

DOCKETED	
Docket Number:	23-IEPR-03
Project Title:	Electricity and Gas Demand Forecast
TN #:	253528
Document Title:	The City of Santa Clara dba Silicon Valley Power (SVP) Comments on the Commission Workshop
Description:	N/A
Filer:	System
Organization:	The City of Santa Clara dba Silicon Valley Power (SVP)
Submitter Role:	Public Agency
Submission Date:	12/5/2023 2:38:49 PM
Docketed Date:	12/5/2023

Comment Received From: The City of Santa Clara dba Silicon Valley Power (SVP)
Submitted On: 12/5/2023
Docket Number: 23-IEPR-03

**The City of Santa Clara dba Silicon Valley Power (SVP) Comments
on the California Energy Commission Docket No 23-IEPR-03**

Additional submitted attachment is included below.



Powering The Center of What's Possible

December 1, 2023

California Energy Commission
Docket Office, MS-4
Re: Docket No. 23-IEPR-03
1516 Ninth Street
Sacramento, CA 95814-5512
docket@energy.ca.gov

Re: The City of Santa Clara *dba* Silicon Valley Power (SVP) Comments on the California Energy Commission Docket No. 23-IEPR-03: Commissioner Workshop on the California Energy Demand Forecast Results

Dear Commissioners:

The City of Santa Clara *dba* Silicon Valley Power (SVP) appreciates the opportunity to submit comments for consideration by the CEC as it updates the 23-IEPR Forecast, which will guide policy and planning efforts across state agencies and at electric utilities. SVP's comments are summarized here and expanded on further below:

- The CEC should continue to work with other state agencies to develop a process for mid-cycle updates to the IEPR Forecast to better inform short-term planning and the California Independent System Operator (CAISO) Transmission Planning Process (TPP).
 - SVP requests that the CEC adopt SVP's updated demand forecast to ensure the rapid load growth being experienced by SVP can be reliably served by the CAISO Controlled Grid which surrounds the SVP transmission system.
- I. The CEC should continue to work with other state agencies to develop a process for mid-cycle updates to the IEPR Forecast to better inform short-term planning and the CAISO TPP. While annual updates to the IEPR Forecast drive most long-term planning efforts, the IEPR Forecast is also used to inform short-term planning efforts such as year-ahead Resource Adequacy (RA) planning where mid-cycle updates can provide additional relevant insights. SVP continues to see significant load growth from large scale data center and urban development within its service territory and has regularly engaged the CEC to provide updates regarding these projects as they continue to energize and ramp. The impacts of this rapid growth are continued to be closely tracked, studied, and mitigated through projects both internally within SVP's system, and externally through the CAISO TPP process to ensure overall system reliability. SVP applauds CEC staff for continuing to proactively engage with stakeholders to ensure forecasts are accurate and current in a rapidly changing environment.



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II. SVP requests that the CEC adopt SVP's updated demand forecast to ensure the rapid load growth being experienced by SVP can be reliably served by the CAISO Controlled Grid which surrounds the SVP transmission system. SVP has continued to remain steadfast in our commitment to providing the CEC and other statewide planning agencies with the latest information regarding our loads and electric system in alignment with statewide planning studies and processes¹. SVP has realigned its internal forecasting schedules to better align with CEC's forecasting initiatives and have continued to refine and improve our internal assessments of existing, permitted, and planned commercial activity within its service territory. The predominant commercial activity is related to data center development that SVP has broken down into the following four (4) Groups for included in our load forecast.

- Group 1 – Customer facilities which have active building permits with the City of Santa Clara and have an agreement with the City of Santa Clara for SVP to build electric infrastructure to connect the Customers facilities to the electric grid. Customer facilities with backup generation exceeding 49 MW's also have received a Small Power Plant Exemption (SPPE) from the CEC.
- Group 2 – Customer facility plans which have been approved by the City of Santa Clara's Project Clearance Committee to proceed to receiving building permits, are in the process of completing an EIR/CEQA that includes the SPPE from the CEC for facilities with backup generation greater than 49MW's and have a funding agreement with the City of Santa Clara allowing SVP to work with the customer on designing the electric infrastructure required to serve the new load.
- Group 3 – Customers which are in the initial stages of planning their development and are working with City of Santa Clara departments. This can include involvement in the City of Santa Clara's Project Clearance Committee (PCC), initiating system impact studies with the City of Santa Clara's storm, sewer, traffic, and electric systems.
- Group 4 – Customers which are engaging with SVP, working with engineers to determine the general site layout, and own the land to be developed but are not in PCC yet.

These four project groups are incorporated into SVP's demand forecast through continuous customer outreach and monitoring. In support of ongoing statewide planning initiatives, for SVP's 23-IEPR-03 update² we have provided the full 15-year horizon (2024-2039) in alignment with SVP's submitted CAISO TPP 24/25 base case models per FERC Order 980. Please see the two attachments that describe how these groups are incorporated into SVP's updated demand forecast, along with an update to SVP's major customer and system projects pertaining to load growth.

