DOCKETED	
Docket Number:	25-IEPR-03
Project Title:	Electricity and Gas Demand Forecast
TN #:	261716
Document Title:	STACK Infrastructure, Inc. co Monica Schwebs, Morgan Lewis Comments - Comments of STACK Infrastructure, Inc Regarding Data Center Load Forecasting
Description:	N/A
Filer:	System
Organization:	STACK Infrastructure, Inc. c/o Monica Schwebs, Morgan Lewis
Submitter Role:	Public
Submission Date:	2/12/2025 9:34:45 AM
Docketed Date:	2/12/2025

Comment Received From: STACK Infrastructure, Inc. c/o Monica Schwebs, Morgan Lewis
Submitted On: 2/12/2025
Docket Number: 25-IEPR-03

Comments of STACK Infrastructure, Inc Regarding Data Center Load Forecasting

Additional submitted attachment is included below.

February 11, 2025

Via Email

California Energy Commission
Dockets Office
California Energy Commission
715 P Street
Sacramento, CA 95814
Email: docket@energy.ca.gov

Re: Integrated Energy Policy Proceeding, Electricity Demand Forecast,
Docket No. 25-IEPR-03
Comments of STACK Infrastructure, Inc. Regarding Data Center Load Forecasting

Dear Commissioner Gunda and Staff of the California Energy Commission ("CEC"):

Thank you for the opportunity to provide input relating to electricity demand and forecasting in California. STACK Infrastructure, Inc. ("STACK") previously provided comments in docket 24-IEPR-03 regarding load forecasting for data centers in California on May 17, 2024, and November 22, 2024.[1]

As STACK has previously shared, STACK delivers a comprehensive suite of data center campus, build-to-suit, colocation, and powered shells solutions across the globe. In California, we have completed one data center, are constructing another, and are in the process of obtaining permits for a third data center, all in the service territory of Pacific Gas & Electric ("PG&E"). STACK also recently completed a data center in the service territory of Silicon Valley Power ("SVP").

We have reviewed the revised load forecast for data centers dated December 23, 2024,[2] and are pleased to see that the load forecast has been increased and has thus become more

[1] *See* docket entry 256440 filed on May 17, 2024, at https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=24-IEPR-03; and docket entry 260218 filed on November 22, 2024.

[2] *See* Data Center Forecast Update, dated December 23, 2024, available at https://www.energy.ca.gov/sites/default/files/2024-12/Data_Center_Forecast_Update_ada.pdf.

accurate. We are also pleased to see that the CEC concluded its presentation by noting next steps, which include:

- Consider Scenario 3 (high case) results for Local Reliability Scenario
- Allocate forecasted demand by load buses for CAISO

Based on our experience in California, we agree that the high case load should be used for the Local Reliability Scenario as the CEC described in its *2024 Integrated Energy Policy Report Update* and that forecasted demand should be allocated by load buses for CAISO transmission planning.

STACK has some suggestions regarding the process the CEC should use to ensure that going forward, the CEC's load forecasts and bus bar mapping are as accurate as possible. With respect to STACK's data center projects in PG&E's service territory, we have been pleased that PG&E has engaged with us to determine the expected load ramp for the data center projects and provided this information accurately to the CEC.

Unfortunately, experience with SVP has differed and raises serious concerns about whether SVP is providing accurate information regarding load requests to the CEC. As detailed in this letter, it is clear that SVP has previously provided the CEC with inaccurate load forecast information related to the Memorex Junction facility in the City of Santa Clara.

In 2024, STACK completed construction of a data center facility on Memorex Blvd. in Santa Clara. The project was designed to have a 90 MVA load. This information was first provided to SVP in 2018 in writing. Over the years that followed, STACK repeated its request for 90 MVA and it is clear that SVP understood the request because beginning in 2019 SVP provided drafts of the substation agreement which accurately stated the requested energization capacity. On September 1, 2020, the developer informed SVP that its load ramp would require 86.3 MVA of energization capacity in 2024. *See* **Attachment 1.**[3] Santa Clara, with input from SVP, approved the development of this facility in November 2021 and STACK commenced construction the following year.

Even though SVP knew the requested energization capacity, in its IEPR submission on December 17, 2020, SVP never indicated that Memorex Junction would have a demand of upwards of 90 MW and instead reported an ultimate load in 2027-31 of only 48 MW.[4]

[3] The developer of the data center project was Skybox Datacenters and the name of the corporation which originally owned the project assets was 1220 Santa Clara Propco, LLC. In 2022, STACK became the owner of the data center project, a.k.a. "Memorex Junction," and now heads the Development Team.

[4] *See* SVP's IEPR load submission dated December 17, 2020, which is available in CEC Docket No. 20-IEPR-03 at https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=20-IEPR-03.

Subsequently, SVP further reduced this figure to 31 MW in its 2022-23 IEPR reporting. *See* **Attachment 2**.

Neither figure accurately reflects the actual projected load of the Memorex Junction facility, which was designed, permitted (with SVP input), and has been constructed to receive 90 MW of capacity from SVP. For reasons that are not entirely clear, to date, SVP has refused to provide the full 90 MW of capacity requested and tendered a Substation Agreement that tops out at 31 MW. A copy of that Substation Agreement is included as **Attachment 3**. Given that this figure was roughly a third of what the Memorex Junction facility needs to be fully utilized, STACK only agreed to this much lower figure based on SVP's representations that SVP would make the additional capacity available. To date, SVP has not done so, which is an ongoing issue.

Despite its representations that it would make additional capacity available, it appears SVP continues to misstate the load projection for the Memorex Junction facility. While SVP's more recent IEPR-related load projects are aggregated, preventing STACK from knowing exactly what load figure SVP is using for the Memorex Junction facility,[5] STACK has seen strong indications that SVP continues to underreport the projected load projection. For example, recent SVP system impact studies show SVP projecting total load for the facility at only 59.4 MW. This figure is shown on page 4 of the excerpted system impact study dated September 11, 2024, attached as **Attachment 4**. While this figure is an improvement on the prior 31 MW figure, it remains significantly below the design capacity of the Memorex Junction facility.[6]

For purposes of transmission planning, SVP's actions raise serious concerns about its load forecasting. An accurate load forecast should reflect expected load and surely the construction of a building, designed, permitted and fully constructed to have 90 MW of load should be reflected in SVP's load forecast so that realistic transmission planning can be done. As best as we can tell, that is not happening, which will only serve to perpetuate the lack of adequate service to the currently vastly underserved Memorex Junction facility.

Although we are only providing information to the CEC regarding STACK's Memorex Junction facility, we have reason to believe that other developers of data centers in SVP's service territory also have substation agreements that do not reflect their requested load ramps. It may

[5] We have reviewed SVP's subsequent IEPR load forecasts which were posted by the CEC and they aggregate data center load to it is not possible to determine from them whether SVP ever corrected the erroneous information it provided regarding STACK's data center. *See* (1) SVP IEPR submission dated December 5, 2023, filed in 23-IEPR-03 and available at https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=23-IEPR-03; and (2) SVP's IEPR submission dated December 4, 2024, filed in 24-IEPR-03 and available at https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=24-IEPR-03.

[6] When STACK received this system impact study, it attempted to get SVP to correct the load forecast but SVP refused. Email correspondence regarding the discrepancy is provided as **Attachment 5.**

be that the information SVP has provided to the CEC regarding their expected load and their system impact studies also do not reflect their requested loads.

Because the CEC needs accurate information to forecast load for the State of California and to do busbar mapping for the CAISO, we urge the CEC to take whatever steps are necessary to make sure that the information it uses regarding expected loads in SVP's service territory is accurate. This is important not only for data center developers, but also for the California communities depending upon the accuracy of the CEC's data center load forecasts and its busbar mapping.

Sincerely,

DocuSigned by:
Matt VanderZanden
8769AFEA528A40D...

Matt VanderZanden
Chief Operating Officer
STACK Infrastructure, Inc.

Initial DO

Initial CV

ATTACHMENTS

To

Comments Filed in California Energy Commission

Docket No. 25-IEPR-03

by

STACK Infrastructure, Inc.

February 11, 2025

ATTACHMENT 1

Re: Load Forecast Request - 1200 Memorex

Rob Morris
Tue 9/1/2020 9:25 AM

To:Wendy Stone <westone@SantaClaraCA.gov>
Cc:Jason Valudos <jvaludos@cps-llc.com>;Gordon Kellerman <gordon@skyboxdatacenters.com>

1 attachments (56 KB)
Load Forecast_Skybox dated 8.28.20.xlsx;

Wendy,

Please see below and attached for 1200 Memorex. Please let us know if you need anything else!

Load Ramps from Feb 2021 – Sept 2022, from 1MW to 6MW, all construction activities.
Oct 2022 – 17.6, beginning stages of Cx/Testing, I am a little ahead here when compared to schedule.
Dec 2022-April 2023 – I increased to 23.4MW for Cx/Testing loads included in SVP load letter.
May 2023 – 45MW, I assumed first floor is at full load + Construction/Cx/Testing Load for Second Level
Nov 2023 – 66.8MW, First/Second Floor is at Full Load + Construction/Cx/Testing Load for Third Level
May 2024 – 86.2MW, First/Second/Third Floor is at Full Load + Construction/Cx/Testing Load for Forth Level
Nov 2024 – 86.2MW, All Floor Online at Full Load

Best,
Rob

Rob Morris
Chief Executive Officer

DALLAS | HOUSTON | SANTA CLARA
3131 Turtle Creek, Suite 310, Dallas, TX 75219
T 214 838 9550 C 214 707 5695
rob@skyboxdatacenters.com

On Aug 24, 2020, at 1:06 PM, Wendy Stone <westone@SantaClaraCA.gov> wrote:

Yes, please.

From: Rob Morris [mailto:rob@skyboxdatacenters.com]
Sent: Monday, August 24, 2020 11:05 AM

To: Wendy Stone <westone@SantaClaraCA.gov>
Cc: Jason Valudos <jvaludos@cps-llc.com>; Gordon Kellerman <gordon@skyboxdatacenters.com>
Subject: Re: Load Forecast Request

Wendy,

Hope you had a great weekend! Is this something that we should be completing incorporating 1200 Memorex?

