

VALLEY CLEAN ENERGY ALLIANCE

Staff Report – Item 14

TO: Valley Clean Energy Alliance Board

FROM: Mitch Sears, Interim General Manager
Gary Lawson, Sacramento Municipal Utility District (SMUD)

SUBJECT: Procurement Guide Update, Directives and Delegations for 2019 Power Procurement Activities

DATE: January 23, 2019

RECOMMENDATION

Staff recommends the Board adopt a resolution that:

1. Approves the revised Procurement Guide, a redacted version of which is attached.
2. Approves specific Directives and Delegations to SMUD for procuring all of VCE's power portfolio for calendar 2020, and portions of the power portfolio for 2021 and 2022, which is the table in Exhibit B of the Procurement Guide.
3. Approves the Calendar 2019 Power Budget of \$41.49 million with an additional 5% contingency.
4. Approves continuing the portfolio mix of 42% renewable and 33% clean large hydro into 2019.

BACKGROUND AND ANALYSIS

On January 18, 2018, the Board approved VCE's initial Procurement Guide which established the procurement plan for 2018 and 2019 power portfolio, along with the delegations to SMUD necessary to execute on that plan. Once the CPUC approved VCE's Implementation Plan, SMUD began executing on the initial procurement plan. VCE has successfully completed the 2018 year, with all power products procured in the volumes needed. To date, the 2019 forward power procurements are largely complete, with the exception of remaining Portfolio Content Category (PCC 2) renewable power, which was suspended pending the outcome of the California Energy Commission proceedings on implementation of AB 1110, and the Resource Adequacy (RA) procurement which was not completed because of lack of availability of RA product.

Based on VCE's power procurement schedule it is time to procure the balance of the 2020 VCE power portfolio and to procure portions of the 2021 and 2022 portfolio. To that end, staff has updated the Procurement Plan, and developed an updated delegation matrix.

2019 Procurement Guide

As with the previously adopted VCE Procurement Guide, this 2019 version of the Guide lays the framework for how SMUD, as VCE's Wholesale Energy Services Provider, will go about these power procurements. The Guide addresses each of the energy products that VCE will need in its portfolio to meet its renewable and clean energy targets, as well for supplying the price hedging products necessary to fix VCE's energy cost on a forward basis. The products included in the Guide are:

California Independent System Operator (CAISO) Market Energy

As a Load Serving Entity within the CAISO market, VCE's daily power needs will be supplied directly from the CAISO market. SMUD will purchase market power on a Day-Ahead basis for VCE, based upon daily forecasts of VCE's hourly loads.

Congestion Revenue Rights

The price of CAISO market power is locational, with locational variability impacted by limitations of the bulk transmission system (known as "Congestion") to freely move power between geographic zones. Congestion Revenue Rights (CRRs) can be used to hedge the locational variability in prices when that variability negatively impacts VCE. VCE has a portfolio of CRR's, some of which were inherited from PG&E when VCE's customers departed bundled service from PG&E, and some of which have been procured through requests to the CAISO of CRR "allocations."

Carbon Free Large Hydro

The non- Renewable Portfolio Standard (RPS) carbon free large hydro power makes up the balance of VCE's targeted 75% clean portfolio.

Price Hedging Energy

The pricing of the market power purchased from the CAISO is not known in advance. In order to fix its energy costs in advance, VCE must find suppliers that will sell it market power at contractually fixed prices. Alternatively, VCE must find an entity that is willing to financially fix the cost of market power.

Renewable Energy

The renewable energy supply will form the foundation of VCE's clean portfolio to achieve its renewable portfolio content. The Board is requested to approve continuing the 42% target renewable energy content into 2019, with 75% of the RPS minimum renewable content (31%) supplied with PCC 1 renewable power, and the remaining RPS minimum content (11%) supplied with PCC 2 power. The additional discretionary renewable content will be supplied with 100% PCC 2 power. Renewables will be procured in volumes sufficient to cover VCE's default power product as well as its opt-up, 100% renewable product (UltraGreen).

