



City Council

**Item #5: Silicon Valley Power
Bi-Annual Update**

RTC 24-237

March 12, 2024

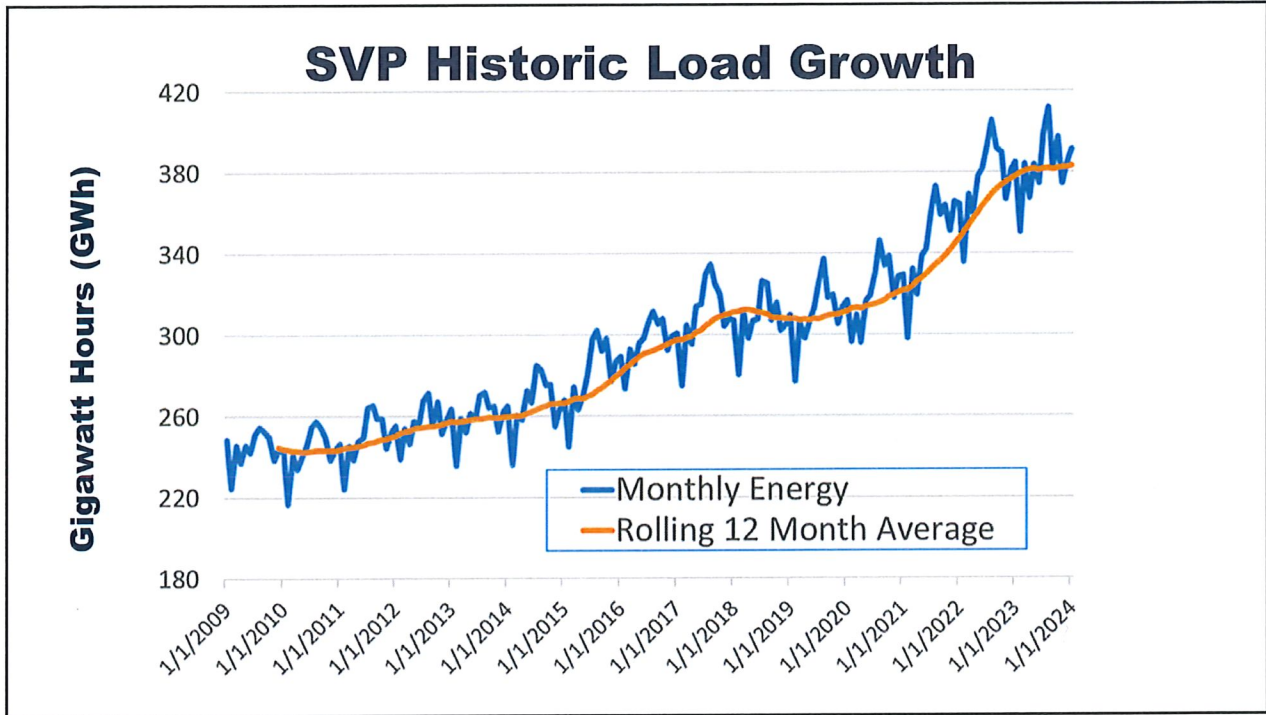
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Agenda

- Load Growth
- Capital Projects
- Storm Response
- Upcoming Items

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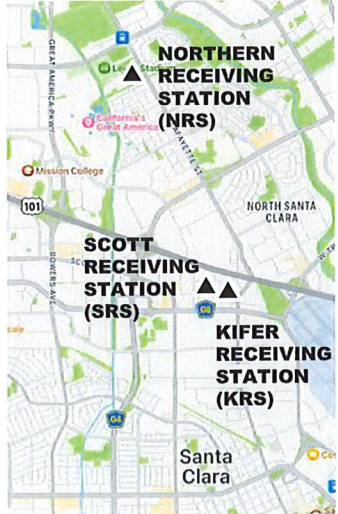
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SVP Receiving Stations Projects to Increase Reliability and Capacity

Northern Receiving Station (NRS):

- Relocation of two existing PG&E 115 kV overhead connections and CAISO meters, replacing with larger transformers, upgrade of existing main/transfer bus configurations, circuit breakers, disconnect switches and system protection improvements.
 - Replace two NRS 115/60kV Transformers (372 to 672 MVA)
 - NRS 115/60kV Transformer Spare (3rd Transformer)
 - Two new NRS 230KV Transformers (560 MVA), existing (420MVA) to remain in parallel.
- Developed value engineering cost estimates and sequencing plans
- Ordered Transformers on January 2024
- Recommendation to purchase circuit breakers May 2024



