CPUC Staff Report on Direct Access Reopening

October 14, 2020
SB 237 (Hertzberg, 2018)

• Directives to the CPUC
  • Issue an order by June 1, 2019, increasing the “cap” on Direct Access-eligible load by 4,000 GWh
  • Provide recommendations on implementing further expansion of Direct Access (DA)
CPUC SB 237 Implementation

• The CPUC met the 2019 deadline for issuing its order increasing the DA cap by 4,000 GWh (see D.19-05-043).

• Due to COVID-19 impacts, it missed this year’s June 1 deadline for sending its recommendations to the Legislature.


• The CPUC issued a Ruling with the draft DA Study on September 28, 2020.
Draft DA Study Recommendations

- ESPs submit robust, transparent IRP filings and meet all D.19-11-016 procurement requirements
- ESPs meet their RPS obligations for the 2021-2024 compliance period
- ESPs comply with all RA requirements
- CPUC ensures CCAs mechanism to cover stranded costs
  - Legislature considers statutory authorization of CCA exit fees
- Legislature clarifies CPUC enforcement authority for IRP and RA compliance
  - Permits de-licensing/registration for ESPs and CCAs with repeated non-compliance
- If these conditions are met, then reopening will gradually occur at 10% annually
Reopening cannot occur before 2026

• The Legislature sets preconditions to reopening that cannot be met until late 2025 at the earliest

<table>
<thead>
<tr>
<th>EOY 2025</th>
<th>2026</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirmation</td>
<td>Confirmation all reopening preconditions</td>
<td>First 10% (8,000 MWh) tranche launch</td>
<td>Compliance verification 2nd tranche</td>
<td>Second 10% tranche launch</td>
</tr>
<tr>
<td>2021-2024 RPS</td>
<td>met</td>
<td>met</td>
<td></td>
<td></td>
</tr>
<tr>
<td>requirements</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>met</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Next Steps

• **October 16th:** Comments on the Draft Study due
  • Staff working closely with CalCCA on comments and in-person advocacy at the CPUC

• **October 26th:** Reply Comments due

• **Q4 2020/Q1 2021:** Proposed Decision expected
  • SVCE/CalCCA will have the opportunity to comment on the Proposed Decision

• **30+ days after Proposed Decision:** Final Decision adopted on DA Expansion by CPUC.

• **March 15, 2021:** Final Study must be submitted to the legislature
Questions?
SVCE Strategic Plan 2020 Update

SVCE Board of Directors
October 14, 2020
California Emissions - Electricity 15%

Figure courtesy of the California Air Resources Board: https://ww2.arb.ca.gov/ghg-inventory-data
CA GHG Reduction Goals
AMBITIOUS & CRITICAL

2020: Back to 1990 levels
2030: 40% below 1990 levels, 260 million tons
2050: 80% below 1990 levels

The electricity sector’s portion of this statewide total is **46 MMT**, or 18% of allowable emissions in 2030. However, for CA to be on track to meet the SB 100 goals in 2045, that total drops to **38 MMT**.

Figure courtesy of California Climate Change Scoping Plan: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf
We’ve Made Progress Since 2000

Figure courtesy of California Climate Change Scoping Plan: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf

The electricity sector’s portion of this statewide total is 46 MMT, or 18% of allowable emissions in 2030. However, for CA to be on track to meet the SB 100 goals in 2045, that total drops to 38 MMT.
We Need to do MUCH MORE

The electricity sector’s portion of this statewide total is 46 MMT, or 18% of allowable emissions in 2030. However, for CA to be on track to meet the SB 100 goals in 2045, that total drops to 38 MMT.
SVCE Community GHG Reduction Goals

Note: Electricity emissions calculated using annual GHG emissions accounting methodology.
SVCE Community GHG Reduction Goals

**Note:** Electricity emissions calculated using annual GHG emissions accounting methodology
MISSION
Reduce dependence on fossil fuels by providing carbon free, affordable, and reliable electricity, and innovative programs for the SVCE community

MEASURE
SVCE, working with SVCE Member Agencies, aspires to achieve energy and transportation GHG reductions of 30% from the 2015 baseline by 2021, 40% by 2025, and 50% by 2030
MISSION
Reduce dependence on fossil fuels by providing carbon free, affordable, and reliable electricity, and innovative programs for the SVCE community

MEASURE
SVCE, working with SVCE Member Agencies, aspires to achieve energy and transportation GHG reductions of 30% from the 2015 baseline by 2021, 40% by 2025, and 50% by 2030
Changes to Strategic Plan in 2020

- Promoted quantifiable measure for our Mission and explicitly included working with and through member agencies
- Reduced length of document by 50%
- Goals, Strategies & Tactics
  - Reduced from 159 to 80
  - Goals 13 to 19
  - Strategies & Tactics from 146 to 61
- Board Approved 5 Focus Areas for 2021
- Proposing 2 activity updates to the Board in next 9 months
SVCE Strategic Planning & Work Plan Process is continuous