Resource Adequacy Capacity

Resource adequacy is the generating capacity that VCE is obligated by law to provide to support system reliability, and is based upon the monthly peak capacity of VCE's loads plus a 15% reserve margin.

Specific Delegation

The specific delegation authorizes SMUD to procure all of the forward products for VCE's power portfolio for 2020 and to begin procurement of the forward products for VCE's 2021 and 2022 power portfolio. Additionally the delegation limits the procurement authority such that the expected power budget for 2019 will not be exceeded by more than 5%. The power budget for calendar year 2019, which is also being approved in this action, is \$41.49 million.

Additionally, VCE's Enterprise Risk Management Committee (EROC), will be reviewing responses to solicitations with SMUD as to their impact on the power budget. In the event that procurements are coming in at a higher cost than expected and that the total power budget may exceed the approved cost plus contingency, VCE staff will come back to the Board for additional delegated authority.

Note: VCE's expenditures in 2018 were within the budget and delegation authorities authorized by the Board.

REQUESTED ACTION

Adopt a resolution that approves: (1) the updated Procurement Guide, a redacted version of which is in Attachment A; (2) the specific procurement delegations in Attachment B (also redacted); (3) the 2019 Power Budget with a 5% margin; and, (4) continuing the renewable and clean portfolio mix into 2019.

ATTACHMENT A
Valley Clean Energy Procurement Guide



Valley Clean Energy Procurement Guide January 2019 Update

Adopted _____

Redacted

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1 Purpose and Scope

The intent of the Valley Clean Energy (“VCE”) Procurement Guide is to provide a roadmap of how the power portfolio for VCE will be procured in the short run. This is not a resource plan, insofar as a resource plan deals with issues such as the long-term resource goals of VCE. Ultimately long-term resource goals will end up in procurement actions. The current goals of getting renewable resources under long-term power purchase agreements are including in the procurement directives/delegation table in section 6.. This guide covers:

- Principles Guiding Portfolio Development
- Channels for Procurement
- Regulatory Requirements
- Steps to Procurement
- Portfolio Composition
- Procurement Approach and Hedging Strategy

2 Principles Guiding Portfolio Development

The portfolio developed for VCE will be guided by the following principles. The portfolio will:

- Meet standards defined by the CAISO's Reliability Requirements Business Practice Manual
- Satisfy CPUC Resource Adequacy requirements
- Comply with annual RPS content standards
- Identify the power portfolio product mix of renewables and non-RPS clean energy as directed by VCE policy
- Target the level of hedging as directed by VCE
- Adhere to risk mitigating directives and delegations of VCE's Enterprise Risk Oversight Committee (EROC)
- Adhere to applicable Federal, regional, and local requirements.

3 Channels for Procurement

SMUD will access power markets and transact on behalf of VCE using the following types of marketing channels:

- Direct Solicitation - SMUD will use its existing relationships to seek suitable bilateral agreements with counterparties directly
- Electronic Exchange Platforms - SMUD will use its access to platforms such as ICE (Intercontinental Exchange) to research markets and transact
- Electronic Auction Platforms - SMUD will use its access to platforms such as EnerNoc to create and enter auctions for desired products
- Brokers - SMUD will use its existing agreements with brokers to help locate trade partners for desired products

Considerations for the channel(s) used include:

- Type of product
- Market liquidity
- Credit quality and availability
- Timing
- Cost/fees
- Existing counterparties and transactions
- Resource and counterparty diversity
- Market conditions

4 Regulatory Requirements

4.1 Resource Adequacy

As a Load Serving Entity (LSE), VCE is subject to the Resource Adequacy (RA) program imposed by the CPUC and adopted by the CAISO. The RA program is designed to ensure sufficient resources to operate the grid reliably. An LSE is required to demonstrate on an annual and monthly basis that it has procured enough capacity to support 115% of its peak loads from physical resources not already committed elsewhere. The required amounts are determined by the CPUC based on VCE's forecast load.

