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SVCE Information Update on 2022 SVCE Board Elections

Executive Committee

November 17, 2021

Purpose

Review the selection process and timeline for SVCE appointments of Chair, Vice Chair, and committees.

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Proposed Process

- Email with call for letters of interest for Chair/Vice Chair send Friday, December 10th
- Chair, Vice Chair, and Executive Committee members selected at annual meeting on January 12th
- Email with proposed committee matrix worksheet distributed to Board members January 14th
- Committee assignments made at the February 9th Board of Directors meeting

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Proposed Timeline

December

Dec. 8: SVCE Board Meeting information item
Dec. 10: Written Instruction

January

Jan. 3: Chair/Vice Chair Interest Letters & Executive Committee Interest due
Jan. 12: Chair/Vice Chair and Executive Committee selections made at BOD meeting
Jan. 14: Written instruction for committee interests distributed
Jan 28: Committee Matrix worksheets due

February

Feb. 9: SVCE Committee Assignments made

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2022 Committee Matrix Worksheet

NAME:
DATE:

Committee	Description	Meeting Details	Current Roster	Interest in serving for 2022	
				Yes	No
Executive Committee	The Executive Committee is a subset of the Board of Directors; they provide input and support to SVCE on operational and policy matters. The Executive Committee is made up of five Directors of the Board.	**Time:** 2:45 PM - 5 PM **Frequency:** Monthly, 4th Friday **Location:** Virtual	•Liz Gibbons (Chair) •George Tyson (Vice Chair) •Margaret Abe-Koga •Neysa Fligor •Javad Ellahie	☐ ☐	☐ ☐
			Not on committee, but interested for 2022	☐	☐
				Yes	No
Finance & Administration Committee	The Finance & Administration Committee consists of no fewer than three members and no greater than six members, and can be Board members, Alternate Board members, or a Board appointed Agency staff member. The Finance and Administration Committee works with SVCE staff on items related to financial and administrative issues that impact the agency.	**Time:** TBD **Frequency:** Quarterly & as needed **Location:** Virtual	•Rob Rennie (Chair) •Bryan Mekechuk (Vice Chair) •Yvonne Martinez Beltran •Liz Gibbons • (formerly Trevin Barber)	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
			Not on committee, but interested for 2021	☐	☐
				Yes	No
Audit Committee	The Audit Committee consists of no fewer than three members and no greater than six members, and can be Board members, Alternate Board members, or a Board appointed Agency staff member. The Audit Committee works with SVCE staff on the initiation and receiving of the annual audit.	**Time:** TBD **Frequency:** Twice yearly & as needed	•Hung Wei •Evelyn Chua •Bryan Mekechuk •Yvonne Martinez Beltran	☐ ☐ ☐ ☐	☐ ☐ ☐ ☐
			Not on committee, but interested for 2021		

Questions?



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California Community Power Long Duration Energy Storage Tumbleweed Project

Executive Committee
November 17, 2021
Monica Padilla, Director of Power Resources

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Overview

1. Background
2. Long Duration Storage Procurement Goals
3. CPUC Mid-term Reliability Procurement Order
4. Long Duration Storage Request for Offers & Selection
5. Project #1 - LS Power Tumbleweed
6. CC Power Participating Members and Contracting Structure
7. Approval Process & Execution
8. Executive Committee Request
9. Next Steps

Long Duration Storage Procurement Timeline

CCAs set out to jointly procure cost-effective long duration storage (LDS) & support grid reliability

Jun '20	Interest & Information Gathering (RFI)
Oct '20	CCAs Issue a Joint- Request for Offers (RFO)
Feb '21	California Community Power (CC Power) Formed/Long Duration Storage Project Oversight Committee formalized
May '21	LDS Projects Shortlisted, ESSA Negotiations start and begin to development of CC Power/CCA Agreements
Jun '21	CPUC Issues Mid-term Reliability Procurement Order – LDS POC Develop Pathways to Achieve Compliance
Now	CC Power kick-off approval process and individual CCA Approval Process – LDS Project #1 Oct 2021-March 2022

LDS Joint Procurement Goals

Procure up to 500 MW of LDS resources

- Enhance portfolio value via cost-effective resources: value of energy + capacity > costs
- Integrate intermittent resources (solar + wind)
- Support grid reliability
- Share development and project performance risk via new joint powers agency → California Community Power
- “Right-size” project subscription
- Meet potential Integrated Resource Plan procurement mandates

