

VALLEY CLEAN ENERGY ALLIANCE**Staff Report – Item 15**

TO: Board of Directors
FROM: Gordon Samuel, Chief Operating Officer
SUBJECT: Renewable Energy Credit Optimization
DATE: July 11, 2024

Recommendations

1. Receive presentation and provide feedback on optimization of short-term Renewable Energy Credit (RECs) sales.
2. Based on current market conditions, authorize Staff to optimize REC portfolio that results in a portfolio that is at or above state RPS compliance levels and maintains or exceeds Base Green and Standard Green commitments for year 2025.

Background

California requires load serving entities (LSEs), such as VCE, to procure a minimum percentage of their load from eligible renewable resources such as wind, solar, geothermal, small hydro, etc. From a State perspective, LSEs need to procure 60% of the load from renewable energy by 2030 as outlined in SB 100. The Board has adopted a more aggressive target of achieving 100% renewable by 2030.

LSEs cannot wait until 2030 to show compliance but rather must achieve interim targets referred to as Compliance Periods (CP1, CP2, CP3, etc). As shown below in figure 1, 2021-2024 is CP4 and CP5 is 2025-2027. It is important to note that LSEs are measured over the time in each CP and not an individual year, therefore the average for CP5 is 49.4% (the % by year is as follows: 2025 = 47.0%, 2026 = 49.2%, 2027 = 52.0%).

[Space intentionally blank]

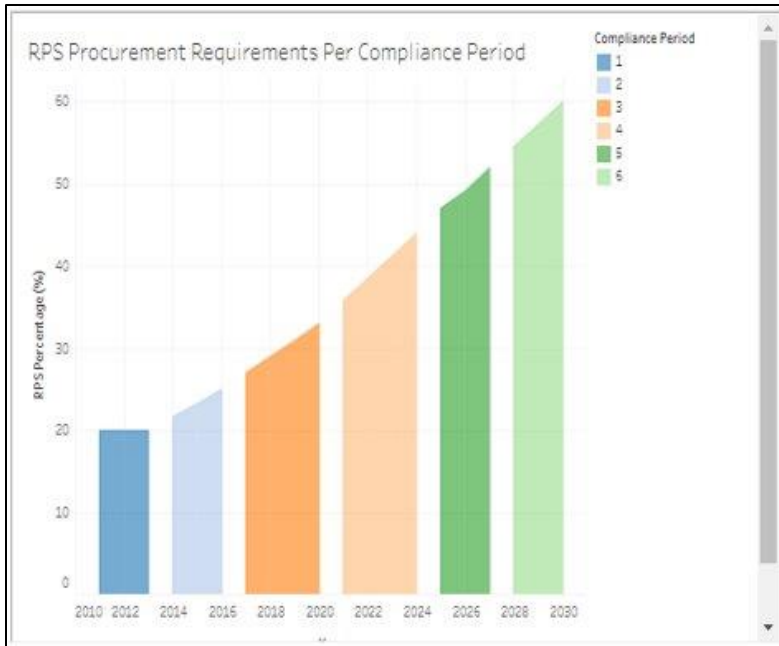


Figure 1 – RPS Procurement Requirements

The measurement of this compliance is in the form of a REC and is “retired” to show compliance. A REC contains the “Green Attributes” of a unit of energy, and represents that the energy was generated with an eligible renewable technology. One REC is equivalent to one MWh (for example, if a geothermal resource produced 50,000 MWhs in a given year, that is equal to 50,000 RECs). Finally, RECs can be purchased or sold on a short-term or long-term basis (multiple years).

California has different categories of RECs called Portfolio Content Categories (PCC):

- PCC 1: Eligible renewable resources directly connected to California’s grid (these can be either in-state or out-of-state. For example, VCE’s Fish Lake Geothermal project is located in Nevada but is directly connected to the California grid)
- PCC 2: Out of state eligible renewable resources imported into California’s grid
- PCC 3: Eligible renewable resources not brought to California’s grid (REC Only)

There are some other nuances between the categories but those are the basic distinctions. Since launch, VCE has procured PCC1, PCC2 and PCC3 RECs and has not been in the position to sell RECs. VCE’s generation portfolio is maturing and with the addition of the long-term power purchase agreements (PPAs) in the portfolio, VCE could be a seller of RECs for the foreseeable future. In addition, the cost of a REC in each category was not as significant as it is today (more on the cost per REC below).

Analysis

VCE’s Renewable Portfolio

VCE’s has signed seven renewable PPAs consisting of photovoltaic (PV), hybrid (PV + storage) and geothermal of which four of the PPAs are currently operational.

