

DOCKETED

Docket Number:	17-IEPR-03
Project Title:	Electricity and Natural Gas Demand Forecast
TN #:	222467
Document Title:	Silicon Valley Power Comments on the California Energy Demand 2018-2030 Revised Forecast and LSE and BA Forecasts
Description:	N/A
Filer:	System
Organization:	Silicon Valley Power/Kathleen Hughes
Submitter Role:	Public
Submission Date:	2/7/2018 4:47:18 PM
Docketed Date:	2/7/2018

Comment Received From: Kathleen Hughes

Submitted On: 2/7/2018

Docket Number: 17-IEPR-03

**Silicon Valley Power Comments on the California Energy Demand 2018-2030
Revised Forecast and LSE and BA Forecasts**

Additional submitted attachment is included below.



Powering The Center of What's Possible

February 7, 2018

California Energy Commission
Dockets Office, MS-4
Docket No. 17-IEPR-03
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Docket 17-IEPR-03: Silicon Valley Power Comments on the California Energy Demand 2018-2030 Revised Forecast and LSE and BA Forecasts

Silicon Valley Power (SVP) appreciates the opportunity to provide comments on the California Energy Commission's (CEC) California Energy Demand (CED) 2018-2030 Revised Forecast¹.

Key points:

- I. Silicon Valley Power's consumer base differs from IOUs and small LSEs in the PG&E load serving area and the overall California region. The existing economic growth indicators underestimate the energy load growth and peak demand growth that SVP expects in its service territory.

- a. Electricity Consumption

The published CED 2017 Revised LSE and BA Demand Forecasts for SVP indicate average annual growth and decline rates of -1.27 percent, -0.25 percent, -0.09 percent, and 0.75 percent in the Low Baseline Demand High AAEE-AAPV case, Mid Baseline Demand Mid AAEE-AAPV case, Mid Baseline Demand Low AAEE-AAPV case, and High Baseline Demand Low AAEE-AAPV case, respectively. See Table I below.

SVP has forecasted and is planning for a 3.78 percent, and 6.67 percent, expected and high growth average annual growth rate from 2016 to 2027. This accelerated growth stems primarily from the growth from data centers which are already in the city's planning and development processes, and secondarily due to commercial and residential mixed-use housing growth. Numerous data centers have been established in SVP's service territory to support the data needs of corporate offices and internet-related businesses. Starting around 2021, SVP's growth is more heavily weighted to data centers due to interest and demand from this consumer base to locate in SVP's service territory, and because of technological advances which allow for a higher potential energy usage density.

¹ California Energy Demand 2018-2030 Revised Forecast <https://efiling.energy.ca.gov/getdocument.aspx?tn=222287>



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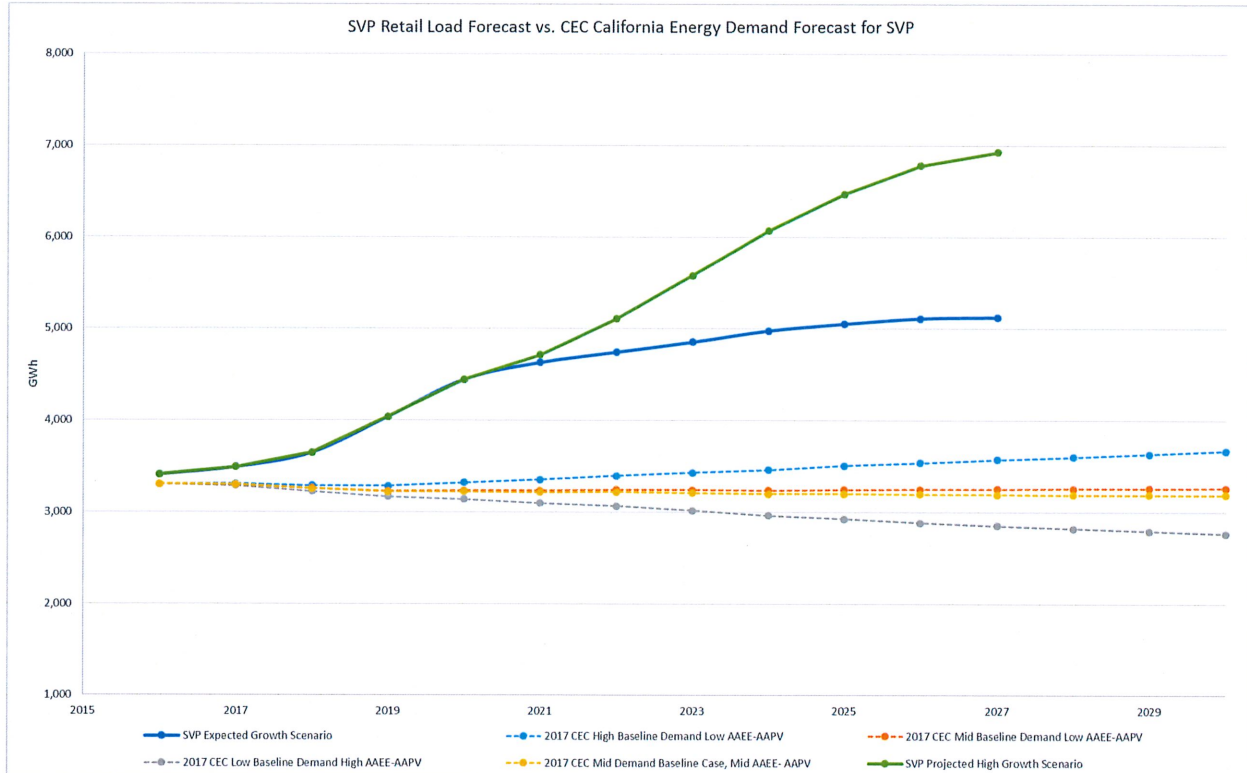
Table I. CEC Electricity Consumption Forecast for SVP and SVP's Actual Expected and High Growth Scenario Forecasts