Total RA Requirements

The total RA requirement of an LSE is determined based on a CEC adjusted forecast plus a 15% planning reserve margin. LSEs must procure and provide their total RA requirement using Local Capacity and System Capacity. Additionally, some of the RA capacity must have flexible ramping capabilities to meet the need of the CAISO to follow rapid changes in load. These types of RA resources are discussed below.

Local RA Resources

Local RA capacity is provided from generating resources located in areas where there are transmission constraints impacting the ability to serve load. The requirement for Local RA Resources is determined by the CAISO based on an annual study assuming extreme weather (a 1-10 weather year) and critical grid component outages (an N-1-1 contingency) impacting those constrained areas. The responsibility for providing RA from Local Capacity is prorated out to LSEs based upon their load, irrespective of where the load is located.

System RA Resources

The balance of the total RA Requirement can be supplied from qualifying generating resources that are not in areas with local capacity constraints.

Flexible RA Requirements

Flexible RA Requirements are based on an annual CAISO study that assesses at the largest three hour ramp for each month needed to run the system reliably. Flexible capacity can be provided from either Local or System RA resources.

4.2 Renewables Portfolio Standards

The portfolio must meet the RPS requirements set by the CPUC. The percentage of the portfolio that must be supplied by RPS-eligible sources each year is detailed below. Compliance will be determined by the Renewable Energy Certificates (RECs) retired within the multi-year

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compliance periods. With the enactment of SB 100, the minimum RPS requirements for years 2021 – 2030 have changed with the mandated 2030 renewable target rising from 50% to 60%. Table 4.1 below shows the new minimum requirements.

Table 4.1. Annual RPS Minimum Requirements

Compliance Period	Year	RPS Percentage
3	2018	29.0%
	2019	31.0%
	2020	33.0%
4	2021	35.8%
	2022	38.5%
	2023	41.3%
	2024	44.0%
5	2025	46.7%
	2026	49.3%
	2027	52.0%
6	2028	54.7%
	2029	57.3%
	2030	60.0%

The CEC certifies the RPS-eligibility of renewable resources. The Western Renewable Energy Generation Information System (WREGIS) assigns Renewable Energy Certificates (RECs) and tracks REC ownership used as evidence for compliance with renewable portfolio requirements. The CPUC enforces the RPS for LSEs under its jurisdiction.

There are three Portfolio Content Categories of renewable resources under RPS, determined by how the REC and associated energy are delivered to California for use by LSEs in California. Table 4.2 below shows the categories and their definition.

Table 4.2. RPS Portfolio Content Categories

Portfolio Content Category	Definition
PCC 1	Bundled energy and REC delivered to the California power grid without substituting electricity from another source. Renewables generated inside CA are by default PCC 1, but out-of-state generators must meet certain scheduling guidelines. The minimum amount of procurement allowed from PCC 1 for compliance period 3 (2017-2020) is 75%.
PCC 2	Bundled energy and REC where the energy can be substituted with non-renewable sources imported into the state. An out-of-state wind resource where the shortfall in energy is firmed up by another resource falls into this category.
PCC 3	Unbundled REC with no obligation for physical delivery of energy. The maximum amount of procurement allowed from PCC 3 for compliance period 3 is 10%.

5 Portfolio Composition

5.1 Renewables

The renewable content established by VCE’s Board for its 2018 portfolio was 42%, with the breakout between the RPS minimum requirements and the additional discretionary renewable content shown in a table similar to Table 5.1 below. Table 5.1 was updated to include the new minimum RPS requirements from SB 100 and shows the 42% renewable content target carrying forward in time.

