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Docket Number:	17-IEPR-03
<b>Project Title:</b>	Electricity and Natural Gas Demand Forecast
TN #:	217870
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Submitter Role:	Applicant
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# **Electricity Demand Forecast Forms**

# California Energy Commission 2017 Integrated Energy Policy Report Docket Number 17-IEPR-03

The following spreadsheets are the California Energy Commission (Energy Commission) forms for collecting data and analyses relating to electricity demand. The Energy Commission's statues and regulations specify that a broad array of information can be collected and analyzed to prepare the *Integrated Energy Policy Report*. Specifically, Public Resources Code (PRC) Section 25301 directs the Energy Commission to conduct regular assessments of all aspects of energy demand and supply to that it may develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety. To carry out these assessments the Energy Commission of data from market participants in California.

To carry out these assessments, PRC Section 25301[a], the Energy Commission may require submission of demand forecasts, resource plans, market assessments, related outlooks, individual customer historic electric or gas service usage, or both, and individual customer historic billing data, in a format and level of granularity specified by the commission from electric and natural gas utilities, transportation fuel and technology suppliers, and other market participants.

### Who must file:

Data are requested from all LSEs whose annual peak demand in the last two consecutive years exceeded 200 MW. Statutes found in the PRC and supporting regulations give the Energy Commission authority to require forecast submittals from all entities engaged in generating, transmitting, or distributing electric power by any facilities. This includes utility distribution companies (UDCs), energy service providers (ESPs), community choice aggregators (CCAs) permitted to operate under Assembly Bill 117 (Migden, Chapter 838, Statutes of 2002), and all other entities that serve end-use loads, collectively referred to as LSEs. However, according to existing regulations, *small LSEs* need not comply with the complete reporting requirements but may be required to submit demand forecasts in an alternative abbreviated form established by the Energy Commission. For this specific IEPR proceeding, the Energy Commission is not requesting long-term forecast data using these forms from any LSE with peak demand less than 200 MW.

A small LSE is one that has experienced an annual peak demand of 200 megawatts or less in two consecutive calendar years preceding the required data filing date and is regulated by the CPUC or owned or operated by a public government entity.

### Submittal Format:

Parties are requested to submit an electronic file containing data for Forms 1, 2, 3, 7 and 8 using this template, and reports on Forms 4 and 6 in .doc or .pdf.

For all filings, parties are required to use the Energy Commission's e-filing system. This requires LSEs to submit their demand data and narratives electronically by uploading files using an internet connection and a modern browser. A user's guide to the Energy Commission's e-filing system is posted at: *http://www.energy.ca.gov/e-filing/*. After completing registration, log in and select the following proceeding from the dropdown menu: *17-IEPR-03 Electricity, Natural Gas, and Transportation Demand Forecast.* When naming an attached file of 50 megabytes or less, please include the LSE's name in the filename. Attachments should be submitted as separate files and clearly identified. Cover letters that only identify documents that are part of the filing are unnecessary.

#### Confidentiality:

If you are requesting confidentiality for any part of the submittal, please see Appendix A: Confidentiality Applications in the Forms and Instructions for Submitting Electricity Demand Forecasts report.

More specific questions about confidentiality may be directed to Michelle.Chester@energy.ca.gov or (916) 654-4701 or to Jared.Babula@energy.ca.gov or (916) 654-3843.

### Due Dates:

Forms 1.1a Retail Sales (2015-2016):	Monday, February 13, 2017
Forms 1 through 7 (all parts) and Form 8.2:	Monday, April 17, 2017
Form 8.1a and 8.1b:	Monday, June 05, 2017

Questions relating to the electricity demand forecast forms should be directed to Kelvin.Ke@energy.ca.gov or (916) 654-4502

Please Enter the Following I	nformation:	
Participant Name:	Southern California Edison	
Date Submitted:	5-Jun-17	
Contact Information:	Catherine Hackney	
	1201 K Street, Sacramento California 95831	
	916-441-3979	
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		E			
		IOU	POU	CCA	ESP
Form 8.1a (IOU)	IOU REVENUE REQUIREMENTS BY MAJOR COST CATEGORIES/UNBUNDLED RATE COMPONENT	Х			
Form 8.1a (POU/CCA)	BUDGET APPROPRIATIONS OR ACTUAL COSTS AND COST PROJECTIONS BY MAJOR EXPENSE CATEGORY		Х	Х	
Form 8.1a(ESP)	ESTIMATED POWER SUPPLY COST				Х
Form 8.1b (Bundled)	REVENUE REQUIREMENTS BY BUNDLED CUSTOMER CLASS	Х	Х		
Form 8.1b (Direct Access)	REVENUE REQUIREMENTS FOR DIRECT ACCESS CUSTOMERS	Х	Х		

