VALLEY CLEAN ENERGY ALLIANCE

Staff Report – Item 12

TO: Board of Directors

FROM: Chad Curran, Director, Power Services

SUBJECT: Approve VCE's 2026 Integrated Resource Plan (IRP) to be submitted to the California Public Utilities Commission by August 10, 2026

DATE: July 9, 2026

RECOMMENDATION

Staff recommends that the Board adopt a resolution establishing the following:

1. Approving the 2026 Integrated Resource Plan (IRP) and the Preferred Conforming Portfolio and Action Plan included therein, for submission to the California Public Utilities Commission (CPUC).
2. Authorizing staff to make any non-substantial changes necessary to finalize the IRP as well as supplemental documents and work products to be submitted to the CPUC by August 10, 2026.

BACKGROUND

VCE is required by the CPUC to prepare an IRP for the supply of energy in the period from 2027 to 2045. IRP filings are the vehicle by which the CPUC and stakeholders gain insight into individual Load Serving Entities' (LSEs) plans for meeting state goals and how LSEs show compliance with their requirements under PUC 454.52(a)(1). This IRP study is designed to provide VCE, its Board, management, and community with a resource plan and portfolio that meets VCE's needs for renewable energy content, minimal greenhouse gas (GHG) emissions, resource diversity and cost-effectiveness as well as to demonstrate compliance with all regulatory and statutory requirements. The IRP is due to the CPUC on August 10, 2026.

VCE submitted IRPs in 2018, 2020, and 2022. Since the 2022 IRP, the content of VCE's contracted portfolio has not changed significantly. By the time of VCE's 2022 IRP filing, VCE had already contracted for several large solar and solar plus storage resources to serve its long-term load. Since the 2022 IRP, those resources have come online, decreasing the development risk of VCE's contracted portfolio. In addition, VCE has contracted for several smaller resources to meet regulatory procurement orders and support strategic planning goals, and the schedule for contracted resources in development has adjusted. VCE's past procurement activities have laid the foundation for this IRP and the ability for VCE to meet and exceed its regulatory mandates.

ANALYSIS

<u>IRP Objectives</u>

The IRP assists the Commission in its efforts to identify cost-effective planned resources that support

system reliability and statewide policy goals. The methodology taken by VCE for this IRP exercise is designed to achieve the following objectives:

- Satisfy the regulatory requirements of PUC Code Section 454.51(a)(1).
- Satisfy all Commission specifications for conforming portfolios.
- Demonstrate how the Preferred Conforming Portfolio (PCP) achieves VCE's 25 MMT and 8 MMT 2035 and 2045 GHG Benchmarks.
- Demonstrate continuous progress towards meeting or exceeding the state's renewables portfolio standard (RPS) targets.
- Show how VCE's PCP contributes to overall system reliability and resource adequacy (RA).

For this IRP cycle, VCE contracted with First Principles Advisory (VCE Board approved this agreement in February 2026) to perform portfolio modeling. First Principles Advisory utilized a suite of industry standard modeling tools when developing the PCP to account for all the key modeling tasks included in a comprehensive planning exercise. For capacity expansion modeling and local portfolio optimization, Blue Marble Analytics' GridPath modeling software was used and for production cost modeling of the CAISO system and broader WECC region, Energy Exemplar's Plexos modeling program was utilized. By working within a framework that incorporated capacity expansion modeling, local portfolio optimization, and production cost modeling - three core pillars of IRP-related modeling - VCE conducted a robust planning exercise to provide a roadmap for future procurement decisions and an improved understanding of the impacts resulting from uncertainty in future market and grid conditions.

Filing

The IRP filing due to the CPUC by August 10, 2026, will consist of the following:

- **Narrative Template**: Describes how an LSE approaches the process of developing its plan, presents the result of analytical work, demonstrates to the CPUC and the stakeholders the LSE's action plan, and identifies areas where the LSE is seeking Commission action to support their plan/procurement.
- **Resource Data Template (RDT)**: Collects LSE contracting data for existing, in-development and planned resources, including for future resources which do not exist yet. Provides a snapshot of the LSE energy and capacity forecast positions across the planning horizon.
- **Clean System Power Calculator (CSP)**: Estimates the GHG and criteria pollutant emissions of LSE portfolios and verifies that LSE portfolios achieve assigned GHG and reliability planning benchmarks.

Preferred Confirming Portfolio (PCP)

VCE's PCP was developed using a modeling framework that began with capacity expansion modeling, followed by production cost modeling, and concluded with local portfolio optimization. The modeling results utilized default inputs provided by the Commission in all aspects except for VCE's load profile and forward resource adequacy prices, which were based on VCE's internal proprietary forecasts. The resulting portfolio solution is optimized as the least-cost portfolio that satisfies both the range of

Commission-required constraints, or objectives, and VCE's own internal renewable energy and GHG emission reduction goals.

As shown below in Table 1, VCE's PCP exceeds the state RPS mandate of 60% renewable by 2030 in all years from 2030 to 2045, and is greater than 93% GHG emission-free in all years from 2030 forward. As shown in
Table 2, the portfolio's GHG emissions are 10% or more below 2035 and 2045 GHG emissions targets.

Table 1 - Summary of Load and Generation Results (PCP)

Renewable and GHG-Free %	Unit	2030	2035	2040	2045
Retail Sales	GWh	803	987	1,119	1,201
RPS-Eligible Delivered Renewable	GWh	601	790	1,344	1,334
GHG-Free	GWh	749	972	1,350	1,342
RPS-Eligible Delivered Renewable Percentage	% of retail sales	75%	80%	120%	111%
GHG-free Percentage	% of retail sales	93%	98%	121%	112%

Table 2 - GHG Emissions of Preferred Conforming Portfolio vs. 2035 and 2045 Targets

	Units	Benchmark	VCE Emissions
2035 GHG Emissions	metric tons	51,000	45,000
2045 GHG Emissions	metric tons	23,000	17,000

The overall results of VCE's PCP, including resources currently under contract and planned resources, are shown in Table and 4. The majority of capacity currently under contract by VCE is solar or solar plus storage, as shown in Table 3. The planned resources modeled in the PCP, shown in Table 4, are the least cost resources needed to meet VCE's load, RA requirements, RPS requirements, and GHG emissions targets under the planning assumptions provided by the CPUC. The planned new solar and wind resources beginning around 2035 replace VCE's long-term solar and solar and battery contracts as those contracts expire, and meet the load growth assumptions provided by the CPUC.

Table 3 - Summary of Preferred Conforming Portfolio Contracted Resources (cumulative MW Nameplate Capacity)

	2026	2027	2028	2029	2030
Contracted Operating Resources (as of June 2026)					
Solar PV	50	50	50	50	50
Solar PV + storage	165	165	165	165	165
Demand Response	7	7	7	7	7
4-Hour BESS	2.5	2.5	2.5	2.5	2.5
5-Hour BESS	3.1	3.1	3.1	3.1	3.1
Gas / Conventional RA		51			
Contracted In-Development Resources (as of June 2026)					
Solar PV + storage			13	13	13
Small Hydro	2.9	2.9	2.9	2.9	2.9

8-Hour BESS					2.7
Geothermal		1.5	4.1	5.2	5.2

Table 4 - Summary of Preferred Conforming Portfolio Planned New Resources (cumulative MW Nameplate Capacity)

	2028	2030	2035	2040	2045
Planned, New Resources (as of June 2026)					
Solar PV			43.2	243.4	250
Wind			54.8	250	321.2
6-Hour BESS				85.9	85.9
8-Hour BESS			2.1	2.1	2.1
Total			100.1	581.4	659.2

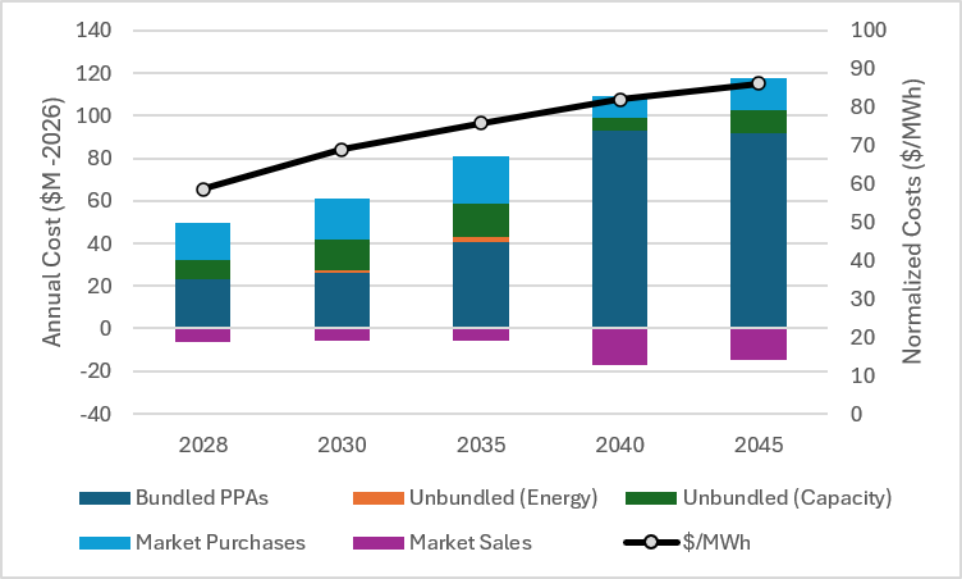
As shown in Table 5 below, VCE's existing contracted portfolio is sufficient to meet the near-term renewable and GHG-free constraints modeled IRP. Significant additional long-term contracting is not modeled to meet these targets, and any additional procurement is modeled to be met through purchases of short-term attributes.

Table 5 - VCE PCP Supply of GHG-free Energy by Planning Year (2030–2045)

Total GHG-Free MWh	2028	2030	2035	2040	2045
VCE Clean Energy Target	405,518	521,872	888,534	1,063,136	1,200,570
Supply	675,100	829,960	1,084,240	1,624,800	1,553,840
Existing ST GHG-F	0	0	0	0	0
Existing ST PCC1	0	0	0	0	0
Solar	131,630	129,390	238,250	689,290	705,950
Geothermal	24,990	44,470	44,470	44,600	44,470
Hybrid	512,030	522,030	509,080	301,960	42,490
Hydro	6,450	6,450	6,450	0	0
Onshore Wind	0	0	113,810	588,950	760,930
PCC1 Purchase	0	0	0	0	0
GHG Free Purchase	0	127,620	172,180	0	0

As shown in Figure 1 below, VCE's PCP exceeds state goals and fulfills the Commission's requirements at an average cost of less than $90/MWh through the 2045 planning horizon which will ensure it is able to continue to provide its customers with affordable clean electricity for the foreseeable future.

Figure 1 – Cost of Preferred Conforming Portfolio



Action Plan

As part of its action plan and its continuous operations, VCE will monitor closely the progress of construction and key milestones for its contracted new capacity that will come online between 2028 and 2030. In particular, long-duration storage and geothermal projects procured through CC Power are still in development and are essential to meeting VCE's procurement obligations from mid-term reliability procurement orders from the CPUC. As shown in Table 4 above, VCE's PCP models the procurement of additional solar, wind and storage beginning around 2035. VCE will continue to procure to comply with all regulatory requirements, including requirements for resources adequacy and RPS compliance, as well as compliance with any specific procurement orders. To conduct procurement, VCE will participate in joint solicitations with CC Power, and may pursue solicitations or direct contracting with projects as opportunities become available.

Future Procurement Activities

The IRP is a planning exercise mandated by the CPUC. Through the IRP, VCE demonstrates its ability to comply with state regulatory procurement requirements. The CPUC uses the LSEs' IRPs to assess the state's progress towards its regulatory goals, and to inform procurement policy. VCE's IRP uses inputs and assumptions provided by the CPUC in preparing its IRP. However, VCE's actual procurement activities may differ from the PCP for a variety of reasons, including:

- Differences between the load assumptions in the IRP and VCE's actual load.
- Changes to the viability and schedule of VCE's currently contracted in-development resources.
- Actual generation from VCE's contracted operating resources.
- Developments in regulatory and legislative procurement requirements.
- Technological, market and policy developments impact the relative price and availability of different types of generation resources.

- VCE's internal procurement policies and goals.

VCE will continue to forecast and monitor VCE's load and generation portfolio and market conditions, and will work with the Board to ensure that future procurement activities meet VCE's regulatory obligations, internal goals, and customers' needs for clean, affordable energy.

COMMUNITY ADVISORY COMMITTEE REVIEW

Staff presented the draft IRP results and recommendations to the CAC on May 28, 2026, and again on June 25, 2026. On June 25, 2026, the CAC voted to recommend that the Board approve the IRP for filing with the CPUC by August 10, 2026.

Attachments

1. Draft 2026 Integrated Resource Plan (Redacted)
2. Resolution

Standard LSE Plan

VALLEY CLEAN ENERGY ALLIANCE

2026 INTEGRATED RESOURCE PLAN

AUGUST 10, 2026

Table of Contents

I. Executive Summary

Valley Clean Energy Alliance ("VCE") is a not-for-profit locally run Community Choice Aggregator ("CCA") electricity provider serving customers in the cities of Woodland, Winters, and Davis, and unincorporated Yolo County. VCE began serving electric load in 2018 and substantially increased its portfolio of contracted resources during 2021 and 2022.

The portfolio of resources for which VCE has existing contracts includes 384 MW of generation, demand response, and storage, 100% of which are under contracts of 10 years or more in length. 350 MW (91%) of these resources are currently operating, and the remaining 34 MW (9%) are in various stages of development.

The long-term vision for VCE, as an organization and as adopted by its Board of Directors in 2017, is to continuously improve the electricity choices available to VCE customers, while expanding local energy-related economic opportunities, by:

- Causing the deployment of new renewable and low-carbon energy sources;
- Evaluating and adopting best practices of the electricity service industry for planning and operational management;
- Substantially increasing the renewable electricity content of basic electricity service, with the ultimate goal of achieving zero carbon emissions electricity;
- Developing and managing customized programs for energy efficiency, on-site electricity production and storage;
- Accelerating deployment of local energy resources to increase localized investment, employment, innovation and resilience;
- Working to achieve the climate action goals of participating jurisdictions to shape a sustainable energy future;
- Saving money for ratepayers on their energy bills; and
- Remaining open to the participation of additional jurisdictions.

Development Process

VCE's 2026 Integrated Resource Plan ("IRP") was prepared using the Standard Load Serving Entity ("LSE") Plan Narrative Template provided by the California Public Utilities Commission ("Commission" or "CPUC") on January 16, 2026.

For its 2026 IRP, VCE evaluated the Commission's requirements and planning targets, and elected to submit a single Preferred Conforming Portfolio ("PCP" or "Portfolio") that reduces VCE's proportional amount of greenhouse gas ("GHG") emissions to levels lower than

the Greenhouse Gas ("GHG") targets of 25 Million Metric Tons ("MMT") by 2035 and 8 MMT by 2045 as required by the January 2026 Ruling[1] ("IRP Ruling"). The PCP was developed using a modeling framework that began with independent capacity modeling, followed by production cost modeling, and concluded with portfolio optimization. The modeling results used default inputs provided by the Commission in all aspects except for forward Resource Adequacy ("RA") prices, which were based on VCE's internal proprietary forecast. The resulting portfolio solution is optimized as the least-cost portfolio that satisfies both the range of Commission-required constraints, or objectives.

The portfolio was refined following VCE staff's review and evaluation of results and metrics from the Resource Data Template ("RDT") and Clean System Power ("CSP") calculator. The resulting PCP was presented to VCE's Community Advisory Committee ("CAC") for review and comment at the May 28 and June 25 meetings, and the IRP was approved by VCE's Board of Directors ("Board") at the July 9, 2026, meeting.

Summary of Findings & Narrative Sections

VCE's current portfolio of long-term contracted resources totals 384 MW of nameplate capacity and consists primarily of solar (60%) and BESS (35%), with smaller contributions from demand response (2%), geothermal (1%), small hydro (1%), and compressed air energy storage ("CAES") (1%). The PCP includes 659 MW of new resources, consisting of wind (49%), solar (38%), and BESS (13%).

VCE's PCP supports compliance with California's RPS requirement to procure at least 60 percent eligible renewable energy resources by December 31, 2030, pursuant to Public Utilities Code Section 399.11 et seq. VCE's PCP includes 75% RPS-eligible energy in 2030 and 80% RPS-eligible energy in 2035.[2] The portfolio includes substantial renewable energy resources, including solar, geothermal, and other eligible renewable resources under long-term contracts, which contribute toward VCE's ongoing RPS compliance obligations.

Table 1 - RPS and GHG-Free Composition of VCE's Preferred Conforming Portfolio (25 MMT by 2035 and 8 MMT by 2045

Renewable and GHG-Free %	Unit	2030	2035	2040	2045
Retail Sales	GWh	803	987	1,119	1,201
RPS-Eligible Delivered Renewable	GWh	601	790	1,344	1,334
GHG-Free	GWh	749	972	1,350	1,342
RPS-Eligible Delivered Renewable Percentage	% of retail sales	75%	80%	120%	111%
GHG-free Percentage	% of retail sales	93%	98%	121%	112%

[1] Administrative Law Judge's Ruling Setting Requirements for Individual Integrated Resource Plans Due June 1, 2026, R.25-06-019 (January 16, 2026).

[2] *See* cells E102 and F102 of the Results tab of the CSP.

VCE's PCP meets the GHG emissions reduction targets established for the electricity sector by achieving emissions equal to or less than VCE's proportional share of the 2045 8 MMT GHG benchmark. The portfolio was developed using the Commission's prescribed assumptions and methodologies and is consistent with the statewide emissions reduction pathway reflected in the 2025-2026 TPP Portfolio with updates. As shown in Table 2 below, VCE's assigned GHG Benchmarks for 2035 and 2045 are 51,000 metric tons and 23,000 metric tons, respectively.[3] VCE's PCP satisfies both requirements, with reported emissions of 45,000 metric tons in 2035 and 17,000 metric tons in 2045.[4] For reference, in the 2022 IRP, VCE forecast 62,000 metric tons in 2035 compared to a forecast of 45,000 in this IRP, showing that VCE is committed to reducing its GHG emissions. See Section III.c for more information.

Table 2 - GHG Emissions of Preferred Conforming Portfolio vs. 25 MMT Target and 8 MMT Target

	Units	Benchmark	VCE Emissions
2035 GHG Emissions	metric tons	51,000	45,000
2045 GHG Emissions	metric tons	23,000	17,000

VCE also engages its customers with information and opportunities for electric vehicle adoption, building electrification, energy efficiency, demand response, net metering, and is even piloting dynamic rates through its Hourly Flex Pricing program. Further, the added generation diversity from wind resources in its PCP reduces VCE's use of emission-intensive system power which not only contributes to the State's overall environmental objectives but also helps reduce power system impacts on disadvantaged communities statewide.

VCE has resources under contract or operating to meet its reliability obligations for D.19-11-016, D.21-06-035, and D.23-02-040, and D.26-02-057, as well as its zero-emitting Diablo replacement, long-duration storage, and zero-emitting 80% capacity factors resource obligations.

Additionally, VCE's PCP exceeds these state goals and fulfills the Commission's requirements at an average cost of less than $90/MWh through the planning horizon which will ensure it is able to continue to provide its customers with affordable clean electricity for the foreseeable future.

VCE's action plan includes securing a new long-term contract for an existing short-term resource [this contract is being presented for approval by VCE's Board on July 9, 2026]. Future

[3] *See* cells N24 and P24 of the GHG Benchmarks tab of the CSP.

[4] *See* cells F4 and H4 of the Results tab of the CSP.

procurement efforts may include an RFO for wind or other baseload-type resources to meet IRP and internal renewable goals.

The overall results of VCE's PCP for its IRP, including resources currently under contract and planned resources, are shown in Figure 1.

Figure 1 - Summary of PCP Expansion Plan Plus Contracted Resources (MW)

Resource MWs	Pre-2027	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043
Solar	218		13						43			7	28	100	65	7		
BESS	122		13			2								50	36			
Demand Response	7																	
Geothermal		1	3	1														
CAES					3													
Small Hydro	3																	
Wind							55				100	95					13	58

II. Study Design

This IRP study was designed to provide VCE, its Board, management, and community with a resource plan and portfolio that meets VCE's needs for renewable energy content, minimal GHG emissions, resource diversity, and cost-effectiveness, as well as to demonstrate compliance with all regulatory and statutory requirements. VCE's IRP development was informed by the CPUC's 2024-2026 Integrated Resource Planning Inputs & Assumptions report,[5] subject to the review by its CAC and input from the public, and approved by its governing Board.

