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Better models. Better decisions.

SILICON VALLEY CLEAN ENERGY

# Energy Risk Management Policy Review

**Carlos Blanco,** Ph.D., Managing Director of Analytic Solutions
**Scott Wrigglesworth,** Managing Director, Operations & Strategy

# Ascend Analytics

**Scott Wrigglesworth**
Managing Director, Operations & Strategy

- Before joining the company, he spent 17 years with Dayton Power and Light and the AES Corporation.
- Focused on practical solutions in energy analytics, actionable reporting, margin modeling and portfolio optimization
- 13+ years of experience leveraging PowerSimm for portfolio & risk management as an Ascend client and in support of Ascend clients
- Teaches Energy Markets at the University of Dayton
- M.B.A., – University of Dayton
- B.A., Global Economics & Int'l Business – Cedarville University

Managing Director, Analytic Solutions

- Former co-founder and mng director of Black Swan Risk Advisors
- Faculty at MENNTA Energy since 2004. Former lecturer University of California, Berkeley
- Published over 150 articles on a wide range of financial and commodity risk management topics
- Former VP, Risk Solutions at Financial Engineering Associates serving on Executive Management Committee and providing client support of the financial and energy derivatives pricing and market risk management models
- Ph.D., Finance - Universidad Complutense, Madrid
- M.S., Investments & Int'l Economics - University of Nebraska, Lincoln

# Section 1 – Addition of acknowledgement of ERM

Change:

- Ensure new and existing employees under ERM have read and understood the ERM policy when joining SVCE and after material revisions

Justification:

- Reduce operational risk from actions that may fall outside the policy
- Reinforce that ERM policy should guide portfolio management decisions

## 1.5. Acknowledgement of ERM

All SVCE Representatives participating in any activity or transaction within the scope of the ERM shall sign, upon joining or upon any material revision of the ERM policy, that such SVCE representative has:

- Read the ERM;
- Understands the terms and agreements of said ERM;
- Will comply with said ERM;
- SVCE employees who are within the scope of the ERM understand that any violation of said ERM may subject the employee to discipline up to and including termination of employment;

# Section 4.1 – Addition to include use of qualified third party advisors to support middle and back office functions

Change:

- Clarify that qualified third-party advisors can support middle and back-office functions

Justification:

- Cost-effective to augment existing staff
- Bring knowledge of industry best practices
- Reduce employee turnover risks

To the maximum extent practicable given SVCE's business model and level of staffing, Middle Office activities will be functionally independent from all Front Office and Back Office activities. The Middle Office will have primary responsibility for risk management oversight

and policy development and compliance. If there are not adequate resources necessary to fully support a Middle Office, this function may be combined with another function, or be supported by qualified third party advisors, provided that appropriate segregation of duties or sufficient internal controls are maintained at all times.

To the maximum extent practicable given SVCE's business model and level of staffing, Back Office settlement activities will be functionally independent from all Front Office and Middle Office activities. The Back Office will have primary responsibility for all transaction confirmation, accounting and reconciliation processes. If there are not adequate resources necessary to fully support a Back Office, this function may be combined with another function, or be supported by qualified third party advisors, provided that appropriate segregation of duties or sufficient internal controls are maintained at all times.

# Section 5.1 – Addition to include use of probabilistic-based risk exposures to complement notional dollar risk exposure of NOPs

Clarify:

- Add probabilistic based risk exposures of open portfolio positions to the current notional methods

Justification:

- Volumetric and price uncertainty important to capture variability of open positions
- Risk exposure outputs already come from probabilistic models

Third bullet point

Exposure Reporting – calculates the notional dollar and/or probabilistic-based risk exposure of open portfolio positions at current market prices. The exposure risk calculation shall be performed at least on a monthly basis.

# Section 5.1 – Addition of "at-Risk" metrics and stress tests to support portfolio management decisions

Change:

- Add "at-Risk" metrics and "stress tests" to support portfolio management decisions

Justification:

- Forward looking metrics for market, credit, collateral and financial reserves risk can provide guidance of range of uncertainty
- Stress tests to be integrated with strategic planning decisions regarding portfolio under stress conditions

In addition to ensuring the portfolio is within the approved hedge bands, portfolio management decisions are supported by risk metrics from simulations of future market conditions, loads, and other material risk drivers for the portfolio. The following probabilistic risk metrics are regularly calculated and reported:

- Net Revenue at Risk: Potential adverse changes in net revenues for a given time period and confidence level.
- Reserve Requirements at Risk: Potential adverse change in reserves for a given time period and confidence level.
- Potential Future Exposure for counterparty credit risk: Maximum Mark-to-market counterparty exposures for a given time period and confidence level.
- Potential Collateral Exposure: Maximum of collateral that SVCE may have to post for a given time period and time horizon with a given counterparty.

Stress tests will used to understand the potential variability in SVCE's projected procurement costs, and resulting retail rate impacts and competitive positioning, associated with adverse scenarios of material risk drivers. The IROC will develop, and update as necessary, a set of plausible and forward-looking stress-tests based on SVCE's portfolio and expected market conditions. The stress test analysis will complement other probabilistic metrics used to manage portfolio risks and its results will be distributed on at least an annual basis to the ROC.

# Section 5.6 – Load and Volumetric Risk
# Addition of language to reflect management of resources with CCCE and limited delegation of authority

Change:

- Add language to reflect cooperation with scheduling coordinator to manage certain resources and delegation of authority

Justification:

- Scheduling coordinator to execute SVCE's generation strategy as necessary
- SVCE to delegate limited authority to SC within guidelines of board-approved operating agreement
- CEO to approve operating plan for management of PPAs

SVCE has contracted for long-term electricity resources including large hydroelectricity, renewable energy and storage to meet its RPS and clean goals. For many of these contracts, SVCE has scheduling coordination responsibilities and intends to work with Central Coast Community Energy (CCCE) to manage these resources.

