

DOCKETED	
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Load Forecast Discussion

***Demand Analysis Working
Group (DAWG)
25-IEPR-03***

SVP Engineering Division

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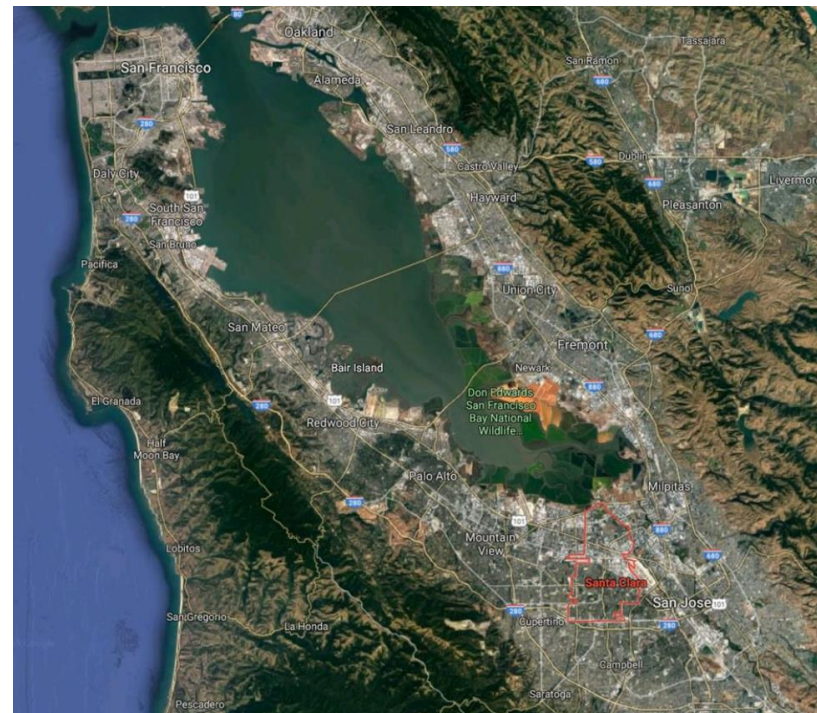
July 16th, 2025



The City of Santa Clara dba Silicon Valley Power (SVP)

The City of Santa Clara dba Silicon Valley Power (SVP) is a vertically-integrated municipal utility established in 1896.

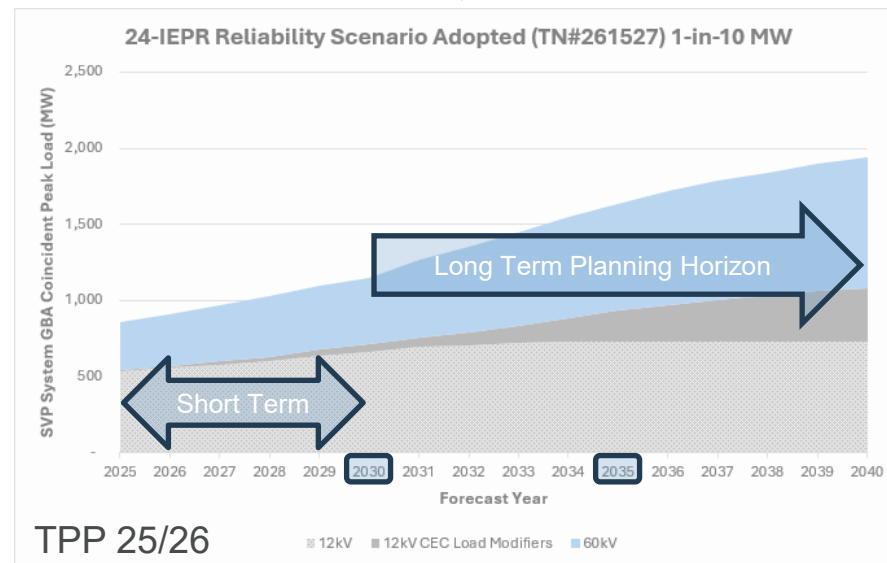
- ❖ We operate on a not-for-profit basis with a mission to provide our retail customers—the citizens, organizations and businesses within the City of Santa Clara—a highly reliable source of power at low, stable rates.
- 18.41 Square Miles of Dense Urban Development
- CY2024 Summary:
 - NCP1 Peak Load of 713.5MW (~1-in-20)
 - Retail Sales of ~4,700 GWh
- High Load Factor (LF) utility with a CY2024 recorded LF of 76.6%
 - Predominantly driven by 91.7% of CY2024 Retail Sales to Industrial Customers





SVP Planning & Load Growth

- How are data center loads considered in distribution, transmission, and system planning?
 - SVP performs an ongoing holistic assessment of system load impacts at the distribution, transmission, and rolling up to the Bulk-Electric System (BES) levels.
 - 0-1 Year Operations Horizon
 - 2-5 Year Near-Term Planning Horizon
 - 5-10+ Year Long-Term Planning Horizon
- Approximately what % of data centers are connected at the transmission-level?
 - 0%, although SVP's new substation design standard is 60/115kV dual voltage.
- Are there any other transmission-level loads besides data centers that you are accounting for? If so, please include a slide on these (MW's in queue and timeline)
 - No.





SVP Planning & Load Growth Cont.

- Data center MW's in queue, with timelines/ramps
 - Per discussions with CEC, SVP will submit an update to CEC staff in Q3/Q4 2025 pending project approvals.
 - 25-IEPR draft data based on 24-IEPR approved projects were docketed to 25-IEPR-03 as TN#264335 on 06/17/2025.
- Data center forecast methodology
 - Do you forecast multiple scenarios?
 - Yes (50%UF, 67%UF, 75%UF).
 - How do you represent mid and long-term growth? (i.e. beyond known applications)
 - System planning load is modeled from load research.
 - SVP tracks historic Data Center (DC) loads of >~70+ (growing) Existing Energized DCs
 - Best performing customer ~67% UF @ 106W/SQFT Colocator (~129W/SQFT Non-Colocator)
 - » Assumes 1.2 Power Usage Effectiveness (PUE)
 - » In CY2023 actual loads dropped to ~64% UF @ 99 W/SQFT
 - How do you assign mid and long-term load to specific locations?
 - SVP plans its system from the load bus down to the distribution feeder levels.



Recommendations for CEC

Specific to 07/16 DAWG

- Develop and maintain stakeholder accessible database of Data Center load metrics, including but not limited to:
 - CEQA submittals for load and operational metrics
 - Ex: IT Load, Power Usage Effectiveness (PUE), Data Hall & Site Square Footage (SQFT)
 - Utilization Factors (UFs)
 - Intra and Inter-Regional Load Transfers
 - Requested versus Realized Demand

General

- Continue coordination for statewide transmission and resource planning
 - Streamline update processes between load forecast and transmission planning
 - Ex: R3 Conforming versus Non-Conforming load bus designations & application of Load Modifiers
 - Continue reaching out to stakeholders for load and resource updates, in parallel with commission processes



Questions?

Thank you!

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