TOWN OF APPLE VALLEY
TOWN COUNCIL STAFF REPORT

To: **Honorable Mayor and Town Council** **Date:** **July 24, 2018**

From: **Kofi Antobam, Director of Finance**
Finance Department **Item No:** **7**

Subject: **ADOPT RESOLUTION NO. 2018-34, A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF APPLE VALLEY, CALIFORNIA, APPROVING THE APPLE VALLEY CHOICE ENERGY ("AVCE") INTEGRATED RESOURCE PLAN (IRP)**

T.M. Approval:_____ **Budgeted Item:** ☐ **Yes** ☐ **No** ☒ **N/A**

RECOMMENDED ACTION:

Staff recommends that the Town Council adopt Resolution 2018-34 approving the Apple Valley Choice Energy ("AVCE") Integrated Resource Plan (IRP).

SUMMARY:

Community Choice Aggregation (CCA), authorized by Assembly Bill 117, is a state law that allows cities, counties and other authorized entities to aggregate electricity demand within their jurisdictions in order to purchase and/or generate alternative energy supplies for residents and businesses within their jurisdiction while maintaining the existing electricity provider for transmission and distribution services. The goals of the Town's CCA are to 1) provide cost-competitive electric services; 2) incentivize economic development within Apple Valley; 3) and gain local control of the Town's energy procurement needs.

The Town's CCA, AVCE, was established by the Town Council through adoption of Ordinance 486 on August 9, 2016 and began serving customers in April 2017.

Senate Bill 350 (SB 350), approved by the Governor October 7, 2015, added, among other actions, Public Utilities Code section 454.52 which established the requirement for load-serving entities (including CCAs) to file an IRP with the California Public Utilities Commission (CPUC).

DISCUSSION:

Among many changes made by SB 350, AVCE is required to comply with revisions to the Renewable Portfolio Standards (RPS) for California. Specifically, it increased the minimum renewable energy standards from 33% by December 31, 2020 to 50% by December 31, 2030. The Town Council took the bold step in establishing a default energy product for AVCE that is sourced from 35% renewable energy, already meeting the state's 2020 goal and well on its way to meeting the 2030 goal.

To ensure CCAs are meeting these minimum standards, as well as meeting greenhouse gas reduction targets as established by the California Air Resources Board, an IRP is required to be filed with the California Public Utilities Commission (CPUC) for certification by August 1, 2018. The IRP maps out at a 10-year time horizon and establishes a plan for AVCE's procurement activities to meet the RPS and greenhouse gas reduction targets established by SB 350. The proposed IRP follows the required template as provided by the CPUC.

From this point forward, the IRP will be updated and brought back to Town Council every two years.

FISCAL IMPACT:

There is no fiscal impact as a result of this action.

ATTACHMENTS:

1. Resolution 2018-34
2. AVCE Integrated Resource Plan

RESOLUTION NO. 2018-34

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF APPLE VALLEY, CALIFORNIA, APPROVING AN INTEGRATED RESOURCE PLAN FOR THE APPLE VALLEY CHOICE ENERGY COMMUNITY CHOICE AGGREGATION PROGRAM

WHEREAS, Community Choice Aggregation (CCA), authorized by Assembly Bill 117, is a state law that allows cities, counties and other authorized entities to aggregate electricity demand within their jurisdictions in order to purchase and/or generate alternative energy supplies for residents and businesses within their jurisdiction while maintaining the existing electricity provider for transmission and distribution services; and

WHEREAS, on August 9, 2016, the Town Council adopted Ordinance 486, Establishing a Community Choice Aggregation program, Apple Valley Choice Energy; and

WHEREAS, Senate Bill 350, approved October 7, 2015, establishes a requirement for Community Choice Aggregation Programs to develop an Integrated Resource Plan and submit it to the California Public Utilities Commission for certification; and

WHEREAS, the Apple Valley Choice Energy Integrated Resource Plan was developed consistent with the requirements as established by the California Public Utilities Commission.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF APPLE VALLEY AS FOLLOWS:

SECTION 1. That based upon and in consideration of staff reports, presentations, public testimony and comment, and such other matters presented to the Town Council during the public meeting on this matter, the Town Council finds and declares the foregoing recitals to be true and correct and incorporates the same as substantive findings herein.

SECTION 2. That the Integrated Resource Plan for Apple Valley Choice Energy has been developed in compliance with SB 350 and California Public Utilities Commission direction and is hereby approved.