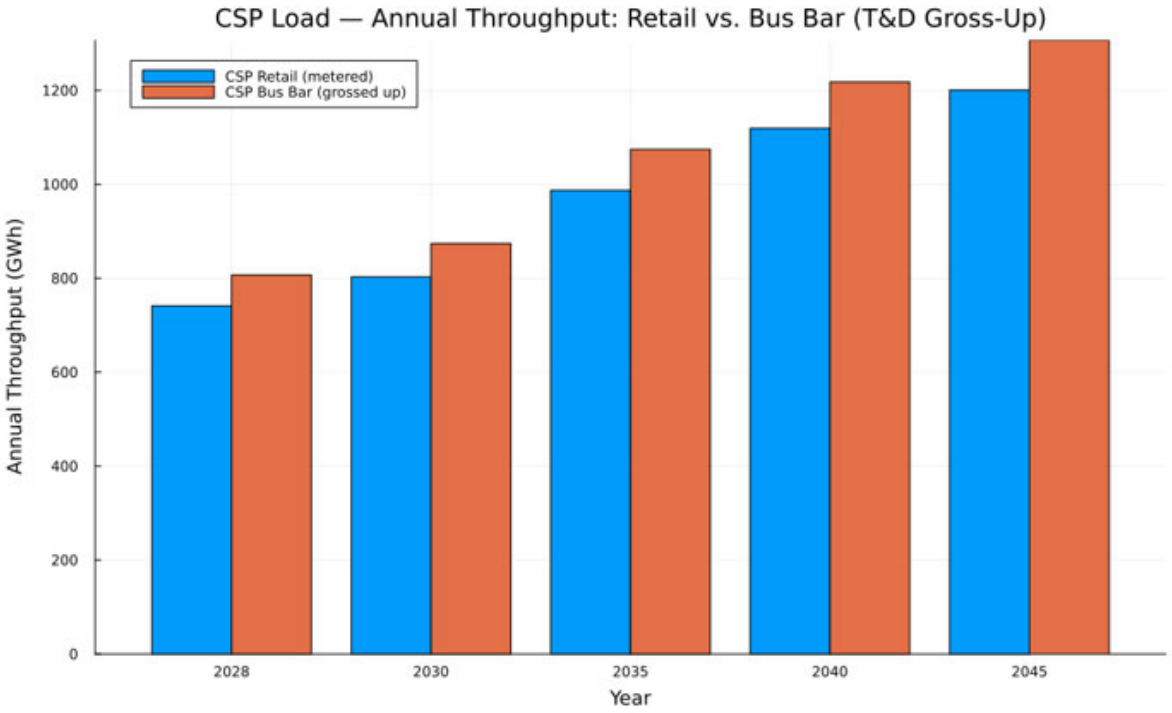
Load Assignments for Each LSE

VCE used the energy and peak demand load forecasts and behind-the-meter photovoltaic ("BTM PV") values approved in the IRP Ruling, as the basis for its IRP modeling. Annual retail sales grow from 741.3 GWh in 2028 to 1,200.6 GWh in 2045, reflecting a 2.7% compound annual growth rate. Demand at the generation busbar (also referred to herein as "busbar load") is derived by grossing up retail sales for transmission and distribution ("T&D") losses, using a loss factor of approximately 8.8%. The resulting busbar load grows from 806.8 GWh in 2028 to

[5] https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/2024-2026-irp-cycle-events-and-materials/2025_inputs_and_assumptions_report_20260210.pdf

1,306.6 GWh in 2045. Figure 2 presents annual retail load and busbar load for select years across the planning horizon.

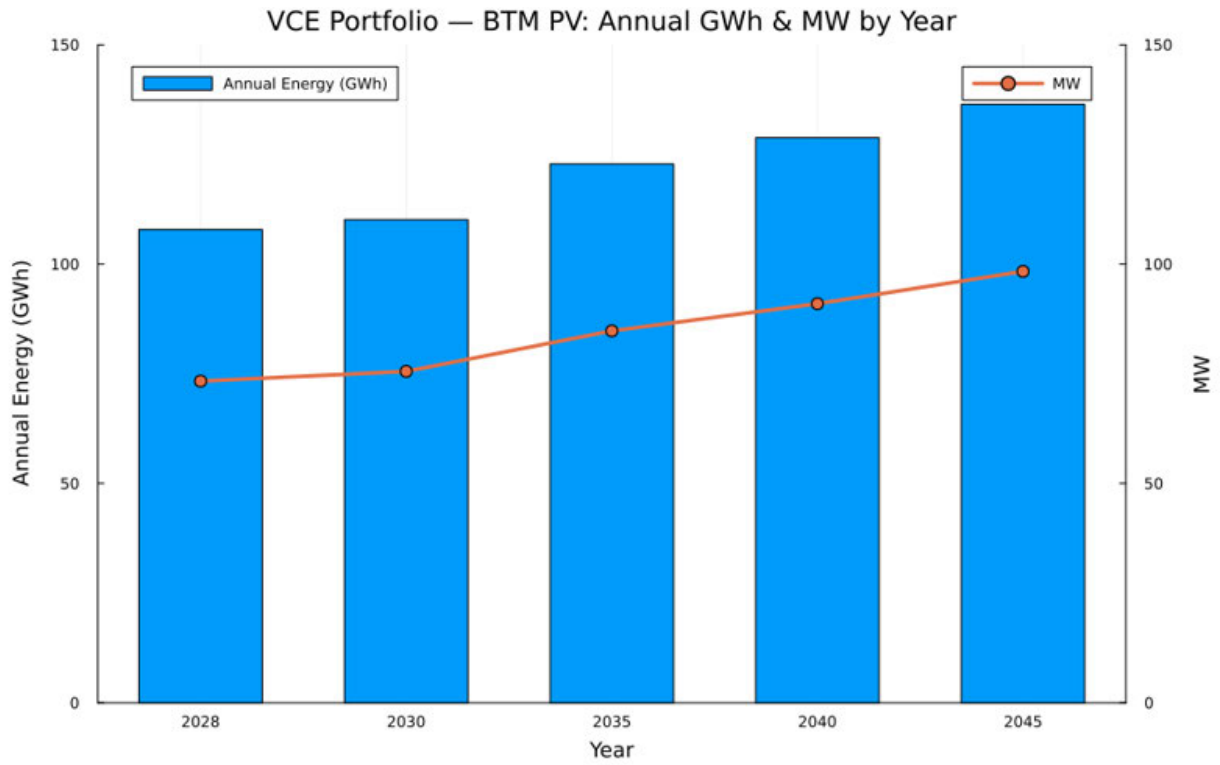
Figure 2 - Annual Retail Load and Busbar Load



BTM PV energy within VCE's service territory is forecast to grow from 107.9 GWh in 2028 to 136.4 GWh in 2045, reflecting a compound annual growth rate ("CAGR") of 1.3%, as

shown in Figure 3. Also shown in Figure 3 is the installed nameplate capacity of BTM PV, which grows from 73.3 MW in 2028 to 98.4 MW in 2045.

Figure 3 - BTM Solar Forecast: Annual Generation (GWh) and Installed Capacity (MW)



For its hourly profiles, VCE applied a custom load shape in lieu of the default hourly profiles sourced from the 2024 Integrated Energy Policy Report ("IEPR") Policy Scenario Demand Forecast. The custom load shape was developed by VCE's scheduling coordinator using VCE's actual load patterns, which is an important piece of customization for VCE's planning due to the comparatively high concentration of agricultural customers with unique usage characteristics in its service area. The custom shape was normalized, thereby ensuring use of VCE's CPUC-assigned total annual retail sales (MWh). Figure 4 presents VCE's annual peak load forecast, comparing the CPUC-assigned contribution to system peak derived from the CSP workbook against VCE's internally developed load profile.

Figure 4 - Annual Peak Load Forecast: CPUC Assigned Contribution to Peak vs. VCE Internal Load Profile

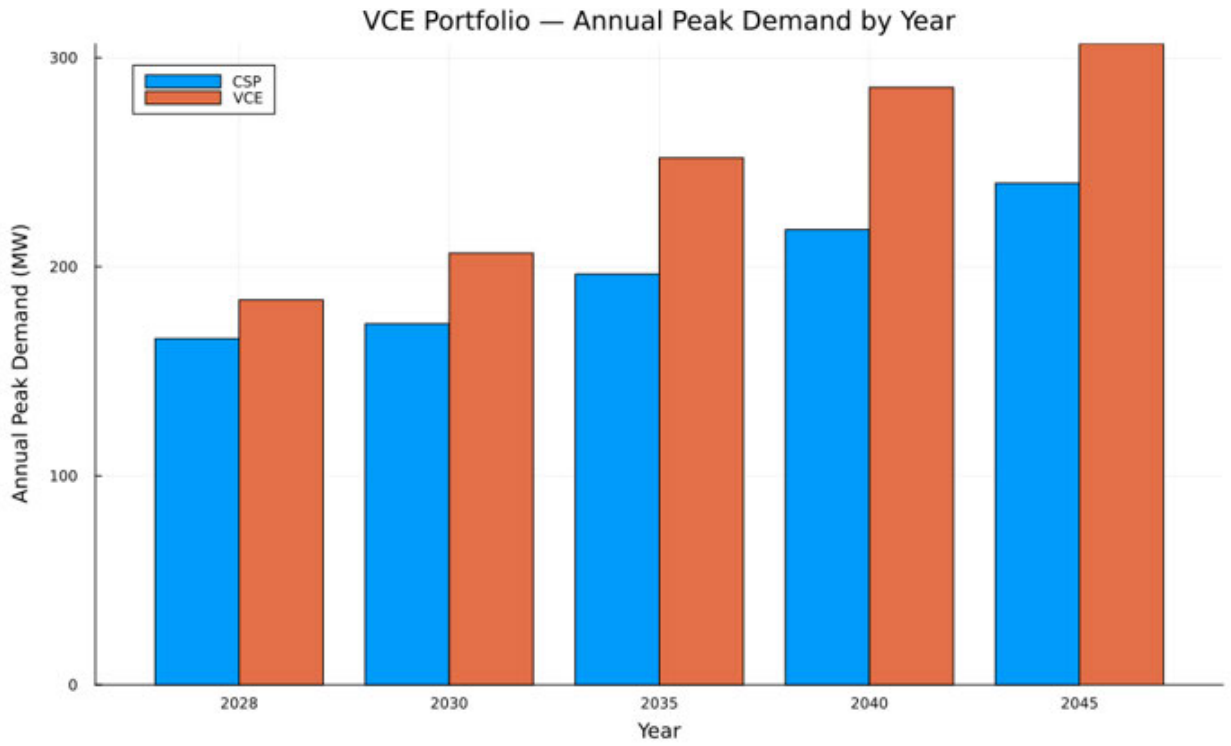


Figure 5 displays the monthly average hourly load profiles of the CPUC-CSP load profile for January, April, July, and October across each of the five CSP planning years (2028, 2030, 2035, 2040, and 2045). Figure 6 presents the same data using VCE's load profile.

Figure 5 - Monthly Average Hourly Load Profile by CSP Planning Year (CPUC-CSP)

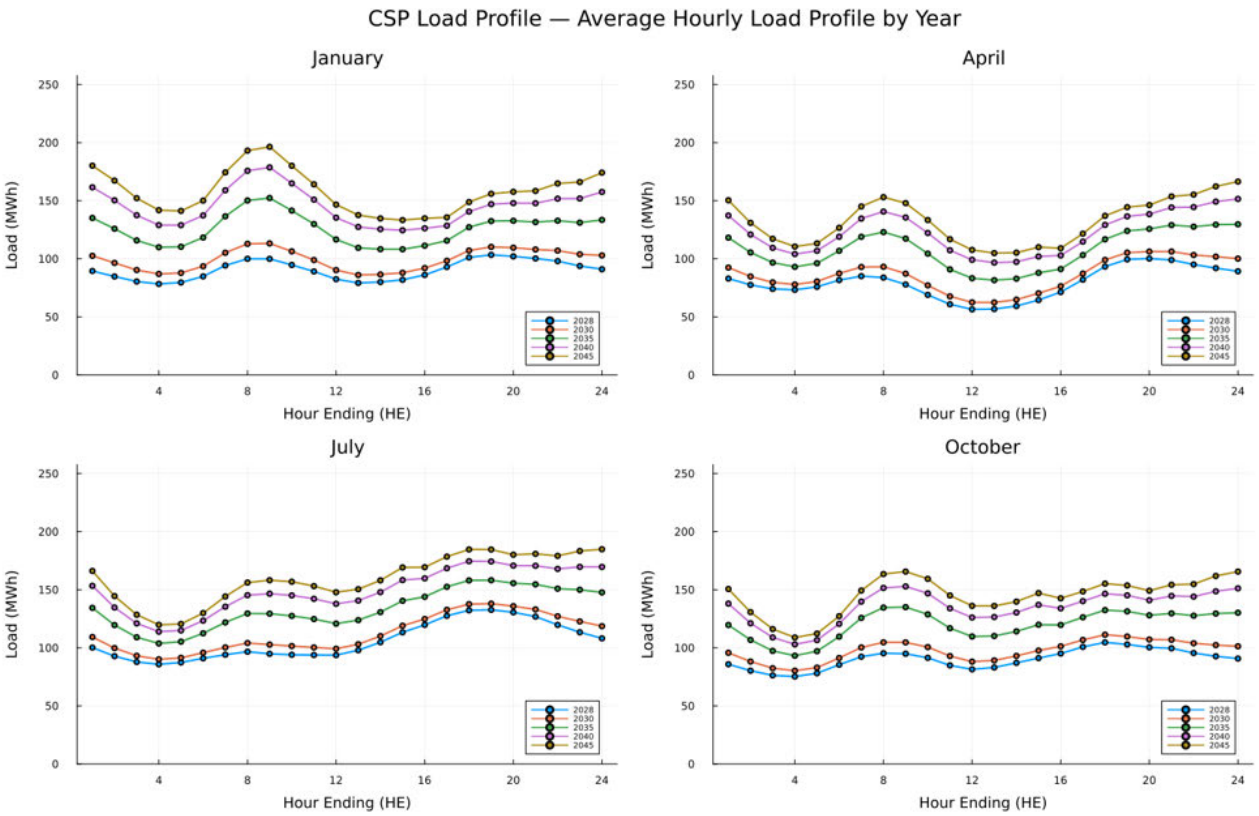


Figure 6 - Monthly Average Hourly Load Profile by CSP Planning Year (VCE Internal)

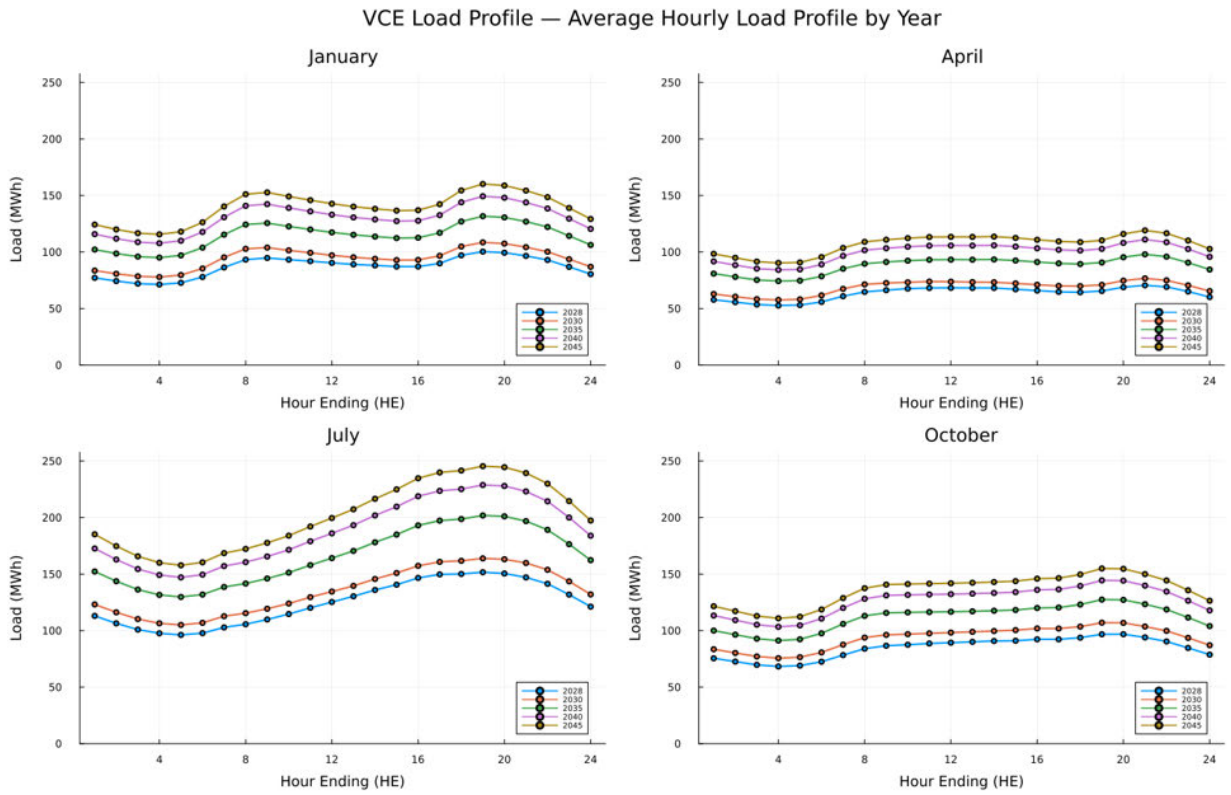
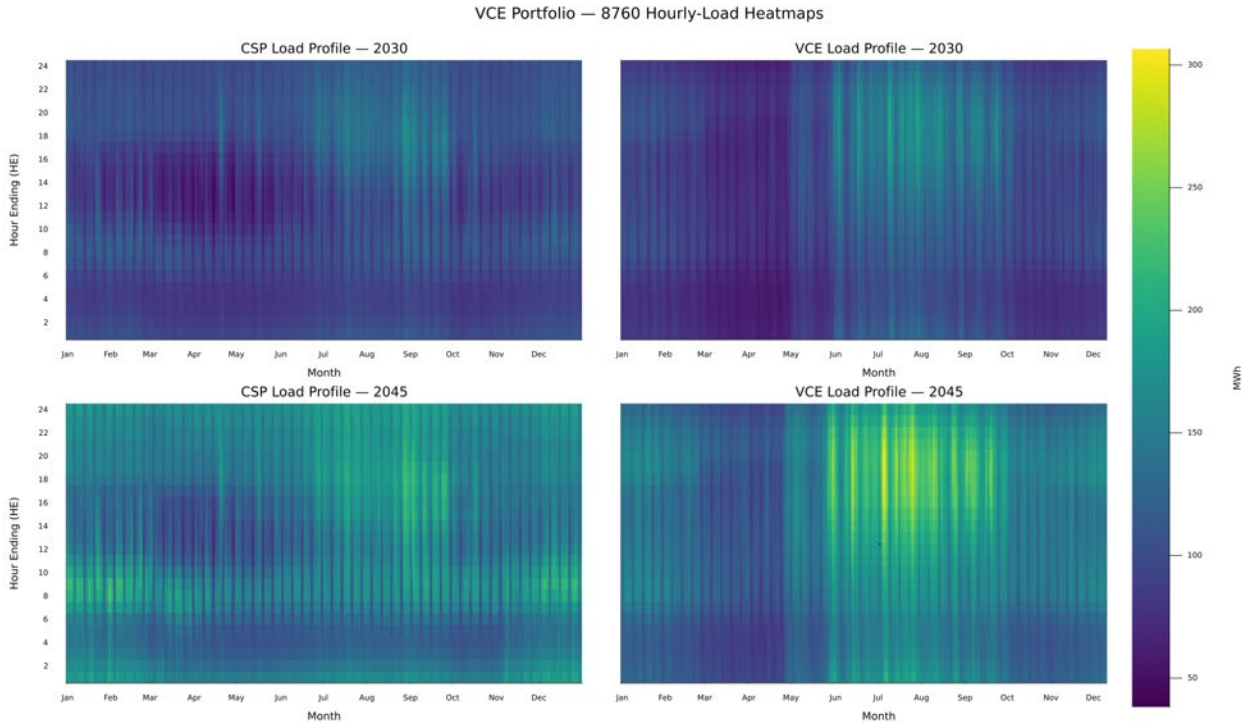


Figure 7 presents two-dimensional ("2D") heatmaps of all 8,760 hourly load values for 2030 and 2045, displayed side by side for the CPUC-CSP and VCE load profiles. While the annual energy values are identical between the two, the VCE load profile exhibits higher peak load values than the CSP profile for both years.

Figure 7 - 2D Heatmap of Hourly Load Values (8,760 Hours): CPUC-CSP vs. VCE Load Profile for 2030 and 2045



Required and Optional Portfolios

VCE is submitting one Portfolio for the 2026 IRP cycle. The Portfolio satisfies all Commission-adopted conforming portfolio criteria, as detailed below. VCE has also accounted

for the costs and benefits of resources subject to the cost allocation mechanism ("CAM"), consistent with Commission requirements.

Specifically, VCE's Portfolio is consistent with the Commission-adopted conforming portfolio criteria by:[6]

- Meeting the 2045 GHG Emissions Benchmark: achieving GHG emissions equal to or less than VCE's proportional share of the 8 MMT by 2045 GHG target;
- Using the Assigned Load Forecast: applying the energy and BTM PV forecasts assigned by the CPUC per the IRP Ruling;
- Meeting Reliability Needs in All Years: ensuring the portfolio's perfect capacity equivalent MW meets or exceeds VCE's assigned reliability procurement need ("RPR") in each planning year;
- Maintaining Proper Load Shapes in the CSP Calculator: keeping total annual energy consistent with the assigned load forecast, with all "Demand Inputs" tab checks reporting "TRUE";
- Using Proper Custom Resource Shapes: following CPUC formatting requirements for any custom production profiles, with all "Supply Inputs" tab checks reporting "TRUE";
- Using Standard Inputs and Assumptions: applying inputs and assumptions from the 2025-2026 TPP Portfolio (with updates), with any deviations from CPUC defaults identified and justified; and
- Completing All Filing Documents: submitting fully completed RDT, CSP calculator, and Narrative Template in accordance with the CPUC's completeness definition.