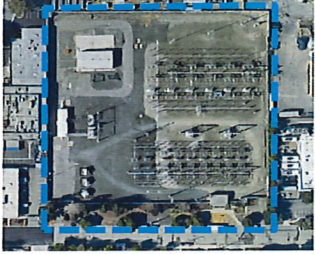
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SVP Receiving Stations Projects to Increase Reliability and Capacity

Scott and Kifer Receiving Stations (SRS & KRS):

- Replaces end of life infrastructure and increases capacity
- SRS constructed 1968 and KRS in 1975
- Full Rebuild - New 60kV/115kV Switchgear, control rooms, larger transformers, circuit breakers, disconnect switches, cable sealing, relocation of 60kV and 115kV transmission lines associated with each substation.
- 30% Design Completed
- Ordered Transformers on January 2024
- Recommendation to purchase circuit breakers May 2024





Scott Receiving Station




Kifer Receiving Station

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115kV Transmission Line Northern to Kifer Receiving Station

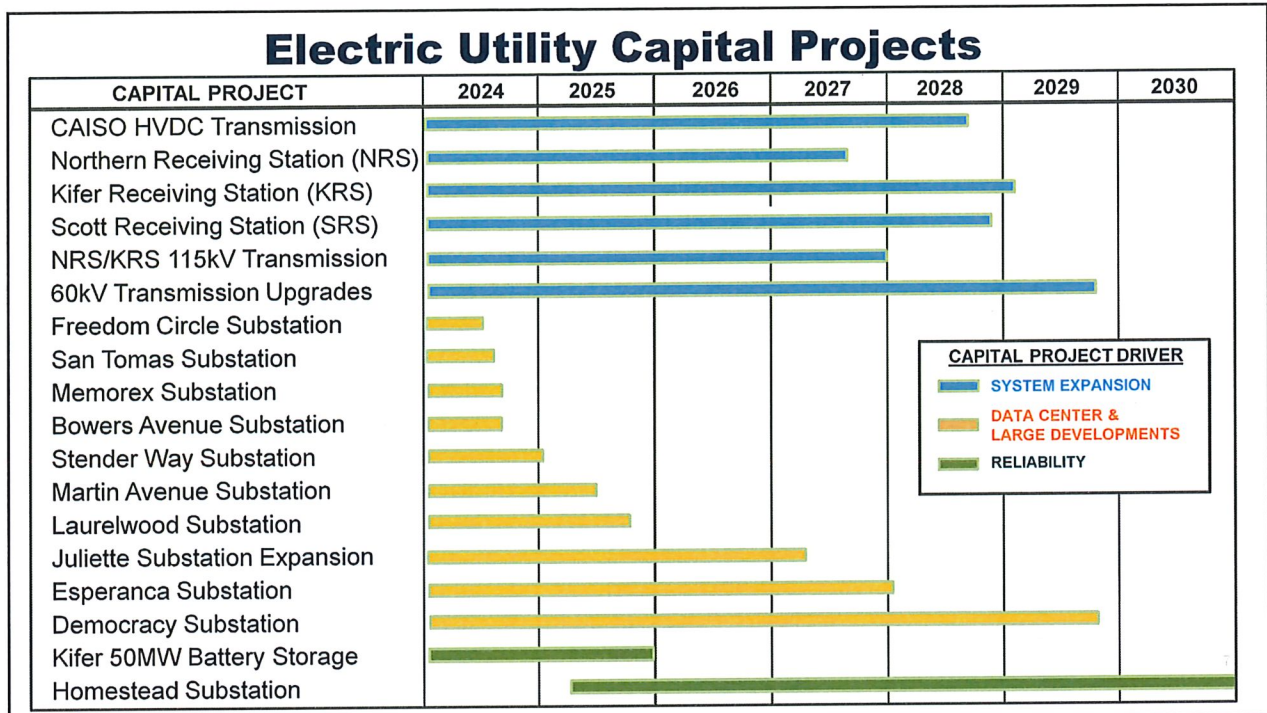
- Project Scope: Construct a new 115kV overhead transmission line of approximately 2.24 miles between Northern Receiving Station and Kifer Receiving Station.
- Key Items: constructability, existing utilities, power delivery, potential growth, aesthetics, tree removals, maintenance considerations, construction costs, and schedule
- Refining preferred route alignment along Lafayette Street, Bassett Street, and Duane Avenue.
- Council informational report March 19th



