BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

FILED
08/10/26
12:30 PM
R2506019

Order Instituting Rulemaking to Continue Oversight of Electric Integrated Resource Planning and Procurement Processes.	Rulemaking 25-06-019 (Filed June 26, 2025)

BEAR VALLEY ELECTRIC SERVICE, INC. (U 913-E)
2026 INTEGRATED RESOURCE PLAN
[PUBLIC VERSION]

JEDEDIAH J. GIBSON
DOWNEY BRAND LLP
621 Capitol Mall, 18th Floor
Sacramento, California 95814
Telephone: 916.444.1000
Facsimile: 916.444.2100
Email: jgibson@downeybrand.com

Attorneys for Bear Valley Electric Service, Inc.

August 10, 2026

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue Oversight of Electric Integrated Resource Planning and Procurement Processes.	Rulemaking 25-06-019 (Filed June 26, 2025)

BEAR VALLEY ELECTRIC SERVICE, INC. (U 913-E) 2026 INTEGRATED RESOURCE PLAN [PUBLIC VERSION]

In compliance with the requirements and instructions from California Public Utilities Commission ("Commission") Decision ("D.") 18-02-018, D.22-02-004, the January 16, 2026 Administrative Law Judge's Ruling Setting Requirements for Individual Integrated Resource Plans Due June 1, 2026, the March 9, 2026 Email Ruling Granting Joint Request for Extension of Load Serving Entity ('LSE') Integrated Resource Plan ('IRP') Filings, and Energy Division's March 19, 2026 Filing Requirements Overview for 2026 IRP Filing Requirements, Bear Valley Electric Service, Inc. ("BVES") hereby provides its 2026 Integrated Resource Plan ("IRP").

Dated: August 10, 2026

Respectfully submitted,

/s/ Jedediah J. Gibson

Jedediah J. Gibson
DOWNEY BRAND LLP
621 Capitol Mall, 18th Floor
Sacramento, California 95814
Telephone: 916.444.1000
Facsimile: 916.444.2100
Email: jgibson@downeybrand.com

Attorneys for Bear Valley Electric Service, Inc.

VERIFICATION

I am the attorney for Bear Valley Electric Service, Inc. ("BVES") and am authorized to make this verification on its behalf. BVES is absent from the County of Sacramento, California, where I have my office, and I make this verification for that reason. The statements in the foregoing document are true of my own knowledge, except as to matters which are therein stated on information and belief, and as to those matters I believe them to be true.

I declare under penalty of perjury that the forgoing is true and correct.

Executed on August 10, 2026 at Sacramento, California.

/s/ Jedediah J Gibson

JEDEDIAH J. GIBSON
DOWNEY BRAND LLP
621 Capitol Mall, 18th Floor
Sacramento, California 95814
Telephone: 916.444.1000
Facsimile: 916.444.2100
Email: jgibson@downeybrand.com

Attorneys for Bear Valley Electric Service, Inc.

Non-Standard LSE Plan

Bear Valley Electric Service, Inc.

2026 INTEGRATED RESOURCE PLAN

Version 1

August 10, 2026

Bear Valley
Electric Service, Inc.
A Subsidiary of American States Water Company

5302421.3

Table of Contents

I. Executive Summary 4
II. Study Design 8
a. Objectives 15
b. Methodology 16
i. Modeling Tool(s) 16
ii. Modeling Approach 16
iii. Alternative Assumptions 18
III. Study Results 18
a. Conforming and Alternative Portfolios 18
b. Preferred Conforming Portfolio 22
c. GHG Emissions Results 24
d. Local Air Pollutant Minimization and Disadvantaged Communities 26
i. Local Air Pollutants 26
ii. Focus on Disadvantaged Communities 28
e. Cost and Rate Analysis 32
Cost and Rate Analysis Background and Methodology 32
f. System Reliability Analysis 36
h. Hydro Generation Risk Management 38
i. Long-Duration Storage Planning 39
j. Clean Firm Power Planning 39
k. Non-CAISO, including Out-of-State (OOS), Wind Planning 39
l. Offshore Wind Planning 40
m. Transmission Planning 40
IV. Action Plan 40
a. Proposed Procurement Activities and Potential Barriers 42
i. Resources to meet IRP mandated procurement requirements, including D.21-06-035 and D.23-02-040: 45

ii. Plans for resources that are currently non-candidate in CPUC's IRPs not described above 45
iii. Other renewable and/or zero carbon resources not described above 45
iv. Other energy storage not described above 45
v. Other demand response not described above 45
vi. Other energy efficiency not described above 45
vii. Other distributed generation not described above 45
viii. Transportation electrification, including any investments that correspond to different levels than what is included in Integrated Energy Policy Report (IEPR) 45
ix. Building electrification, including any investments that correspond to different levels than what is included in Integrated Energy Policy Report (IEPR) 45
x. Potential Centralized Procurement, pursuant to AB-1373 46
xi. Other 46
b. Disadvantaged Communities (DACs) 46
c. LSEs' Tribal Customers 47
d. Procurement Products 47
e. Commission Direction of Actions 49
V. Lessons Learned 49

List of Figures

Figure 1: Portfolio Supply Mix by GHG Benchmark Year 6
Figure 2: Resource Planning under 8 MMT Portfolio 14
Figure 3: Preferred Conforming Portfolio Supply Mix 21
Figure 4: Cumulative RE PPA Stack (2026-2045) 22
Figure 5: DACs Outside of BVES Service Territory 30

List of Tables

Table 1: 2026 IRP Cycle GHG Assigned Benchmark Results 5
Table 2: BVES Assigned Load Forecast 2023-2035 (GWh) 12
Table 3: BVES Assigned Load Forecast 2036-2045 (GWh) 12
Table 4: BVES CSP Calculator Demand Inputs: 8 MMT Scenario 12
Table 5: BVES Sales Forecast and GHG Emissions Benchmark Compared to Other LSEs 15
Table 6: Comparison of New Resource Against TPP Portfolio 18
Table 7: BVES's Preferred Conforming Portfolio Resource Categories 20
Table 8: Preferred Conforming Portfolio - Required Elements 23
Table 9: GHG Benchmark Milestone Comparison 25
Table 10: RPS Resource Custom Profile - CSP 8 MMT 26
Table 11: BVES Local Air Pollutant Results Based on 8 MMT Emissions Scenario in the Clean System Power Calculator 26
Table 12: BVES Conforming Portfolio GHG Local Emissions Results: 8 MMT Benchmark 27
Table 13: Census Tracts and Demographics within BVES's Service Territory 31
Table 14: Revenue Requirements and Bundled System Average Rates for 8 MMT Preferred Conforming Portfolio (2024 $) 34
Table 15: Procurement Strategy Barriers 42
Table 16: Illustrative RE PPA Block Strategy (2026-2045) 47
Table 17: BVES Procurement Products 48

I. Executive Summary

The 2026 Integrated Resource Plan (IRP) for Bear Valley Electric Service, Inc. (BVES) presents BVES's preferred portfolio for the 2026-2045 planning horizon. This IRP serves as the primary document used in planning, evaluating, and acquiring energy resources to meet the forecasted energy requirements of BVES's retail customers, consistent with California policy goals, the California Public Utilities Commission (hereafter, CPUC or Commission) IRP filing requirements, and BVES's assigned load forecast and greenhouse gas (GHG) emissions benchmark. This IRP also serves as a contributing factor to the overall electric sector profile for state regulators to prepare a pathway for load-serving entities (LSEs) to achieve 100 percent of retail energy sales coming from eligible renewable and zero-carbon resources by 2045 in accordance with Senate Bill (SB) 100 (DeLeon, Chapter 312, Statutes of 2018).[1]

BVES developed its IRP to identify reliable, best-fit, least-cost, low-carbon energy resources to serve the needs of BVES's electric customers and support compliance with applicable renewable energy, GHG emissions, and system reliability planning requirements. This IRP summarizes BVES's evaluation of supply-side and demand-side resources - documenting BVES's preferred conforming portfolio for the Commission. The amount and types of resources presented in the IRP are consistent with Commission regulations and California State laws governing, among other issues, resource adequacy (RA), renewable energy (RE), GHG emissions limits, and reduction targets.

For this 2026 IRP filing, BVES prepared its plan consistent with the non-standard filing pathway identified for small and multi-jurisdictional utilities (SMJUs).[2] BVES utilized the CPUC-assigned load forecast, GHG benchmark thresholds, and considered the modeling results of the Resource Data Template (RDT) and Clean System Power (CSP) Calculator. Under the revised IRP filing requirements, SMJUs are not required to file the RDT and CSP models with the narrative filing. However, please note that BVES used these tools to inform its portfolio analyses.

GHG Benchmark Results

For the 2026 IRP cycle, BVES evaluated its Preferred Conforming Portfolio against the applicable GHG benchmark years. The CSP results indicate that BVES's portfolio complies with its assigned GHG benchmark in the required compliance years of 2030, 2035, 2040, and 2045. The 2028 result is included for informational purposes only and is not treated as a compliance year. BVES's Preferred Conforming Portfolio meets the GHG conformance requirement while preserving reasonable procurement flexibility.

[1] SB 1020 (The Clean Energy, Jobs, and Affordability Act of 2022) added Interim targets to the existing policy framework established by SB 100 by requiring renewable energy and zero-carbon resources to supply 90 percent of all electric retail sales by 2035 and 95 percent by 2040.

[2] CPUC, *Administrative Law Judge's Ruling Setting Requirements for Individual Integrated Resource Plans Due June 1, 2026*, R.25-06-019, January 16, 2026, Section 5, Narrative Template. The ruling identifies small and multi-jurisdictional utilities, including Bear Valley Electric, as non-standard plan filers. The CPUC Narrative Template further states that Non-Standard LSE Plan filers may use the template but are not required to submit the Clean System Power calculator, Resource Data Template, or address requirements based on contracted or planned resource information. (2026 Narrative Template, p. 3.)

For the 2024-2027 IRP cycle, Rulemaking (R.) 25-06-019 continues the Commission's statewide electric sector planning to support California's trajectory toward carbon neutrality by maintaining the 25 million metric ton (MMT) greenhouse gas (GHG) planning target for 2035 and implementing a planning target of 8 MMT or less by 2045.[3] Table 1 below presents BVES's assigned GHG benchmarks and modeled portfolio results for the 2026 IRP cycle. The modeled results show that BVES's Preferred Conforming Portfolio remains at or below the applicable benchmark in each required compliance year.

Table 1: 2026 IRP Cycle GHG Assigned Benchmark Results

Year	Statewide GHG Target (MMT)	BVES Assigned GHG Benchmark (MMT)	BVES Modeled CO_2 (MMT)	Benchmark Result
2030	30.00	0.0154	0.0145	Meets
2035	25.00	0.0128	0.0125	Meets
2040	16.84	0.0099	0.0093	Meets
2045	8.68	0.0051	0.0045	Meets

Covering the years 2026-2045 in this IRP procedural process, the Commission established baseline assumptions and inputs that were utilized in framing the Reference System Plan (RSP). On January 16, 2026, an Administrative Law Judge (ALJ) Ruling finalizing load forecasts and GHG benchmarks (R. 25-06-019), was released and assigned benchmarks were published to the IRP materials webpage. In the 2024-2027 IRP cycle, the Commission further updated and issued the narrative template for the IRP on January 16, 2026. Further, the Commission allows SMJUs to file a non-standard plan, which does not require submission of the RDT or CSP calculator.

Additional Procurement Obligations

The Commission initiated the Mid-term Reliability (MTR) procurement requirements in 2021 after Commission staff identified an MTR need for the 2023-2026 period. However, BVES is not subject to the additional MTR procurement obligations established in Decision (D.) 19-11-016, D.21-06-035, D.23-02-040, or D.26-02-057 (refer to Section IV.a.i).

[3] **CPUC. Rulemaking 25-06-019 Order Instituting Rulemaking to Continue Oversight of Electric Integrated Resource Planning and Procurement Process," https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M571/K276/571276511.PDF.**

Preferred Portfolio & Action Plan

BVES developed its Preferred Portfolio as its singular Conforming Portfolio for the IRP submission. With existing contracted resources, system power supply, an in-development battery energy storage system (BESS), and anticipated renewable procurement objectives, BVES demonstrates that its portfolio meets its assigned load forecast, reliability needs, Renewables Portfolio Standard (RPS) compliance, and the applicable GHG benchmark. The portfolio assumes no new future RE Power Purchase Agreement (PPA) procurement is needed in 2026-2028 because BVES continues to rely on existing contracted supply and system power during this near-term bridge period.

Figure 1 demonstrates the supply mix transition across GHG benchmark years. Beginning in [redacted], after accounting for the added system power stack, the portfolio identifies [redacted]. This [redacted]. After existing contracted supply rolls off in [redacted]. The [redacted].

Figure 1: Portfolio Supply Mix by GHG Benchmark Year



BVES selected this portfolio as its Preferred Conforming Portfolio because it meets the IRP requirements and BVES's assigned GHG emissions benchmarks while minimizing upward pressure on customer rates. The annual RE PPA values represent total future RE needs in each year, not a new incremental contract requirement each year. After accounting for the added system power layer, BVES's [redacted] and increases over time as reliance on system power declines and existing power supply contracts expire.

Action Plan:

BVES has developed the following Action Plan to carry out its Preferred Portfolio:

1. Construct the approved 5 MW/20 MWh BESS in 2027 providing cycled four-hour duration.

2. Maintain existing supply through 2028 relying on existing contracted resources, system power, BVES resources, and BESS. No new RE PPA needs are identified before 2029.

3. Procure the first RE PPA tranche by 2029. Targeting [redacted] reflecting the layered system power stack and existing portfolio resources.

4. Use system power as a bridge resource, within GHG assigned benchmarks and emission limits.

5. Before 2036, BVES will [redacted] and will continue to add supplies to address increasing requirements as existing contracted supplies roll off.

6. [redacted]

7. Address emerging RA requirements and potential shortfalls through separate procurement processes, as needed.

From an implementation standpoint, BVES's near-term action is to maintain existing supply through 2028 while preparing for future procurement. In 2027-2028, BVES will finalize the desired product structure and begin market outreach or solicitation activity for future RE PPA supply for delivery in [redacted]. BVES may initiate the solicitation earlier if additional Portfolio Content Category (PCC) 1 Renewable Energy Credits (RECs) are needed to meet RPS compliance requirements. BVES plans to procure the first [redacted]. BVES has targeted the second procurement tranche by [redacted] so that additional renewable supply is available before the larger [redacted] need occurs. This staged approach reduces procurement timing risk and avoids a [redacted]. Further, BVES's Preferred Conforming Portfolio will preserve optionality for standalone RA contracts, bundled RE plus RA products, additional storage, and other firm capacity products to satisfy reliability requirements, as needed.

BVES's portfolio separates energy compliance from local reliability needs. Staged firm bundled RE PPA procurement addresses BVES's long-term clean energy and GHG compliance needs, while the 5 MW / 20 MWh BESS, Bear Valley Power Plant (BVPP), RA procurement, and local Southern California Edison (SCE) capacity coordination support reliability and local capacity needs. Because the planned BESS is a four-hour resource, BVES will continue to evaluate whether additional storage, local capacity, transmission capacity, or other reliability products are needed as load grows and as winter peak drivers evolve.

As presented in this IRP, BVES' Preferred Conforming scenario is designed to serve load using cost-effective, firm system power PPAs, BVPP, energy efficiency activities, demand response (DR), and behind-the-meter (BTM) distributed energy resources (DER). BVES continues to plan for migration to a nearly 100 percent clean power delivery strategy through contracted firm renewable energy PPAs by 2045. Through these power supply planning characteristics, along with assigned load modifiers and the forecasted demand increase through 2045, BVES modeled future supply needs that align with calculations and assumptions prescribed by the CPUC. Throughout this process, BVES will maintain awareness of local

community impacts and maintain prudent utility practices to provide reliable, least-cost energy to all customers.

