



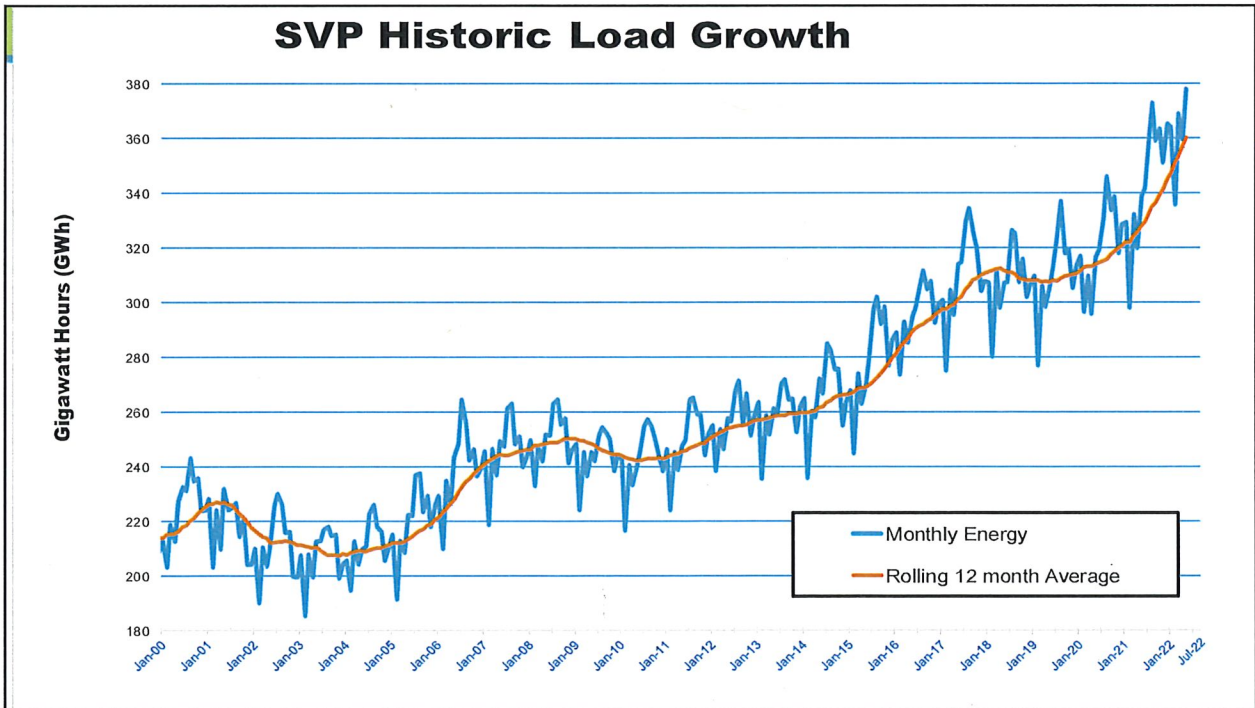
City Council

Item #5: Silicon Valley Power Quarterly Update

RTC 22-1022

August 16, 2022

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POST MEETING MATERIAL



Load Growth – Priority

- Load Growth is Happening – New Peak of 650 MW on June 21st (Up From 596 MW).
- Two Multi-Phased Activities (SVP and Transmission Projects)
- Many Completed Actions – Approved, began and completed construction of South Loop Project, Approved Growth Plan, Approved New Load Development Fees, Approved Master Consultant Contracts, Approved Program Management Contract
- Work is Underway
 - Project management firm developing schedules, scoping documents, procurement specifications and preliminary CEQA work for new projects.
 - Design consultant selection underway for Kifer Receiving Station, Scott Receiving Station, Northern Receiving Station Upgrade, New 115KV Transmission Line (NRS/KRS)
 - Battery Storage Project Continues – Supply chain issues causing significant impacts