SECTION 3. That the Town Clerk shall certify to the adoption of this Resolution, and it shall become effective immediately upon adoption.

APPROVED and **ADOPTED** by the Town Council of the Town of Apple Valley this 24th day of July, 2018.

ATTEST:

Art Bishop, Mayor

La Vonda M-Pearson, Town Clerk

Standard LSE Plan

APPLE VALLEY CHOICE ENERGY

2018 INTEGRATED RESOURCE PLAN

[DATE]

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1. Executive Summary

Although AVCE qualifies for an alternative plan, AVCE has elected to submit a full Standard LSE Plan in order to provide the California Public Utilities Commission ("Commission") with the most information possible and signal AVCE's support for the Commission's efforts to help to achieve the State's important greenhouse gas ("GHG") reduction and system reliability goals.[1]

The Commission and AVCE's governing board exercise concurrent jurisdiction and have shared responsibilities in this Integrated Resource Plan ("IRP") process. The AVCE shares the Commission's goal of meeting the state's GHG reduction and renewable energy goals and looks forward to a cooperative relationship with the Commission in fulfilling the direction of Senate Bill 350.

AVCE was founded in 2016 and started serving load in April 2017. AVCE currently serves 25,000 customers in a service territory that covers the Town of Apple Valley.

As described in detail in Section 2, below, AVCE took the following steps to prepare its IRP. Total energy and capacity requirements were projected based on a forecast of enrolled customers. Requirements for renewable energy and other low carbon emitting resources were projected in accordance with AVCE's governing board policies and consistent with applicable regulatory requirements. Projected supply from resources already under contract were subtracted from the requirements to yield open positions, and contracts for additional resources (new and existing) were modeled to fill the open positions. AVCE used the CPUC's GHG Calculator tool to verify that total portfolio GHG emissions by 2030 would fall below the assigned GHG emissions benchmark.

AVCE's submitted its IRP its governing board on [DATE]. AVCE's Governing Board formally approved AVCE's IRP on [DATE] in [CITE TO FORMAL APPROVAL AND INCLUDE AS ATTACHMENT].

AVCE prepared a conforming portfolio, as required by the Commission, as well as an alternative, preferred portfolio which is based on AVCE's current load forecast.

AVCE's conforming portfolio includes the following resources in 2030:

- 15 MW of new Southern California Desert Solar PV generation (single axis tracking)
- 8 MW of existing CAISO Solar Tracking PV generation
- 18 MW of Behind the Meter Distributed PV generation
- 9 MW of new Tehachapi Wind generation
- 5 MW of existing CAISO Wind Generation
- 8 MW of existing Out-Of-State large Hydro-electric generation

[1] D.18-02-018 at 170 (Ordering Paragraph 3) authorizes CCA programs with a load of less than 700 gigawatt hours per year for the next five years to file Alternative Plans with reduced reporting requirements.

- 5 MW of new lithium-ion batteries

AVCE's preferred portfolio includes the following resources in 2030:

- 20 MW of new Southern California Desert Solar PV generation (single axis tracking)
- 10 MW of existing CAISO Solar Tracking PV generation
- 25 MW of Behind the Meter Distributed PV generation
- 14 MW of new Tehachapi Wind generation
- 7 MW of existing CAISO Wind Generation
- 11 MW of existing Out-Of-State large Hydro-electric generation
- 7 MW of new lithium-ion batteries
- 17 MW of existing CAISO Unspecified (system energy) generation

AVCE's action plan includes the following key steps, goals, and targets:

- Conduct a competitive solicitation for new renewable resources
- Conduct a competitive solicitation for new storage resources
- Continue to manage AVCE's supply portfolio to achieve AVCE's policy objectives and ensure compliance with all regulatory requirements.

2. Study Design

This section describes the process used by AVCE to develop its IRP.

Load Assignment

To project its load from 2018-2030, AVCE used the load forecast set forth in the June 18, 2018 ALJ Ruling for the conforming portfolio and AVCE's current load forecast for the preferred portfolio. Under this ruling AVCE's load forecast is 200 GWh for 2030, while AVCE's projected load for 2030 is 279 GWh.