IRP Section Overview

This IRP presents the study results of the conforming and preferred scenarios under the 8 MMT GHG reduction scenarios, the action plan in achieving the supply plan, and ongoing lessons over the last IRP cycles. The study design in Section II addresses the methodology utilized to develop the analyses and modeling tools and approach. The study results, as discussed in Section III, address the conforming and alternative portfolios as well as the basis for the final preferred conforming portfolio selection. Section III also addresses the final GHG emissions results and any local air pollutants with particular focus on disadvantaged communities; describes the cost and rate analysis for the baseline and portfolio cases, system reliability analysis, and several power supply planning opportunities/challenges; and addresses how BVES will work towards achieving clean firm power contracts. The action plan presented in Section IV describes the proposed procurement activities and potential barriers for success, as well as additional procurement obligations for required capacity planning.

II. Study Design

IRP Process Overview & Study Findings

As a result of Senate Bill (SB) 350, the Commission was directed to develop an IRP process for its regulated electric utilities and service providers for long-term resource planning needs, assuring that the collective electric sector is on track to meet GHG reduction goals with secured reliable and least-cost resources. The IRP proceeding is designed on a two-year cycle, with LSE contributions to the Commission's RSP provided in the form of conforming portfolios and planned procurement activities within their IRPs.

The first year of the CPUC IRP cycle consists of a self-initiated process undertaken by the Commission to develop an RSP of optimal planning resources integrated to meet the state's GHG reduction targets. The Commission considers LSE IRPs in the second year of the cycle and aggregates LSE portfolios into a single system-wide portfolio referred to as the Preferred System Portfolio (PSP). The RSP and PSP serve as inputs for the California Independent System Operator (CAISO) Transmission Planning Process (TPP).

On February 15, 2024, the Commission adopted a new portfolio for the 2023 PSP and evaluated the 2022 individual IRP filings pursuant to D.24-02-047 under R.20-05-003.[4] The 2023 PSP decision also recommended to the CAISO that the 8 MMT PSP portfolio be utilized for the reliability and policy-driven base case for the 2027-2028 TPP. From this determination, the results urged both the Commission,

[4] The recently adopted PSP meets a statewide 8 million metric ton (MMT) of carbon dioxide (CO2) GHG target for the electric sector in 2045. Commission staff adjusted the timeframe beyond 2035 to 2045 in order to add resources required under D.26-02-057.

California Energy Commission (CEC), and CAISO to establish a more aggressive GHG reduction case for the 2024-2027 IRP cycle.[5]

Carbon accounting practices at BVES had previously assumed emissions intensity alignment with the power resource mix attributed to SCE's service territory. This is supported by the condition that supply from the CAISO-controlled grid is indirectly fed onto BVES's distribution system by way of SCE infrastructure and service area.[6] However, the methodology described in this IRP represents emissions factors that are assigned to LSEs with contracted system power supply and calculations supported by CPUC-driven models and assigned assumptions that address the CAISO system level proportional share to each LSE. As a result of this IRP, BVES found that additional procurement activities may be warranted in order to meet its forecast GHG benchmark targets by 2045. These activities include securing eligible renewable power resources and making direct contracting agreements or market purchases from unit-specific generation. BVES plans to continue to issue solicitations and requests for information that enable internal objectives to transition away from dependency on unspecified power generation contracts over time.

BVES is also in a hedged position in meeting the goals of the California RPS through its strategy in securing REC contracts. In late 2011, D.11-12-052 defined and implemented PCC. Most retail sellers subject to the RPS must procure certain quantities from each of the PCCs. Of importance, D.11-12-052 confirmed that BVES may satisfy its RPS obligations without regard to the PCC limitations to which most other retail sellers must adhere. As such, and in alignment with clean power adoption targets, BVES continues to adapt its preferred portfolio to account for bundled, firm RE PPAs, for which it expects to meet future procurement requirements for RPS compliance periods as well as meeting applicable standards for the IRP CSP model under varying GHG benchmark thresholds.

BVES faces constraints in substantially expanding its utility-owned renewable generation buildout due to limited large parcel availability suitable for renewable resources in its remote service territory and no direct connection to the CAISO controlled grid. BVES will investigate the viability to procure unit-specific eligible resources, wheeled in the CAISO market, or secure contracts for firm renewable resources. BVES recently received approval for a 5 MW BESS, enhancing the resilience of BVES's local distribution grid, and decreasing reliance on external generation and transmission sources. At the time of this IRP, construction will commence in 2026, with substantial completion scheduled for 2027. Additionally, BVES is exploring the potential installation of a second BESS or additional engines at the BVPP, which could come online in 2031 or 2032 or earlier. These plans are still in the preliminary stages.

BVES will continue to seek cost-appropriate renewable energy contracts and eligible renewable projects to assist in moving away from system power supply contracts over time to meet the 2045 benchmark and state energy sector GHG reduction targets. Additional results from this IRP include the determination of net qualifying capacity (NQC) targets through 2045. BVES has secured certain RA capacity contracts

[5] For the 2026 IRP cycle, LSE portfolios are evaluated against the LSE's assigned load forecast and proportional share of the 8 MMT by 20245 GHG target, consistent with the Commission's current IRP filing requirements and SB 350, which was modified by SB 100 state objectives in achieving 100 percent of electricity sales coming from eligible renewable and zero-carbon resources by 2045.

[6] SCE, "2024 Power Content Label," California Energy Commission Power Source Disclosure Program, https://www.energy.ca.gov/filebrowser/download/9168.

through the end of [redacted]. BVES will continue to seek additional RA capacity through its competitive procurement processes to meet future RA obligations while balancing reliability requirements with prudent ratepayer cost considerations.

BVES Service Area Characteristics

BVES, a subsidiary of American States Water Company, is an investor-owned utility (IOU) regulated by the CPUC. BVES provides electric service in a mountainous resort community with approximately 24,915 customers, of which approximately 23,414 are residential customers.[7] Approximately 1,501 of the total number of customers are commercial, industrial, and public-authority customers, including two ski resorts. Additionally, approximately 748 accounts within the commercial and residential customer base are considered net energy/distributed generation metering (NEM) customers.

BVES's historical peak load is approximately 45 MWs; winter monthly peaks occur when snowmaking machines at the ski resorts are operating and recreational visitors are present (generally between 5:00 pm and 11:00 pm on weekends). BVES's 45 MW peak load represents approximately 0.1 percent of the CAISO peak load. In the summer months, the load in BVES's service area ranges from an average minimum of about 10-12 MW (early summer mornings) to a maximum of approximately 24 MW (late evenings on holiday weekends). BVES purchases wholesale power to meet the majority of its energy requirements. To aid in meeting peak demand for electric energy, BVES installed and operates the BVPP, a natural gas-fired, 8.4 MW generation plant, with a tested heat rate of 12,000 British thermal units (Btu)/kilowatt-hour (kWh), in its service area. The BVPP became commercially operational on January 1, 2005.

BVES has two receipt points of power from SCE, which include the Goldhill transfer station and Radford/Bear Valley Feeder. The majority of BVES's power is transmitted over SCE's 33 kilovolt (kV) sub-transmission line from the Cottonwood substation to the Goldhill transfer station. The remainder of BVES's energy is transmitted over SCE's 33 kV distribution facilities from the Zanja substation near Redlands over the Radford Feeder to BVES's Village substation.[8] BVES is coordinating with SCE to evaluate whether an additional 10 MW of capacity can be allocated to the Radford/Bear Valley sub-transmission line to meet peak load demand and improve system reliability across the BVES service territory.

BVES's distribution system is located and operates under the balancing authority (BA) of the CAISO. However, BVES does not own any transmission facilities and is not a Participating Transmission Owner (PTO) under the CAISO Tariff. BVES facilities are indirectly interconnected with the CAISO-controlled grid via wholesale distribution access facilities that are owned, controlled, and operated by SCE. These facilities are then directly interconnected with SCE transmission facilities that are part of the CAISO-controlled grid. Lastly, the BVPP does not operate under a Participating Generator Agreement (PGA) and thereby is not considered a CAISO-controlled unit under the CAISO Tariff. It should be noted that because BVES is a holder of Congestion Revenue Rights (CRRs), BVES falls under direct tariff regulation by the CAISO. BVES must indirectly adhere to the CAISO Tariff due to power scheduling requirements. The

[7] BVES, A.26-01-022, "2027 GENERAL RATE CASE APPLICATION OF BEAR VALLEY ELECTRIC SERVICE, INC." https://www.bvesinc.com/assets/documents/applications/a.26-01-___bves-ty-2027-grc-application-final.pdf.

[8] BVES refers to voltages on these SCE lines as 34.5 kV.

requirements are imposed on BVES by its third-party scheduling coordinator, who must abide by the CAISO Tariff to schedule BVES's power and resources.[9]

Load Assignments for Each LSE

BVES developed its 2026 IRP using the CPUC-assigned load forecast, peak demand forecast, Behind the Meter Photovoltaic (BTM PV) forecast, and GHG emissions benchmarks finalized through the January 16, 2026 ALJ ruling.[10] BVES did not substitute an alternative annual load forecast for its Conforming Preferred Portfolio. The assigned load forecast provided forecasted amounts throughout 2035. BVES used the assigned load forecast originally found in the 2021 CEC Integrated Energy Policy Report (IEPR) and extended the forecast to 2045 based on the forecasted growth rate of kWh sales in the Test Year 2027 General Rate Case (GRC), in order to maintain compliance with both the IRP requirements and BVES' GRC Application.[11] This was used as the basis for the 2026-2045 planning horizon and was carried through the RDT and CSP-informed portfolio analysis. BVES's study design focused on identifying a portfolio that meets customer energy needs, maintains reliability, supports RPS and GHG compliance, and reflects a reasonable procurement path for a small utility. BVES reviewed existing supply resources, planned resources, system power assumptions, BESS capacity, and future renewable procurement needs. The portfolio was then tested against BVES's assigned GHG benchmarks to confirm that modeled emissions remain equal to or below the applicable thresholds in the benchmark years.

Although BVES's inaugural filing for the 2020 IRP and 2022 IRP follow the Standard Plan pursuant to R. 20-05-003, the 2026 filing follows the non-standard plan as directed in R. 25-06-019. BVES also provides in this IRP its resource action plan through 2045, system-level planning discussions, a response addressing identification of disadvantaged communities and supply procurement impacts, and details surrounding the modeling design and GHG emissions benchmark results using established Commission assumptions and inputs. After completing the IRP analysis, BVES modeled the portfolio where emissions targets reach just below the assigned threshold benchmarks. BVES used the CSP Calculator and RDT as planning tools to inform its resource stack and emissions results. Under the non-standard filing pathway for SMJUs, BVES is not required to submit the RDT and CSP workbooks with the narrative filing; however, the portfolio analysis was developed with these tools to remain consistent with the assigned forecast, assigned GHG benchmarks, and applicable IRP filing requirements.

As directed by the Commission, the 2021 CEC IEPR forecast for BVES was used as a baseline in the conforming portfolio scenario development. Load modifiers such as increased penetration of BTM DERs, energy efficiency (EE), electric vehicle (EV) adoption, and expected load growth are described in detail using CEC IEPR demand modifier inputs for modeling results. These values were verified against the input assumptions in the RDT CSP for RESOLVE and SERVM modeling and subsequent instruction from the Commission. BVES did not modify any optional input entries or deviate from the assigned assumptions

[9] Currently APX is under contract with BVES to act as its Scheduling Coordinator and provide schedule coordination services.

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

[11] BVES, A.26-01-022, "2027 GENERAL RATE CASE APPLICATION OF BEAR VALLEY ELECTRIC SERVICE, INC." https://www.bvesinc.com/assets/documents/applications/a.26-01-___bves-ty-2027-grc-application-final.pdf

apart from the commercial and industrial (C&I) demand modifier percentages as explained below. As discussed, BVES does not own any transmission assets, does not have any sourced energy projects that are CAISO-controlled, and receives supplied electricity fed in at the distribution level from SCE.

Table 2: BVES Assigned Load Forecast 2023-2035 (GWh)

2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
[redacted]	[redacted]	[redacted]	138	139	140	140	141	142	142

Table 2 reports the assigned sales forecast for BVES through 2035 resulting from the 2021 IEPR Forecast and approved in R.20-05-003 on June 15, 2022. This sales forecast forms the basis for BVES's IRP, as directed by the Commission, which was used to predict sales for 2036-2045, as shown in Table 3. BVES represents the second smallest LSE of all those reported in the CSP calculator, and has a sales forecast nearly four-times smaller than the next larger SMJU.

Table 3: BVES Assigned Load Forecast 2036-2045 (GWh)

2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
143	144	145	145	146	147	148	148	149	150

In addition to the sales forecast shown above, BVES relied on load modifier assumptions as presented in the CSP calculator to remain consistent with the 2021 IEPR forecast. BVES did include a customized assumption regarding the annual percent of C&I load. BVES used BVES-specific hourly shapes where available, while ensuring that total annual energy volumes remained consistent with the assigned IRP forecast. These shapes were developed using BVES historical load data and normalized to the CPUC-assigned annual forecast. While the default assumption included in the CSP model is 49-50 percent, BVES's system is anticipated to be 41.14 percent C&I by 2030 and onwards. This is supported by recorded percentage of sales attributed to the C&I customer accounts and plans for oncoming load growth in that customer category.

Table 4 reports the calculated demand inputs for BVES assigned sales forecast as calculated by the CSP calculator.

Table 4: BVES CSP Calculator Demand Inputs: 8 MMT Scenario

Active Demand Inputs	Units	2028	2030	2035	2040	2045
Baseline net energy for load	**GWh**	[redacted]	**134**	**121**	**117**	**115**
Non-commercial/industrial portion of baseline (included in baseline total)	GWh	[redacted]	79	71	69	68
Commercial/industrial portion of baseline (included in baseline total)	GWh	[redacted]	65	67	48	47
Electric Vehicle Load	GWh	[redacted]	14	27	36	42
Building Electrification	GWh	[redacted]	7	13	15	17
Energy Efficiency	GWh	[redacted]	-4	-5	-4	-4
Behind-The-Meter Photovoltaics (BTM PV)	GWh	[redacted]	-11	-15	-18	-19

Active Demand Inputs	Units	2028	2030	2035	2040	2045
Behind-The-Meter Storage Losses (BTM Storage)	GWh	[redacted]	0	0	0	0
Calculated demand at utility-scale generator bus-bar	**GWh**	[redacted]	**151**	**155**	**159**	**163**

Required and Optional Portfolios

BVES developed one Conforming Portfolio for the 2024-2027 IRP cycle and selected that portfolio as its Preferred Conforming Portfolio. BVES did not develop a separate Alternative Portfolio for this filing nor present any deviations from the assigned assumptions. BVES selected this portfolio because it best represents how BVES plans to meet state policy goals while maintaining reliability, managing cost, and avoiding unnecessary over-procurement. The portfolio reflects existing contracted renewable supply, BVES resources, the planned 5 MW/20 MWh BESS, a limited system power layer, and staged future RE PPA procurement beginning in [redacted].

