Valley Clean Energy Board Meeting – July 14, 2022
via video/teleconference

Item 20 – CC Power Firm Clean Resources: Geothermal Projects

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Item 20 – CC Power Geothermal Projects: Outline

1. Background
2. CPUC Mid-term Reliability Procurement Order
3. Project Overview
4. CC Power Participating Members & Allocations
5. Contract Structure
6. Conclusion / Recommendation

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Item 20 – CC Power Geothermal Projects: Background

- On Sept. 15, 2021, CC Power Board approved issuance of an RFP for Firm Clean Resources (FCR) (i.e. geothermal or biomass) with a min. 80% capacity factor
- Offers were due December 13, 2021
- CC Power received bids from 6 bidders and 16 projects. Only 5 of the projects were located in California
- CC Power ran an analytics model and conducted interviews
- On January 19, 2022, CC Power Board delegated authority to the General Manager to finalize shortlisting of FCR projects and to proceed with negotiations with the shortlisted developers
- CC Power negotiated projects from two bidders: 1 project from Open Mountain Energy LLC (OME) and a portfolio of projects from Ormat Nevada, Inc. (Ormat)
  - Offers from the remaining CA projects were priced substantially above the OME and Ormat offers
  - Ormat PPA is for a portfolio of projects, 5 of which are in NV and 3 of which are in CA

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Item 20 – CC Power Geothermal Projects: Mid-term Reliability Procurement Order (MTR)

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

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Item 20 – CC Power Geothermal Projects: MTR 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***

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Item 20 – CC Power Geothermal Projects: Ormat Portfolio Overview

- **Seller -** Ormat
- **Developer –** Ormat
- **Technology –** Geothermal
- **Project size -** Portfolio of facilities in CA and NV with a min of 64 MW and a max of 125 MW
- **Product –** Energy, PCC1, full capacity rights
- **Location –** California & Nevada
- **COD –** Varies but as early as 2024
- **Price -** fixed $/MWh, no escalation
- **Term –** 20 years

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Item 20 – CC Power Geothermal Projects: Fish Lake Project Overview

- **Seller -** Fish Lake Geothermal, LLC
- **Developer –** Open Mountain Energy, LLC
- **Technology –** Geothermal
- **Project size -** 13 MW
- **Product –** Energy, PCC1, full capacity rights
- **Location –** Esmeralda County, Nevada
- **COD –** June 2024
- **Price -** fixed $/MWh, no escalation
- **Term –** 20 years

