# VALLEY CLEAN ENERGY ALLIANCE

#### Staff Report Item 15

| то:      | Valley Clean Energy Alliance Board of Directors  |
|----------|--|
| FROM:    | Mitch Sears, Interim General Manager<br>Gary Lawson, Sacramento Municipal Utility District (SMUD)<br>Michael Champ, Sacramento Municipal Utility District (SMUD) |
| SUBJECT: | Power Mix Targets and Target Rates for CY 2018   |
| DATE:    | December 14, 2017  |

#### RECOMMENDATION

- 1. Adopt a resolution approving:
  - a. Power Mix Target for calendar year 2018 that has a total 75% clean energy supply, comprised of the following components:
    - A 40% Renewable Energy component, which includes the minimum required Renewable Portfolio Standard (RPS) component of 29%, plus an additional discretionary renewable component of 11%.
    - A non-renewable clean energy component of 35%.
  - b. Target Rates for 2018 that are at a 1% discount to PG&E rates, net of Power Charge Indifference Adjustment (PCIA) and Franchise Fees.

#### **BACKGROUND AND ANALYSIS**

#### **Power Mix**

Setting the Power Mix Target will provide the procurement direction needed by SMUD, as VCEA's Wholesale Energy Services Provider, to build VCEA's renewable and clean energy portfolio.

Resource and financial modeling was performed using seven different combinations of renewable/clean energy percentages and Product Content Category types (see below for a discussion on the Product Content Category types). They are shown in detail in Tables A1 through A7 in Attachment A, and summarized below in Table 1.

Staff recommends the Board adopt Scenario F for the Power Mix Target for 2018. Scenario F strikes a balance of providing a portfolio that is cleaner than PG&E's in total, has a renewable content exceeding that being currently achieved by PG&E, and provides for accumulation of reserves over the initial 3½ years. The power mix was developed after discussions with the Community Advisory Committee CAC at their November 27<sup>th</sup> and December 4<sup>th</sup> meetings.

|          |           | F     | Renewable M | ix    |         |       |   |
|----------|-----------|-------|-------------|-------|---------|-------|---|
|          | Renewable |       |             |       | Non RPS |       |   |
| Scenario | Content   | PCC-1 | PCC-2       | PCC-3 | Clean   | Total | Characterization  |
| A        | 35%       | 100%  | 0%          | 0%    | 40%     | 75%   | Minimum desirable renewable content.<br>Total clean content greater than PG&E.                      |
| A Alt    | 35%       | 75%   | 25%         | 0%    | 40%     | 75%   | Minimum desirable renewable content.<br>Total clean content greater than PG&E.                      |
| В        | 50%       | 75%   | 25%         | 0%    | 25%     | 75%   | Meets 2030 RPS goals now. Total clean content greater than PG&E.                                    |
| С        | 50%       | 100%  | 0%          | 0%    | 25%     | 75%   | Meets 2030 RPS goals now at increased cost. Total clean content greater than PG&E.                  |
| D        | 75%       | 100%  | 0%          | 0%    | 0%      | 75%   | All clean content supplie by renewables.<br>Highest cost. Total clean content greater<br>than PG&E. |
| E        | 42%       | 75%   | 25%         | 0%    | 33%     | 75%   | Middle range renewable content. Total clean content greater than PG&E.                              |
| F        | 40%       | 54%   | 46%         | 0%    | 35%     | 75%   | Middle range renewable content. Total clean content greater than PG&E.                              |

Table 1. Renewable/Clean Resource Mix Scenarios Considered

Note: Power Content Categories (PCC-1, 2 & 3), are determined based upon how the qualifying renewable energy is delivered into California. California law dictates how much renewable power must be supplied from the various product content categories for the minimum RPS standards required for load serving entities. See Attachment D for Power Content Category definitions.

