


**City Council**

**Item 6 – 20 MW Bloom PPA and AWS Offtake Agreement**

RTC 24-475

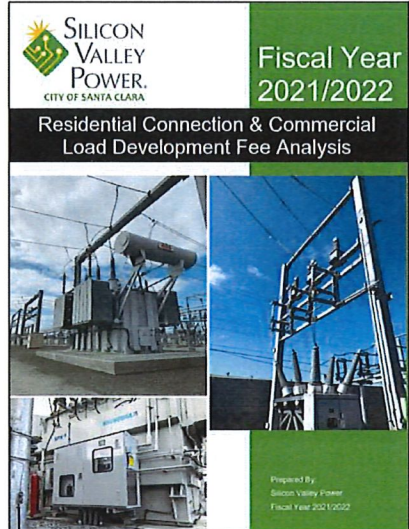
July 9, 2024

1





## Load Growth and Limitations

- Two Multi-phased Activities (SVP and CAISO)
- Additional Transmission Capacity – LS POWER
- In the interim there are limitations for load ramps for major data center customers
  - Near-term and mid-term timeframes
  - Staff has discussed this item with the City Council as part of the SVP quarterly reports and directly with data center customers
  - Some customers have expressed an interest in adding more capacity beyond what SVP can currently serve



Prepared By:  
Silicon Valley Power  
Fiscal Year 2021/2022

2



## Council Actions

- October 13, 2020 - Master service agreements with several engineering consultant firms
- April 6, 2021- Comprehensive review of upcoming load growth and capital projects to the City Council.
- September 28, 2021, the City Council accepted SVP's Three-Year System Growth Plan Strategy
- April 5, 2022 - updated connection and load development fees for SVP
- November 15, 2022 - City Council accepted SVP's System Expansion Plan for the California Independent System Operator's Transmission Planning Process
- May 9, 2023 - City's intent to issue tax-exempt electric system bonds

- July 18, 2023 - Updated City Council regarding these key near-term projects
- October 10, 2023, Authorized the purchase of up to 12 high voltage transformers - \$81,392,908
- April 23, 2024 - updated connection fees and load development fees,
- May 7, 2024, Authorized the negotiation and purchase of high voltage circuit breakers - \$38,000,000.
- On May 28, 2024, the City Council authorized the negotiation and purchase of high voltage disconnect switches, station service voltage transformers, voltage transformers and capacitive voltage transformers, and combination revenue metering transformers - \$17,400,000

3

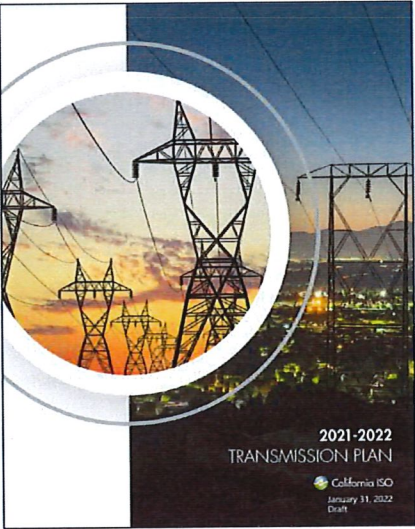
3

## Approved Transmission



### CAISO 2021/22 Transmission Planning Process

<b>6/01/20</b>	<b>Started work on updated load 1,142 MW's</b>
<b>11/3/30</b>	Started discussion with CEC
<b>12/17/20</b>	Started meeting with PG&E regarding additional projects
<b>1/25/21</b>	<b>CEC adopts new SVP load forecast</b>
<b>3/11/21</b>	SVP comments on draft Study Plan
<b>3/24/21</b>	SVP presents to CAISO board
<b>3/31/21</b>	Final Study Plan Posted
<b>8/3/21</b>	CAISO posts preliminary reliability study results
<b>9/15/21</b>	PG&E posts mitigation plans
<b>9/27/21</b>	Stakeholder meeting for comments on mitigation plans
<b>1/31/22</b>	Draft Transmission Plan posted
<b>3/23/22</b>	<b>CAISO Approved Transmission Plan</b>
<b>4/1/22</b>	Project Procurement Phase Starts
<b>3/7/23</b>	CAISO selected LS Power Grid High Voltage Direct Current Line from Newark 230kV to SVP's Northern Receiving Station
<b>2028</b>	<b>Expected completion date</b>





**2021-2022**  
**TRANSMISSION PLAN**  
California ISO  
January 11, 2022  
Draft

4






## Proactive Approach

- Discussed with Council exploring Creative ideas
- Over the last two years, SVP staff has encouraged customers and power vendors to propose options for in-City generation
- The team has had many meetings on a variety of different possibilities
  - Peaker power plants (both natural gas and renewable gas), base load power plants, batteries, and fuel cells.
- SVP had lengthy and detailed discussions
  - None reached a formal proposal
  - Except for the proposed Bloom Power Purchase Agreement and AWS Offtake Agreement





5

## Discussion

- Negotiate and Execute a 20 MW Power Purchase Agreement (PPA) with Bloom Energy to be used serve the load of Amazon Web Services (AWS)
- Negotiate a separate Offtake Agreement with AWS for the 20 MW
- Authorize the City Manager to Negotiate and Execute up to an additional 80 MW of Power Purchase Agreements for in-City generation solutions and all needed agreements with Customers.

