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The City of Santa Clara dba Silicon Valley Power Comments - Commissioner Workshop on Updates to the California Energy Demand

Additional submitted attachment is included below.

October 3, 2022

California Energy Commission
Docket Office, MS-4
Re: Docket No. 22-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. 22-IEPR-03: Commissioner Workshop on Updates to the California Energy Demand 2023-2033 Forecast

Dear Commissioners:

The City of Santa Clara *dba* Silicon Valley Power (SVP) appreciates the opportunity to submit comments on the for consideration by the CEC as it updates the 22-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. <u>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.</u> 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 development within its service territory. 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 engage with stakeholders to ensure forecasts are accurate and current in a rapidly changing environment.

II. <u>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.</u> Since the submittal of SVP's comments on 20-IEPR-

03 on 12/17/2020[1] and 21-IEPR-03 submittal on 07/01/2021[2], 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[3].

- 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. Please see the two attachments that describe how these groups are incorporated into SVP's updated demand forecast.

[1] CEC Docket: 20-IEPR-03, TN#235998
[2] CEC Docket: 21-IEPR-03, TN#238609, 238608, 238607
[3] Since CY2021, SVP has changed our naming convention from "Clusters" to "Groups", but all definitions remain the same.

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 2022 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 Load Ramps and 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	SVP Substation	2020	2021	2022**	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
	Silicon Valley Power 1-in-2 Forecast		586	595	655	657	705	782	848	911	988	1,053	1,116	1,180	1,246	1,285
	Total Group* #1 + #2 + #3 + #4 + 12kV Distribution Projects				***0***	***36***	***45***	***80***	***86***	***99***	***129***	***157***	***181***	***202***	***224***	***234***
	Total Group* #1 + #2 + #3 + #4				***0***	***0***	***0***	***22***	***22***	***22***	***43***	***64***	***85***	***105***	***128***	***138***
	Total Group #1															
	DC24	NA - 12kV			Accounted for in 12kV Switchplan											
	DC26	NA - 12kV														
	Total Group #2				***0***	***0***	***0***	***22***	***22***	***22***	***22***	***22***	***22***	***22***	***22***	***22***
	DC20	Juliette			0	0	0	22	22	22	22	22	22	22	22	22
	Total Group #3				***0***	***0***	***0***	***0***	***0***	***0***	***14***	***30***	***47***	***64***	***82***	***87***
	DC15	Richard			0	0	0	0	0	0	4	7	10	13	17	20
	DC16	Mead Jct			0	0	0	0	0	0	4	6	8	11	13	15
	DC21	Owens Jct			0	0	0	0	0	0	6	17	28	40	53	53
	Total Group #4				***0***	***0***	***0***	***0***	***0***	***0***	***8***	***12***	***16***	***20***	***25***	***29***
	DC25	NA - 12kV			Accounted for in 12kV Switchplan											
	DC27	Name TBD			0	0	0	0	0	0	4	6	8	9	11	13
	DC17	Shulman Jct			0	0	0	0	0	0	4	6	9	11	13	16
	Total 12kV Distribution Projects				***0***	***36***	***45***	***58***	***65***	***77***	***86***	***94***	***96***	***96***	***96***	***96***
	Multiple	Multiple			0	36	45	58	65	77	86	94	96	96	96	96

*SVP has changed naming convention in tracking from Clusters to Groups.

**As of 09/07/2022, SVP has recorded a record system peak load of 702.62 MW at its CAISO NCP1 meter during a statewide extreme weather event with significant SVP customer load curtailment. Maximal CY2022 system peak was forecasted to occur in 09/2022 as 655MW and may have been understated. SVP staff are investigating the weather normalized load ramps from the system peak day which will be ready for inclusion in the 23-IEPR.

Form 1.5a - SVP

California Energy Demand SVP 1-in-2 - Mid Demand Case

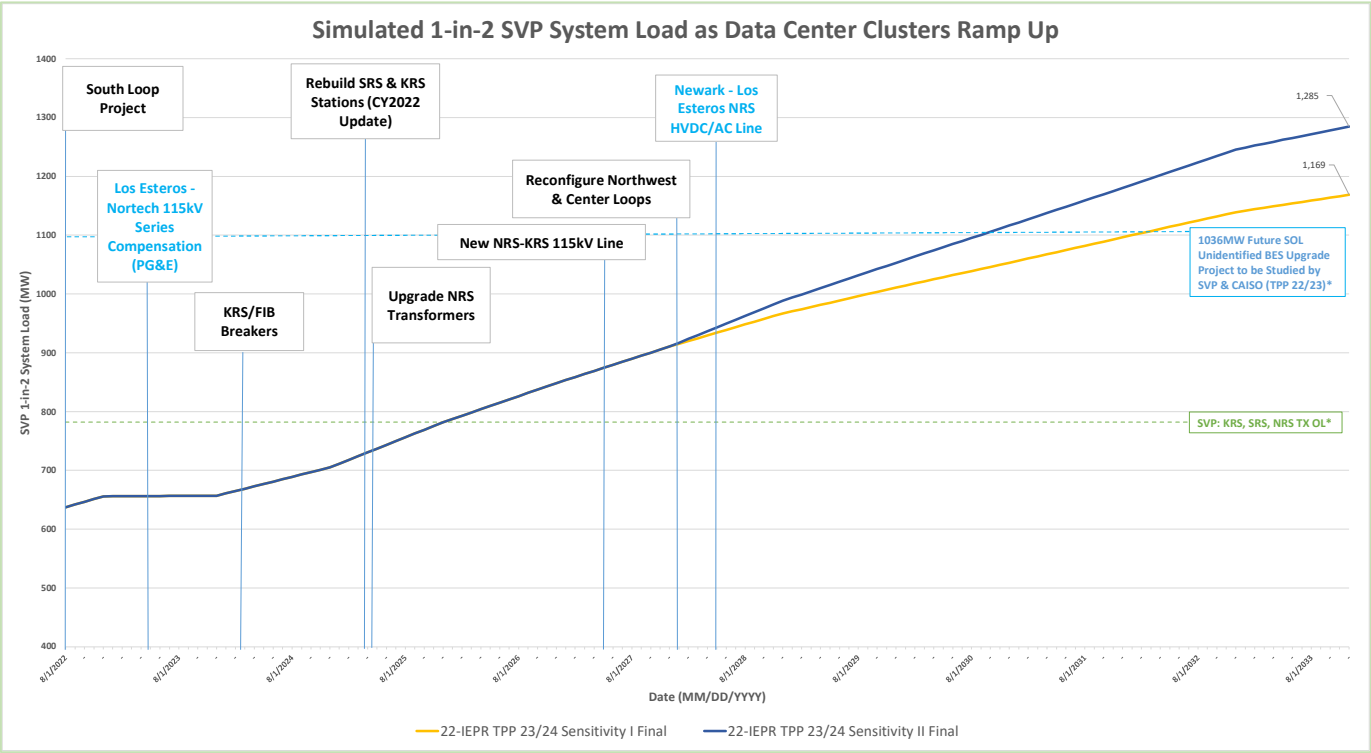
SVP Total Energy to Serve Load (GWh)