The CPUC developed the assumptions utilized in this IRP as a result of calibrated models executed through the RESOLVE and SERVM models. Additional inputs for load modifiers are derived from the CEC IEPR. In order to address the electric sector's proportion of GHG emissions reductions by 2045, the CPUC assigned LSEs proportional GHG emissions (in carbon dioxide CO_2 MMT) benchmarks. BVES developed its Conforming Portfolio/Preferred Portfolio using these assumptions for consistency and did not opt to select optional demand side entries. BVES does not have any candidate resources subject to the baseline information utilized in the development of the CPUC RSP and responds to this prompt as "not applicable." BVES also assumes all future RE firm PPA generating units are online and are regional to the CAISO system. Additionally, BVES does not have any resources subject to the Cost Allocation Mechanism or Power Charge Indifference Adjustment relating to departing load.

BVES references internal energy supply costs in forecasting cost and financing information that better reflect the position and unique conditions in long-term energy resource planning. While an incremental analysis on RA capacity is not warranted for this 2024-2027 IRP cycle, BVES presents a discussion on current efforts to address this concern in the short- and long-term. BVES leveraged financial information both from the RESOLVE results, market insight, as well as the characterization presented in its 2027 Test Year GRC for consistency. All other cost and rate analysis values are designed from publicly available inputs. This is discussed in detail in Section III.e.

Figure 2 below illustrates the two supply-side portfolios generated under this analysis through 2045.

Figure 2: Resource Planning under 8 MMT Portfolio



GHG Emissions Benchmark

BVES utilized benchmarks of GHG MMT CO_2 for 2045 for the 8.68 MMT scenario. BVES's Preferred Conforming Portfolio meets the assigned GHG benchmark in each applicable benchmark year. Modeled emissions are approximately 0.0145 MMT in 2030, 0.0125 MMT in 2035, 0.0093 MMT in 2040, and 0.0045 MMT in 2045, each of which is at or below BVES's assigned benchmark. These results support selection of the portfolio as BVES's Preferred Conforming Portfolio. The portfolio achieves this result by maintaining existing contracted renewable resources, retaining system power only within available GHG headroom, and adding future RE PPA procurement as needed over the planning horizon. This approach allows BVES to meet its assigned GHG benchmarks.

BVES aligned its IRP approach to these established benchmarks as shortfall supply will be met by day-ahead energy purchases and short-term power contracts structured to achieve carbon reduction goals.[12] The statewide target is used to calculate BVES's assigned benchmark while BVES's compliance obligation is measured against its individual assigned benchmark. BVES is not an Electric Service Provider (ESP), so the ESP-specific benchmark calculation is not applicable. BVES also does not rely on BTM Combined Heat and Power (CHP) as part of its IRP resource stack. For this filing, BVES used the CSP methodology to evaluate portfolio emissions across the planning horizon and confirmed that the Preferred Conforming Portfolio remains at or below the applicable GHG benchmark years.

Table 5 compares forecast sales and GHG emissions benchmarks between BVES and the other SMJUs as well as the large IOUs. The table shows that BVES's, the smallest utility in the aggregated service territory area, proportion of emissions is 0.07 percent while Pacific Gas and Electric Company, the largest utility, is 44 percent of total emissions. Further, BVES's proportion of emissions represents 5 percent of the emissions associated with the two additional SMJUs, exemplifying the small size of BVES as an electric provider. In terms of load, BVES represents only 0.07 percent of total load for the combined small and large IOUs in 2045.

[12] The IRP Standard Plan narrative prompt states, "When calculating emissions in the CSP calculator, LSEs should achieve GHG emissions results that are slightly below their GHG benchmarks to leave room in the system for BTM CHP emissions that will be added during the portfolio aggregation process."

Table 5: BVES Sales Forecast and GHG Emissions Benchmark Compared to Other LSEs

Aggregated Service Territory Area	Proportion of 2045 Emissions	2040 Load (GWh)	2045 Load (GWh)	2040 GHG Emissions Benchmark (16.8 MMT)	2045 GHG Emissions Benchmark (8.68 MMT)
BVES	0.07%	146	150	0.01	0.005
Other Small Multi-Jurisdictional Utilities (Liberty Utilities & PacifiCorp)	1.30%	N/A	N/A	0.169	0.087
Pacific Gas & Electric Area	44.00%	145,985	155,228	5.698	2.937
Southern California Edison Area	43.13%	123,166	129,785	5.586	2.879
San Diego Gas & Electric Area	11.50%	29,671	31,839	1.489	0.768

a. Objectives

BVES's IRP incorporates analytical work with the following objectives:

1. Evaluate BVES's resource needs over the planning horizon using the CPUC-assigned load forecast, demand modifiers, BTM PV forecast, and GHG emissions benchmarks where applicable;
2. Identify a reliable, least-cost, and reasonable resource portfolio that supports compliance with applicable RPS, GHG, and RA planning requirements;
3. Use the RDT and CSP Calculator as planning tools to inform BVES's Preferred Conforming Portfolio and test whether the portfolio remains at or below BVES's assigned GHG benchmarks;
4. Inform the Commission and stakeholders of its 2026-2045 IRP and portfolio results;
5. Understand whether BVES is on target to meet its GHG benchmarks;
6. Evaluate the role of existing contracted resources, system power, BESS capacity, and future RE PPA procurement in meeting BVES's forecasted customer needs;
7. Identify when future renewable procurement is needed, including the approximate timing and scale of future RE PPA additions beginning in [redacted]
8. Present avenues to meet current and future policy goals given its unique service area, wholesale market energy supply, and overall customer profile;
9. Preserve reasonable procurement flexibility by retaining system power only to the extent supported by available GHG headroom, minimizing upward pressure on customer rates;
10. Provide discussion results that address system-wide concerns and anticipated constraints; and
11. Provide an actionable plan, utilizing the model results, for least-cost, reliable resource planning while identifying potential constraints.

BVES's IRP includes discussion of future procurement actions needed to maintain GHG compliance and presents BVES's Preferred Conforming Portfolio as the portfolio that best reflects how BVES plans to meet applicable state planning goals.

b. Methodology

i. Modeling Tool(s)

BVES used excel-based planning tools and an internally developed supply and capacity planning model to evaluate its positions under the IRP assigned assumptions. The primary tools that informed the internal modeling process included analyses through the RDT and CSP calculator models. BVES assumed inputs and results from the RESOLVE model as captured in the CPUC assumptions and model results to understand capacity expansion needs and price forecasting as well as the resource planning assumptions within the RDT. BVES did not independently run RESOLVE or SERVM for this filing. Instead, BVES relied on the Commission's adopted planning framework, assigned load forecast, assigned GHG benchmarks, RDT structure, and CSP methodology to inform its portfolio analysis. The RDT and CSP tools reflect the Commission's portfolio accounting and emissions-calculation framework and were used to test whether BVES's Preferred Conforming Portfolio remains consistent with applicable IRP requirements.

BVES's internal Excel power resource planning workbook analyzed the impacts of different portfolio scenarios on the supply-demand balance and portfolio emissions to reach its Conforming/Preferred Portfolio selection. Because BVES's internal workbook is a deterministic planning workbook, it does not perform the same function as RESOLVE or SERVM. BVES's workbook does not optimize the statewide resource portfolio or conduct probabilistic reliability modeling. Instead, it is used to evaluate BVES-specific resource needs, procurement timing, GHG compliance, and portfolio feasibility. These differences should be considered when evaluating BVES's portfolio: the analysis is intended to demonstrate conformance with assigned IRP requirements and identify a reasonable BVES procurement path, not to replace statewide RESOLVE or SERVM modeling.

Additionally, BVES's modeling workbook reflects the key inputs, assumptions, and logic assumed by both the RDT and CSP models to ensure consistency when analyzing different portfolio options. The logic imbedded in the workbook aligns with the CPUC's IRP approach and planning assumptions enabling multiple test runs of portfolio stacks to compare against GHG benchmarks and procurement viability. An additional Excel workbook was developed to project incremental costs (market purchases, renewable contracts, and investment costs) to determine the functionalized revenue requirement under the portfolio options presented.

ii. Modeling Approach

The Conforming Scenario was developed under policy-driven modeling objectives as a base-case approach for reliability while ultimately ensuring the emissions benchmarks assigned to BVES were met. BVES approached its analysis with the goal of evaluating a practical supply portfolio that reflects existing contracted resources, planned BVES resources, future RE PPA procurement with bundled REC products, and a managed level of system power contracts that provide GHG headroom to meet benchmarks over the planning horizon.

The 2026-2045 energy resource planning strategy aims to secure achievable, cost-appropriate PPAs, preferably with eligible REC products, while mitigating rate impacts and maintaining portfolio flexibility by increasing the share of renewables in the supply mix while reducing reliance on system power contracts. BVES does not treat the planned BESS project as net annual energy supply because storage shifts energy rather than producing incremental generation; however, the BESS is included for reliability, RA, and portfolio integration value.

In building the Preferred Conforming Portfolio, BVES evaluated the residual renewable procurement need after accounting for the CPUC-assigned load forecast, existing contracted resources, modeled system power, and planned resources. BVES used planning tools to evaluate the portfolio emissions and confirm that the selected portfolio remains at or below BVES's assigned GHG benchmarks in the applicable years. Based on the updated portfolio analysis, BVES identified future RE PPA procurement needs beginning in approximately [redacted] BVES considered solar, wind, balanced renewable, and firm renewable supply shapes to understand how different future RE PPA products could affect system power reliance, portfolio emissions, and procurement needs. After accounting for the layered system power stack, BVES identified a future [redacted] BVES translated these results into an illustrative staged procurement path rather than treating each annual modeled value as a separate contract.

BVES considered a range of RPS-eligible resource combinations to understand how supply shapes could affect system power reliance, portfolio emissions, and overall cost in procurement. These sensitivities included RE stacks for firm supply with wind-heavy, solar-heavy, balanced wind/solar, and generalized firm shaped RE portfolios for 24x7 block products. These sensitivities helped BVES understand the directional tradeoffs between renewable shape, system power reliance, emissions, and cost. These cases informed the analysis through discussion and market research, but BVES did not assign a definitive technology mix to its procurement strategy for RE PPA procurement as the underlying resource attributes will depend on the market availability, counterparty offers, deliverability, price and contract terms at the time of procurement.

For purposes of this IRP, BVES presents future RE PPAs as firm renewable quantities consistent with the delivery characteristics of its current 6 MW RE PPA. The actual fuel mix, renewable attributes, and GHG emissions intensity of future retail supply will be reflected after procurement and delivery through applicable Power Source Disclosure and Power Content Label reporting. This approach allows BVES to model a conforming procurement need without over-specifying the final resource mix before contracts are executed.

Other planning references, including BVES's GRC forecast and CEC IEPR materials, were reviewed as supporting context, particularly for understanding near-term load drivers, large customer changes, EV adoption, and BTM DER adoption. Additionally, BVES's existing DR program provides a reliability and peak management tool through interruptible service for its largest customers, including meaningful winter demand reduction during BVES's highest peak periods. BVES will continue to monitor these load drivers and incorporate updated CPUC and CEC planning information in future planning cycles.

Where owned or contracted generation fell short of demand, BVES modeled system power as a balancing resource. Portfolio costs were reviewed at a planning level based on expected future renewable procurement costs and the cost of continued system purchases or sales needed to balance the portfolio.

As part of this portfolio analysis, BVES reviewed the CPUC-assigned load forecast against utility derived planning information, including updated expectations for large customer load growth and distributed generation adoption.

As of this IRP filing, the BVES Solar Project[13] has not advanced following San Bernardino County review and is not treated as an approved resource in the Preferred Conforming Portfolio. BVES may revisit a similar project in the future if permitting issues can be resolved. For this filing, future renewable needs are therefore reflected through staged RE PPA procurement rather than reliance on the local solar project.

BVES incorporated updated NQC and RA planning assumptions into its analysis and evaluates RA needs separately from annual energy and RPS procurement. Because future RE PPAs may not fully resolve residual RA needs, BVES will continue to evaluate RA only products, bundled RE plus RA products, storage, or other firm capacity options as needed. For planning purposes, BVES assumes that its RA procurement obligations are as defined by the CAISO Tariff default provisions, which parallel the CPUC's program for jurisdictional LSEs; therefore, BVES plans for RA requirements equal to the CEC determined monthly coincident forecasted load, including reserves.

iii. Alternative Assumptions

Not applicable. BVES did not use any alternative assumptions to develop the scenarios it evaluated.

III. Study Results

The following describes the modeling results of BVES's planned resource mix and GHG emissions benchmarks.

a. Conforming and Alternative Portfolios

BVES developed one Conforming Portfolio for this IRP and selected it as its Preferred Conforming Portfolio. BVES did not develop a separate Alternative Portfolio for this filing.

Although BVES is filing under the non-standard filing pathway and is not required to submit an RDT or provide the full RDT based planned resource comparison, BVES provides the following high-level comparison for transparency. As shown in Table 6, BVES's planned resources are generally consistent with the direction of the 2025-2026 TPP Portfolio with updates, which identifies the need for additional clean resources and storage to support reliability and GHG reduction.

Table 6: Comparison of New Resource Against TPP Portfolio

Planned/New Resource	TPP Comparison	Variance
Future RE PPAs	Consistent with the TPP Portfolio's need for additional clean resources	• No material variance • Final resource mix will depend on procurement

[13] *See* D.25-12-024, Decision Approving Settlement Agreement for Bear Valley Electrical [sic] Service's Application to Develop a Solar Facility and Battery Energy Storage System, available at https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M591/K806/591806231.PDF.

Planned/New Resource	TPP Comparison	Variance
5 MW / 20 MWh BESS	Consistent with the TPP Portfolio's reliance on storage for reliability and renewable integration	• No material variance
BVES Solar Project	**Not included** as a committed resource in this IRP	• Not material because future renewable needs are met through staged RE PPA procurement • This specific Solar Project will not move forward

BVES's future RE PPAs are modeled as firm renewable quantities, but BVES does not identify a fixed technology mix before procurement because the final resources will depend on market availability, deliverability, pricing, and contract terms. BVES's planned 5 MW/20 MWh BESS is directionally consistent with the TPP's reliance on storage to support reliability and renewable integration. BVES does not identify a material variance from the TPP Portfolio for purposes of this IRP.

BVES modeled its supply needs for future renewable contracts based on its ability to meet benchmarks for GHG emissions under the CPUC assumptions for carbon intensity of system power. Future RE PPAs are assumed to include bundled RPS eligible attributes where available, but REC only products are not modeled as physical supply resources in the Preferred Conforming Portfolio. At this time, BVES's greatest energy supply coming from firm energy annual contracts is characterized as unspecified energy representing available, reliable, cost-effective delivery capabilities. BVES recognizes that the modeling scenarios incorporate carbon intensity measurements for system power, which are mapped to that of dispatchable natural gas resources as it assumes no generating units in specific hours in addition to natural gas generation.

The Preferred Conforming Portfolio uses BVES's CPUC-assigned load forecast, existing contracted resources, planned BESS, limited system power within GHG headroom, and staged future RE PPA procurement to meet BVES's assigned GHG benchmarks. The planned owned BESS will be located in BVES's service territory and, therefore, will not be directly tied to the CAISO electric grid. There are no direct comparisons to the planned buildout within the RSP that can be made from these IRP generating facility initiatives. Under the 8 MMT conforming portfolio scenario, BVES presents a case for rapid, higher capacity, procurement of renewable power supplies. This supply mix portfolio enables the utility to immediately plan for a greater portion of demand to be served by carbon-free resources.

BVES plans to deploy its storage facility in 2027 providing local benefits at 5 MWs/20 MWhs discharge. For IRP modeling purposes, estimates for contract life are based on life-of-facility assessments.[14] Exact construction details for these projects are still being considered or negotiated. The portfolio retains a limited system power layer only within available GHG headroom; this serves as a balancing resource while maintaining emissions below BVES's assigned benchmarks. The BVES Solar Project is not included as a committed resource because it has not advanced following San Bernardino County permitting review.