Best,
Rob

> On Aug 17, 2020, at 1:03 PM, Wendy Stone <westone@SantaClaraCA.gov> wrote:
>
> Good morning Rob,
>
> It is that time of year when SVP reaches out to our Key Customers requesting a forecast of their loads for remaining CY 2020 (August - December) through CY 2024. SVP relies on receiving up-to-date forecast numbers from you so that we can plan for:
>
> • Future system planning and growth
> • Future infrastructure and capital needs
> • Resource procurement to meet SVP's RA Obligation (Capacity)
> • Renewable Requirement (SB 100)
> • Balance Rate Increases (Create Long Term Financial Forecast)
>
> Please use the attached load forecast template to provide your monthly Peak forecasts for remaining CY 2020 - CY2024 (as noted above). To see each individual month in each CY, you will need to expand the "+" above each CY column. **We ask that you please complete this template by Monday, August 31**. If you have any questions, please let me know.
>
> Thank you in advance for providing SVP with a meaningful forecast. By your effort, this will assist SVP to be poised to meet your future load growth requirements so that your company can be successful in meeting its goals.
>
> Regards,
> Wendy

Wendy Stone
Electric Program Manager, Customer Development
Silicon Valley Power
881 Martin Ave.
Santa Clara, CA 95050
Tel 408-615-5648
Email westone@svpower.com

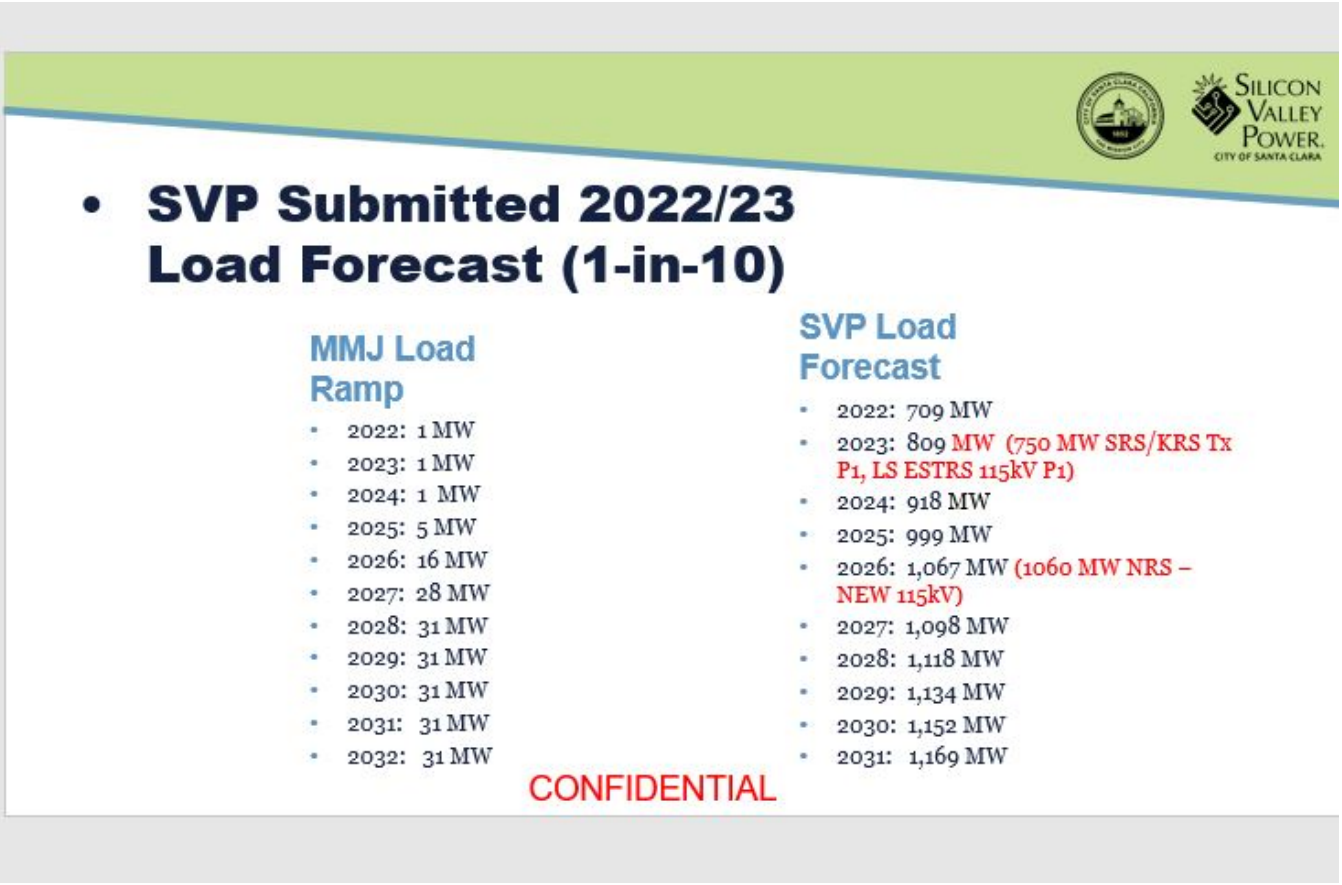
<Load Forecast_Skybox.xlsx>

The information contained in this email may be privileged, confidential and exempt from disclosure under applicable law. The information is intended only for the use of the individual or entity to which it is addressed. If you are not the intended recipient or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any use, dissemination, distribution or copying of this communication is strictly prohibited. If you have received this message in error, or are not the named recipient(s), please notify the sender immediately by reply email and delete this message from your computer. Thank you

ATTACHMENT 2

From: **Wendy Stone** westone@SantaClaraCA.gov
Subject:
Date: February 16, 2022 at 12:21 PM
To: Rob Morris rob@skyboxdatacenters.com

WS

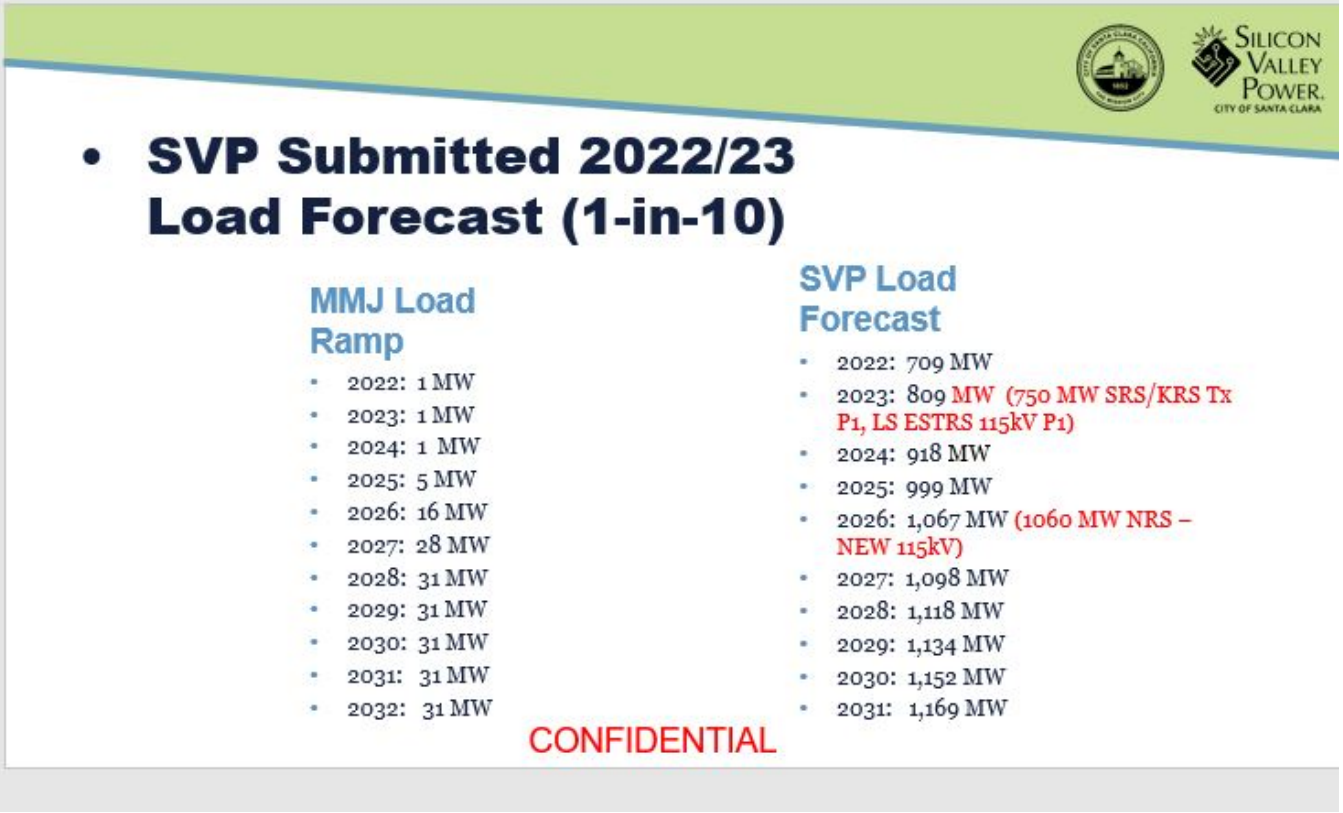


Wendy Stone
Electric Program Manager, Customer Development
Silicon Valley Power
881 Martin Ave.
Santa Clara, CA 95050
Tel 408-615-5648
Email westone@svpower.com

CITY OF SANTA CLARA CALIFORNIA 1852 THE MISSION CITY

125 YEARS SILICON VALLEY POWER. CITY OF SANTA CLARA

Powering The Center of What's Possible Since 1896



ATTACHMENT 3

SUBSTATION AGREEMENT
BY AND BETWEEN
THE CITY OF SANTA CLARA, CALIFORNIA
AND
1220 SANTA CLARA PROPCO, LLC

PREAMBLE

This Substation Agreement ("Agreement") is made and entered into on the date last signed by the Parties ("Effective Date") by and between the City of Santa Clara, California, a chartered California municipal corporation ("City") and 1220 Santa Clara PropCo, LLC, a Delaware limited liability company ("Customer"). The City and Customer may be referred to in this Agreement individually as a "Party" or collectively as the "Parties".

RECITALS

A. The City of Santa Clara owns and operates an electric utility, doing business as Silicon Valley Power ("SVP"), and currently provides electric service to Customer at 1200 Memorex Drive, parcel number 224-66-006, in the City of Santa Clara, California ("Premises"), which is shown on Exhibit A attached hereto and incorporated herein, pursuant to standard electric rate schedules authorized by the City Council of the City of Santa Clara;

B. Customer has requested that the City provide 90 MVA of total capacity to meet Customer's anticipated operating needs;

C. City has determined that a new single customer electric substation, which is shown as the area and equipment marked as the Substation Facilities on Exhibit C - attached hereto and incorporated herein with a capacity of 90 MVA, to be known as the Memorex Junction (MJ) ("Substation Facilities"), is required to be built to fulfill its obligations to Customer;

D. City has determined that the Substation Facilities require new 60kV transmission line extensions ("Transmission Facilities") to connect the Substation Facilities to SVP's electrical system.

E. The Parties acknowledge that significant system capacity improvement facilities will be required to provide the capacity of 90 MVA to the Customer. The Parties further acknowledge these system capacity improvements are not fully within their control and may impact the Customer's Available Capacity Schedule. SVP will use commercially reasonable efforts to provide the Customer with the requested Available Capacity as described in the Available Capacity Schedule in Exhibit E attached hereto and this will be the Customer's obligation to utilize the Available Capacity based upon the Available Capacity Schedule in Table E1.