Year	2017 CEC High Baseline Demand Low AAEE-AAPV	2017 CEC Mid Baseline Demand Low AAEE-AAPV	2017 CEC Low Baseline Demand High AAEE-AAPV	2017 CEC Mid Demand Baseline Case Mid AAEE- AAPV	SVP Expected Growth Scenario	SVP Projected High Growth Scenario
2016	3,306	3,306	3,306	3,306	3,408	3,408
2017	3,304	3,298	3,288	3,297	3,489	3,489
2018	3,289	3,259	3,224	3,256	3,648	3,648
2019	3,283	3,228	3,169	3,221	4,040	4,040
2020	3,322	3,235	3,140	3,223	4,448	4,448
2021	3,354	3,234	3,100	3,216	4,632	4,717
2022	3,397	3,244	3,066	3,220	4,745	5,110
2023	3,431	3,242	3,018	3,210	4,855	5,581
2024	3,463	3,238	2,967	3,199	4,979	6,068
2025	3,507	3,247	2,925	3,201	5,053	6,472
2026	3,540	3,248	2,885	3,195	5,114	6,783
2027	3,574	3,252	2,852	3,193	5,126	6,932
2028	3,604	3,255	2,823	3,190		
2029	3,635	3,258	2,793	3,189		
2030	3,668	3,264	2,766	3,190		
Avg. Annual Growth Rate	0.75%	-0.09%	-1.27%	-0.25%	3.78%	6.67%

* Actual values shaded in gray



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b. Peak Load (MW)

Furthermore, the CEC’s peak demand estimate underestimates SVP’s peak demand in coming years and does not account for the future growth SVP anticipates. Historically, from 1999 through 2009, SVP’s peak demand growth rate performed in the order of magnitude similar to the CEC’s 2017 High Baseline Demand Low AAEE-AAPV and CEC’s 2017 Mid Baseline Demand Low AAEE-AAPV peak demand forecasts for SVP in the 1 in 2 Scenario.^{2 3} See Table II and Table III below.

However, based on SVP’s more recent historical (from year 2000 on) and future peak demand growth, this estimate inaccurately reflects SVP’s growth, which is forecasted to be 3.26 percent and 6.28 percent in the Expected and High Growth scenarios, respectively, from 2017 through 2027. See Table III below.