[14] **National Renewable Energy Laboratory. "Life Prediction Model for Grid-Connected Li-Ion Battery Energy Storage System," May 26, 2017. https://www.nrel.gov/docs/fy17osti/67102.pdf.**

Future renewable needs are addressed through staged RE PPA procurement. Table 7 explains the resource categorization listed above.

Table 7: BVES's Preferred Conforming Portfolio Resource Categories

Resource Category	Treatment in Portfolio
Existing contracted resources	• Existing 6 MW RE PPA through 2035 • Existing system power resources as modelled
Existing/planned BVES resources	• Planned 5 MW / 20 MWh BESS included for reliability, RA, and portfolio integration value • BVES may elect to revisit a second BESS installation in future years
Future contracted resources	• Staged future RE PPA procurement beginning in [redacted] increasing after the existing 6 MW contract rolls off after [redacted] and continuing through the planning horizon
System power	• Retained as a limited bridge/flexibility resource • Limited by GHG headroom in the CSP results
BVES Solar Project	• Not treated as an approved or committed resource in this portfolio because it did not advance following San Bernardino County permitting review • BVES may revisit a similar project in the future

Planned renewable energy procurement will take shape under firm competitive RE solicitations for contracts that target existing and online CAISO resources. Resources that are cost-appropriate and provide for a mix of 24x7 flat delivery will be considered. Current plans consider three batches of RE firm PPA contracts to achieve 100 percent clean energy by 2045 in alignment with state goals. However, spot market purchases for peak periods, upwards of 5 percent through 2045, may be incorporated to mitigate risk exposure in the market, as shown in Figure 3: **Preferred Conforming Portfolio Supply MixFigure 3**. The portfolio presented positions BVES to achieve its GHG emissions targets under the 8 MMT portfolio scenario. BVES is not requesting any direct action by the Commission at this time through this 2026-2045 IRP filing. See the figure below for the CSP-aligned portfolio stack.

Figure 3: Preferred Conforming Portfolio Supply Mix



Figure 4 below shows future RE PPA procurement needs, which are modeled as a staged portfolio rather than as separate annual contracts. Under the illustrative procurement path, BVES would add

This results in a future RE PPA position of approximately

Figure 4: Cumulative RE PPA Stack (2026-2045)



b. Preferred Conforming Portfolio

In this 2026-2045 IRP, BVES selected the 8 MMT Conforming Portfolio as its Preferred Conforming Portfolio because it best reflects BVES's current plan to achieve State clean energy goals while maintaining reliability, managing customer cost impacts, and preserving procurement flexibility. The portfolio uses BVES's CPUC-assigned load forecast and GHG benchmarks and includes existing contracted renewable supply, the planned 5 MW/20 MWh BESS, limited system power within available GHG headroom, and staged future RE PPA procurement beginning in [redacted].

The Preferred Conforming Portfolio does not include new natural gas resources or long-term re-contracting with existing natural gas resources for a term of five years or more. Table 8 details the requirements associated with the Preferred Conforming Portfolio.

Table 8: Preferred Conforming Portfolio - Required Elements

Requirement	How the Preferred Conforming Portfolio Satisfies the Requirement
(A) GHG emissions reduction targets	The portfolio is designed to meet BVES's assigned GHG benchmarks under the 8 MMT by 2045 conforming portfolio requirement. Modelled emissions remain at or below BVES's applicable benchmark years, as discussed in Section III.c.
(B) 60% RPS by 2030	BVES's portfolio meets the 60% renewable procurement requirement by 2030, with approximately 98.82 GWh of renewable supply against 138.82 GWh of assigned load, or about 71% renewable supply, [redacted].
(C) Obligation to serve at just and reasonable rates	The portfolio balances clean energy procurement with cost and reliability by relying on existing resources, staged procurement, and limited system power rather than immediate over-procurement.
(D) Minimize ratepayer bill impacts	BVES uses a staged procurement approach to reduce unnecessary near-term procurement costs and preserve flexibility to procure resources when needed.
(E) System and local reliability	The portfolio includes the planned 5 MW / 20 MWh BESS, existing contracted resources, system power for balancing needs, and future RE PPAs to support long-term supply needs. BVES will continue to evaluate RA and capacity needs separately from annual energy procurement.
(F) Long-term RPS contracting requirement	BVES expects future RE PPA procurements to rely on long-term bundled renewable products where available, supporting compliance with the long-term contracting requirements for RPS procurement and maximizing opportunities to carry forward excess procurement between compliance periods.
(G) Diversity, sustainability, and resilience	The portfolio includes a mix of existing renewable supply, future RE PPAs, storage, and limited system power. The planned BESS supports local reliability and resilience in BVES's service territory.
(H) Distribution systems and demand-side energy management	The planned BESS and existing demand-side programs support local system management, peak reduction, and reliability. BVES will continue to monitor load modifiers, BTM PV, EV adoption, and customer load changes.
(I) Local air pollutants and disadvantaged communities (DACs)	The portfolio reduces reliance on system power over time through staged renewable procurements. Local air pollutant and DAC considerations are addressed further in Section III.d.
(J) Diverse portfolio of energy resources	BVES maintains a diverse portfolio of existing renewable resources, future RE PPAs, storage, demand-side resources, and limited system power.

Cost and rate considerations are addressed in Section III.e; however, BVES selected a staged procurement approach in part to manage customer cost impacts and avoid unnecessary near-term over-procurement.

BVES's modeled emissions are below its assigned GHG benchmarks in the applicable benchmark years, and the results reflect practical procurement sizing, including whole MW contract assumptions, staged RE PPA blocks, and retention of limited system power that fit within available GHG headroom. The portfolio is expected to operate similarly from a reliability perspective because the additional renewable procurement is sized to meet BVES's energy and emissions needs while BVES continues to evaluate RA and capacity needs separately.

BVES has historically used REC only procurement to support RPS compliance. In 2013, the Commission approved BVES's ten-year REC only agreement with Avangrid Renewables, LLC, formerly Iberdrola Renewables, through Resolution E-4604 approving Advice Letter 277-E. The Avangrid REC contract was originally forecasted to satisfy BVES's RPS obligations through the early 2020s and provided BVES with a compliance bridge while it evaluated longer-term renewable procurement options.[15] Since that contract period, BVES has shifted its RPS strategy toward bundled renewable procurement. In 2023, the Commission approved BVES's PPA with Shell Energy North America for firm bundled energy and associated RECs through Resolution E-5275 approving Advice Letter 470-E. The Shell PPA provides BVES with an existing 6 MW firm bundled renewable supply product and supports BVES's transition from REC only compliance products toward bundled RPS eligible energy and REC procurement.[16]

Going forward, BVES's Preferred Conforming Portfolio relies on existing bundled renewable supply and staged future RE PPA procurements to support RPS compliance and GHG conformance. BVES may continue to evaluate REC only products as a supplemental tool to manage compliance timing or short-term procurement gaps, but REC only products are not treated as physical energy supply for purposes of the IRP portfolio.

Compared to BVES's 2022 IRP portfolio, the Preferred Conforming Portfolio reflects the 8 MMT by 2045 planning framework, updated CPUC-assigned load and GHG benchmark assumptions, the addition of the Shell 6 MW firm bundled RE PPA, the planned 5 MW/20 MWh BESS, removal of the BVES Solar Project as a committed resource, and staged future RE PPA procurements beginning in [redacted] The primary drivers of change are the updated IRP planning framework, updated load assumptions, the status of the solar project, and BVES's continued transition from REC only compliance products toward bundled renewable procurement.

c. GHG Emissions Results

BVES evaluated the Preferred Conforming Portfolio against its assigned GHG emissions benchmarks using the CSP methodology. Although BVES is filing under the non-standard filing pathway and is not required to submit the CSP calculator as a formal filing item, BVES used the CSP framework as a planning tool to estimate portfolio emissions and confirm that the Preferred Conforming Portfolio remains at or below BVES's assigned benchmarks.
The statewide 8 MMT value represents the 2045 electric sector planning target. As listed in

Table 9, BVES's applicable GHG benchmarks are its proportional share of the statewide targets. BVES's modeled portfolio emissions remain below the assigned benchmark in each applicable benchmark year.

[15] CPUC Resolution E-4604, July 29, 2013, approving BVES Advice Letter 277-E and BVES's ten-year REC-only contract with Avangrid Renewables, LLC, formerly Iberdrola Renewables.

[16] CPUC Resolution E-5275, June 29, 2023, approving BVES Advice Letter 470-E and BVES's PPA with Shell Energy North America for procurement of firm bundled energy and associated RECs. Actual PPA costs are confidential.

Table 9: GHG Benchmark Milestone Comparison

Year	BVES Assigned GHG Benchmark (MMT CO_2e)	Modeled Portfolio Emissions (MMT CO_2e)
2028	Informational only	0.0301
2030	0.0154	0.0145
2035	0.0128	0.0125
2040	0.0099	0.0093
2045	0.0051	0.0045

The results show that BVES's Preferred Conforming Portfolio meets the 8 MMT requirement. Modeled emissions are below BVES's assigned benchmarks in 2030, 2035, 2040, and 2045. The portfolio achieves this result through existing bundled renewable supply, staged future RE PPA procurement, and limited system power retained to operate within available GHG headroom. The planned 5 MW/20 MWh BESS supports reliability, RA, and portfolio integration, but is not treated as net annual energy supply.

BVES's modeled emissions are slightly below the assigned benchmarks because future renewable procurement is modeled in practical whole MW contract blocks rather than exact annual energy increments. BVES did not select a materially more stringent portfolio for a separate reliability purpose. The below benchmark results reflect reasonable procurement sizing and staged RE PPA additions needed to maintain GHG compliance over the planning horizon.

BVES did not rely on REC only products to reduce modeled GHG emissions. REC only products may be used for RPS compliance or short-term procurement gaps, but they are not treated as physical energy supply for purposes of the IRP GHG emissions results.

BVES utilized a user-specified hourly production profile, shown in Table 10 for future RPS eligible firm RE PPA resources in the CSP analysis. The profile was intended to approximate a firm renewable delivery product similar to BVES's existing bundled RE PPA (Shell PPA), rather than a single intermittent solar or wind resource. The profile reflects BVES's planning assumption that future RE PPA procurements may be supplied by a blended renewable resource mix, including solar and wind, with delivery shaped to support BVES's load and reduce reliance on unspecified system power.

Table 10: RPS Resource Custom Profile - CSP 8 MMT

RPS Resource Custom Profile				
Profile should be in units of MW in each hour (=MWh) The sum of power production in each year must match the annual value in the "User-Specified Profiles" section.				
52,600	98,819	100,424	116,191	132,057
6	11	11	13	15
6	11	11	13	15
2028	2030	2035	2040	2045

This profile was developed for planning purposes based on BVES's current procurement strategy and expected firm renewable product structure. It does not predetermine the final technology mix, counterparty, resource location, or contract terms of future RE PPA procurement. Because future RE PPA contracts have not yet been executed, actual hourly delivery characteristics may differ from the modeled profile. BVES will update future IRP analyses as procurement advances and more specific contract information becomes available.

d. Local Air Pollutant Minimization and Disadvantaged Communities

i. Local Air Pollutants

BVES presents the results of local air pollutants that may directly impact those in and surrounding its service area. Based on BVES's plans for PPAs, firm and shaped energy contracts, and wholesale market purchases, its system power resources reflect the majority of GHG for the utility. Within the Action Plan of this IRP, BVES outlines its strategy for securing affordable, reliable energy contracts, which are informed by ongoing investigations into locally sited and utility-owned DERs. BVES's anticipated air pollutant emissions through the transition to the 8 MMT emissions scenario is shown in Table 11.

Table 11: BVES Local Air Pollutant Results Based on 8 MMT Emissions Scenario in the Clean System Power Calculator

Emissions Total	*Unit*	2028	2030	2035	2040	2045	*Notes*
PM2.5	*tonnes /yr*	*1.871*	*0.910*	*0.876*	*0.632*	*0.370*	*Only In-CAISO emissions*
SO_2	*tonnes /yr*	*0.178*	*0.087*	*0.083*	*0.059*	*0.034*	*Only In-CAISO emissions*
NOx	*tonnes /yr*	*2.476*	*1.362*	*1.317*	*1.045*	*0.423*	*Only In-CAISO emissions*

BVES has updated this IRP to reinforce its commitment to minimizing local air pollutants that extend beyond the immediate service territory. For example, BVES has incorporated timeline planning to better reflect the implementation of applicable California Environmental Quality Act (CEQA) requirements within its resource planning strategy. The timeline is structured to achieve 100 percent retail sales from low-carbon or carbon-free resources as construction of the storage plant and further renewable plans are considered. BVES also assessed the larger regional impact of emitting sulfur dioxide (SO2), nitrogen oxide (NOx), and particulate matter (PM2.5 and PM10), noting low-carbon or carbon-free resources minimize

or eliminate emissions of these criteria air pollutants and their potential to cause both immediate and prolonged respiratory and health issues.[17]

As part of concurrent community engagement efforts, BVES has enhanced its awareness and education initiatives by integrating health focused information in outreach activities to disseminate actionable tips on minimizing exposure to air pollutants, which are of significant concern during the fire season. BVES presented IRP findings and discussion of local pollutant impact in May 2026 ahead of this IRP filing.

BVES views its IRP framework as a structured approach with achievable targets, serving as a roadmap for meeting carbon reduction goals. Carbon accounting practices at BVES were based on the carbon emissions intensity across SCE's service territory. Now, carbon accounting practices are based on a methodology that accounts for emissions factors assigned to the LSEs with contracted system power supply, as supported by CPUC-driven models and assumptions. As a result, since the 2020 IRP development, BVES's approach led to a new procurement strategy identifying the preferred portfolio aimed at providing a reliable, best-fit, low-carbon resource mix that is well diversified and consistent with CPUC regulations and state laws governing resource planning, RA, RPS, and GHG emissions benchmarks.

BVES recognizes that emissions from its operations are not bound by geography and can impact broader regions, including disadvantaged communities. This recognition is integrated into the planning efforts, with BVES committed to ensuring its Preferred Conforming Portfolio adheres to stringent emissions benchmarks, thus minimizing these impacts and future emissions. BVES has broadened the scope of its communication programs to include health information related to air quality. BVES aims to ensure that residents are better informed about health impacts and potential preventative actions, including regionally disadvantaged populations where information may be less available and air quality risks may be more pronounced.

Under the Preferred Conforming Scenario using 8 MMT GHG benchmark thresholds, Table 122 presents the particulate matter (PM2.5), SO_2, and NOx results from the CSP calculator.