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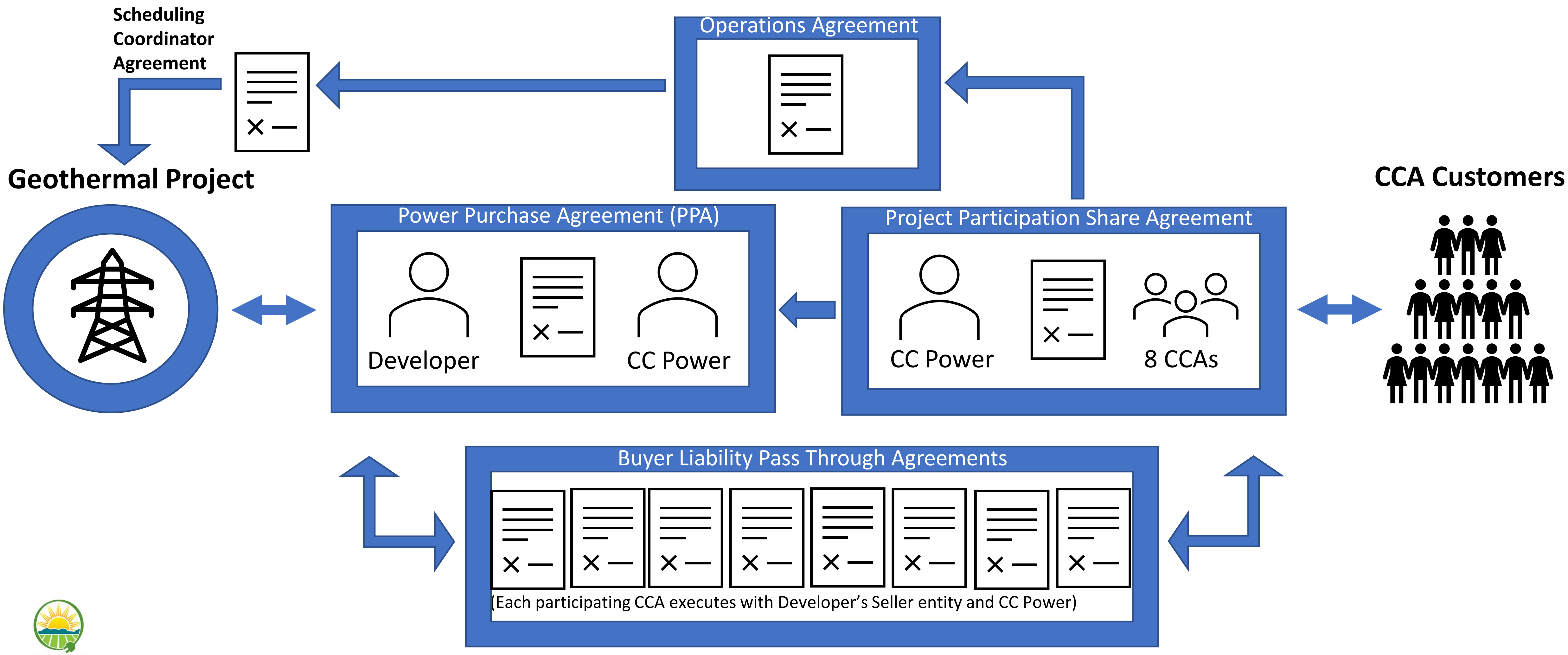
Item 20 – CC Power Geothermal Projects: Member Participation & Allocation

CCA	OME Nameplate	OME Step-up	Ormat Nameplate	Ormat Step-up	Total Nameplate	Total Step-up
3CE	2.42	0.60	22.38	5.59	24.79	6.20
CPSF	1.89	0.47	17.38	4.34	19.26	4.82
PCE	2.31	0.58	21.38	5.34	23.69	5.92
RCEA	0.36	0.09	4.00	1.00	4.36	1.09
SJCE	2.26	0.57	24.50	6.13	26.76	6.69
SVCE	1.82	0.46	16.75	4.19	18.57	4.64
SCPA	1.52	0.38	14.00	3.50	15.52	3.88
VCE	0.42	0.10	4.63	1.16	5.04	1.26
TOTAL	**13.00**	**3.25**	**125.00**	**31.25**	**138.00**	**34.50**

Item 20 – CC Power Geothermal Projects : Contract Structure

VCE to execute the PPSA and the BLPTA (the Operating Agreement will be signed at a later date)



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Item 20 – CC Power Geothermal Projects: Conclusion / Recommendation

- The geothermal projects were selected through a robust, competitive solicitation process
- Projects not in the CAISO need import capability (MIC) into California to count as Resource Adequacy, a requirement for the FCR procurement mandate
- All projects, with the exception of one, will require MIC
- Contracting structure includes a “step-up” provision which exposes VCE to taking up to additional capacity (based on contract share) in the event a participant defaults[1]
- Firm clean resource procurement, such as geothermal, is mandated through MTR order
- VCE’s has a need for additional geothermal resources[2]
- **Recommendation**: Authorize the Executive Officer to execute the following agreements:
    - Project Participation Share Agreement (PPSA)
    - Buyer Liability Pass Through Agreement (BLPTA) [BLPTA is Exhibit L of the PPA]

1) Staff will seek approval from the VCE Board for a maximum authorized amount of approx. 6.5 MW.
2) Per the Carbon Neutral study VCE has a need beyond the mandate which can be procured at a later date.