Table 1 – VCE’s Executed Long-Term Renewable PPAs (operating)

Long Term PPAs	COD	Capacity*
Resurgence Solar I	8/3/2023	90 MW PV, 75 MW BESS (250,000 MWhs)
Aquamarine Solar	9/22/2021	50 MW PV (130,000 MWhs)
Putah Creek Energy Farm	10/15/2022	3 MW PV, 3 MW BESS (7,600 MWhs)
Willy 9 Chap 2**	12/31/2023	72 MW PV, 36 MW BESS (210,000 MWhs)
<p>* All Battery Energy Storage Systems (BESS) are 4-hour duration. Approx annual MWhs shown. ** Formerly Willow Springs Solar 3. Name changed at the request of the CAISO. *** Indian Valley also produces renewable energy, but the output is extremely variable and the contract expires mid-2025.</p>		

The REC attributes generated from the above resources far exceed state compliance targets as well as the Base Green and Standard Green rates VCE offers (note: VCE’s Base Green is 0-5% above compliance and Standard Green rate is 5% above Base Green). Planning for resource outages, curtailments and higher than expected loads Staff anticipates up to 160,000 RECs that would be available for sale – this would result in an RPS percentage equivalent to State compliance. VCE can retain these RECs and display a higher renewable percentage on the 2025 power content label or VCE can monetize a portion of these RECs to offset power costs.

Market Volatility of REC Prices

Historically, REC prices stayed relatively stable, but due to market conditions and policy objectives that is no longer the case. At the time of VCE’s launch the price spread between a PCC1 and a PCC3 REC was approximately \$15. Today that spread has increased by almost 5x and is approximately \$70. REC prices are currently trading at historic highs. Table 2 reflects past, current and future REC prices.

Table 2 – REC Prices (note: 2025 fwd prices as of 6/27/2024)

Portfolio Content Category	2018 Avg Price	2023 Avg Price	2024 Fwd Price	2025 Fwd Price
PCC1	\$16.50/REC	\$52.00/REC	\$73.00/REC	\$83.00/REC
PCC2	\$6.50/REC	\$38.00/REC	\$67.00/REC	\$70.00/REC
PCC3	\$1.50/REC	\$7.00/REC	\$7.00/REC	\$8.00/REC

With prices at these levels Staff believes it is prudent for VCE to consider the possibility of selling RECs to help offset other increasing cost pressures (e.g. Resource Adequacy Slice of Day). As shown in Table 3 below, VCE potentially has the option to sell REC’s while maintaining compliance with the State’s RPS requirements. The current forward market price values associated with VCE’s REC’s as well as resulting RPS % levels based on selling various volumes are shown in Table 3. Note, VCE’s policy goal of 100% renewable portfolio by 2030 would not be impacted by the sale of REC’s over the next several years because VCE remains on a trajectory to achieve the Board goal of 100% renewable by 2030.

It is also important to note that the overall emissions in the environment does not change as this REC transaction is a reflection of who can count the RECs on their power content label. Even though VCE may generate the REC and then sell it to another LSE, the buyer of the REC will “count” the REC as that is what they are paying for. This is a paper transaction and the same amount of renewable energy is being generated and consumed regardless of who generates it or counts it in their portfolio.

Table 3 – Illustrative example of REC sales (note: based 2025 fwd prices as of 6/27/2024)

REC Volume (MWh)	Est. Dollars Generated (\$M)	VCE RPS %
160,000	13.28	47% (Ave. 2025 State RPS target)
140,000	11.62	50%
120,000	9.96	53%
100,000	8.30	56%
80,000	6.64	59%

Community Advisory Committee

Staff presented this topic to the Community Advisory Committee (CAC) at their June 2024 meeting. The CAC had a robust discussion on the topic and supported an approach that monetizes RECs as long as VCE remained at or above RPS compliance.

Conclusion

Since launch in mid-2018, VCE has taken an overall approach to balance emission reduction with cost competitive customer rates. It has also continued to take a long-view in building a portfolio focused on causing renewable projects to actually be built (“steel in the ground”), with regulatory compliance as an attribute and not as the primary driver. It is within this context that staff makes its recommendation to optimize the REC portfolio. Since launch VCE has been strategic about the procurement of short-term RECs and has invested in building new renewable resources. Until now, VCE has been a net purchaser of RECs, but that situation is changing and now VCE finds itself in a position to sell RECs. VCE remains on a trajectory to achieve the Board goal of 100% renewable by 2030 and along this path there may be opportunities to capitalize on market conditions in order to offset other expenses. Staff believes that time is now and into 2025 to monetize a certain volume of RECs while maintaining compliance and other internal policy targets.