Portfolio

AVCE's conforming portfolio is based on AVCE's assigned load forecast and the Commission's Reference System Portfolio. AVCE's conforming portfolio is fully consistent with the Commission's Reference System Portfolio:

- AVCE's portfolio uses the LSE-Specific 2030 GHG Emissions Benchmark of 0.035 Million Metric Tons ("MMT") assigned to AVCE in the June 18, 2018 ALJ Ruling.
- AVCE's portfolio was developed using the same inputs and assumptions used by the Commission to develop the Reference System Plan, with the following Commission-approved exceptions:
    - AVCE used the load assignment set forth in the June 18, 2018 ALJ Ruling.

- AVCE used the load modifier assumptions from the 2017 IEPR demand forecast projections of both PV and non-PV self-generation, and load-modifying demand response included in the "mid Baseline mid AAEE mid AAPV" case.

AVCE's alternative, preferred portfolio uses the same planning assumptions other than the load forecast.

GHG Emissions Benchmark

AVCE developed and evaluated its conforming portfolio using its specific GHG Emissions Benchmark as assigned in the June 18, 2018 ALJ Ruling. Under standard GHG emissions accounting as used in the RESOLVE model, CCA Program's Portfolio would account for 0.034 MMT of GHG emissions in 2030. This falls below AVCE's assigned GHG emissions benchmark of 0.035 MMT. For the preferred portfolio, AVCE estimates GHG emissions of 0.047 MMT in 2030, below the load adjusted CPUC benchmark of 0.049 MMT.

GHG Accounting in IRP Planning

AVCE used the Commission's Clean Net Short methodology and associated calculator tool to derive the GHG emissions reported above.

2.1. Objectives

AVCE developed its IRP in accordance with the following objectives:

- Objective 1: identify and select a portfolio that is based on and fully consistent with the Commission's reference system portfolio.
- Objective 2: identify and select a portfolio that reduces AVCE's 2030 GHG emissions to a level *below* AVCE's GHG Emissions Benchmark.
- Objective 3: select a portfolio that uses cost-effective resources, as determined by AVCE's governing board.
- Objective 4: select a portfolio that minimizes negative impacts and emphasizes benefits for Disadvantaged Communities ("DACs").
- Objective 5: select a portfolio that, to the maximum degree possible consistent AVCE's other goals and requirements, interpedently meets AVCE's share of procurement requirements, minimizing or eliminating any need for "on behalf of" procurement by investor owned utilities ("IOUs").
- Objective 6: identify and select a portfolio that meets AVCE's resource policy objectives and supports the optional renewable retail product offerings administered by AVCE.

2.2. Methodology

2.2.1. Modeling Tool(s)

AVCE based its portfolio on the Commission's reference system portfolio and used the tools and guidance provided by the Commission to develop its IRP. AVCE did not conduct any independent modeling.

2.2.2. Modeling Approach

AVCE did not model any scenarios in developing its IRP, nor did AVCE perform any calculations, including post-processing calculations, used to generate metrics for portfolio analysis.

2.2.3. Assumptions

In developing its IRP, AVCE did not use any inputs or assumptions that differed from the inputs and assumptions used by the Commission to prepare the Reference System Plan.

3. Study Results

3.1. Portfolio Results

AVCE's IRP includes a conforming portfolio, which is based on and consistent with the Commission's Reference System Portfolio, and an alternative, preferred portfolio. The contents of AVCE's conforming and preferred portfolios are itemized in the Data Template Excel workbooks identified as [XXXX, YYYY, ZZZZ, AAAA, BBBB, CCCC] and included as part of AVCE's IRP. Broadly, AVCE's conforming portfolio identifies the following new resources that AVCE plans to invest in:

- 15 MW of new solar.
- 9 MW of new wind.
- 5 MW of new battery storage.
- 12 MW of new behind-the-meter distributed solar

AVCE's conforming portfolio also includes the following existing resources that AVCE owns, currently contracts with, or plans to contract with:

- 8 MW of existing solar.
- 5 MW of existing wind.
- 8 MW of existing large hydroelectric.

- 12 MW of existing CAISO system energy.
- 6 MW of existing behind-the-meter distributed solar

AVCE's preferred portfolio identifies the following new resources that AVCE plans to invest in:

- 20 MW of new solar.
- 14 MW of new wind.
- 7 MW of new battery storage.
- 17 MW of new behind-the-meter distributed solar

AVCE's conforming portfolio also includes the following existing resources that AVCE owns, currently contracts with, or plans to contract with:

- 10 MW of existing solar.
- 7 MW of existing wind.
- 11 MW of existing large hydroelectric.
- 17 MW of existing CAISO system energy.
- 8 MW of existing behind-the-meter distributed solar

3.2. Conforming Portfolio

AVCE's prefers its alternative portfolio for planning purposes, and this is the portfolio that was approved by AVCE's governing board and is hereby provided by AVCE to the Commission for certification. AVCE's governing board has approved AVCE's portfolio as compliant with the requirements of Public Utilities Code Section 454.52(a)(1) for the reasons provided below. As required by the Commission, AVCE is including a conforming portfolio, which utilizes the load forecast set for in the May 25th, 2018 Commission Ruling; however, AVCE believes this load forecast to be low by approximately 28%.