Table 5.1 VCE Renewable and Clean Energy Portfolio Content

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total Renewable Content	42.0%	42.0%	42.0%	42.0%	42.0%	42.0%	44.0%	46.7%	49.3%	52.0%
PCC 1 Calculated	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
PCC 2 Calculated	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
PCC 3 Calculated	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RPS Required Minimums	29.0%	31.0%	33.0%	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%
PCC 1	75%	75%	75%	100%	100%	100%	100%	100%	100%	100%
PCC 2	25%	25%	25%	0%	0%	0%	0%	0%	0%	0%
PCC 3	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Incremental Discretionary Renewables	13.0%	11.0%	9.0%	6.2%	3.5%	0.7%	0.0%	0.0%	0.0%	0.0%
PCC 1	0%	0%	0%	100%	100%	100%	100%	100%	100%	100%
PCC 2	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
PCC 3	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Non Renewable Carbon Free	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%	31.0%	28.3%	25.7%	23.0%
Total Carbon Free	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%

However, VCE’s long term goal may be to increase the renewables and clean energy content of the portfolio. As such, for procurement and hedging purposes, it will be assumed that VCE’s mix will be at least 42% renewable going forward. The 42% renewable energy component exceeds the 2019 minimum RPS requirement of 31% of Retail Load by 11% of Retail Load.

The renewables component will consist of 75% from PCC 1 and 25% from PCC 2 for the 31% minimum renewable content required for compliance with RPS in 2019. The additional 11% discretionary renewable content will be supplied 100% from PCC 2 resources.

The amount of PCC 3 renewables targeted for procurement is zero. However, PCC 3 could be utilized to make up for any shortfalls in renewable energy content in a given year stemming from volumetric changes in forecast versus actual load or volumetric changes in delivery of renewables. This could occur if VCE’s load in a given year is greater than forecast. PCC 3 would only be used as insurance that VCE meets its desired power mix for the year when additional procurement of PCC 1 and 2 products is not feasible.

5.2 Non-RPS Carbon Free

As Table 5.1 shows, the total targeted clean energy component of VCE's portfolio is 75%. For 2019, this means the remaining 33% of clean energy not supplied from RPS qualifying resources will be sourced from non-RPS qualifying large hydro resources.

Supplies of large hydro will primarily come from the Northwest, from entities that own or have rights to offer the power directly sourced from a specific hydro project or set of hydro projects. Power directly from zero- or low-carbon resources is known as Specified Source supply. For large hydro Specified Source power, the carbon factor of the power imported will be 0.00 tonnes CO2/MWh.

5.3 Resource Adequacy

Forecast RA requirements for 2019 and 2020 are shown in table 5.2 below.

Table 5.2. Estimated Resource Adequacy Volumes, MW

	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19
RA Requirements												
System RA												
Max Total RA Required	126.63	144.08	119.63	167.02	177.53	238.72	228.00	191.29	202.91	139.92	132.10	117.09
<i>Greater Bay Area</i>	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00
<i>PG&E Other</i>	54.00	54.00	54.00	54.00	54.00	54.00	54.00	54.00	54.00	54.00	54.00	54.00
<i>Net System RA</i>	38.80	55.81	31.29	77.17	86.73	146.07	135.31	99.52	111.21	49.60	42.74	28.10
<i>Required Flexible Capacity</i>	45	57	47	52	51	47	41	38	52	46	58	58

	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20
RA Requirements												
System RA												
Max Total RA Required	105.00	113.00	101.00	144.00	161.00	243.00	235.00	201.00	202.00	136.00	112.00	103.00
<i>Greater Bay Area</i>	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00	36.00
<i>PG&E Other</i>	54	54	54	54	54	54	54	54	54	54	54	54
<i>Net System RA</i>	15.00	23.00	11.00	54.00	71.00	153.00	145.00	111.00	112.00	46.00	22.00	13.00
<i>Required Flexible Capacity</i>	45	57	47	52	51	47	41	38	52	46	58	58

The 2020 RA estimates will be updated when VCE receives its CPUC RA determination, which is expected in September 2019.