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Program Management

Silicon Valley Power
System Expansion Plan Program
June 2022

Program Commentary	Risks & Opportunities	Schedule Milestones																																																			
<p>Safety: No incidents.</p> <p>Program Status: Focused on Near-Term Schedule Items: Design Consultant On-boarding, Environment Consulting On-boarding, Equipment Procurement Specs</p> <p>Highlights: AECOM Contract Executed for Program Management; Issued SRS/KRS Design CFP; Completed Draft Transformer Procurement Specification</p> <p>Critical Items: Issue Transmission Line Planning Packages and CFP for NRS and Transformer Procurement Package</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Category</th> <th>Description</th> <th>Mitigation / Actions</th> </tr> </thead> <tbody> <tr> <td rowspan="3" style="background-color: #ffe0b2;">Risks</td> <td>1. Equipment Procurement Delivery Timeline</td> <td>1. Bulk Transformer & early GIS procurement packages</td> </tr> <tr> <td>2. Construction Contractor availability</td> <td>2. Early outreach, combining SRS & KRS projects, & bid projects to increase Constr. contract value</td> </tr> <tr> <td>3. Design Consultant on-boarding and ability to meet key project deliverable milestones</td> <td>3. Leverage existing contracts with Design Firms for early NTP</td> </tr> <tr> <td rowspan="2" style="background-color: #e8f5e9;">Opportunities</td> <td>1. Leverage AECOM resources</td> <td>1. AECOM PM assigned to every SEP project; AECOM technical support services: Program Mgmt/Controls Team</td> </tr> <tr> <td>2. Implement SEP projects in parallel</td> <td>2. Leverage existing contract w/ Environmental Consultant (Asper) & New Env. Consultant</td> </tr> </tbody> </table>	Category	Description	Mitigation / Actions	Risks	1. Equipment Procurement Delivery Timeline	1. Bulk Transformer & early GIS procurement packages	2. Construction Contractor availability	2. Early outreach, combining SRS & KRS projects, & bid projects to increase Constr. contract value	3. Design Consultant on-boarding and ability to meet key project deliverable milestones	3. Leverage existing contracts with Design Firms for early NTP	Opportunities	1. Leverage AECOM resources	1. AECOM PM assigned to every SEP project; AECOM technical support services: Program Mgmt/Controls Team	2. Implement SEP projects in parallel	2. Leverage existing contract w/ Environmental Consultant (Asper) & New Env. Consultant	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Milestone Description (Phase/Component)</th> <th>Baseline Date</th> <th>Forecast Date</th> <th>Value (\$)</th> </tr> </thead> <tbody> <tr> <td>KRS Rebuild & Replace</td> <td>17-Nov-25</td> <td>17-Nov-25</td> <td>0</td> </tr> <tr> <td>SRS Rebuild & Replace</td> <td>17-Nov-25</td> <td>17-Nov-25</td> <td>0</td> </tr> <tr> <td>NRS Upgrades</td> <td>18-Mar-26</td> <td>18-Mar-26</td> <td>0</td> </tr> <tr> <td>New 115KV Line NRS to KRS</td> <td>26-Jun-24</td> <td>26-Jun-24</td> <td>0</td> </tr> <tr> <td>Rebuild 69KV Line Wash to Uranium</td> <td>16-Dec-24</td> <td>16-Dec-24</td> <td>0</td> </tr> <tr> <td>Reconfigure 69KV Line Northwest & Center</td> <td>6-Jun-28</td> <td>6-Jun-28</td> <td>0</td> </tr> <tr> <td>Kifer Battery Energy Storage System (BESS) Transformer & GIS Procurement</td> <td>30-Oct-24</td> <td>30-Oct-24</td> <td>0</td> </tr> <tr> <td></td> <td>1-Jun-21</td> <td>1-Jun-21</td> <td>0</td> </tr> </tbody> </table>	Milestone Description (Phase/Component)	Baseline Date	Forecast Date	Value (\$)	KRS Rebuild & Replace	17-Nov-25	17-Nov-25	0	SRS Rebuild & Replace	17-Nov-25	17-Nov-25	0	NRS Upgrades	18-Mar-26	18-Mar-26	0	New 115KV Line NRS to KRS	26-Jun-24	26-Jun-24	0	Rebuild 69KV Line Wash to Uranium	16-Dec-24	16-Dec-24	0	Reconfigure 69KV Line Northwest & Center	6-Jun-28	6-Jun-28	0	Kifer Battery Energy Storage System (BESS) Transformer & GIS Procurement	30-Oct-24	30-Oct-24	0		1-Jun-21	1-Jun-21	0
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Program Metrics

Activity	Start	End	2022	2023	2024	2025	2026	2027	2028
SVP SEP Program Summary Schedule	24-Mar-24	30-Jun-28							
KRS Rebuild and Replacement	24-Mar-24	17-Nov-25							
SRS Rebuild and Replacement	24-Mar-24	17-Nov-25							
NRS Upgrades	18-Mar-26	18-Mar-26							
New 115KV Line NRS to KRS	26-Jun-24	26-Jun-24							
Rebuild 69KV Line Wash Substation to Uranium Substation	16-Dec-24	16-Dec-24							
Reconfigure 69KV Line Northwest & Center	06-Jun-28	06-Jun-28							
Kifer Battery Energy Storage System (BESS)	30-Sep-24	30-Oct-24							