Staff presented the A Alt portfolio during the December 4<sup>th</sup> CAC meeting as the likely staff recommendation to the Board. During discussions with the CAC, evaluation of Scenario E was requested (42% renewable content), which became the basis for the CAC recommendation to the Board (motion passed with a 5-2-1 vote):

The CAC supports staff recommendation for 2018, with the change that the renewables percentage be increased to 42%. The CAC recommends that when VCEA is looking at 2019 and beyond, VCEA should:

- Evaluate increasing renewable percentage in the mix
- Beginning in year 1, lay foundation for including local renewable resources as a part of the mix.

Following the CAC meeting and after review of the financial impact of Scenario E, staff developed a Scenario F, which lowered the overall renewable content recommended by the CAC from 42% to 40%, and increased the PCC-2 content. Reducing the renewable content and increasing the amount of renewable content supplied from PCC-2 has the effect of lowering the cost of the Scenario F power portfolio closer to Scenario A Alt, which is the lowest cost portfolio evaluated.

Staff recommends the Board adopt Scenario F for the Power Mix Target for 2018 and accept the CAC's recommendation related to future Power Mix Targets. As noted, Staff believes Scenario F strikes a reasonable balance of providing a portfolio that is cleaner than PG&E's in total, has a renewable content exceeding that being currently achieved by PG&E, and provides for accumulation of reserves over the initial 3½ years of VCEA's operation.

Recommended Scenario F Power Mix Notes:

- 1. The staff recommended Scenario F meets the minimum RPS obligations by securing a target mix of 75% PCC-1 resources and 25% PCC-2 resources. The additional discretionary renewable content beyond the RPS requirements are supplied 100% from PCC-2 resources.
- 2. Staff recommends that VCEA not plan any forward PCC-3 transactions, however staff does recommend that PCC-3 RECs be used, if necessary, to make up for any shortfalls in renewable energy deliveries in any year, to ensure that VCEA meets its Power Mix Target.

#### Rates

State law and regulations provide the Board of a CCA with the authority to set rates. While VCEA has legal authority to set rates, it is constrained in practice by competitive forces, data availability, and complexity for the customer. All VCEA customers will retain the option of opting out of CCA service and remaining with PG&E. Therefore, rates should be set to be competitive with PG&E for all customers. Similarly, all VCEA customers will continue to receive bills for transmission and distribution services from PG&E, and will be assigned to PG&E rates with associated definitions of peak hours, holidays, and seasons. Offering rates with different definitions of peak time, or based on requirements separate from PG&E would require independent collection and analysis of customer energy data, and could result in customer confusion. Therefore, CCA rates are typically designed as a discount to the existing PG&E rate, maintaining the existing overall structure of the rate. The attached Table B1 shows rate discounts currently offered by other CCAs, along with their power mix, size, and launch year. In addition to the CCA power rate, customers opting in will also pay the Power Charge Indifference Adjustment (PCIA) and Franchise Fee. In order to keep the customer whole, the CCA rate is typically designed to be at a discount net of these fees.

The overall financial position of a CCA is determined in large part by rates, power mix, and operating budget. When setting an annual budget, these should be considered together and set to ensure financial stability, ability to weather variation in load volumes and market prices, and achievement of strategic goals. VCEA staff and consultants reviewed a variety of power portfolio mixes, rate structures, and scenarios for PG&E and PCIA rate changes, and the associated impacts to financial position to develop a target rate recommendation.

Staff recommends a rate structure designed to be 1% below PG&E's current forecast of 2018 rates. In combination with the recommended Scenario F Power Mix, this rate structure provides revenues sufficient to fund expected power purchases, ongoing operations, maintenance of an adequate cash balance, and initial repayments of startup liabilities. Specifically, this combination allows for gradual repayment of initial debt, while maintaining an unrestricted cash balance of at least 30 days expenses, as recommended in the draft reserve policy. Higher rate discounts would increase VCEA's financial risk, and delay the buildup of capital for local power projects and programs. Lower rate discounts risk higher opt-out rates.

# CONCLUSION

Staff is recommending that the Board adopt the Scenario F Power Mix Target and Target Rate discount of 1%.