May 2020
Board starts CEO evaluation

May-August 2020
Strategic Plan Input & Updates

Sep. 2020
Board approves FY21 Budget & Adopts Strategic Focus Areas

Sep-Oct 2020
Board completes CEO evaluation and sets CEO Priorities

Sep-Oct 2020
SVCE Staff Work Plan for 2020-21 Update Strategic Plan document

Sep 2021
Update Strategic Plan Focus Areas and FY22 Priorities

Sep. 2021
CEO Evaluation

Sep. 2021
FY2022 Budget Adoption
Recommendation

Adopt SVCE’s updated Strategic Plan and direct the CEO to continue engaging with the Board throughout the year on progress.
Backup & Reference
SVCE Mission Statement

Reduce dependence on fossil fuels by

• providing carbon free, affordable and reliable electricity and innovative programs for the SVCE community
Reduce dependence on fossil fuels by providing carbon free, affordable, and reliable electricity, and innovative programs for the SVCE community.

SVCE, working with SVCE Member Agencies, will achieve energy and transportation GHG reductions of 30% from the 2015 baseline by 2021, 40% by 2025, and 50% by 2030.
Focus Areas for 2020-21

- Additional Resources & Efficiencies
- Enterprise-wide systems, metrics & tools
- Focus on Equity
- Digital Pivot - Customer & Community engagement
- Community outreach and leverage
Landscape of Board Approved Policy/Plans

- Strategic Focus Areas – 5 areas identified by Board in June 2020
- Shorter Strategic Plan – October 2020
- Integrated Resource Plan (every 2 years, as per CPUC)
- Decarbonization Roadmap (every 3 years, as needed)
- Electric Vehicle Infrastructure Plan (Board approved, xx)
- Building Decarbonization Plan (Board proposed, xx)
- Policy Platform (every year)

For this year

Also approved by Board

SVCE Strategic Plan – 2020 Update
Strategies for Market Transformation

- Procure sustainable, affordable & carbon-free supply
- Electrify the built environment & mobility
- Promote efficiency & utility grid integration
- Remove market barriers (regulations & law)
Recipe for Clean Energy Communities

ENTERPRISE RISK MANAGEMENT
CLEAN ENERGY PORTFOLIOS

JOINT ACTION
COLLABORATIVE & NIMBLE
DECISION-MAKING

MARKET INNOVATION
ALL-ELECTRIC LIVING & TRANSPORTATION
Silicon Valley Clean Energy (SVCE)

Joint Action Agency formed to reduce dependence on fossil fuels by providing carbon free, affordable and reliable electricity and innovative programs.

---

Campbell | Cupertino | Gilroy | Los Altos | Los Altos Hills | Los Gatos | Monte Sereno

Milpitas | Mountain View | Morgan Hill | Santa Clara County | Saratoga | Sunnyvale
SVCE Communities

Our Member Communities

Mountain View
Sunnyvale
Los Altos
Saratoga
Cupertino
Monte Sereno
Los Gatos
SANTA CLARA COUNTY
Palo Alto
Milpitas
Campbell
Morgan Hill
Gilroy

SILICON VALLEY CLEAN ENERGY
$1 B worth of Power Supply Contracts Online Starting next Summer
Joint Action: Rapid Progress, At-Scale

1. 2016 October
   Formation

2. 2017 April
   100% Carbon-Free Electricity

3. 2018
   Long-Term Renewable PPAs
   Decarbonization Roadmap

4. 2019-2020
   • Renewable PPAs
   • Reach Codes
   • EV Plan
   • Building Decarb Plan
   • eHUB

5. Continuous Implementation & Innovation!
Uncertainty, Risk, and COVID-19

**SUPPLY**
Project delays and financing issues due to COVID-19; new IRP/RA rules.

**PCIA**
PCIA uncapped later in 2020, 10+M reserve call in 2021.

**LOAD LOSS**
15% load loss for C&I customers; return to “normal” in 2022.

**PAYMENTS**
Customer defaults, payment issues due to COVID-19.

**L&R ISSUES**
Central buyer, PG&E BK, Transparency, PSPS, Long-duration storage.

**DIRECT ACCESS**
Potential for additional DA market expansion.

SILICON VALLEY CLEAN ENERGY
<table>
<thead>
<tr>
<th>Renewable &amp; Carbon-Free Resources</th>
<th>Now</th>
<th>Transition through 2025</th>
<th>2025 and beyond</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy reliance on existing and short-term renewable (RPS) resources</td>
<td>Implement long-term, additive renewable resources</td>
<td>Additional long-term renewables</td>
<td></td>
</tr>
<tr>
<td>Out-of-state hydro resources</td>
<td>Deploy strategic local renewables</td>
<td>Increased deployment local renewables</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Longer-term hydro contracts, both in-state and out-of-state</td>
<td>Less dependence on large hydroelectricity</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GHG Accounting</th>
<th></th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Resource Adequacy &amp; Reliability</th>
<th></th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>DER &amp; Grid Innovation</th>
<th></th>
<th></th>
</tr>
</thead>
</table>
## Pathway to 2030