GHG Emissions Benchmark

VCE's 2045 GHG Emissions Benchmark was assigned in the IRP Ruling, based on the 2025-2026 TPP Portfolio with updates. The benchmark reflects the 2045 GHG planning target for the electric sector, derived using the same methodology applied in the 2022-2023 IRP cycle

[6] Filing Requirements Overview posted: https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/long-term-procurement-planning/2024-26-irp-cycle-events-and-materials

and consistent with the California Air Resources Board's 2022 Climate Change Scoping Plan for Achieving Carbon Neutrality. Benchmarks are posted on the CPUC IRP website.

Table 3 presents VCE's GHG emissions benchmarks for 2030, 2035, 2040, and 2045, as derived from the 2026 CSP tool. Table 3 also shows VCE's allocated share of in-front-of-meter combined heat and power (IFM CHP) emissions. The CSP calculator assigns each LSE a load-ratio share of CAISO IFM CHP generation, adds it to the LSE's portfolio supply, and attributes the resulting emissions using separate emission factors. Because IFM CHP is administratively assigned and its emissions are embedded in VCE's GHG benchmark, VCE's portfolio must achieve net emissions below that benchmark to meet its GHG targets.

A second source of administratively assigned emissions is each LSE's pro rata share of non-displaceable system power. System power comprises displaceable gas and unspecified imports; when either is not on the margin, the associated generation is non-displaceable and each LSE is assigned its pro rata share of that power along with the attendant emissions. This assignment is analogous to the IFM CHP allocation described above. Both IFM CHP and non-displaceable system power emissions are discussed in further detail in the GHG Emissions Results section and the CSP workbook. While BTM CHP emissions are not included in the CSP calculator and VCE is not required to plan explicitly for their reduction, the CPUC accounts for them at the system level: "Commission staff will account for BTM CHP emissions when calculating electric sector emissions of the aggregated LSE portfolios during the development of the Preferred System Plan."[7]

Table 3 - VCE's GHG Emissions Benchmarks (MMT)

Item	Units	2028	2030	2035	2040	2045
GHG Emissions Benchmark	MMT	n/a	0.064728	0.051019	0.04368	0.022716
IFM CHP	MMT	0.015227	0.014051	0.014275	0	0

a. Objectives

VCE's IRP is designed to guide its Board, executive management, and community members in selecting a portfolio that optimizes reliability and affordability while reducing GHG emissions over the planning horizon. It also supports the Commission's efforts to identify cost-effective resources that advance system reliability and statewide policy goals. The portfolio is shaped by input from VCE's Board, CAC, and the public on resource preferences, diversity, and

[7] Greenhouse Gas and Criteria Pollutant Accounting Methodology for use in Load-Serving Entity Portfolio Development in 2026 Integrated Resource Plans, California Public Utilities Commission. Updated March 19, 2026.

cost-effectiveness, consistent with applicable statutory and regulatory requirements and VCE's environmental and power supply objectives

VCE's IRP methodology is designed to achieve the following objectives:

- Satisfy the regulatory requirements of Public Utilities Code Section 454.51(a)(1);
- Satisfy all Commission specifications for conforming portfolios;
- Demonstrate how the PCP achieves VCE's CPUC-assigned GHG Emissions Benchmarks as set forth in Table 3;
- Demonstrate progress toward meeting or exceeding the state's RPS targets; and
- Demonstrate how VCE's PCP contributes to overall system reliability and satisfies Resource Adequacy ("RA") requirements.

b. Methodology

VCE conducted a robust planning exercise to provide a roadmap for future procurement decisions and an improved understanding of the impacts resulting from uncertainty in future market and grid conditions. VCE hired First Principles Advisory ("FPA") to perform the portfolio optimization analysis for its 2026 IRP filing.

i. Modeling Tool(s)

Using a custom branch of modeling software GENX[8] v.0.4.4, FPA employed an internal fundamental model to conduct a portfolio optimization study on VCE's portfolio. Similar to software used by the CPUC, the model solves a cost-minimization problem subject to constraints including reliability requirements, VCE's assigned GHG reduction targets, and the Mid-Term Reliability ("MTR") requirement. Total cost is defined as the sum of investment cost, fixed and variable operations and maintenance, and net market costs (purchase expenses less sales revenue). Because VCE's modeling approach is built on the CPUC's RESOLVE results, the use of GENX software as described in the following subsection is expected to provide results comparable to and compatible with results that would have been obtained using the more-expensive modeling tools employed by the CPUC is its system-level analysis.

ii. Modeling Approach

VCE's 2026 methodology departs from the three-step approach applied in the 2022 IRP cycle. In 2022, VCE ran three sequential steps: an independent capacity expansion study (Step 1, using GridPath to approximate RESOLVE's system-level portfolio output), a regional

[8] https://github.com/GenXProject

production-cost simulation (Step 2, using PLEXOS at WECC zonal resolution to generate hourly LMPs), and a portfolio optimization (Step 3, using GridPath). For the 2026 cycle, VCE proceeded directly to Step 3. Step 1 was omitted because VCE accepts the CPUC's RESOLVE modeling as the basis for the future systemwide composition of resources and does not take a position on an alternative CAISO system buildout. Step 2 was omitted because VCE found the NP15 hourly energy price forecast provided by its scheduling coordinator, The Energy Authority ("TEA"), as a suitable forward-market planning input. TEA also provided annual capacity and clean-attribute price forecasts eliminating the need for an independent regional simulation. These TEA inputs are described in the Alternative Assumptions section.

As previously discussed, the CPUC's preferred system-level planning tools are RESOLVE for capacity expansion and SERVM for reliability assessments. VCE's 2026 IRP similarly employs a two-stage modeling process to develop its PCP that is structurally analogous to this pairing. The key distinction between VCE's portfolio optimization planning workflow and the CPUC's is the set of loads and resources of interest. The CPUC is performing planning at the CAISO system level, accounting for all LSEs and direct access organizations. Conversely, VCE's modeling is designed for an individual LSE and reflects VCE's specific set of loads and resources and the corresponding net position with the market. Stage 1, analogous to RESOLVE, identifies cost-optimal resource additions across the planning horizon using a sampled set of operating days; Stage 2, analogous to SERVM, applies a full 8,760-hour commit-and-dispatch simulation for select planning years to capture commitment and dispatch decisions at an hourly resolution.

Figure 8 depicts the three-region model topology underlying VCE's portfolio optimization framework, spanning the VCE, CAISO, and Attributes regions. The VCE region contains two nodes: a load zone and a supply zone. The supply zone encompasses all bundled power purchase agreements ("PPAs"), including full baseline and candidate resources. The CAISO region includes two market nodes: the NP15 node, which supports bidirectional transactions (both purchases and sales to account for battery storage dispatch). The DLAP node is configured as a one-way, purchases-only transaction node representing VCE settling its load at the DLAP_PGAE-APND. The Attributes region provides VCE the option to procure renewable energy or GHG fleet attributes through index-plus contracts. These attributes are decoupled from VCE's physical energy position and are used only to satisfy clean energy attribute requirements for clients subject to CPUC mandates and to fulfill VCE's own clean energy commitments.

Figure 8 - Three-Region Model Topology for VCE's Portfolio Optimization Framework

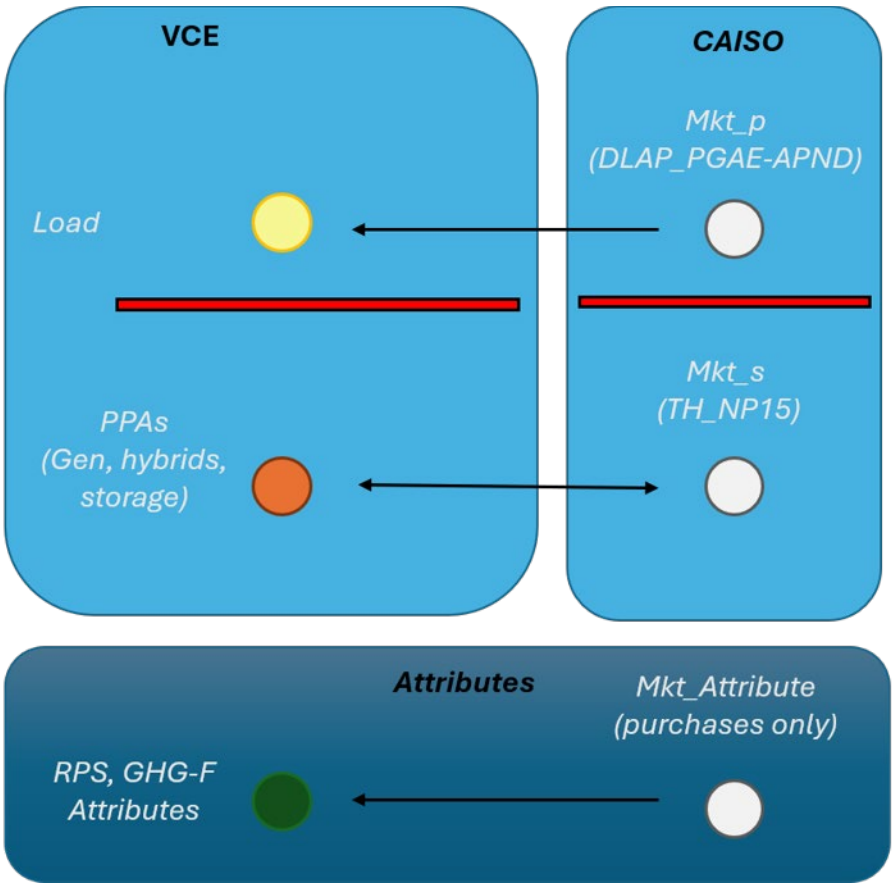


Figure 9 provides a summary of VCE's two-stage portfolio optimization process. Stage 1 runs across the full planning horizon, which spans 2027-2045. In each investment-decision year, the model selects the type, amount, timing, and approximate location of new resources to minimize total cost while satisfying all applicable planning constraints. Stage 1 represents time at reduced resolution (one sampled representative week per month), keeping the multi-year optimization computationally tractable. Candidate resources for Stage 1 are drawn from a subset of CPUC RESOLVE candidate resources and are listed in Table 4.

Figure 9 - VCE Two-Stage Portfolio Optimization Process

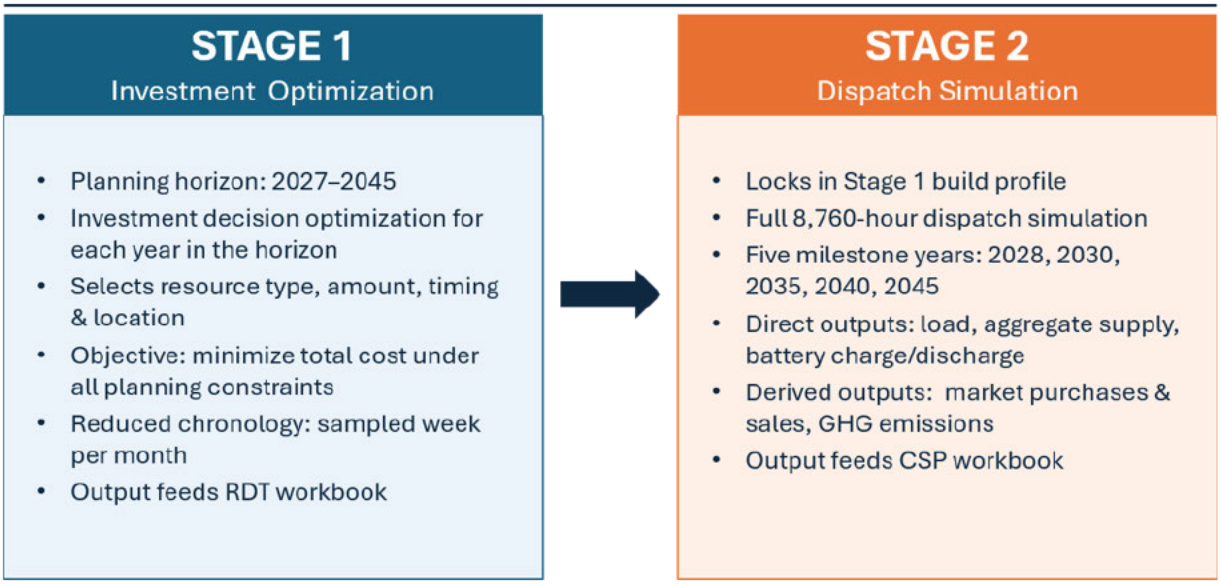


Table 4 - Candidate Resources for Stage 1 Optimization

Resources	Technology	Gen_Profile
PGE_Kern_Solar	Solar	CSP (Solar New PG&E)
SCE_Eastern_Solar	Solar	CSP (Solar New SCE SDG&E)
PGE_NGBA_Solar	Solar	CSP (Solar Baseline California)
SCE_Arizona_Solar	Solar	CSP (Solar Baseline California)
SCE_Northern_Wind	InState_Wind	CSP (Wind New PG&E)
PGE_Kern_Wind	InState_Wind	CSP (Wind New SCE SDG&E)
Morro_Bay_Offshore_Wind	Offshore_Wind	CSP (Wind Offshore Morro Bay)
Biomass	Biopower	CSP (Biomass)
Li-ion Battery (4-hr) - CA	Li-ion Battery	n/a
Li-ion Battery (8-hr) - CA	Li-ion Battery	n/a
LDES - Constrained (12-hr)	Pumped Storage Hydropower	n/a
LDES - Generic (12-hr)	Generic LDES	n/a
LDES - Generic (24-hr)	Generic LDES	n/a
LDES - Generic (100-hr)	Generic LDES	n/a
Onshore Wind - NM to SCE - Palo Verde - Tranche 3	Out_of_State_Wind	CSP (Wind New Mexico)
Onshore Wind - WY to PGE - Tesla - Tranche 1	Out_of_State_Wind	CSP (Wind Wyoming)

Geothermal - CA	Geothermal	CSP (Geothermal)
NF EGS - CA	Geothermal	CSP (Geothermal)

After Stage 1 completes its investment optimization, Stage 2 performs an 8,760-hour full dispatch simulation of VCE's total portfolio, including both existing PPAs and those selected during Stage 1. Unlike Stage 1, Stage 2 performs these grid simulations for a select number of years in the planning horizon. For this IRP, VCE simulated the five years modeled in the CSP workbook (2028, 2030, 2035, 2040, and 2045). The results of the Stage 2 run include hourly profiles of key model outputs, including load, aggregate supply, battery charge-discharge schedules, and VCE's net market position (positive when VCE is net long and sells excess supply to the market; negative when VCE is short and purchases from the market). The market model uses TEA's forecast of NP15 hourly prices. GHG emissions from both native resources and net market purchases are accounted for in the model run. FPA used the hourly GHG intensity profile for system power from the CSP workbook and assigned that to the market objects in the portfolio optimization model. For GHG emissions, the optimization model mirrors the same accounting used in the CSP workbook. This means VCE can receive GHG reduction credit from excess clean energy sold to the market, assuming system power is on the margin for that hour.

Upon the completion of both modeling stages, VCE enters its complete portfolio into the RDT's unique contracts tab to verify that the portfolio satisfies all applicable reliability planning constraints. Specifically, the aggregate perfect-capacity-equivalent MW of all qualifying resources in VCE's portfolio (calculated as each resource's nameplate capacity multiplied by its marginal effective load-carrying capability, or "ELCC") must equal or exceed VCE's assigned RPN in every planning year through 2045. Only contracts designated as "EnergyCapacity" or "CapacityOnly" in the RDT count toward this requirement; energy-only and attribute-only resources are excluded. Qualifying contracts must also satisfy a delivery window requirement: the contract start date must be on or before June 1 of the applicable planning year, and the contract end date must be on or after October 1 of that year. This check is done in lieu of a SERVM-style simulation for resource adequacy purposes.

The values on the CSPReportSheet tab in the RDT are copied and pasted into the CSP workbook, per CPUC filing requirements. Within the CSP workbook, VCE also applies three custom inputs: VCE's custom load profile in place of the CPUC default load shape (as described in the Alternative Assumptions section), custom standalone storage dispatch profiles, and custom dispatch profiles for existing hybrid PPA facilities. The dispatch profiles are derived directly from Stage 2 portfolio optimization model runs. Together, these inputs drive the portfolio's net GHG emissions calculation, covering both native emissions from VCE's bundled PPAs and GHG

emissions associated with net market purchases of system power and confirm conformance to VCE's assigned 8 MMT 2045 GHG Emissions Benchmark.

Because VCE's load profile is based on historical retail sales, BTM solar is accounted for outside of the model. The modeled load input is retail sales grossed up for transmission and distribution ("T&D") losses, using the loss factor assumed in the CSP workbook; this ensures the model's gross busbar megawatt-hours are directly consistent with the CSP workbook inputs. BTM solar itself is not subject to the T&D loss gross-up. The reliability contribution of BTM solar was netted out of the reliability constraint applied in Stage 1, preserving the credit without requiring BTM solar to be modeled as an explicit candidate resource. This treatment was adopted for computational efficiency.

iii. Alternative Assumptions

VCE made the following three categories of departures from the 2025 Filing Requirements Inputs and Assumptions ("I&A"):

- A custom normalized hourly load profile in lieu of the default IEPR-sourced profiles;
- Market price forecasts provided by The Energy Authority ("TEA") in lieu of independent systemwide production cost modeling; and
- Candidate resource capital cost assumptions drawn from the 2026–2027 Transmission Planning Process ("TPP") rather than the 2025 I&A defaults.

VCE applied a custom, normalized hourly load shape in lieu of the CPUC default hourly profiles sourced from the 2024 Integrated Energy Policy Report ("IEPR") Demand Forecast. The custom shape was developed from a historical analysis of VCE's previous five years of retail sales. The shape is normalized so that the area under the hourly curve equals VCE's CPUC-assigned annual retail sales figure; only the intra-day distribution differs from the default IEPR profile. VCE's total annual load forecast, in MWh is unchanged from the CPUC-assigned value.

TEA provided three external price forecasts that served as direct modeling inputs. First, TEA provided an 8,760-hour locational marginal price ("LMP") forecast for the NP15 trading hub for every year of the planning horizon. This forecast was used in Stage 2 to value VCE's net market position: purchases when VCE is short and sales when VCE is long. Second, TEA provided an annual capacity price forecast denominated in dollars per kilowatt-year. Third, TEA provided an annual clean energy attribute price forecast covering Power Content Category 1 ("PCC1") attributes (e.g., solar and wind) and GHG-free attributes (e.g., large hydro and Asset-Controlling Supplier ("ACS") resources). Together, the TEA forecasts replaced the need for independent capacity expansion modeling (Step 1) and regional production-cost simulation (Step 2), as described in the Modeling Approach section. VCE found the TEA forecasts defensible as

planning inputs given TEA's forward prices for energy, environmental attributes (i.e., PCC1 and GHG-free), and capacity are informed through robust, daily price discovery driven directly by trading activities. This long-established market-grounded approach ensures that all forward curves reflect real-time market dynamics and regulatory shifts.

Candidate resource capital costs were drawn from the 2026–2027 TPP rather than the 2025 I&A defaults. Per CPUC filing instructions, the conforming portfolio definition permits an LSE with capital cost and financing information that more accurately reflects its situation to use those inputs in lieu of the defaults. VCE determined that the 2026–2027 TPP satisfies this standard, as it reflects the accelerated expiration of renewable energy tax credits under the One Big Beautiful Budget Act ("OBBBA") and the impact of recent federal import tariffs on capital costs across major renewable and storage technologies.

For utility-scale solar and onshore wind, the 2025 I&A assumes tax policy as of January 1, 2025, without accounting for changes under OBBBA. The 2026–2027 TPP reflects OBBBA's accelerated credit phase-out: new onshore wind and utility-scale solar must commence construction by July 3, 2026, to retain tax-credit eligibility; accounting for safe-harbor provisions, effective eligibility for new onshore wind and solar ends by 2029, and offshore wind loses eligibility entirely. On import tariffs, the 2025 I&A assumes no impact, while the 2026–2027 TPP accounts for recent federal trade policy, resulting in net capital cost increases of 30.3% for utility-scale solar, 16.1% for onshore wind, and 11.8% for offshore wind.

For four-hour lithium-ion ("Li-ion") battery storage, the 2025 I&A assumes the Investment Tax Credit ("ITC") under the Inflation Reduction Act ("IRA") as of January 1, 2025. The 2026–2027 TPP incorporates OBBBA, under which standalone battery storage retains full ITC eligibility through 2032; with safe-harbor provisions and a three-year phase-out, the final year of any ITC eligibility for battery storage extends to 2038. On import tariffs, the 2026–2027 TPP applies a net capital cost increase of 88.7% for Li-ion batteries, assumed to persist through 2029, reflecting the heavily import-dependent nature of Li-ion supply chains. The values are based on reciprocal tariffs only and do not include the incremental impact of anti-dumping and countervailing duty ("AD/CVD") proceedings or Foreign Entity of Concern ("FEOC") restrictions.

