345	348	351	353	356	358	360	361	363	
Biggs M	1unicipal Utilities	15	15	15	15	15	15	16	16	16	16	16	16	16	
Calave	ras Public Power Agency	31	31	31	31	31	31	32	32	32	32	32	32	33	
Gridley	, City of	32	31	32	32	32	32	32	33	33	33	33	33	33	
Healds	burg, City of	73	72	73	73	73	74	74	75	76	76	76	77	77	
Pittsbu	rg, City of (dba Island Energy)	22	22	22	22	22	22	22	22	23	23	23	23	23	
Lassen	Municipal Utility District	125	122	124	124	124	125	126	127	128	129	129	130	131	
Lathrop	plrrigation District	9	9	9	9	9	9	9	9	9	9	9	9	9	
Lodi, Ci	ity of	413	406	410	411	413	416	419	422	425	428	430	432	434	
Lompo	c, City of	128	126	127	127	128	129	130	131	131	132	133	134	134	
Palo Al	to, City of	890	875	883	885	889	895	902	910	915	921	925	930	935	
Plumas	-Sierra Rural Electric Cooperation	144	141	143	143	144	145	146	147	148	149	150	150	151	
Powerf	Enterprise of the San Francisco PUC	994	977	987	988	993	1,000	1,008	1,016	1,022	1,029	1,034	1,039	1,044	
Port of	Oakland	54	53	54	54	54	54	55	55	56	56	56	57	57	
Port of	Stockton	20	20	20	20	20	21	21	21	21	21	21	21	21	
Silicon	Valley Power	3,614	3,773	4,021	4,138	4,235	4,342	4,457	4,544	4,587	4,607	4,626	4,645	4,663	
Tuolum	ne County Public Power Agency	25	24	24	24	24	25	25	25	25	25	25	26	26	
Ukiah, (Dity of	108	106	108	108	108	109	110	111	111	112	113	113	114	
Californ	nia Department of Water Resources - Nort	2,943	3,059	3,059	3,059	3,059	3,059	3,059	3,059	3,059	3,059	3,059	3,059	3,059	
WAPA		2,210	2,210	2,210	2,210	2,210	2,210	2,210	2,210	2,210	2,210	2,210	2,210	2,210	
ETotal		91,971	90,385	91,263	91.418	91,864	92.487	93,234	93,986	94,555	95,124	95,621	96,108	96,577	



CCA Forecast Use Cases

Forecast Product	Scope	Use Case	Method		
Form 1.1c (Sales by LSE)	10 years	CPUC Integrated Resource Plan	CEC disaggregates IEPR forecast by LSE; limited input from CCAs and ESPs		
TAC Area Monthly Peaks	Year-Ahead (3 Years Local)	RA Year-Ahead System and Local Requirements	LSEs provide their forecasts to CEC; CEC adjusts for consistency with IEPR monthly peak demand		
Departing Load Scenarios (TBD)	3-10 years	CPUC TBD	Probabilistic or Scenario-Based		



Process Comparison for Existing CCAs

	Current Method	Proposed Improvement			
Near-term (1-2 years)	 Year-ahead filings Implementation plans 				
Mid/Long-term (3-10 years)	 Disaggregation of PA forecast Limited LSE-specific data used 	 Leverage FZ projections Addtl. CCA/ESP data informs long-term adjustments 			



- Evaluate alignment with CPUC IRP and other processes
- □ Identify additional data requirements
- □ Consider need for IEPR data request changes
- □ Take up probabilistic departing load topic with DAWG



Appendix: Forecast Forms

CEDU 2018

Baseline and Managed Forecast Forms <u>https://ww2.energy.ca.gov/2018_energypolicy/documents/#cedu</u>

CED 2019 Preliminary

Baseline Forecast Forms

https://ww2.energy.ca.gov/2019 energypolicy/documents/#08152019

Appendix: Forecast Zones by Planning Area

Planning Area	FZ #
PG&E	1-6
SCE	7-11
SDG&E	12
Northern California Non-CAISO	13-15
LADWP	16-17
Burbank/Glendale	18
Imperial Irrigation District	19
Valley Electric Association	20

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