Balancing Authority	Agency	SVP Substation	2020	2021	2022*	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
	Silicon Valley Power 1-in-2 Forecast		3,741	4,029	4,548	4,570	4,993	5,577	6,099	6,570	7,170	7,633	8,106	8,586	9,094	9,356
	Total Group** #1 + #2 + #3 + #4 + 12kV Distribution Projects				***0***	***256***	***329***	***581***	***630***	***724***	***949***	***1,156***	***1,330***	***1,484***	***1,656***	***1,721***
	Total Group** #1 + #2 + #3 + #4				***0***	***0***	***0***	***156***	***157***	***157***	***317***	***469***	***622***	***776***	***945***	***1,013***
	Total Group #1															
	DC24	NA - 12kV			Accounted for in 12kV Switchplan											
	DC26	NA - 12kV														
	Total Group #2				***0***	***0***	***0***	***156***	***157***	***157***	***158***	***158***	***158***	***158***	***159***	***158***
	DC20	Juliette			0	0	0	156	157	157	158	158	158	158	159	158
	Total Group #3				***0***	***0***	***0***	***0***	***0***	***0***	***100***	***222***	***345***	***468***	***606***	***643***
	DC15	Richard			0	0	0	0	0	0	29	52	76	99	123	146
	DC16	Mead Jct			0	0	0	0	0	0	29	45	62	78	94	110
	DC21	Owens Jct			0	0	0	0	0	0	42	124	207	291	389	388
	Total Group #4				***0***	***0***	***0***	***0***	***0***	***0***	***59***	***89***	***120***	***150***	***181***	***211***
	DC25	NA - 12kV			Accounted for in 12kV Switchplan											
	DC27	Name TBD			0	0	0	0	0	0	29	42	56	69	82	95
	DC17	Shulman Jct			0	0	0	0	0	0	29	47	64	81	99	116
	Total 12kV Distribution Projects				***0***	***256***	***329***	***424***	***473***	***567***	***632***	***687***	***708***	***708***	***710***	***708***
	Multiple	Multiple			0	256	329	424	473	567	632	687	708	708	710	708

*Estimated- billing and adjustments have not been completed or reported for CY2022.

**Average weighted load factor by customer rate schedule class applied to each Group.

Attachment 2- SVP Load Ramps and Project Timelines



*Note: System Operating Limits (SOLs) from transmission studies as-presented are 1-in-10 limits

Legend Color Key[1]:

- 22-IEPR TPP 23/24 Sensitivity I Final – Yellow Line Indicates Prior Studied Loads + DC20 + 12kV Distribution Projects
- 22-IEPR TPP23/24 Sensitivity II Final – Blue Line Indicated Prior Studied Loads + DC20 + 12kV Distribution Projects + Groups 1, 2, 3, 4

List of Ongoing & Planned SVP Internal & External System Projects:

Index	Project	ISD (In-Service Date)*	SVP Capital Improvement Project (CIP) #**
1	South Loop Project	8/1/2022	2124
2	Series compensation on Los Esteros - Nortech 115kV (PG&E)	5/30/2023	NA
3	Replace breakers at KRS/SRS substations	3/30/2024	2452
4	Northwest Loop Capacity Upgrade	9/1/2024 (Est.)	2444
5	Uranium Walsh 60kV Reconductor	11/1/2024 (Est.)	2458
6	Rebuild SRS & KRS Stations	4/30/2025	2453, 2456
7	NRS transformer replacement	5/30/2025	2454
8	NRS T2 Spare Transformer	5/30/2025	2430
9	NRS 115 tie-breaker 392 mitigation	5/30/2025	2445
10	CAISO Short Term Mitigation Phase II	TBD	NA
11	New NRS - KRS 115kV line	6/1/2027	2455
12	Newark - Los Eseros - NRS HVDC/230kV AC project	6/1/2028	NA

*Projected
**CAISO/PG&E SVP External projects are indicated as Not Applicable (NA)

[1] Refer to the cover document "The City of Santa Clara *dba* Silicon Valley Power (SVP) Comments on the California Energy Commission Docket No. 22-IEPR-03: Commissioner Workshop on Updates to the California Energy Demand 2023-2033 Forecast" for specific Group definitions.