SVCE's generation scheduling strategy, as executed by its scheduling coordinator and in coordination with CCCE when necessary, ensures that the resources are scheduled to produce needed PCC1 renewable energy certificates; manage curtailment risk; meet the regulatory requirements for Resource Adequacy; and optimize energy value either in the day-ahead or real time market. To effectively manage these resources, SVCE will delegate limited authority to its scheduling coordinator within the guidelines of the board-approved operating agreement. The CEO will approve an operating plan for management of each of its Power Purchase Agreements.

# Section 5.10 – Reporting
# Extension of compliance exception and reporting language

Change:

- Define compliance exceptions more broadly and set reporting and notification requirements

Justification:

- Prior language limited to transactions falling outside risk limits and email notification
- Introduction of Exception Report to document, track and resolve policy exceptions
- Summary of all exception to be reported to the Board annually

Replace: "Should the risks associated with the portfolio or a specific transaction within the portfolio fall outside of any established risk limit, the CEO will report this fact to the ROC within one business day via email and will evaluate the risk of holding any of the contracts in the portfolio to delivery and report to the Board within 3 months."

With: "Compliance exceptions are actions which violate the limits, and/or the procedures developed and approved by the ROC. For example, the risks associated with the portfolio or a specific transaction within the portfolio may fall outside of any established risk limit at a given point in time.

In the event a compliance exception occurs, the CEO is responsible for notifying the ROC within 24 hours via email after it is identified and ensure that the Front Office prepares a report (Exception Report) for the ROC at its next meeting. The Report shall identify the issue or violation, and discuss the alternative remedial actions, document the action taken in response, and describe the steps that will be taken to prevent a reoccurrence of the event. Exceptions will be reported quarterly to the Board. A summary of all exceptions shall be reported at least annually to the Board by the CEO."

# Section 5.10 – Reporting Tolerance Bands – include following language

Change:

- Include the dual objective of manage power resources to optimize value and load obligations in addition to hedge costs
- Add expected generation and variability in the portfolio management plan

Justification:

- Volumetric uncertainty on supply portfolio require active management of resources

**Tolerance Bands**

Hedging its load obligation is a key function for SVCE. The primary responsibility of the Front Office is to manage the energy portfolio by purchasing energy to hedge the cost of SVCE's load obligation and managing SVCE's portfolio of power resources to optimize value and load obligations. As described in Section 5.3 (Market Price Risk), SVCE ladders its energy purchases over time to access the market at different times. Every six months, the Front Office produces a Portfolio Management Plan that must be approved by the CEO. The Portfolio Management Plan must describe the current portfolio position, expected generation and variability, the recommended hedging transactions, the portfolio position after the transactions, and how the portfolio will remain within the Tolerance Bands in Table 1.

# Section 5.10 – Reporting Tolerance Bands – Change Min and Max based on uncertainty

Change:

- Extend tolerance bands from 105% to 110% for prompt quarter and current BOY
- Move minimum for Y4 and Y5 to 50%
- Move maximum for Y4 and Y5 to 80%

Justification:

- Volumetric uncertainty of supply portfolio means NOP based on mean of distributions are not optimal hedges for costs
- Long term procurement actions have pushed limits

Existing Policy

Item 2 Presentation

***Energy Hedging***

Tolerance bands for SVCE's Net Open Position (NOP) for energy—load minus hedged and fixed-price supplies—shall fall within the tolerances outlined in Table 1 below:

**Table 1 Calendar Year Energy NOP Tolerance Bands**

| Period* | Minimum Tolerance | Maximum Tolerance |
|---|---|---|
| Prompt Quarter | 85% | 105% |
| Current Balance of Year | 80% | 105% |
| Year 2 | 70% | 90% |
| Year 3 | 55% | 75% |
| Year 4 | 40% | 60% |
| Year 5 | 0 | 50% |

*For example, if the current year calendar year is 2019, then Year 2 is 2020

Recommendation

**Table 1 Calendar Year Energy NOP Tolerance Bands**

***Energy Hedging***

SVCE will maintain Net Open Position (NOP) portfolio hedge levels within the tolerances outlined in Table 1 below:

| Period* | Minimum Tolerance | Maximum Tolerance |
|---|---|---|
| **Prompt Quarter** | 85% | **110%** |
| **Current Balance of Year** | 80% | **110%** |
| **Year 2** | 70% | **90%** |
| **Year 3** | 55% | **80%** |
| **Year 4** | **50%** | **80%** |
| **Year 5** | **50%** | **80%** |

*For example, if the current year calendar year is 2021, then Year 2 is 2022.

# Section 6.4 Resource Adequacy
# Take language related to CPUC decisions at a given point in time

Change:

Existing Policy

- Remove reference to CPUC compliance obligations at a given point in time

Justification:

- Resource Adequacy rules under review by CPUC
- SVCE will continue complying with any future requirements set by CPUC

***Resource Adequacy***

SVCE must comply with the regulatory requirements for procurement of capacity products for Resource Adequacy (RA) needs. The CPUC has recently adopted a decision to modify compliance obligations for local resource adequacy from demonstrating for one year to three year by October 31st. Additionally, SVCE must demonstrate, on a month-ahead basis, full compliance with its monthly RA obligations.

SVCE endeavors to purchases RA products over time to meet its obligation and to diversify its purchases between suppliers and market conditions.

Remove : The CPUC has recently adopted a decision to modify compliance obligations for local resource adequacy from demonstrating for one year to three year by October 31st. Additionally, SVCE must demonstrate, on a month-ahead basis, full compliance with its monthly RA obligations.

*Recommendation*

SVCE must comply with the regulatory requirements for procurement of capacity products for Resource Adequacy (RA) needs.

SVCE endeavors to purchase RA products over time to meet its obligation and to diversify its purchases between suppliers and market conditions.

# Section 6.5.2 Authority Delegated to the CEO by the Board
# Replace NOP with Hedge

Change:

- Replace NOP with Hedge

Justification:

- Consistent use of Hedge Tolerance bands

Existing Policy

6.5.2 Authority Delegated to the CEO by the Board

Under the Board-approved Purchasing Policy, the CEO is delegated the authority to approve and execute contracts for Energy Procurement for terms of less than or equal to 12 months, which the CEO shall timely report to the Board. In addition, under Resolution 2019-03, the Board delegates to the CEO the authority to enter into Confirmations for terms not greater than 60 months and limited to purchases of Product consistent with forecasted load and within the Energy NOP Tolerance Bands (as defined in the ERM Policy).