5.4 CAISO Market Energy

Because VCE customers reside in the CAISO balancing authority, their load will be served physically by energy from the CAISO market. VCE is therefore subject to paying the price at the Load Aggregation Point (LAP) where it is assumed to take energy.

Day Ahead traders will analyze and create daily load forecast profiles. Forecasted hourly loads for VCE will be bid into the CAISO Day Ahead market by 10am the prior day. All awards from the Day Ahead market will carry over to the Real Time market. Any deviations in VCE's actual load from what is scheduled in the Day Ahead market will pay or be paid at the Real Time market prices.

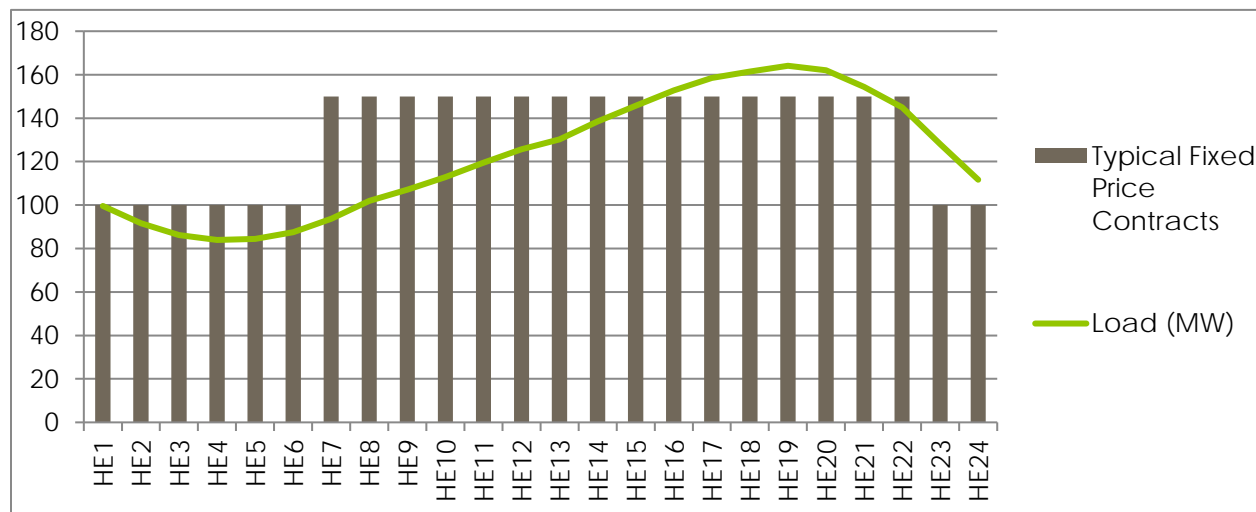
5.5 Hedging Products

Options to mitigate price risk of the CAISO market include: 1. NP-15 Futures; 2. Fixed price delivery contracts; and, 3. Congestion revenue rights.

NP-15 Futures (Physical or Financial)

NP-15 futures allow a buyer to fix the price for specified forward periods at set volumes of energy delivery. This hedges against the volatility of Day Ahead clearing prices in the CAISO market but does not protect against congestion and loss charges between the NP-15 trading hub and VCE's LAP. These futures products are traded in standard lots of 25MW for yearly, quarterly, and monthly durations, for off and on-peak hours daily. Futures contracts can be procured such that the monthly energy delivered under the contract approximates forecast energy load for VCE during that month, but because of the size of the 25 MW blocks, the procurement won't exactly match in quantity. Additionally, futures are typically at flat quantities across peak and/or non-peak hours, therefore the shape does not perfectly track VCE's system load shape. This leaves VCE short in some hours, and long in other hours, even though on a monthly basis the energy volume of the futures contract(s) approximates VCE's forecast load. Chart 5.1 shows an example of how on a typical day, the standard futures contract could be structured to deliver nearly the same energy quantity as the forecast load. However, as discussed, the 25 MW blocks procured for on-peak hours provide more energy in the example day than exactly needed for load. NP-15 futures can either be purely financial or can involve the physical delivery of power.