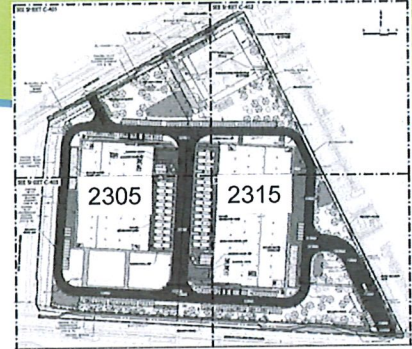


AWS Data Center

6

## AWS Development

- AWS has a development project which will be located at 2305 and 2315 Mission College Boulevard (MCB)
- The substation will have an operational nameplate capacity of 99 MVA at full buildout with four transformers. The substation is being constructed with two transformers to serve 2315 MCB.
  - Typically, Data Centers will use 55% of the nameplate capacity
  - Other capacity use limitations and subject to substation agreement available capacity limitations and ramp rates
- AWS has an initial 9 MVA for its use at 2315 MCB
- The substation agreement has a ten-year load ramp which will get AWS to 32 MVA in 2034 at 2315 MCB
  - No electric capacity to AWS for its use at 2305 MCB
- AWS wants to have additional capacity of 20 MVA for its use through the proposed in-City generation option.



7

## Key Items for Agreements

### PPA and Offtake Agreements

- The term is for 15 years.
- AWS will be required to pay the full cost of the 20MW (whether they use the full amount or not).
- AWS will need to provide the City financial assurances to address City contractual risk for the full 15-year term

### Cost and Rate Protection

- PPA will be up to 50% higher than the current rate for SVP industrial customers
- AWS will be fully responsible for the total cost under Offtake Agreement
- SVP will not enter into the Bloom PPA if AWS does not agree to pay the full cost
  - All costs associated with providing the power including infrastructure, maintenance and operations, gas, and state and federal compliance requirements (e.g., RPS compliance).
  - SVP costs for PPA management
  - The 5% general fund transfer



8



## Key Items for Agreements

### Renewable Portfolio Standard

- Under the Offtake Agreement, AWS will be responsible for compliance cost obligations
  - Compliance with the RPS
  - Submittal of Power Source Disclosure
  - Compliance with regulations and requirements of the California Energy Commission (CEC), California Air Resources Board (CARB), and any other federal or state agency
  - Mitigation of any increased resource adequacy obligation
- AWS will pay for procurement costs of Power Content Category (PCC) 1 bundled energy
- In addition, per AWS "Amazon energy supply from utilities, combined with its renewable energy procurement across the United States, has enabled several AWS Regions including our AWS West (Northern California) Region to be attributable to 100% renewable energy."

9



## Additional Items

- To date four other large customers have expressed interest for similar PPA's
- Customers also have the option of behind the meter installations
  - Some customers prefer to enter into agreements with SVP
  - "support our utility partners, support AWS renewable energy goals, and build capacity that will support utility/AWS growth in our regions. Via this structure we will be better positioned to supply renewable energy RECs to support those corporate renewable energy goals through SVP, and support SVP meeting their RPS requirements."
- City positives with this type of proposal
  - Environmental requirements are higher
  - Financial benefit to the General Fund

10



## Additional Items

- Staff is requesting to negotiate both with Bloom, other similar vendors, and SVP customers for additional PPAs and separate Offtake Agreements
  - Up to an additional 80 MW
  - No individual agreement will exceed 20 MW
- In addition to Bloom, any vendor can approach SVP at any point for a PPA proposal for consideration; provided that, it is in-City generation
  - At least one more vendor has recently approached the City
- Assuming 20MW at 50% higher than the typical rate, the first-year cost of the agreements will be approximately \$35 million, including SVP administration costs and the 5% General Fund Transfer (General Fund transfer estimated at \$1.7 million a year).

11



## Recommendation

1. Authorize the City Manager or designee to negotiate and Execute a 20MW Power Purchase Agreement with Bloom or a Bloom affiliate for Amazon Web Services (AWS) and a separate Offtake Agreement with AWS, subject to the review and approval as to form of the City Attorney;
2. Authorize the City Manager or designee to Negotiate and Execute up to an additional 80 MW of Power Purchase Agreements for in-City generation solutions with energy suppliers and separate Offtake Agreements with other SVP customers (each individual PPA and Offtake Agreement cannot exceed 20MW), subject to the review and approval as to form of the City Attorney;
3. Authorize the City Manager or designee to execute all documents, agreements, and certificates as may be required under the terms of the agreement, subject to the review and approval as to form of the City Attorney, including, but not limited to, collateral assignment agreements, estoppel certificates, and performance security documentation, and take any and all actions as are necessary or advisable to implement and administer the agreements; and
4. Authorize the City Manager or designee to execute any amendments to the agreements so long as there is no change to their price or term length.

12



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