Mid-term Reliability Procurement Order

D.21-06-035 adopted by CPUC on June 24, 2021 to address mid-term reliability

- LSEs required to collectively procure 11,500 MW NQC of new resources
- Follow-on to November 7, 2019 CPUC decision mandating 3,300 MW NQC procurement for 2021-2023 to maintain reliability
- Contract of at least 10 years
- Allocated to LSEs by load share
- Resources must be zero-emission or RPS eligible (no fossil resources)
- 4,500 MW of obligation subject to specific category requirements

Procurement Order Timing

Procurement Obligation in Net Qualifying Capacity (MW) for All LSEs by Category and Year

Procurement Category	2023	2024	2025	2026	Total
Zero-emissions generation, generation paired with storage, or demand response resources	-	-	2,500	-	2,500
Firm zero-emitting resources	-	-	-	1,000	1,000
Long-duration storage resources	-	-	-	1,000	1,000
Remaining New Capacity Required			-	-	7,000
Total Annual Capacity Requirements	***2,000***	***6,000***	***1,500***	***2,000***	***11,500***

1,000 MW of LDS ordered by CPUC

- Technology agnostic
- 8-hour minimum discharge duration
- COD June 2026 – demonstrate reasonable effort by February 2023
- 10-year minimum term
- Subject to Effective Load Carrying Capability (ELCC) adjustments

CPUC Interim ELCCs

Procurement Category	2023	2024	2025 *Indicative*	2026 *Indicative*
4-Hour Battery	96.3%	90.7%	74.2%	69.0%
6-Hour Battery	98.0%	93.4%	79.6%	75.1%
8-Hour Battery	98.2%	94.3%	82.2%	78.2%
8-Hour Pumped Storage Hydro				76.8%
12-Hour Pumped Storage Hydro				80.8%

Requirements & Criteria

RFO Protocol

- CAISO resource or Import with dynamic transfer rights
- Qualify as RA
- COD no later than June 1, 2026
- Minimum delivery term 10 years
- 50 MW minimum
- Submittal deadline December 2021

Evaluation Criteria

- Economics
- Location, Interconnection & Risk
- Technology viability
- Developer Experience
- Environmental
- Labor

Offers Received

- 51 Entities submitted offers (over 9,000 MW)
- Total of 221 unique pricing offers
  - 160 Full Toll Offers
  - 57 RA Only Offers
- 8 Technology types
  - 18 distinct technologies
- 8,10,12-hour, and multi-day discharge durations
- Project COD as early as 2023

Technology
Battery aqueous-air flow lithium-ion zinc
Chemical Flow iron redox flow vanadium flow
Compressed Air
Fuel Cell – Hydrogen
Hybrid hydrogen, combined-cycle gas gen li-ion, combined-cycle gas gen
Mechanical – Gravity
Pumped Hydro
Thermal ice (HVAC) liquid air molten Salt molten Salt & Gas gen volcanic stone water heat exchange

Evaluation, Ranking, Shortlisting & Negotiations

Staff from 9 CCAs conducted a two-round evaluation process

Round 1: 98 unique Conforming offers evaluated using evaluation rubric & simple-NPV

Round 2: Top 17 projects

- Expected value - evaluation of economics
- Risk
- Interconnection feasibility/deliverability
- Scenario analysis on dispatch strategies & resource adequacy value
- Labor, environment and environmental justice
- Follow-up interviews with emerging technology developers

Shortlisted: 6 Projects (4 lithium-ion and 2 emerging technology) moved to by CC Power

- Dropped 1 emerging technology & 1 lithium-ion
- Remain – 1 emerging technology & 3 lithium-ion

Negotiations: – 3 projects in active negotiations, including **LS Power's Tumbleweed**

Project #1: LS Power – Tumbleweed LDS Project

Tumbleweed was the highest-ranking LDS project

- **Developer – LS Power**
- **Technology –**Lithium-ion, 8 hours discharge duration
- **Project size** - 69 MW/552 MWh
- **Product** – Tolling Agreement w/full capacity rights
- **Location –** Rosamond, Kern County
- **COD –** 7/1/24
- **Price -** fixed $/kw-mo, no escalation
- **Term –** 15 years