<table>
<thead>
<tr>
<th>Category</th>
<th>Now</th>
<th>Transition through 2025</th>
<th>2025 and beyond</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Renewable &amp; Carbon-Free Resources</strong></td>
<td>Heavy reliance on existing and short-term renewable (RPS) resources</td>
<td>Implement long-term, additive renewable resources</td>
<td>Additional long-term renewables</td>
</tr>
<tr>
<td></td>
<td>Out-of-state hydro resources</td>
<td>Deploy strategic local renewables</td>
<td>Increased deployment local renewables</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Longer-term hydro contracts, both in-state and out-of-state</td>
<td>Less dependence on large hydroelectricity</td>
</tr>
<tr>
<td><strong>GHG Accounting</strong></td>
<td>Annual - The Climate Registry</td>
<td>Annual transitioning to hourly</td>
<td>Carbon-free 24x7 to meet community and customer specific needs</td>
</tr>
<tr>
<td></td>
<td>Power Content Label (PCL) includes GHG</td>
<td>Evaluate cost/strategy for Carbon-Free (CF 24x7)</td>
<td></td>
</tr>
<tr>
<td><strong>Resource Adequacy &amp; Reliability</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DER &amp; Grid Innovation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Pathway to 2030

<table>
<thead>
<tr>
<th></th>
<th>Now</th>
<th>Transition through 2025</th>
<th>2025 and beyond</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Renewable &amp; Carbon-Free Resources</strong></td>
<td>Heavy reliance on existing and short-term renewable (RPS) resources</td>
<td>Implement long-term, additive renewable resources</td>
<td>Additional long-term renewables</td>
</tr>
<tr>
<td></td>
<td>Out-of-state hydro resources</td>
<td>Deploy strategic local renewables</td>
<td>Increased deployment local renewables</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Longer-term hydro contracts, both in-state and out-of-state</td>
<td>Less dependence on large hydroelectricity</td>
</tr>
<tr>
<td><strong>GHG Accounting</strong></td>
<td>Annual - The Climate Registry Power Content Label (PCL) includes GHG</td>
<td>Annual transitioning to hourly Evaluate cost/strategy for Carbon-Free (CF 24x7)</td>
<td>Carbon-free 24x7 to meet community and customer specific needs</td>
</tr>
<tr>
<td><strong>Resource Adequacy &amp; Reliability</strong></td>
<td>Short-term RA procurement (up to 3 years) based on rules</td>
<td>Short-term RA Stand-alone &amp; hybrid batteries Natural gas tolling agreements and long-term RA purchases DER &amp; VPP increase</td>
<td>Short-term RA Stand alone &amp; hybrid batteries Reduce dependence on natural gas DER &amp; VPP increase</td>
</tr>
<tr>
<td><strong>DER &amp; Grid Innovation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Pathway to 2030

<table>
<thead>
<tr>
<th>Renewable &amp; Carbon-Free Resources</th>
<th>Now</th>
<th>Transition through 2025</th>
<th>2025 and beyond</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy reliance on existing and short-term renewable (RPS) resources</td>
<td>Implement long-term, additive renewable resources</td>
<td>Additional long-term renewables</td>
<td></td>
</tr>
<tr>
<td>Out-of-state hydro resources</td>
<td>Deploy strategic local renewables</td>
<td>Increased deployment local renewables</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Longer-term hydro contracts, both in-state and out-of-state</td>
<td>Less dependence on large hydroelectricity</td>
<td></td>
</tr>
</tbody>
</table>

| GHG Accounting | | | |
|----------------|-------------------|---------------|
| Annual - The Climate Registry Power Content Label (PCL) includes GHG | Annual transitioning to hourly Evaluation cost/strategy for Carbon-Free (CF 24x7) | Carbon-free 24x7 to meet community and customer specific needs |

<table>
<thead>
<tr>
<th>Resource Adequacy &amp; Reliability</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term RA procurement (up to 3 years) based on rules</td>
<td>Short-term RA Stand-alone &amp; hybrid batteries Natural gas tolling agreements and long-term RA purchases DER &amp; VPP increase</td>
<td>Short-term RA Stand alone &amp; hybrid batteries Reduce dependence on natural gas DER &amp; VPP increase</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DER &amp; Grid Innovation</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Background research &amp; stakeholder engagement; design and launch of flagship pilots</td>
<td>Leverage 100kW-10MWs of Demand Flexibility via flagship pilots</td>
<td>Leverage 10-100MWs Demand Flexibility by expanding flagship pilots into broad-based programs</td>
</tr>
</tbody>
</table>
## Pathway to 2030