Confirmations for terms not greater than 60 months and limited to purchases of Product consistent with forecasted load and within the Energy Hedge ~~NOP~~ Tolerance Bands (as defined in the ERM Policy).

# 6.5.3 Resource Adequacy Authority Delegated to the CEO by the Board Streamline section due to changing nature of Capacity requirements

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## Existing Policy

### 6.5.3 Resource Adequacy Authority Delegated to the CEO by the Board

RA obligations are set by the CPUC and may change with respect to the quantity needed, type of RA, location and timing. Failure to meet California's RA compliance obligations, may subject SVCE to hefty penalties. Table 3 contains current RA "Year Ahead" compliance reporting and demonstration obligations, which are subject to change as California considers broad changes to how reliability requirements are met including the possible establishment of a central buyer for all load serving entities.

**Table 3: Resource Adequacy Requirements**

| Resource Adequacy Product | Year-Ahead Demonstration Requirement | Compliance Obligation |
|---|---|---|
| Local | Year 1 & 2: by October 31st, must demonstrate capacity to meet 100% of monthly obligation<br>Year 2: by October 31st, must demonstrate capacity to meet 50% of monthly obligation | Obligation is based on 50% of SVCE's system coincident peak. Capacity must be procured for the Greater Bay Area and 7 Local Zones. Obligation for quantity and location set annually. |
| System | Year 1: by October 31st, must demonstrate capacity to meet 50% of "summer" (May through September) needs | System RA needs are based on 15% monthly planning reserve above SVCE's expected monthly capacity forecast. |
| Flexible | Year 1: by October 31st, must demonstrate capacity to meet 50% of "summer" (May through September) needs | |

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Adopted: June 12, 2019

To adequately and effectively meet RA requirements, the CEO needs a broad authority to transact for terms of up to five years and with a broad set of suppliers, including counterparties not under a Master Agreement. And, while credit risk is a significant risk related to energy transactions, it is not as significant a risk for RA products as the prices tend to be less volatile and suppliers are less likely to default on compliance related products. For this reason, many RA transactions are executed under a WSPP with less onerous credit terms than the EEI Master Agreement. For SVCE, the more significant risk associated with RA is that the product procured will not count towards a specific obligation (type or location) or the possibility of the establishment of a central buyer for RA which may strand or change the value of RA under contract. To mitigate such risk, SVCE will ladder RA procurement consistent with an RA Procurement Plan subject to CEO approval. Table 4 lists the CEO's authority for RA transactions, which may be delegated provided proper documentation is established by the CEO.

**Table 4: Resource Adequacy Authority Delegated to the CEO by the Board**

| Product | Term Limit | Maturity Limit | Volume Limit | Counterparty Limit | Who |
|---|---|---|---|---|---|
| Local Capacity | Up to 60 months | 72 months | As required to comply | Any counterparty | CEO |
| System Capacity | Up to 60 months | 72 months | As required to comply | Any counterparty | CEO |
| Flexible Capacity | Up to 60 months | 72 months | As required to comply | Any counterparty | CEO |
| All of the above | Over 60 months | As approved by the Board | As approved by the Board | Any counterparty | Board |

# 6.5.3 Resource Adequacy Authority Delegated to the CEO by the Board Replace section and tables with following

Change:

- Streamline Resource Adequacy Authority and include language to reflect that CPUC may change the quantity needed, type of RA, location and timing

Justification:

- Reflect changing nature of CPUC Resource Adequacy obligations
- Maintain RA delegation authority by CEO based on current limits

6.5.3 Resource Adequacy Authority Delegated to the CEO by the Board

RA obligations are set by the CPUC and may change with respect to the quantity needed, type of RA, location and timing. The CEO has the authority to meet resource adequacy requirements based on CPUC and CAISO guidelines. Failure to meet California's RA compliance obligations, may subject SVCE to hefty penalties.

To adequately and effectively meet RA requirements, the CEO needs a broad authority to transact for terms of up to five years and with a broad set of suppliers, including counterparties not under a Master Agreement. Table 3 lists the CEO's authority for RA transactions, which may be delegated provided proper documentation is established by the CEO.

Table 3: Resource Adequacy Authority Delegated to the CEO by the Board

| Product | Term Limit | Maturity Limit | Volume Limit | Counterparty Limit | Who |
|---|---|---|---|---|---|
| Resource Adequacy | Up to 60 months | 72 months | As required to comply | Any counterparty | CEO |

# 6.6. Conflict of Interest and Appendix A
# Add paragraph with Declaration of Conflict of Interest

Change:

- SVCE employees under ERM policy to sign Declaration of Conflict of Interest

Justification:

- Ensure all SVCE employees declare any potential conflict of interest in a formal way
- Promote transparency and reduce potential legal and reputational risk arising from potential conflicts of interest

SVCE employees will sign notice acknowledging policy regarding conflict of interest and report any existing or potential conflicts of interest (see Appendix A).

**8. Appendix A: Notice of Conflict of Interest**
**To:** [insert title]

**Declaration of Conflict of Interest**

I understand that I am obligated to give notice in writing to Silicon Valley Clean Energy of any interest or relationship that I may have in any counterparty that seeks to do business with Silicon Valley Clean Energy, and to identify any real or potential conflict of interest such counterparty has or may have with regard to any existing or potential contract or transaction with Silicon Valley Clean Energy, within 48-hours of becoming aware of the conflict of interest.

I would like to declare the following existing/potential conflict of interest situation arising from the discharge of my duties concerning Silicon Valley Clean Energy activities covered by the scope of the ERM:

a) Persons/companies with whom/which I have official dealings and/or private interests:

b) Brief description of my duties which involved the persons/companies mentioned in item a) above.