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Item 21 – Customer Rate / Product Options

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Item 21 – Customer Rate / Product Options

<u>Overview</u>

- Background
- Proposed Cost-Based Rates Structure
- Recommendation/Next Steps

Purpose: To update VCE's customer rate structure enabling VCE to offer additional customer choice and continue to set rates calibrated to actual cost and reserve requirements.

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Item 21 – Customer Rate / Product Options

Summary

Consistent with prior Board direction, Staff recommends implementation of the three-tiered rate structure in 2023.

- The expanded customer rate/option structure similar to other CCA's.
- Increased ability to address cost drivers outside of VCE's direct control.
- Adding a new least-cost Base Green customer rate/product option gives customers an additional choice
- Does not alter VCE's overall portfolio or progress toward 2030 renewable goals.
- Provides enhanced local control, customer choice, cost competitiveness and the ability to execute local programs.

Item 21 – Customer Rate / Product Options

<u>Background (Primary Rate Considerations)</u>

- Power Charge Indifference Adjustment (PCIA). A net 46% increase in the PCIA from 2020/21
- Resource Adequacy (RA) mandates and pricing
- Power Prices. Average forward market power prices have increased by nearly 60% since April-2021.
- PG&E Rate Adjustments.
- Geopolitical Climate. The conflict in Ukraine
- Supply chain interruptions - COVID Pandemic and U.S. trade restrictions
- Establish/Maintain VCE Cash Reserves – Rate Stabilization, Programs Implementation, Credit Rating

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Item 21 – Customer Rate / Product Options

Updated Customer Rate/Product Options – Three-Tiers

- Customer product structure with three options could be established by implementing a new “Base Green" option.

Proposed Base Green option:

1. Increased customer choice by adding a new least-cost customer option
   - Approximately 0.5% below PG&E (Total Bill)
2. 0-5% more renewable than California RPS requirements
3. Starting with Renewable Differentiation of 5% from Standard Green

Note: VCE's existing customer dividend program would continue to provide VCE with a mechanism to credit eligible customers when VCE reaches its financial/reserve objectives.

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Item 21 – Customer Rate / Product Options

Draft Customer Rate Structure (Design)

Base Green

New "Least Cost" product: Priced 0.5% ***below*** PG&E

Renewable energy sources target 0-5% ***above*** CPUC RPS mandate

Reduced program eligibility and no dividends

Standard Green

Existing Default: cost-based rate

Min 5% RPS differentiation above Base Green

Full program eligibility and dividends

UltraGreen

Existing Opt-Up: cost-based rate

100% Renewable

Full program eligibility and dividends

Note: CARE/FERA customers maintain the existing VCE Standard Green RPS and Customer Programs for 2023

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Item 21 – Customer Rate / Product Options

VCE Draft Customer Products (Content and Pricing)

Customer Rate Option	Rate	Portfolio	Notes
Base Green (new)	Less than PG&E (-0.5%) total bill comparison	Target 0-5% above RPS requirements	• Ineligible to participate in customer dividend program; reduced access to customer program benefits • CARE/FERA customers maintain the existing VCE Standard Green RPS and Customer Programs for 2023
Standard Green - Default (existing)	Cost-based	Maintain existing VCE multi-year portfolio mix	• To establish product differentiation, the 2023 standard green portfolio target will be a minimum of 5% above the Base Green renewable content. The product differentiation percentage target will be revisited as part of the 2024 rate adoption process. • Eligible for customer dividend program and full customer program benefits
UltraGreen – Opt-up (existing)	Cost-based	Maintain existing 100% renewable portfolio	• Eligible for customer dividend program and full customer program benefits

Item 21 – Customer Rate / Product Options

VCE Projected (RPS) Products

Customer Rate Option	2023	2024	2025
CPUC RPS Mandate	41%	45%	47
Base Green (new)	42%	48%	52%
Standard Green - Default (existing)	47%	85%	83%
UltraGreen – Opt-up (existing)	100%	100%	100%

Note: The table above is based on current VCE renewable contracts.