F. The purpose of this Agreement is to set forth the mutual obligations of the Parties with respect to supplying Customer with initial interim electric power and then with permanent capacity and transmission infrastructure for the Premises.

Therefore, in consideration of the foregoing, the Parties agree as follows:

AGREEMENT PROVISIONS

1. DEFINITIONS

A. "Capacity" is the maximum or peak amount of electric power (electricity) that may be received by Customer for use at a specific point in time and is determined by Transmission System Operating Limits

1. "Available Capacity" is the Capacity depicted in Exhibit E – Available Capacity Schedule and is the maximum Capacity available to be used by the Customer during each year of each Load Phase.
2. "Available Capacity Schedule" the phased schedule by which the City anticipates Capacity requested by Customer will be available. The Available Capacity Schedule is outlined in Exhibit E – Available Capacity Schedule.
3. "Interim Capacity" is the Capacity available from SVP from 12 kV distribution feeders prior to operation of the Substation Facilities
4. "Paid Capacity" is the Capacity for which Customer has paid Load Development Fees. Paid Capacity is greater than or equal to Available Capacity.
5. "Cumulative Paid Capacity" is the Paid Capacity required for the Available Capacity in the Exhibit E – Available Capacity Schedule.
6. "Total Capacity" is the Customer requested maximum MVA capacity and can not exceed 99 MVA. While, the Substation Facilities and Transmission Facilities will be designed to meet Total Capacity, the maximum Capacity available to Customer is Available Capacity for each Load Phase.

B. "Electric Service" is defined in SVP Rules and Regulations No. 1C – Definitions.

C. "Estimated Duration" in Exhibit D – Project Schedule and Costs is an estimated duration for a set of tasks. This is a best case scenario and does not include potential delays such as weather or force majeure.

D. "Load Development Fee" is the Commercial Facilities Dedicated 60kV Fee in the City of Santa Clara Municipal Fee Schedule. This fee represents the share of costs associated with System Capacity Improvement Facilities required. This fee funds system wide capital expenditures directly related to the addition of infrastructure associated with new load increases and does not include costs directly attributed to Customer's Project. Customer will be obligated to pay the fee based on the City's Municipal Fee Schedule at the time of the invoice.

E. "Load Phase" is depicted in Exhibit D and are the periods for which a specific Available Capacity is in effect and available for Customer to use.

F. "System Capacity Improvement Facilities" are the system improvements required by City to support the Total Capacity requested by Customer. System Capacity Improvement Facilities include projects on SVP's 230kV, 115kV, and 60kV

transmission lines, receiving stations, and Pacific Gas & Electric Bulk Electric System Improvements.

2. PROJECT OVERVIEW

A. PROPOSED PROJECT:

The Proposed Project, (PLN2019-14055), was approved at the City Council meeting on November 9, 2021. On November 9, 2021, City Council approved the resolution to adopt the Environmental Impact Report and associated actions for the 1200 Memorex Drive project, including a new substation, equipment yards and onsite improvements.

The Proposed Project is the development of a four-story 472,920 square foot data center building with an attached six-story 87,520 square foot ancillary use office and storage component, for a combined square footage of 560,440, along with the associated electrical substation, paved parking areas and landscaping. The data center building would be approximately 85 feet in height, with additional screening features extending to a height of 99 feet. The data center portion of the building would house computer servers for private clients in a secure and environmentally controlled structure and would be designed to provide 60 megawatts (MW) of information technology (IT) power.

The Proposed Project includes the demolition of the existing historic industrial buildings on-site, and a minor modification to the Zoning Code standards to allow the increased height of 99 feet and a reduction in the zoning code parking standards for a data center.

B. ELECTRIC FACILITIES:

1. Customer will construct electrical Substation Facilities with a capacity of 90 megavolt amps (MVA) on the southeast corner of the Premises near Di Giulio Avenue and Memorex Drive.
2. Customer is also requesting electric power capacity of up to 4.5 MVA from SVP prior to completion of the Substation Facilities ("Interim Phase").
3. City and Customer have agreed that Customer will fund the development and construction of the Substation Facilities and Transmission Facilities ("Substation Development Phase") to serve the Premises.
4. In the course of the development of the Premises, City and Customer will finalize requirements for the interconnection facilities necessary for supplying electrical power within the project ("Connection Phase").

   The layout of and requirements for the interconnection facilities shall be complete and agreed upon by the Parties prior to commencement of any construction on the Substation Facilities.
5. The beginning and the ends of these successive phases may overlap. The respective responsibilities and obligations of the City and Customer for each of these phases are more particularly described below.
6. Customer has requested a Total Capacity of 90 MVA. In the event that 90 MVA is not included in Exhibit E – Available Capacity Schedule, SVP and Customer shall meet at least once every two (2) years to consider amendments to this Agreement to modify or extend the Available Capacity

Schedule in Exhibit E to increase or decrease Capacity.

3. INTERIM PHASE

A. SVP OBLIGATIONS

To enable Customer to begin construction and operate without interruption until the Substation Facilities are fully constructed and begin operation, Customer will utilize the existing 4.5 MVA of Capacity of Electric Service. Interim Service is provided from one (1) 12 kV distribution feeder at or near the location set forth in the Interim Service diagram attached as Exhibit B.

B. CUSTOMER OBLIGATIONS

Customer acknowledges that up to 4.5 MVA Interim Service requested for the site is the combined allocation for the Premises. Customer shall pay all costs associated with the removal of the Interim Service. Customer shall work with SVP to transfer Customer's existing load from the Interim Service to the new Substation Facilities within three (3) months after energization of the Substation Facilities.

4. SUBSTATION DEVELOPMENT PHASE

A. SVP OBLIGATIONS

1. SVP will provide up to the Available Capacity for Customer's use in each Load Phase as detailed in Exhibit E – Available Capacity Schedule, to the Premises, upon completion of, and served by, the Substation Facilities, Transmission Facilities and required System Capacity Improvement Facilities which include projects on SVP's 230kV, 115kV, and 60kV transmission lines, receiving stations, and Pacific Gas & Electric Bulk Electric System Improvements ("System Capacity Improvement Facilities").
2. As the System Capacity Improvement Facilities completion schedules are not fully controlled by SVP, SVP at its sole discretion may limit Customer and Customer's tenants' Available Capacity until the Capacity is made available to SVP.
3. The initial approved Available Capacity Schedule is identified in Exhibit E.
4. The Parties agree that the Capacity from the Substation Facilities will also be provided pursuant to the Rules and Regulations, applicable Silicon Valley Power Rate Schedules, current Load Development Fees and subject to the completion of any system upgrades necessary to serve the load at the time the load capacity increase is initiated. The 90 MVA of Capacity shall be provided to the Customer at the cost of the Load Development Fee applicable at the time of payment.
5. SVP will make Electric Service available to the Customer, at the Utility Connection Point, from the Substation Facilities and connected to the Premises through the Transmission Facilities. The "Utility Connection Point" for a SVP junction facility is the Customer side of the 60kV disconnect switches located within the Substation Facilities as shown in

Exhibit C.

6. SVP will use commercially reasonable efforts to test and commission the Substation Facilities to be able to deliver the Capacity per the Available Capacity Schedule (inclusive of any Interim Service that is transferred to the Substation Facilities) in Table E1 of Exhibit E, at 60 kV, within thirty (30) months after the Effective Date of this Agreement.

7. SVP shall use commercially reasonable efforts to design, construct, test and commission the Transmission Facilities to be able to deliver the Capacity per the Available Capacity Schedule (inclusive of any Interim Service that is transferred to the Substation Facilities) in Table E1 of Exhibit E, within thirty (30) months after the Effective Date of this Agreement.

8. Completion of the Substation Facilities and Transmission Facilities is subject to the following terms:

   a) SVP shall own, operate, and maintain all City-owned Substation Facilities and Transmission Facilities, to the Customer's point of connection with SVP.

   b) SVP shall own, operate and maintain all City-owned Substation Facilities and Transmission Facilities, SVP control building and all equipment therein, as shown in Exhibit C.

   c) The Parties agree to coordinate the design and construction of the Substation Facilities and Transmission Facilities in accordance with the Project Schedule and Costs attached hereto as Exhibit D, to ensure timely completion.

   d) SVP shall design the City-owned control building within the Substation Facilities.

   e) SVP shall take over the management of the Transmission Facilities once a complete 70% design package has been reviewed and approved.

   f) SVP shall keep Customer informed on a regular ongoing basis as to the costs it is incurring associated with the design, construction, testing, commissioning, and completion of the Substation Facilities and Transmission Facilities, including periodic updates to Exhibit D as appropriate. Once preliminary engineering review is complete, SVP will provide Customer with a detailed estimate of SVP project cost to fully complete the Substation Facilities and the Transmission Facilities, including the control building within the Substation Facilities. SVP shall provide Customer with reasonable access to SVP's books and records that substantiate any costs SVP proposes to bill to Customer related to the Substation Facilities and Transmission Facilities.

   g) In no way will City be held responsible or subject to any penalty if the Project is not complete by Customer's anticipated or proposed energization date.

h) The Substation Facilities shall be substantially complete before SVP begins testing and commissioning activities. For purposes of this Agreement, "substantially complete" means that Substation Facilities construction is complete, in accordance with SVP's standards and requirements, and no Customer contractors remain working within the perimeter wall of the Substation Facilities. See Exhibit C for location of perimeter wall. SVP is not obligated to compress its testing and commissioning schedule to meet Customer's anticipated service date.

i) SVP acknowledges that the required interconnection study has been completed and it reflects development and Available Capacity schedules known at that time. SVP will update the Customer on projects and schedules that may impact the Available Capacity feasibility as they become available.

B. CUSTOMER OBLIGATIONS

1. The Customer shall design (with the exception of the City-owned control building), procure, and construct the Substation Facilities, as shown in Exhibit C (Station Plan), to provide 60kV service to the Premises, at its own financial risk, per SVP's standards and requirements.

2. The substation would consist of three (3) 50 MVA transformers. In the event one transformer fails, then the load, not to exceed 90 MVA, would be transferred to the redundant transformer.