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Additional Transmission

CAISO Yearly Transmission Planning Process

Completed Items

- **6/01/20** - Started work on updated load 1,142 MW's
- **11/3/30** – Started discussion with CEC
- **12/17/20** – Started meeting with PG&E regarding additional projects
- **1/25/21** – CEC adopts new SVP load forecast
- **3/11/21** – SVP comments on draft Study Plan
- **3/24/21** – SVP presents to CAISO board
- **3/31/21** – Final Study Plan Posted

Upcoming Items

- **8/3/21** – CAISO posts preliminary reliability study results
- **9/15/21** – PG&E posts mitigation plans
- **9/27/21** – Stakeholder meeting for comments on mitigation plans
- **1/31/22** – Draft Transmission Plan posted
- **3/23/22** – CAISO Board of Governors Approved Transmission Plan
- **4/1/22** – Project Procurement Phase Starts

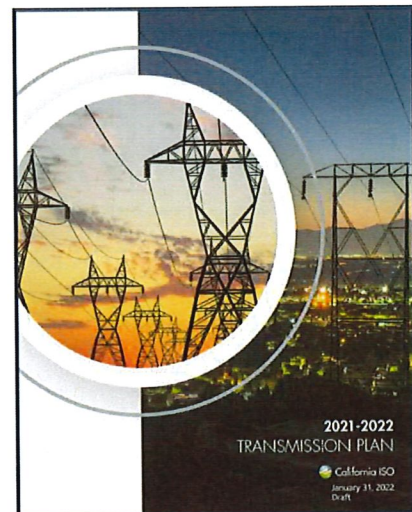
Incredible work by staff over two years to include SVP needs in Transmission Plan

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New Transmission Projects

- Plan Approved by CAISO March 24 – Includes projects that benefit SVP (estimated at \$1.0 Billion)
 - Project 1 - High Voltage Direct Current Line from Newark 230kV to SVP's Northern Receiving Station
 - Project 2 - HVDC line from Metcalf Substation to San Jose B Substation.
- SVP's Priority is Project 1
 - Also requires additional work at NRS
 - CAISO Completion goal 2027/28
- Almost Double SVP load serving capability to 1,200 MW
- Many additional projects still want to be in Santa Clara (significantly over 1,200 MW)



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Additional Future Growth

- Future Policy Decisions on SVP Growth
 - 20-year plan (expect to bring to City Council in 2023)
- How much should SVP grow?
- There are many additional projects interested in locating in Santa Clara
 - Data Centers (20+ projects)
 - Residential, Commercial (50+ project)
- Under current environment SVP could triple maybe quadruple in capacity (2,000 plus MW system)?
 - What would it require to achieve this? More CAISO and large internal projects
 - Needs and Physical Constraints
- Look forward to the discussion



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South Loop Project

- Scope: South Loop Project constructed to increase capacity.
 - 81 new steel poles
 - 2.3 miles of new 60kV transmission line
 - Reconductored 0.5 miles existing overhead
 - 37 easements (2 in eminent domain process)
- Schedule: Project Energized on July 19, 2022, after 5-day cutover process. Anticipated close out for punch list items and Oak's Junction tie-in in October 2022.
- Benefits:
 - Increases system capacity of 60kV lines allows existing data center customers to increase loads.
 - Allows new data center loads from Oaks and Memorex Junctions to utilize newly installed poles on East Loop with looped system redundancy.
 - Reconductoring reduced bottleneck between Walsh and Fiberglass Substations.



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Other Project Highlights

- Serra Substation Project Completed
 - 2 new transformer banks, switchgear and control room
- Upcoming Pole Replacements for Communication Companies
- Many neighborhood upgrades – 1st quarter (25 transformers, 16 Pole Replacements, 77 Cross Arm Replacements, 7 Street lights, 16,274 ft overhead wires and 8,243 ft underground wires)
- E-Builder Update
 - City's first Project Management System
 - SVP has fully transitioned projects (52 projects)
 - **New Update** E-Builder PeopleSoft Integration



Capital Projects – e-Builder



Project Details 2449-000 - Memorex Junction

Details

Project Name: Memorex Junction
 e-Builder Project Administrator: Euzaine, Joseph
 Project Status: Active
 Project Address: 1102 O. Chula Ave, Santa Clara, CA 95052
 Country: USA
 Start Date: 01/01/2010
 Target Date: 11/30/2012
 Description: New Single Customer Kiosk Substation facility
 Project Manager: Euzaine, Joseph
 Last Modified By: Euzaine, Joseph
 Date Last Modified: 04/09/2012