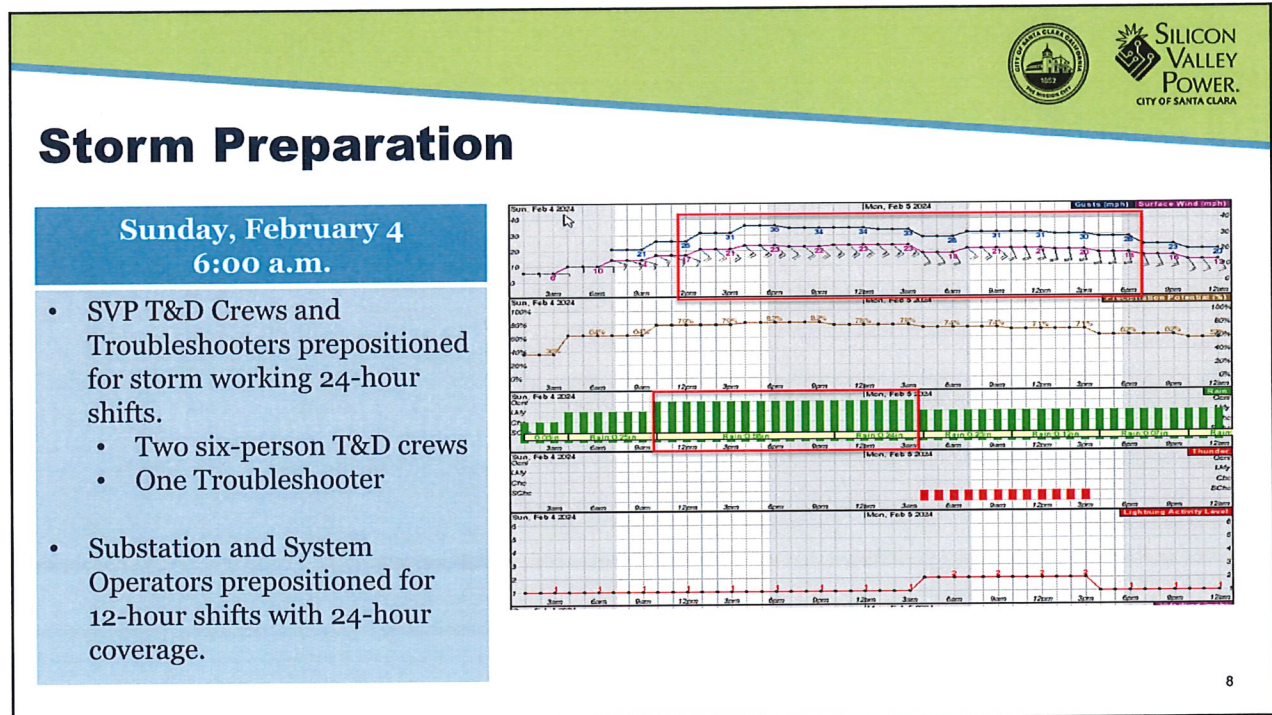
LEGEND

- Preferred Route
- Alternative Route
- Alternative Route



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Storm Timeline

3:45 p.m.	4:00 p.m.	4:15 p.m.	4:45 p.m.	Later that night	
<p>Quiet until about 3:45 p.m.</p> <ul style="list-style-type: none"> • Three minor outages 	<p>Three feeders out at approximately 4:00 p.m.</p> <ul style="list-style-type: none"> • 3,500 customers out 	<p>Multiple additional feeders at approximately 4:15 PM</p>	<p>Multiple additional feeders at approximately 4:45 PM</p> <ul style="list-style-type: none"> • 10,000+ customers out 	<p>18,000 + customers out</p>	<p><small>Fwd: adding 102S Outages. Whole feeders 203B 203W, 201S 102S-1595 customers And a momentary outage on 202H.</small></p> <p><small>Sent from my Verizon, Samsung Galaxy smartphone Get Outlook for Android<https://... ></small></p> <p><small>Fwd: adding whole feeders 101S, 204H, 104H. Adding 102S. Whole feeders 203B 203W, 201S 101S customer count unknown 204H, 2132 customers 104H, 773 customers</small></p> <p><small>Sent from my Verizon, Samsung... ></small></p> <p><small>Fwd: adding whole feeders 202H, 104B, 301U, 102H, 101S, 204H, 104H. Adding 102S. Whole feeders 203B 203W, 201S 202H, 1608 customers 104B, 2155 customers 301U, 3707 customers ></small></p>
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p><small>Outages. Whole feeders 203B 203W, 201S Whole feeders tripped. 203B, 2080 customers 203W, 1419 customers 201S, 1001 customers No cause or eta yet.</small></p> </div>					