CC Power Member Participation

7 CCAs agreed to move forward with joint LDS procurement for Tumbleweed

- MTR LDS procurement mandate for the 7 CCAs is 96.5 MW
- 123.4 MW adjusted by ELCC
- Tumbleweed is 69 MW nameplate – meeting 56% of ELCC adjusted need under the MTR
- Tumbleweed should meet the requirements under the MTR (duration, COD, location etc.)
- Capacity to be allocated based on MTR share obligation

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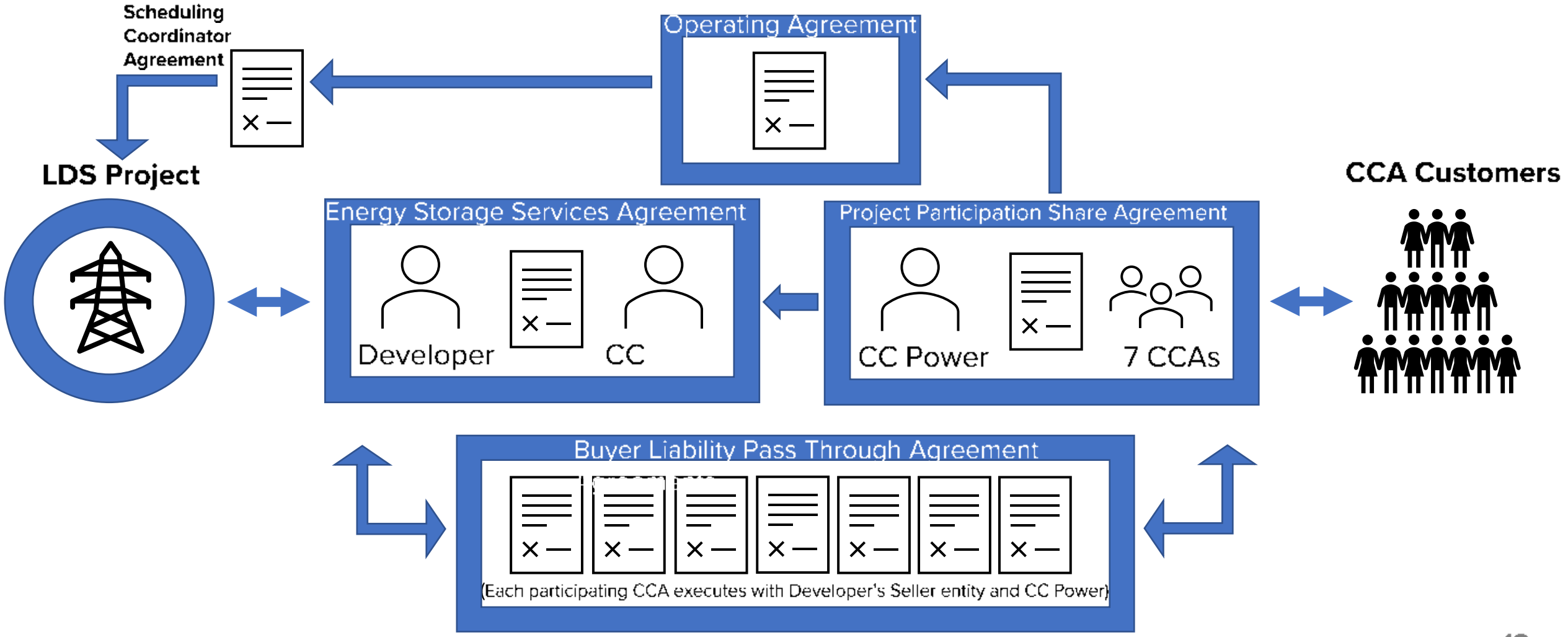
Contracting Structure



Summary and Policy Implications

SVCE must procure ~26.2 MW of qualifying LDS

- Tumbleweed was selected through a robust and competitive solicitation process
- Tumbleweed NPV to participating CCAs is highly uncertain
- Project is expected to include project labor agreement
- Contracting Structure includes a “step-up” provision which exposes SVCE to taking up to 25% additional capacity (based on contract share)
- Procurement of Long Duration Storage (8-hours or more) is mandated through MTR order
- SVCE’s expected share of Tumbleweed is 14.69 MW (56% of obligation)
- Need an additional 11.5 MW - remaining shortlisted projects ***may*** meet or exceed remaining needs
- Failure to meet MTR obligation will expose SVCE to “back-stop” procurement and CPUC penalties

