

# AI Energy Impacts:

## *AI's Grid Impacts*

**Nico Procos**

Electric Utility Director

January 28, 2026



# About Silicon Valley Power

Vertically Integrated Utility – Transmission, Generation, Distribution



**129 years young**

Established in 1896



**Department of the  
City of Santa Clara**



**Largest Municipal Utility**

Retail Sales in CA



**19.3 sq. Miles**

Service Area



**746 MW**

Peak Demand



**131,062 Residents**

60,980 Electric Accounts



**235 SVP Employees**



**58 Data Centers**

Largest data center cluster on  
West Coast





# Data Center Cluster Map



**Tech. Alley**



**Santa Clara University / Mission College**



**Data Center**



**Levi's Stadium**



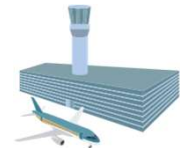
**City Hall**



**Great America**



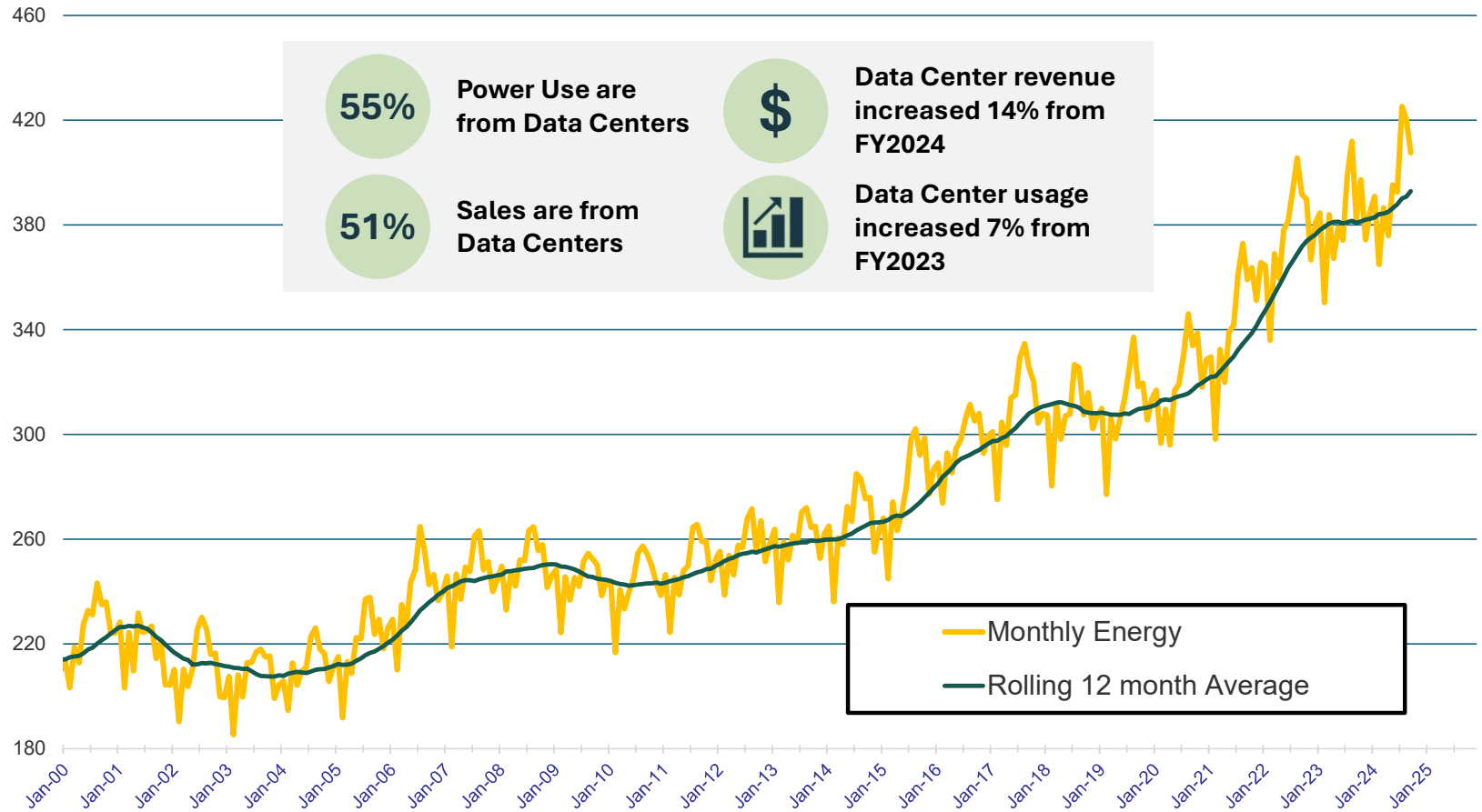
**Police Department**



**SJC Airport**

# SVP Historic Load Growth

Monthly Gigawatt Hours (GWh)



# Energy Density



	City of Santa Clara	City of Palo Alto	City of San Jose
Sq. Miles	19.3	26	181
Population	131,062	66,010	970,000
Peak Load	714 MW	170 MW	1,236 MW
Energy Intensity	36.9 MW / sq. mile *	6.5 MW / sq. mile	6.8 MW / sq. mile

\* Projected load growth to 1,300 MW increases energy density to 67 MW per square mile.