Position and Name: _____
Signature: _____
Date: _____

# CEO Report

Executive Committee – CEO Report
October 22, 2021

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# CEO Report

- Update on certain consultant contracts
- Update on items coming to the Board in the next quarter
- Update on current hydro conditions and outlook for the future

# Current Master Consulting Agreement with 4 contractors – expires March 2022 –contract with Ascend for 3 years

## Current Contracts

**Master Consulting Agreement & Board Authority**

- Existing Contracts - ~$1.22M committed, $923k expended
- Authority set to expire in March 2022
- Other consultants not used as much as Ascend

**Existing SVCE/Ascend Agreement – 2018 to present**

- Risk management, portfolio valuation, resource valuation, custom product assessment, scenario analysis, net revenue model
- Ascend $932k committed, $855k expended (Ascend)

## Future – Ascend contract

**Same services as current PLUS**

- added Middle Office Function to replace PEA

**Commit to three years – allows Ascend to dedicate staff resources**

- Provides a "bucket of hours"
- Must integrate with BPO
- Off-ramps for performance
- Cost is $1.3 M over three years, with compensation for hours not used
- Term November 11, 2021, to October 31, 2024

**Provide to Board for approval at Nov Board meeting**

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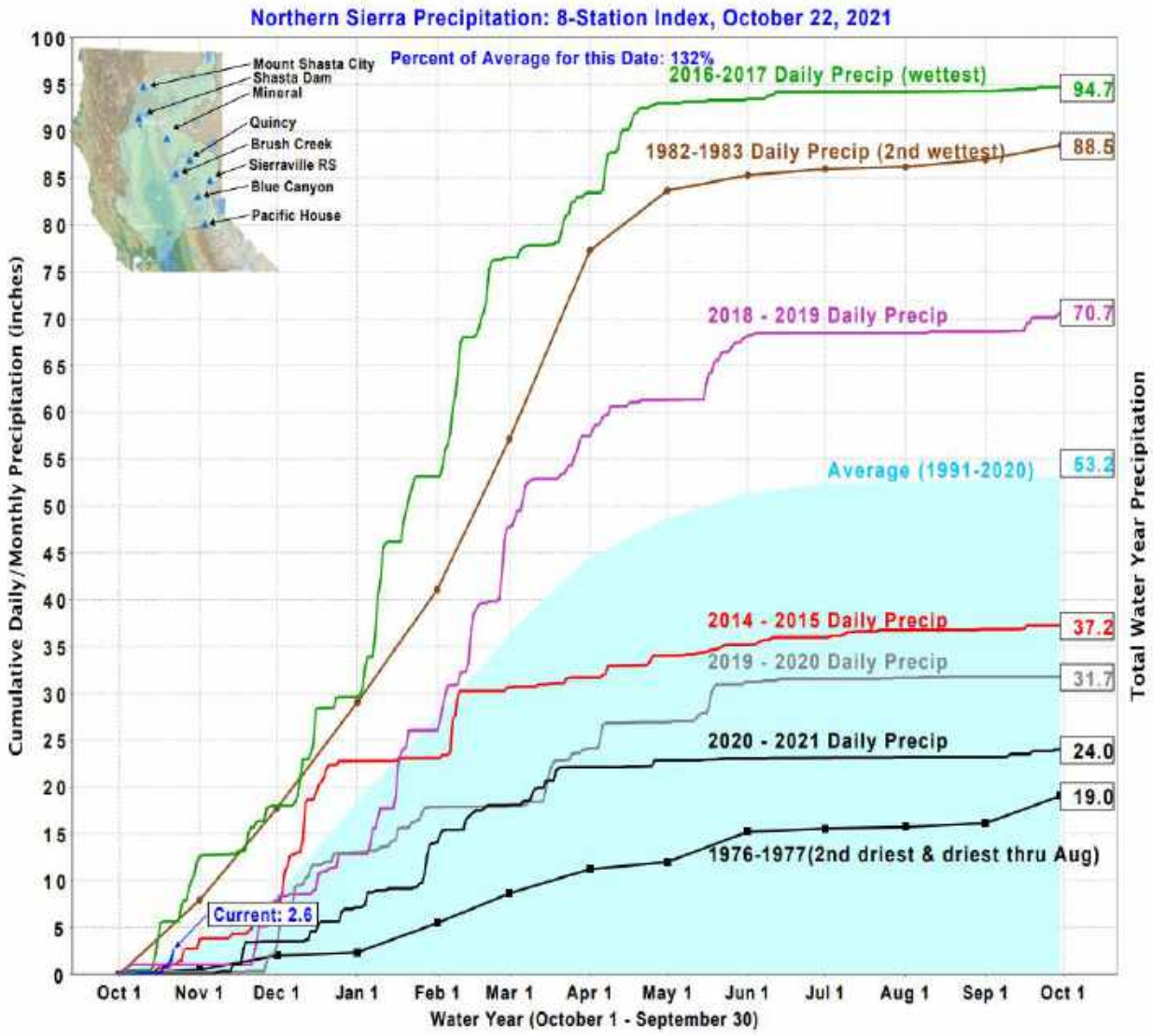
# Upcoming Board Items

1. Ascend 3-year contract – November consent
2. PPA Coordinated Operations Agreement – November
3. ERM Policy Update - November
4. Doubling-down strategy Iteration #1 – EC November; Board December
5. Power Procurement - CC Power Long-duration storage contracts - Tumbleweed – December
6. Clean Energy Future – Workshops – Q4 and Q1 - Discuss carbon-free transition and making a difference
7. SVCE Board Elections – January and February 2022
8. SVCE Rates & Reserves Update – January/February 2022 (PG&E ERRA & Gen Rate end of 2021)
9. Doubling-down strategy Iteration #2 – Q1 2022 – budget and implementation plan
10. Power Procurement - CC Power Long-duration storage contracts - Supplier #2 – Q1 2022
11. Power Procurement - Mid-term Procurement – Firm Clean Resources – Q2 2022

# California precipitation levels in 2021 almost at driest year




Source: CA Department of Water Resources

# Cost of Procuring Carbon-free Hydro Increasing from $4 million when we started to projected $15

- GreenStart 100% Clean - ~50% RPS and 50% non-RPS, carbon-free mostly large hydroelectricity
  - Hydro resources come from Northwest and California – 30-50% of load
  - PG&E allocations of large hydro 3 to 10% of load
- Hydro supply is not firm - highly dependent on weather and precipitation conditions – hard to plan for
- Neighboring state green policies, restrictions on imports, increased demand, and limited supply especially in drought years driving cost up
- Premiums increased from $1.50-2.00/MWh in 2018 to $6-9/MWh in 2021
- **Projected cost - $7.2MM to $18 MM per year**