3. Completion of the Substation and Transmission Facilities is subject to the following terms:

   a) The Substation Facilities shall be for exclusive use of the Customer's building(s) to be constructed on the parcel 224-66-006, as shown on Exhibit A.

   b) Substation Facilities 60kV bus will be a breaker and half scheme with the complete 60kV junction being constructed to serve the Premises.

   c) Customer shall obtain all land use entitlements, and provide any property rights, including easements, to the City, necessary to construct, complete and maintain the Substation Facilities.

   d) Customer shall be responsible for managing the transmission line design until a 70% design package has been reviewed and approved.

   e) Customer shall be responsible for all costs associated with the acquisition of all easements necessary for the Transmission Facilities.

   f) Customer shall construct a perimeter wall, marked as "Perimeter Wall" on Exhibit C, which shall create a physical boundary around the Substation Facilities and which is for ensuring the Substation Facilities' security ("Station Perimeter Wall"). The Station Perimeter

Wall shall be for the exclusive use of SVP. Only SVP approved signage is permitted on the Station Perimeter Wall. The substation shall have an all-weather asphalt surface underlain by an aggregate base.

g) The Customer shall procure the Substation Facilities control building to comply with SVP's design specifications and requirements. Any changes or substitutions to SVP's design package for the control building must have SVP approval prior to implementation, which approval shall not be unreasonably delayed or withheld. SVP, or SVP's designated representative shall oversee factory acceptance testing of the control building and inspect the control building prior to shipment of the building to the Premises. All deficiencies identified by SVP during the factory inspection visits shall be corrected prior to shipment of the control building to the Premises.

h) Customer-owned control, communication, and protection wiring from the Customer's control building to the marshalling termination cabinet located on Customer side of the demarcation fence, and related equipment, will be owned and maintained by Customer. All control and protection wiring must be clearly identified by Customer per SVP direction to avoid confusion when troubleshooting, maintaining, or repairing City-owned equipment to avoid possible misoperation of any SVP equipment.

i) Customer shall pay the City actual costs per Payment Milestones set forth in Exhibit D. These costs shall include but not be limited to all travel expenses incurred by SVP to perform factory inspections, oversee testing for any equipment purchased by Customer to be turned over for SVP's ownership, and all punch list items necessary to fully integrate the Substation Facilities into SVP's network. Invoiced costs by City shall be due within thirty (30) days of receipt of invoice. Invoices from City shall describe in detail the costs to Customer.

4. Customer must pay a Load Development Fee according to the current applicable fee schedule in the City of Santa Clara Municipal Fee Schedule and the schedule set forth in Exhibit D. The Load Development Fee will be payable 30 days prior to the energization of the additional Electric Service.

5. CONNECTION PHASE

A. SVP OBLIGATIONS

1. Upon completion of the Substation Facilities, Transmission Facilities and System Capacity Improvement Facilities, SVP shall provide the Available Capacity (inclusive of any Interim Service that is transferred to the Substation Facilities) for each Load Phase as detailed in Exhibit E. Such Capacity shall include primary and, as necessary, secondary, services to the Premises.

2. All electrical equipment installed by Customer upon the Premises for the purpose of, but not limited to, delivery and metering of Customer's Electric Service, shall become the property of SVP. SVP shall own, operate, and maintain the Substation Facilities (including the City-owned control building and all other City-owned equipment) and the Transmission Facilities at its sole cost and expense, in accordance with good utility practices and SVP Rules and Regulations as they may be updated.

B. CUSTOMER OBLIGATIONS

1. SVP and Customer will negotiate and prepare one or more easement agreements providing limited easements on the Premises, as may be required by SVP, to install, operate, and maintain any necessary distribution facilities.

2. Customer shall work with SVP to transfer Customer's existing load from the Interim Service to the new Substation Facilities within three (3) months after energization of the Substation Facilities.

6. LOAD FORECAST AND LOAD DEVELOPMENT FEE PAYMENT SCHEDULE

A. The Available Capacity – Table E1 is the agreed upon Available Capacity schedule. Exhibit E may only modified through an amendment to this Agreement or a Capacity Reduction as described in this Section. Customer shall pay Load Development Fees based on the Payment Schedule in Exhibit D.

B. Customer shall provide an annual 10-Year load forecast by month due within 30 days of request by SVP. A template will be provided annually by SVP to complete this process. This forecast will be used to determine Capacity available for use and incorporated into SVP's Transmission Planning Process. SVP may adjust this customer-provided load forecast to meet system capacity requirements. The resulting 10-Year load forecast (which may also be referred to as load ramp schedule) is for transmission planning purposes only and does not modify Exhibit E – Available Capacity Schedule.

C. City will invoice Load Development Fees based on the following schedule:

1. Following execution of this Agreement, City will invoice Customer for Load Development Fees based on 20 MVA. This amount will be reduced by the dollar amount of Load Development Fees paid for Interim Service.

2. Each time that Available Capacity exceeds Cumulative Paid Capacity in Exhibit E – Available Capacity Schedule, City will invoice Load Development Fees in 10 MVA increments based on the current municipal fee schedule rate at time of invoice date.

D. Capacity Reduction:

1. SVP will monitor the Customer's demand at the end of each Load Phase as described in Exhibit E.

2. After the end of each Load Phase, SVP at its sole discretion may reduce Available Capacity and Cumulative Paid Capacity based on Customer's

Peak Demand during the last completed Load Phase. The Customer's Peak Demand is calculated as the highest demand average over three (3) consecutive monthly billing periods within each Load Phase. This reduced Available Capacity is calculated as the Customer's Peak Demand plus 15%.

3. SVP shall notify the Customer of any Capacity reduction by means of a Capacity Reduction Notice in substantially the same format as Exhibit F – Sample Capacity Reduction Notice. The Capacity Reduction Notice shall include an updated Exhibit E and such updated Exhibit E shall replace the most recent Exhibit E. Any Load Development Fees paid by Customer for unavailable Capacity that has been reduced pursuant to a Capacity Reduction Notice shall be refunded to the Customer at the rate the Customer paid for such Capacity.

4. If the Available Capacity has been reduced through a Capacity Reduction Notice, and the City issues a refund of Load Development Fees, the Customer acknowledges and agrees that Customer shall have no right to any interest accrued by the entire payment or any amount refunded.

5. If the Available Capacity has been subject to Capacity Reduction at any time during the term of this Agreement and if the Customer's Demand is expected to increase above the reduced Available Capacity, then the Customer may request an amendment to this Agreement including an updated Exhibit E - Available Capacity Schedule. Customer shall provide any supporting information requested by SVP. Such amendment to this Agreement is not to be unreasonably withheld or delayed but is subject to SVP's system capacity limitations.

6. SVP may continue to issue Capacity Reduction Notices by evaluating the highest demand average over (3) three consecutive monthly billing periods during a 5-year window beginning with the end date of the final phase of the currently effective Available Capacity Schedule.

7. When evaluating Customer Peak Demand, SVP may evaluate any anomalies such as needle peaks that may artificially increase peak demand.

E. Customer shall be responsible to operate within the Available Capacity for each Load Phase. In the event of exceedance, the Customer shall pay any penalties, damages, or any other cost associated with Customer's load exceeding the Available Capacity as detailed in Table E1. Such costs include the de-energization of SVP electric system for asset inspection and pass through of any penalties assessed to SVP by the California Independent System Operator (CAISO) relating to Resource Adequacy forecasted capacity based on the Customer's excess load above the Available Capacity.

F. Customer shall provide at least 14-day advance notice of any major maintenance or commissioning activities concerning the Substation Facilities.

7. NON-INTERFERENCE

Neither Party nor any of its agents or contractors shall perform any work relating to the Interim Service, the Substation Facilities, the Transmission Facilities, or the Premises in a manner which unreasonably interferes with the other Party's work or property. Customer and each of its respective agents and contractors shall use their best efforts to minimize disruption to the City. Without limiting the generality of the foregoing, each Party shall consult in good faith with the other regarding the manner in which work will be performed.

8. FORCE MAJEURE

A. Neither Party shall be considered to be in default in performance of any of its obligations under this Agreement when a failure of performance is due to an Uncontrollable Force. The term "Uncontrollable Force" as used in this Agreement, shall mean any cause beyond the reasonable control of the Party affected, and which by exercise of due diligence such Party could not reasonably have been expected to avoid and which by exercise of due diligence it has been unable to overcome or obtain or cause to be obtained a commercially reasonable substitute therefore. Such Uncontrollable Force includes the failure or threat of failure of facilities, Act of God, flood, drought, earthquake, storm, tornado, fire, explosion, lightning, epidemic, public emergency, war, riot, civil disobedience, labor strike, labor dispute, labor or materials shortage (however labor or materials shortage does not include the mere inability to obtain that labor or material at a particular price), sabotage, restraint by court order, restraint by public authority, or action or non-action by governmental authority or accident.

B. No Party shall, however, be relieved of liability for failure of performance if such failure is due to causes arising out of its own negligence or due to removable or remediable causes which it fails to take reasonable efforts to remove or remedy within a reasonable time, or due to mere fluctuations in market prices, or due to unreasonable delay by the Party claiming or seeking to claim relief from liability. Nothing contained herein shall be construed to require a Party to settle any strike or labor dispute in which it may be involved. Either Party rendered unable to fulfill any of its obligations under this Agreement by reason of an Uncontrollable Force shall give prompt written notice of such fact to the other Party and shall exercise due diligence to remove such inability with all reasonable dispatch.

9. NO ASSIGNMENT OF AGREEMENT/SUCCESSORS IN INTEREST

A. Customer and City each bind itself, its successors, and assigns, to all of its respective covenants of this Agreement. Except as otherwise set forth in this Agreement, no interest in this Agreement or any of the work provided for under this Agreement shall be assigned or transferred, either voluntarily or by operation of law, by either Party without the prior written approval of the other Party, which approval shall not be unreasonably withheld, conditioned or delayed; any such assignment shall not relieve the assignor from any of its obligations under this Agreement.

B. Notwithstanding anything to the contrary, Customer shall have the right to collaterally assign its rights under this Agreement to a lender providing

construction financing or other financing for the improvements being constructed by Customer on or about the Premises, including any Substation Facilities. Customer shall provide written notice to SVP of Customer's collateral assignment of its rights under this Agreement to a lender. SVP agrees to reasonably cooperate with Customer's financing efforts pursuant to this Section 9, at no out-of-pocket expense to SVP.

10. NO THIRD PARTY BENEFICIARY

Except permitted assignees per Section 9 above, this Agreement shall not be construed to be an agreement for the benefit of any third party or parties and no third party or parties shall have any claim or right of action under this Agreement for any cause whatsoever.

11. HOLD HARMLESS/INDEMNIFICATION

A. To the extent permitted by law, Customer agrees to protect, defend, hold harmless and indemnify City, its City Council, commissions, officers, employees, volunteers and agents from and against any claim, injury, liability, loss, cost, and/or expense or damage, including all costs and attorney's fees in providing a defense to any such claim or other action, and whether sounding in law, contract, tort, or equity, in any manner arising from, or alleged to arise in whole or in part from, or in any way connected with this Agreement, including claims of any kind by Customer's employees or persons contracting with Contractor to perform any portion of this Agreement, and shall expressly include passive or active negligence by City connected with the Agreement. However, the obligation to indemnify shall not apply if such liability is ultimately adjudicated to have arisen through the sole active negligence or sole willful misconduct of City; the obligation to defend is not similarly limited.

B. Customer's obligation to protect, defend, indemnify, and hold harmless in full City and City's employees, shall specifically extend to any and all employment-related claims of any type brought by employees, contractors, subcontractors or other agents of Customer, against City (either alone, or jointly with Customer), regardless of venue/jurisdiction in which the claim is brought and the manner of relief sought.