Table 122: BVES Conforming Portfolio GHG Local Emissions Results: 8 MMT Benchmark

PM2.5	*Unit*	2028	2030	2035	2040	2045	*Notes*
Coal	*tonnes/yr*	-	-	-	-	-	*Information only, not included in total*
IFM CHP	*tonnes/yr*	*0*	*0*	*0*	-	-	
Biogas	*tonnes/yr*	-	-	-	-	-	
Biomass	*tonnes/yr*	-	-	-	-	-	
System Power	*tonnes/yr*	*2*	*0*	*0*	*0*	*0*	*In-CAISO emissions only - unspecified import emissions excluded*

[17] **World Health Organization. "Air quality, Energy and Health," https://www.who.int/teams/environment-climate-change-and-health/air-quality-and-health/health-impacts/types-of-pollutants.**

Total	***tonnes/yr***	*2*	*0*	*0*	*0*	*0*	*Only In-CAISO emissions*
Average emissions intensity	*kg/MWh*	*0.0158*	*0.0027*	*0.0027*	*0.0025*	*0.0022*	*Emissions per MWh of sales*

SO_2	***Unit***	**2028**	**2030**	**2035**	**2040**	**2045**	***Notes***
Coal	*tonnes/yr*	-	-	-	-	-	*Information only, not included in total*
IFM CHP	*tonnes/yr*	*0*	*0*	*0*	-	-	
Biogas	*tonnes/yr*	-	-	-	-	-	
Biomass	*tonnes/yr*	-	-	-	-	-	
System Power	*tonnes/yr*	*0*	*0*	*0*	*0*	*0*	*In-CAISO emissions only - unspecified import emissions excluded*
Total	***tonnes/yr***	*0*	*0*	*0*	*0*	*0*	*Only In-CAISO emissions*
Average emissions intensity	*kg/MWh*	*0.0015*	*0.0003*	*0.0003*	*0.0002*	*0.0002*	*Emissions per MWh of sales*

NOx	***Unit***	**2028**	**2030**	**2035**	**2040**	**2045**	***Notes***
Coal	*tonnes/yr*	-	-	-	-	-	*Information only, not included in total*
IFM CHP	*tonnes/yr*	*0*	*0*	*0*	-	-	
Biogas	*tonnes/yr*	-	-	-	-	-	
Biomass	*tonnes/yr*	-	-	-	-	-	
System Power	*tonnes/yr*	*2*	*0*	*0*	*1*	*0*	*In-CAISO emissions only - unspecified import emissions excluded*
Total	***tonnes/yr***	*3*	*1*	*1*	*1*	*0*	*Only In-CAISO emissions*
Average emissions intensity	*kg/MWh*	*0.0205*	*0.0051*	*0.0048*	*0.0038*	*0.0025*	*Emissions per MWh of sales*

ii. Focus on Disadvantaged Communities

BVES considered DAC impacts as part of its Preferred Conforming Portfolio despite results indicating that BVES does not have these communities within its service area or within a five-mile buffer of its service area. BVES's approach to minimizing DAC impacts includes:

- Reducing reliance on system power over time through staged RE PPA procurement

- Incorporating the planned 5 MW/20 MWh BESS, which supports reliability and has no direct NOx, PM2.5, or SO_2 emissions
- Seeking similar future PPAs that mimic the existing Shell PPA as a bundled renewable supply resource and its associated limited or no GHG, Nox, PM2.5, or SO2 emissions
- Evaluating DAC proximity and local air pollutant impacts for future RE PPAs when specific resource locations are known
- Avoiding new fossil generation commitments where feasible

Because BVES's current resources are not all tied to specific facility locations at this stage, BVES reviewed DAC impacts using CalEnviroScreen and CalEPA disadvantaged community designations. BVES does not have any disadvantaged communities within its service territory, which includes Big Bear Lake, Big Bear City, and Fawnskin. BVES's prior review of service territory census tracts found that none were designated as SB 535 disadvantaged communities.

BVES utilized the most recent California Communities Environmental Health Screening Tool (CalEnviroScreen 5.0) to determine whether any disadvantaged communities fall within the utility service territory for the 2026 filing. This IRP presents an updated discussion reviewing the determination of the state of disadvantaged communities as defined by CalEPA's CalEnviroScreen tool as well as an additional visual representation.[18] These communities include any community scoring in the top 25 percent statewide, any community in one of the 22 census tracts within the top five percent of communities with the highest pollution burden that do not have an overall score, any lands under control of federally recognized Tribes, or any of the 307 census tracts identified in the 2017 Disadvantaged Communities designation by CalEPA.[19] Table 13 reports the status of CalEnviroScreen 5.0 scores for those census tracts within BVES's service territory which consists of Big Bear Lake, Big Bear City, and Fawnskin.[20]

BVES has identified access and functional needs groups, medical baseline customers, and predominate languages spoken within the service area. During the development and updates to its Wildfire Mitigation Plans, BVES surveyed its territory and customer base to promote community awareness, public outreach, and support before, during, and after a wildfire, should one occur.[21] BVES continues with quarterly engagement meetings, files a quarterly access and functional needs report, and routinely reviews any new self-identifications across its customer base. It has extended these updates for public outreach to incorporate resource planning results during the third quarter of 2026.

As discussed, BVES confirms that no disadvantaged communities have been identified within its service territory under CalEPA's designation. Likewise, no communities within the service territory meet the criteria for designation as Indigenous or tribal communities. Although BVES did not receive direct

[18] California EPA. "Final Designation of Disadvantaged Communities Pursuant to Senate Bill 535." May 2022. https://calepa.ca.gov/wp-content/uploads/2022/05/Updated-Disadvantaged-Communities-Designation-DAC-May-2022-Eng.a.hp_-1.pdf.

[19] See https://calepa.ca.gov/programs/dac2026/.

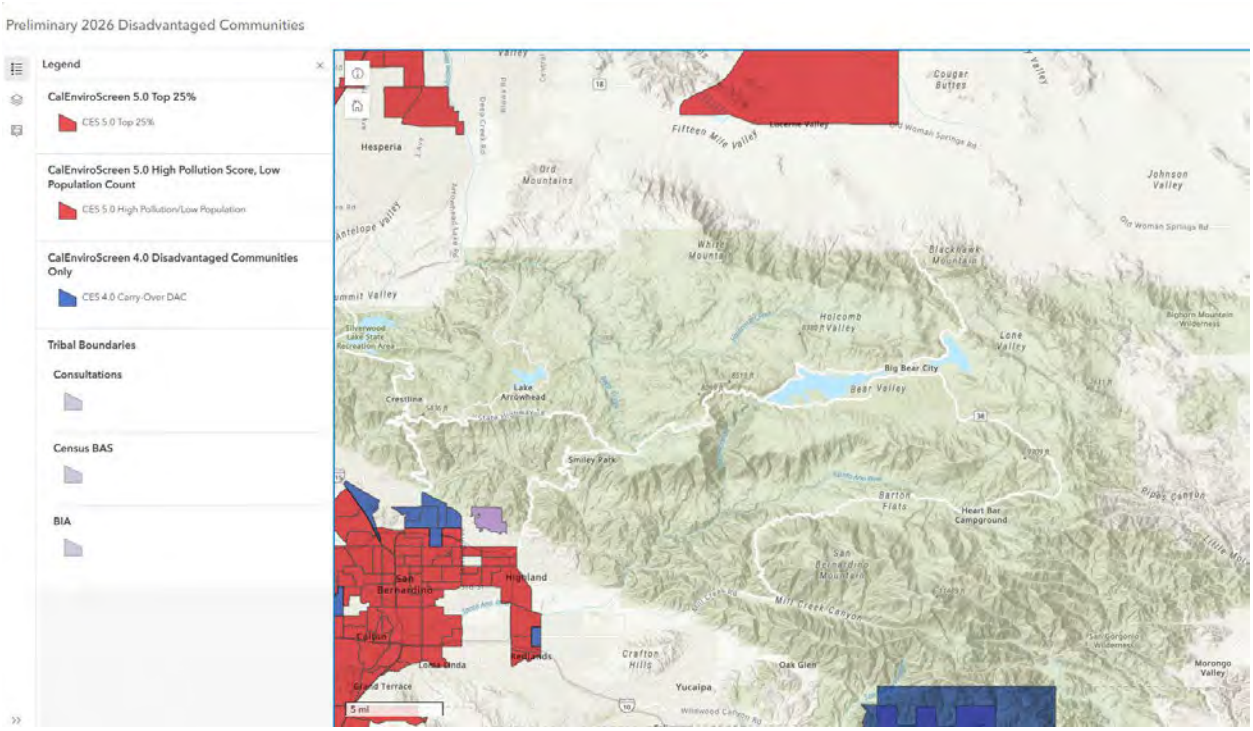
[20] Fawnskin is located in census track 6071011300.

[21] BVES. "Wildfire Mitigation Plan 2020 Revision Refile." pg. 212. https://www.bvesinc.com/assets/migrated/managed/bveswmp/BVES_2020_WMP_REVISION_20200226_Clean.pdf.

feedback from disadvantaged communities or other interested stakeholder groups during the development of its 2026 IRP, BVES provided updates on its energy storage projects for public review and comment and presented resource planning information during quarterly stakeholder meetings to inform the IRP process. BVES plans to continue targeted stakeholder workshops as part of its next IRP update.

Figure 5 below represents the CalEPA census track at the time of this update.

Figure 5: DACs Outside of BVES Service Territory



While the utility does not immediately border any tribal lands, BVES consults with the Morongo and San Manuel Tribes with regards to projects jointly enacted with the United States Forest Service (USFS) as BVES's territory is surrounded by USFS land. Additionally, capital projects such as the Radford circuit covered conductor replacement initiative required coordination and awareness with any neighboring tribal agencies.[22]

While BVES recognizes the emphasis on engaging with DACs in the development of the IRP Conforming Portfolios, it is important to note that there are no DACs directly within BVES's service territory as defined by current regulatory frameworks. However, BVES understands that air pollution and environmental impacts do not recognize geographic boundaries. Consequently, BVES's commitment extends beyond its immediate service area to encompass potential impacts on nearby regions that might experience indirect

[22] The project consists of replacing a bare wire sub-transmission line that operates at 34.5 kV and 95 wood poles with high performance covered conductor and fire resistant (ductile iron) poles. This project is now complete.

effects from its operations. BVES's strategy to reduce reliance on system power and increase bundled renewable procurement is intended to reduce those broader emissions impacts over time.

BVES will continue to track applicable disadvantaged community metric reports to ensure proper representation of its customer base that may be impacted by the local emissions profile while ensuring safe and reliable delivery of electricity. Table 13 explains the Cumulative Environmental Score (CES) score associated with each census tract in the BVES service territory.

Table 13: Census Tracts and Demographics within BVES's Service Territory[23]

Census Tract Number	Total Population	County	CES 5.0 Percentile	CES 5.0 Percentile Range	SB 535 Disadvantaged Community
6071011102	1211	San Bernardino	52.93	50-55%	No
6071011203	1362	San Bernardino	45.83	45-50%	No
6071011204	1268	San Bernardino	14.19	10-15%	No
6071011205	1344	San Bernardino	53.67	50-55%	No
6071011300	1293	San Bernardino	44.93	40-45%	No
6071011404	3617	San Bernardino	39.67	35-40%	No
6071011405	1833	San Bernardino	34.26	30-35%	No
6071011407	1789	San Bernardino	15.27	15-20%	No
6071011408	1703	San Bernardino	29.96	25-30%	No
6071011500	2062	San Bernardino	30.92	30-35%	No

In lieu of direct DAC engagement within its service territory, BVES continues to actively explore ways to contribute positively to broader regional initiatives that benefit DACs. BVES will continue to use its existing public outreach and customer engagement channels, including customer communications and stakeholder updates, designed to share relevant resource planning information as future procurement and storage planning activities advance.

As a part of this planning effort BVES affirms that the Preferred Conforming Portfolio meets the emissions benchmarks and as such limit BVES's future emissions significantly, especially compared to a portfolio scenario completely reliant on system power. By planning for a low emissions future while maintaining system reliability, BVES seeks to minimize the effects of generation related emissions on disadvantaged communities across the state.

[23] **CalEnviroScreen 5.0 Draft, California Office of Environmental Health Hazard Assessment, March 12, 2026, https://oehha.ca.gov/calenviroscreen/general-info/draft-calenviroscreen-50.**

e. Cost and Rate Analysis

Cost and Rate Analysis Background and Methodology

BVES's power supply costs come from two categories: purchase power costs and owned asset costs (including the BVPP and the BESS project). Other costs beyond purchase power and owned assets include transmission access on SCE owned and operated facilities (including the 33 kV lines from Cottonwood Substation to Goldhill transfer station and Zanja Substation to BVES's Village Substation), transmission over the CAISO grid, ancillary services charges, reserve requirements, schedule dispatch charges and CAISO grid management charges, including CRRs.

Cost estimates align with the GRC methodology with an inflation adder to account for planned revenue requirement (RR) by 2045. BVES modeled its cost analysis using its input from the current GRC application for the 2027 Test Year.[24] BVES will make every effort to seek cost competitive renewable energy PPAs that maintain a parallel cost impact estimate with the IRP's RR forecast. Modeling inputs assume that the applicable units to be solicited for available capacity are: (1) currently online; (2) able to provide delivery at the identified hours of demand for offloading system power supply; and (3) are located within the CAISO controlled grid. Out-of-state contracts or a need for a new resource build are not directly modeled but are considered a risk factor in the roadmap to transition to 100 percent electric retail sales coming from clean energy resources. This IRP describes the Preferred Conforming Portfolios consistent with the relevant statutory and administrative requirements (Public Utilities Code (PUC) Section 454.52(a)(1)).

When modeling portfolio costs and associated ratepayer impacts, BVES relied on the inputs and modeling approach used in its 2027 GRC application to ensure consistency between proceedings. Notably the costs shown in the tables below for the "Baseline Scenario" directly reflect those costs presented in the latest GRC though adjusted to reflect the IEPR load forecast. The second table aligns to the assigned load forecast. Key inputs that were held constant from the GRC in this modeling exercise included: system contract prices and REC price assumptions, forward power prices for day-ahead purchases, and the requested change to return on equity and associated weighted cost of capital.

Purchase power costs were modeled following the methodology BVES utilized in A.22-08-010 whereby costs related to capacity and energy purchases are built up from volumes purchased and the associated purchase price. Fixed costs related to BVES's market purchases and use of SCE's transmission system are also included and discussed later in this section. Day-ahead and system contract purchases were reduced to accommodate the additional contract generation in line with results shown in the RDT and CSP calculator.

Because both the Baseline Scenario and the Preferred Conforming Portfolio all depend in some part on contracts for system power as well as day-ahead purchases for monthly short positions, a key driver in these cost estimates is the forecast of CAISO market prices. Since the inception of the CAISO market, BVES has been able to meet its monthly short positions with Day-Ahead purchases and Inter-SC Trades. The price BVES pays for short positions is the Locational Marginal Price (LMP) at the default SCE load aggregation point and is calculated and published by approximately 1:00 PM the day before power flows.

[24] BVES, A.26-01-022, "2027 GENERAL RATE CASE APPLICATION OF BEAR VALLEY ELECTRIC SERVICE, INC." https://www.bvesinc.com/assets/documents/applications/a.26-01- bves-ty-2027-grc-application-final.pdf.

To align this cost exercise with results presented in A.26-01-022[25], BVES used the 2027-2030 forecasted energy costs developed as part of the company's supply cost forecast.

BVES will continue to manage energy requirement prices with firm power agreements after the existing and proposed contracts expire through this IRP forecast horizon. Electricity and capacity prices are anticipated to increase, potentially creating price spikes in the energy and RA capacity market. BVES will pursue energy and capacity products to mitigate this potentially significant price increase from 2026 to 2045.

Transmission costs represent the next largest cost component within BVES purchase power costs. BVES pays SCE for transmission service on SCE's 33 kV lines that deliver power up the mountain to BVES, and for SCE wholesale distribution access tariff (WDAT) service (for service from SCE's Victor Substation near Victorville to SCE's Cottonwood Substation in Lucerne Valley and from SCE's Vista Substation to SCE's Zanja Substation near Redlands). BVES also pays the CAISO for transmission and related charges of energy imported into and through California. Together these transmission charges are approximately $3,700,000 annually.[26] BVES is currently coordinating with SCE on a proposed 10 MW capacity increase for the Radford transmission line to accommodate projected load growth and increase the capacity available to serve BVES's service area.