# Attachments

- A. Power Mix Portfolios Evaluated
- B. CCA Rate/Resource Mix Comparisons w/PG&E
- C. Product Content Categories
- D. Resolution

#### ATTACHMENT A

#### VCEA Power Mix Portfolios Evaluated

|          |                           |           |             | 2018       | 2019   | 2020   | 2021   | 2022   | 2023   | 2024   | 2025   | 2026   | 2027   |
|----------|---------------------------|-----------|-------------|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Scenario | A RPS & CI                | ean Energ | y Requirem  | ent (100%) |        |        |        |        |        |        |        |        |        |
| A        | Total Ren                 | ewable Co | ntent       | 35.0%      | 35.0%  | 35.0%  | 35.0%  | 36.5%  | 38.3%  | 40.0%  | 41.7%  | 43.3%  | 45.0%  |
|          |                           | PCC 1     | Calculated  | 100%       | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   |
|          |                           | PCC 2     | Calculated  | 0%         | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     |
|          |                           | PCC 3     | Calculated  | 0%         | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     |
|          |                           | RPS Requ  | iired Minim | 29.0%      | 31.0%  | 33.0%  | 34.8%  | 36.5%  | 38.3%  | 40.0%  | 41.7%  | 43.3%  | 45.0%  |
|          |                           |           | PCC 1       | 100%       | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   |
|          |                           |           | PCC 2       | 0%         | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     |
|          |                           |           | PCC 3       | 0%         | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     |
|          |                           | Increment | tal Renewa  | 6.00%      | 4.0%   | 2.0%   | 0.2%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
|          |                           |           | PCC 1       | 100%       | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   |
|          |                           |           | PCC 2       | 0%         | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     |
|          |                           |           | PCC 3       | 0%         | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     |
|          | Non Renewable Carbon Free |           |             | 65.0%      | 65.0%  | 65.0%  | 65.0%  | 63.5%  | 61.7%  | 60.0%  | 58.3%  | 56.7%  | 55.0%  |
|          | Total Carb                | on Free   |             | 100.0%     | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

# Table A1. Scenario A - 100% Clean, 35% Renewable, 100% PCC-1

Table A2. Scenario A Alt - 75% Clean, 35% Renewable, 75% PCC-1, 25% PCC-2

| Scenario | A Alt - Minimum Re       | newable and  | Additional | Non Rene | wable Carb | oon Free (7 | '5% Clean) |       |       |       |       |       |
|----------|--------------------------|--------------|------------|----------|------------|-------------|------------|-------|-------|-------|-------|-------|
| A-Alt    | Total Renewable C        | ontent       | 35.0%      | 35.0%    | 35.0%      | 35.0%       | 36.5%      | 38.3% | 40.0% | 41.7% | 43.3% | 45.0% |
|          | 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 Red                  | quired Minim | 29.0%      | 31.0%    | 33.0%      | 34.8%       | 36.5%      | 38.3% | 40.0% | 41.7% | 43.3% | 45.0% |
|          |                          | PCC 1        | 75%        | 75%      | 75%        | 75%         | 75%        | 75%   | 75%   | 75%   | 75%   | 75%   |
|          |                          | PCC 2        | 25%        | 25%      | 25%        | 25%         | 25%        | 25%   | 25%   | 25%   | 25%   | 25%   |
|          |                          | PCC 3        | 0%         | 0%       | 0%         | 0%          | 0%         | 0%    | 0%    | 0%    | 0%    | 0%    |
|          | Increme                  | ntal Renewa  | 6.00%      | 4.00%    | 2.00%      | 0.20%       | 0.00%      | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
|          |                          | PCC 1        | 75%        | 75%      | 75%        | 75%         | 75%        | 75%   | 75%   | 75%   | 75%   | 75%   |
|          |                          | PCC 2        | 25%        | 25%      | 25%        | 25%         | 25%        | 25%   | 25%   | 25%   | 25%   | 25%   |
|          |                          | PCC 3        | 0%         | 0%       | 0%         | 0%          | 0%         | 0%    | 0%    | 0%    | 0%    | 0%    |
|          | Non Renewable Ca         | 40.0%        | 40.0%      | 40.0%    | 40.0%      | 38.5%       | 36.7%      | 35.0% | 33.3% | 31.7% | 30.0% |       |
|          | <b>Total Carbon Free</b> |              | 75.0%      | 75.0%    | 75.0%      | 75.0%       | 75.0%      | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% |