Form 8.1a (IOU)														
IOU Revenue Requirements by Major Cost	Categories/Unbung	dled Rate Comr	onent											
2015 to 2028 (in Nominal Dollars)	ERRA AUTHORIZ			STED (2018) 20	017 Spring FOREC	CAST>>>>>>>>>>>>	>>>							
Southern California Edison	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
GENERATION														
Utility owned/retained generation by fuel/resource type:														
Nuclear:														
Fuel	47,693	40,225	38,684	38,223	37,987	38,181	39,003	38,844	38,438	38,504	38,923	39,849	40,774	41,382
Non-Fuel														
Conventional Hydroelectric: Fuel			I			I								
Non-Fuel														
Hydroelectric Pumped Storage:														
Fuel														
Non-Fuel														
Natural Gas-Fired:		-				-	•							
Fuel	172,864	133,737	134,243	44,841	93,580	110,368	110,000	104,575	93,904	81,621	120,364	126,214	140,829	158,724
Average Fuel Price \$/MMBtu														
Average Carbon Allowance Price \$/MTCO2E														
Non-Fuel														
Diesel/Propane:	0.220	7 452	5 770	E 47E	6 612	7 042	7 545	0 426	9 652	0.400	0 775	10 226	0 1 4 7	0.002
Fuel Average Fuel Price \$/MMBtu	8,239	7,453	5,779	5,175	6,612	7,042	7,545	8,126	8,652	9,199	9,775	10,236	8,147	8,083
Non-Fuel														
Other														
UOG Base Revenue Requirement	1,355,981	773,577	787,648	713,122	747,473	784,462	807,996	832,236	857,203	882,919	909,407	936,689	964,789	993,733
RPS Eligible Renewables:	-													
Utility-Owned Generation Subtotal:	1,584,777	954,992	966,354	801,361	885,652	940,054	964,544	983,781	998,197	1,012,243	1,078,469	1,112,987	1,154,539	1,201,922
Purchased Power		•			• •				•	•	•	•		
DWR Contracts	(126,000)	(16,000)	-											
Qualifying Facilities	518,125	684,559	719,107	613,949	454,523	396,804	230,320	166,456	90,029	81,213	84,138	68,407	46,888	40,283
Non-QF Renewables	1,611,664	1,417,886	1,766,326	1,934,734	2,106,331	2,232,204	2,254,530	2,231,624	2,252,071	2,285,763	2,311,616	2,351,074	2,273,426	2,279,287
Other Contracts (Inc. New System Gen)	2,553,807	1,270,864.28	1,982,049	1,836,674	1,217,842	1,539,713	1,693,929	1,562,015	1,366,138	1,234,452	1,358,663	1,439,986	1,486,426	1,522,224
Residual Market Transactions: Payments to CAISO for Market Charges:	91,197	126,314	73,232	53,791	78,509	80,169	81,915	83,741	85,645	87,602	89,617	91,656	93,759	95,905
Other Resources	51,157	120,314	13,232	55,791	78,509	80,109	61,915	03,741	05,045	87,802	69,017	91,000	33,733	90,900
GENERATION SUBTOTAL	7,063,871	5,626,340	6,426,851	6,076,346	5,404,896	5,658,846	5,619,873	5,476,475	5,393,112	5,435,022	5,667,689	5,880,058	5,981,943	6,174,823
TRANSMISSION	.,,	-,,	-,,	-,,	-,	-,,	-,,	-,,	-,,	-,,	-,,	-,,	-,,	-,,
Base Transmission Revenue Requirement	910,155	1,091,803	1,188,758	1,192,000	1,215,840	1,252,315	1,289,885	1,328,581	1,368,439	1,409,492	1,451,777	1,495,330	1,540,190	1,586,395
Transmission Revenue Balancing Account Adjustment	(85,755)	(31,135)	(107,584)	(81,400)										
Transmission Access Charge Balancing Account	108,987	(7,754)	(10,268)	(83,659)										
Reliability Services Rates	(9,680)	5,111	14,308	16,100										
TRANSMISSION SUBTOTAL	923,707	1,058,025	1,085,214	1,043,041	1,215,840	1,252,315	1,289,885	1,328,581	1,368,439	1,409,492	1,451,777	1,495,330	1,540,190	1,586,395
DISTRIBUTION	/ *													
Base Distribution Revenue Requirement	4,202,748 28,234	4,554,326 28,324	4,796,259 28,324	5,113,626	5,612,762 56,648	6,145,782	6,330,156	6,520,060	6,715,662	6,917,132	7,124,646	7,338,385	7,558,537	7,785,293
Self-Generation Incentive Program Demand Response Program	94,042	94,042	28,324 41,544	56,648 49,424	49,020	- 43,325	- 33,000	- 31,800	- 31,800	- 31,800	- 31,800	- 31,800	- 31,800	31,800
Electric Vehicle Infrastructure/Programs	54,042	34,042	6,101	3,539	19,093	43,325 26,149	45,209	65,869	91,493	91,347	91,200	91,200	91,200	91,127
California Solar Initiatives	83,011	102,236	8,943	6,000	3,840		-3,200	-	-	-	-	-		51,127
All Other Costs (e.g., GHG Revenue, G&A)	(527,320)	(267,289)	(585,688)	(496,144)	(513,517)	(511,972)	(637,606)	(688,206)	(661,068)	(699,530)	(732,970)	(736,014)	(722,685)	(739,311)
DISTRIBUTION SUBTOTAL	3,880,715	4,511,639	4,295,482	4,733,093	5,227,846	5,703,284	5,770,759	5,929,523	6,177,887	6,340,749	6,514,676	6,725,371	6,958,852	7,168,909
NUCLEAR DECOMMISSIONING	23,506	(72,929)	773	(27,301)	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	
PUBLIC PURPOSE PROGRAMS:														
Low-Income	80,653	80,653	69,599	68,888	63,791	65,067	65,067	65,067	65,067	65,067	65,067	65,067	65,067	65,067
Energy Efficiency	336,525	337,065	337,189	242,481	257,049	269,830	265,331	272,604	280,094	287,809	295,756	295,756	295,756	299,834
Electric Program Investment Charge	70,630	70,625	70,651	70,651	70,651	70,651	70,651	70,651	70,651	70,651	70,651	70,651	70,651	70,651
Renewable Energy	107.000	400.040	477 400	000.000	004 404	405 5 40	404 040	400.000	445.040	400 505	404 477	404 477	404 474	405 550
PUBLIC PURPOSE PROGRAMS SUBTOTAL	487,809	488,343	477,438	382,020	391,491	405,548	401,049	408,322	415,812	423,527	431,474	431,474	431,474	435,552