III. Study Results

This section discusses the results from the modeling described in Section II. Reliability results are reported in the RDT workbook; GHG and other emissions results are reported in the CSP workbook; and detailed portfolio selection results for the single PCP are listed in the RDT workbook, which accompany this narrative.

a. Conforming and Alternative Portfolios

VCE developed and is submitting a single PCP that achieves GHG emissions below its proportional share of the 8 MMT by 2045 GHG Emissions Benchmark. This IRP does not include alternative portfolios.

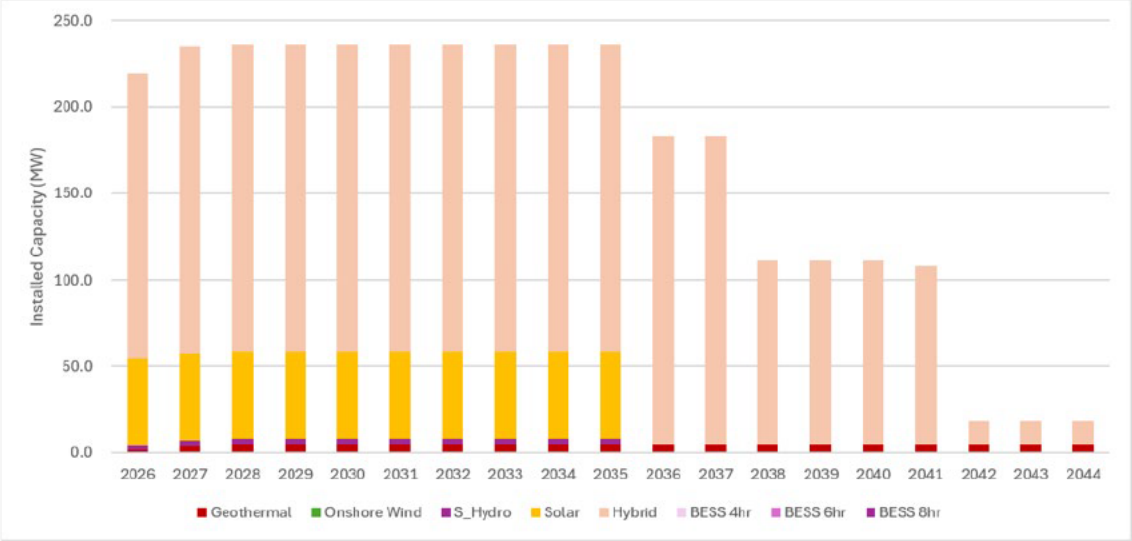
Existing Resources under Contract

VCE's portfolio of existing resources under contract is shown in Table 5 and displayed graphically in Figure 10. The portfolio of resources with which VCE has existing contracts in 2030 includes 251.4 MW of generation and storage. Each of the PPAs are greater than 10 years in length. For 2030, 227.6 MW (90%) of these resources are currently operating, and the remaining 23.8 MWs are in various stages of development.

Table 5 - Summary of Contracted Existing Resources (Cumulative MW Nameplate Capacity)

	2026	2027	2028	2029	2030
Contracted Operating Resources (as of June 2026)					
Solar PV	50	50	50	50	50
Solar PV + storage	165	165	165	165	165
Demand Response	7	7	7	7	7
4-Hour BESS	2.5	2.5	2.5	2.5	2.5
5-Hour BESS	3.1	3.1	3.1	3.1	3.1
Gas / Conventional RA		51			
Contracted In-Development Resources (as of June 2026)					
Solar PV + storage			13	13	13
Small Hydro	2.9	2.9	2.9	2.9	2.9
8-Hour BESS					2.7
Geothermal		1.5	4.1	5.2	5.2

Figure 10 - VCE's Existing PPAs by Resource Type



Planned Future Contracts with Existing Resources

Currently, VCE has no plans to contract with other existing resources in the future.

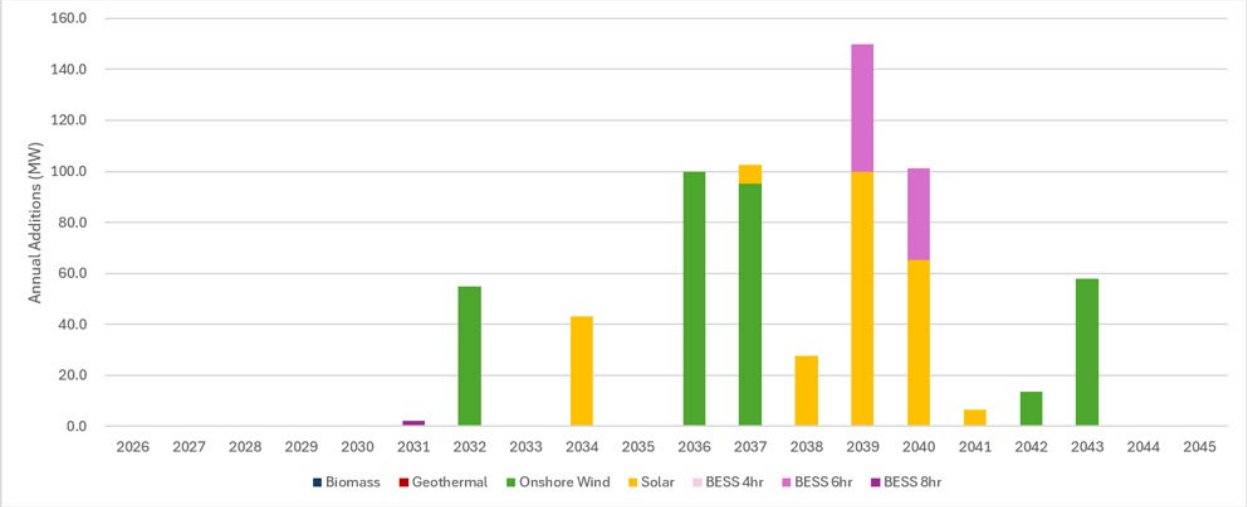
Planned Contracts with New Resources

VCE's PCP includes planned contracts with 659.2 MW of new resources by the 2045 terminal year, as shown in Table 6, and displayed by year and resource type in Figure 11. Those planned resources include 250 MW of new Solar PV, 321.2 MW of new wind, including offshore wind, and 88 MW of new battery storage. VCE's modeling assumed a 10-year contract term for battery storage resources.

Table 6 - Summary of Planned Contracts with New Resources (Cumulative MW Nameplate Capacity)

	2028	2030	2035	2040	2045
Planned, New Resources (as of June 2026)					
Solar PV			43.2	243.4	250
Wind			54.8	250	321.2
6-Hour BESS				85.9	85.9
8-Hour BESS			2.1	2.1	2.1
Total			100.1	581.4	659.2

Figure 11 - Annual Addition of New PPAs by Technology Type



Narrative Summary of Resources

Existing resources that the retail seller owns or contracts

- Aquamarine Westside Solar — VCE contracts 50 MW from the Aquamarine Westside solar PV project under a 15-year agreement running through 2036. The resource has been operating since 2021.

- Resurgence Solar + Storage — A hybrid project pairing 90 MW of solar PV with 75 MW of four-hour battery storage, online since 2023 and under contract with VCE through 2043. VCE contracts the full 90 MW of solar nameplate capacity.

- Willow Springs Solar + Storage — A hybrid project comprising 72 MW of solar PV paired with 36 MW (four-hour / 144 MWh) of battery storage. Both components share a contract start of December 31, 2023, and the project is under a 15-year contract with VCE through December 2038.

- Putah Creek Solar Farm North — A 3 MW solar PV / 3 MW (four-hour / 12 MWh) battery storage hybrid project that reached commercial operation in mid-October 2022 and is under contract with VCE through 2042.

- Tierra Buena Energy Storage Facility — A 2.5 MW / 10 MWh (four-hour) standalone battery storage resource that reached commercial operation in 2022 and is under contract through 2032. Tierra Buena is contracted as a Resource

Adequacy–only (capacity-only) resource, providing VCE with system RA capacity but no associated energy or clean-energy attributes.

- Tumbleweed Energy Storage — A standalone battery storage facility with an 8-hour duration (3.1 MW / 24.9 MWh). VCE holds a contracted share of roughly 3.1 MW, online in 2026 and under contract through 2041.

- Leapfrog Demand Response — A 7 MW demand response resource under contract with VCE through 2031, providing dispatchable load reduction that counts toward VCE's Resource Adequacy obligations.

- Indian Valley Hydroelectric Project — A 2.9 MW small hydro facility under contract with VCE from 2026 through 2041 (a 15-year term), with expected annual generation of 6.4 GWh.

Contracted planned resources that the retail seller owns or contracts

- Willow Rock Compressed Air Energy Storage ("CAES") — A long-duration energy storage project with an eight-hour duration. VCE holds a contracted share of approximately 2.7 MW. The project is in advanced development/review, expected to reach commercial operation in 2030 under a contract extending through 2050.

- Fish Lake Valley Geothermal — A geothermal generation facility located in Nevada under development, with a 20-year contract with VCE beginning July 1, 2027, through June 30, 2047. The project is expected to provide approximately 4.54 GWh of annual generation attributable to VCE's contracted share. VCE holds contracted RA, energy, and clean energy attribute rights. (Contracted MW share under finalization.)

- Ormat Dogwood Geothermal — A Nevada-based geothermal import resource under development with Ormat Technologies. VCE holds a contracted share of approximately 0.925 MW under a 20-year agreement beginning July 1, 2027, through June 30, 2047, providing RA, energy, and clean energy attributes.

- Ormat [redacted] Geothermal — A Nevada-based geothermal import resource under development with Ormat Technologies. VCE holds a contracted share of approximately [redacted] under a contract beginning [redacted] providing RA, energy, and clean energy attributes.

- Ormat Geothermal Portfolio (Balance of Supply) — Representing the remaining balance of VCE's broader Ormat geothermal contract portfolio (125 MW total contract capacity). VCE holds approximately [redacted] of remaining contracted

capacity under an agreement running [redacted], providing RA, energy, and clean energy attributes.

New and existing resources that will be used to meet Mid-Term Reliability obligations

- Willy 9 Chap 2 Solar + Storage
- Resurgence Solar + Storage
- Tumbleweed Energy Storage
- Fish Lake Valley Geothermal
- Ormat Dogwood Geothermal
- Ormat [redacted] Geothermal
- Ormat Geothermal Portfolio (Balance of Supply)
- Willow Rock CAES

Comparison Between VCE's Preferred Conforming Portfolio and the 2025-2026 TPP Portfolio

This sub-section is divided into two parts. The first part compares VCE's PCP to the 2025-2026 TPP Portfolio as adopted in D.25-02-026. The second part compares VCE's PCP to the updated 2025-2026 TPP Portfolio (i.e., RESOLVE-Selected New Resources) as provided in Table 1 of the IRP Ruling. This distinction and dual examination is included to reflect the high degree of uncertainty introduced by unprecedented recent changes in federal energy policy, many of which are currently being litigated.

The mix of new planned resources in VCE's PCP differs substantially from the new resource mix in the 2025-2026 TPP Portfolio[9], as shown in Table 7. The 2025-2026 TPP Portfolio's new build includes a broad resource mix but by 2045 is nearly half (48.5%) new solar, and the next largest share of new resources – 8-hour Li-ion batteries – make up 16.6% of the 2045 TPP portfolio but represent only about one-third of the share of solar in the overall portfolio. In comparison, in-state wind makes up nearly half (48.7%) of new resources by 2045

[9] D.25-02-026, Decision Transmitting Electricity Resource Portfolios to the California Independent System Operator for the 2025–2026 Transmission Planning Process, R.20-05-003, (February 20, 2025) Table 1, p. 19:https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M557/K879/557879249.pdf

in VCE's PCP, followed by new solar at 37.9%, non-long-duration[10] Li-ion battery storage at 13%, and 8-hour Li-ion storage at 0.3%.

Table 7 - Comparison of Resource Mix in VCE's PCP and 2025-2026 TPP

RESOLVE Resource Type	TPP Base Case (%)				VCE PCP (%)			
	2030	2035	2040	2045	2030	2035	2040	2045
Natural Gas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Geothermal	3.8%	2.5%	1.6%	1.3%	0.0%	0.0%	0.0%	0.0%
Biomass	0.5%	0.3%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%
In-State Wind	13.0%	12.6%	8.0%	7.1%	0.0%	54.7%	43.0%	48.7%
Out-of-State Wind	11.8%	14.3%	10.8%	12.3%	0.0%	0.0%	0.0%	0.0%
Offshore Wind	0.0%	7.2%	4.6%	3.5%	0.0%	0.0%	0.0%	0.0%
Solar	37.0%	31.5%	45.4%	48.5%	0.0%	43.2%	41.9%	37.9%
Li-ion Battery (4 hr)	29.0%	25.0%	15.9%	12.3%	0.0%	0.0%	14.8%	13.0%
Li-ion Battery (8 hr)	3.0%	4.5%	12.1%	16.6%	0.0%	2.1%	0.4%	0.3%
Pumped Hydro Storage (12 hr)	1.3%	1.3%	0.8%	0.6%	0.0%	0.0%	0.0%	0.0%
Other LDES (8–24 hr)	0.8%	0.8%	0.5%	0.4%	0.0%	0.0%	0.0%	0.0%
Shed Demand Response	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Gas Capacity Not Retained	0.0%	0.0%	0.0%	-2.7%	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%

Table 8 shows the variance between VCE's PCP and the 2025-2026 TPP Portfolio, calculated by subtracting the TPP percent for each resource type from the percent in VCE's PCP. Compared to the TPP, VCE's PCP has a substantially higher share of in-state wind resources, about the same share of non-long-duration Li-ion batteries, and slightly smaller shares of solar and 8-hour Li-ion battery resources.

Table 8 - Resource Mix Variance between VCE's PCP and 2025-2026 TPP

Variance (VCE PCP % less TPP %)	2030	2035	2040	2045
Natural Gas	0.0%	0.0%	0.0%	0.0%
Geothermal	-3.8%	-2.5%	-1.6%	-1.3%
Biomass	-0.5%	-0.3%	-0.2%	-0.2%
In-State Wind	-13.0%	42.2%	35.0%	41.7%
Out-of-State Wind	-11.8%	-14.3%	-10.8%	-12.3%
Offshore Wind	0.0%	-7.2%	-4.6%	-3.5%
Solar	-37.0%	11.6%	-3.6%	-10.6%
Li-ion Battery (4 hr)	-29.0%	-25.0%	-1.1%	0.7%
Li-ion Battery (8 hr)	-3.0%	-2.4%	-11.8%	-16.2%

[10] VCE's modeling selected 6-hour Li-ion battery storage as the economic resource. For convenience, comparability, and clarity in this exercise, these 6-hour batteries are shown in comparison to the 4-hour batteries in the TPP to differentiate them from the 8-hour batteries also selected in VCE's modeling which are compared to the TPP's 8-hour battery resources.

Pumped Hydro Storage (12 hr)	-1.3%	-1.3%	-0.8%	-0.6%
Other LDES (8–24 hr)	-0.8%	-0.8%	-0.5%	-0.4%
Shed Demand Response	0.0%	0.0%	0.0%	0.0%
Gas Capacity Not Retained	0.0%	0.0%	0.0%	2.7%

The mix of new planned resources in VCE's PCP differs substantially from the new resource mix in the updated 2025-2026 TPP Portfolio (i.e., RESOLVE-Selected New Resources) provided in Table 1 of the IRP Ruling, as shown in Table 9. The updated 2025-2026 TPP Portfolio's new build includes a broad resource mix but by 2045 is 57.4% new solar, and the next largest share of new resources – 8-hour Li-ion batteries – make up 14.6% of the updated 2045 TPP portfolio, followed by out-of-state wind at a 13.2% share, and in-state wind at a 7.6% share of the overall updated resource mix.

Table 9 - Comparison of Resource Mix in VCE's PCP and Updated 2025-2026 TPP

RESOLVE Resource Type	TPP Base Case (%)				VCE PCP (%)			
	2030	2035	2040	2045	2030	2035	2040	2045
Natural Gas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Geothermal	5.0%	3.6%	2.9%	2.2%	0.0%	0.0%	0.0%	0.0%
Enhanced Geothermal (EGS)	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%
In-State Wind	2.7%	7.2%	7.5%	7.6%	0.0%	54.7%	43.0%	48.7%
Out-of-State Wind	11.5%	8.0%	14.3%	13.2%	0.0%	0.0%	0.0%	0.0%
Solar	58.8%	60.7%	59.0%	57.4%	0.0%	43.2%	41.9%	37.9%
Li-ion Battery (4 hr)	9.2%	5.0%	4.0%	4.7%	0.0%	0.0%	14.8%	13.0%
Li-ion Battery (8 hr)	13.4%	15.9%	12.6%	14.6%	0.0%	2.1%	0.4%	0.3%
Total	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%

Table 10 shows the variance between VCE's PCP and the updated 2025-2026 TPP Portfolio, calculated by subtracting the updated TPP percent for each resource type from the percent in VCE's PCP. Compared to the updated TPP, VCE's PCP has a substantially higher share of in-state wind resources, a somewhat higher share of non-long-duration Li-ion batteries, and smaller shares of solar and 8-hour Li-ion battery resources.

Table 10 - Resource Mix Variance between VCE's PCP and updated 2025-2026 TPP

Variance (VCE PCP % less updated TPP %)	2030	2035	2040	2045
Natural Gas	0.0%	0.0%	0.0%	0.0%
Geothermal	-5.0%	-3.6%	-2.9%	-2.2%
Enhanced Geothermal Systems (EGS)	0.0%	0.0%	0.0%	-0.5%
In-State Wind	-2.7%	47.6%	35.5%	41.2%
Out-of-State Wind	-11.5%	-8.0%	-14.3%	-13.2%
Solar	-58.8%	-17.5%	-17.1%	-19.5%
Li-ion Battery (4 hr)	-9.2%	-5.0%	10.8%	8.3%
Li-ion Battery (8 hr)	-13.4%	-13.8%	-12.3%	-14.3%

This variance is significant for several reasons: 1) VCE expects most LSEs to generally follow the TPP portfolio and compete to procure new hybrid/co-located solar facilities; 2) VCE's existing resource portfolio is already heavily weighted towards solar and solar-plus-storage ("PV+S") resources, and while some amount of incremental solar and battery storage procurement is well-suited to VCE's load shape and portfolio balance needs, in-state wind resources add even more value due to the complementary nature of wind's output profile and wind's ability to support increased alignment of generation and load on an hourly basis; and 3) VCE is a comparatively small LSE with little market power, and by focusing a limited number of fully commercial resource types rather than the full breadth of TPP resource types VCE is likely to achieve more efficient and lower-cost procurement..

Additionally, there are other practical considerations for VCE, including that there are no new uncontracted resources being planned by 2030 because VCE has all the new capacity it needs by 2030 already under contract, VCE's load forecast for the near term is relatively flat[11], and a primary driver of VCE's procurement strategy at present is to diversify its resource portfolio to better align load and generation on an hourly basis as a means of supplying electricity to its customers at both the lowest possible cost and with the lowest possible emissions of GHGs and other air pollutants.

b. Preferred Conforming Portfolio

VCE's PCP is the LSE's 8 MMT Conforming Portfolio submitted for Commission approval. This portfolio represents a continuation of VCE's renewable energy-focused strategy that will allow it to satisfy the statewide Renewable Portfolio Standard ("RPS") and GHG targets. VCE expects to continue expanding and diversifying its portfolio of renewable energy and energy storage over the forecast period by adding more renewable energy and battery storage to provide clean energy and RA capacity. A summary of the PCP's resources and expected generation as well as estimated annual electric demand is shown in Table 11.

Total Portfolio

Figure 12 displays VCE's total portfolio across the planning horizon in terms of installed nameplate capacity, in MW, broken out by technology type. It includes both existing resources under contract and candidate resources selected by the optimization model, as well as RA-only unspecified resources, which are shown separately from bundled PPAs. Figure 13 presents the same portfolio view expressed in MWh of annual generation.

[11] *See* LSE reliability procurement requirement (RPR) (MW), Row 12 of the Reliability – Planning tab of the RDT.