<table>
<thead>
<tr>
<th></th>
<th>Now</th>
<th>Transition through 2025</th>
<th>2025 and beyond</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Renewable &amp; Carbon-Free Resources</strong></td>
<td>Heavy reliance on existing and short-term renewable (RPS) resources</td>
<td>Implement long-term, additive renewable resources</td>
<td>Additional long-term renewables</td>
</tr>
<tr>
<td></td>
<td>Out-of-state hydro resources</td>
<td>Deploy strategic local renewables</td>
<td>Increased deployment local renewables</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Longer-term hydro contracts, both in-state and out-of-state</td>
<td>Less dependence on large hydroelectricity</td>
</tr>
<tr>
<td><strong>GHG Accounting</strong></td>
<td>Annual - The Climate Registry Power Content Label (PCL) includes GHG</td>
<td>Annual transitioning to hourly Evaluate cost/strategy for Carbon-Free (CF 24x7)</td>
<td>Carbon-free 24x7 to meet community and customer specific needs</td>
</tr>
<tr>
<td><strong>Resource Adequacy &amp; Reliability</strong></td>
<td>Short-term RA procurement (up to 3 years) based on rules</td>
<td>Short-term RA Stand-alone &amp; hybrid batteries Natural gas tolling agreements and long-term RA purchases DER &amp; VPP increase</td>
<td>Short-term RA Stand alone &amp; hybrid batteries Reduce dependence on natural gas DER &amp; VPP increase</td>
</tr>
<tr>
<td><strong>DER &amp; Grid Innovation</strong></td>
<td>Background research &amp; stakeholder engagement; design and launch of flagship pilots</td>
<td>Leverage 100kW-10MWs of Demand Flexibility via flagship pilots</td>
<td>Leverage 10-100MWs Demand Flexibility by expanding flagship pilots into broad-based programs</td>
</tr>
</tbody>
</table>
Local Market Vision: All-Electric Buildings & Transportation

Health & Comfort  Cost-Savings  Improved Air Quality
Local Market Vision: All-Electric ‘FutureFit’ Home
Animating Local Markets: Electric Vehicles

- Silicon Valley Transportation Electrification Clearinghouse
- Regional EV Leadership Recognition
- Priority Zone DC Fast Charging
- Multi-Unit Residential Charging Technical Assistance
- Workplace Charging Rebates
- Fleet Electrification
Animating Local Markets: Electric Vehicles

- Multifamily & Small/Medium Business Technical Assistance
- Concierge support to multifamily and small/medium business to install EV charging
- Targeted education/outreach and awareness-building
- Site assessments & recommendations (costs, equipment type, management, etc.)
- SVCE will learn about key challenges & continue to adapt

Administered by CLEAResult®
Animating Local Markets: 
Customer Education

• Online Tools: Customer Resource Center (CRC)

• Customers learn about, see the value of, and take action to transition to electric vehicles and appliances as well as solar + storage.

• Phased launch of website redesign with three tools to educate and encourage adoption of:
  • Electric vehicles
  • Solar + storage
  • High-efficiency electric appliances
Animating Local Markets: All-Electric Buildings Showcase

• SVCE customer awards & case studies
• Showcases top local all-electric buildings:
  o 13 residential homes
  o 5 commercial offices buildings
  o One multi-family development
• City Ventures honored for Depot Station at 2019 Silicon Valley Business Journal Structures Awards

www.svcleanenergy.org/all-electric-award
Animating Local Markets: Building Retrofits

- Gas water heater replacement w/ Heat Pump Water Heater
- $2,000 to $7,000 rebate (depending on configuration)
- 100 installed or in-process
- Future market stimulus:
  - Expand water heating retrofits
  - Add other appliances
Animating Local Markets:
Smart Meter ‘Data Hive’

- SVCE Data Hive launched on March 30
- Flagship pilot with UtilityAPI
- **Over 50 solution providers** registered on portal

More info: data.svcleanenergy.org
Regional collaboration:
  - SVCE, Peninsula Clean Energy & San Mateo County Office of Sustainability

Local Building Codes for New Construction:
  - Limit Natural Gas Usage
  - Increase Electric Vehicle Charging

SVCE member municipalities:
  - Advanced Codes passed in 9 municipalities: Mountain View, Morgan Hill, Milpitas, Monte Sereno, Saratoga, Los Altos Hills, Los Gatos, Cupertino & Campbell
  - Under consideration / development: Santa Clara County, Sunnyvale & Los Altos
Regional Electric Vehicle Charging Infrastructure Stimulus:
  - SVCE & Peninsula Clean Energy
$60+ million for two counties:
  - $33 million from California Energy Commission & matched by local partners
Summer 2020: first-come / first-served incentives
  - DC Fast Chargers: $50,000 to $70,000
  - Level 2 Chargers: $4,500
Animating Local Markets — Regionally!
Energy Storage & Resilience

- Regional initiative: 4 community power agencies
- Community Resilience program launching summer 2020
- Deploy 30MW+ of new battery storage at homes and businesses
- Market prioritizes customers at-risk of wildfire power shut-offs
Animating Local Markets — Regionally!
Targeting EV Charging & Grid Integration
Virtual Power Plant Options Analysis*
Explains how community energy can support grid integration (Summer 2019)

Virtual Power Plant Valuation**
Quantifies benefits created by enabling customer load flexibility (Winter 2019)

*https://tinyurl.com/SVCEVPPOptionsAnalysis
**Abstract submitted for Distributed Energy Conference, Fall 2020
Innovation
Stimulus
Innovation Stimulus: $100,000 ‘Innovation Onramp’ Grants