#### Table A3. Scenario B - 75% Clean, 50% Renewable, 75% PCC-1, 25% PCC-2

| Scenario | B VCEA RP                   | S 50% (75° | % PCC1 / 25 | % PCC2) 8 | Clean Ene | ergy 25% |       |       |       |       |       |       |       |
|----------|-----------------------------|------------|-------------|-----------|-----------|----------|-------|-------|-------|-------|-------|-------|-------|
| В        | Total Rene                  | wable Co   | ntent       | 50.0%     | 50.0%     | 50.0%    | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
|          |                             | PCC 1      | Calculated  | 75.0%     | 75.0%     | 75.0%    | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% |
|          |                             | PCC 2      | Calculated  | 25.0%     | 25.0%     | 25.0%    | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% |
|          |                             | PCC 3      | Calculated  | 0%        | 0%        | 0%       | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|          |                             | RPS Requ   | ired Minim  | 29.0%     | 31.0%     | 33.0%    | 34.8% | 36.5% | 38.3% | 40.0% | 41.7% | 43.3% | 45.0% |
|          |                             |            | PCC 1       | 75%       | 75%       | 75%      | 75%   | 75%   | 75%   | 75%   | 75%   | 75%   | 75%   |
|          |                             |            | PCC 2       | 25%       | 25%       | 25%      | 25%   | 25%   | 25%   | 25%   | 25%   | 25%   | 25%   |
|          |                             |            | PCC 3       | 0%        | 0%        | 0%       | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|          |                             | Increment  | tal Renewa  | 21.0%     | 19.0%     | 17.0%    | 15.2% | 13.5% | 11.7% | 10.0% | 8.3%  | 6.7%  | 5.0%  |
|          |                             |            | PCC 1       | 75%       | 75%       | 75%      | 75%   | 75%   | 75%   | 75%   | 75%   | 75%   | 75%   |
|          |                             |            | PCC 2       | 25%       | 25%       | 25%      | 25%   | 25%   | 25%   | 25%   | 25%   | 25%   | 25%   |
|          |                             |            | PCC 3       | 0%        | 0%        | 0%       | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|          | Carbon Fr Non Renewable Car |            |             | 25.0%     | 25.0%     | 25.0%    | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% |
|          | Total Carbon Free           |            |             | 75.0%     | 75.0%     | 75.0%    | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% |

| Scenario | C VCEA RPS 50% (10 | 0% PCC1) 8  | Clean Ene | ergy 25% |       |       |       |       |       |       |       |       |
|----------|--------------------|-------------|-----------|----------|-------|-------|-------|-------|-------|-------|-------|-------|
| С        | Total Renewable Co | ntent       | 50.0%     | 50.0%    | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% | 50.0% |
|          | PCC 1              | Calculated  | 100%      | 100%     | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  |
|          | PCC 2              | Calculated  | 0%        | 0%       | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|          | PCC 3              | Calculated  | 0%        | 0%       | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|          | RPS Requ           | iired Minim | 29.0%     | 31.0%    | 33.0% | 34.8% | 36.5% | 38.3% | 40.0% | 41.7% | 43.3% | 45.0% |
|          |                    | PCC 1       | 100%      | 100%     | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  |
|          |                    | PCC 2       | 0%        | 0%       | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|          |                    | PCC 3       | 0%        | 0%       | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|          | Incremen           | tal Renewa  | 21.0%     | 19.0%    | 17.0% | 15.2% | 13.5% | 11.7% | 10.0% | 8.3%  | 6.7%  | 5.0%  |
|          |                    | PCC 1       | 100%      | 100%     | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  |
|          |                    | PCC 2       | 0%        | 0%       | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|          |                    | PCC 3       | 0%        | 0%       | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|          | Non Renewable Car  | bon Free    | 25.0%     | 25.0%    | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% | 25.0% |
|          | Total Carbon Free  |             | 75.0%     | 75.0%    | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% |