Chart 5.1 Standard Futures Product vs. Load Profile



Bilateral Fixed Price Delivery Contracts (Physical or Financial)

With bilateral fixed price delivery contracts, a buyer and seller can agree on a fixed price, duration, and point of delivery at any CAISO Aggregated Pricing Node or Physical Generator location. This approach fixes the energy price at the agreed delivery point but does not protect

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against congestion and losses between delivery point and VCE's LAP. Long term renewable power purchase agreements that are at fixed prices will provide price hedge protection for their expected generation profiles.

As an option, fixed price delivery contracts can also be delivered and shaped into schedulable quantities on a daily basis in order to better match hourly fixed price energy delivery to VCE load. This provides a more "perfect" hedge than flat on peak and off peak financial hedging instruments. Shapeable products have a price premium as compared to non-shapeable products. Bilateral fixed price delivery contracts can either be purely financial or can involve the physical delivery of power.

Day Ahead Fixed Price Delivery Contracts (Physical)

The Futures and Bilateral Contracts are procured on a month-ahead, season-ahead, and/or year(s)-ahead basis, using a long-term load forecast of expected loads. When Day-Ahead scheduling is performed, the expected loads for the day being scheduled are much better known. During the Day Ahead trading and scheduling process, any short-falls and excesses between VCE's load and the fixed price hedging volumes for the next day may be trued up by selling energy for any long hours at fixed prices and purchasing energy to cover any short hours at fixed prices.

Congestion Revenue Rights

Not all sellers will enter fixed price contracts for delivery direct to load, or they will charge a high premium for doing so. Congestion Revenue Rights (CRR's) can be used to hedge against congestion between the point a seller supplies power (a "source" node) and location where the buyer has load (a "sink" node). The CRR owner for those respective source and sink nodes would be entitled to the congestion charges between the source and sink, as calculated by the CAISO. This would, in effect, offset the congestion charges incurred by the difference in price the buyer receives at source node and price paid at the sink node. Holders of CRR's can also be obligated to incur charges if the congestion is in the opposite direction to the power flow they intended to hedge against.

CRR's are made available to LSEs in two ways: 1. LSE allocation; and, 2. CRR auction process conducted by the CAISO. In most cases, and LSE will only want to obtain CRRs by allocation, which has no up-front cost associated with the allocation. CRRs obtained through auction are acquired by paying a premium, the price of which is determined through the auction process.

CRRs are limited in that they are designed to cover energy flows that are blocked into on-peak and off-peak periods; they are not shapeable.

5.6 Carbon Allowances

For large hydro power imported from the Northwest from Specified Sources, there should not be any associated carbon emissions, therefore it is not anticipated that carbon allowances will need to be procured. Transactions for energy imported into the state are structured such that the energy provider has the Cap and Trade compliance obligation. As such, VCE will not have a direct Cap and Trade compliance obligation and will not need to procure Carbon Allowances.

6 Procurement Approach and Hedging Strategy

6.1 Load Assumed for Procurements

Retail Load

The current VCE load forecast (shown in Attachment A) has been updated to reflect actual customer counts, which implicitly takes into account the number of opt-outs. Additionally, the current load forecast assumes that Net Energy Metered (“NEM”) customers who had their solar systems prior to VCE’s June 1, 2018 launch will not be enrolled with VCE service until starting in January 2021. This reflects the Board’s recent policy decision to move NEM enrollments out of 2019. Should the Board decide later that it wants to enroll NEM customer sooner, the load forecast will be updated to reflect the updated policy.

System Load

System Load is the wholesale load of VCE. The System Load is the Retail Load factored up for Distribution Losses. The System Load forecast of energy and capacity for VCE is shown in the columns of Appendix A with the heading, “Wholesale Load.”