Tumbleweed Allocations & Authority

Each CCA will seek their respective governing body authority to participate

- Initial expected share based on MTR obligation
- Minimum authority needs to cover:
  1) contingency risk of one or more CCA's not executing and
  2) 25% step-up cap due to default
- Maximum authority will be based on individual CCA's appetite to take additional volume
- SVCE min 22.4 MW
- SVCE max 26.2 MW - based on MTR obligation

CCA	Expected Share in ESSA/PPSA	Tumbleweed Allocation per PPSA MW based on 69 MW	Minimum includes large CCA dropping out + Step-up 25% MW
CPSF	[16.0640%]	11.084	16.94
PCE	[19.6888%]	13.585	20.77
RCEA	[3.6248%]	2.501	3.83
SJCE	[22.2792%]	15.373	23.50
SVCE	[21.2448%]	14.659	22.40
SCPA	[12.9520%]	8.937	13.66
VCE	[4.1464%]	2.861	4.37

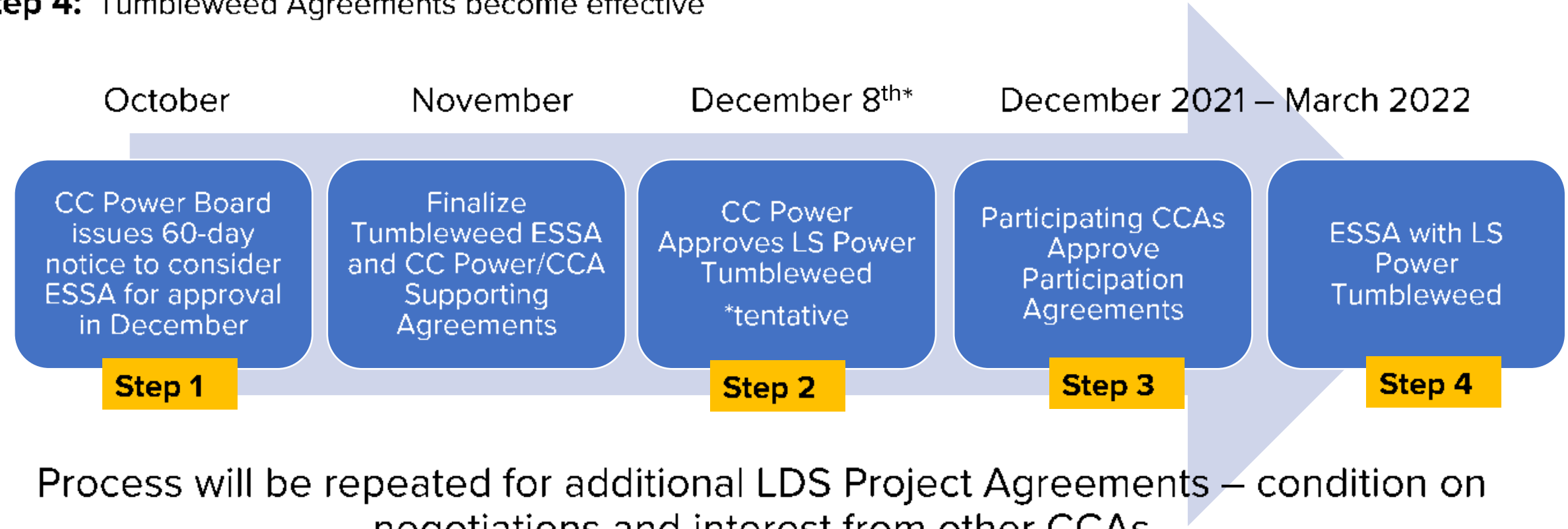
Approval Process

Step 1: CC Power Board issues 60-day notice to consider ESSA for approval in December ✓

Step 2: CC Power Board approves ESSA, PPSA, BLPTA & Operating Agreement condition on individual CCA Approval