#### Table A4. Scenario C - 75% Clean, 50% Renewable, 75% PCC-1, 25% PCC-2

# Table A5. Scenario D - 75% Clean, 75% Renewable, 100% PCC-1

| Scenario | cenario D VCEA RPS 75% (100% PCC1) & Clean Energy 0% |             |        |        |        |        |        |        |        |        |        |        |
|----------|--|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| D        | Total Renewable Co                                   | ntent       | 75.0%  | 75.0%  | 75.0%  | 75.0%  | 75.0%  | 75.0%  | 75.0%  | 75.0%  | 75.0%  | 75.0%  |
|          | PCC 1  | Calculated  | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   |
|          | PCC 2  | Calculated  | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     |
|          | PCC 3  | Calculated  | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     |
|          | RPS Requ   | uired Minim | 29.0%  | 31.0%  | 33.0%  | 34.8%  | 36.5%  | 38.3%  | 40.0%  | 41.7%  | 43.3%  | 45.0%  |
|          |  | PCC 1       | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   |
|          |  | PCC 2       | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     |
|          |  | PCC 3       | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     |
|          | Incremen   | tal Renewa  | 46.00% | 44.00% | 42.00% | 40.20% | 38.50% | 36.70% | 35.00% | 33.30% | 31.70% | 30.00% |
|          |  | PCC 1       | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   | 100%   |
|          |  | PCC 2       | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     |
|          |  | PCC 3       | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     |
|          | Carbon Free  |             | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   | 0.0%   |
|          | Total Carbon Free                                    |             | 75.0%  | 75.0%  | 75.0%  | 75.0%  | 75.0%  | 75.0%  | 75.0%  | 75.0%  | 75.0%  | 75.0%  |

#### Table A6. Scenario E - 75% Clean, 42% Renewable, 75% PCC-1, 25% PCC-2

| Scenario | E - VCEA RPS 42% Re       | nawable ar | nd Addition | al Non Rer | newable Ca | arbon Free | (75% Clea | n)    |       |       |       |       |
|----------|---------------------------|------------|-------------|------------|------------|------------|-----------|-------|-------|-------|-------|-------|
| E        | Total Renewable Co.       | ntent      | 42.0%       | 42.0%      | 42.0%      | 42.0%      | 42.0%     | 42.0% | 42.0% | 42.0% | 43.3% | 45.0% |
|          | 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 Requ                  | ired Minim | 29.0%       | 31.0%      | 33.0%      | 34.8%      | 36.5%     | 38.3% | 40.0% | 41.7% | 43.3% | 45.0% |
|          |                           | PCC 1      | 75%         | 75%        | 75%        | 75%        | 75%       | 75%   | 75%   | 75%   | 75%   | 75%   |
|          |                           | PCC 2      | 25%         | 25%        | 25%        | 25%        | 25%       | 25%   | 25%   | 25%   | 25%   | 25%   |
|          |                           | PCC 3      | 0%          | 0%         | 0%         | 0%         | 0%        | 0%    | 0%    | 0%    | 0%    | 0%    |
|          | Increment                 | tal Renewa | 13.00%      | 11.00%     | 9.00%      | 7.20%      | 5.50%     | 3.70% | 2.00% | 0.30% | 0.00% | 0.00% |
|          |                           | PCC 1      | 75%         | 75%        | 75%        | 75%        | 75%       | 75%   | 75%   | 75%   | 75%   | 75%   |
|          |                           | PCC 2      | 25%         | 25%        | 25%        | 25%        | 25%       | 25%   | 25%   | 25%   | 25%   | 25%   |
|          |                           | 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% | 33.0% | 31.7% | 30.0% |
|          | Total Carbon Free         |            | 75.0%       | 75.0%      | 75.0%      | 75.0%      | 75.0%     | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% |