Idea

Prototype

Commercialization

Stage 1 grant ($10k-$75k) for proofs of concept through Innovation Onramp

Stage 2 grant ($50k-$100k) for demonstrations through Innovation Onramp

Events & ongoing activities
Innovation Stimulus: GridShift Hackathon

- Sponsored by 4 community power agencies
- 100 developers competed for 24 hours:
  - **1st Place to Grove ($10k):** intuitive interface for smart scheduling a customer’s flexible electrical loads
  - **2nd Place to Green Routes ($4k):** electric vehicle app for drivers to find charging stations & optimize for carbon, cost & convenience
  - **People’s Choice Award to WattsDown ($2k):** app linked to a smart light in homes that alerts customers to planned power shut-offs & high electricity prices
COVID-19 Stimulus:
Balancing Multiple Policy Objectives

Need/Equity
Speed
Near-term Materiality

Mission-Aligned
Fairness
Longer-term Value
### COVID-19 Stimulus: Striking the Balance

<table>
<thead>
<tr>
<th>Program</th>
<th>Estimated $</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Customer Relief</strong></td>
<td></td>
</tr>
<tr>
<td>1a) $100 bill credit to residential low-income customers</td>
<td>$2.5 million</td>
</tr>
<tr>
<td>1b) $250 bill credit to qualifying and responding small business customers</td>
<td>$1.0 million</td>
</tr>
<tr>
<td><strong>Workforce Relief</strong></td>
<td></td>
</tr>
<tr>
<td>2a) Workforce Electrification Training with $500 stipend</td>
<td>$1.0 million</td>
</tr>
<tr>
<td>2b) Workforce Home Electrification Installation</td>
<td>$0.5 million</td>
</tr>
<tr>
<td><strong>Community Resiliency</strong></td>
<td></td>
</tr>
<tr>
<td>3a) Resiliency Infrastructure Planning Support</td>
<td>$1.0 million</td>
</tr>
<tr>
<td>3b) Resiliency Infrastructure Capital Project Support</td>
<td>$4.0 million</td>
</tr>
</tbody>
</table>

Total: ~$10 million
$10 Million in local COVID-19 Relief

Customer Relief, Workforce Training & Community Resilience
Power Prepay – Authorize CEO to Enter Into Agreements To Finalize Power Prepayment

SVCE Board of Directors
October 14, 2020
Overview

• **Transacting Parties**
  1. Tax-exempt Load Serving Entity (LSE, also called “Prepay Buyer”)
  2. Taxable financial counterparty (bank, called “Prepay Supplier”)

• **Process**
  1. Prepay Supplier assigned into existing or future energy supply contract(s) held by LSE
  2. Municipal bonds issued by conduit, amounting to combined notional value of assigned contracts
  3. Prepay Supplier pays the contract price to PPA Seller, immediately transferring all electricity and attributes to LSE
  4. LSE pays Prepay Supplier at discounted rate, achieving procurement cost savings

• **Takeaway**
Prepay Supplier holds and utilizes capital, creating taxable vs. tax-exempt arbitrage that enables discount
Summary of Benefits and Risk

• Benefits
  ✓ Savings over the 30-year term expected to be 8% - 12% per year on power quantities delivered under the pre-pay structure compared to spot market purchases / current contracts
  ✓ Equates to @$2.5MM to $3.5MM per year or @0.50% to 0.75% rate reduction
  ✓ Favorable risk allocation where SVCE only pays for energy that is delivered (same as contracts today)
  ✓ Debt is non-recourse to SVCE
  ✓ Rating agencies comfortable with comparable deals at SMUD, SCPPA, others

• Risks
  ✓ Loss of savings and back to square one
  ✓ Lost investment of staff time
Timing and Cost

• **Timing**
  ✓ Transaction is dependent on number of market factors which are in constant fluctuation; opportunities to transact can be episodic
  ✓ Moving forward and preparing paperwork takes months
  ✓ Invest the time now to prepare for future approval, execution and success

• **Cost**
  ✓ Majority of the costs are contingent and paid through bond proceeds at closing
  ✓ Various parties involved: bond underwriter, energy supplier, lawyers (bond/tax/disclosure/underwriter’s), municipal advisor, and rating agencies
  ✓ Estimated costs of $1.5MM (paid for by bond issuance)
  ✓ Exploring creation of a JPA Conduit Issuer at a cost of $15k (out of pocket)
Getting Ready

**Bond Conduit Formation**

- SVCE, EBCE, MCE, CCCE
- Work has been initiated
- To be completed in Q4 2020 or Q1 2021
- Minimal cost ~$15K

**Documentation and Transaction Terms**

- SVCE & EBCE
- Work has been initiated
- To be completed by Q1 2021
- Select pre-pay supplier, hire legal counsel, municipal finance advisor and other necessary professionals; nearly all fees are contingent on a deal being transacted.
Agreements with Professionals to Complete Transaction

- SVCE needs to secure professional assistance to complete the work necessary to develop, draft, and finalize appropriate documents to bring the complete Prepayment Transaction
  - bond counsel,
  - tax counsel,
  - issuers counsel,
  - disclosure counsel,
  - municipal financial advisor,

and any other consultant needed to support the completion of the Prepayment Transaction
### Professionals selected by EBCE/SVCE