Step 3: CCAs seek respective Board Approvals of PPSA, BLPTA and Operating Agreement w/in 90-120 days

Step 4: Tumbleweed Agreements become effective



Process will be repeated for additional LDS Project Agreements – condition on negotiations and interest from other CCAs

SVCE Review of Tumbleweed

Approval Process is contingent on finalization of agreements & CC Power approval of LS Power's Tumbleweed Agreements

1. **September 2021** - Risk Oversight Committee Review of RFO Process, Agreements and Approval Process
2. **October 2021** – Risk Oversight Committee Review of LS Power Tumbleweed (**LDS Project #1**)
3. **November 2021** – Obtain input from the Executive Committee related to CEO vote at CC Power Board meeting in December on LS Power Tumbleweed approval
4. **December 2021** – Seek Board approval of LS Power Tumbleweed Agreements – condition on CC Power approving

SVCE Executive Committee Request

1. Direct the Chief Executive Officer (CEO) as SVCE's representative to California Community Power in support of approval of the LS Power's Tumbleweed Energy Storage Service Agreement, and ancillary agreements

2. Contingent on California Community Power decision on LS Power's Tumbleweed project, bring the necessary CC Power, Tumbleweed agreements to the SVCE Board for approval for a maximum capacity of 26.2 MW

THANK YOU!





Draft
PCIA, PG&E Gen Rate, and SVCE Margin Update

Amrit Singh
Executive Committee Meeting
November 17, 2021

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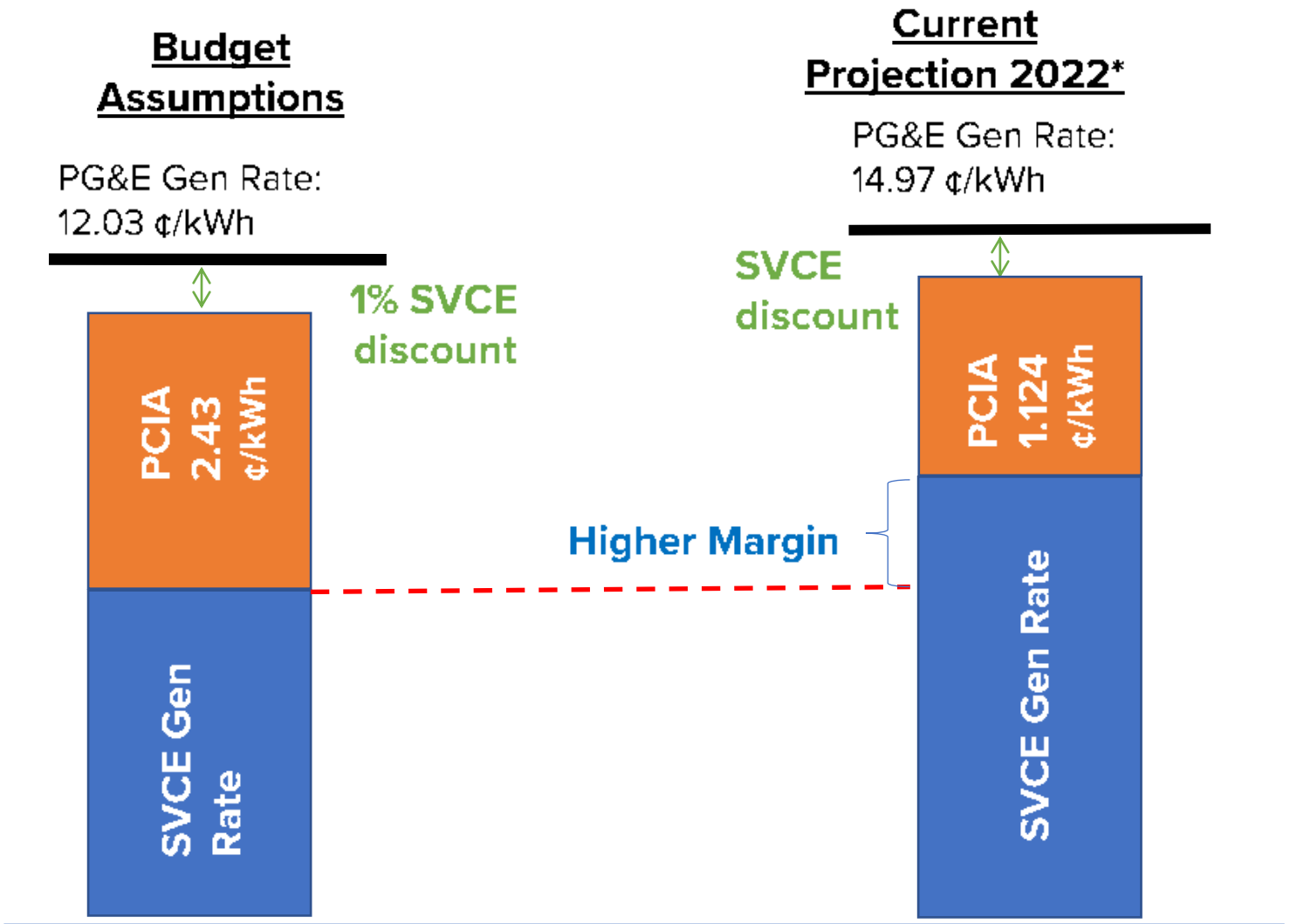
Overview