# Table A7. Scenario F - 75% Clean, 40% Renewable, 75% PCC-1, 25% PCC-2 for RPS, 100% PCC-2 for Discretionary Renewable Content

| F | Total Renewable Co | ntent       | 40.0% | 40.0% | 40.0% | 40.0% | 40.0% | 40.0% | 40.0% | 41.7% | 43.3% | 45.0% |
|---|--------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|   | 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 Req            | uired Minim | 29.0% | 31.0% | 33.0% | 34.8% | 36.5% | 38.3% | 40.0% | 41.7% | 43.3% | 45.0% |
|   |                    | PCC 1       | 75%   | 75%   | 75%   | 75%   | 75%   | 75%   | 75%   | 75%   | 75%   | 75%   |
|   |                    | PCC 2       | 25%   | 25%   | 25%   | 25%   | 25%   | 25%   | 25%   | 25%   | 25%   | 25%   |
|   |                    | PCC 3       | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|   | Incremen           | tal Renewa  | 11.0% | 9.0%  | 7.0%  | 5.2%  | 3.5%  | 1.7%  | 0.0%  | 0.0%  | 0.0%  | 0.0%  |
|   |                    | PCC 1       | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|   |                    | PCC 2       | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  |
|   |                    | PCC 3       | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|   | Non Renewable Car  | bon Free    | 35.0% | 35.0% | 35.0% | 35.0% | 35.0% | 35.0% | 35.0% | 33.3% | 31.7% | 30.0% |
|   | Total Carbon Free  |             | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% | 75.0% |

# ATTACHMENT B

# Table B1. CCA Rate/Resource Mix Comparisons w/PG&E

|   |                       |        |          | Default   | Product Resource | e Mix²      |
|---|-----------------------|--------|----------|-----------|------------------|-------------|
|   |                       | Launch | Rate     |           | Non-Renewable    |             |
| CCA                                     | Accounts <sup>1</sup> | Year   | Discount | Renewable | Clean            | Total Clean |
| Marin Clean Energy                      | 260,000               | 2010   | 0.62%    | 55%       | 13%              | 68%         |
| Sonoma Clean Power                      | 227,000               | 2014   | 2.17%    | 42%       | 49%              | 91%         |
| CleanPowerSF                            | 76,000                | 2016   | 0.25%    | 40%       | 38%              | 78%         |
| Peninsula Clean Energy                  | 300,000               | 2017   | 5.00%    | 50%       | 30%              | 80%         |
| Silicon Valley Clean Power              | 240,000               | 2017   | 1.00%    | 50%       | 50%              | 100%        |
| Redwood Coast Energy Authority          | 60,000                | 2017   | 2.70%    | 42%       | 40%              | 82%         |
| City of Lancaster                       | 52,000                | 2015   | -5.35%   | 35%       | 0%               | 35%         |
| Apple Valley                            | 29,000                | 2017   | -4.35%   | 35%       | Not Disclosed    | 35%         |
| Pico Rivera Innovative Municipal Energy | 17,000                | 2017   | -4.35%   | 50%       | Not Disclosed    | 50%         |
| Pacific Gas & Electric                  |                       |        | 0.00%    | 33%       | 36%              | 69%         |
| Southern California Edison              |                       |        | 0.00%    | 28%       | 12%              | 40%         |
|   |                       |        |          |           |                  |             |

Notes:

1 - Represents Customer Accounts as reported by CalCCA

2 - As reported on CCA's websites

# ATTACHMENT C Product Content Categories

#### **Product Content Categories**

There are three Product Content Categories, determined based upon how the qualifying renewable energy is delivered into California. California law dictates how much renewable power must be supplied from the various product content categories for the minimum RPS standards required for load serving entities.