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bond Counsel: Orrick, Herrington &amp; Sutcliffe</td>
<td>• Role: Represent bondholders</td>
</tr>
<tr>
<td>Tax Counsel: Orrick, Herrington &amp; Sutcliffe</td>
<td>• Role: Provide tax opinion on transaction</td>
</tr>
<tr>
<td>Issuer's Counsel (also known as Prepay Counsel or Prepaid Counsel): Chapman &amp; Cutler LLP</td>
<td>• Role: Represent issuer’s interests, supporting drafting and negotiating terms of prepay agreement and associated energy supply agreements</td>
</tr>
<tr>
<td>Disclosure Counsel: Chapman &amp; Cutler LLP</td>
<td>• Role: Prepare Official Statement / Prospectus</td>
</tr>
<tr>
<td>Municipal Advisor: TBD, solicitation in process</td>
<td>• Role: Advise Prepay Buyer in negotiations; required by Municipal Securities Rulemaking Board (MSRB)</td>
</tr>
</tbody>
</table>
Fiscal Impact of this Recommendation

• There is no negative fiscal impact to SVCE. Funds for the Contracts would be contingent and paid directly from the proceeds from the sale of the bonds except for a payment by SVCE of no more than $15,000 to Issurer’s Counsel if the transaction does not close.

• Cost is estimated to be between $1-1.5 million
<table>
<thead>
<tr>
<th>Date Range</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 2020</td>
<td>SVCE Finance Committee Briefing #1</td>
</tr>
<tr>
<td>September 2020</td>
<td>SVCE Board Briefing on Getting Ready to Transact a Power Prepay</td>
</tr>
<tr>
<td>September 2020</td>
<td>SVCE Finance Committee Discussion #2</td>
</tr>
<tr>
<td>October 2020</td>
<td>SVCE Board Authorizes CEO to get Prepayment Transaction Finalized for Board Consideration</td>
</tr>
<tr>
<td>Q4 2020 - Q1 2021</td>
<td>Documentation and Transaction Terms Developed</td>
</tr>
<tr>
<td></td>
<td>Conduit JPA to SVCE Board</td>
</tr>
<tr>
<td>TBD - Q1 2021 or later</td>
<td>Transaction brought to SVCE Board for approval when market is ready</td>
</tr>
</tbody>
</table>
Request

• Recommend that the SVCE Board authorize CEO to enter into agreements necessary to carry out the tasks to finalize the Prepayment Transaction that will be subsequently submitted to the Board for approval

• This action was approved and recommended by the Finance & Administration Committee on September 15, 2020
Additional Background Slides
Structure Overview

- **Bank Supplier**
  - Prepayment $$$
  - MWhs + RECs + Debt Service

- **Existing PPA Counterparty**
  - Contract Price

- **Municipal Conduit**
  - Contract Price
  - Less Discount
  - MWhs + RECs

- **Non-Recourse Tax-Exempt Bonds**
  - Debt Service
  - Bond Proceeds

- **SVCE**
  - Existing PPA to be “Novated”
Glossary of Terms

**Power Purchase Agreement “PPA”** – contract to receive and pay for a specific type of energy (i.e. renewable solar, wind, etc.) at a specific price over the term of the contract (i.e. 15 years)

**Tax-exempt Prepayment** – payment in advance by a municipal utility for a number of years of contracted energy and financing the prepayment with tax-exempt debt

“**Novate**” – to assign a PPA contract to another party for a some or all of the contract term

“**Recourse to...**” – secured or guaranteed by the referenced entity

“**Non-recourse...**” – not secured or guaranteed by the referenced entity

“**Conduit issuer**” – entity formed to issue debt but not responsible to repay the debt (non-recourse!)
History and Tax Law Behind Municipal Prepaid Energy Transactions

• Municipal electric and gas utilities (and tax-exempt entities such as CCAs) in the US can prepay for a supply of electricity or natural gas from a taxable (corporate) entity and fund that prepayment with tax-exempt municipal bonds:
  o Must sell that commodity to their retail end-users that reside within their traditional service area.

• Prepayment transactions are legal and Codified in US Tax Law: Since first prepayments of natural gas were done in the early 1990’s, the IRS issued rules allowing tax-exempt prepayments and Congress enacted legislation specifically allowing the transactions (National Energy Policy Act of 2005; Section 1327).

• Over 90 municipal prepayment transactions totaling over $50 Billion have been completed in the US – over 95% of them for natural gas. Natural gas is much easier to “prepay” because the commodity is homogenous and is easy to store.