# Doubling Down on Decarbonization Programs

Executive Committee
October 2021

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# Objectives of this presentation

Received input from industry stakeholders; still in progress

- Re-articulate SVCE program approach
- Identify program efforts to prioritize
  - Additional funds/staff resources
  - De-prioritize some other programs

# SVCE can "double down" on key program approaches with additional funding

Focus on creating the **foundation** to enable **policy** for big impacts

Target barriers that SVCE (and member agencies) are best positioned to tackle

Program areas to prioritize:

- Multifamily tenant EV access
- Natural gas phase-out

# Programs are an emphasis in the 2021-22 strategic focus areas

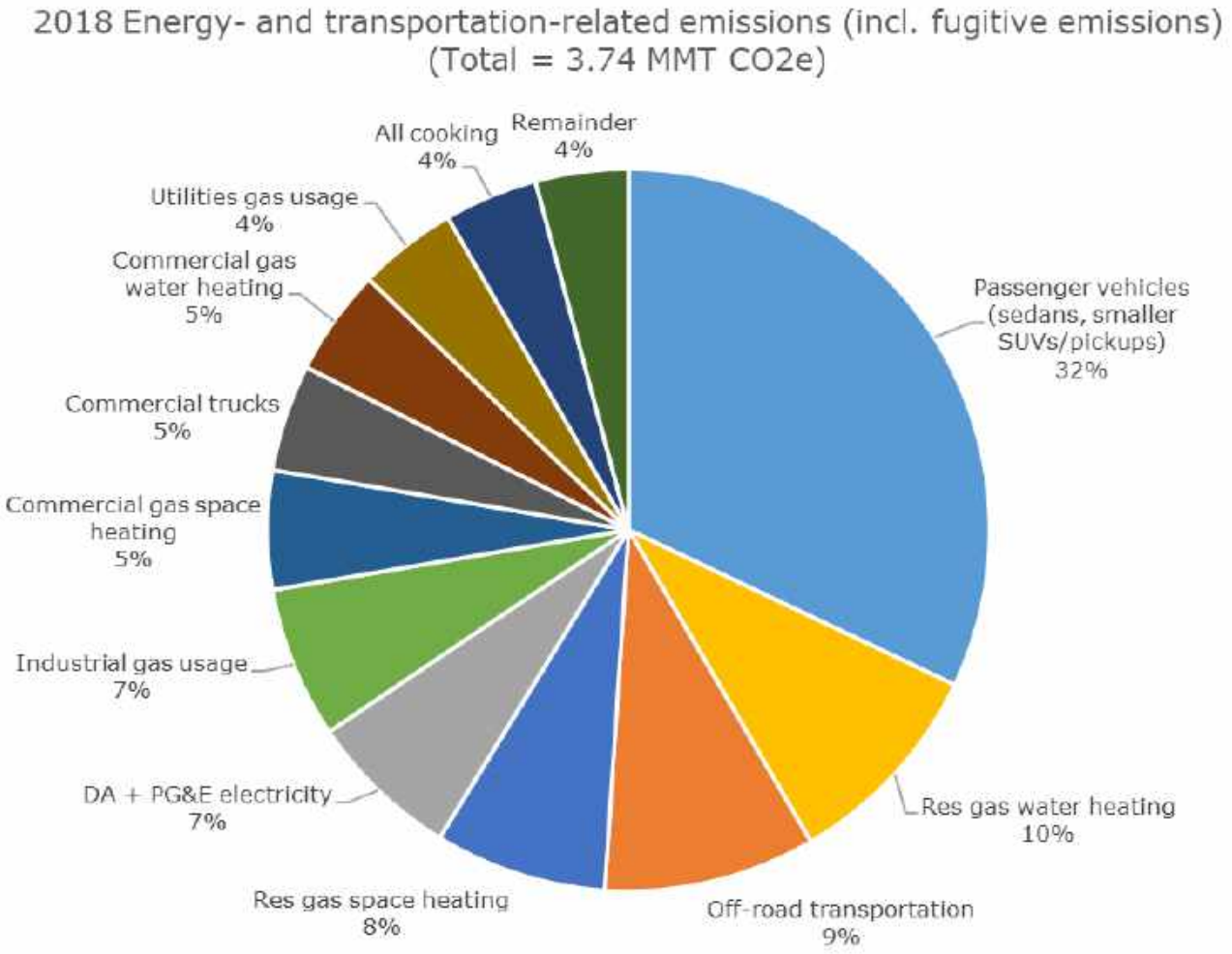
Support local agency work and leverage close ties to staff

1. Additional staffing
2. Bring PPAs into operations mode
3. Procurement and integration
4. Financial stability
5. Operations and cyber risk management
6. **Grow organization to expand efforts on climate change and decarb**