² CEC LSE and BA Tables High Baseline Demand Low AAEE-AAPV <https://efiling.energy.ca.gov/GetDocument.aspx?tn=222387-1>

³ CEC LSE and BA Tables Mid Baseline Demand Low AAEE-AAPV <https://efiling.energy.ca.gov/GetDocument.aspx?tn=222387-3>



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Table II. SVP Coincident Peak Average Annual Growth Rate

Years	Expected Growth Scenario	High Growth Scenario
1999-2009	0.76%	n/a
2000-2016	1.58%	n/a
2017-2020	5.75%	5.75%
2017-2027	2.92%	5.62%

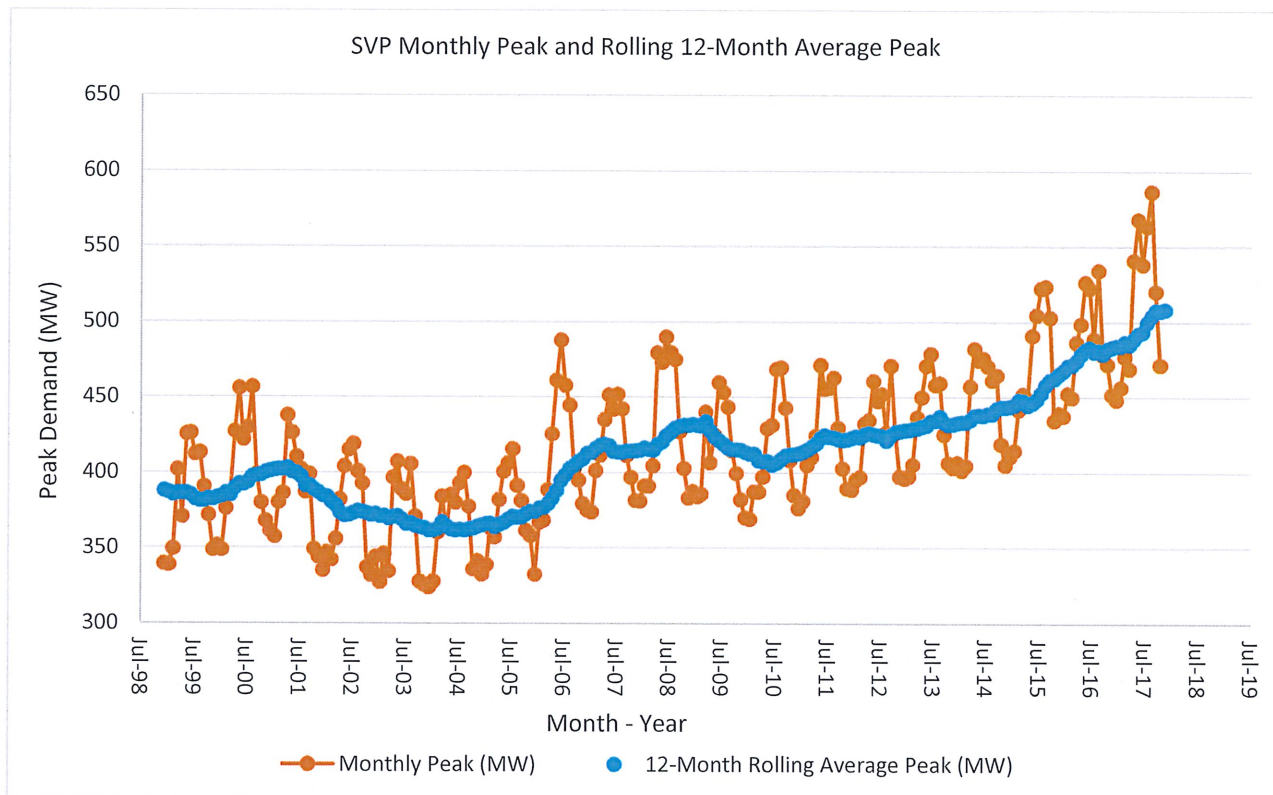
Table III. CEC Peak Demand Forecasts and SVP's Expected and High Growth Scenario Peak Load in the 1 in 2 Scenario (MW)

Year	2017 CEC High Baseline Demand Low AAEE-AAPV	2017 CEC Mid Baseline Demand Low AAEE-AAPV	2017 CEC Low Baseline Demand High AAEE-AAPV	2017 CEC Mid Baseline Mid AAEE-AAPV	SVP Peak Demand - Expected Growth	SVP Peak Demand - High Growth
2017	718	718	718	718	586	586
2018	719	713	706	713	586	586
2019	720	709	698	708	647	647
2020	726	710	696	708	694	694
2021	737	714	693	712	716	732
2022	746	717	695	713	731	788
2023	753	724	695	719	746	848
2024	755	720	684	714	760	909
2025	771	731	687	723	772	959
2026	779	734	685	725	778	994
2027	787	735	681	725	782	1,014
2028	793	736	673	724		
2029	801	741	673	728		
2030	809	748	673	734		
Avg. Annual Growth Rate	0.92%	0.31%	-0.49%	0.17%	2.92%	5.62%