• Prepayments have saved utility ratepayers (natural gas, electricity from gas fired power plants and energy from renewable power projects) billions of $ in reduced rates and energy charges and will continue to do so over the 30-year life of the transactions.
Renewable Energy Prepayment - Key Elements of an SVCE Transaction -

- Existing Renewable PPA’s are assigned or “novated” to the taxable prepaid supplier
- SVCE continues to take and pay for energy and attributes delivered through the contract
- Maintains the existing terms of PPAs, including scheduling and operations
  - Preserves critical PCC-1 and “long-term” attributes for renewable contracts
- Debt associated with program is issued through a conduit and is non-recourse to SVCE; does not impact SVCE’s balance sheet or credit metrics,
- Debt is recourse to (guaranteed by) the bank that receives the prepayment
- If program terminates early or prepaid supplier fails to perform, the SVCE forgoes the future savings and assigned contracts return to status quo
Eleven Prepayments Totaling Over $5.7 Billion Have Been Completed in California

<table>
<thead>
<tr>
<th>Date</th>
<th>Amt. ($000)</th>
<th>Issuer</th>
<th>Description</th>
<th>Beneficiary</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/2007</td>
<td>757,055</td>
<td>Northern Ca Gas Auth No. 1</td>
<td>Nat. Gas</td>
<td>SMUD</td>
</tr>
<tr>
<td>9/2007</td>
<td>887,360</td>
<td>Long Beach Bond Fin Auth</td>
<td>Nat. Gas</td>
<td>City of Long Beach</td>
</tr>
<tr>
<td>10/2007</td>
<td>251,695</td>
<td>Long Beach Bond Fin. Auth</td>
<td>Nat. Gas</td>
<td>City of Long Beach</td>
</tr>
<tr>
<td>8/2009</td>
<td>901,620</td>
<td>M-S-R Energy Authority</td>
<td>Nat. Gas</td>
<td>MID/Redding/SVP</td>
</tr>
<tr>
<td>10/2009</td>
<td>514,160</td>
<td>So Ca Pub Power Auth (Windy Flats)</td>
<td>Elec (Wind)</td>
<td>LADWP, Mult. MOUs</td>
</tr>
<tr>
<td>2010/11</td>
<td>394,700</td>
<td>So Ca Pub Power Auth (Milford 1 &amp; 2)</td>
<td>Elec (Wind)</td>
<td>LADWP, Mult. MOUs</td>
</tr>
<tr>
<td>12/2018</td>
<td>539,615</td>
<td>Northern Ca Energy Auth</td>
<td>Gas/Elec</td>
<td>SMUD</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>5,717,815</strong></td>
</tr>
</tbody>
</table>
Long Duration Storage Procurement Efforts and Formation of a Super Joint Powers Agency

SVCE Board Meeting
October 14, 2020
Purpose

• Overview of Super Joint Power Agency
• Long-Duration Storage Goals and Procurement
• Seek Board feedback
• Timeline
• Next Steps
Business Need for Long-Duration Energy Storage (LDES) & Joint Procurement Super-JPA

**Long Duration Energy Storage**
- California Climate Goals require a clean electric grid & large-scale procurement of renewable power
- Keeping the lights on with high penetrations of renewable power requires energy storage
- CPUC has IRP requirements for Long Duration Energy Storage (LDES)
- Bills in 2020 session have included LDES
- Rolling blackouts result in more interest in storage

**Joint Procurement Super JPA**
- CCAs are proactive in purchasing cleaner power and are also focused on affordability & reliability
- LDES investments may be too large for any one CCA to successfully complete
- LDES is technically complex and has associated financial risk
- Joint procurement de-risks technology and financial risk
Super JPA
Joint Procurement
9 CCA’s are taking steps to form a joint procurement Super-JPA
### 9 CCAs - by the numbers

<table>
<thead>
<tr>
<th>CCA considering Super JPA</th>
<th>Annual Load 2019 (GWh)</th>
<th>Est Peak Load (MW)</th>
<th>Customer Accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Coast Community Energy</td>
<td>3,094</td>
<td>679</td>
<td>275,750</td>
</tr>
<tr>
<td>Clean Power SF</td>
<td>2,706</td>
<td>460</td>
<td>380,000</td>
</tr>
<tr>
<td>East Bay Community Energy</td>
<td>5,819</td>
<td>990</td>
<td>533,000</td>
</tr>
<tr>
<td>Marin Clean Energy</td>
<td>5,275</td>
<td>505</td>
<td>470,000</td>
</tr>
<tr>
<td>Peninsula Clean Energy</td>
<td>3,600</td>
<td>733</td>
<td>293,000</td>
</tr>
<tr>
<td>Redwood Coast Energy</td>
<td>699</td>
<td>125</td>
<td>62,000</td>
</tr>
<tr>
<td>San Jose Clean Energy</td>
<td>3,286</td>
<td>1,081</td>
<td>332,500</td>
</tr>
<tr>
<td>Silicon Valley Clean Energy</td>
<td>3,898</td>
<td>800</td>
<td>270,000</td>
</tr>
<tr>
<td>Sonoma Clean Power</td>
<td>2,360</td>
<td>417</td>
<td>227,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30,737</strong></td>
<td><strong>5,790</strong></td>
<td><strong>2,843,250</strong></td>
</tr>
</tbody>
</table>
Super JPA Highlights

- **Objective:** Develop a cost-effective, risk-minimized, CCA-controlled structure to develop or acquire necessary resources exceeding the procurement needs of a single CCA.