Mid-Year Forecast Adjustment

Any changes that may occur to the load forecast will impact the power supply needs. The most likely change that would impact the load forecast would be changes in timing of when NEM customers are to be enrolled into VCE service. Any material short positions will need to be covered with additional purchases of products which will be pursuant to recommendations from SMUD and authorization from VCE’s EROC.

6.2 Procurement Strategy

CAISO Market Energy

Congestion Revenue Rights

Valley Clean Energy

Large Hydro Clean Energy

Price Hedging Energy

Renewable Energy

Resource Adequacy

6.3 Procurement Directives

Commodity Price/Market Price

The price at which electricity, gas, capacity, and renewable attributes are bought and sold.

Congestion Revenue Right

Congestion Revenue Rights (CRR) are financial instruments used in the Day Ahead market to hedge the difference in price between two locations caused by congestion.

Counterparty

An entity to which an exposure to financial risk might exist.

Customer Load

A single customer's power usage that receives power from the electric system.

Day-Ahead

Refers to the day before actual power flow begins. For example, in the CAISO, the Day-Ahead market for Tuesday's flow date closes on Monday at 10 am.

Energy Products

Means all commodities and commodity related products, both physical delivery and financial instruments, related to meeting the wholesale energy, regulatory, hedging, and/or risk management needs of VCE. The types of products include, but are not limited to: Energy; Capacity; Resource Adequacy; Local Capacity; System Capacity; Ancillary Services; Environmental Attributes (including but not limited to RECs, Carbon Allowances, and other required environmental attributes); Forwards; Futures; Swaps; Options; Congestion Revenue Rights; and other energy and commodity related products as needed.

Enterprise Risk Oversight Committee (EROC)

This is the committee established in accordance with the VCE Board Wholesale Energy Risk Management Policy Manual, initially adopted December 14, 2017, as it may be revised.

Financial Product

A contract in which the value is derived from an underlying physical commodity but which does not require physical delivery or receipt of the commodity.

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Load Aggregation Point (LAP)

A Load Aggregation Point is a set pricing nodes used in the CAISO market for the submission of demand bids and for settlement of demand. The purpose of a LAP is to collapse into a single pricing node, the various locations of a load serving entity's load that are distributed throughout the system.

Long Position

A long position means there is not an open or short position, and that excess supply exists. In addition, as load forecasts are updated, if an excess exists, that excess is also considered a long position. For the renewable power purchase example (see *Open Position*), if 60,000 MWhs has been procured for a 50,000 MWh need, a long position of 10,000 MWhs will exist.

Open Position

For any given timeframe, any commodity requirement that is unfilled is considered to be an open position. For instance, if there is a requirement to procure 50,000 MWhs of renewable power in a calendar year, until 50,000MWhs of renewable power purchases have been secured, there will be an open position equal to the remaining MWh value needed to reach 50,000 MWhs.

Physical Product

A contract which requires the seller to physically deliver, and the buyer to physically receive a given commodity.

Price Risk (or Market Price Risk)

Price Risk is the risk that prices for power are different than have been assumed for financial planning and budgeting. Price risk is hedged by procuring fixed-price forward contracts for power.

Portfolio

The aggregation of commodity-related products (both physical and financial) procured to serve load and meet other policy goals.

Portfolio Manager

A core service provided by the WESP which broadly encompasses the responsibility for managing the purchase and sale of energy commodity-related products in the commodity portfolio in an effort to serve load and meet other policy goals.

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Real-Time

Refers to the actual day in which power flows. In the CAISO, the Real-time market opens at 1pm the day before flow date and closes for each hour 75 minutes prior to the start of scheduled flow.

Renewable Energy Certificate (REC)

A REC is evidence of the production equal to one megawatt-hour of generation from a certified renewable energy resource.

Retail Load

The summation of all customers' loads that receive power from the electric system.

Short Position

A short position is an open position. The volumetric value of a short position is determined by the shortfall in volume compared to the requirement. For the renewable power purchase example, if 30,000 MWhs of the 50,000 MWh requirement has been procured, a short position of 20,000 MWhs remains.