- Higher margins
- Estimated impact on budget
- Discussion on risk factors
- Price forecast implications
- Stress test
- Options on use of additional funds
- Recommendations - TBD



PG&E ERRA Update Results in Higher Margin than FY 22 Budget Assumptions

- Relative to assumptions in the FY 22 Budget:
  - PG&E's generation rate is expected to increase by about 24%
  - PCIA is expected to decrease by about 54%
- Relative to Budget, SVCE's margin improve by about 44% (in calendar year 2022)
- CPUC to approve actual rates in late December



** Source: PG&E 2022 ERRA Forecast Application*

Estimated Impact on Budget

*Based on **preliminary** calculations.*

FY 22 Budget ($ in thousands)	Budget	Current Estimate	With Revised Margins**	Variance (Budget to Revised Margins)
Revenues*	342,105	348,946	434,222	92,117
Power Supply Cost	273,561	293,558	293,558	19,997
Operating Margin	68,544	55,388	140,664	72,120
Other Costs	32,060	32,060	32,060	-
Net Contribution to Reserves	36,484	23,328	108,604	72,120

** Potential customer write-offs included in other costs.*

*** Assumes 1% customer discount.*

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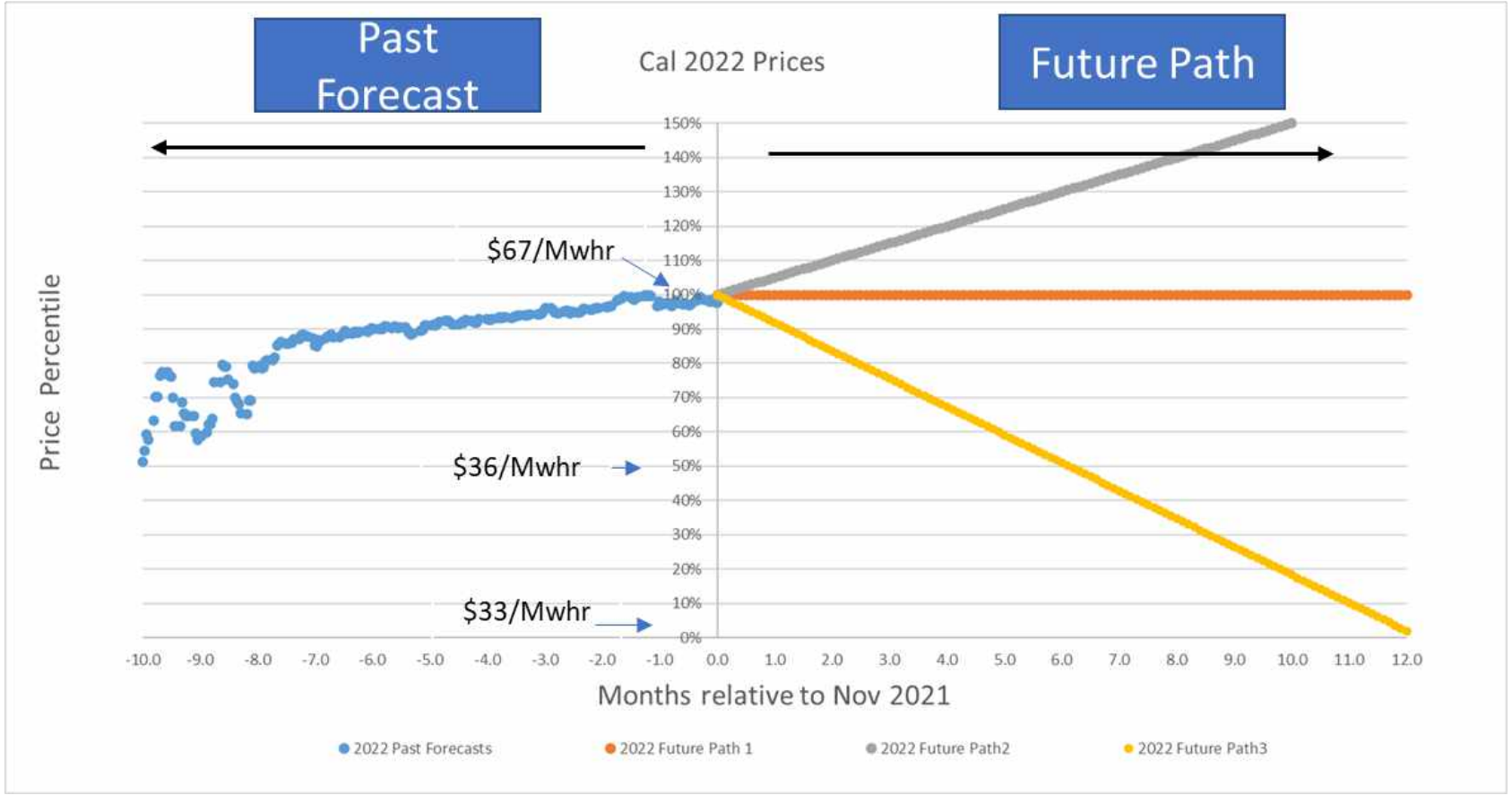
Risk Factors to Consider

- Higher margins result from extreme increase in power market prices (black-swan type event).
  - PG&E Gen Rate also increased because of under recovery in ERRA account
- Black-swan type events that can affect us adversely in the future can draw substantial funds from the reserves and/or increase customer rates to uncompetitive levels
- PCIA is based on current estimated market price benchmark (MPB) from the CPUC
  - If realized prices are lower than MPB, then PCIA will be under collected and the under collection will raise 2023 PCIA rates