- **Structure:** Joint Powers Authority composed of CCAs; Enabling Agreement with Opt-in Project Participation

- **Target Projects:** Stand-alone storage and renewable resources exceeding individual CCA demand
  - Long Duration Storage – first project

- **JPA Timeline:** Form JPA by end of 2020 and not later than early 2021
Super JPA - Joint Procurement Benefits

• Economies of Scale
• Enhanced Negotiating Power
• Shared Risk – execution, development and performance
• Potential for Shared Financing – prepay/bonds
• Strategic value in demonstrating CCA self-procurement, reliability contributions (if successful)
Super-JPA - Joint Procurement Non-Benefits

• **Joint Procurement allows for sharing of risk but does not eliminate underlying risk**
  
  • Project Development and Performance Risk
  • Regulatory, Policy and Market Risk
  • Potential for establishment and/or expansion of centralized procurement entity or mandated procurement

• **Sharing risk with other members may increase risk for individual members due to step-up and/or other contract provisions**
Proposed Super JPA Structure

• Enabling Agreement – allows for CCAs to potentially participate in projects – no obligation

• Super JPA intended to be the direct party to any contract with storage or project developers
  • We will learn details on this as we go through the solicitation process
  • CCAs that chose to participate will sign Project Participation Agreement(s) with Super JPA

First Joint Procurement Project Target: Long Duration Storage Agreement by September 2021
Super JPA Agreement Schedule

• First Draft of JPA Enabling Agreement circulated to potential JPA member attorneys in late September
• Collaborative revisions are ongoing
• Draft JPA Agreement is scheduled for completion by the end of October 2020
• Potential Members are targeting November-December timeframe for individual governing body consideration and approval
  • Some potential JPA members may take a bit longer for local approval processes
Long Duration Energy Storage
Long Duration Energy Storage ("LDES")

- LDES are energy storage technologies with 8-hour minimum discharge duration
- Technologies – lithium ion, chemical flow batteries, gravity, pumped hydro, compressed air, etc.
- Can be grid-charged – not renewable
- Used to integrate renewables onto the grid and support reliability

*CPUC’s Integrated Resource Plan (IRP) - LDES needed to meet GHG reduction goals*
LDES Procurement Goals

• Target up to 500 MW of LDS from one or more projects with on-line date no later than 2026
  • Notional value $2 billion

• Assess Project Viability, Uncertainty & Risk

• LDS should not be procured for compliance alone – must have market and/or strategic value and be cost-effective
  • Cost, Energy value, Resource Adequacy, Ancillary Services
LDES Procurement Efforts

• June 2020
  • Multi-CCA Request for Information (RFI)
  • 13 CCAs participated
  • Over 58 projects submitted

• Sept. – October 2020
  • Stakeholder Outreach – CPUC, CAISO & Legislature

• October 2020
  • Multi-CCA (8) Request for Offers/Proposal
Super JPA & LDES Procurement Timeline

**June 2020**
Initiate Super JPA Formation Agreement

**October 2020**
Finalize Super JPA Agreement
Issue LDES RFO

**Dec. - February 2021**
CCA Super JPA Board Approvals
Evaluate RFO Proposals

**March - September 2021**
Negotiate/Execute LDES Project(s)
CCA Board Approvals for Project Participation Agreement
# JPA & LDES Procurement Timeline

## 1. Long-Duration Energy Storage (LDES) RFO & Transaction

- **a.** RFI (done)
- **b.** RFO
- **c.** Shortlist Projects
- **d.** Negotiate LDES & Participation Agreements

## 2. Super JPA Enabling Agreement & Project Principles

- **a.** Develop Enabling-Agreement Super JPA document
- **c.** Obtain individual member approvals of SuperJPA
- **d.** Hire lead negotiator and associated support
- **d.** Negotiate LDES & Participation Agreements

---

The two tasks are identical and merge the RFO and SuperJPA tracks.
Next Steps

• Input from the Board
• Discuss comments with Executive Committee, as necessary
• Schedule for December 2020 Board meeting for approval
Backup
# Super JPA Buying Power

<table>
<thead>
<tr>
<th>CCA</th>
<th>Annual Load 2019 (GWh)</th>
<th>Est Peak Load (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Coast Community Energy</td>
<td>3,094</td>
<td>679</td>
</tr>
<tr>
<td>Clean Power SF</td>
<td>2,706</td>
<td>460</td>
</tr>
<tr>
<td>EBCE</td>
<td>5,819</td>
<td>990</td>
</tr>
<tr>
<td>Marin Clean Energy</td>
<td>5,275</td>
<td>505</td>
</tr>
<tr>
<td>Peninsula Clean Energy</td>
<td>3,600</td>
<td>733</td>
</tr>
<tr>
<td>Redwood Coast Energy</td>
<td>699</td>
<td>125</td>
</tr>
<tr>
<td>San Jose Clean Energy</td>
<td>3,286</td>
<td>1,081</td>
</tr>
<tr>
<td>Silicon Valley Clean Energy</td>
<td>3,898</td>
<td>800</td>
</tr>
<tr>
<td>Sonoma Clean Power</td>
<td>2,360</td>
<td>417</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30,737</strong></td>
<td><strong>5,790</strong></td>
</tr>
</tbody>
</table>