Currently, BVES is charged monthly for four different uses of SCE's non-CAISO grid. The four different categories of monthly charges for transmission and wholesale distribution services from SCE total approximately $883,000 annually. The CAISO charges BVES, through its Scheduling Coordinator (SC) Automated Power Exchange (APX-Xpansiv Power), for ancillary services, grid management charges, imbalance energy, and CAISO uplifts.[27] Ancillary services are the services necessary to follow the moment-to-moment changes in load, such as regulation, load following, voltage support and operating reserve capacity. Grid management charges are the cost of operating the California transmission grid and include costs associated with running the CAISO markets. Imbalance energy charges apply to deviations between scheduled and metered energy and typically represent a very small portion of BVES's energy requirements. BVES will continue to strive to minimize imbalance costs through accurate day-ahead power forecasts.

Congestion Costs are one of the two components of the cost to deliver energy from one point to another within the CAISO (transmission losses being the other). The cost of congestion is the difference in the Marginal Congestion Cost (MCC) component of the LMP between the price nodes specified for energy

[25] BVES, A.26-01-022, "2027 GENERAL RATE CASE APPLICATION OF BEAR VALLEY ELECTRIC SERVICE, INC." https://www.bvesinc.com/assets/documents/applications/a.26-01-___bves-ty-2027-grc-application-final.pdf

[26] Including Scheduling Coordinator fees.

[27] CAISO uplift charges are collected from all customers to ensure market participants, including suppliers, are made whole. They reflect costs incurred to run the market for which there is no direct assignment to specific LSEs. They are collected from all customers to ensure the CAISO market is ultimately revenue neutral.

delivery and takeout.[28] For BVES supply contracts, the source from the CAISO settlements perspective is the aggregated generation hub price for SP15 (TH_SP15_Gen-APND) area.[29] The sink, or takeout, point is the SCE Default Load Aggregation Price (DLAP_SCE). This price is the load weighted aggregation of all load nodes within the SCE Transmission Access Charges (TAC) area. The Congestion Cost is calculated using the Day-Ahead Market Prices as follows:

Congestion Costs = Source Marginal Congestion Cost – Sink Marginal Congestion Costs

Congestion costs can be mitigated using CRRs. BVES's power contracts are for delivery to the SP15 area, so BVES must bear the cost for any congestion between SP15 and the DLAP. If economic conditions within California improve and system load increases, the cost of congestion may increase corresponding to heavier system loading.

While purchase power costs are anticipated to represent the majority of supply costs for BVES through the forecast period under the Preferred Conforming Portfolio, owned asset costs will grow as new facilities come online. For the cost estimate presented with the BESS facility, BVES modeled costs associated with the key revenue requirement line items of Net Income, Operations and Maintenance Expense, Administrative and General Expense, Property and Local Taxes, and State and Federal Income Tax, which results in a final all-in annual expense.

Cost and Rate Impact

To maintain consistency with BVES's current GRC proceeding, the IRP cost and rate analysis and calculations leveraged the same return on equity and associated weighted cost of capital as submitted in the 2027 Test Year GRC. Table 14 lists the revenue requirements and bundled system average rates for the preferred conforming portfolio scenario using the CPUC assigned load forecast.

Table 14: Revenue Requirements and Bundled System Average Rates for 8 MMT Preferred Conforming Portfolio (2024 $)

Line No.	Cost Category	2027	2030	2035	2040	2045
1	*Distribution*	$7,475,857	$8,332,934	$9,968,619	$11,925,377	$14,266,229
2	*Transmission*	$1,089,023	$1,437,123	$2,190,832	$3,339,830	$5,091,428
3	*Generation (Less Purchase Power)*	$543,161	$575,812	$634,650	$699,501	$770,978

[28] The CAISO's market design creates marginal nodal or locational prices in its Day Ahead market process. The Locational Marginal Price or LMP is the algebraic sum of the 1) Marginal Energy Cost (MCE), 2) MCC, and 3) Marginal Loss Cost (MLC).

[29] The CAISO derives the aggregated generation hub price by calculating a weighted average for all generators within the SP15 area. Weights are pre-determined by the CAISO on an annual basis based on previous year output. Generator hub prices are calculated for NP15, ZP26 and SP15 areas. Generation scheduled to the aggregate generation hub is paid/charged the weighted hub price as calculated in the Day Ahead market.

Line No.	Cost Category	2027	2030	2035	2040	2045
4	*Demand Side Programs*	—	—	—	—	—
5	*Other (Purchase Power Expense)*	$15,534,938	$16,662,161	$18,852,453	$21,330,665	$24,134,646
6	*Preferred Conforming Portfolio Revenue Requirement*	$24,642,979	$27,008,029	$31,646,554	$37,295,372	$44,263,280
7	*System Sales (GWh)*	[redacted]	138.82	142.42	146.19	150.06
8	*Bundled Sales (GWh)*	[redacted]	138.82	142.42	146.19	150.06
9	*System Average Delivery Rate (¢/kWh)*	[redacted]	7.04	8.54	10.44	12.9
10	*Bundled Generation Rate (¢/kWh)*	[redacted]	0.41	0.45	0.48	0.51
11	*Bundled System Average Rate (¢/kWh)*	[redacted]	19.46	22.22	25.51	29.5

The table above presents the results of BVES's cost and rate impact analysis for the 8 MMT Preferred Conforming Portfolio, based on revenue requirement inputs consistent with BVES's latest GRC application and the CPUC assigned load forecast. The analysis presents the resulting System Average Delivery Rate, Bundled Generation Rate, and Bundled System Average Rate for each portfolio year. The Bundled System Average Rate reflects total portfolio revenue requirements divided by bundled sales and increases from approximately [redacted] in 2027 to 22.22 ¢/kWh in 2035, 25.51 ¢/kWh in 2040, and 29.50 ¢/kWh in 2045.

The results show the expected rate trajectory under the updated cost and load assumptions. The primary drivers of the overall increase in bundled average rates over the IRP forecast horizon are growth in distribution and transmission revenue requirements, together with increasing purchase power expense.

BVES's portfolio modeling indicates that staged firm bundled renewable procurement can help reduce reliance on system power while supporting achievement of the applicable GHG emissions benchmark. In contrast, relying solely on wind or solar only PPAs could require additional shaping, balancing, and/or multiple contracts over the IRP forecast horizon because of the intermittent and shaped nature of those resources. As discussed elsewhere in this IRP filing, BVES has historically faced challenges contracting renewable generation due to limited bid responses and lack of cost competitive offers. Therefore, minimizing the number of required contracts and prioritizing commercially available bundled renewable products is essential to ensure that BVES's supply portfolio remains achievable. Since the last IRP cycle, BVES has continued to evaluate available renewable energy contract opportunities, with preference given to bundled products that include RECs.

Firm bundled renewable products may be higher priced than alternative options such as system power contracts or market purchases, but they also provide several planning benefits. These benefits include the bundled nature of the product, including associated RECs, the firm nature of the supply, reduced need to over procure renewable energy or layer multiple shaped resources to account for the output profile of standalone wind or solar PPAs, and the administrative simplicity and advantages of managing fewer contracts. These attributes are particularly important for BVES given its small load and energy staff, historically limited ability to attract cost competitive renewable bids and need to maintain a feasible and reliable supply portfolio. BVES's portfolio modeling indicates that staged firm bundled renewable procurement can help reduce reliance on system power while supporting achievement of the applicable GHG emissions benchmark.

Additionally, BVES's winter peak is materially influenced by snowmaking and resort related load; however, local capacity needs are system wide planning considerations and are not solely attributable to one customer segment. BVES will continue to evaluate cost allocation through applicable rate proceedings, facilities agreements, and Commission approved mechanisms to balance cost causation, system reliability, and ratepayer impacts.

Ultimately, BVES is keenly aware of the current financial pressures on ratepayers during a period of high inflation and significant power market volatility. BVES considered portfolio costs throughout this IRP planning process, from its initial investigation of a broad range of supply portfolios through the final comparison between the Baseline Scenario and Preferred Conforming Portfolio. The Baseline Scenario does not meet the applicable emissions benchmark and therefore does not provide a complete view of BVES's future supply costs under current emissions requirements. To meet California's GHG reduction policies and clean energy targets, BVES will need to continue evolving its supply portfolio, and that transition will ultimately have cost implications for both the utility and its ratepayers.

f. System Reliability Analysis

Although the standard template references the RDT for system reliability analysis, BVES is filing under the non-standard pathway and is not required to submit the RDT. BVES nonetheless considered reliability in developing its Preferred Conforming Portfolio, including system RA needs, local capacity constraints, winter peak drivers, upstream SCE delivery constraints, and resilience needs.

Because the RDT does not include BVES as a selectable LSE or calculate SMJU specific reliability obligations, BVES used the RDT framework as a proxy. BVES estimated its proportional reliability need based on its load within SCE's planning area and compared that need against the effective MW contribution of its existing and planned portfolio resources. This proxy analysis is intended to show whether the Preferred Conforming Portfolio contributes BVES's fair share toward overall system reliability, recognizing that BVES's impact is minimal relative to larger respondent LSEs directly modeled in the RDT and accounting for BVES's unique location that is not directly interconnected to the CAISO BA. As described in the Preferred Conforming Portfolio and Action Plan sections, BVES's reliability strategy separates energy/GHG compliance from capacity and resilience needs. Firm bundled RE PPA procurement addresses long-term clean energy and GHG compliance. Local reliability and capacity needs are addressed through a combination of existing and potential future local generation, the approved BESS, demand-side

flexibility, RA procurement, potential additional storage, and continued coordination with SCE on local capacity.

BVES has seen an increase in load in recent years. The implementation of BVES's owned storage project will modify the hourly load profile and shift energy use towards a more fully utilized capacity. A potential capacity expansion of the Radford transmission line would further support future load growth and system reliability, if approved. Planned solicitations to procure renewable firm contracts will also support load shape flattening as reliance on system power agreements is reduced over the ten-year planning cycle.

Due to the lack of CAISO controlled resources mapped to RSP identified generators and the BVPP, to reduce capacity needs for BVES's local load center, RA system capacity needs must be met through available contracts as no physical resources currently owned by or contracted with the utility provide this qualified capacity. To address CAISO system reliability needs, BVES's load can be reduced by continued CAISO BTM deployments and other load modifying efforts. BVES continues to seek RA capacity reservations for flexible and generic system needs. BVES's existing BVPP provides 8.4 MW of local generation capacity and remains an important reliability resource, particularly given BVES's winter-peaking load profile and reliance on SCE facilities for delivery into the service territory. BVES also has the ability to evaluate incremental capacity at the BVPP site, including use of the available 8th bay, as part of its broader local capacity strategy. Any future BVPP expansion would be evaluated against reliability need, emissions impacts, permitting requirements, cost, and available lower emitting alternatives. Additionally, BVES's approved BESS will support local reliability, operational flexibility, and resilience. It is a four-hour resource and is not a complete solution for longer duration capacity needs. BVES will therefore continue to evaluate whether a second battery project, longer duration storage, or other local capacity products are needed to address winter peak, load growth, and emergency operating conditions.

BVES has not enacted any public safety power shutoff (PSPS) events on its system; however, BVES has experienced PSPS impacts from upstream SCE outages and remains vulnerable to future outages and PSPS or other de-energization events. Local resources, including the BESS, BVPP, potential additional storage, and local capacity upgrades, provide resilience value by improving BVES's ability to support critical load, manage short-duration interruptions, and reduce reliance on external supply during constrained or emergency conditions. As described later in Section III.m, BVES will continue to coordinate with SCE regarding local capacity and deliverability, including the Radford capacity upgrade request. These efforts are complementary to BVES's resource procurement strategy and help address the physical delivery and local capacity constraints that cannot be solved solely through renewable energy procurement.

In 2004, the CPUC adopted an RA policy framework (PUC Section 380) to ensure the reliability of electric service in California. While BVES is not subject to the CPUC RA program, the utility plans to meet its RA requirements subject to the CAISO Tariff and will continue to issue solicitations to contract RA resources including a reserve margin and will use its BVPP as a BTM DG resource. BVES complies with the CAISO Tariff through its SC.

BVES complies with Federal Energy Regulatory Commission requirements and the CAISO Tariff by following these key provisions:

- BVES closely mirrors the State's monthly coincident peak demand calculation and provides the data to the CEC.[30]
- BVES treats the BVPP as a distributed generation resource because the BVPP is not under a PGA and is behind the CAISO metering point.

BVES will continue to meet applicable RA obligations through available RA contracts, BVPP treatment as a BTM DG resource where applicable, demand-side programs, and future solicitations for RA capacity. BVES will also continue to comply with applicable CAISO Tariff requirements through its scheduling coordinator.

Another option for reducing the RA obligations and the associated cost will include the construction of the 5 MW/20 MWh BESS coming online in 2027. BVES has assessed the benefits of stored power as a means to manage its load profile and reduce peak load and therefore contribute to the reduction of its RA requirement. Results of the analysis indicate that the battery solution should provide a reduction in the RA requirement, a daily arbitrage, an increase in capacity served, and other load shaping and frequency benefits. As a distribution only utility with no direct interconnection to the CAISO, BVES's small size has virtually no impact on the CAISO system. BVES's peak load of approximately 45 MW when compared to the CAISO peak load of over 45,000 MWs represents less than one percent of the total CAISO peak load.

g. Existing Resource Planning

In developing the Preferred Conforming Portfolio, BVES evaluated both existing and prospective resources to meet its supply needs. BVES plans to bring a 5 MW BESS online in 2027 and is developing a plan for a second battery project targeted for late 2029. In addition, BVES is considering all other available local capacity options. Outside of these resources, BVES's Preferred Conforming Portfolio relies on the contracts that deliver 7x24 block renewable power from existing resources. BVES will actively engage with counterparties to contract for additional firm renewable PPAs that would begin delivery in [redacted].

Challenges to procuring generation from existing facilities will not be unique to BVES as the broader pool of LSEs are likely interested in the broad benefits provided by firm renewable power. While BVES's small size is a benefit in terms of contract achievability, it also limits BVES's risk appetite owing to its small customer base as well as limits to the amount of financial collateral available to BVES. BVES chose the final Preferred Conforming Portfolio as it broke up the required contracts into two tranches so as to limit the amount of financial collateral BVES would have to support at any one time. Additionally, BVES acknowledges the risk of depending on the availability and affordability of the upcoming contracts. Accordingly, the financial size and strength of the counterparties being considered will be an important variable for BVES in selecting the counterparty to these contracts.

h. Hydro Generation Risk Management

While BVES is not directly exposed to hydro generation risk, delivery from large hydro facilities carried through the CAISO power grid can lead to a market risk exposure that may impact the CPUC's RSP as well

[30] The CEC reviews this data and provides to BVES a procurement value consistent with the treatment provided to other CPUC-jurisdictional LSEs.

as BVES's power supply forecasts in shortfall day-ahead demand scheduling. During drought years, the availability of hydroelectric generation production can be severely limited. It is well known that the Big Creek/Ventura area is a local capacity requirement area that relies on Big Creek generation to meet North American Electric Reliability Corporation planning standards. Additionally, more supply of run-of-river hydroelectric power generally reduces the need for baseload generation and imports. Hydro conditions also impact the amount of hydroelectric power and ancillary services available during peak hours from units with reservoir storage. Year-to-year variation in hydroelectric power supply in California can have a significant impact on supply mix and the performance of the wholesale energy market.

i. Long-Duration Storage Planning

Both the remote nature as well as BVES's small customer base makes off-site long duration storage financially infeasible for BVES at this time owing to increased TAC charges among other factors. BVES is, however, building a 5 MW, 4-hour duration storage facility within its service territory. As a part of future IRP proceedings BVES will continue to investigate the cost effectiveness and practicality of long-duration storage.

j. Clean Firm Power Planning

As discussed above, BVES's Preferred Conforming Portfolio identifies a future firm bundled RE PPA need beginning in [redacted]. The modeled need is approximately [redacted]. This procurement would represent approximately [redacted] of BVES's annual assigned load and would support BVES's transition from system power while maintaining compliance with the applicable GHG benchmark. BVES indicates this type of product is achievable through a mix of multiple renewable resources that together can provide a firm product, made easier by the small contract capacity BVES requires. BVES understands that the resources that will provide this firm energy are all located within the CAISO balancing authority. BVES sees significant benefits for contracting for this type of generation product both in the near future as well as for the planned procurements included in the Preferred Conforming Portfolio.