C. To the extent permitted by law, City agrees to protect, defend, hold harmless and indemnify Customer and its affiliates and their directors, officers, employees, and agents from and against any claim, injury, liability, loss, cost, and/or expense or damage, however same may be caused, including all costs and reasonable attorney's fees in providing a defense to any claim arising therefrom, for which Customer shall become legally liable arising from SVP and the City of Santa Clara's gross negligence or willful misconduct with respect to or in any way connected with its performance under this Agreement.

12. AMENDMENTS

It is mutually understood and agreed that no alteration or variation of the terms of this Agreement shall be valid unless made in writing and signed by the Parties and incorporated as an Amendment to this Agreement.

13. SEVERABILITY CLAUSE

In case any one or more of the provisions contained herein shall be held invalid, illegal or unenforceable by a court of competent jurisdiction, it shall not affect the validity of the other provisions which shall remain in full force and effect.

14. WAIVER

Waiver by either Party of any provision of this Agreement shall not be construed as waiver(s) of any other provision of this Agreement.

15. NOTICES

All notices to the Parties shall, unless otherwise requested in writing, be sent to SVP addressed as follows:

Chief Electric Utility Officer
City of Santa Clara
1500 Warburton Avenue
Santa Clara, California 95050
And by e-mail at svpcontracts@santaclaraca.gov, and
manager@santaclaraca.gov

And to Customer addressed as follows:

1220 Santa Clara PropCo, LLC
300 N. LaSalle Street, Suite 1500
Chicago, IL 60654
Attention: Nitin Sathe, General Counsel
Email: nsathe@ipipartners.com

The workday the e-mail was sent shall control the date notice was deemed given. An e-mail transmitted after 1:00 p.m. Pacific Standard Time on a Friday shall be deemed to have been transmitted on the following business day.

16. CAPTIONS

The captions of the various sections, paragraphs and subparagraphs of this Agreement are for convenience only and shall not be considered or referred to in resolving questions of interpretation.

17. GOVERNING LAW AND VENUE

This Agreement shall be governed and construed in accordance with the statutes and laws of the State of California. The venue of any suit filed by either Party shall be vested in the state courts of the County of Santa Clara, or if appropriate, in the United States District Court, Northern District of California, San Jose, California.

18. COMPLIANCE WITH LAWS

The Parties shall comply with all laws, ordinances, codes and regulations of the federal, state and local governments applicable to their respective obligations and activities contemplated by this Agreement, including but not limited to "The Code of the City of

Santa Clara, California" ("SCCC"). In particular, Customer's attention is called to the regulations regarding Campaign Contributions (SCCC Chapter 2.130), Lobbying (SCCC Chapter 2.155), Minimum Wage (SCCC Chapter 3.20), Business Tax Certificate (SCCC section 3.40.060), and Food and Beverage Service Worker Retention (SCCC Chapter 9.60), as such Chapters or Sections may be amended from time to time or renumbered. Additionally Customer has read and agrees to comply with City's Ethical Standards (http://santaclaraca.gov/home/showdocument?id=58299).

19. DISPUTE RESOLUTION

A. Unless otherwise mutually agreed to by the Parties, any controversies between the Parties regarding the construction or application of this Agreement, and claims arising out of this Agreement or its breach, shall be submitted to mediation within thirty (30) days of the written request of one Party after the service of that request on the other Party.

B. The Parties may agree on one mediator. If they cannot agree on one mediator, the Party demanding mediation shall request the Superior Court of Santa Clara County to appoint a mediator. The mediation meeting shall not exceed one day (eight (8) hours). The Parties may agree to extend the time allowed for mediation under this Agreement

C. The costs of mediation shall be borne by the Parties equally.

D. Mediation under this section is a condition precedent to filing an action in any court. In the event of litigation or mediation that arises out of any dispute related to this Agreement, the Parties shall each pay their respective attorney's fees, expert witness costs and cost of suit, regardless of the outcome of the litigation.

20. OTHER AGREEMENTS

This Agreement shall not prevent either Party from entering into similar agreements with other entities or individuals.

21. TERMINATION OF AGREEMENT

A. TERMINATION FOR CAUSE

For purposes of this Agreement, the term "default" shall mean the failure of any Party to perform any material obligation in the time and manner provided by this Agreement. Either Party may terminate this Agreement in the event of a default by the other Party by providing a written Notice of Termination to the defaulting Party. Such Notice of Termination shall become effective no less than thirty (30) calendar days after a Party receives such notice. Such Notice of Termination for cause shall include a statement by the terminating Party setting forth grounds for determination of default under the Agreement.

B. OPPORTUNITY TO CURE DEFAULT

Upon receipt of a Notice of Termination by a Party arising from its default under this Agreement, the defaulting Party shall have thirty (30) days from the receipt of such notice to cure the default by making such payment or performing the

required obligation (or additional time, if any that is reasonably necessary to promptly and diligently cure the default). If the default is cured to the reasonable, mutual satisfaction of the Parties, the Agreement shall remain in effect upon written acceptance of the cure by the Party who issued the Notice of Termination for cause.

C. TERMINATION WITHOUT CAUSE

At any time, Customer may elect to terminate construction of the Substation Facilities and Transmission Facilities upon delivery of one hundred eighty (180) days written notice thereof to the City. If Customer chooses to terminate construction of the Substation Facilities and Transmission Facilities, Customer will reimburse any and all City expenses, termination fees, and cancellation fees reasonably incurred by the City related to the Substation Facilities and Transmission Facilities prior to the expiration of such 180-day notice period. Customer shall not be entitled to a refund of any Load Development Fees that have been paid prior to the written notice of termination.

22. COUNTERPARTS

This Agreement may be executed in counterparts, each of which shall be deemed to be an original, but both of which shall constitute one and the same instrument.

23. INTEGRATED DOCUMENT - TOTALITY OF AGREEMENT

This Agreement and its Exhibits embody the entire agreement between the Parties regarding the subject matter of this Agreement. No other understanding, agreements, conversations, or otherwise, with any officer, agent, or employee of the City shall affect or modify any of the terms in or obligations created by this Agreement.

The Parties acknowledge and accept the terms and conditions of this Agreement as evidenced by the following signatures of their duly authorized representatives. It is the intent of the Parties that this Agreement shall become operative on the Effective Date.

CITY OF SANTA CLARA, CALIFORNIA
a chartered California municipal corporation

Approved as to Form:

City Attorney

Dated: 5/5/2022

Office of the City Manager
1500 Warburton Avenue
Santa Clara, CA 95050
Telephone: (408) 615-2210
Fax (408) 241-6771

"CITY"

1220 SANTA CLARA PROPCO, LLC
a Delaware limited liability company,

Dated: April 25, 2022
By (Signature):
Name: Nitin Sathe
Title: Vice President
Principal Place of Business Address: 300 N. LaSalle Dr., Ste. 1500 Chicago, IL 60654
Telephone: (202) 396-1907

"CUSTOMER"