3.2.1. Local Air Pollutant Minimization

AVCE's portfolio minimizes localized air pollutants and other GHG emissions with early priority on disadvantaged communities.

In order to identify disadvantaged communities ("DACs") that are located within its service territory, AVCE used CalEnviroScreen 3.0 to identify the top 25% of impacted census tracts on a statewide basis and the top 5% of census tracts without an overall score but with highest pollution burden. This analysis provided the following information:

- AVCE serves nor census tracts that are identified as a DAC.

AVCE is a local government agency that serves a relatively small and discrete community. AVCE does not have any localized air pollutant emitting electric generation facilities within its borders. AVCE's primary strategy for reducing emissions and contributing to the economic development of DACs is the aggressive procurement of zero-emissions renewable resources. When economically feasible, AVCE intends to give preference to green power projects that are located within DACs or otherwise contribute to DAC economic development (for instance, by increasing employment opportunities for DAC residents).

3.2.2. Cost and Rate Analysis

CCA rates are adopted by their local governing boards and are not set or overseen by the Commission. AVCE's governing board has determined that AVCE's portfolio achieves environmental, reliability, and other benefits in a cost-effective manner. AVCE checked the rate impact of its portfolio by incorporating the planned resources in AVCE's financial model. For this analysis, AVCE assumed that other LSEs will procure resources in a manner consistent with the Reference System Plan. Based on this analysis, AVCE projects that its average per MWh portfolio costs will increase by an annual average rate of 3.3% through 2030 in nominal terms, and 1.2% annually in real (inflation adjusted) dollars, while providing the GHG reduction, system reliability, and other benefits described in this narrative.

Numerous market factors could change the projected cost trajectory, including but not limited to the following:

- Wholesale energy prices
- Locational marginal prices
- Resource adequacy costs
- Costs for services provided by the CAISO (e.g., ancillary services)
- Production from contracted resources and potential curtailment costs
- Costs associated with allocated resources procured by other entities (e.g., CAM, RMR, etc.)

While AVCE rates are influenced by power supply costs, customer rates will not necessarily change in lock-step with the projected change in power supply costs over time, as financial reserves are available to help provide rate stability.

Additionally, AVCE's portfolio accounts for the Resource Adequacy ("RA") benefits of Investor Owned Utility ("IOU") resources that its customers pay for through the Cost Allocation Mechanism ("CAM"). Based on the most recent year-ahead CAM resource list available on the

Commission's Resource Adequacy Compliance Materials webpage,[2]AVCE calculates that its proportional share[3] of the RA value for these resources is 12 MW.

3.3. Deviations from Current Resource Plans

AVCE's portfolio does not deviate from any of AVCE's currently filed or authorized resource plans, including Bundled Plans, RPS Plans, Energy Efficiency Business Plans, Distributed Resource Plans, and specific procurement-related applications.

3.4. Local Needs Analysis

AVCE's portfolio provides AVCE's share of its capacity area's ("LCA") local needs requirement. Under the CPUC's Resource Adequacy Program, AVCE must procure a specified portion of its Resource Adequacy obligation from resources located within the Big Creek/Ventura and LA Basin Local Reliability Areas.[4] According to the Local Capacity Technical Analysis reports for years 2018 and 2022 associated with the CAISO board-approved 2017-18 Transmission Plan, these LCAs will have the following local area needs for 2018 and 2022:

LCA	2018 LCR Need (MW)	2022 LCR Need (MW)
Big Creek/Ventura	2321	2597
LA Basin	7525	6022

AVCE plans to meet its share of this local area need through:

- Existing Resource Adequacy Capacity procurement.

[2] Refer to the Commission's Resource Adequacy Compliance Materials, available at: http://cpuc.ca.gov/General.aspx?id=6311.