¹ [ISO CEC and CPUC Memorandum of Understanding](#), Posted 01/19/2023

² [Update to TN#251467](#), Docketed 08/02/2023 in 23-IEPR-02



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III. Conclusion

SVP wants to thank the California Energy Commission staff for working with us to gain understanding of the unique situation SVP is experiencing resulting from the load growth caused primarily by new Data Centers. SVP appreciates the CEC for considering the above comments and we look forward to continuing our partnership with stakeholders in the development of the 2023 IEPR Update. Please do not hesitate to contact me at (408) 315-8528 with any questions or concerns you may have. I am available to discuss these matters further at your convenience.

Sincerely,

Eric Shum, P.E.
Electric Utility Engineer
Silicon Valley Power

Attachments:

Attachment 1 – SVP Updated Load Forecast Separated by Project Groups

Attachment 2 – SVP Updated Project Timelines

Attachment 1- SVP Updated Load Forecast Separated by Project Groups

Form 1.5b - SVP
 California Energy Demand SVP 1-in-2 - Mid Demand Case
 SVP Total Load (MW)



Balancing Authority	Agency	2021	2022	2023*	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
	Silicon Valley Power 1-in-2 Forecast**	595	699	670	734	801	857	909	950	1,006	1,075	1,134	1,181	1,228	1,275	1,320	1,359	1,385	1,406	1,426
	Total Group #1 + #2 + #3 + #4 + 12kV Distribution Projects**				64	131	187	239	280	336	405	464	511	558	605	650	689	715	736	756
	Total Group #1 + #2 + #3 + #4**				59	106	141	176	214	244	303	350	397	444	491	536	575	601	622	642
	Total Group #1***				53	94	125	155	185	209	235	261	288	314	340	365	382	388	389	389
	Total Group #2***				6	13	16	20	29	31	31	31	31	31	31	31	31	31	31	31
	Total Group #3				0	0	0	0	0	0	15	25	36	46	56	67	77	87	98	108
	DC15				0	0	0	0	0	0	5	8	11	14	17	20	23	26	30	33
	DC16				0	0	0	0	0	0	5	7	9	11	13	15	18	20	22	24
	DC21				0	0	0	0	0	0	5	10	15	21	26	31	36	41	46	52
	Total Group #4				0	0	0	0	0	5	22	33	43	53	64	74	85	95	105	114
	DC27				0	0	0	0	0	0	5	7	8	10	12	13	15	17	19	20
	DC17				0	0	0	0	0	0	5	7	10	12	14	16	19	21	23	25
	DC22				0	0	0	0	0	5	7	10	12	15	17	20	22	25	27	28
	DC32				0	0	0	0	0	0	5	9	13	17	21	25	29	33	37	41
	Total 12kV Distribution Projects				5	24	46	63	66	91	102	114	114	114	114	114	114	114	114	114
	Multiple				5	24	46	63	66	91	102	114	114	114	114	114	114	114	114	114

*Actual recorded on 08/23/2023 670.28MW at SVP's CAISO NCP1 Meter (less than 1-in-2 weather). As SVP's System typically peaks July-September, the reported value is considering the CY2023 Annual SVP System Peak.
 **Tracked project loads presented reconciled to latest planned SVP Internal & Bulk Electric System (BES) project schedules as of 11/2023. Additional known active/upcoming load-adding projects with schedules currently under scoping are not included and will be updated for 24-IEPR.
 ***Group 1 & 2 projects energized and/or scheduled to energize within SVP's near-term operations horizon are presented in aggregate for customer confidentiality.

Form 1.5a - SVP
 California Energy Demand SVP 1-in-2 - Mid Demand Case
 SVP Total Energy to Serve Load (GWh)

Balancing Authority	Agency	2021	2022	2023*	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
	Silicon Valley Power 1-in-2 Forecast**	4,029	4,414	4,652	5,199	5,712	6,161	6,556	6,890	7,288	7,809	8,248	8,619	8,941	9,284	9,614	9,920	10,114	10,267	10,412
	Total Group*** #1 + #2 + #3 + #4 + 12kV Distribution Projects				546	1,060	1,509	1,903	2,238	2,636	3,157	3,596	3,967	4,289	4,632	4,962	5,268	5,462	5,615	5,760
	Total Group*** #1 + #2 + #3 + #4				512	887	1,176	1,449	1,760	1,976	2,413	2,767	3,136	3,460	3,802	4,133	4,436	4,630	4,784	4,928
	Total Group #1				470	797	1,062	1,304	1,552	1,717	1,919	2,122	2,337	2,512	2,704	2,884	3,033	3,075	3,078	3,081
	Total Group #2				42	90	114	146	209	222	222	223	223	223	223	223	224	224	224	224
	Total Group #3				0	0	0	0	0	0	109	184	261	335	411	486	563	638	714	790
	DC15				0	0	0	0	0	0	36	59	81	103	126	148	171	193	216	238
	DC16				0	0	0	0	0	0	36	52	67	82	97	113	128	144	159	174
	DC21				0	0	0	0	0	0	36	74	112	150	187	225	264	301	339	377
	Total Group #4				0	0	0	0	0	36	163	238	315	389	465	540	617	693	768	834
	DC27				0	0	0	0	0	0	36	49	61	73	86	98	111	123	135	148
	DC17				0	0	0	0	0	0	36	53	70	86	102	119	136	152	169	185
	DC22				0	0	0	0	0	36	54	72	90	107	125	143	161	179	197	205
	DC32				0	0	0	0	0	0	36	65	94	123	151	180	210	238	267	296
	Total 12kV Distribution Projects				35	173	333	454	477	660	743	829	831	829	829	829	832	832	832	832
	Multiple				35	173	333	454	477	660	743	829	831	829	829	832	832	832	832	832