Specified Source

A Specified Source is an out-of-state generator that meets the requirements of the California Air Resources Board such that the carbon intensity of that resource's emissions (typically zero, or lower than that of unspecified imports) can be declared by the California entity importing the power.

System Load

The summation of all customers' loads that receive power from the electric system. System Load includes applicable transmission and/or distribution losses.

Volumetric Risk

The effect of fluctuations in demand for load or for production of generation from a generator.

Western Renewable Energy Generation Information System (WREGIS)

The Western Renewable Energy Generation Information System (WREGIS) is an independent, renewable energy tracking system for the region covered by the Western Electricity Coordinating Council (WECC).

Attachment B
2019 Power Budget

2019 Power Supply Cost	Target Budget
Market Energy	\$ 29,079,467
CAISO Variable Fees	\$ 126,983
REC Costs	\$ 3,470,566
Resource Adequacy Cost	\$ 7,432,636
CAISO GMC Cost	\$ 319,856
Market Services Charge	\$ 67,777
System Operations Charge	\$ 240,078
SCID Fee	\$ 12,000
Carbon Free Premium	\$ 1,060,085
2019 Total Power Cost	\$ 41,489,593

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RESOLUTION NO. 2019- _____

**A RESOLUTION OF THE VALLEY CLEAN ENERGY ALLIANCE ADOPTING
A REVISED PROCUREMENT GUIDE AND DELEGATING PROCUREMENT AUTHORITY TO
VCEA STAFF AND SMUD FOR ENERGY PROCUREMENT FOR CALENDAR YEARS 2020,
2021 AND 2022**

WHEREAS, the Valley Clean Energy Alliance (“VCE”) is a joint powers agency established under the Joint Exercise of Powers Act of the State of California (Government Code Section 6500 et seq.) (“Act”), and pursuant to a Joint Exercise of Powers Agreement Relating to and Creating the Valley Clean Energy Alliance between the County of Yolo (“County”), the City of Davis (“Davis”), and the City of Woodland (“City”) (the “JPA Agreement”), to collectively study, promote, develop, conduct, operate, and manage energy programs; and

WHEREAS, in order to achieve its strategic goals, VCE has established procurement policies and goals and on January 18, 2018 the Board approved VCE’s Procurement Guide which provided the roadmap for implementation and established the procurement plan for 2018 and 2019 power portfolio, along with delegations to Sacramento Municipal Utilities District (“SMUD”) to execute on this plan;

WHEREAS, the 2019 forward power procurements are largely complete, with the exception of remaining PCC 2 power, which was suspended pending the outcome of the California Energy Commission (“CEC”) proceedings on implementation of Assembly Bill 1110, and the Resource Adequacy (“RA”) procurement which was not completed because of lack of availability of RA product;

WHEREAS, there is a need to delegate to VCE Staff and SMUD to procure power for the balance of the 2020 VCE power portfolio and to procure portions of the 2021 and 2022 portfolio, consistent with the procurement policy and guide;

NOW, THEREFORE, the Board of Directors of the Valley Clean Energy Alliance resolves as follows:

1. approves the revised Procurement Guide (Exhibit A attached);
2. approves specific Directives and Delegations to SMUD for procuring all of VCE’s power portfolio for the 2020 calendar year, and portions of the power portfolio for 2021 and 2022 (Table in Exhibit B of the revised Procurement Guide);

3. approves the Calendar 2019 Power Budget of \$41.49 million with an additional 5% contingency; and,
4. approves continuing the portfolio mix of 42% renewable and 33% clean large hydro into 2019.

PASSED, APPROVED, AND ADOPTED, at a regular meeting of the Valley Clean Energy Alliance, held on the _____ day of _____, 2019, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Tom Stallard, VCE Chair

Alisa M. Lembke, VCE Board Secretary

EXHIBIT A – revised Procurement Guide

EXHIBIT A

VCEA Procurement Guide