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Storm Response

Sunday, February 4 3:00 p.m.	Sunday, February 4 6:00 p.m.	Monday, February 5 4 – 6:00 a.m.
<ul style="list-style-type: none"> • Additional resources called in <ul style="list-style-type: none"> • Three-person Substation crew • Three Control room operators • SVP Management Staff 	<ul style="list-style-type: none"> • SVP transitioned into Storm Response mode by breaking T&D crews into 2-person Triage/Damage Assessment Teams. <ul style="list-style-type: none"> • Crews isolated, minimized outages and began repairs. 	<ul style="list-style-type: none"> • Remaining T&D Crews arrive as scheduled to relieve off going 24hr shift. • 6:00 a.m. - Remaining Substation and System Operators arrive as scheduled to relieve off going shift. • 3:00 p.m. - Additional SVP resources allocated for Triage/Damage Assessment.

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Affected the Entire State

<p style="text-align: center;">“</p> <p>In terms of outage totals, this was one of the top three most damaging, single-day storms on record, only comparable to storms in 1995 and 2008.</p> <p style="text-align: center;">PG&E Chief Operating Officer Sumeet Singh Emergency Operations Center in Vacaville</p>	<p style="text-align: center;">“</p> <p>After the brunt of Sunday's storm finally ended, a staggering 235,000 PG&E customers in the Bay Area were without power at 5 a.m. Monday.</p> <p style="text-align: center;">KRON 4</p>	<p style="text-align: center;">“</p> <p>The Feb. 4 storm brought strong winds, surpassing 65 miles per hour, impacting over 200,000 of our customers...</p> <p style="text-align: center;">Sacramento Municipal Utility District</p>
<p style="text-align: center;">“</p> <p>Historic storms knocked out power for record number of Californians.</p> <p style="text-align: center;">LA Times</p>	<p style="text-align: center;">“</p> <p>About 1.4 million PG&E customers statewide lost power during the storm</p> <p style="text-align: center;">LA Times</p>	<p style="text-align: center;">“</p> <p>As of Wednesday evening, LADWP crews have restored 82,246 customers since the start of the storm Sunday</p> <p style="text-align: center;">LA Department of Water & Power</p>

Actual PG&E Urgent Alert


Storm Safety: Rain, snow and high winds caused widespread outages. It could take up to 24 hours before we have an estimate of when your power will be on. Online tools offer the same information as our phone agents. [Latest storm updates](#). [Storm Safety](#) → [View & Report Outages](#)

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OUTAGES SNAPSHOT

- Electric System Impact
 - 34 total outages
 - 26 Circuits affected (159 Circuits in the City)
- Customers Affected
 - 18,734 Service accounts affected
- Customer Accounts
 - 59,485 customers
 - 31% of SVP customers were affected





The Mercury News
Storm leaves swath of debris, damage, darkness in its wake
 County agency alters course
Storms pounding all areas of state

San Francisco Chronicle
 @sfchronicle
 The cyclone has wreaked havoc across California, downing trees and power lines, causing thunderstorms and prompting tornado and flash flood risks.


4:37 PM - Feb 4, 2024 • 4,772 Views

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OUTAGES AT A GLANCE

- Outage Length
 - 5.73 Hrs Average outage length
 - 60.13 Hrs Longest outage for 18 customers
 - 23 minutes was the shortest prolonged outage for 1,526 customers
- Outages Duration
 - Starting at 4:00 PM on Sunday, February 4
 - Ending at 4:45 AM on Wednesday, February 7





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Winter Storm Effect in Santa Clara

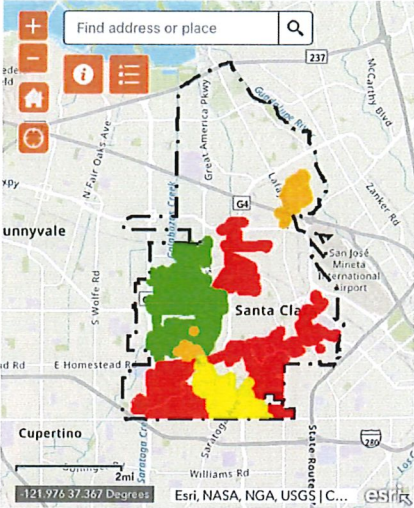
- 39% of outages were under 100 customers
- 44% of outages resolved under 4 hour
- 85% of outages resolved under 8 hours
- 89% of outages resolved under 12 hours
- 11% of outages had outages over 12 hours
- Staffing plan actively managed during storm response.
- Kaiser Hospital and Schools Prioritization
 - Kaiser switched to alternate feed for 7 hours
 - 10 of 11 schools restored by 2/5 @ 0500,
1 school restored 2/5 @ 0701.