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Item 21 – Customer Rate / Product Options

Staff Responses to Community Advisory Committee initial Feedback

Product Differentiation

- Standard Green and "Base Green" RPS value differentiation has been recommended to start at 5%.
- Standard Green & UltraGreen - customer dividends and community programs

Duration needed to provide the Base Green option

- Revisit in 2028 or upon annual participation greater than 5%.

Marketing framework

- Primary Focus is customer retention

Organizational Cost/Benefit – Examine the value added by additional customer choice vs. the effort/value added and the risk of customer "opt down."

- The additional customer rate/product option provides a benchmark for rate equity (CARE/FERA).
- Ensures competitive rates for current and future member jurisdiction

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Item 21 – Customer Rate / Product Options

CAC Recommendation

The CAC recommended that the Board adopt the following:

- Adopt a new rate structure with three customer options starting in 2023 to include a least cost option.

and

- Automatically enroll California Alternative Rates for Energy (CARE) and Family Electric Rates Assistance (FERA) customers in the Base Green option but with enhanced renewable portfolio (Standard Green)

VALLEY CLEAN ENERGY

Item 21 – Customer Rate / Product Options

Summary

Consistent with prior Board direction, Staff recommends implementation of the three-tiered rate structure in 2023 to coincide with VCE's annual rate setting process.

- The expanded customer rate/option structure similar to other CCA's.
- Increased ability to address cost drivers outside of VCE's direct control.
- Adding a new least-cost Base Green customer rate/product option gives customers an additional choice
- Does not alter VCE's overall portfolio or progress toward 2030 renewable goals.
- Provides enhanced local control, customer choice, cost competitiveness and the ability to execute local programs.

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Item 21 – Customer Rate / Product Options

Staff Recommendation

1. Approve the attached resolution adopting a new three-tiered customer rate structure adding a new least cost “Base Green” option in 2023 to the existing “Standard Green” (default rate) and “UltraGreen” (existing 100% renewable rate) customer rate options;
2. Approve enrolling California Alternative Rates for Energy (CARE) and Family Electric Rates Assistance (FERA) customers in the Base Green option with Standard Green features as described in the staff report.
3. Direct staff to incorporate recommendations 1 and 2 into the 2023 Customer Rate Setting process.

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Item 21 – Customer Rate / Product Options

Next Steps

If adopted, the proposed schedule for implementation of 2023 rates:

- May - August 2022: Begin 2023 Rate study/preliminary revenue needs **(underway)**
- September 2022: Mid-year rate review of 2022 actuals
- October to December 2022: Review 2023 customer rate study and rate adoption.
- December 2022: Board adoption of 2023 rates, including Base Green customer option
- Q1 2023: Rates update report to Board/CAC.