Form 8.1a (IOU)	-orm 8.1a (IOU)													
OU Revenue Requirements by Major Cost Categories/Unbundled Rate Component														
2015 to 2028 (in Nominal Dollars)	ERRA AUTHORIZ	RA AUTHORIZED (2015 - 2017) or FILED/REQUESTED (2018) 2017 Spring FORECAST>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>												
Southern California Edison	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
DWR BOND CHARGE	403,051	420,612	418,875	410,399	403,212	395,306	391,707	391,209	-	-	-	-	-	
ON-GOING COMPETITIVE TRANSITION CHARGE														
REGULATORY ASSET FOR ENERGY RECOVERY														
BOND (PG&E only)														
TAXES AND FRANCHISE FEES														
OTHER COSTS NOT ALREADY REPORTED	(166,998)	296,799	145,550	85,125	111,358	118,885	123,243	117,314	115,396	104,575	98,977	90,654	70,351	62,342
TOTAL REVENUE REQUIREMENTS	12,615,661.85	12,328,830	12,850,183	12,702,724	12,759,642	13,539,184	13,601,516	13,656,423	13,475,645	13,718,365	14,169,592	14,627,887	14,987,809	15,428,021
	-	684,559	719,107	613,949	-	-	-	-	-	-	-	-	-	
ON-GOING COMPETITIVE TRANSITION CHARGE	13,179	1,002	2,422											