# We will need to bend a lot of different carbon curves

Mix of shared and unique challenges across sources

SVCE's sector-specific Joint Action Plans identify top barriers



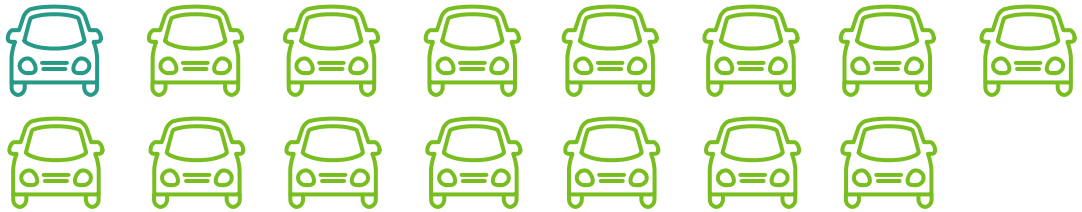

*Fugitive emissions account for ~32% of total natural gas emissions*

# Major leaps in adoption are needed – residential EV example

On the order of $10B to buy EVs; $1B to install EVI

*(total cost)*

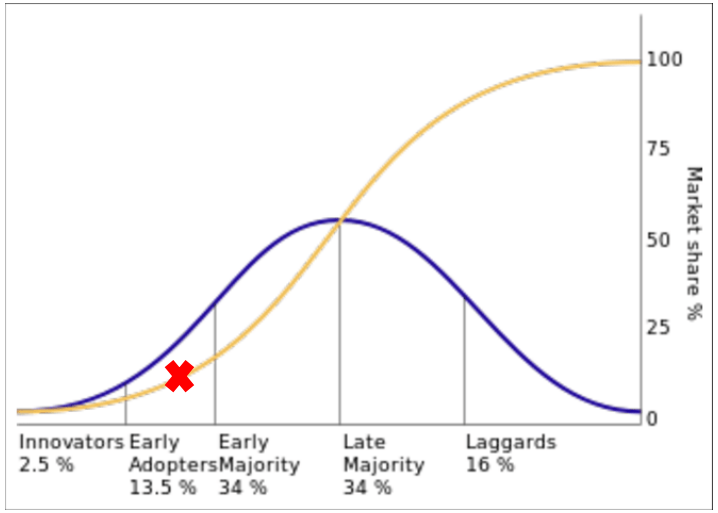
Some customers face bigger barriers



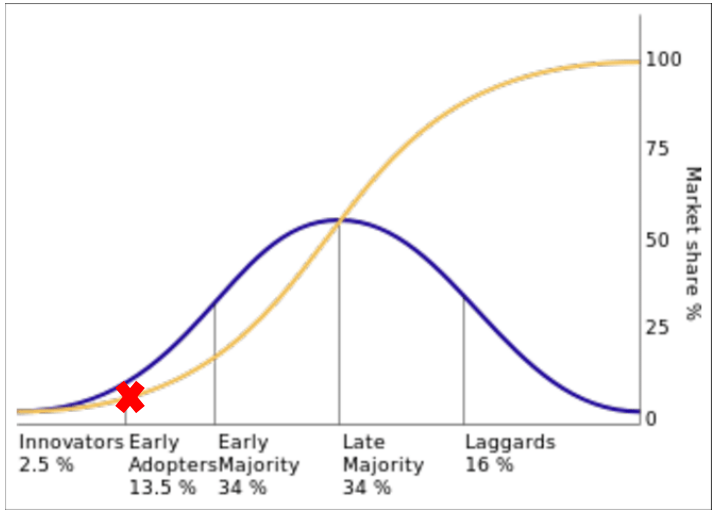
32,000 EVs today…

…and 440,000 conversions to go

**Single-Family EVs: 8%**




**Multi-Family EVs: 3%**



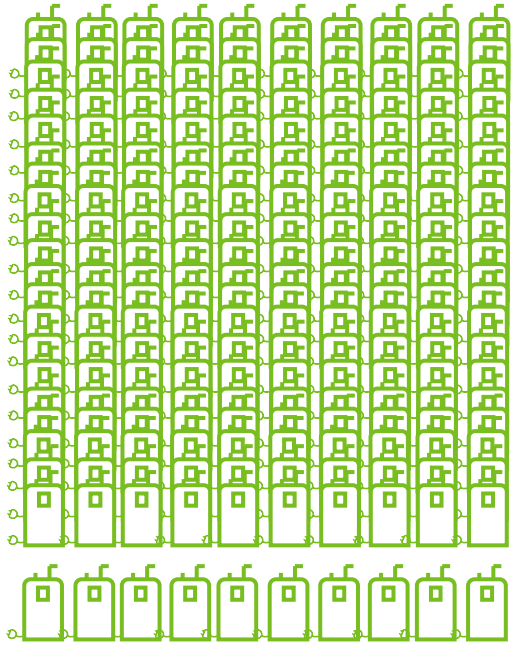
# Major leaps in adoption are needed – residential heat pump water heater example