EXHIBIT A

Parcel Map

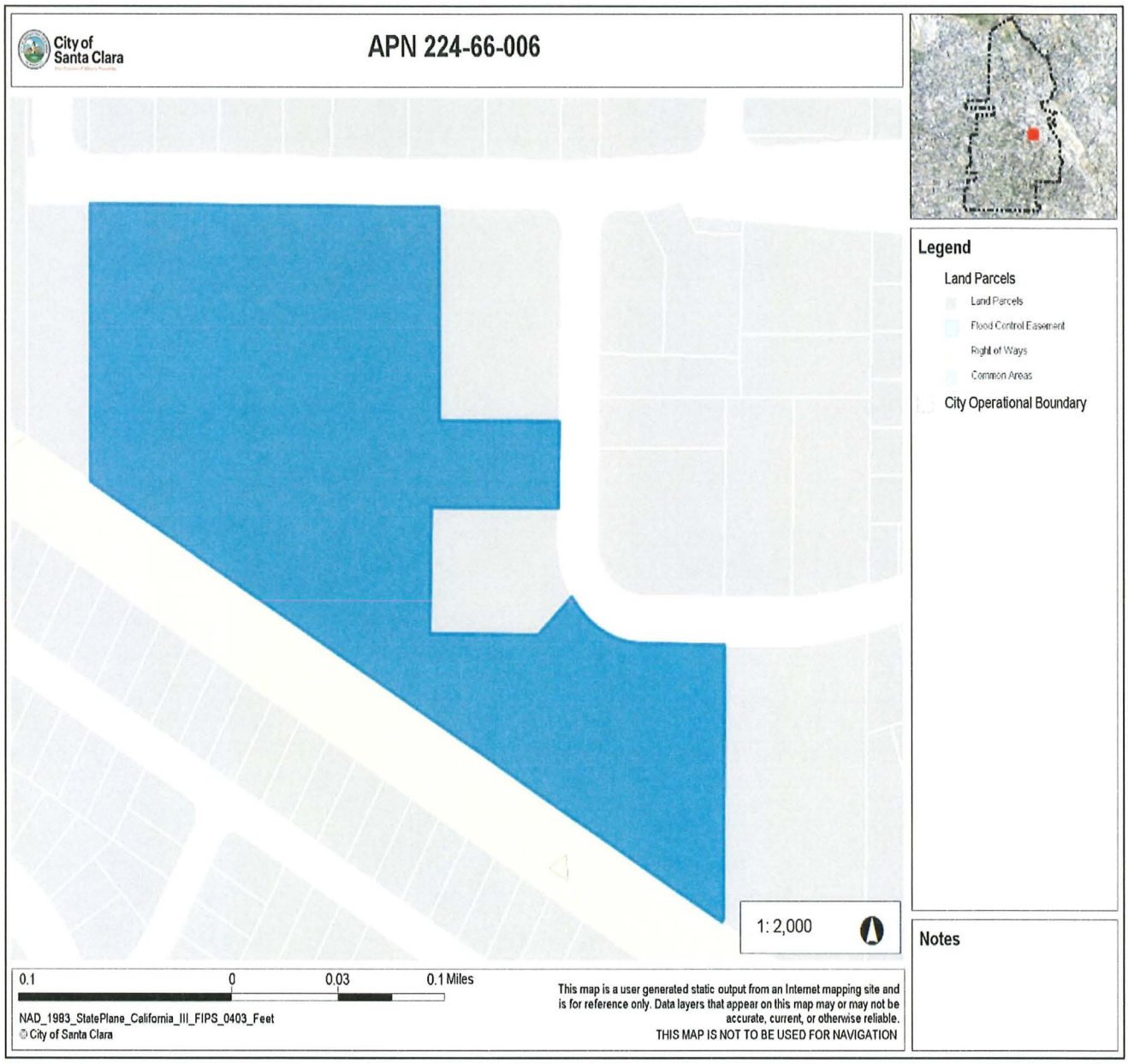


EXHIBIT B

Interim Service Diagram

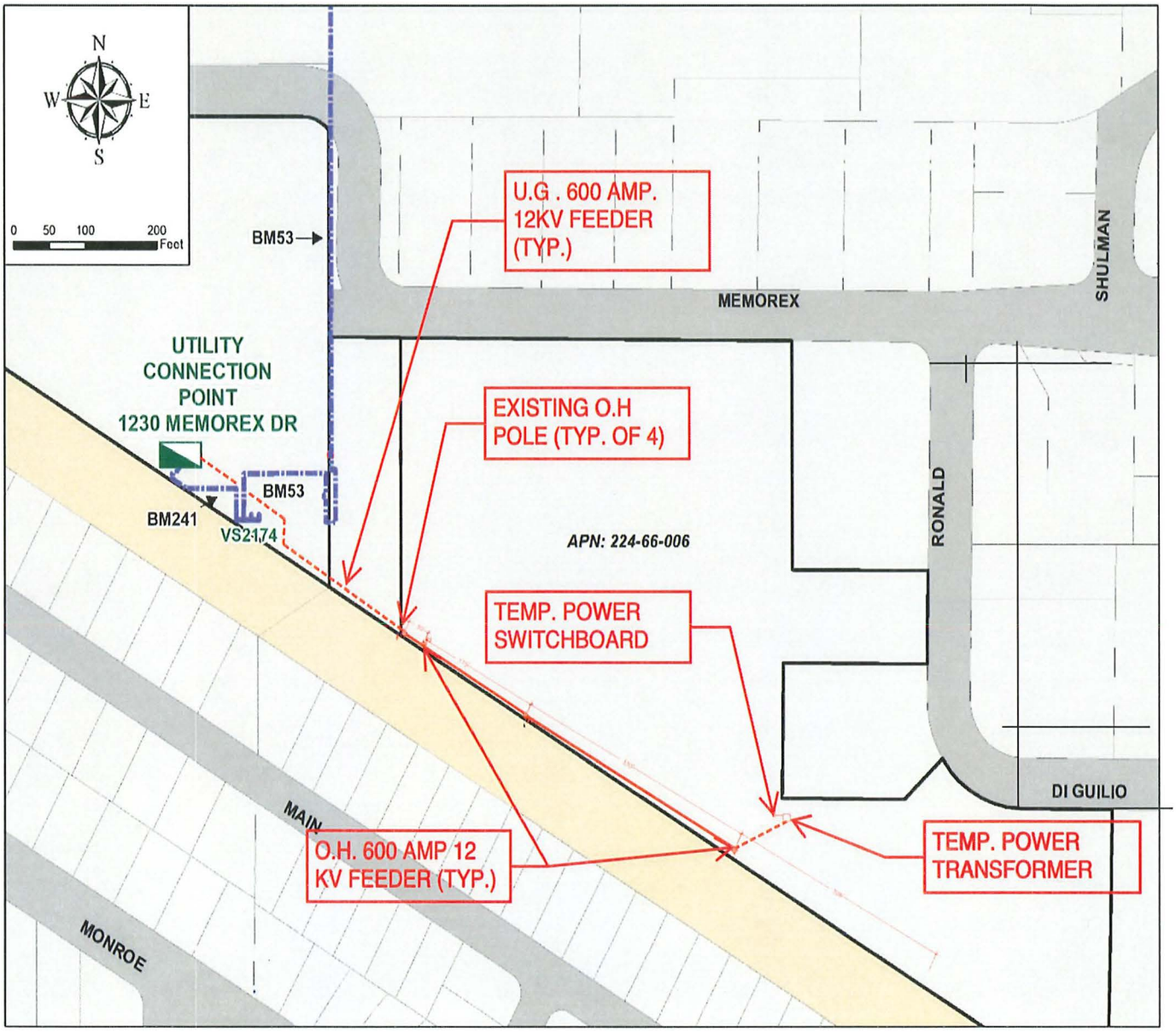


EXHIBIT C

Station Plan

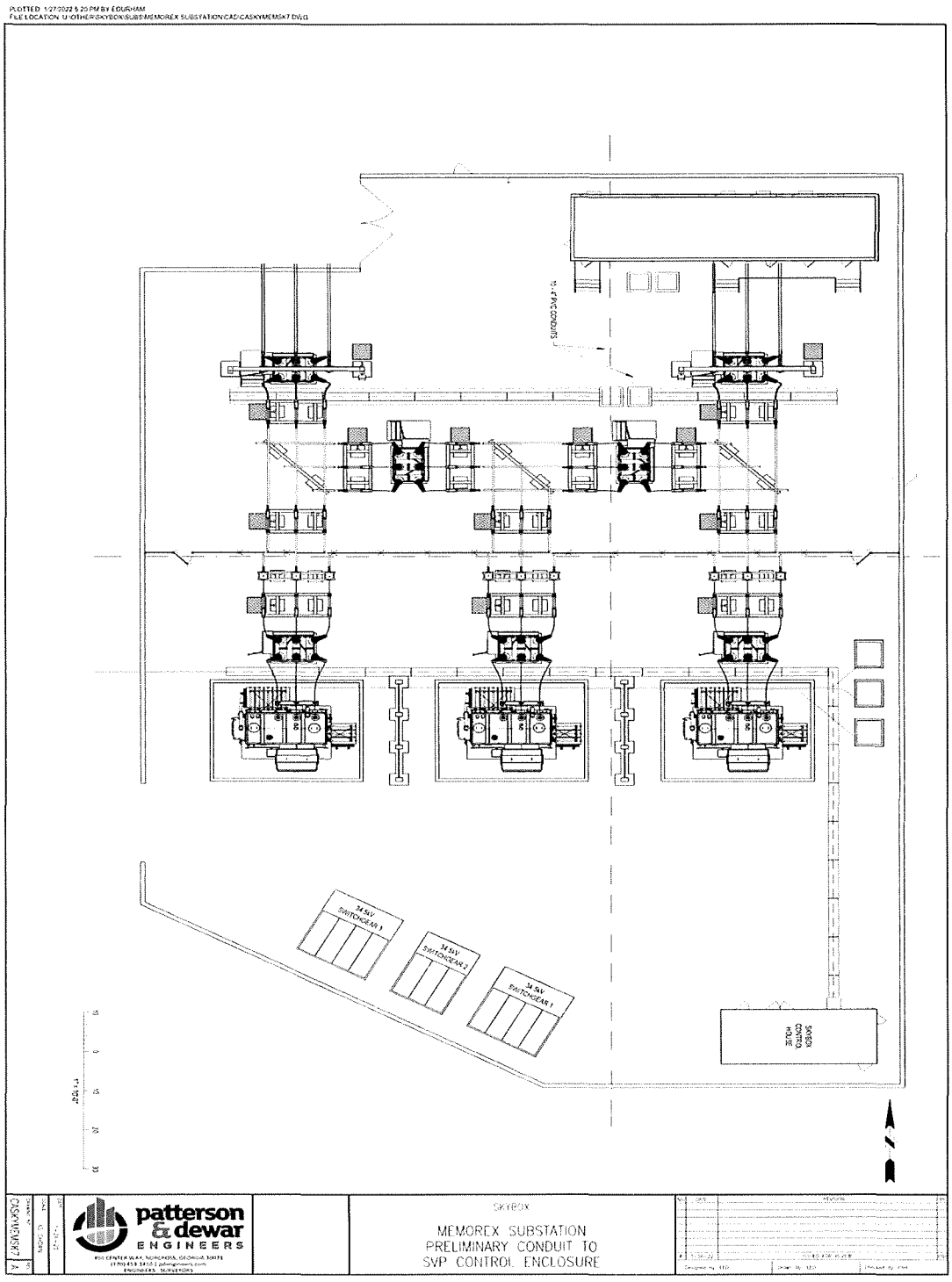


EXHIBIT D
Project Schedule and Costs

Payment Rates

Customer will pay the Load Development Fee based on the current published fee in the Municipal Fee Schedule adopted by the City Council of the City of Santa Clara and amended from time to time. Customer shall also be responsible for actual costs for Substation Facilities and Transmission Facilities.

Payment Schedule

All SVP Estimated Amounts are based on estimated costs and fees at the time of this Agreement. Actual amounts will be based on actual costs and fees at the time of invoice.

Table D1 - Payment Milestone Schedule

Milestone	SVP Invoice Date (payment due 30 days after invoicing)	SVP's Estimated Amount
1	City will invoice within 30 Days following execution of Substation Agreement (Milestone payment amount includes Load Development Fees for 20MVA $6,979,800) City will invoice for LDF for the difference between 20 MVA and the dollar amount paid for Interim Service.	$11,507,800
2	Invoiced 30 Days before Public Works contract is submitted to City Council for approval	$5,770,000
3	City will invoice 30 days before Notice to Proceed is issued to Transmission Line contractor.	$840,000
4	Invoiced after energization of Substation Facilities. City will invoice customer for the difference between estimated costs billed in PM 1, PM 2, and PM 3 and actual costs.	$TBD
5	Phase 0 Load Development Fee; City will invoice 2 years following substation facilities energized; 10 MVA block	$3,489,900
6	Phase 1 Load Development Fee; City will invoice 3 years following substation facilities energized; 10 MVA block	$3,489,900

Customer shall provide SVP written notice at least thirty (30) days prior to the substantial completion of the Substation Facilities, and SVP shall use its commercially reasonable efforts to complete its testing and commissioning activities within 120 days

after the substantial completion of the Substation Facilities. SVP will use its commercially reasonable efforts to meet Customer's anticipated service date. SVP is not obligated to compress its testing and commissioning schedule to meet Customer's anticipated service date.

Table D2 – Substation Design and Construction Elements

Transmission Interconnection Process to run concurrent with Substation Design, Build and Test Process

All SVP Estimated Costs are based on estimated costs and fees at the time of this Agreement. Actual amounts will be based on actual costs and fees at the time of invoice.