Figure 12 - VCE's Total Portfolio by Technology Type

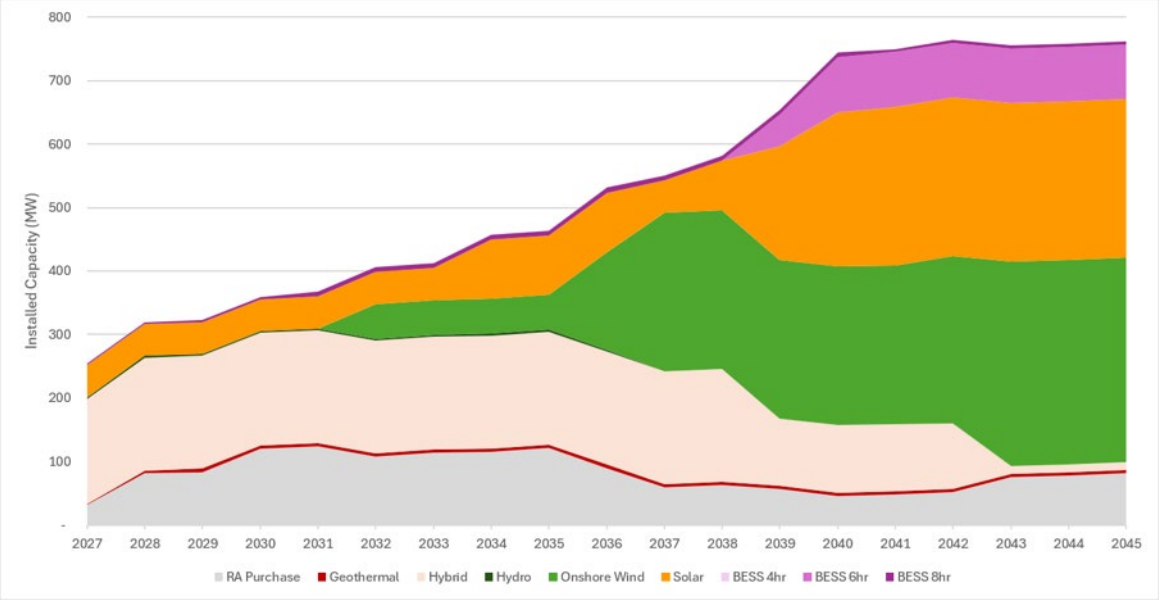


Figure 13 - VCE's Total Portfolio by Technology Type (Annual Generation, MWh)

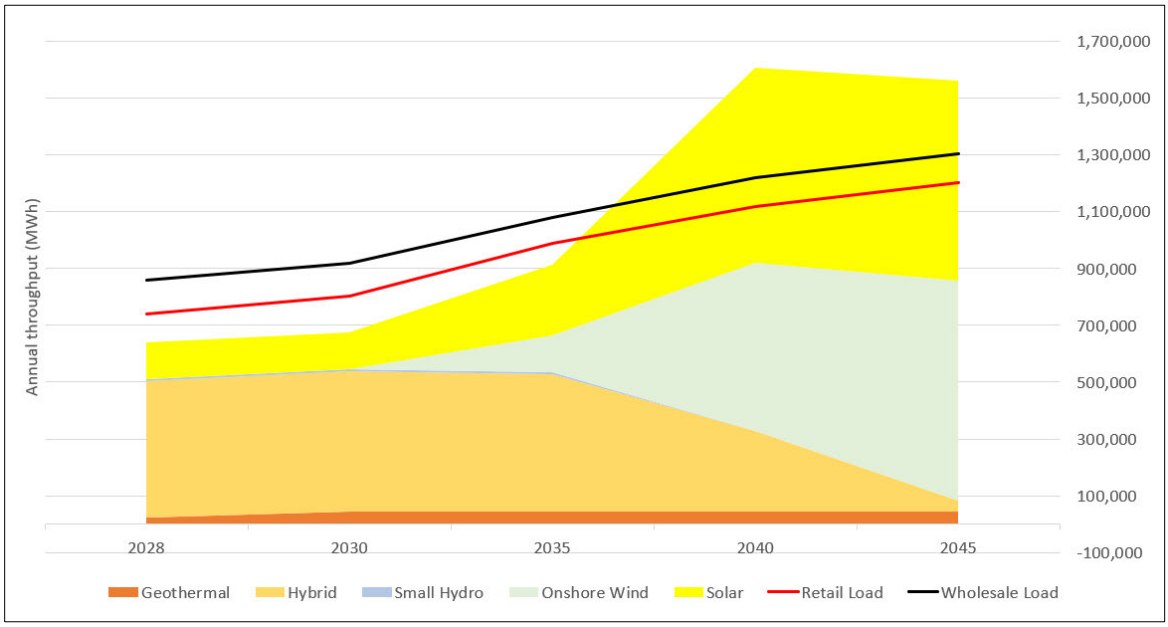


Figure 14 shows the annual volume of GHG-free ("GHG-F") energy attributes that VCE procures across the planning horizon to satisfy its clean energy goals and GHG emission reduction targets. These attributes are sourced from bundled PPAs with GHG-free resources (including geothermal) whose clean energy attributes are contractually assigned to VCE, as well as allocations of GHG-free attributes from PG&E for large hydro and nuclear. The chart

illustrates how VCE's attribute procurement grows over time as additional GHG-free contracts come online.

Figure 14 - Annual GHG-Free Attribute Procurement by Resource Type

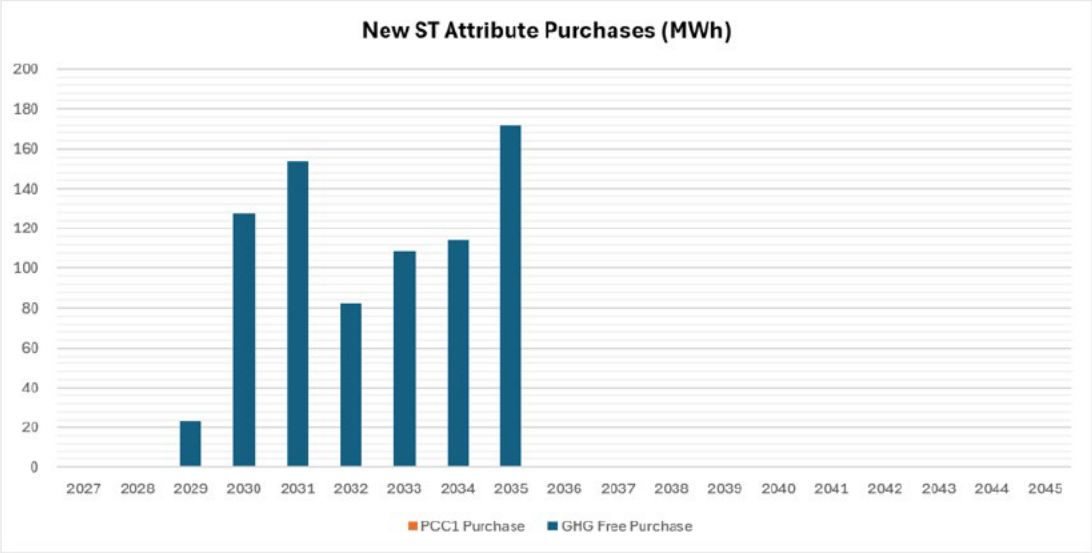


Table 11 summarizes VCE's complete PCP portfolio across the planning horizon, including existing PPAs, new candidate PPAs selected by the optimization model, RA-only unspecified resources, and standalone clean energy attribute purchases. The table also includes a forecast of VCE's residual reliance on net system power, the share of retail load met with RPS-eligible renewables, and the share of retail load met with GHG-free resources.

Table 11 - PCP Portfolio Summary: Supply Mix, System Power Reliance, and Clean Energy Metrics

	2028	2030	2035	2040	2045
Retail Demand	741.4	802.9	987.3	1,119.1	1,200.6
Demand (at generator busbar)	806.8	873.8	1,074.5	1,218.0	1,306.7
Large Hydro	0.0	127.6	172.2	0.0	0.0
Geothermal	24.9	44.5	44.5	44.5	44.5
Small Hydro	6.5	6.5	6.5	0.0	0.0
Wind CAISO	0.0	0.0	130.2	593.9	773.3
Solar Utility Scale	131.2	129.4	248.2	687.5	706.0
Storage Resource Custom Profile	-1.5	-0.8	-5.0	-34.6	-32.6
RPS Resource Custom Profile	478.3	493.3	483.3	282.4	38.6
IFM CHP	27.4	24.5	24.9	0.0	0.0
Net System Power	175.4	112.2	99.7	-77.3	21.2
Curtailment	-39.3	-72.8	-122.4	-264.6	-228.6
Exports	-9.5	-11.2	-16.8	-20.5	-23.4
RPS-Eligible Delivered Renewable Percentage	81.1%	74.8%	80.0%	120.1%	111.1%
GHG-free Percentage	83.0%	93.3%	98.4%	120.7%	111.7%

The portfolio generation summarized in Table 11 shows the expected performance of the PCP that is consistent with VCE's long-term preferences and conforms with Commission and statutory requirements. VCE's long-term operational goals include maintaining electricity prices that are competitive with PG&E retail prices while at the same time delivering a supply portfolio that is cleaner than PG&E's portfolio.

There are several reasons why VCE's PCP relies on a mix of renewable resources, including solar PV, wind, geothermal, small-scale hydro, and battery storage. First, a high level of renewable energy is preferred by VCE and its customers. Second, relying on a mix of resources provides a better match of renewable generation to VCE's load profile than a more solar-heavy portfolio, which could otherwise be preferred from a cost perspective. VCE's electricity demand is lower than that of many other LSEs, which necessitates partnering with other LSEs to develop and/or contract for non-solar resources. This joint procurement approach adds risk to the development and contracting cycle but offsets that risk by allowing VCE to access procurement opportunities, such as its geothermal resources, that would otherwise be precluded by its relatively small electricity demand.

Compliance with Statutory and Regulatory Requirements

Section 454.52 (a) (1) of the Public Utilities Code sets out several requirements with which LSEs must comply in their IRPs:

(A) Meet GHG emissions reduction targets established by the State Air Resources Board

VCE's PCP meets the GHG emissions reduction targets established IRP Ruling by achieving emissions equal to or less than VCE's proportional share of the 2045 8 MMT GHG benchmark, as shown in Table 12. The portfolio was developed using the Commission's prescribed assumptions and methodologies and is consistent with the statewide emissions reduction pathway reflected in the 2025-2026 TPP Portfolio with updates. VCE's assigned GHG Benchmarks for 2035 and 2045 are 51,000 metric tons and 23,000 metric tons respectively.[12] VCE's PCP satisfies both requirements, with reported emissions of 45,000 metric tons in 2035 and 17,000 metric tons in 2045.[13] For reference, in the 2022 IRP, VCE forecast 62,000 metric tons in 2035 compared to a forecast of 45,000 in this IRP, showing that VCE is committed to reducing its GHG emissions. See Section III.c for more information.

Table 12 - VCE GHG Reduction Targets and PCP Emissions by Planning Year (2030–2045)

Item	2028	2030	2035	2040	2045
VCE GHG Reduction Target (MMT)	n/a	0.065	0.051	0.044	0.023
VCE PCP GHG Emissions (MMT)	*0.078*	0.054	0.045	-0.024	0.017

[12] *See* cells N24 and P24 of the GHG Benchmarks tab of the CSP.

[13] *See* cells F4:7 and H4:7 of the Results tab of the CSP.

(B) Procure at least 60 percent eligible renewable energy resources by December 31, 2030

VCE's PCP supports compliance with California's RPS requirement to procure at least 60 percent eligible renewable energy resources by December 31, 2030, pursuant to Public Utilities Code Section 399.11 et seq. VCE's PCP includes 93% RPS-eligible energy in 2030 and 98% RPS-eligible energy in 2035.[14] The portfolio includes substantial renewable energy resources, including solar, geothermal, and other eligible renewable resources under long-term contracts, which contribute toward VCE's ongoing RPS compliance obligations. Table 13 lists VCE's long-term and total RPS requirements alongside total portfolio supply broken out by technology. Table 14 provides the GHG-free view of the same portfolio.

Table 13 - VCE PCP Supply of RPS-Eligible Energy by Planning Year (2030–2045)

	2028	2030	2035	2040	2045
VCE Long-Term RPS Requirement	263,587	313,123	385,031	436,445	468,222
VCE Total RPS Requirement	405,518	481,728	592,356	671,454	720,342
VCE PCP Supply	675,100	702,340	912,060	1,624,800	1,553,840
Biomass	0	0	0	0	0
Existing ST PCC1	0	0	0	0	0
Existing ST PCC2	0	0	0	0	0
Solar	131,630	129,390	238,250	689,290	705,950
Geothermal	24,990	44,470	44,470	44,600	44,470
Hybrid	512,030	522,030	509,080	301,960	42,490
Hydro	6,450	6,450	6,450	0	0
Onshore Wind	0	0	113,810	588,950	760,930
PCC1 Purchase	0	0	0	0	0

Table 14 - VCE PCP Supply of GHG-free Energy by Planning Year (2030–2045)

Total GHG-Free MWh	2028	2030	2035	2040	2045
VCE Clean Energy Target	405,518	521,872	888,534	1,063,136	1,200,570
Supply	675,100	829,960	1,084,240	1,624,800	1,553,840
Existing ST GHG-F	0	0	0	0	0
Existing ST PCC1	0	0	0	0	0
Solar	131,630	129,390	238,250	689,290	705,950
Geothermal	24,990	44,470	44,470	44,600	44,470
Hybrid	512,030	522,030	509,080	301,960	42,490
Hydro	6,450	6,450	6,450	0	0
Onshore Wind	0	0	113,810	588,950	760,930

[14] *See* cells E102 and F102 of the Results tab of the CSP.

PCC1 Purchase	0	0	0	0	0
GHG Free Purchase	0	127,620	172,180	0	0

(C) Just and reasonable rates

VCE's rates are approved by its Board in accordance with VCE policies. VCE's goal is to meet or beat PG&E's retail electric rates. VCE has always maintained retail rates that are competitive with those of PG&E. VCE's PCP enables VCE to serve its customers at reasonable and stable rates by relying on a balanced portfolio of existing long-term contracts and planned resources that provide cost certainty and reduce exposure to short-term market volatility. VCE's procurement strategy seeks to meet reliability and clean energy objectives while prudently managing procurement costs.

(D) Minimize impacts on ratepayers' bills

VCE's PCP selects the least-cost resource options to meet its requirements, including operational and capital investment costs. (VCE's IRP does not analyze costs like transmission and distribution costs that impact customer bills because, as a CCA, these costs are outside of VCE's control and are the responsibility of PG&E.) Minimizing impacts on ratepayer bills is a top priority for VCE when it procures on behalf of its customers, in addition to striving for a cleaner resource portfolio that utilizes local resources in line with VCE customer preferences. See Section III.e for additional details.

(E) Ensure System and Local Reliability

VCE's PCP meets or exceeds its assigned reliability need in every planning year, as required by California Public Utilities Code Section 380; its net capacity position exceeds forecast need through 2045.[15] The plan provides system and local RA at 100 percent of expected monthly peak load plus the CPUC-required Planning Reserve Margin, and it includes these capacity costs in the PCP's resource costs. It relies on a diverse mix of solar, onshore and offshore wind, hydro, energy storage, long-duration energy storage, geothermal, and demand response, and it procures battery storage RA beyond current mandates, including replacement of Diablo Canyon capacity. VCE's long-term PPAs with intermittent renewables also allow curtailment during periods of negative market prices. Together these resources support resource adequacy and maintain reliability under evolving grid conditions, including increased electrification and climate-related risks. By exceeding VCE's proportional share of the market, the portfolio supports reliability across the broader system.

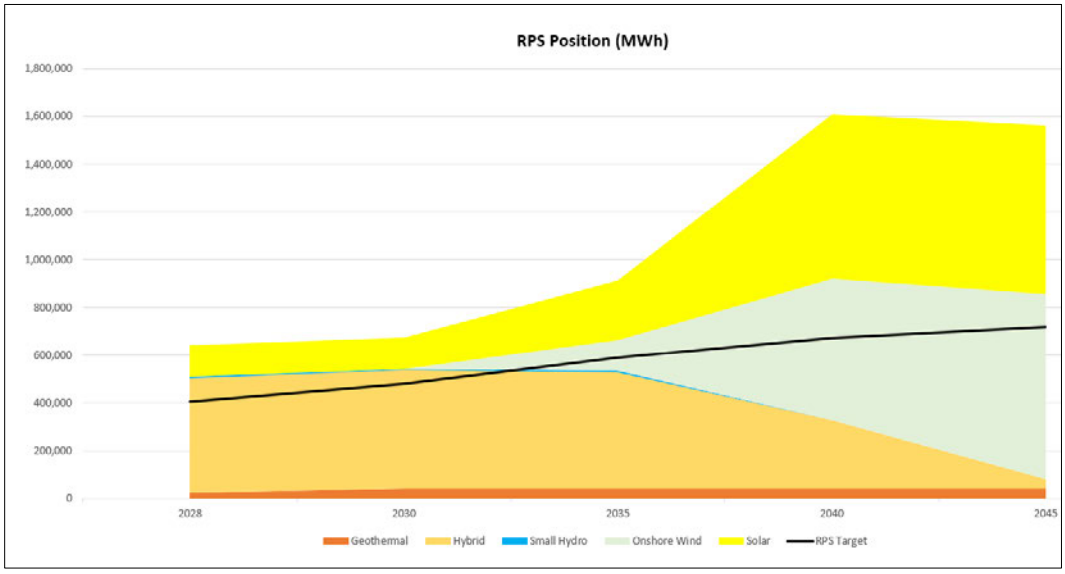
(F) Long-Term Contracts for RPS Procurement

VCE's PCP demonstrates compliance with Public Utilities Code Section 399.13(b)(1), which requires that at least 65% of RPS procurement for each compliance period come from contracts with terms of at least ten years or from ownership arrangements for eligible renewable resources. VCE is well positioned to exceed SB 350's long-term contracting requirements and

[15] *See* row 242 on the Reliability - Planning tab of the RDT.

support California's broader SB 100 goals of 60% renewable retail sales by 2030 and 100% renewable and zero-carbon electricity by 2045. VCE's PCP includes 75% RPS-eligible energy in 2030 and 80% RPS-eligible energy in 2035.[16] VCE's current portfolio of long-term contracted resources totals 384 MW of nameplate capacity and consists primarily of solar (60%) and BESS (35%), with smaller contributions from demand response (2%), geothermal (1%), small hydro (1%), and compressed air energy storage ("CAES") (1%). The PCP includes 659 MW of new resources, consisting of wind (49%), solar (38%), and BESS (13%). See Figure 15.

Figure 15. RPS Position (MWh)



(G) Strengthen the diversity, sustainability, and resilience of the bulk transmission and distribution systems, and local communities

VCE neither owns nor operates transmission or distribution systems, and it therefore operates within the decisions and constraints of transmission and distribution system owners or operators. However, VCE supports diversity, sustainability, and resilience in the grid system by seeking a variety of resource types (e.g., solar, hybrid solar, geothermal, small hydro, on- and off-shore wind, demand response, etc.) located in a variety of places (e.g., across California and several counties in Nevada). VCE also recognizes the importance of a diverse, sustainable, and resilient grid system by seeking a resource mix that reduces curtailment events and the associated use of system power which often has much higher emissions than VCE's priority resources. Furthermore, members of VCE's CAC emphasize the importance of local resources and avidly encourage the procurement of local resources in VCE's portfolio.

(H) Enhance distribution systems and demand-side energy management

Since the distribution system and demand side management programs are managed by PG&E, the primary responsibility for meeting these requirements and making such programs

[16] *See* cells E102 and F102 of the Results tab of the CSP.

available to VCE customers lies with PG&E. VCE provides information to its customers on energy efficiency, electric vehicle adoption, the transition to time-of-use rates, net metering, OhmConnect demand management programs, and has implemented a demand management pilot program, AgFIT, for its agricultural customers that was expanded by the Commission to serve a broader mix of commercial and industrial customers as an Hourly Flex Program. In the future, additional load management programs and managed charging of electric vehicles may be adopted by VCE as they become available. VCE will continue to explore programs that can be offered in parallel with PG&E's customer programs.

Some of VCE's key actions in this area include:

- DERs: VCE supports the deployment of customer-sited solar, battery storage, and other distributed resources that can reduce strain on the distribution grid, improve local resilience, and help integrate renewable energy. For example, in 2025, VCE partnered with UC Davis and Panasonic on the Coordinated Home Automation via Real-Time Grid Economics Study ("CHARGE") Pilot to test residential DER integration, including BESS, heat pump water heaters, heat pump HVAC systems, EV chargers, and home energy management systems ("HEMS"). The pilot enrolled approximately 25 Yolo County households to evaluate how smart homes can shift load in response to responsive devices, dynamic pricing and grid signals.

- Demand response and load flexibility: VCE has implemented programs that encourage customers to shift electricity use away from peak periods. By reducing peak demand and increasing load flexibility, these programs can lower system costs, reduce reliance on fossil generation, and alleviate stress on local distribution infrastructure. For example, the Agricultural Flexible Irrigation Technology (AgFIT) Program helped agricultural customers shift irrigation pumping to times that better align with grid conditions and lower-cost electricity periods. The AgFIT Pilot closed in December 2024. Due to positive initial load shift results in AgFIT, the CPUC expanded the AgFIT design into the currently open statewide Hourly Flex Pilot program, in which VCE participates and offers residential, non-residential, and agricultural customers a dynamic rate.

- Energy efficiency and building electrification: VCE offers customer programs that improve energy efficiency and promote the transition from fossil fuel technologies to efficient electric alternatives, such as heat pump water heaters, space heating, and EVs. These programs help manage long-term load growth and support cleaner energy use. For example, VCE launched a heat pump incentive program to support customers transitioning from fossil fuel equipment to efficient electric technologies. VCE also maintains energy efficiency resources that connect customers with state, federal, and PG&E rebates and incentives. VCE customers have access to a free "concierge" program that helps customers to

transition to electric and involves a dedicated case manager to develop a whole home electrification plan. The case manager can assist the customer in applying for available incentives and evaluating contractor bids.