SVCE program very successful, compared to historical deployment

Similar scaling needed for other building technologies

SVCE HPWH program install rate: **100 per year**

To replace all gas water heaters by 2030: **21,000 per year**

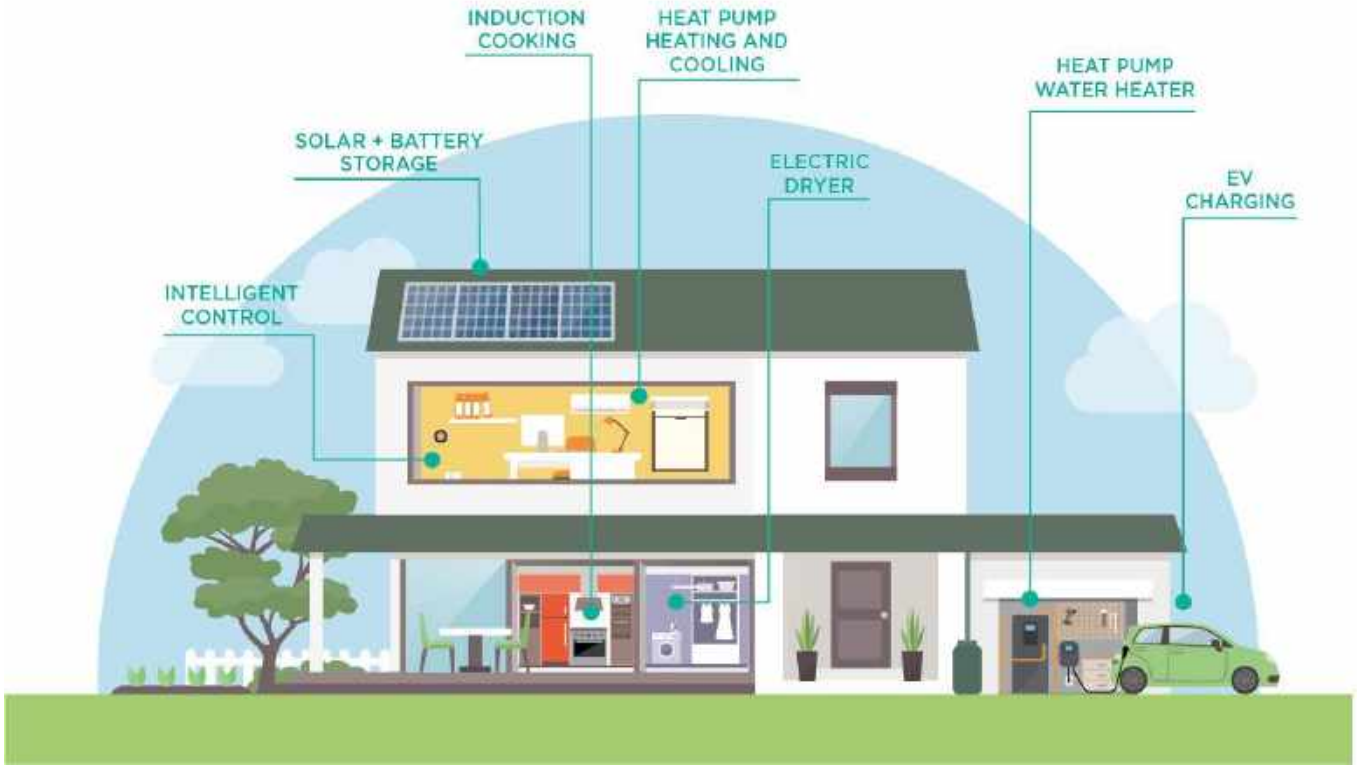


| | Adoption rate, target 2030 |
|---|---|
| **Water Heating** | 21,000 per year |
| **Space Conditioning** | 17,000 per year |
| **Stovetops** | 11,000 per year |
| **Dryers** | 5,000 per year |
| **Panel Upgrades** | 13,000 per year |

# SVCE Program Approach

## To succeed, policy/mandates need a support structure

- Incentives, rebates and financing lower customer bills and upfront costs
- Communication and marketing increase awareness
- Available and competitive products enable uptake
- Efficient permitting processes reduce time and costs
- Trained & available workforce with inclusive, high-quality jobs
- Pilot demonstrations prove viability and benefits



# SVCE will "double down" on key programs with more resources and staff focus

Lay the **foundation** for rapid, smart adoption of policy

- Based on learnings from programs so far, existing plans
- Additional programs budget may be available
- Key barriers and approaches already identified, but this is where we can invest even more

# Proposed programs to expand

Focus efforts on two key areas, across a suite of programs

| SVCE Programs | Multifamily EV Access | Natural Gas Phase-Out |
|---|---|---|
| Reach Codes 2.0 | ✓ | ✓ |
| Permitting Simplification | ✓ | ✓ |
| Accessible Financing | ✓ | ✓ |
| Multifamily EV Charging Assistance and Grants/Incentives | ✓ | |
| Whole-Building Electrification Grants/Incentives | | ✓ |
| Experimental Policy Support | ✓ | ✓ |

# Still some open questions

## This is a work in progress

Still in the works:

- Budget
- Staffing
- Program specifics
- De-prioritizing others

# Next steps

## Timeline

| Date | Task |
|---|---|
| Sep-Oct | Prepare slides for V1, get input from stakeholders |
| Oct/Nov | Present V1 to EC for discussion *(draft priorities)* |
| Nov/Dec | Present V1.5 to BOD for discussion *(draft budget, staffing, priorities)* |
| Q1 2022 | Present V2 to BOD for approval *(final budget, priorities, staffing; outline program specifics)* |

# Discussion

# Program Proposal for $600k 2020 Savings from PG&E Carbon Free Attribute

October 22, 2021 Executive Committee Meeting

Don Bray, Director of Account Services & Community Relations & Justin Zagunis, Manager of Decarbonization & Grid Innovation Programs

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# What we will discuss today

- Background
- Program recommendations for $600k 2020 nuclear allocation savings
  - Fund EV chargers at multi-family properties
  - Portable batteries for qualified Medical Baseline customers

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# Seeking approval to take two program proposals to the board on the November consent calendar

Recommended programs utilize savings from the 2020 PG&E carbon-free attribute savings, specifically from the nuclear portion

- Oct. 8, 2020, board voted to accept the allocation of carbon free attributes from PG&E, including from Diablo Canyon
- Staff said they will return to the board with a recommendation on how to utilize the savings towards funding one or more of the following:
  - Resiliency programs
  - Equity programs
  - Invest in local resources
  - Workforce training
  - Build financial reserves

# Fund EV Chargers at Multi-Family Properties

## Program will help pay for the cost of charger installation

- Funding was biggest barrier to adoption with existing EV Tech Assist program
- Currently have pipeline of properties that are interested in installation, but need funding support
- $400k in funding can offer the following:
  - Pay for a percentage of installation costs
    - If similar to CALeVIP, could support ~10 sites with combo of L1 and L2 charging
  - Staff is evaluating program design options to determine incentive levels, technology types, and eligibility

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# Portable Batteries for Qualified Customers

- Provide a free portable battery for qualified medical baseline customers in areas vulnerable to power shutoffs due to PSPS, fires, and winter storms
- Pilot program with 50 batteries
- Replicating program from other CCAs

- Will utilize local partner for program administration
- Existing partnership from 2021 summer outreach with SVILC
- Aligns with ongoing community resilience framework development


Goal Zero Yeti 3000X

# Questions?

# SVCE & Central Coast Community Energy Coordinated Operating Agreement (COA)

Executive Committee – October 22, 2021

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# 12 PPAs jointly procured with 3CE require a Coordinated Operations Agreement

Management and operation of the 12 projects is necessary to manage costs, benefits, resources, operational decisions, and risk for both CCAs



## Signed Power Purchase Agreements


- $1.6 B in commitments
- 62% RPS in 2024
- 13 PPAs signed
- 10 new build projects
- ~725 MW in total
- 173 MW lithium-ion storage paired with 516 MW of Solar PV

12 Projects to be operated with Central Coast Community Energy

Central Coast Community Energy
CLEAN ENERGY. LOCAL CONTROL.
Formerly Monterey Bay Community Power