*Estimated- billing and adjustments have not been completed or reported for CY2023
 **2021-2023 are actual recorded retail sales, 2024-2039 do not include distribution losses (historically 2-3% for SVP).
 ***Average weighted load factor by customer rate schedule class applied to each Group.

Attachment 2- SVP Updated Project Timelines



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SVP Abbreviated List of Major Active & Planned System Expansion Projects				
Project Index	Capital Improvement Project (CIP) #	Project Name	In-Service Date (ISD)¹	Project Classifications
(SVP) Project Classifications: Distribution Substation				Distribution Substation
1	2431-0000	Homestead Substation Rebuild	02.18.2028	Distribution Substation
2	2418-0000	Esperanca Substation	06.30.2027	Distribution Substation
3	2464-0000	Democracy Substation	12.31.2025	Distribution Substation
(SVP) Project Classifications: Junction Substation²				Junction Substation
4	2462-0000	<i>Customer</i> Substation Expansion	09.08.2026	Junction Substation
5	2450-0000	<i>Customer</i> Junction	04.30.2024	Junction Substation
6	2443-0000	<i>Customer</i> Substation	02.07.2025	Junction Substation
7	2448-0000	<i>Customer</i> Junction	01.17.2025	Junction Substation
8	2457-0000	<i>Customer</i> Junction	09.12.2024	Junction Substation
9	2449-0000	<i>Customer</i> Junction	06.10.2024	Junction Substation
10	2442-0000	<i>Customer</i> Junction	06.10.2024	Junction Substation
11	2451-0000	<i>Customer</i> Junction	03.18.2024	Junction Substation
12	2462-9308	<i>Customer</i> Substation Transformer Rerate	08.19.2024	Junction Substation
(SVP) Project Classifications: Receiving Station²				Receiving Station
13	2454-0000	NRS Transformer Replacement	04.30.2027	Receiving Station
14	2453-0000	KRS Rebuild and Replacement	12.31.2027	Receiving Station
15	2456-0000	SRS Rebuild and Replacement	12.31.2027	Receiving Station
16	2452-9295	60KV Breaker Upgrade at Fiber Substation	10.03.2025	Receiving Station
17	2452-9296	60KV Breaker Upgrade at KRS & SRS for Center Loop	10.06.2025	Receiving Station
18	2452-9297	60KV Breaker Upgrade at KRS & SRS for East Loop	10.03.2025	Receiving Station
(SVP) Project Classifications: Transmission Line Extension				Transmission Line Extension
19	2455-0000	NRS-KRS 115kV Line	11.01.2027	Transmission Line Extension
20	2448-9668	<i>Customer</i> Junction - Transmission Line Extension	10.25.2024	Transmission Line Extension
21	2442-9668	<i>Customer</i> Junction - Transmission Line Extension	05.08.2024	Transmission Line Extension
22	2449-9668	<i>Customer</i> Junction - Transmission Line Extension	05.02.2024	Transmission Line Extension
23	2459-0000	New Loop 1 - Reconfigure Northwest & Center Loops	2030+	Transmission Line Extension
24	2463-0000	New Loop 2	2030+	Transmission Line Extension
(SVP) Project Classifications: Transmission Line Rebuild				Transmission Line Rebuild
25	2466-0000	Duane-Scott 115kV Reconductor	Q1 2027	Transmission Line Rebuild
26	2444-0000	Northwest Loop Capacity Upgrade	06.30.2025	Transmission Line Rebuild
27	2458-0000	Walsh-Uranium 60kV Reconductor	09.05.2025	Transmission Line Rebuild
(SVP) Project Classifications: Generation				Generation
28	2461-0000	Kifer 50MW/200MWh Battery Energy Storage System (BESS)	Q1 2026	SVP In-City Generation
(CAISO/PG&E) Project Classifications: Bulk Electric System (BES)³				Bulk Electric System Projects
29	NA	Series compensation on Los Esteros - Nortech 115kV (PG&E)	Q4 2025	Bulk Electric System Projects
30	NA	Newark - Los Esteros - NRS HVDC/AC project	Q2 2028	Bulk Electric System Projects
31	NA	SVP PST Overload by Loss of HVDC P1 Under Investigation by CAISO	TBD Under Study	Bulk Electric System Projects

¹ The In-Service Date (ISD) represents projected permanent energization post-commissioning activities.

² Active *Customer* projects anonymized for customer confidentiality.

³ CAISO/PG&E projects external to SVP and thus SVP CIP Project #s are indicated as Not Applicable (NA).