- EV integration: VCE supports EV adoption and managed charging strategies to encourage charging during periods when renewable energy is abundant and grid demand is lower. For example, the Electrify Yolo Program partnership with local jurisdictions funded by the Sacramento Area Council of Governments resulted in the installation of public EV charging infrastructure across VCE's service area. The program completed in 2024. Additionally, VCE launched its EV Rebate Program on September 19, 2022, providing customer incentives of $2,000 for plug-in hybrid vehicles (PHEVs), $2,500 for battery electric vehicles (BEVs), and $4,000 for either PHEVs or BEVs for income-qualified customers.

(I) Local Air Pollutants and Disadvantaged Communities

VCE's PCP minimizes localized air pollutants and greenhouse gas emissions by relying on a predominantly clean and zero-emission energy portfolio composed of renewable generation, energy storage, and demand-side resources. By advancing zero-emitting resources and reducing dependence on fossil-fueled generation, the portfolio supports California's environmental goals, including improved air quality benefits for disadvantaged communities. Air pollutants allocated to VCE, such as those shown in the CSP results in Section III.c, result from system resources and not from VCE's contracted long-term resources. VCE intends to continue diversifying its resource portfolio in the coming years by procuring resources to better align its hourly generation with its hourly load and anticipates that implementation of this approach will reduce emissions resulting from system resources and support reduced emissions in disadvantaged communities across the state.

J) Maintain a diverse portfolio of energy resources

VCE's PCP expands on its existing diverse portfolio of resources, primarily by adding a substantial amount of in-state wind and additional 6- and 8-hour long-duration storage alongside additional solar resources. These planned resources will complement and add additional resource diversity to VCE's existing contracted resource portfolio that includes standalone solar, solar co-located with storage, standalone storage, long-duration storage, geothermal, small hydro, and demand response resources. Additionally, VCE existing resource portfolio is geographically diverse with generation facilities located in two states (i.e., California and Nevada) and six counties in California stretched over about two-thirds of the state.[17]

VCE also recognizes the potential benefits of long lead-time resources (e.g., offshore wind, geothermal, and other such resources) and the advantages of the centralized procurement

[17] *See* https://valleycleanenergy.org/power-sources-2/

approach addressed in D.24-08-064 and the Commission's letter[18] in February 2025 requesting the Division of Water Resources to initiate its central procurement function for long lead-time resources. Because both the specific type(s) of resources and the ultimate success at contracting for resources through the centralized resource procurement are unknown, these potential long lead-time resources are not currently included in VCE's PCP but will be considered in future planning as additional information becomes available.

Additional Information and Justification

As previously mentioned, VCE's PCP assumes other LSE procurement will be consistent with the updated 2025-2026 TPP Portfolio. VCE's Portfolio achieves GHG emissions of 17,000 metric tonnes, which is about 26% below its proportional 2045 target of 23,000 metric tonnes. Pursuant to its internal policies and goal established by its Board, VCE does not have GHG-emitting resources in its existing or planned future resource portfolio. Instead, VCE is planning on diversifying its portfolio with wind and solar plus storage to better align its generation and load on an hourly basis. This improved alignment contributes to system-wide reliability, lower-cost RA compliance under the slice-of-day ("SOD") framework, and because the PCP's increased resource diversification results in negative emissions in 2040 – meaning emissions from system power are reduced – VCE's zero-emissions objectives provide benefits statewide and particularly to the communities throughout the state that are negatively impacted by nearby fossil fuel-combusting generation units.

VCE's PCP does not include any new natural gas resources or re-contracting with existing natural gas resources with terms of five years or more; therefore, no additional demonstration regarding the inability of lower-emitting or zero-emitting resources to meet identified needs is required.

Compared with VCE's 2022 IRP 25 MMT by 2035 PCP, the current 8 MMT by 2045 PCP reflects updated statewide decarbonization targets, revised load forecasts, and changes in resource availability and procurement needs. The current portfolio includes additional executed clean energy resources that have reached commercial operation since the 2022 IRP cycle, including Resurgence Solar I, Willy 9 Chap 2 battery storage, and Tumbleweed Long Duration Battery Storage. These additions increase the amount of existing clean resources in VCE's portfolio and provide greater certainty regarding resource availability, reliability, and long-term cost stability.

VCE's 2026 PCP for target year 2035 reflects higher projected electricity demand and lower renewable energy penetration than its 2022 PCP, while maintaining a similar level of GHG-free energy. This is because compared to the 2022 portfolio, the 2026 portfolio increases reliance on large hydro, utility-scale solar, onshore in-state wind, and small hydro, while

[18] *See* https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/ab1373/cpuc-ab-1373-procurement-request_dwr.pdf

eliminating offshore wind. The removal of offshore wind and addition of large hydro is the largest driver of the reduced percentage of RPS-eligible resources. Since 2022, VCE has reassessed the economics and feasibility of offshore wind and determined it not to be a viable addition to the portfolio at this time. Geothermal and hybrid solar remain largely unchanged.

Retail electric demand in 2035 increases from 847 GWh in the 2022 PCP to 987 GWh in the 2026 PCP, an increase of approximately 17%. Wholesale energy demand, including losses, increases from 914 GWh to 1,075 GWh, also reflecting significant load growth. Net system power declines slightly from 118 GWh to 100 GWh. The share of retail sales served by RPS-eligible renewable resources decreases from 97% in the 2022 PCP to 80% in the 2026 PCP. Despite the lower renewable share, the GHG-free share of retail sales remains at 98% in both portfolios. See Table 15 for a snapshot of how the 2035 targets in VCE's 2026 8 MMT by 2045 PCP compares to its 2022 25 MMT by 2035 PCP.

Table 15 - Comparison of Load and Generation Results (2022 25 MMT by 2035 PCP and 2026 8 MMT by 2045 PCP)

2035 Targets for "2022 25 MMT by 2035" & "2026 8 MMT by 2045" PCPs	2022 PCP	2026 PCP
Retail Electric Demand GWh	847	987
Wholesale Energy Demand (accounting for losses) GWh	914	1,075
Net System Power GWh	118	100
RPS-Eligible (Renewable) % of Retail Sales	97%	80%
GHG-free % of Retail Sales	98%	98%

Compared to its 2022 PCP for target year 2035, VCE's 2026 PCP substantially changes the composition of its clean energy portfolio while maintaining a similar overall level of GHG-free generation.

Resources Added or Increased

- Large hydro increases from 0 GWh to 172.2 GWh.[19]
- Utility-scale solar increases from 114.0 GWh to 248.2 GWh, more than doubling its contribution.
- Wind (CAISO) increases from 99.9 GWh to 130.2 GWh.
- Small hydro increases from 0 GWh to 6.5 GWh.

Resources Decreased

- Offshore wind declines from 167.8 GWh to 0 GWh.

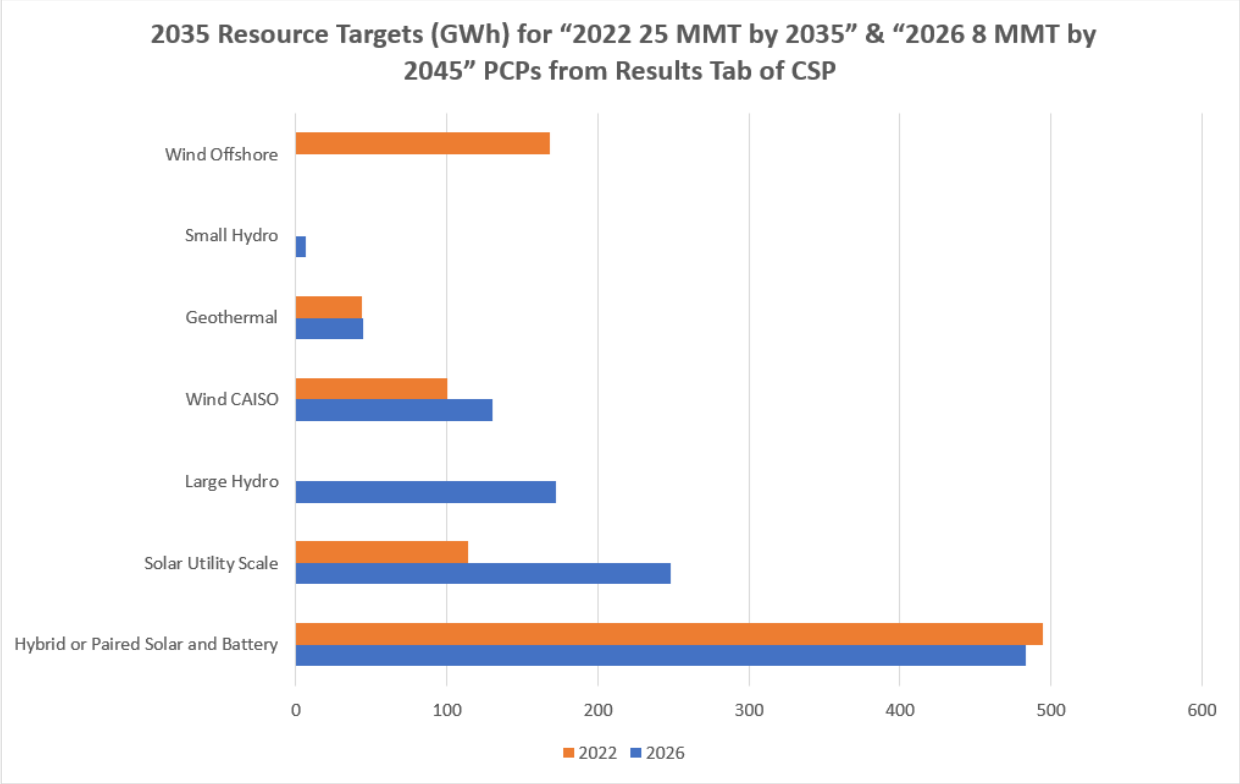
Resources Largely Unchanged

[19] Unbundled large hydro purchases.

- Geothermal remains relatively unchanged, increasing slightly from 43.3 GWh to 44.5 GWh.
- Battery storage contributions remain similar.
- RPS Resource Custom Profile resources are added at 483.3 GWh, becoming the largest single resource category in the 2026 portfolio. In 2022, this category was previously hybrid or paired solar and battery resources, which was 494.8 GWh.
- No material changes occur for imported hydro, nuclear, biogas, biomass, out-of-state wind, distributed solar, pumped storage, coal, or GHG-free non-RPS custom-profile resources, all of which remain at zero.

Figure 16 compares the resource portfolio of the 2022 and 2026 PCP for target year 2035.

Figure 16 - Comparison of 2022 and 2025 PCPs for Target Year 2035



c. GHG Emissions Results

This section discusses the emissions results for VCE's PCP as calculated by the CSP calculator. Table 16 list the emission targets and corresponding emissions for VCE's portfolio, as calculated by the CSP workbook. In that scenario, VCE's assigned GHG Benchmarks for 2030

and 2045 are 0.065 MMT and 0.023 MMT, respectively. VCE's PCP satisfies both requirements with reported emissions of 0.054 MMT in 2030 and 0.017 MMT in 2045.

Table 16 - Comparison of GHG Emissions Target and PCP Emissions

	2028	2030	2035	2040	2045
VCE GHG Emissions Target	n/a	0.065	0.051	0.044	0.023
VCE PCP GHG Emissions	*0.078*	0.054	0.045	-0.024	0.017

VCE used custom hourly load profiles and user-specified production profiles for standalone storage and hybrid projects in the CSP calculator. Other inputs specified by VCE included the CPUC-issued retail sales and BTM PV forecasts on the Demand Inputs tab and the agency's portfolio information entered in the Supply Inputs tab, which are copied over from the RDT. Table 17 provides summary statistics of interest, as calculated by the CSP.

Table 17 - Summary CSP Statistics

	Units	2028	2030	2035	2040	2045
Retail Demand	GWh	741.4	802.9	987.3	1,119.1	1,200.6
RPS-Eligible Delivered Renewable Energy	GWh	601.5	600.8	790.2	1,343.6	1,333.8
GHG-free Delivered Energy	GWh	615.2	749.1	971.6	1,350.4	1,341.5
RPS-Eligible Delivered Renewable Percentage	% retail sales	81.1%	74.8%	80.0%	120.1%	111.1%
GHG-free Percentage	% retail sales	83.0%	93.3%	98.4%	120.7%	111.7%

Table 18 shows the emissions results for VCE's PCP as calculated by the CSP calculator. VCE's assigned GHG Benchmarks for 2035 and 2045 are 0.051 MMT and 0.023 MMT, respectively.[20] VCE's PCP satisfies both of these requirements, with reported emissions of 0.045 MMT in 2035 and 0.017 MMT in 2045.[21]

Table 18 - Total Emissions for VCE's Preferred Conforming Portfolio (25 MMT by 2035 and 8 MMT by 2045)

Emissions Total	Unit	2030	2035	2040	2045
CO2	MMT/yr	0.054	0.045	(0.024)	0.017
PM2.5	tonnes/yr	3	3	(2)	1
SO2	tonnes/yr	0	0	(0)	0
NOx	tonnes/yr	5	4	(5)	1

[20] *See* cells N24 and P24 of the GHG Benchmarks tab of the CSP.

[21] *See* cells F4:7 and H4:7 of the Results tab of the CSP.

VCE's CSP uses a custom hourly load shape developed using historical sales, as discussed in more detail in Section II. The custom load shape is an important aspect of accurately modeling VCE's resource needs and emissions because VCE has a comparatively high share of sales to agricultural customers with usage patterns that deviate from typical commercial and industrial load profiles. Overall, VCE's PCP substantially increases the amount of RPS-eligible and GHG-free energy by 2045, and, perhaps more importantly, as shown in Table 19, by 2040 VCE's PCP produces more RPS-eligible and GHG-free energy than its expected retail sales – meaning that VCE will be contributing RPS-eligible and GHG-free electricity in quantities that provide state- and system-wide benefits by reducing system power emissions.

Table 19 - RPS and GHG-Free Composition of VCE's Preferred Conforming Portfolio (25 MMT by 2035 and 8 MMT by 2045)

Renewable and GHG-Free %	Unit	2030	2035	2040	2045
Retail Sales	GWh	803	987	1,119	1,201
RPS-Eligible Delivered Renewable	GWh	601	790	1,344	1,334
GHG free	GWh	749	972	1,350	1,342
RPS-Eligible Delivered Renewable Percentage	% of retail sales	75%	80%	120%	111%
GHG-free Percentage	% of retail sales	93%	98%	121%	112%

d. Local Air Pollutant Minimization and Disadvantaged Communities

i. Local Air Pollutants

VCE's PCP results in emissions of NOx, PM2.5, and SO2 as shown in Table 20. These emissions result exclusively from System Power resources. These emissions are projected to decline through the 2040 benchmark year when they turn negative, meaning that in 2040 VCE's PCP reduces system power emissions. The 2045 increase in emissions from the negative emission values in the 2040 benchmark year is an artefact of modeling resulting from the expiration date of current resource contracts. VCE's plan for reducing its reliance on system power and the associated emissions is described in the Action Plan section of this document.

Table 20 - Local Air Pollutant Emissions

Emissions Total	Unit	2028	2030	2035	2040	2045
PM2.5	tonnes/yr	4.759	3.244	2.922	-1.677	1.399
SO2	tonnes/yr	0.455	0.311	0.281	-0.155	0.132
NOx	tonnes/yr	6.593	4.610	4.243	-4.561	1.493

ii. Focus on Disadvantaged Communities

The California Environmental Protection Agency ("CalEPA") designates a geographic area as disadvantaged according to four criteria:

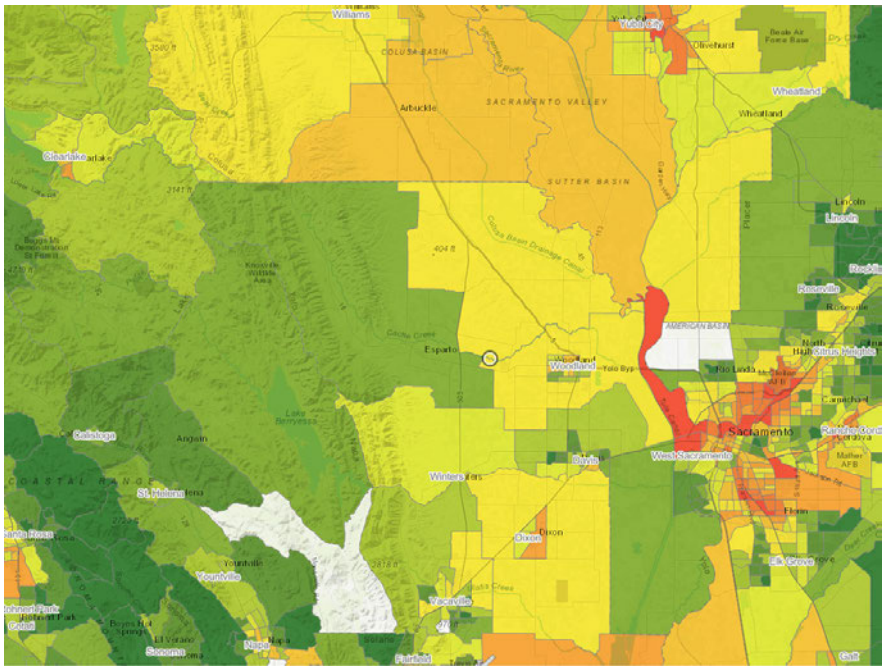
- Census tracts receiving the highest 25% of overall scores in CalEnviroScreen 4.0 (1,984 tracts).
- Census tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps but receiving the highest 5% of CalEnviroScreen 4.0 cumulative pollution burden scores (19 tracts).
- Census tracts identified in the 2017 Disadvantaged Community ("DAC") designation as disadvantaged, regardless of their scores in CalEnviroScreen 4.0 (307 tracts).
- Lands under the control of federally recognized Tribes.

VCE utilized the CalEnviroScreen 4.0 tool and CalEPA's 2022 SB 535 Identification of Disadvantaged Communities to evaluate all census tracts in its primary service area of Yolo County. This analysis identified four census tracts that qualify as disadvantaged communities under the currently effective criteria – Tracts 101.01, 101.02, 102.03, and 102.04, along with specialized tract 3265R which represents the Rumsey Indian Rancheria, a federally recognized Tribe. Of these Tracts, area 101.02, which is a largely rural census tract, is partially located in VCE's service territory. The total number of households in this census tract was 575 in 2020, as updated in the American Community Survey, and the number of estimated households in this census tract was 576 in 2024. VCE estimates that fewer than 100 of all customer accounts are located within tract 101.02. Thus, less than 0.2% of all VCE customers are estimated to be in a DAC.

According to the CalEnviroScreen 4.0 tool, the key reasons for census tract 101.02 falling within the top 25% appears to be risks associated with a combination of pesticide exposures, ground water threats, hazardous waste, impaired waters, and solid waste, coupled with the presence of sensitive populations (particularly those with asthma and cardiovascular disease) and socioeconomic factors such as unemployment and poverty. There are no emissions-emitting power plants in this DAC, and the only resource in the located in this DAC is a solar resource. The fact that the impacted areas are situated close to a major transportation hub likely contributes to the CalEnviroScreen 4.0 rating. Although specialized tract 3265R contains sensitive populations and is ranked highly in terms of poverty, the region is not located in one of

CalEnviroScreen 4.0's high scoring areas as its pollution burden percentile is 24, compared to tract 101.02's percentile of 89.

Figure 17 - CalEnviroScreen 4.0 Results for Yolo County



The selection of resources in VCE's portfolio has an impact regionally and statewide, particularly in the extent to which VCE's resource portfolio decisions result in the use of and emissions from system power. Even though VCE has no power generation in DACs within its service territory, it recognizes the harmful impacts on DACs outside its service territory from the use of emissions-intensive system power. VCE constructs its portfolio to obtain the maximum reductions in GHG emissions and the maximum possible use of renewable energy as reasonable-cost considerations permit.