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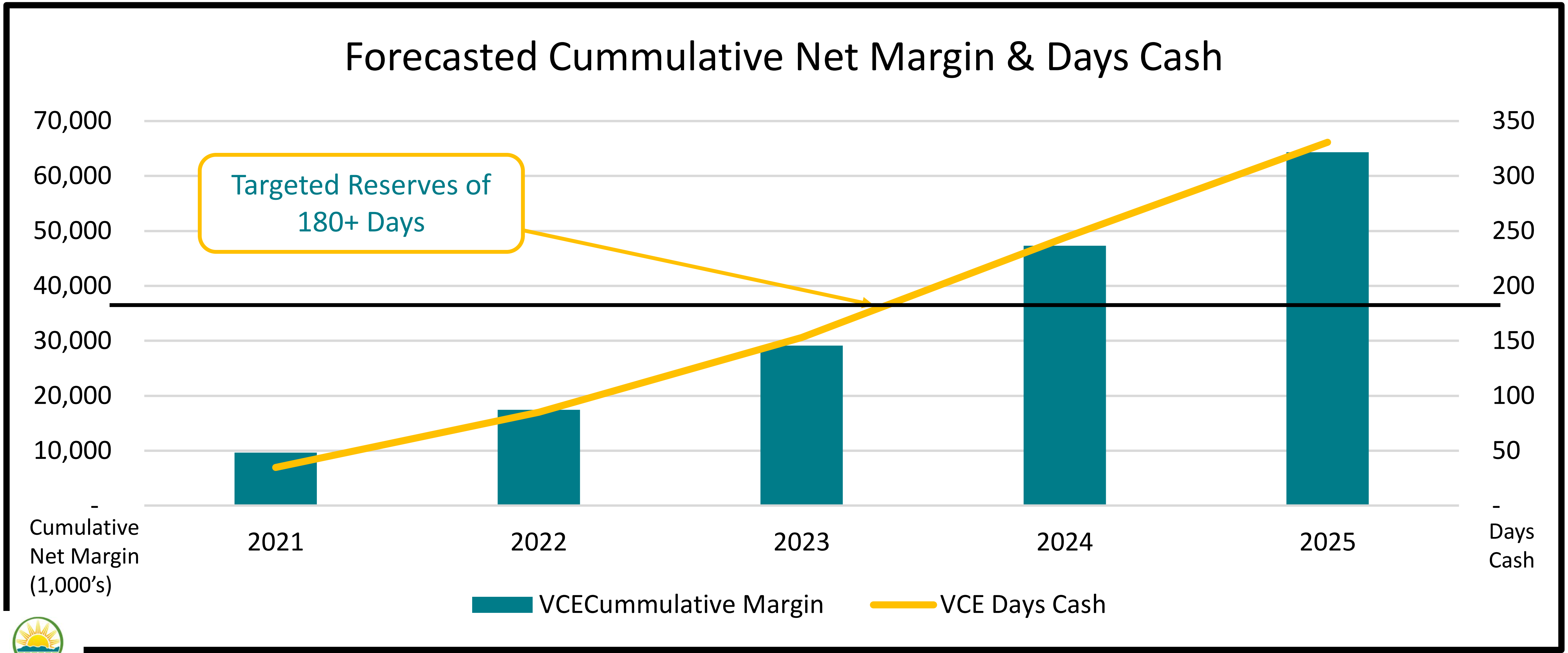
Item 21 – Customer Rate / Product Options (extra slide)

Draft Customer Rate/Product Analysis



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Item 22 – Mid-Year Financials Update

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Item 22 – 2022 Mid-Year Financials Update

Overview

Since March 2020, the overall economy and energy sector has been highly unpredictable due to COVID-19, regulatory decisions, and weather conditions driving volatility by increased load demand, resource adequacy costs, and energy costs. VCE Staff continues to monitor and update the Board on budget performance for long-term financial sustainability.

This presentation will:

- Background of 2022 Budget Development
- 2022 Financials Update and additional factors
- Multi-Year Forecast Update
- Discussion

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Item 22 – 2022 Mid-Year Financials Update

Background

Summary of VCE key budget actions 2020-2022.

- June 2020 - FY 2020-21 Budget adoption with fiscal mitigation policy adjustments
- October 2020 - FY 2020-21 Mid-year budget update to monitor Pandemic Impacts
- June 2021 – FY2021-22 Budget adoption with updated load & extended fiscal mitigation
- October 2021 – Budget update with power costs and financial model corrections.
- October 2021 – Board adopted rate increase to preserve cash reserves.
- November 2021- VCE Board adopted cost-based rate policy and deferred consideration of an expanded customer rate structure
- November 2021 – Adopted change from fiscal year to calendar year.
- February 2022 – Budget Adoption (Continued)

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Item 22 – 2022 Mid-Year Financials Update

Key Factors included in the 2022 Budget Adoption

- CARE / FERA / Medical Baseline – Incorporated a 2.5% rate credit
- Financial Reserves. Incorporated a 2022 target of 85 days for operating cash
- Power Prices. Average forward market power prices increased by 57% (April-21)
- PG&E Rate Adjustments – Delays in annual rate setting. PG&E's current filings/CPUC proposed decision effective March 1st, 2022 (33% rate increase and a PCIA reduction of 57%)
- Financial Power Cost Model - Corrected forecast was approximately $13M over the three FYs 2022 to 2024
- PCIA. A net 46% increase in the PCIA from 2020/21 continued into 2022 due to delays in CPUC ERRA proceeding.