These types of firm renewable contract generation are especially advantageous to BVES, which is limited in its ability to sell existing excess system power contract generation that would be inherent in procuring the amount of generation required from shaped, renewable resources. Additionally, contracting for this type of firm renewable power can be readily aligned with BVES's historic approach of procuring firm system power but does not require the additional step of having to purchase unbundled RECs via PCC3 contracts to retire towards the RPS program. Ultimately, procuring firm renewable contracts for BVES reduces emissions significantly, and is its best path forward to ensure compliance with the GHG benchmarks.

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

BVES does not currently see potential in pursuing contracts with OOS wind resources and does not project a need to procure power generated by any new OOS wind developments before the end of this IRP forecast horizon.

l. Offshore Wind Planning

Due to its customer base and load, as well as significant regulatory and political challenges impacting the development of offshore wind, BVES does not view offshore wind as a viable, affordable, or necessary option to achieve its clean energy goals and emissions benchmarks at this time. However, BVES will continue to monitor related offshore wind proceedings and developments and investigate the need for such generation, accounting for affordability should such generation be required in future IRP proceedings.

m. Transmission Planning

As a utility operating at the sub-transmission level, BVES has no plans to develop any transmission lines or transmission level projects. Additionally, BVES does not have CAISO controlled generation projects or planned resources requiring CAISO busbar mapping. However, local capacity and deliverability remain important planning considerations because BVES receives power through SCE facilities at the Goldhill transfer station and Radford Feeder. BVES is exploring the possibility of a 10 MW increase from SCE on the Radford line to support peak load demand across its service territory. BVES will continue to coordinate with SCE regarding local capacity, deliverability, and timing of any required upgrades, while separately evaluating resource options such as storage, RA products, and firm renewable supply.

BVES understands that as more renewable generation is added within the CAISO area, it is expected that transmission use will increase and ultimately add to the overall cost of congestion. To mitigate this direct risk, BVES will continue to participate in the CAISO CRR process to secure the appropriate financial hedge to mitigate potentially increasing congestion costs or secure PPAs that deliver energy to the Default Load Aggregation Point (DLAP_SCE) on behalf of BVES.

Additionally, BVES evaluations do not require busbar mapping exercises for capacity planning with regard to its presented resource portfolio as it has no current projects under CAISO control and no current projects in the interconnection queue.

IV. Action Plan

BVES's action plan to meet the targets proposed in this IRP is as follows:

1. BVES's Preferred Conforming Portfolio is designed to meet the applicable GHG emissions benchmark reflected in the IRP modeling:
    a. Continue to evaluate incremental bundled renewable PPAs, firm renewable supply blocks; and
    b. investigate other cost-effective renewable procurement options to serve base and seasonal load requirements.
2. BVES plans to further reduce reliance on system power beginning in [redacted]:
    a. BVES plans to meet the GHG emissions benchmark by focusing on procuring competitive bundled renewable PPAs, which includes procuring incremental renewable supply beginning in [redacted] and replacing existing contracted renewable supply after the current contracted PPA expires after [redacted];

b. The Preferred Conforming Portfolio reduces system power from approximately [redacted]
c. BVES's modeled system power need increases slightly to 42 GWh during 2034-2038 before declining further, reflecting portfolio balancing needs over the planning horizon; and
d. Any daily imbalances are either purchased or sold through the CAISO market.

3. Local, flex, and system RA capacity obligations:
   a. BVES continues to seek new RA contracts, facing significantly higher costs for capacity since California reserve margins may drop (unless additional resources are brought online), stimulating higher capacity prices and therefore, higher RA prices, in the power market;
   b. Evaluate the need for additional local capacity resources, including a second battery project, longer-duration storage, incremental BVPP capacity, and other firm local capacity products, to support winter peak, load growth, and local resilience;
   c. Continue evaluating the BVPP site, including the available 8th bay, as a potential local reliability option;
   d. Use the approved BESS, potential additional storage, BVPP, DR, RA procurement, and SCE capacity coordination as a portfolio of reliability tools to support PSPS mitigation, emergency response, and resilience during upstream supply or delivery constraints;
   e. Securing cost competitive or any RA contracts has been a challenging issue among most LSEs in California, including BVES; and
   f. BVES will continue to solicit RFPs for RA capacity contracts in a commercially reasonable manner in an effort to procure additional RA capacity.
4. BESS facility:
   a. BVES is currently in the construction process of a 5 MW BESS facility that will provide 20 MWh;
   b. Construction is expected to be completed in 2027; and
   c. BVES will continue investigating the opportunity for a second BESS project in the future.
5. Secure firm future renewable energy only contracts with bundled RECs
   a. Current RE PPAs expiring in [redacted] and
   b. Three additional blended firm RE PPA blocks over the course of the planning horizon.
6. Support supplemental service to BVES's largest customers:
7. DACs and Community Engagement:
   a. BVES will continue to engage with the community through educational programs and awareness campaigns, especially when/where energy resource emissions and/or wildfire smoke are heightened; and
   b. BVES will continue to reduce GHG and particulate matter emissions in an effort to reduce impacts on DACs.
8. Demand side management:
   a. BVES uses its electric vehicle pilot program, time of use rate program, and energy efficiency in an effort to optimize load patterns to achieve higher load factor.
   b. Lighting EE Program:

i. BVES will consider new programs for BVES customers. BVES has one active EE program as part of its Energy Savings Assistance (ESA) program.[31]

c. Time of Use (TOU) rate structures:
   i. BVES will consider new rate structures that may help alleviate further system constraints.

a. Proposed Procurement Activities and Potential Barriers

BVES does not have direct activities that necessitate approval from the Commission through this IRP filing. In order to implement the Preferred Conforming Portfolio and reduce forecasted GHG emissions attributed to BVES supply, BVES will investigate all available resource procurement options. BVES's procurement pathway is staged because the need is real but the procurement timeline is long. The portfolio uses system power as a bridge, begins additional firm bundled RE PPA procurement in [redacted], increases procurement before the existing RE PPA expires after [redacted], and separately evaluates RA, storage, BVPP, and local capacity options for reliability. For BVES, procurement can take up to two years or more from need identification to delivery, with a significant portion of that timeline driven by regulatory filing and Commission approval. This requires BVES to begin outreach and procurement planning well ahead of the modeled need year. Main barriers include small procurement scale, limited bid response, potentially higher cost of firm bundled renewable products, RA market constraints, local deliverability limits, development risk, and customer rate impacts.

Table 155: Procurement Strategy Barriers

Area	Planned Approach	Constraint or Barrier to Procurement
Future RE PPA	Begin planning for an initial [redacted]	Small procurement size may limit bidder interest and pricing
Post [redacted] supply	Increase the RE PPA position before the existing contracted supply rolls off	Waiting too long could create a larger replacement need all at once
System power	Use system power as a bridge while staying within GHG headroom	Price volatility and declining GHG flexibility over time
RA capacity	Continue seeking RA through solicitations and bilateral opportunities	RA availability and pricing remain difficult, especially for small volumes
BESS	Use the approved BESS for reliability, flexibility, and resilience	Four-hour duration may not cover longer local capacity needs

[31] **The ESA program, funded through the Public Purpose Program Adjustment Mechanism, is available only for qualifying low-income residential customers. The ESA Program provides funding for energy efficient refrigerators, hard-wired compact fluorescent fixtures, compact fluorescent bulbs, LEDs, smart strip surge protectors, low-flow showerheads and weatherization measures. BVES also provides educational materials to all customers promoting the use of energy efficient appliances, weatherization materials, thermostatic controls, and lifestyle changes.**

Area	Planned Approach	Constraint or Barrier to Procurement
Second battery	Evaluate a second battery or longer-duration storage as the next local capacity option	Cost, siting, interconnection, and approval timing
BVPP	Evaluate the available 8th bay and existing engines as a local reliability option if additional capacity is needed	Emissions, permitting, fuel cost
SCE delivery capacity	Continue working with SCE on Radford/Goldhill capacity and deliverability	Dependent on SCE studies, timing, approvals, and cost allocation
Winter peak	Reflect increased load in capacity planning and demand-side options	Peak months can exhibit anomalies requiring load reshaping for capacity planning
Customer cost impacts	Procurement should be staged rather than replacing system power all at once	Firm RPS eligible and bundled products are limited in availability

BVES aims to minimize air pollutant criteria through the proposed initiatives in this IRP to provide air quality benefits to part-time and permanent residents within its service area through the planned utility owned projects and contracts. As discussed in this IRP, BVES does not have disadvantaged communities that would warrant additional outreach or input relative to these proposed activities, but its procurement plans are intended to mitigate emissions overall.

BVES will continue its efforts to implement steps for construction of the BESS solution projects, secure renewable firm PPAs, issue RFPs for available local, flex, and system RA capacity, and exhaust its PCC3 REC contract strategy and replace it with bundled energy and PCC1 REC product contracts to hedge for its long-term supply needs as well as to meet the state objectives of GHG emissions reduction from retail electricity sales as available. Net baseline supply will otherwise be supported by short-term PPAs for system power or unit specific renewable power purchases as the utility phases in new renewable energy contracts to its power content mix.

BVES strives to assume a low-risk posture to prudently serve its customers and meet state clean energy and reliability goals. BVES seeks greater certainty in total power supply costs through long-term contracts rather than risking substantial upward price movements in the volatile spot market. For many years, BVES has been able to fix a large percentage of its total power supply costs through long-term PPAs. This has allowed BVES to reduce its exposure to market price uncertainty, but BVES still faces other sources of risk. BVES takes into account the Value at Risk (VAR) when determining how much of its future energy supplies to purchase through long-term PPAs. The VAR is a measure of how much total costs change when underlying variables, such as natural gas prices, change. Steps taken or under consideration to mitigate VAR include the following:

- use of assets such as gas fired generation, which indexes power prices to natural gas prices;
- use of physical call options with fixed strike prices to cap power prices; and
- battery systems to condition system load and facilitate asset and contract coverage.

Two major goals included in BVES's risk management strategy of its resources are as follows: 1) meet the capacity of the firm customers first and interruptible customers second, and 2) secure favorable prices through a competitive bid process for future energy requirement expenditures via fixed price contracts for both interruptible and non-interruptible customers, addition of utility-owned local capacity, and the conditioning of system load to fit assets and contracts through batteries. Additional risks BVES faces include forecast accuracy, market price fluctuations, regulatory uncertainty, unplanned supply constraints, counterparty decision making, customer behavior, or any combination thereof. The growing portion of energy consumption from customer owned DG via the NEM program and its successor tariff is also a concern. BVES continues to closely monitor customer DG growth and will reassess resource requirements in future IRPs.

Forecast risk is the risk associated with over- or under-forecasting BVES's retail requirements and having either too much or too little energy under long-term PPAs, requiring that BVES either buy at higher than expected costs in the spot market or sell surplus energy from existing contracts at a loss. BVES mitigates this risk by improving forecasting models, using multiple models (regression, statistically adjusted end-use, demand analysis models for individual customers) for long-term and mid-term forecasting periods, and neural network models for next day forecasting.

Market price risk is the risk associated with entering into long-term PPAs with wholesale prices subsequently falling, such that BVES could have purchased the energy less expensively in the short-term or spot market. Conversely, if BVES chooses not to enter into a long-term PPA at current prices and then prices rise, BVES's price of power could rise dramatically as compared to not locking in prices at current rates. To mitigate market price risk, BVES's planning assumptions utilize its internal load demand forecasting to plan for its future resource needs.

Counterparty risk is the risk that a counterparty defaults on its obligations and BVES incurs additional costs to replace energy contracted from the counterparty. To attempt to mitigate this risk, BVES utilizes collateral requirements and company guarantees to the extent possible. BVES also attempts to deal primarily with companies that have good credit ratings.

BVES will seek to meet its RA obligation based on its contribution to monthly CAISO coincident peak load and will offset its peak with the use of the BVPP as a DER BTM resource and future battery projects. Local RA and flexible capacity requirements will remain an area of focus for BVES. Additional RA procurement does create barriers and additional risks associated with the ones listed above. The forecast and market risk associated with RA procurement both compound the risk being faced by BVES in its normal procurement. BVES also may face challenges to procure additional RA PPAs, if price fluctuations are too drastic or if resources are not available. BVES will continue to seek use of RA contracts, and energy storage to meet all of the flexible, local, and system RA requirements in the future. BVES continues to promote the benefits of reduced consumption, in line with state goals and regulatory policies.

Regulatory risk is the risk of changes in regulations or new regulations that alter procurement requirements or increase BVES's cost of doing business. For example, if BVES takes actions to meet current regulations and regulations are subsequently changed, BVES may incur increased and unforeseen costs to (1) undo earlier actions, and (2) meet the new regulations. To mitigate regulatory risk, BVES utilizes a number of resources to assess current and future policy affecting California energy markets. BVES utilizes various legal and market consultants as well as internal subject matter experts to fully assess options that BVES should take in planning for the future. BVES will continue to monitor, assess, and reduce, where possible, its regulatory risk at both the federal and state levels. Different or new energy

and environmental goals, at both the federal and state levels, could add new complexity and costs to BVES's operations. Any proposed changes, both at the federal and state level, will be taken into consideration by BVES in its integrated resource planning process.

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

Not applicable. BVES was not assigned an additional procurement obligation in D.21-06-035, D.23-02-040, or any other CPUC MTR decision.

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

Not applicable. BVES does not plan on attaining any resources that are non-candidate in the CPUC's IRP.

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

Not applicable. BVES does not plan on attaining any renewable and/or zero carbon resources not previously described.

iv. Other energy storage not described above

Not applicable. BVES does not plan on attaining any renewable and/or zero carbon resources outside of the two BESS facilities described above.

v. Other demand response not described above

Not applicable. BVES already has a DR program in place with its largest C&I customer enabling the ability to curtail load if ever called upon. No other DR options or potential barriers are considered in this analysis.

vi. Other energy efficiency not described above

Not applicable. BVES has no other EE plans beyond those outlined above. BVES maintains its ESA energy efficiency program and does not find any potential barrier or proposed activity to report.

vii. Other distributed generation not described above

Not applicable. BVES has no other plans for DG or DERs not described above. BVES has no other additional DER potential barriers to address for this analysis.

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

Not applicable. BVES did not find additional insight into transportation electrification beyond what is discussed in the IEPR.

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

Not applicable. BVES did not find additional insight into building electrification beyond what is discussed in the IEPR.

x. Potential Centralized Procurement, pursuant to AB-1373

Not applicable. BVES is not subject to CPUC MTR procurement requirements and is not subject to requirements associated with centralized procurement of long lead time resources in accordance with D.24.08.064.

xi. Other

Not applicable. BVES does not have any further procurement-related activities than the ones previously detailed in this report.

b. Disadvantaged Communities (DACs)

While BVES does not have disadvantaged communities within its direct service territory, BVES recognizes that air pollution transcends geographic boundaries. In understanding this, BVES notes that GHG emissions can affect any population within San Bernardino County, or the state for that matter, which may include nearby or other disadvantaged areas. Accordingly, BVES is committed to minimizing emissions and any potential cross-regional impacts, particularly on these communities. BVES is actively advancing its long-term strategy to decrease reliance on system power by enacting its Preferred Conforming Portfolio that includes 7x24 block renewable power, which emits no greenhouse gases. This will significantly reduce the accumulation of GHG emissions for BVES over time.