# Transmission Expansion – South Bay

## CAISO 2021/22 Transmission Planning Process





<b>6/01/20</b>	Started work on updated load 1,142 MW's
<b>11/3/20</b>	Started discussion with CEC
<b>12/17/20</b>	Started meeting with PG&E regarding additional projects
<b>1/25/21</b>	CEC adopts new SVP load forecast
<b>3/11/21</b>	SVP comments on draft Study Plan
<b>3/24/21</b>	SVP presents to CAISO board
<b>3/31/21</b>	Final Study Plan Posted
<b>8/3/21</b>	CAISO posts preliminary reliability study results
<b>9/15/21</b>	PG&E posts mitigation plans
<b>9/27/21</b>	Stakeholder meeting for comments on mitigation plans
<b>1/31/22</b>	Draft Transmission Plan posted
<b>3/23/22</b>	CAISO Approved Transmission Plan
<b>4/1/22</b>	Project Procurement Phase Starts
<b>3/7/23</b>	CAISO selected LS Power Grid High Voltage Direct Current Line from Newark 230kV to SVP's Northern Receiving Station
<b>11/12/24</b>	CAISO Board approves upgrade to transmission from 500MW to 1000 MW –
<b>2028</b>	Expected completion date





# Powering the South Bay




## In Progress

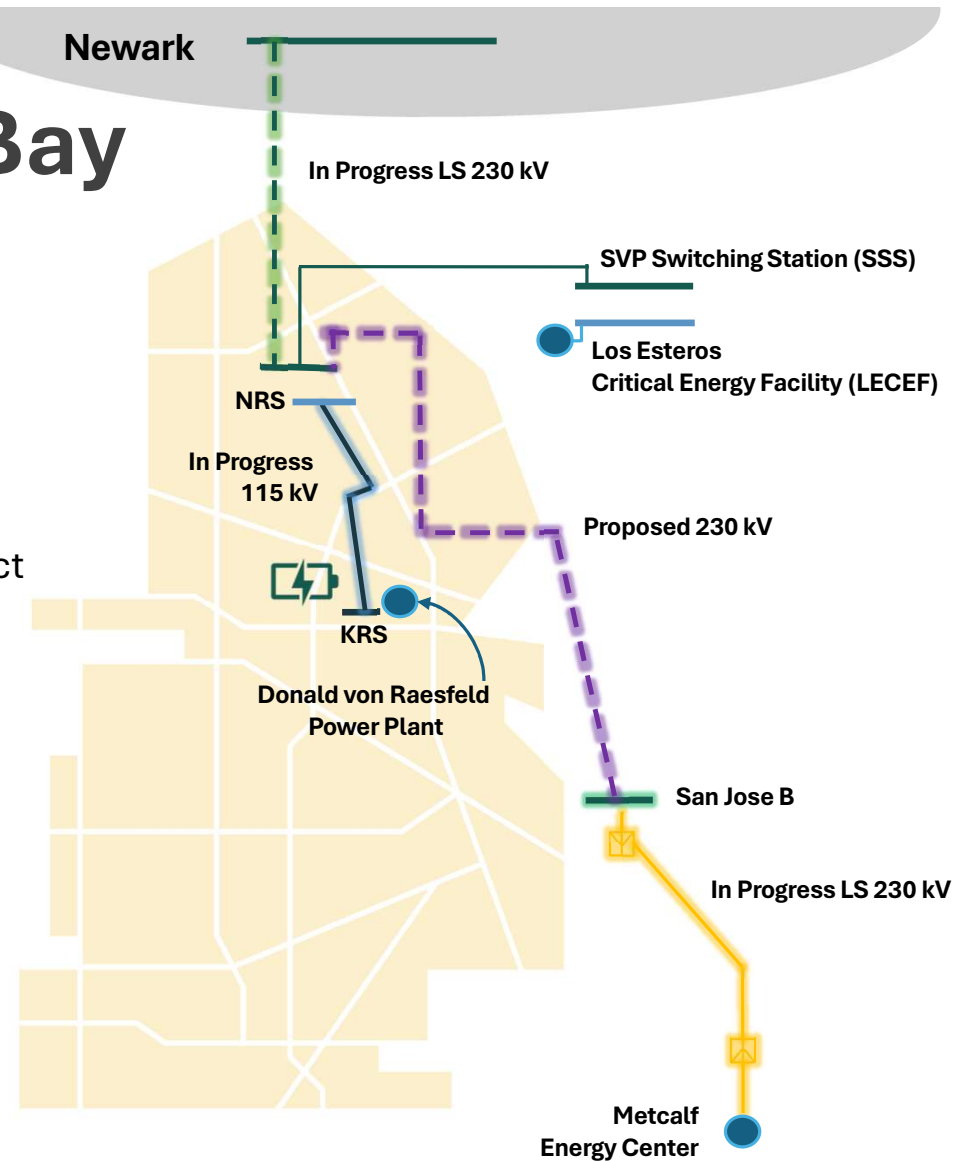
-  LS 230 kV (Newark to NRS)
-  LS 230 kV (Metcalf to San Jose B)
-  115 kV (NRS to KRS)
-  50MW/200MWh Battery Energy Storage Project

## Proposed

-  230 kV (San Jose B to NRS)

## Regional

-  Power Plant
-  Alameda County
-  City of Santa Clara



# Laying the Groundwork

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## \$459 Million+ System Expansion Program

- Designed to double electric load capacity to meet current and future demand
- Current capacity: 700MW, projected to reach 1,300 MW in 5-10 years
- Growth driven by increasing demand from large industrial customers
- Demand stresses both SVP's local system and California's Bulk Electric Systems
  - Most new data centers request 50–99 MW
- Since 2021, SVP has communicated limited capacity by halting “Will Serve” letters, issuing system limitation notices, and conducting impact studies.





# THANK YOU



*Powering* The Center of What's Possible