VCE's PCP does not include new natural gas resources or re-contracting with existing natural gas resources with terms of five years or more, which enables the PCP to minimize localized air pollutants and greenhouse gas emissions by relying on a predominantly clean energy portfolio composed of renewable generation, energy storage, and demand-side resources. For example, the portfolio of resources with which VCE has existing contracts includes 239 MW of generation and 145 MW of non-generation resources such as demand response and energy storage, of which 100% are under contracts of 10 years or more in length. By advancing zero-emitting resources and reducing dependence on fossil-fueled generation, the portfolio supports

California's environmental goals, including improved air quality benefits for disadvantaged communities.

e. Cost and Rate Analysis

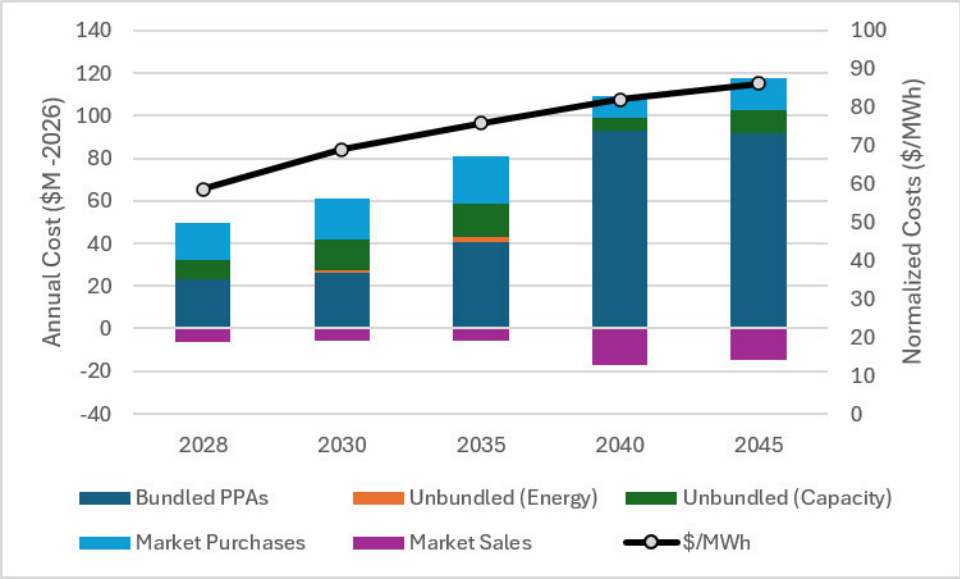
VCE's modeling framework identifies a portfolio optimized to minimize cost while fulfilling operational objectives. During the development of the PCP, it became apparent that a balanced portfolio of in-state wind, six-hour storage, and solar was complementary to the existing resource portfolio's solar-heavy profile and increased the overall effective ELCC per unit of cost. Focusing on attaining the maximum marginal return, or marginal performance, per additional unit of cost was the primary mechanism for approaching affordability when developing the PCP. VCE will continue to monitor the RFP process to assess current market conditions for new projects as updated pricing and availability information becomes available.

Figure 18 below provides an estimate of the total net costs of the PCP listed in 2026$ for CSP planning years, along with a breakdown by primary cost category. The primary cost categories depicted include: bundled PPAs (both generation and storage resources signed under long-term contracts); unbundled energy (clean energy attributes only); unbundled capacity (resource adequacy only); market purchases (expenses incurred from procuring energy from CAISO); and market sales (offsetting revenues from VCE selling excess energy back to the market at the assumed LMP price). The secondary axis displays the normalized cost, defined as total portfolio cost divided by retail load. The average total portfolio cost across the CSP planning years is $74.4 million (real 2026$), with a CAGR of 5.2% over the 17-year planning period. The net present value ("NPV") of total portfolio costs over the 2027–2045 planning horizon is approximately $835 million.

VCE employs a balanced approach combining bundled PPAs with targeted participation in capacity and energy markets, managing trade-offs between cost, market risk, and uncertainty in future market conditions. These figures do not represent the full scope of VCE's costs: near-term RA costs are reflected by volume only, with no associated cost included; energy hedge costs and Power Charge Indifference Adjustment ("PCIA") charges owed to PG&E are also

excluded. Additionally, agency direct costs (i.e., employee salaries, rent, and other SG&A expenses) are not captured.

Figure 18 - Estimated Annual Portfolio Costs in 2026$



f. System Reliability Analysis

VCE used the RDT to verify that its PCP contributes its fair share to system reliability across all study years. Figure 19 shows VCE's firm RA supply by resource type alongside its total reliability requirement (i.e., effective MW) for each planning year. Figure 20 presents the same supply broken out by contract status. Both figures report total reliability need, total supply, and net capacity position in effective MW.

Figure 19 - VCE Preferred Conforming Portfolio: Firm RA Supply by Resource Type vs. Reliability Requirement (Effective MW)

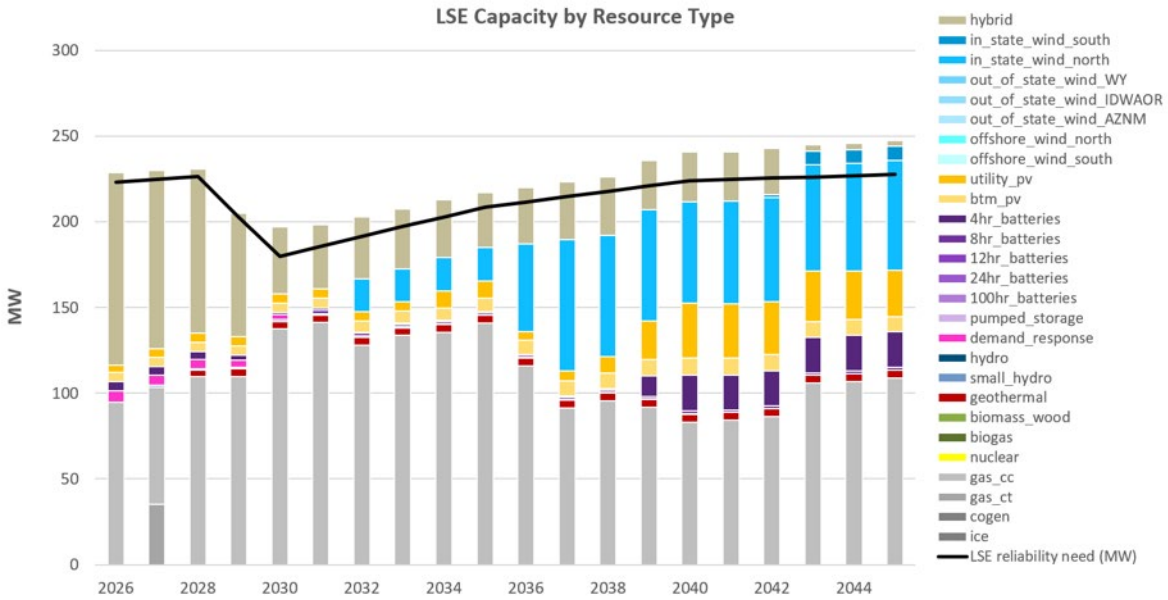
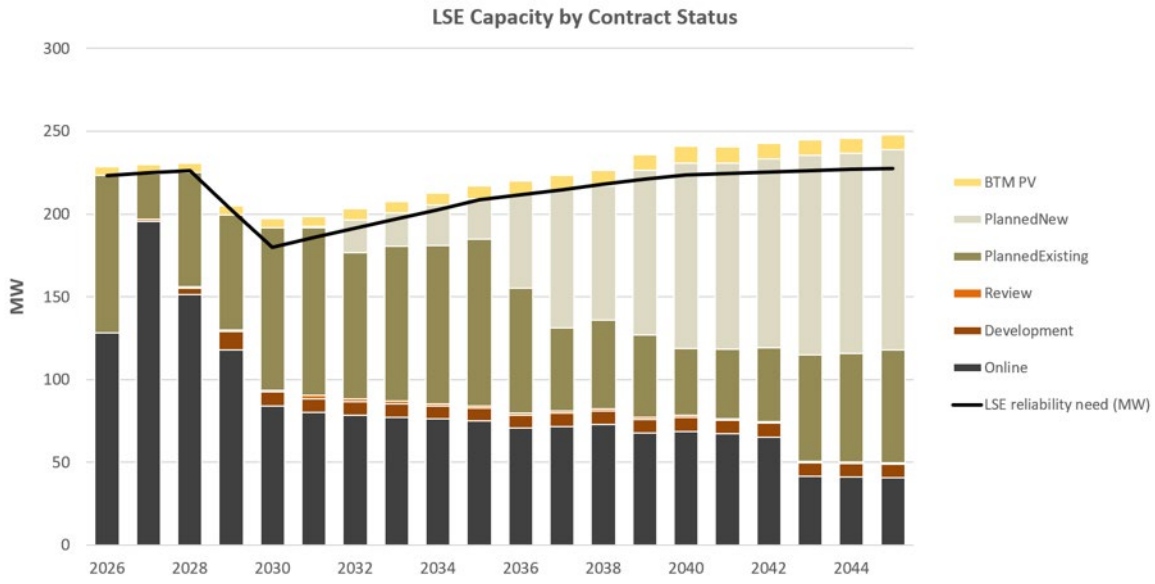


Figure 20 - VCE Preferred Conforming Portfolio: Firm RA Supply by Contract Status vs. Reliability Requirement (Effective MW)



g. Existing Resource Planning

VCE's PCP relies significantly on existing resources, including currently operating long-term PPAs and existing resources for which contract extensions or continued availability are expected. VCE's PCP includes 221 MW of existing online generation and 129 MW of existing online non-generation resources such as demand response and energy storage. These resources

provide a combination of renewable energy, resource adequacy capacity, demand response capability, and long-duration energy storage that supports VCE's reliability and greenhouse gas reduction objectives. 100% of these resources are under long-term contracts and therefore are expected to remain available to VCE throughout their applicable contract terms. These resources include Indian Valley Hydro [this contract is being presented for approval by VCE's Board on July 9, 2026], Leapfrog Demand Response, Aquamarine Solar, Tierra Buena Energy Storage, Putah Creek Energy Farm, Resurgence Solar I, Willy 9 Chap 2, and Tumbleweed Long Duration Battery Storage. See Table 21.

VCE does not anticipate significant challenges in maintaining its existing contracted resources because the majority are secured through executed long-term agreements. However, there may be challenges associated with retaining existing resources at contract expiration, particularly as competition among LSEs for available carbon-free and renewable resources increases and as California's broader clean energy procurement requirements continue to increase demand for existing resources. VCE will continue to evaluate opportunities to extend existing contracts or replace expiring resources with cost-effective alternatives as needed.

Compared with VCE's 2022 IRP 25 MMT by 2035 Preferred Conforming Portfolio, the current 8 MMT by 2045 Preferred Conforming Portfolio includes more existing resources due to additional executed contracts that have reached commercial operation since the 2022 IRP cycle, including Resurgence Solar I, Willy 9 Chap 2 battery storage, and Tumbleweed Long Duration Battery Storage. The increased reliance on existing resources reflects VCE's successful execution of its prior procurement commitments and provides greater certainty regarding portfolio availability and cost.

Table 21 - Existing and In Development Contracted Resources

Long-Term PPAs	Contract Status	Actual or Expected COD	Contracted Capacity and Energy
Indian Valley Hydro	Online	6/1/2020	2.9 MW PV (6,400 MWh)
Leapfrog Demand Response	Online	6/1/2021	7 MW
Aquamarine Solar	Online	9/22/2021	50 MW PV (130,000 MWh)
Tierra Buena Energy Storage	Online	6/3/2022	5 MW BESS (10 MWh)
Putah Creek Energy Farm	Online	10/15/2022	3 MW PV, 3 MW BESS (7,600 MWh)
Resurgence Solar I	Online	7/1/2023 PV & 8/2/2023 BESS	90 MW PV, 75 MW BESS (250,000 MWh)
Willy 9 Chap 2	Online	3/9/2023 PV & 3/8/2025 BESS	72 MW PV, 36 MW BESS (215,000 MWh)
Tumbleweed Long Duration Battery Storage	Online	6/1/2026	3.1125 MW (24.9 MWh)

Fish Lake Geothermal	Development	7/1/2027	0.5376 MW (4,414 MWh)
Dogwood	Development	9/1/2027	0.925 MW (7,986 MWh)
Ormat Portfolio Balance of Supply	Development	[redacted]	[redacted]
Gibson Solar	Development	6/30/2028	13 MW PV, 13 MW BESS (50,000 MWh)
[redacted]	Development	[redacted]	[redacted]
Willow Rock CAES	Development	12/31/2030	2.7 MW (21.6 MWh)

h. Hydro Generation Risk Management

VCE currently [is presenting to its Board for consideration on July 9 a contract for] has 2.9 MW of small hydro under contract with Indian Valley for a term of 15 years[22]. In 2028, the facility will represent about 1% of VCE's contracted resources and does not present a significant risk to expected costs, GHG emissions, or reliability. Indian Valley's capacity and energy output has been affected by drought in the past but in the last several years it has produced the expected output. When it was impacted by the drought in the past, there was no meaningful impact to VCE's reliability requirements.

i. Long-Duration Storage Planning

VCE's PCP includes long-duration storage as a key component of its strategy to enhance reliability, diversify its storage portfolio, and support renewable integration. Long-duration storage provides value by shifting renewable generation across longer periods, supplying resource adequacy capacity, improving grid reliability, and reducing reliance on market purchases during constrained evening and peak demand periods.

VCE's long-duration storage planning has been driven primarily by CPUC procurement obligations, particularly the requirements established in D.21-06-035, as well as the broader portfolio value of long-duration storage. In its 2022 IRP, VCE identified Tumbleweed and Goal Line as 8-hour battery storage resources intended to satisfy its long-duration storage procurement requirements, including the 2026 Tranche 4 obligation.

Since the 2022 IRP, VCE's long-duration storage portfolio has progressed from planned procurement to project implementation and has evolved to include a more diverse set of technologies. Tumbleweed Long Duration Battery Storage became operational on June 1, 2026, providing 3.1125 MW / 24.9 MWh. VCE's portfolio also includes Willow Rock CAES, expected to come online by December 31, 2030, providing 2.7 MW / 21.6 MWh. VCE's PCP further includes 2.1 MW of additional long-duration (8-hour or greater) storage in 2031 to satisfy MTR

[22] The Indian Valley contract was under negotiation during the IRP preparation process and it was modeled as a 10-year contract but has since been modified to a 15-year term.

Part III obligations and approximately 85 MW of 6-hour storage additions in 2039–2040 to further support system reliability and renewable integration.

The inclusion of long-duration storage improves portfolio resilience by increasing renewable utilization, providing additional reliability value, and reducing exposure to volatile market conditions during prolonged net-peak or low-renewable periods. However, these resources also present risks, including project development delays, technology and performance uncertainty, cost escalation, interconnection and deliverability challenges, and, for standalone storage, reliance on sufficient low-cost, low-emissions charging energy.

Compared to its 2022 IRP, VCE's current approach reflects both project advancement and greater technology diversification. Tumbleweed has moved from a planned resource to an operating asset, and the portfolio now includes Willow Rock CAES, reducing reliance solely on lithium-ion battery technologies while continuing to meet CPUC-directed procurement requirements and improve overall portfolio flexibility.

j. Clean Firm Power Planning

VCE's Preferred Conforming Portfolio includes clean firm generation to satisfy its ordered procurement requirements for zero-emitting resources with an annual capacity factor of at least 80 percent. VCE's approach is to rely primarily on geothermal resources because geothermal generation can provide firm, renewable, high-capacity-factor energy.

VCE's clean firm resources are the Fish Lake Geothermal project and the Ormat geothermal portfolio. These resources were selected to meet VCE's D.21-06-035 clean firm procurement obligation. In its 2022 IRP, VCE identified Ormat and Fish Lake as the resources intended to meet its zero-emitting 80 percent capacity factor 4 MW obligation. VCE does not currently plan to procure clean firm resources materially beyond its ordered procurement requirements, but it remains interested in additional geothermal procurement if resources are cost-competitive or if additional procurement obligations are adopted.

The primary benefits of including clean firm geothermal resources are reliability, resource diversity, reduced emissions, and improved portfolio flexibility. The primary risks are project development delays, operational and technical risks, permitting risk, cost escalation, and transmission deliverability risk. For Fish Lake and the Ormat portfolio, transmission allocation rights and import capability are particularly important because portions of the resources are located outside the CAISO balancing authority area. In 2022, VCE noted that Maximum Import Capability ("MIC") was scarce in northern Nevada and that MIC expansion at Gonder, Silver

Peak, and Summit, or other transmission upgrades, could be needed to deliver the full Ormat portfolio to California Independent System Operator ("CAISO").

Since 2022, VCE's clean firm planning has evolved from identifying geothermal contracts for compliance purposes to reflecting updated project-specific development timelines and portfolio quantities. The current portfolio continues to rely on geothermal resources, including Fish Lake and the Ormat portfolio balance, but with updated expected online dates and capacity amounts based on project development status. The principal drivers of these changes are project development progress, interconnection and transmission deliverability considerations, MIC availability, and the need to align VCE's portfolio with current CPUC IRP and procurement requirements.

k. Non-CAISO, including Out-of-State, Wind Planning

VCE's PCP in the 2026 IRP does not include out-of-state wind resources. This change from the 39 MW of out-of-state wind in the 2022 IRP portfolio is primarily the result of least-cost portfolio optimization as the relative cost of out-of-state wind compared to other resources makes it uncompetitive. Additionally, the transmission cost associated with out-of-state wind contributes to it being uncompetitive.

l. Offshore Wind Planning

VCE's PCP in the 2026 IRP does not include offshore wind resources. This change from the 35 MW of offshore wind in the 2022 IRP portfolio is primarily the result of least-cost portfolio optimization as the relative cost of offshore wind compared to other resources makes it noncompetitive. The cost of offshore wind has increased significantly since the 2022 IRP.

m. Transmission Planning

VCE has several projects with transmission upgrades. They are described below and in Table 22.

- Dogwood (Contract ID 20220531_CCPower_Ormat_Portfolio_Dogwood_VCEA) is a geothermal project in Imperial County, CA, from which VCE has contracted 0.925 MW and 7,986 annual MWh to fulfill a portion of VCE's LLT requirement of 4 MW from geothermal/80% firm supply. It is expected to achieve COD by 9/1/2027. This project entered the Imperial Irrigation District ("IID") queue in 2023 and received a project delivery notice in May of 2026. A new transmission service request is in

to deliver power to the Imperial Valley or Mirage interties with CAISO, but the developer also has flexibility to redirect existing transmission rights for project.

- [redacted] The project entered the IID interconnection queue in 2020. [redacted] A transmission service request to deliver energy to the [redacted].
- The Fish Lake and Ormat Geothermal Portfolio Projects (including Dogwood and [redacted]) have all applied for permits from the lead permitting agency and some projects have received permits from the lead permitting agency but still await additional permits from secondary permitting agencies. Fish Lake has received all permits from the lead and secondary permitting agencies. One of the portfolio projects has posted the third Interconnection Financial Security ("IFS") at the start of its construction, two have executed a generator interconnection agreement and posted the second IFS, and all other portfolio projects have posted the first IFS and have a Phase 2 interconnection study, or the equivalent, in progress. Fish Lake is on track to be online in advance of the 2028 procurement deadline, [redacted]
- Gibson Solar is a 13 MW PV/13 MW 5-hour BESS expected online by 6/30/2028 for a 20-year term for 52,203 MWh per year and located in Yolo County, CA. The Gibson Solar project schedule has been delayed twice due to interconnection challenges described later in this section. The project is now in development and under construction and transmission upgrades are under way. The Gibson Solar project delay does not meaningfully impact VCE's renewable net short position, but it will likely require VCE to procure a small amount of short-term RECs in CP5.

Table 22 - Project Transmission Development Status

Project	Original Expected Commercial Operation Date	Current Expected or Actual Commercial Operation Date	Project Development Status Update
Gibson Solar	3/31/2023	6/30/2028	Renegotiated PPA first half of 2023 because of PG&E's delays under the

			wholesale distribution interconnection study process. Executed second amended and restated PPA in April of 2026 because of further delays.
Dogwood	12/1/27	9/1/2027	Experiencing permitting delays.
[redacted]	[redacted]	[redacted]	Experiencing permitting delays.

For contracted resources located outside the CAISO balancing area in the PCP, no MIC expansion and/or transmission upgrades are needed. The only planned resource with a location specified in the RDT is a generic Arizona solar resource with an interconnection location at the Palo Verde Substation, which is owned by a California IOU and is therefore treated as being delivered to the CAISO border.

IV. Action Plan

a. Proposed Procurement Activities and Potential Barriers

i. Resources to meet IRP mandated procurement requirements, including D.21-06-035 and D.23-02-040:

D.21-06-035 (the Mid-Term Reliability or "MTR" Decision), adopted in the IRP rulemaking (R.20-05-003) in June 2021, established a procurement target of 11,500 MW of incremental Net Qualifying Capacity ("NQC") coming online in 2023-2026, all from zero-emitting generation resources and/or energy storage, including RPS-eligible resources and Long Lead Time ("LLT") resources such as Long Duration Energy Storage ("LDES") and zero-emitting generating resources with a capacity factor of at least 80% that is not weather-dependent (e.g., geothermal power, bioenergy, or offshore wind).

A subset of the 2023-2025 capacity was intended to serve as Diablo Canyon Replacement ("DCR") capacity by being available 5 p.m. - 10 p.m. daily, during which time period they must deliver 5 MWh per 1 MW of capacity. D.23-02-040 ("MTR Part II") extended the LLT capacity obligation from D.21-06-035 to be online by June 1, 2028,[23] with a potential ability to extend the timeline to June 1, 2031, through the Advice Letter process. It also required more zero-emissions or RPS capacity to be online by June 1, 2026, and June 1, 2027. Finally, D.26-02-057 or ("MTR Part III") required additional capacity in 2030, 2031, and 2032 with 20% of the capacity coming from either long duration storage or 80% firm and clean resources like geothermal or LDES.

Below are the new and existing resources that will be used to meet MTR obligations adopted by D.21-06-035 and the supplemental procurement ordered by D.23-02-040 and D.26-02-057.