The webpage and associated stakeholder outreach provide IRP materials and notifications to inform residents about updates to the current IRP and revisions to BVES's procurement strategy.

BVES adhered to traditional outreach methods such as email notices, bill inserts, and media announcements related to planned procurement projects when communicating the IRP results. However, BVES acknowledges the importance of direct stakeholder feedback in shaping the Preferred Conforming Portfolio, particularly from disadvantaged groups. Recognizing the absence of formal stakeholder engagement workshops in the IRP cycles, BVES has dedicated structured feedback sessions and direct engagement in future IRP processes.

BVES has begun discussing the IRP process at PSPS and wildfire meetings to improve visibility and understanding. WMP and PSPS processes strongly integrate the needs of both reliability and energy provisions, a relationship that is commonly demonstrated at these meetings. Additionally, BVES emphasizes discussing the procurement plan as an approach to mitigate perceived rate shock from switching from firm system power contracts to renewable resources and to articulate the benefits of transitioning to a cleaner power supply portfolio. These meetings aim to create a space for collaboration and enlightenment on future BVES procurement strategies and GHG abatement techniques.

Future IRP submissions may feature an overview of the mechanisms performed in capturing insights of underrepresented community members, particularly those in medical baseline or access and functional needs groups, ensuring their perspectives significantly shape strategic planning. BVES notes that forthcoming efforts will further enhance communication and stakeholder engagement.

Additionally, BVES acknowledges the presence of vulnerable populations, such as those on medical baselines or with access and functional needs and strives to tailor its support services to enhance their resilience and safety. BVES further acknowledges that while tribal communities do not exist within the

service area, BVES appreciates its external relationships with tribal agencies, which share boundaries with USFS lands. Through targeted initiatives and planned stakeholder meetings ahead of the next IRP filing, BVES reaffirms its commitment to inclusivity and proactive engagement across all segments of the community.

c. LSEs' Tribal Customers

While BVES does not have tribes within its direct service territory, BVES recognizes that air pollution transcends geographic boundaries. In understanding this, BVES notes that GHG emissions may affect any population, including those within San Bernardino County, which includes the nearby Chemehuevi Indian Tribe, Colorado River Indian Tribe, Fort Mojave Indian Tribe, and the Yuhaaviatam of San Manuel Nation. Accordingly, BVES is committed to minimizing emissions and any potential cross-regional impacts, particularly on these tribes. BVES is actively advancing its long-term strategy to decrease reliance on system power by enacting its Preferred Conforming Portfolio that includes 7x24 block renewable power, which emits no greenhouse gases. This will significantly reduce the accounting of GHG emissions for BVES over time.

BVES further acknowledges that while tribal communities do not exist within the service area, BVES appreciates its external relationships with tribal agencies, which share boundaries with USFS lands. Through targeted initiatives and planned stakeholder meetings ahead of the next IRP filing, BVES reaffirms its commitment to inclusivity and proactive engagement across all segments of the community.

d. Procurement Products

Table 16 and
Table ***17*** list the procurement procedures.

Table 16: Illustrative RE PPA Block Strategy (2026-2045)

[redacted]



The full list of procurement products associated with this filing is listed below.

Table 17: BVES Procurement Products

Product	Description of Product
Bundled RE PPA (RPS-eligible energy)	Long-term renewable energy contract product expected to include eligible renewable energy and associated RECs/attributes where available.
REC products	May be evaluated as needed to manage RPS compliance timing, delivery risk, or short-term procurement gaps. REC-only products are not treated as physical energy supply for IRP portfolio purposes.
System power	Used as a limited balancing and bridge product only within available GHG headroom.
RA capacity products	May be procured separately if future RE PPAs do not provide sufficient RA value.

Product	**Description of Product**
Bundled RE PPA / RPS-eligible energy	Long-term renewable energy contract products expected to include eligible renewable energy and associated RECs/attributes where available.
REC products / RPS compliance instruments	May be evaluated as needed to manage RPS compliance timing, delivery risk, or short-term procurement gaps. REC-only products are not treated as physical energy supply for IRP portfolio purposes.
System power	Used as a limited balancing and bridge product within available GHG headroom.
RA / capacity products	May be procured separately if future RE PPAs do not provide sufficient RA value.

e. Commission Direction of Actions

Not applicable.

This prompt is not applicable to BVES at this time as procurement decisions are made through alternative Commission procedures. BVES does not seek any new actions from the Commission at this time related to its procurement forecasts for its Preferred Conforming Portfolio scenario.

V. Lessons Learned

BVES appreciates the opportunity to present its Portfolio scenario to the Commission to help meet the overall objective of developing an optimized resource planning portfolio under the Non-Standard Plan template in the 2024-2027 IRP cycle. The Commission's approach for this IRP's analysis established uniform assumptions that enable standardized comparisons across all LSEs and transfer easily into the RSP. This provides a structured avenue for the Commission and state agencies/entities to develop a pathway to successfully reduce electric sector GHG emissions and meet state mandates. BVES understands this pathway and has adapted its internal processes to remain compliant with and consistent with biennial IRP compliance filings and long-term plan updates.

BVES has historically relied on unspecified power contracts as a least-cost option for reliable supply as unspecified system power contracts are generally more cost favorable for long-term resource planning. BVES, however, presents in this IRP a new roadmap for meeting GHG emissions benchmarks and reducing reliance on CAISO system power, along with deployment of planned storage resources and staged renewable procurement.

BVES's current primary energy supply resource is categorized as unspecified system power and thus is tied to the modeled carbon intensity of natural gas dispatch on the CAISO controlled grid for the purposes of modeling emissions through 2045, which BVES does not believe is a true reflection of the California power mix. While BVES's internal methodology takes into account the resource mix profile of SCE's service territory for local emissions supply mix forecasts, BVES understands the applied dispatch conditions and calculated emissions allocated to LSEs are intended to account for generating units called upon by the CAISO to meet BVES load center demand and therefore support an evaluation of the CAISO system mix profile for more accurate carbon emission accounting. BVES also presents a common planning concern regarding the potential rate impacts to its customers associated with transitioning from least-cost system power products to cleaner, longer-term renewable power delivery agreements.

Through this IRP process, BVES found value in using the Commission's standardized planning framework to test its portfolio against the assigned load forecast, applicable GHG emissions benchmark, and long-term resource planning assumptions. The process helped BVES distinguish between the roles of existing contracted renewable supply, future incremental renewable procurement, system power, RA capacity, and storage resources in the Preferred Conforming Portfolio. For a small, non-standard LSE such as BVES, this distinction is important because procurement decisions are highly dependent on commercially available products, contract timing, counterparty interest, and customer rate impacts. BVES also notes

that continued clarity on the treatment of system power, storage resources, and future renewable procurement assumptions would support more consistent IRP filings for small LSEs while maintaining alignment with statewide GHG reduction and reliability objectives.

Continued flexibility for small and non-standard LSEs to demonstrate progress through staged procurement, rather than assuming immediate availability of large-scale clean energy and renewable products, will help support achievement of state policy goals in a manner that remains feasible and cost conscious for smaller customer bases.

Glossary of Terms

Alternative Portfolio: LSEs are permitted to submit "Alternative Portfolios" developed from scenarios using different assumptions from those used in the Preferred System Plan with updates. Any deviations from the "Conforming Portfolio" must be explained and justified.

Approve (Plan): the CPUC's obligation to approve an LSE's integrated resource plan derives from Public Utilities Code Section 454.52(b)(2) and the procurement planning process described in Public Utilities Code Section 454.5, in addition to the CPUC obligation to ensure safe and reliable service at just and reasonable rates under Public Utilities Code Section 451.

Balancing Authority Area (CAISO): the collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

Baseline resources: Those resources assumed to be fixed as a capacity expansion model input, as opposed to Candidate resources, which are selected by the model and are incremental to the Baseline. Baseline resources are existing (already online) or owned or contracted to come online within the planning horizon. Existing resources with announced retirements are excluded from the Baseline for the applicable years. Being "contracted" refers to a resource holding signed contract/s with an LSE/s for much of its energy and capacity, as applicable, for a significant portion of its useful life. The contracts refer to those approved by the CPUC and/or the LSE's governing board, as applicable. These criteria indicate the resource is relatively certain to come online. Baseline resources that are not online at the time of modeling may have a failure rate applied to their nameplate capacity to allow for the risk of them failing to come online.

Candidate resource: those resources, such as renewables, energy storage, natural gas generation, and demand response, available for selection in IRP capacity expansion modeling, incremental to the Baseline resources.

Capacity Expansion Model: a capacity expansion model is a computer model that simulates generation and transmission investment to meet forecasted electric load over many years, usually with the objective of minimizing the total cost of owning and operating the electrical system. Capacity expansion models can also be configured to only allow solutions that meet specific requirements, such as providing a minimum amount of capacity to ensure the reliability of the system or maintaining greenhouse gas emissions below an established level.

Certify (a Community Choice Aggregator Plan): Public Utilities Code 454.52(b)(3) requires the CPUC to certify the integrated resource plans of CCAs. "Certify" requires a formal act of the Commission to determine that the CCA's Plan complies with the requirements of the statute and the process established via Public Utilities Code 454.51(a). In addition, the Commission must review the CCA Plans to determine any potential impact on public utility bundled customers under Public Utilities Code Sections 451 and 454, among others.

Clean System Power (CSP) methodology: the methodology used to estimate GHG, and criteria pollutant emissions associated with an LSE's Portfolio based on how the LSE will expect to rely on system power on an hourly basis.

Community Choice Aggregator: a governmental entity formed by a city or county to procure electricity for its residents, businesses, and municipal facilities.

Conforming Portfolio: *the LSE portfolio that conforms to IRP Planning Standards, the 2045 LSE-specific GHG Emissions Benchmark, use of the LSE's assigned load forecast, use of inputs and assumptions matching those used in developing the Reference System Portfolio, as well as other IRP requirements including the filing of a complete Narrative Template, a Resource Data Template and Clean System Power Calculator*.

Effective Load Carrying Capacity: *a percentage that expresses how well a resource is able avoid loss-of-load events (considering availability and use limitations). The percentage is relative to a reference resource, for example a resource that is always available with no use limitations. It is calculated via probabilistic reliability modeling and yields a single percentage value for a given resource or grouping of resources.*

Effective Megawatts (MW): *perfect capacity equivalent MW, such as the MW calculated by applying an ELCC % multiplier to nameplate MW.*

Electric Service Provider: *an entity that offers electric service to a retail or end-use customer, but which does not fall within the definition of an electrical corporation under Public Utilities Code Section 218.*

Filing Entity: *an entity required by statute to file an integrated resource plan with CPUC.*

Future: *a set of assumptions about future conditions, such as load or gas prices.*

GHG Benchmark (or LSE-specific 2045 GHG Benchmark): *the mass-based GHG emission planning targets calculated by staff for each LSE based on the methodology established by the California Air Resources Board and required for use in LSE Portfolio development in IRP.*

GHG Planning Price: *the systemwide marginal GHG abatement cost associated with achieving a specific electric sector GHG planning target.*

Integrated Resources Planning Standards (Planning Standards): *the set of CPUC IRP rules, guidelines, formulas and metrics that LSEs must include in their LSE Plans.*

Integrated Resource Planning (IRP) process: *integrated resource planning process; the repeating cycle through which integrated resource plans are prepared, submitted, and reviewed by the CPUC*

Long term: *more than 5 years unless otherwise specified.*

Load Serving Entity: *an electrical corporation, electric service provider, community choice aggregator, or electric cooperative.*

Load Serving Entity (LSE) Plan: *an LSE's integrated resource plan; the full set of documents and information submitted by an LSE to the CPUC as part of the IRP process.*

Load Serving Entity (LSE) Portfolio: *a set of supply- and/or demand-side resources with certain attributes that together serve the LSE's assigned load over the IRP planning horizon.*

Loss of Load Expectation (LOLE): *a metric that quantifies the expected frequency of loss-of-load events per year. Loss-of-load is any instance where available generating capacity is insufficient to serve electric demand. If one or more instances of loss-of-load occurring within the same day regardless of duration are counted as one loss-of-load event, then the LOLE metric can be compared to a reference point such as the industry probabilistic reliability standard of "one expected day in 10 years," i.e. an LOLE of 0.1.*

Maximum Import Capability: a California ISO metric that represents a quantity in MWs of imports determined by the CAISO to be simultaneously deliverable to the aggregate of load in the ISO's Balancing Authority (BAA) Area and thus eligible for use in the Resource Adequacy process. The California ISO assesses a MIC MW value for each intertie into the ISO's BAA and allocated yearly to the LSEs. A LSE's RA import showings are limited to its share of the MIC at each intertie.

Net Qualifying Capacity (NQC): Qualifying Capacity reduced, as applicable, based on: (1) testing and verification; (2) application of performance criteria; and (3) deliverability restrictions. The Net Qualifying Capacity determination shall be made by the California ISO pursuant to the provisions of this California ISO Tariff and the applicable Business Practice Manual.

Non-modeled costs: embedded fixed costs in today's energy system (e.g., existing distribution revenue requirement, existing transmission revenue requirement, and energy efficiency program cost).

Nonstandard LSE Plan: type of integrated resource plan that an LSE may be eligible to file if it serves load outside the CAISO balancing authority area.

Optimization: an exercise undertaken in the CPUC's Integrated Resource Planning (IRP) process using a capacity expansion model to identify a least-cost portfolio of electricity resources for meeting specific policy constraints, such as GHG reduction or RPS targets, while maintaining reliability given a set of assumptions about the future. Optimization in IRP considers resources assumed to be online over the planning horizon (baseline resources), some of which the model may choose not to retain, and additional resources (candidate resources) that the model is able to select to meet future grid needs.

Planned resource: any resource included in an LSE portfolio, whether already online or not, that is yet to be procured. Relating this to capacity expansion modeling terms, planned resources can be baseline resources (needing contract renewal, or currently owned/contracted by another LSE), candidate resources, or possibly resources that were not considered by the modeling, e.g., due to the passage of time between the modeling taking place and LSEs developing their plans. Planned resources can be specific (e.g., with a CAISO ID) or generic, with only the type, size and some geographic information identified.

Qualifying capacity: the maximum amount of Resource Adequacy Benefits a generating facility could provide before an assessment of its net qualifying capacity.

Preferred Conforming Portfolio: the conforming portfolio preferred by an LSE as the most suitable to its own needs; submitted to CPUC for review as one element of the LSE's overall IRP plan.

Preferred System Plan: the Commission's integrated resource plan composed of both the aggregation of LSE portfolios (i.e., Preferred System Portfolio) and the set of actions necessary to implement that portfolio (i.e., Preferred System Action Plan).

Preferred System Portfolio: the combined portfolios of individual LSEs within the CAISO, aggregated, reviewed and possibly modified by Commission staff as a proposal to the Commission, and adopted by the Commission as most responsive to statutory requirements per Pub. Util. Code 454.51; part of the Preferred System Plan.

Short term: 1 to 3 years (unless otherwise specified).

Staff: CPUC Energy Division staff (unless otherwise specified).

Standard LSE Plan: type of integrated resource plan that an LSE is required to file if it serves load within the CAISO balancing authority area (unless the LSE demonstrates exemption from the IRP process).

Transmission Planning Process (TPP): process conducted by the California Independent System Operator (CAISO) to identify potential transmission system limitations and areas that need reinforcements over 10-year and 15-year horizons.