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Item 22 – 2022 Mid-Year Financials Update

2022 Budget Proforma Update (5 Months Actuals – unaudited)

FY 2021-22	APPROVED 2022 BUDGET	2022 Proforma (5 Month Actuals + 7 Month Budget)	Variance
Revenue	$ 89,750	$ 89,840	$ 90
Power Cost	$ 66,990	$ 66,460	$ (530)
Other Expenses	$ 5,292	$ 5,292	$ 0
Net Income	$ 17,468	$ 18,088	$ (440)

Note: The table does not account for updated forward power market price fluctuation and resource adequacy costs

Key Highlights

- Revenues are slightly higher than forecasted and expected to meet budget.
- Power Costs have been lower than budgeted due to lower mild winter temperatures.
- 2022 drought conditions continued from 2021 impacting agriculture sector pumping loads that have been offset by reduced loads for Residential and Commercial.

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Item 22 – 2022 Mid-Year Financials Update

Updated Multi-Year Forecast – 2022 Budget Adoption Forecast

	Actuals				2022 Proforma (5 Month Actuals + 7 Month Budget)	2022 Budget Forecast*		
2022 Budget	**FY2019**	**FY2020**	**FY2021**	**FY2022**	**2022**	**2023**	**2024**	**2025**
Revenue	51,035	55,249	54,657	29,366	89,840	69,500	70,750	71,050
Power Cost	38,540	41,538	54,234	30,139	66,460	52,400	47,100	48,400
Other Expenses	3,850	4,346	4,267	2,285	5,292	5,398	5,506	5,616
Net Income	8,646	9,365	(3,844)	(3,058)	18,088	11,702	18,144	17,034

Note: The table does not account for updated forward power market price fluctuation and resource adequacy costs

*2022 Budget forecast include customer rates, PCIA, and power costs as forecasted in the VCE Budget Adoption