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Customer Engagement

- Customer reps worked through the night to communicate with key customers
 - Kaiser hospital, schools
- Call volume strained resources
- 2,100 online forms were submitted to report outages
- New Outage Map (only 3 weeks old)
 - Challenges created by manual input system
 - Caught up on Monday
 - 90,000 hits



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Customer Engagement

- Emergency Alert Banner across all City websites
- Social Media
 - X (Twitter) (10.4 K Followers) – 8 updates
 - Facebook (1900 Followers) – 8 updates



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Feedback - Negative

““

What updates? Hasn't been one since this major outage started. And BTW your useless map says my area has power now, it doesn't, hasn't for 7 hrs. Who'd you hire to update it, a 3rd grader with crayons?

Social Media Comment

““

Too bad the map is completely useless. No status, no timelines to fix, numbers of affected customers clearly random. The green area cannot be 18 customers.

Social Media Comment

““

Still no power!! 16 hours. They need a better way to update people. That map is inaccurate and calling the number gives no information.

Social Media Comment

““

We've been out of power since 330 pm yesterday! Went down to main office this morning to report our block wasn't on outage map. Was informed they're aware of our block but as of yet, no update on outage map and no crew to repair transformer on Barton/Flannery as of 130 pm today! Unacceptable!

Social Media Comment

““

This is ridiculous, our neighborhood is not even listed as affected and we've been manually pumping water out of our basements for 4 hours, nobody even picks the phone to report the outage


Social Media Comment

““

Thank you for the hard work under dangerous conditions. I'm starting to understand why it can be difficult to communicate/ update in a timely manner. I would rather the crews continue their work uninterrupted then have to report their progress back to headquarters. Assuming this is the reason for the poor or poorly updated communication to customers. Thank you again.

Social Media Comment

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Feedback - Positive

““

I am EVER SO GRATEFUL for our SVP! THANK YOU A THOUSAND TIMES! Now if you don't mind, I need to go brag on you to my friends around the world!

Social Media Comment

““

Thank you to our wonderful SVP staff who work around the clock to keep our power on in Santa Clara. This last storm was a really rough one and we appreciate your hard work and are grateful for your service to our residents and businesses

Social Media Comment

““

Thanks for all you do! We can't remember the last time our power was out in the Park-Hilmar neighborhood, it's been that long! We were happy to have power back earlier this morning!

Social Media Comment

““

Thank you for your work. The hours are long and uncomfortable due to weather. My guess is that those working to restore power have families that are making sacrifices and taking on extra responsibly during this time. I am grateful my power is back. I have no complaints about the time it took. We can't control weather and how it affects the systems we depend on. Thanks again for your work!

Social Media Comment

““

SVP crews did an outstanding job restoring service during yesterday's storms. I can only imagine how miserable the working conditions were and I appreciate the heroic efforts made by all involved. I notice and appreciate their professionalism and unwavering commitment. It is a huge contribution to our community.


Resident Email to Council

““

The District is so grateful to SVP for the extraordinary work that has been done. 11 of our sites were without power at one point and were online by the time school began.

School District


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Outage Communication Improvements

- Will implement Automated Management System to improve Communication
- Full meter software upgrades to enable full Outage Management System (OMS)
 - Full benefit of AMI
 - Approximately 2 years out
 - First contract scheduled for Council on March 19
- Pursue interim OMS that does not require AMI
 - Automated map and phone system
 - Working through NCPA partners to explore options
 - Lining up product demonstrations in March
- Explore emergency/overflow remote phone answering service

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Upcoming Items

- Next 6 months highlights
 - Award of Circuit Breaker Bid for Receiving Stations
 - Bond Financing of 3 CIP Transmission Projects
 - RFP Switchgear Procurement Package
 - RFP for Engineering and Consultant Support Services
 - Multiple system expansion contract awards

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The seal of the City of Santa Clara, California, is circular with a white border. Inside the border, the text "CITY OF SANTA CLARA CALIFORNIA" is written in a circle at the top, and "THE MISSION CITY" is written at the bottom. The center of the seal features a depiction of a mission 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 central image.

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