Substation Design & Construction Elements	Estimated Duration Time Frame of work	SVP Estimated Costs	Payment Milestone	Comments
Substation Design	3 Months	$1,340,000	PM #1 $940,000 - City will invoice within 30 days after agreement is executed. Payment is due within 30 days of invoice date. Work will commence once City receives payment in full.	$1,340,000 includes all work for Substation Design and Transmission Design elements. Funds received from a Funding Agreement ($400,000) is credited to this payment milestone.
Substation Design Build & Test Process: Start date based on date the substation agreement is executed by City				
Control Building Procurement Drawings & Contract Specification Preparation	6 Months		Estimated costs included in PM #1 (Substation Design)	Concurrent with Substation Drawing Preparation
SVP Control Building Bid Assistance and Shop Drawing Review	9 Months		Estimated costs included in PM #1 (Substation Design)	Concurrent with Substation Drawing Preparation
Substation Design Drawings & Contract Specification Preparation	8 Months		Estimated costs included in PM #1 (Substation Design)	Customer may perform this task concurrent with Control Building Drawing Prep
Substation Construction	8 Months		Estimated costs of Engineering support of construction including submittal review is included in PM#1	Construction costs paid directly by Customer

Substation Design & Construction Elements	Estimated Duration Time Frame of work	SVP Estimated Costs	Payment Milestone	Comments
Substation Commissioning & Testing	3 Months	$270,000	PM #2 - $270,000- City twill invoice 30 days before Public Works contract is submitted to City Council for approval. Payment due 30 days from invoice date. Work will commence once Public Works Contract is executed and payment is received in full.	Begins after substation construction is complete.
Total Substation Design, Construct, Test process	22 months	$1,610,000	This cost is a subtotal and not a part of a payment milestone	$1,610,000 is a subtotal for Substation Design, Construct, and Test process. Best case time frame.
Transmission Interconnection Process. Concurrent with Substation Design, Build and Test process				
Transmission Line Interconnection Design	6 months	$750,000	PM #1 $750,000. City will invoice 30 days after Substation Agreement is executed Payment is due within 30 days of invoice date. Work will commence once City receives payment in full.	
Transmission Pole and Conductor Procurement	5 months	$2,210,000	PM #1: Route 1 - $2,210,000 City will invoice 30 days before Public Works contract is submitted to City Council for approval. Payment is due 30 days from invoice date.	$2, 210,000 includes all long lead time material procurement and fabrication work for the Transmission Line Interconnection elements.
Easement Acquisition	9 Months	$778,000	PM #1 $628,000. City will invoice 30 days after Substation Agreement is executed. Payment is due within 30 days of invoice date. Work will commence once City receives payment in full.	$778,000 is total for easement acquisition and negotiation. Funds received from a Funding Agreement Amendment ($150,000) is credited to this payment milestone.
Public Works Bidding Transmission (T-line) construction	4 Months		Estimated cost included in Construction of Transmission Line Extension (PM#2)	This task includes the public works bid for T-line construction associated with connecting the substation to the SVP 60kV loop

Substation Design & Construction Elements	Estimated Duration Time Frame of work	SVP Estimated Costs	Payment Milestone	Comments
Construction of Transmission Line Extension Includes the T-line construction associated with connecting the substation to the SVP 60kV loop	2 months	$5,500,000	PM #2 Route 1: $5,500,000 - City to invoice 30 days before Public Works contract is submitted to City Council for approval. Payment is due 30 days from invoice date. Work will commence once Public Works Contract is approved and payment is received in full.	Task includes all work necessary at adjacent stations for relay panel replacement or upgrades necessary for the new interconnection. This does not include any work associated with capacity increases on the loop.
Transmission Line Interconnection & City Labor	6 Months		Estimated Costs included in Construction of Transmission Line Extension (PM#2)	
Transmission Interconnection process complete	30 months	$9,238,000	This amount is a subtotal and not part of a payment milestone	Advisory Comment: Best case time frame.
Miscellaneous costs	Not Applicable	$840,000	PM #3: Payment due within 30 days of invoice from City.	Potential miscellaneous costs could include: Permits from City of Santa Clara or other regulatory agencies, 3rd party temporary construction easement fees that are not included in transmission line easement fees, utility relocation work, costs for soil remediation or disposal of hazardous materials not previously identified, CEQA mitigation fees, substation testing and commissioning costs not previously charged, and 5% Contribution in Lieu to General Fund

Substation Design & Construction Elements	Estimated Duration Time Frame of work	SVP Estimated Costs	Payment Milestone	Comments
Project close out and reconciliation	Not Applicable	To be determined at end of Project	PM #4 – City will invoke the difference between estimated costs and actual costs. Payment is due 30 days after invoice date. If estimated costs are greater than actual costs, City will refund remaining funds to Customer within sixty (60) days of the conclusion of invoicing by any third parties performing work associated with Agreement	Close out costs include any costs that exceed cost estimates such as, but not limited to: SVP labor and material costs incurred during the project, interim service removal costs, construction inspection costs, as-built documentation costs and costs associated with adding new transmission and substation assets into SVP inspection and inventory databases, and 5% Contribution in Lieu to General Fund.
Estimated Total for Substation & Transmission Design & Construction Elements	**30 Months**	**$11,688,000**		**Estimated duration includes net duration with schedule overlaps included. Schedule assumes best case scenario (Transmission Interconnection Process) and no delays due to unforeseen events such as weather for force majeure**

Table D3 Load Development Fee Schedule (based on 40 MVA)

All Estimated Amounts are based on fees at the time of this Agreement. Actual Amounts will be based on fees at the time of invoice.

Additional Fees to be paid by the Customer	Time Frame from Effective Date	Estimated Cost	Payment Milestone	Comments
Interim Service Fee (based on 4.5MVA)	Existing	$ -	None	Interim service already existing to site. No additional payment required.
Load Development Fee (based on 20MVA)	City will invoice within 30 days of execution of agreement	$6,979,800	PM #1 $6,979,800 - PM #1 - City will invoice first 20MVA of Interim Service. Payment is due 30 days after date of invoice.	Payment estimate based on Customer Load Development Fee = $348.99/kVA. Load Development Fees are based on City of Santa Clara Municipal Fee Schedule in effect at time of invoice to Customer.
Load Development Fee (based on 10MVA)	City will invoice within 30 days after Available Capacity in Table E1 exceeds 20 MVA	$3,489,900	PM #5 $3,489,900 - City will invoice 10MVA of Available Capacity. City must receive payment in full before capacity will be made available to Customer.	Payment estimate based on Customer Load Development Fee = $348.99/kVA. Load Development Fees are based on City of Santa Clara Municipal Fee Schedule in effect at time of invoice to Customer.
Load Development Fee (based on 10MVA)	City will invoice within 30 days after Available Capacity in Table E1 exceeds 30 MVA	$3,489,900	PM #6 $3,489,900 - City will invoice 10MVA, City must receive payment in full before capacity will be made available to Customer.	Customer Load Development Fee = $348.99/kVA Load Development Fees are based on City of Santa Clara Municipal Fee Schedule in effect at time of invoice to Customer.
Total for Load Development Fees		**$13,959,600**		

ESTIMATED GRAND TOTAL FOR ENTIRE PROJECT: $25,647,600

EXHIBIT E
AVAILABLE CAPACITY SCHEDULE

I. SVP will make commercially reasonable efforts to make Available Capacity for Customer's use based on the timeline shown in Table E1 ("Available Capacity Schedule").

II. The start date of the Available Capacity Schedule is the July 1st following the energization date of the Substation Facilities ("Capacity Start Date").

III. The Phase Start Date for each phase assumes Customer has paid all amounts due including, but not limited to, Load Development Fees and charges included in Exhibit D before the start of that Phase.

IV. Table E1 – Available Capacity Schedule is subject to the provisions of Section 6.C. (Capacity Reduction) of the Agreement and may be modified pursuant to the terms of that section.

Table E1 –Available Capacity Schedule

Load Phase	Phase Start Date	Phase End Date	Year	Available Capacity (MVA)	Capacity for Load Development Fee Payment	Cumulative Paid Capacity
Interim	Date Substation Agreement Executed	Date Substation Facilities Energization	2022	1	20	20
			2023	4.5	0	20
0	Substation Facilities Energization Date	3 years after Facilities Energization Date	2024	5	0	20
			2025	18	0	20
			2026	28	10	20
1	Substation Facilities Energization date +3 years	3 years after Phase 1 Start Date	2027	31	10	30
			2028	31	0	40
			2029	31	0	40
2	Substation Facilities Energization date +6 years	2 years after Phase 2 Start Date	2030	31	0	40
			2031	31	0	40

EXHIBIT F
Sample Capacity Reduction Notice

This Capacity Reduction Notice is made pursuant to the [INSERT SUBSTATION NAME] Substation Agreement (the "Agreement"), between the City of Santa Clara, California, a chartered California municipal corporation ("City") and [INSERT NAME OF ENTITY], [INSERT TYPE OF ENTITY] ("Customer") dated _____, 20___. This Capacity Reduction Notice is governed by the provisions of the Agreement, and this Capacity Reduction Notice is incorporated into that Agreement.

Customer is hereby notified that the Available Capacity Schedule (Exhibit E – Available Capacity Schedule) of the Agreement has been modified according to the below calculations:

Capacity Reduction Calculation pursuant to Phase #: [INSERT SUBJECT PHASE]

Available Capacity for year: _____ has been modified based on the following calculation:

1. Peak Demand for [INSERT FIRST CONSECUTIVE MONTH], 20___ during evaluation period [INSERT PHASE OR YEAR STATED IN STEP 1]:_____MVA
2. Peak Demand for [INSERT SECOND CONSECUTIVE MONTH], 20___ during evaluation period [INSERT PHASE OR YEAR IN STEP 1]:_____:_____MVA
3. Peak Demand for [INSERT THIRD CONSECUTIVE MONTH], 20___ during evaluation period [INSERT PHASE OR YEAR STATED IN STEP 1]:_____:_____MVA
4. Peak Demand average of the 3 months: [INSERT AVERAGE OF STEPS 3, 4, AND 5] MVA
5. Peak Demand average with Additional 15%: [INSERT MVA FROM STEP 6 MULTIPLIED BY 1.15] MVA

Based on the above reduction calculation, Table E1- Available Capacity Schedule in Exhibit E of the Agreement has been modified. This Capacity Reduction Notice is effective 30 days from the date signed by the SVP official below.

The new Available Capacity for each Load Phase of Agreement is as shown on Exhibit E – AVAILABLE CAPACITY SCHEDULE – AMENDED [ENTER DATE OF NOTICE + 30 Days] attached and incorporated into the Agreement by reference. Such Exhibit E shall supersede any previous Exhibit E whether those Exhibits were modified by amendment to the Agreement or by Capacity Reduction Notice.

By:

Name: _____

Title: Chief Electric Utility Officer

Signature: _____

Date: _____

File: File signed copy of Notice with the City Clerk's Office in Memorex Junction Substation Agreement

ATTACHMENT 4

CONFIDENTIAL

SVP & Bulk Electric System (BES) Projects Updates

CY2023 SVP-TPP 24/25

Memorex Junction (DC9)

SVP Engineering Division

September 11th, 2024

CONFIDENTIAL

Disclaimer

- **What this update is for & intent of update**
  - SVP's system study processes are conducted on a rolling annual basis in parallel with CAISO's annual Transmission Planning Process (TPP) which assess projects both internal to SVP's electric system and external in the California Independent System Operator (CAISO) controlled electric grid. This update is an informational snapshot in time of known system conditions and project in-service dates (ISDs), and is subject to change.