Commodity Price Implications on PCIA/Gen Rates

- 2022 forward prices are at all time high.
  - Extreme case of runup in prices
- Most of the increase occurred in the last 10 months
- Can't predict future but price trends could reverse, and prices could drop equally or more.
  - Leads to substantial draw from reserves



Stress Test – Market Prices Plunge

Assumes market prices drop to historical lows (1 percentile).

($ in thousands)	Cal 2023 Forecast	Stress Test 1.**	Stress Test 2.***
Revenues*	394,111	96,629	96,629
Power Supply Cost	251,249	219,867	251,249
Operating Margin	142,862	(123,238)	(154,620)
Other Costs	33,663	33,663	33,663
Net Contribution to Reserves	109,199	(156,901)	(188,283)

* *Potential customer write-offs included in other costs.*

** *Hedges for Cal 2023 at current 70% level. Assumes 1% customer discount.*

*** *Assumes Cal 2023 is hedged 100% at today's prices. Assumes 1% customer discount.*

Options for use of Improved Margins

1. Increase customer discount
   - Every 1% increase in customer discount diverts ~ $6 million from reserves.
2. Add funds to programs double down strategy
   - Currently programs are funded at 2% of revenues. Each 1% adds ~$4.3 million.
3. Hold in reserves for future black swan events
   - Forecast days cash on hand (DCOH) from FY 2022 budget: 233
   - Increase in DCOH with improved margins after adjustment for FY 21 loss: 70
   - Expected DCOH for FY 2022: 303
     - Minimum target: 120 Days
     - Target: 230 Days
     - Maximum: 320 Days
   - The black swan event/stress test modeled would use 190 – 225 DCOH.
4. Combination of above

Recommendations - TBD

Staff will present recommendations at the meeting for the Committee's consideration.