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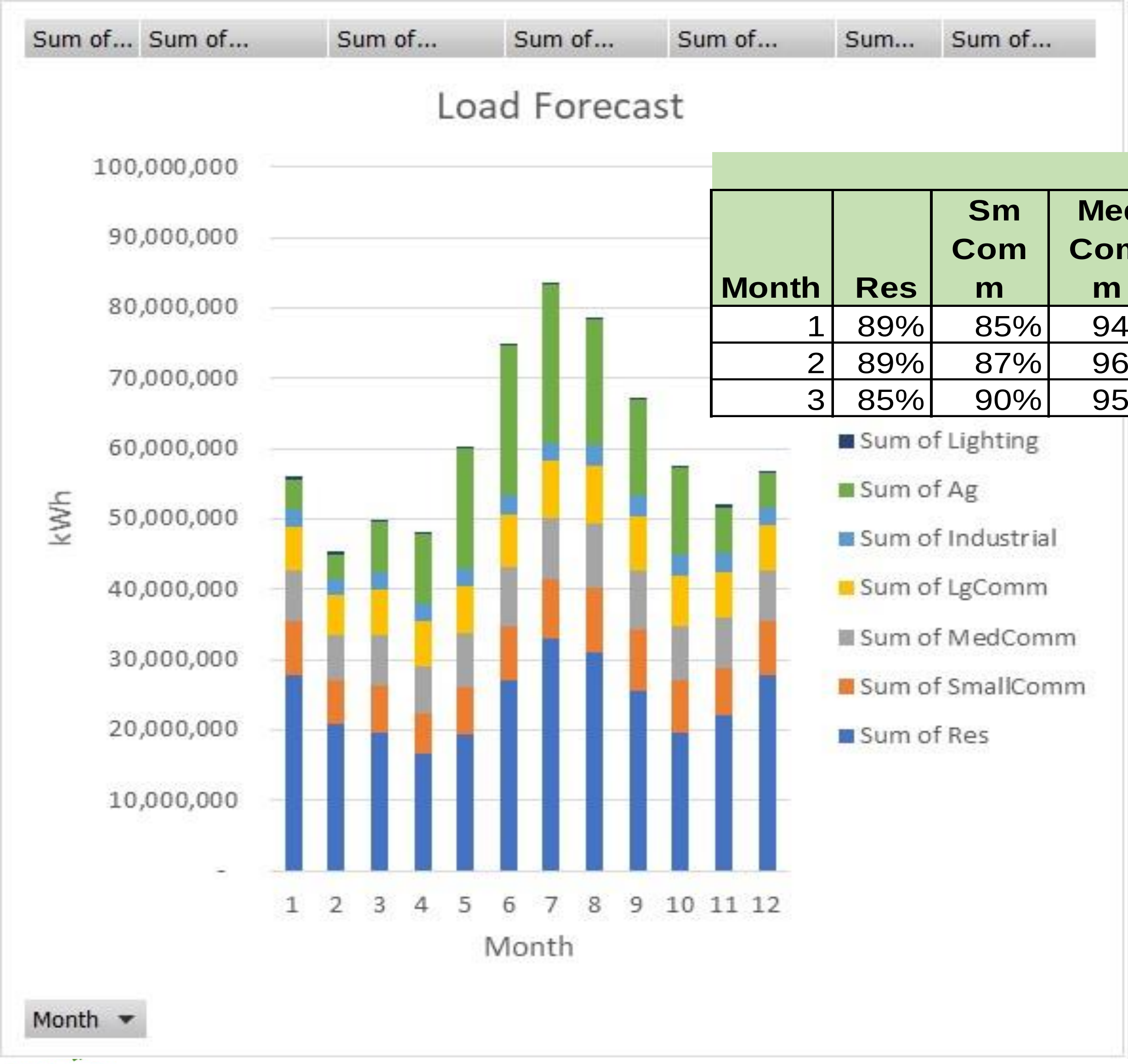
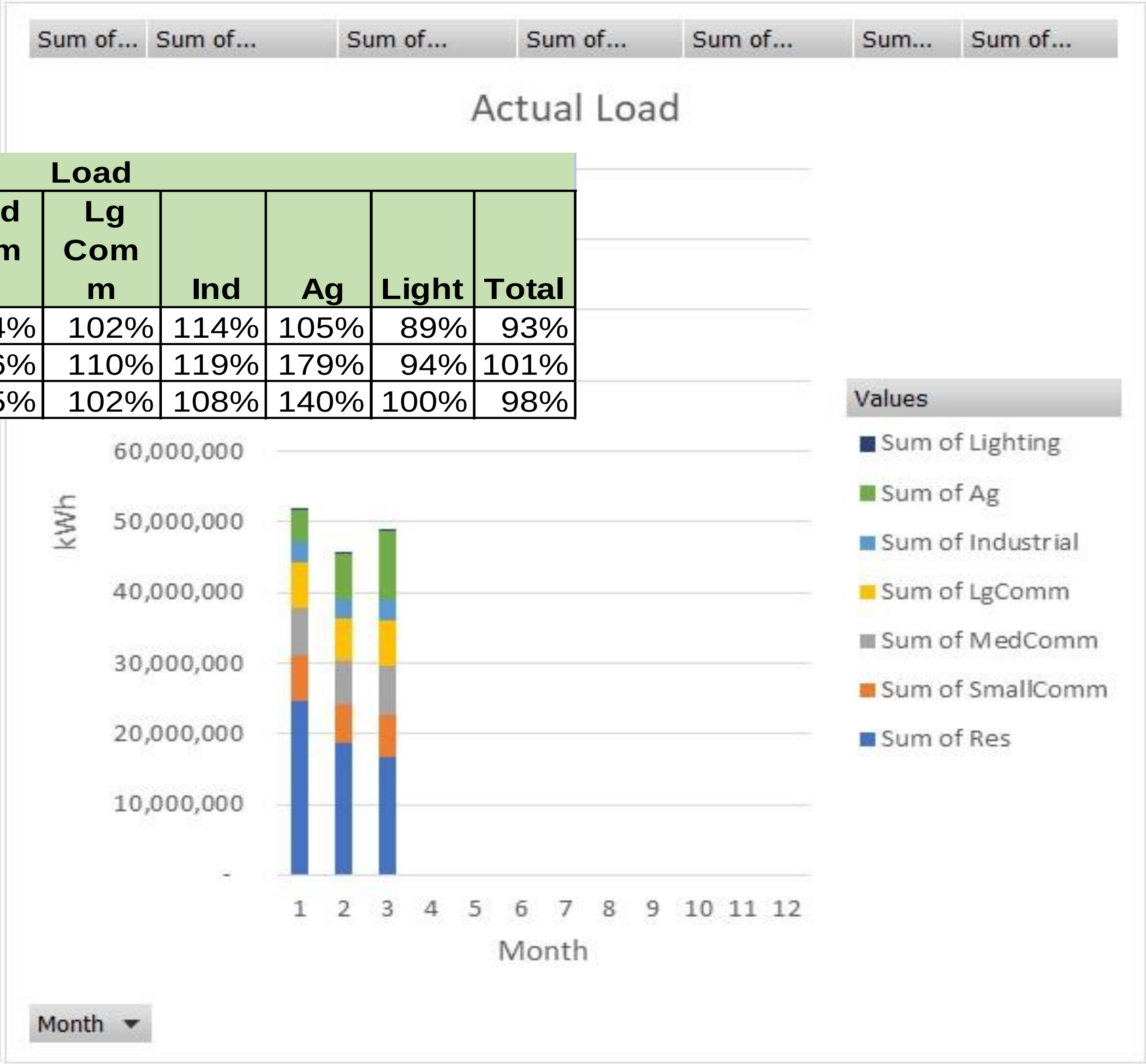
Item 22 – 2022 Mid-Year Financials Update (Load Forecast vs Actual)