# Product Content Category 1 (PCC-1)<sup>1</sup>

A renewable resource that is directly delivered to California without energy substitution from another resource is considered to qualify as a PCC-1 resource. This determination is made based upon the scheduling interval used (hourly or every 15-minutes) based upon the lesser of the energy scheduled into California, or the actual output of the resource. A renewable resource located within the state is considered to be a PCC-1 resource. For the minimum RPS quantities, a portfolio has to contain at least 75% of PCC-1 resources. There are no specific requirements in law for any additional discretionary renewable energy that a load serving entity wishes to retire for its portfolio mix.

#### Product Content Category 2 (PCC-2)

A renewable resource that is out-of-state, and delivering to California, where the Renewable Energy Credits are paired with a substitute energy resource imported into the state, is considered a PCC-2 resource. A load serving entity cannot use more that 25% of PCC-2 resources for meeting its minimum RPS obligations. There are some specific commercial requirements associated with the energy output of the specific renewable resource supporting the sale. This sort of renewable energy delivery is most often used to take the intermittent output of a wind resource and smooth the delivery schedule of the resource into the state.

# Product Content Category 3 (PCC-3)

A PCC-3 renewable resource is merely the Renewable Energy Certificate (REC) (evidence of ownership of the renewable attributes) from a resource, delivered without the energy component. This is commonly called a "tradeable REC." Because PCC-3 transaction is only for the Renewable Energy Certificate itself, it is can be contracted for after-the-fact.

<sup>&</sup>lt;sup>1</sup> CPUC – Energy Division: Portfolio Content Category Classification Review Process Handbook, October 2017

#### VALLEY CLEAN ENERGY ALLIANCE

#### RESOLUTION NO. 2017-

#### A RESOLUTION OF THE VALLEY CLEAN ENERGY ALLIANCE APPROVING POWER MIX TARGETS AND TARGET ELECTRICITY RATES FOR 2018

WHEREAS, the Valley Clean Energy Alliance ("VCEA") 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, VCEA has the authority to set power mix targets and rates; and

WHEREAS, setting a power mix target will provide the procurement direction needed by SMUD, as VCEA's Wholesale Energy Services Provider, to build VCEA's renewable and clean energy portfolio; and

WHEREAS, setting a rate will allow VCEA to carry out its Mission to deliver cost-effective clean electricity to its customers.

NOW, THEREFORE, the Board of Directors of the Valley Clean Energy Alliance hereby adopts the following Power Mix Targets and Rates for 2018:

- 1. **Power Mix Target.** Target a Power Mix for calendar year 2018 that has a total 75% clean energy supply, comprised of the following components:
  - i. A 40% Renewable Energy component, which includes the minimum required Renewable Portfolio Standard (RPS) component of 29%, plus an additional discretionary renewable component of 11%. The RPS component of the renewable energy would be sourced 75% from Product Content Category 1 (PCC-1, see explanation below) resources and 25% from Product Content Category 2 (PCC-2) resources. The discretionary renewable component of 11% would be sourced 100% from PCC-2 resources. Furthermore, while staff recommends that VCEA not plan any forward Product Content Category 3 (PCC-3) transactions, staff does recommend that PCC-3 RECs may be used in small quantities to make up for any shortfalls in renewable energy deliveries in any year, to insure that VCEA meets its Power Mix Target.
  - ii. A non-renewable clean energy component of 35%. The supply of this resource would primarily be from large hydro resources located in the Pacific Northwest that do not qualify as renewable under California Renewable Portfolio Standards.
- 2. Target Rate. Target a Rate for 2018 that is at a 1% discount to PG&E rates, net of PCIA

and Franchise Fees.

ADOPTED, this \_\_\_\_\_ day of \_\_\_\_\_, 2017, by the following vote:

AYES: NOES: ABSENT: ABSTAIN:

Chair

Secretary

Approved as to form:

Interim VCEA Counsel