CONFIDENTIAL

Memorex Junction (DC9)

Customer	Stack (formerly Skybox)	**Substation Agreement**	Signed by City (4/25/2022)
Address	1220 Memorex Dr	**CEC Small Power Plant Exemption**	Did not apply, B/U Capacity 48 MW.
Data Center Name	Memorex Junction Data Center	**CEQA/EIR/MND**	Approved 11/9/2021
Building Sqft	Building #1: 472,920 Building #2: 87,520	**SVP TPP Cycle**	TPP 24/25 Phase 0
PCC Status	Complete (5/12/2020)	**Previous SIS's Completed**	TPP 21/22, 22/23
City Planning No.	PLN2019-14055	**Current CAISO TPP Cycle**	2023/2024 Phase 3
CEQA	Final Environmental Impact Report – October 2021	**Included in IEPR**	2021, 2022, 2023
City Planner	Tiffany Vien	**Substation Descriptions**	Three customer owned 56 MVA bank
Metered Voltage	60 kV	**Interconnection Study No.**	DC-9
Feeder Interconnection	East Loop	**In Service Date**	10/01/2024 (update as of 08/2024)

SVP TPP 24/25 Submitted Load Forecast (1-in-10) & Customer Loads

CONFIDENTIAL

Customer Site Load Density (LD):

DC9 Memorex Jct CEQA load submittals by customer:	IT Load	PUE	Facility Load			SVP 106 W/SQFT
			100% UF	75% UF	50% UF	~83% UF @ 1.2 PUE
	60	1.2	72.0	54.0	36.0	59.4

Note: For TPP 25/26 additional load sensitivities for higher/lower loads based on SVP load research of data center Utilization Factors (UF) will be performed.

SVP System & Customer Loading:

Studied SVP System Load to Determine SVP (Internal) & Bulk Electric System (External) System Impacts													
DC9 Memorex Jct	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Customer Substation Agreement - Executed April 2022 (MW)[3]			5.0	18.0	28.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0

[1]Data are for informational use only, contractual loads are assessed through the substation agreement process.
[2]Summer Peaks are between June and Sep.
[3]Per the current Substation Agreement executed 04/25/2022.

Memorex Junction Load Data:

- SVP's load research of 59MW[1] implies a ~83% UF relative to Memorex Junction's CEQA submittal of ~67% UF at ~48MW.
- The current executed substation agreement is ~35% UF (relative to SVP Load Research) at ~31MW.

Memorex Junction Loading:

- Pre-2028, if any overloads should occur, they will be managed/coordinated by SVP Operations for 60kV only, and for the Bulk Electric System SVP Operations will coordinate with PG&E and the CAISO.
- Post-2028, with all currently known reliability projects projected in-service, Memorex Junction may ramp to their ultimate load.

[1]SVP Load Research from existing energized Data Centers ~106W/SQFT Colo, ~129W/SQFT Non-Colo.

ATTACHMENT 5

Schwebs, Monica

From: Lina Pradabaez <LPradabaez@SantaClaraCA.gov>
Sent: Friday, November 8, 2024 8:17 AM
To: Miles Kersten; Chris Karwick; Kissinger, William D.; Schwebs, Monica
Cc: Matt Weisberg; Les Pelio (Les@pelio.com); Jon Shank; Matt VanderZanden; Rich Fernicola; Greg Mikulecky; Todd Arris
Subject: RE: [EXTERNAL] System Impact Study for Stack DC 9

[EXTERNAL EMAIL]
Hi Miles,

At this point, we are unable to provide any additional updates or commitments until the CAISO/PG&E/SVP projects are completed. However, we are aware of your needs, and we will take your input into account when making executive decisions when we arrive at those decision points. For now, rest assured that we will provide updates as they become available. I also encourage you to attend the Growth Plan Update meetings – the next one will take place on January 16 at 11am.

Thank you,

Lina Prada-Báez
Sr. Key Customer Representative
City of Santa Clara | Silicon Valley Power
Cell: 408-592-8364 | Office: 408-615-6642
Follow us! Facebook | Twitter

Powering The Center of What's Possible

From: Miles Kersten <mkersten@stackinfra.com>
Sent: Monday, October 28, 2024 11:05 AM
To: Lina Pradabaez <LPradabaez@SantaClaraCA.gov>; Chris Karwick <CKarwick@SantaClaraCA.gov>; william.kissinger@morganlewis.com; monica.schwebs@morganlewis.com
Cc: Matt Weisberg <mweisberg@ipipartners.com>; Les Pelio (Les@pelio.com) <Les@pelio.com>; Jon Shank <Jon@pelio.com>; Matt VanderZanden <mvanderzanden@stackinfra.com>; Rich Fernicola <rfernicola@stackinfra.com>; Greg Mikulecky <gmikulecky@stackinfra.com>; Todd Arris <tarris@stackinfra.com>
Subject: Re: [EXTERNAL] System Impact Study for Stack DC 9

Hi Lina,

Thank you for your response. I do have a few additional questions.

Now that SVP has actual customer-provided information, can you please confirm that SVP will be updating the figures represented for SVY02A Memorex that it will be using in the BES and in the Memorex Junction Operational Study? As detailed, that figure should be 90 MVA, rather than the 54 MVA that is currently being used. When will SVP make that update?

In addition, will SVP be updating the load estimates it has provided to the Energy Commission? If so, when will it do that? As detailed in my note below, STACK is concerned the transmission upgrade projects that are under development may end up being undersized in light of the artificially low figures supplied to the CEC and CAISO. Will SVP be taking any steps to provide CAISO with this information directly?

All the best,
Miles

STACK INFRASTRUCTURE

Miles Kersten
Director, Development | STACK Americas
m: 503-720-2872
e: mkersten@stackinfra.com

From: Lina Pradabaez <LPradabaez@SantaClaraCA.gov>
Date: Wednesday, October 16, 2024 at 14:24
To: Miles Kersten <mkersten@stackinfra.com>, Chris Karwick <CKarwick@SantaClaraCA.gov>, william.kissinger@morganlewis.com <william.kissinger@morganlewis.com>, monica.schwebs@morganlewis.com <monica.schwebs@morganlewis.com>
Cc: Matt Weisberg <mweisberg@ipipartners.com>, Les Pelio (Les@pelio.com) <Les@pelio.com>, Jon Shank <Jon@pelio.com>, Matt VanderZanden <mvanderzanden@stackinfra.com>, Rich Fernicola <rfernicola@stackinfra.com>, Greg Mikulecky <gmikulecky@stackinfra.com>, Todd Arris <tarris@stackinfra.com>
Subject: RE: [EXTERNAL] System Impact Study for Stack DC 9

Hi Miles,

Thank you for your email. We understand the concerns you bring up regarding forecast assumptions in our model.

Based on the confirmation of the TPP 23/24 Planning Coordinator Report (TPP report), SVP's maximum system capacity is expected to increase to about 1298 MW. Based on this information, SVP is evaluating whether it can serve additional load beyond what is included in the executed agreements. Additional information will be provided as the CAISO/PG&E/SVP projects progress to construction, with completion currently scheduled to be around 2028.

Please let me know if you have any additional questions.

Lina.

From: Miles Kersten <mkersten@stackinfra.com>
Sent: Wednesday, October 9, 2024 10:27 AM
To: Lina Pradabaez <LPradabaez@SantaClaraCA.gov>; Chris Karwick <CKarwick@SantaClaraCA.gov>; william.kissinger@morganlewis.com; monica.schwebs@morganlewis.com
Cc: Matt Weisberg <mweisberg@ipipartners.com>; Les Pelio (Les@pelio.com) <Les@pelio.com>; Jon Shank <Jon@pelio.com>; Matt VanderZanden <mvanderzanden@stackinfra.com>; Rich Fernicola <rfernicola@stackinfra.com>; Greg Mikulecky <gmikulecky@stackinfra.com>; Todd Arris <tarris@stackinfra.com>
Subject: Re: [EXTERNAL] System Impact Study for Stack DC 9

Hi Lina,

We have reviewed the BES and have a few notes:

STACK has requested a total available capacity of 90 MVA to be served through SVP Memorex Junction, however the forecast is only representing 54 MVA of load. We are concerned that because SVP is underestimating the expected load and thus SVP may not be planning to build sufficient energization capacity to serve the full 90 MVA STACK requested.

We can see from the System Impact Study which SVP provided that it is basing is load forecast on the assumptions in this table:

DC9 Memorex Jct CEQA load submittals by customer:	IT Load	PUE	Facility Load			SVP 106 W/SQFT
			100% UF	75% UF	50% UF	~83% UF @ 1.2 PUE
	60	1.2	72.0	54.0	36.0	59.4

These assumptions do not accurately reflect the load for STACK's energization request. As you may know, the STACK data center has already been built and would already be fully leased if there were available energization capacity. Thus, STACK already knows its IT load and PUE:

- The STACK Basis-of-Design (BOD) we built at Memorex performs to a peak PUE of 1.50 via air-cooled chillers.
- We have a total of 8 data halls which each are designed to have 6MW of IT load requiring 48MW of electrical capacity.
- To support the 8 data halls our mechanical systems require 24MW of electrical capacity
- Thus, STACK , requires 72MW of the 90MW requested. 48MW of this capacity is backed up by our generating facility.
- We are exploring power densification on the 1st floor which is the Lab data halls without generator redundancy for a client's testing environment for data center IT development which would require the balance of the 90MW request

We are very concerned about SVP's use of a utilization factor in determining the expected load estimate because it does not represent current industry practice for a hyperscale data center like the one STACK has built. When a hyperscale is leased, the lease commitment to one or more customers is for 100% of the capacity, so the SVP Utilization Factor is underestimating what is being contracted. We recognize that assuming 100% utilization for the load of old data centers which lack the new design features hyperscale users need may not be appropriate, but SVP should differentiate between the type of data centers to make its load estimates accurate. For load estimates for STACK's Memorex Junction which are used for system impact studies and transmission planning, we recommend that SVP use a 100% utilization factor on the fastest schedule possible to avoid undersizing the network upgrades needed for SVP to be able the provide the full 90 MVA it was promised on as fast a load ramp as possible.

Thank you,
Miles

Miles Kersten
Director, Development | STACK Americas
m: 503-720-2872
e: mkersten@stackinfra.com

From: Lina Pradabaez <LPradabaez@SantaClaraCA.gov>
Date: Friday, September 13, 2024 at 12:20
To: Miles Kersten <mkersten@stackinfra.com>
Subject: [EXTERNAL] System Impact Study for Stack DC 9

Hi Miles,

The SVP & Bulk Electric System (BES) Project Updates (formerly known as System Impact Studies) for your site are ready. The presentation is housed on a secure SFTP account. You can follow the instructions attached to access the file. Once you have access, you will want to **download** the file to view it.

Please let me know when you have time to hop on a quick call so I can provide you the credentials to log in.

Please let me know if you have any questions and/or would like to schedule a time to meet and discuss these updates.

Lina Prada-Báez
Sr. Key Customer Representative
City of Santa Clara | Silicon Valley Power
Cell: 408-592-8364 | Office: 408-615-6642
Follow us! Facebook | Twitter

Powering The Center of What's Possible