Load								
Month	Res	Sm Comm	Med Comm	Lg Comm	Ind	Ag	Light	Total
1	89%	85%	94%	102%	114%	105%	89%	93%
2	89%	87%	96%	110%	119%	179%	94%	101%
3	85%	90%	95%	102%	108%	140%	100%	98%

Item 22 – 2022 Mid-Year Financials Update

Multi-Year Forecast Updated – June Power Costs

Power Costs	2022	*2023	*2024	*2025
2022 Budget / Forecast	66,990	52,400	47,100	48,400
June Power Forecast	68,750	65,075	48,781	48,400
Variance (Forecast to Forecast)	(2,290)	(12,675)	(1,681)	-

Factors Impacting Forward Power Costs

- Geopolitical Climate. The conflict in Ukraine and consequent Russian energy supply disruptions have significantly impacted current and forecast energy prices and availability. (Natural Gas Prices)
- Supply chain interruptions stem from the COVID Pandemic, and U.S. trade restrictions on solar panels and the like are impacting renewable projects expected to go online in 2022-2024. (Renewable Energy & RA Prices)
- 2022 drought conditions continued from 2021 impacting agriculture sector pumping loads. (Short-term Energy)

***Other Considerations – Increased Power Market Prices -> Increased Revenues**

Generally, increased power costs increase PG&E rates and VCE's ability to set competitive rates for full cost recovery.

- 2022 increases result in decreased 2023 PCIA (over collection) and 2023 increased generation (under collection).
- Forecasted increases power costs result in decreased 2023 PCIA and increased generation rates

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Item 22 – 2022 Mid-Year Financials Update

Next Steps

- VCE Power Costs Hedging for 2023 ongoing.
- Possible adoption of an additional customer rate/product (least cost)
- 2023 Rates and Budget Adoption

Discussion

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