# PPA Expected Commercial On-line Dates over the next 9 quarters

| | |
|---|---|
| 2021- Q4 | Slate Solar + Storage |
| 2022 – Q1 | Coso & Casa Diablo Geothermal |
| 2022 – Q2 | Big Beau Solar + Storage |
| 2022 – Q3 | Rabbitbrush Solar + Storage |
| 2022 – Q4 | Yellow Pine Solar + Storage & Atlas Solar |
| 2023 – Q1 | Mountain View & Cameron Crest Wind |
| 2023 – Q2, Q3 | Angela & Aratina Solar + Storage |
| 2023 – Q3, Q4 | Victory Pass & San Luis West Solar + Storage |

# Power Purchase Agreements

| PPA # | Project | Scheduling Coordinator | Expected COD | Term Years | Location | SVCE % Share | 3CE % Share | PPA Structure Type |
|---|---|---|---|---|---|---|---|---|
| 1 | Slate S+S | Buyer | Nov-Dec 21 | 17 | King Cnty | 58% | 42% | Separate |
| 2 | Big Beau S+S | Buyer | Dec 21-Apr 22 | 20 | Kern Cnty | 55% | 45% | Separate |
| 3 | Ormat Geothermal | Seller | Mar-22 | 10 | Mono Cnty | 50% | 50% | Buyers Share |
| 4 | Coso Geothermal | Seller | Jan-22 | 15 | Inyo Cnty | 40% | 60% | Buyers Share |
| 5 | Rabbitbrush S+S | Buyer | Aug-22 | 15 | Kern Cnty | 40% | 60% | Separate |
| 6 | Yellow Pine S+S | Seller | Dec-22 | 20 | Clark Cnty, NV | 40% | 60% | Buyers Share |
| 7 | Atlas Solar | Seller | Dec-22 | 10 | La Paz Cnty, AZ | 25% | 75% | Separate |
| 8 | AES Mountain Wind | Seller | Jan-23 | 20 | Riverside Cnty | 50% | 50% | Buyers Share |
| 9 | Angela S+S | Buyer | Mar-23 | 15 | Tulare Cnty | 50% | 50% | Buyers Share |
| 10 | Aratina S+S | Buyer | Jun-23 | 20 | Kern Cnty | 40% | 60% | Separate |
| 11 | Victory Pass S+S | Buyer | Sep-23 | 15 | Kern Cnty | 50% | 50% | Buyers Share |
| 12 | San Luis West S+S | Buyer | Dec-23 | 15 | Riverside Cnty | 50% | 50% | Separate |

# Buyers Share vs. Non-Buyers Share PPAs

- SVCE and 3CE have separate PPAs for jointly procured resources
- Two types of PPA structures:
  - ***Buyers Share*** – one CAISO resource identification and meter. Each CCA gets their percentage share of costs/benefits
    - Under a Buyers Share PPA structure, risks and benefits are exactly proportional to project % shares.
    - 3CE and SVCE **must** coordinate operations
  - ***Separate/Non-Buyers Share*** –individual resource id's/meters and each CCA gets costs/benefits based on its **own** resource id/meter output
    - Under a Separate/Non-Buyers Share PPA structure, risks and benefits are **not** necessarily exactly proportional to project % shares due to:
      - SVCE and 3CE resources may have different CODs (SVCE's Slate and Big Beau projects have earlier CODs than 3CE's)
      - SVCE and 3CE resources may have different forced outage rates
      - SVCE and 3CE resources may be subject to different CAISO curtailments despite of using the same bidding strategy
    - Further, 3CE and SVCE may decide not to operate in a coordinated fashion at all

# The Original Intent of Joint Procurement with 3CE – share project benefits, cost and risk

**Buyers Share** – perfect sharing of benefits and risk in accordance with project % shares

**Separate/Non-Buyers Share** – needs a separate mechanism to attain the sharing of risk and benefits in accordance with project % shares

- The Separate/Non-Buyers Share PPAs can be operated independently
  - SVCE and 3CE desire to share risks beyond control of SVCE and 3CE in limited circumstances for the Separate/Non-Buyers Share PPAs
    - Example: equipment failure, forced outages, unbalanced curtailments by CAISO
- A true-up mechanism will be established to specify how and when costs and benefits resulting from agreed upon facility issues beyond SVCE and 3CE's control will be shared

# The Purpose of Coordinated Operations Agreement (COA)

- To establish a framework to operate projects under the COA in a coordinated fashion regardless whether it is a Buyers Share or Separate/Non Buyers Share project
- To establish a structure that facilitates the following:
  - Study, approve and implement resource bidding strategies in a coordinated fashion
  - Provide timely oversight of operation of projects in a coordinated fashion
  - Timely communicate with Scheduling Coordinator/project operator regarding operational issues in a coordinated fashion
  - Promptly address operational/market emergency situations in a coordinated fashion
- To establish a process for resolving disputes if disputes arise
- To establish a true-up mechanism between SVCE and 3CE to rebalance the risks/benefits in accordance with project % shares for the agreed upon conditions outside of either CCA's control – e.g., different CODs, equipment issues and/or uneven CAISO directed curtailments

# Costs and Alternatives

- Cost of implementing the COA is limited – some dedication of staff time
- Scheduling Coordination, consultants and legal support are contracted for and budgeted by each CCA separately – not an additional cost
- True-up cost is expected to be less than $100,000 per year and will be budgeted for in Power Supply budget starting in FY 23
- Coordination of Buyers Share PPAs without COA in place is cumbersome – leading to potential disputes and increased costs
- Coordination of Separate/Non Buyers Share PPAs without COA in place is infeasible, specially as to rebalancing the risks/benefits in accordance with project % shares
- COA does not preclude SVCE's ability to exercise its own independent strategy for Separate/Non Buyers Share PPAs – SVCE can elect to take any of the Separate/Non-Buyers Share PPAs out of the COA at any time with short notice (30 days)
- COA term set to longest term of Buyers Share PPA – 20 years

# COA Next Steps

1. Informal coordinated operation has already started between SVCE and 3CE as some projects are under test or under construction and will soon come on-line

2. Finalize Coordinated Operating Agreement to formalize the coordination process

3. Seek Board Approval of COA - November 10, 2021

# Questions