Form 8.1b (Bundled) Revenue Requirements Allocation 2015 to 2028 (in Nominal Dollars) Southern California Edison														
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total Revenue Requirements (From Form 8.1a)	12,615,662	12,328,830	12,850,183	12,702,724	12,759,642	13,539,184	13,601,516	13,656,423	13,475,645	13,718,365	14,169,592	14,627,887	14,987,809	15,428,021
Total Generation Revenue Requirement:														
Residential/Domestic	3,143,987	2,506,979	2,677,660	2,531,626	2,251,876	2,357,681	2,341,443	2,281,698	2,246,966	2,264,428	2,361,365	2,449,846	2,492,295	2,572,656
Commercial	3,024,430	2,419,782	2,889,451	2,731,867	2,429,989	2,544,163	2,526,641	2,462,170	2,424,691	2,443,534	2,548,139	2,643,618	2,689,424	2,776,141
Industrial	387,521	315,688	376,226	355,708	316,401	331,268	328,986	320,592	315,712	318,165	331,785	344,217	350,182	361,473
Agricultural	135,142	125,752	130,893	123,754	110,079	115,251	114,457	111,537	109,839	110,693	115,431	119,756	121,832	125,760
All Other Customer Classes	322,638	260,307	305,870	289,188	257,232	269,318	267,464	260,639	256,671	258,666	269,739	279,846	284,695	293,875
GENERATION SUBTOTAL	7,013,719	5,628,508	6,380,099	6,032,143	5,365,578	5,617,681	5,578,992	5,436,636	5,353,879	5,395,485	5,626,459	5,837,284	5,938,427	6,129,904
Total Distribution Revenue Requirement:														
Residential/Domestic	1,533,848	1,951,250	1,736,049	1,906,191	2,119,640	2,291,243	2,274,488	2,335,284	2,425,331	2,480,618	2,542,786	2,633,433	2,740,722	2,861,772
Commercial	1,605,099	1,707,733	1,739,234	1,920,798	2,111,241	2,321,012	2,381,223	2,448,063	2,556,403	2,630,254	2,706,789	2,788,052	2,872,997	2,931,107
Industrial	102,697	110,212	108,924	120,311	133,078	143,175	143,693	147,599	153,573	157,389	161,549	166,999	173,222	179,478
Agricultural	67,409	81,552	79,820	88,161	96,865	106,587	109,477	112,555	117,559	120,979	124,516	128,230	132,093	134,656
All Other Customer Classes	231,078	247,975	249,140	274,958	302,038	333,569	343,189	352,861	368,646	379,483	390,652	402,198	414,109	421,653
DISTRIBUTION SUBTOTAL	3,540,131	4,098,721	3,913,167	4,310,419	4,762,862	5,195,585	5,252,070	5,396,362	5,621,511	5,768,723	5,926,292	6,118,913	6,333,143	6,528,665
All Other Revenue Requirements:							-			-				
Residential/Domestic	552,216	897,556	843,982	747,457	828,932	850,656	864,485	880,240	791,477	806,438	824,533	838,299	847,069	862,344
Commercial	721,056	821,181	824,605	740,035	833,599	852,517	865,019	880,738	727,421	742,514	759,899	774,405	785,529	801,043
Industrial	70,643	87,879	83,805	76,735	93,117	97,214	101,041	104,119	84,047	86,652	88,643	89,908	91,004	90,969
Agricultural	27,132	37,525	33,878	29,631	34,102	34,646	35,044	35,582	27,393	27,904	28,525	29,009	29,326	29,857
All Other Customer Classes	91,535	98,134	102,228	87,805	95,031	94,928	94,792	95,099	72,826	73,611	75,445	76,956	77,646	79,874
"ALL OTHER" SUBTOTAL	1,462,582	1,942,276	1,888,497	1,681,662	1,884,781	1,929,960	1,960,381	1,995,778	1,703,163	1,737,118	1,777,046	1,808,577	1,830,573	1,864,086
Total Revenue Requirements	12,016,431	11,669,505	12,181,764	12,024,224	12,013,221	12,743,227	12,791,443	12,828,776	12,678,554	12,901,326	13,329,798	13,764,774	14,102,144	14,522,656

Form 8.1b (Direct Access) Revenue Requirements Allocation for D 2015 to 2028 (in Nominal Dollars) Southern California Edison	Revenue Requirements Allocation for Direct Access Service Customers 2015 to 2028 (in Nominal Dollars) Southern California Edison														
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	
Total Revenue Requirements	599,231	659,324	668,419	678,499	746,421	795,957	810,073	827,647	797,090	817,039	839,794	863,113	885,666	905,365	
Total Revenue Requirements for Direct															
Residential	3,929	39,222	35,384	36,152	39,583	42,176	42,210	43,124	43,214	44,146	45,284	46,695	48,193	49,944	
Non-Residential	595,302	620,102	633,035	642,348	706,838	753,781	767,862	784,523	753,877	772,893	794,510	816,418	837,473	855,421	