D.21-06-035, or MTR Part I:

For the NQC MTR targets by LSE in Table 6 of D.21-06-035, resources were fully deliverable and qualified for RA by August 1 of 2023 and June 1 of 2024, 2025, and 2026. VCE's Compliance Plan for RPS eligible or Zero-Emitting including Diablo Replacement

[23] Ordering Paragraph 2 of D.23-02-040

("Zero-Emitting" Resources) and VCE's 2031[24] Plan for Compliance with Long-Lead Time Resources Requirement ("LLT resources")[25]:

- 2023: 8 MW: **8 MW** of Resurgence Solar + Storage
- 2024: 23 MW + 3.09 MW for DCE Obligation Swap[26]: **26.09 MW** of Resurgence Solar + Storage
- 2025 (General): 6 MW: **6 MW** of Resurgence Solar + Storage
- 2025 (Zero Emissions): 10 MW + 3.09 MW for DCE Obligation Swap Minimum zero-emitting capacity "Diablo Replacement Capacity"[27]: **13.09 MW** Resurgence Solar + Storage

Total = 37 MW + 3.09 for DCE Obligation Swap = **40.09 MW**

D.21-06-035 MTR Long-Duration Storage LLT (4 MW)

- 2028: 4 MW - 2.03 MW DCE took on in the obligation swap = **1.97 MW**. The obligation will be met by Tumbleweed and Willow Rock CAES. Tumbleweed is a Long-Duration BESS (8 hrs.) in Kern County for which VCE's share is 3.1125 MW (24.9 MWh). Tumbleweed came online in 2026. Willow Rock CAES will supply another 2.7 MW and is coming online December 31, 2030.

D.21-06-035 MTR Zero-Emitting (80% Capacity Factor) LLT (4 MW)

- 2031: 4 MW of Ormat Geothermal Portfolio Projects (including Dogwood, and [redacted]) in 2027-2029 and Fish Lake Geothermal expected in 2027. VCE's AL 23-E was approved on January 2, 2026, to extend this deadline to June 1, 2031.

[24] Modified to 2028 from 2026 due to D.23-02-040, then modified for the geothermal portion of VCE's portfolio to June 1, 2031 per AL 23-E, which was approved on January 2, 2026.

[25] The LLT resource requirements are divided into half from long-duration storage and half from firm, zero-emitting generation resources.

[26] Desert Community Energy. (2025, May 29). Advice Letter 13-E: Request of Desert Community Energy to trade Mid-Term Reliability compliance obligations with Valley Clean Energy pursuant to D.23-02-040 [Advice letter]. https://desertcommunityenergy.org/wp-content/uploads/2025/05/DCE-AL-13-E-DCE-VCEA-MTR-Obligation-Swap.pdf

[27] The amount in this column is a subset of the 2023, 2024, and 2025 columns, and is therefore not also added to the total for each LSE. These resources must supply electricity on a P50 (i.e., 50% of all hours of the year) during the five-hour 5-10 pm period.

Table 23 - Mid-Term Reliability Procurement (D.21-06-035)

					Long Lead Time	
	RPS eligible or Zero-Emitting			Diablo Replacement (Zero-Emitting)	Long-Duration Storage	Zero-Emitting (80% Capacity Factor)
Compliance Year	2023	2024	2025	2025	2028	2031*
VCE Obligation (MW NQC)	8 MW	23 MW	6 MW	10 MW	4 MW	4 MW
VCE's Planned Method of Compliance	Resurgence Solar 1 Long-Term PPA	Resurgence Solar 1 Long-Term PPA	Resurgence Solar 1 Long-Term PPA	Resurgence Solar 1 Long-Term PPA (10 MW)	**Tumbleweed Agreement + Willow Rock CAES Agreement	*Ormat Geothermal Portfolio Projects and Fish Lake Geothermal
**AL 23-E submitted by VCE on June 2, 2025, and approved by the CPUC on January 2, 2026, extended the deadline for certain Long Lead-Time ("LLT") geothermal projects from June 1, 2028, to June 1, 2031. * The deadline for LLT Resources to come online was extended to June 2028 instead of 2026 by D.23-02-040.						

D.23-02-040 or "MTR Part II":

This section covers VCE's requirement for 16 MW of incremental NQC total, with 8 MW to be online by June 1, 2026, and another 8 MW to be online by June 1, 2027[28]. Willy 9 Chap 2 is filling the obligation for the 16 MW of incremental capacity.

Table 24 - Increased Mid-Term Reliability Procurement (D.23-02-040)

	2026	2027
VCE Incremental Obligation	8 MW	8 MW
Willy 9 Chap 2	8 MW	8 MW

D.26-02-057 or "MTR Part III":

[28] Using the table on PDF p. 32 of this study: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/20230210_irp_e3_astrape_updated_incremental_elcc_study.pdf.

D.26-02-057 Attachment A set out a requirement for VCE to procure 7 MW + 7 MW + 7 MW (in each of 2030, 2031, and 2032) of additional MTR-eligible resources, with 5 of the 21 MW total coming from either long duration storage or 80% firm and clean resources like geothermal.

Resurgence, Willy 9 Chap 2, and/or Gibson, all solar plus storage projects, are being used to meet the general requirement of 21 MW. VCE will supply part of its 5 MW requirement of either long duration or clean firm resources using existing resources and will procure any remaining capacity needed to meet the requirement.

Table 25 - Increased Mid-Term Reliability Procurement (D.26-02-057)

	2030	2031	2032	Firm
VCE Incremental Obligation	7 MW	7 MW	7 MW	5 MW
Willy 9 Chap 2, Resurgence, Gibson	7 MW	7 MW	7 MW	
Tumbleweed, Willow Rock CAES, and Other Resources				5 MW

ii. Plans for resources that are currently non-candidate in CPUC's IRPs not described above

At this time, VCE's PCP does not include plans to procure resource types that are not currently represented as candidate resources in the CPUC's IRP modeling framework beyond those discussed elsewhere in this filing. VCE's portfolio relies on commercially available and Commission-recognized resource types, including solar photovoltaic generation, energy storage, long-duration energy storage, geothermal generation, and demand response, to meet its greenhouse gas reduction, reliability, and renewable energy objectives.

VCE recognizes that emerging technologies may play an increasingly important role in California's long-term decarbonization strategy. Potential non-candidate resources could include advanced geothermal technologies, long-duration energy storage technologies beyond those currently represented in the CPUC's modeling framework, hydrogen-based generation, carbon capture technologies, advanced nuclear technologies, or other innovative zero-emitting resources. VCE will continue to monitor technology development, market availability, cost trends, and future CPUC planning assumptions to determine whether these resources could provide cost-effective reliability, resiliency, or environmental benefits.

iii. Other renewable and/or zero carbon resources not described above

VCE's PCP does not include plans to procure additional categories of renewable or zero-carbon resources beyond those described elsewhere in this filing. The portfolio already includes a diverse mix of renewable and zero-carbon resources, including solar photovoltaic generation,

geothermal generation, small hydro, battery energy storage, long-duration energy storage, and demand response resources.

iv. Other energy storage not described above

VCE's PCP includes 6-hour energy storage.

v. Other demand response not described above

VCE's PCP does not include plans for other demand response not described above.

vi. Other energy efficiency not described above

VCE's PCP does not include plans for other energy efficiency not described above.

vii. Other distributed generation not described above

VCE's PCP does not include plans for other distributed generation not described above.

viii. Transportation electrification, including any investments that correspond to different levels than what is included in Integrated Energy Policy Report (IEPR)

VCE's PCP uses the CPUC-assigned load forecast, including transportation electrification assumptions derived from the CEC's IEPR. Therefore, VCE's portfolio does not assume electric vehicle adoption levels or associated electricity demand beyond those already reflected in the Commission-assigned load forecast.

VCE supports transportation electrification as an important strategy for reducing GHG emissions and advancing California's clean energy goals. VCE provides customers with information and programs that support electric vehicle adoption and charging, including customer education and outreach regarding clean transportation options. However, VCE does not currently plan additional transportation electrification investments or load growth assumptions beyond those incorporated into the IEPR forecast and reflected in the PCP.

As a CCA, VCE does not own or operate the distribution system and therefore does not make transmission or distribution infrastructure investments associated with increased electric vehicle charging demand. VCE will continue to monitor transportation electrification trends and evolving customer demand and will incorporate updated IEPR forecasts and Commission guidance in future IRP cycles.

ix. Building electrification, including any investments that correspond to different levels than what is included in Integrated Energy Policy Report (IEPR)

VCE's PCP uses the CPUC-assigned load forecast, including building electrification assumptions derived from the CEC's IEPR. Accordingly, VCE's portfolio does not assume

building electrification adoption levels or associated electricity demand beyond those incorporated into the Commission-assigned load forecast.

VCE supports building electrification as an important strategy for reducing greenhouse gas emissions and achieving California's long-term decarbonization goals. VCE offers customer programs and educational initiatives that encourage energy efficiency, beneficial electrification, and the adoption of clean energy technologies. However, VCE does not currently plan additional building electrification investments or incremental load growth assumptions beyond those reflected in the IEPR forecast and incorporated into the PCP.

x. Potential Centralized Procurement, pursuant to AB-1373

VCE anticipates significant benefits from the successful procurement of long lead-time resources as addressed in D.24-08-064 (e.g., offshore wind, geothermal, and emerging long-duration energy storage) because these resources will further diversify VCE's resource mix and support its ongoing efforts to align supply and load on an hourly basis around the clock. As discussed in D.24-08-064, many of these technologies are emerging or under development and not fully commercial, and as a result are not readily incorporated into IRP-related modeling due to unknowns regarding cost and performance characteristics.

To the extent that the centralized procurement is successful, or partially successful, the specific influence on VCE's PCP will depend on the performance and operational characteristics of the resource(s) that is ultimately procured. VCE will evaluate the extent to which its allocated share of the procured resources contribute to hours in which its load does not meet its supply under its current resource portfolio, and the likely result would be reductions or changes in the mix of the planned resources in its PCP. Likewise, successful centralized procurement may affect how renewals or extensions of existing contracts scheduled to expire by the 2045 benchmark year are evaluated in ways such as term lengths, quantities contracted, and potentially terms related to curtailment.

b. Disadvantaged Communities (DACs)

VCE's rates and programs are designed to provide economic benefits for all ratepayers, including those residing in DACs. It should also be noted that the DAC area identified in VCE's service territory does not appear to have any significant land suitable for renewable energy development, due to the predominant land use types such as prime farmlands, Williamson Act Lands, conservation easements, and Sacramento River bypass (flood) channels.

Until further notice, PG&E will continue to make its existing energy efficiency and demand response programs available to VCE customers. In addition, VCE operates several

programs and initiatives that will help air quality and energy affordability for all VCE customers, including residents of DACs, as described in the following summaries.

Transportation Electrification. Decarbonizing the transportation section is a high priority for VCE and its local government member agencies due to their central implementation role of State transportation goals. With a high level of emissions generated by the transportation sector in California (50%)[29] and the consideration of the impacts of diesel particulate matter, traffic, and particulate matter on Census Tract 101.02, VCE is in the best position to catalyze transportation electrification at the local level. As part of VCE's transportation electrification initiative, goals include: 1) Accelerating electrification of transportation and moving consumer spending from gallons to kWh; 2) Improving air quality in service territory and adjacent locations; 3) Building upon the Climate Action Plans of Yolo County, Woodland, Winters, and Davis; and 4) Becoming a trusted source of information within our community regarding electrification.

VCE's transportation electrification initiatives are designed to focus on customer-facing activities that advance local electrification of the transportation system. In November 2025, VCE's Board approved the Charge Your Ride Pilot Program which includes: 1) a $3,500 pre-owned EV rebate to low-income qualifying applications; 2) rebates up to $35,000 per project to multi-family properties of 5+ units for EV charging systems and charging readiness; and 3) technical assistance for EV charging to be offered through an enhanced VCE Electric Advisor service.[30] Additionally, VCE provides an online education tool[31] for customers to find information regarding EVs such as: EV benefits, EV facts, a savings calculator, a CO2 reduction calculator, EV models, a charger finder, and available credits and rebates.

Hourly Flex Pricing. The Hourly Flex Pricing ("HFP") pilot program, which includes HFP 1 and HFP 2, was launched in 2025 and sends dynamic hourly price signals to residential, non-residential, and EV customers and their devices. By enrolling in the program, participants can decrease energy usage during high-demand periods and connect smart thermostats, irrigation systems, or EV chargers to automatically run during lower-cost times of day. By participating in the program, customers can help prevent issues on the grid and save money on electric bills. Shifting electricity to lower demand times helps to ensure that cleaner forms of energy such as wind and solar are being supplied and minimizes the need for fossil fuel-based energy. The Hourly Flex Pricing pilot is available to qualifying agricultural, commercial, and residential

[29] https://www.energy.ca.gov/about/core-responsibility-fact-sheets/transforming-transportation

[30] *See* https://valleycleanenergy.org/wp-content/uploads/Item-11-Electric-Vehicle-Rebate-Pilot-Program-Phase-2-Charge-Your-Ride-11-13-25.pdf

[31] https://valleycleanenergy.org/electric-vehicles/ev-benefits/

customers and will run through late 2027. The program will help VCE to align resources and load in real time and meet the CEC's Load Management Standards.

The HFP pilot program follows the close of the AgFIT program in December 2024, which helped agricultural customers shift irrigation pumping to times that better align with grid conditions and lower-cost electricity periods. Due to positive initial load shift results in AgFIT, the CPUC expanded the AgFIT design into the currently open statewide HFP program.

Energy Efficiency. VCE's Coordinated Home Automation via Real-Time Grid Energy Pilot Program,[32] a partnership between VCE, UC Davis, and Panasonic, provides customers to receive the latest home energy technology at little or no cost. The study seeks to enroll a test bed of 25 single-family residential customers on a dynamic rate and is currently using HFP for the rate. The CHARGE Pilot provides eligible customers with a range of home electrification and storage incentives and provides the software to automate the customer response to dynamic prices. Available technologies include high-efficiency heat pump water heaters, EV chargers, and home battery storage, which will be determined by UC Davis.

In 2025, VCE joined the Yolo Energy Partnership ("YEP"), which is a county-led initiative developed to help residents in unincorporated Yolo County reduce utility bills.[33] Through the program, eligible residents may receive: 1) a free Home Energy Score assessment with energy savings recommendations; 2) a free weatherization kit with LED bulbs, weatherstripping, and additional items; and 3) guidance on electrification rebates and home repair assistance through VCE's Electric Advisor Program. While the program is available for homeowners and renters interested in energy efficiency and electrification, eligibility varies by program and the Home Energy Score Pilot Program and Weatherization Program give priority to low-income households, farmworkers, seniors (65+), households with children, and individuals with disabilities.

VCE's customers may also enroll in state-sponsored discount programs, specifically the: California Alternative Rates for Energy ("CARE"), the Federal Electric Rate Assistance ("FERA") program, and the Low-Income Home Energy Assistance Program ("LIHEAP").[34] CARE/FERA participants receive a 10% discount on energy bills and an additional 5% on top of all Standard Green customer discounts during the foreseeable future in 2026. VCE also

[32] *See,* https://valleycleanenergy.org/programs/charge-program-smarter-energy-for-your-home/

[33] *See* https://valleycleanenergy.org/yolo-energy-partnership/

[34] *See* https://valleycleanenergy.org/energy-choices/standard-service/

submitted an application to PG&E's Microgrid Incentive Program in December 2025, as outlined in Section 4.c.

VCE conducts regular outreach to its customers to increase customer satisfaction and retention, including targeted efforts to demonstrate its commitment to customers in DACs. For example, VCE updates its website annually with resources for customers having trouble paying bills and participates in the Commission's Arrearage Management Plan.[35] VCE also works to increase the accessibility of the information it shares with customers, particularly Spanish speakers. VCE has performed, or is performing, the following activities in support of this effort:

- Translated the material and information listed on its website into Spanish.
- Ensuring all new collateral is translated into Spanish within 3 months of introduction.
- Analyzing satisfaction levels for customer calls in languages other than English and Spanish through VCE's contact center.
- Analyzing opt-out rates when customers request a Spanish-speaking customer service representative or Spanish on VCE's Interactive Voice Response phone system.
- Increasing social media posts in Spanish.

c. LSEs' Tribal Customers

In December 2025, VCE applied for the PG&E-administered Microgrid Incentive Program, funded by the Public Purpose Program Charge (paid by all utility customers), and administered by PG&E.[36] This effort involved engagement of Yolo County stakeholders including the Yocha Dehe Wintun Nation. The Yocha Dehe Tribal Council accepted a Letter of Intent ("LOI") to formalize a partnership for the Microgrid Incentive Program. The submission is pending, and awardees should be announced in Summer 2026.

d. Procurement Products

VCE procures multiple products to construct its preferred conforming portfolio. The bulk of VCE's procurement comes from fixed price power purchase agreements directly with energy facilities that include bundled attributes: energy, renewable energy credits, and resource

[35] *See* https://valleycleanenergy.org/financial-assistance/

[36] See https://valleycleanenergy.org/wp-content/uploads/VCE-2025-Supplier-Diversity-Report-and-2026-Plan_2026-03-02_updated_5_20_2026.pdf

adequacy capacity attributes. These physical agreements give VCE the right to revenues generated in the CAISO energy markets and therefore also serve as a financial hedge against the cost to serve VCE's load. Additionally, VCE may engage in fixed-price inter-scheduling coordinator transactions or congestion revenue rights to further hedge its cost to serve load in the CAISO energy market. Otherwise, VCE may engage in market-based procurement of renewable energy credits and resource adequacy capacity attributes on an ongoing basis to meet mandated procurement requirements as well as future environmental goals.

e. Commission Direction of Actions

VCE does not seek any direction or action from the Commission at this time beyond requesting certification of its IRP pursuant to statute and consideration of the items mentioned in Section V.

V. Lessons Learned

VCE understands the complexity of holding the IRP process and developing the assumptions and inputs necessary for LSEs to finalize the narrative, RDT, and CSP files for submission. The proposed due date and schedule for the IRP was not announced until early 2026 and was subsequently extended from the initial June 1 due date to the August due date in response to LSE requests. Greater advanced notice and consistency in IRP due dates would help LSEs to achieve compliance with all IRP requirements.

VCE respectfully encourages the Commission to consider in its planning timelines that many CCAs like VCE require Board review and approval of IRPs and community review and input from advisory committees. These reviews and approvals are integral to the identity, purpose, and mission of many CCAs, and an IRP timeline recognizing these requirements would acknowledge that the effective deadline for IRP development is about two months prior to the Commission's IRP filing deadline. In addition, LSEs must contract for IRP modeling services, which may require requests for proposals, evaluation of service provider proposals, and board approval of service contracts. Conducting these activities requires sufficient advance notice of IRP due dates.

VALLEY CLEAN ENERGY ALLIANCE

RESOLUTION NO. 2026-___

RESOLUTION OF THE BOARD OF DIRECTORS OF VALLEY CLEAN ENERGY ALLIANCE APPROVING THE 2026 INTEGRATED RESOURCE PLAN FOR SUBMISSION TO THE CALIFORNIA PUBLIC UTILITIES COMMISSION

WHEREAS, the Valley Clean Energy Alliance ("VCE") was formed as a community choice aggregation agency ("CCA") on November 16, 2016, under the Joint Exercise of Power Act, California Government Code sections 6500 et seq., among the County of Yolo, and the Cities of Davis and Woodland, to reduce greenhouse gas emissions, provide electricity, carry out programs to reduce energy consumption, develop local jobs in renewable energy, and promote energy security and rate stability in all of the member jurisdictions. The City of Winters, located in Yolo County, was added as a member of VCE and a party to the JPA in December of 2019; and,

WHEREAS, in accordance with state Senate Bill (SB) 350 (2015, DeLeón), as well as modifications to those sections added by SB 338 (2016, Skinner) and Assembly Bill (AB) 759 (2017, Dahle) to implement Public Utilities Code Sections 454.51 and 454.52, the California Public Utilities Commission (CPUC) has enacted rulemakings requiring load servicing entities in the state over which the CPUC exercises regulatory authority to file Integrated Resource Plans (IRP) beginning in August 2018 and then every other year; and,

WHEREAS, the 2026 IRP is a CPUC planning and compliance document which is intended to provide guidance regarding the expected power supply cost and the resources needed for meeting electric demand in the 2027-2045 period; and,

WHEREAS, on July 12, 2018, on August 13, 2020, and on October 13, 2022, the Board approved VCE's first, second and third IRP and associated Action Plans and VCE submitted the IRPs to the CPUC; and,

WHEREAS, the draft 2026 IRP will be considered by the VCE Board prior to submission to the CPUC, including the adoption of a "Preferred Conforming Portfolio"; and,

WHEREAS, in addition to the Preferred Conforming Portfolio, the IRP includes VCE's Action Plan for how it intends to achieve the objectives of the Preferred Conforming Portfolio.

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

1. The Board hereby approves of the Integrated Resource Plan update for 2026 which includes the Preferred Conforming Portfolio, and the associated Action Plan identified therein, for submission to the California Public Utilities Commission by August 10, 2026; and

2. The Board hereby authorizes the Chief Executive Officer in consultation with VCE staff to make any non-substantial changes necessary to finalize the IRP document for filing.

PASSED, APPROVED AND ADOPTED, at a regular meeting of the Valley Clean Energy Alliance, held on the _____ day of _____ 2026, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAIN:

_____
Jesse Loren, VCE Chair

_____
Alisa M. Lembke, VCE Board Secretary

Attachment: Draft 2026 Integrated Resource Plan (Redacted)