Custom Fields (7)

Name ID	Value
Phorum CIP Project ID	2449
Item ID	0000
Report ID A	3448-0000
Fund A	351 - Electric Utility
Planning Program A	1541
Report Project	Electrical
Project Manager	Euzaine, Joseph
Report Description / Scope / Purpose	A customer is requesting a new data center. Plan will require a new substation. SVP was requested to provide switch services to the site through a 100kV single customer substation. The requested maximum capacity from the substation facility is 800kVA.
Evaluation & Analysis	The customer will design and construct the substation as required per SVP's specifications. SVP will design and construct the 100kV transmission line and interconnect to Memorex. They construct in accordance with the City's design and procurement standards. Costs incurred by SVP related to the design, construction, installation, inspection and testing associated with Memorex Junction will be paid in full by the customer. The completed Memorex Junction will be owned, operated and maintained by SVP.

Schedule

Last Modified by Joseph Euzaine 05/08/2012 02:54 PM

Task Name	Duration	2010	2011	2012	2013	2014							
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
3.9 PO Issued - Consultant	0 weeks												
4 Project Schedule Review Meeting	1 day												
5 Design	26.57 months												
5.1 Customer Design Submittals	23.83 months												
5.2 Control Building Design	8.48 months												
6 Customer Kiosk Control Building Issues	6.57 months												
7 Customer Control Building Procurement	12.70 months												
7.1 Control Building Procurement	3 months												
7.2 Control Building Manufacturing	40 weeks												
8 Fire Commission	7 weeks												
9 Transmission Site Remediation	41.87 months												
10 Customer Substation Construction	11.83 months												
11 Testing and Commissioning	3 months												
12 Go-Live / Energize	0 days												
13 Post Construction / Close out	37 days												
14 Final Completion	0 days												



Maintenance Highlights

- Predictive Maintenance and Monitoring program for Substations
- Implementation of the SVP Job Hazard Analysis and Substation Entry Program
- Completion of the Gianera Unit 2 Turbine Major Outage
- Completion of the DVR Generator Major Outage



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Services and Electrification

- Solar Rooftop installations supported with 190 new applications in 2022
 - Of the 190 - 53 have been installed
 - Adds to the over 1000 permitted Solar PV systems in Santa Clara
- Large Commercial Renewable Energy (LCRE) program being refined with over half dozen customers and expected to provide 24/7/365 Carbon Neutral power
- *Just Launched:* Electric Yard Care Equipment instant rebate off the purchase price available through Silicon Valley Power's online marketplace



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Transportation Electrification

- **Electric Vehicle Charger Installations** - delayed due to recently resolved equipment supply chain issues
 - By end of summer, **48** additional charging ports at **8 locations** supporting public and fleet charging. Includes Machado Park, Henry Schmidt Park, and Central Park Tennis Courts/Softball Field
 - Received DC Fast Charging grant to support medium-heavy duty fleet
- **Fleet Electrification** - replaced old combustion vehicles with all-electric vehicles for City depts.
 - FY22 purchased **46 all-electric vehicles** + electric forklifts
- **Customer Programs** - launched EV Charging Technical Assistance program for multifamily properties, schools and businesses



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Upcoming Items

- Currently have 46 vacant positions (22% vacancy rate)
 - Recruitment capacity (29 positions currently being recruited) and unsuccessful recruitments (Technicians, Electricians, Engineers, Project Managers, Analysts)
 - Very competitive market in the Utility and CCA workspace
 - Affects all our work (contracts, project management, operations, maintenance)
- Next 6 months highlights
 - Upcoming annual rate increase
 - Multiple system expansion contract awards
 - Completion of solicitations and master agreements for critical services supporting existing infrastructure (power plants, substations, transmission and distribution.)
 - Resolution on Battery Storage
 - Integrated Resources Plan (IRP)
 - Many additional items.....

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The seal of the City of Santa Clara, California, is circular. It features a central illustration of a mission-style building with a red roof and a bell tower, set against a blue sky with clouds and a green field. The year "1852" is written in white on a green banner at the bottom of the illustration. The outer ring of the seal contains the text "CITY OF SANTA CLARA CALIFORNIA" at the top and "THE MISSION CITY" at the bottom, separated by a dotted line.

City Council

**Item #5: Silicon Valley Power
Quarterly Update**

RTC 22-1022

August 16, 2022

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