* Actual values shaded in gray



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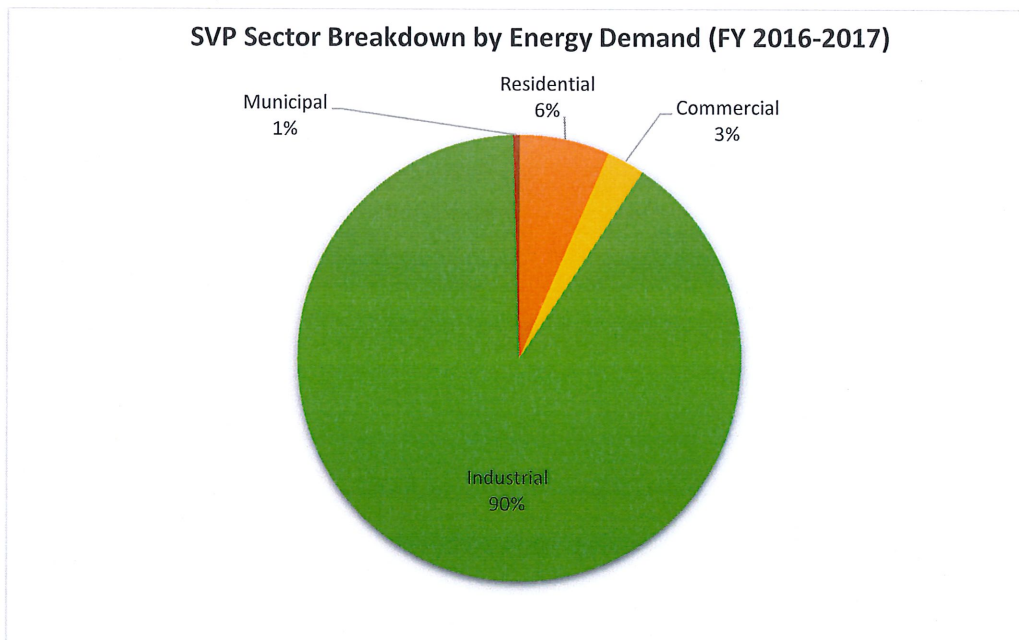
- II. SVP has a higher than average load factor of (76% in 2017) compared to other load servicing entities in the larger planning area due to the energy demand being driven by data centers.

The data centers in SVP's service area are categorized in two tiers (hyper-scale and mid-tier) data centers which operate with a load factor of 85 percent or greater. Due to significant energy efficiency improvements in the design and operation of data centers over the past decade this has allowed U.S. data center energy use to remain nearly constant while simultaneously meeting a drastic increase in demand for data center services. Because of the large percentage of server farm load, which is by nature almost unity load factor, the delta between the off-peak and peak loads is much lower than a typical utility.



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III. The CEC identifies the industrial sector based on a more traditional definition, encompassing a combination of manufacturing, construction, and resource extraction industries,⁴ and forecasts industrial consumption growth to be flatter than the commercial and residential sector. SVP's industrial sector category includes data centers which operate with a higher load factor and growth rate in the SVP service area. In SVP's 2016-2017 fiscal year, its retail load by energy demand consisted of 90.2 percent industrial, 2.8 percent commercial, and 6.5 percent residential consumers.⁵ From this retail load, 47 percent of the load was driven by data centers.



Due to SVP's unique geographic location and proximity to the high tech industry, SVP believes that global and national economic indicators applied in California do not apply to SVP's load demand forecast and the metrics used in the CEC's CED Forecasts have underestimated SVP's growth. SVP respectfully requests that the Commission adopt SVP's electricity consumption and peak demand load forecast to accurately reflect the growth SVP anticipates in its service territory.

SVP appreciates the opportunity to provide comments CEC's California Energy Demand 2018-2030 Revised Forecast.

⁴ California Energy Commission – Tracking Progress
http://www.energy.ca.gov/renewables/tracking_progress/documents/statewide_energy_demand.pdf

⁵ SVP's Municipal Load by electricity consumption was 0.5 percent in FY2016-2017



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Sincerely,

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