[3] Proportional Share is determined by its year-ahead share of peak load out of total coincident peak load for the IOU service territory the LSE is located in, as assigned in the Commission's annual resource adequacy process. The LSE's proportional share is assumed static through the IRP planning horizon for the purpose of projecting its share of CAM resource adequacy value

[4] AVCE uses the Commission's resource adequacy program's definition of local capacity areas for the purposes of its local needs analysis. These areas are: Greater Bay Area, Big Creek Ventura, CAISO System, LA Basin, San Diego IV, and Other PG&E.

- Planned Resource Adequacy Capacity procurement.
- Resource Adequacy associated with planned renewable resource procurement.
- Allocated Resource Adequacy Capacity credits from Southern California Edison ("SCE") CAM and Demand Response resources.

4. Action Plan

4.1. Proposed Activities

AVCE intends to take the following near-term (in the next 1-3 years) to implement its IRP and associated portfolio:

- Conduct one or more competitive solicitations for new renewable resources
- Conduct one or more competitive solicitations for new storage resources
- Continue to manage AVCE's supply portfolio to achieve AVCE's policy objectives and ensure compliance with all regulatory requirements

AVCE does not serve any DACs and does not have plans to undertake additional activities to conduct outreach and seek input from DACs.

4.2. Barrier Analysis

AVCE has identified the following market, regulatory, financial, or other barriers or risks that may impede AVCE's ability to acquire the resources identified in its Portfolio:

- Factors that may that may restrict availability of Resource Adequacy Capacity such as retirement of conventional resources, the potential re-rating of renewable resource Effective Load Carrying Capacity, and the lack of an efficient and transparent mechanism for transferring Resource Adequacy Capacity from the Investor Owned Utility portfolios as load migrates to CCA service
- Factors that may increase AVCE customer costs such as potential regulatory changes relating to the treatment of SCE generation costs and the share of costs allocated to AVCE customers
- The potential for reduced availability of large hydro-electric energy due to draught or increasing demand

4.3. Proposed Commission Direction

Not applicable.

5. Data

5.1. Baseline Resource Data Template

AVCE has provided the required baseline resource portfolio data in the attached Baseline Resource Data Templates, titled [*Data_LSEname_BaseRsrc_Identifier_yyyymmdd.xlsx and Data_LSEname_BaseRsrc_Identifier_yyyymmdd.xlsx*]. This data includes all resources under obligation to serve AVCE load, including resources under contract and resources owned by AVCE.

5.2. New Resource Data Template

AVCE's IRP includes a conforming portfolio and an alternative, preferred portfolio. AVCE has provided the required new resource portfolio data in the attached New Resource Data Templates, titled [Data_LSEname_NewRsrc_Identifier_yyyymmdd.xlsx and Data_LSEname_NewRsrc_Identifier_yyyymmdd.xlsx]. This data includes:

- Identification of all new resources, that AVCE intends to invest in to serve its load over the IRP planning horizon (through 2030).
- Mapping of all new resources to their respective pre-defined RESOLVE candidate resource type.

5.3. Other Data

In addition to its Baseline Resource Data and New Resource Data, AVCE is providing the following additional data as part of its IRP:

- Clean Net Short Calculator results.

6. Lessons Learned

Lessons learned from this exercise include the need for additional time from when data templates and other requirements are made available to when plan must be submitted to the Commission, to allow sufficient time for preparation and for obtain governing board approval prior to submission. Also, additional opportunities for collaboration and feedback on the data templates and tools could help reduce the burden of completing the templates and result in higher quality and more consistent data for the Commission.

Appendix A – Glossary of Terms and Acronyms

AAEE *– Additional Available Energy Efficiency.*

AAPV *– Additional Available Photovoltaics.*

Alternative Plan *– An IRP filing designed for use by Smaller LSEs (Type 1) as well as multi-jurisdictional utilities (Type 2).*

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

Baseline Resource Data Template *– Report of baseline resource portfolio data provided by the Commission, found at: http://www.cpuc.ca.gov/irp/filingtemplates/.*

CAISO *– California Independent System Operator.*

CAISO Transmission Plan - *The report prepared by the CAISO on an annual basis pursuant to Section 24 of its tariff, which documents the outcome of the Transmission Planning Process.*

CalEnviroScreen 3.0 *- A mapping tool that helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects.*

CAM *- Cost Allocation Mechanism.*

CCA *- Community Choice Aggregation.*

CEC *- The California Energy Commission.*

Conforming Portfolio *– Each LSE must produce a "Conforming Portfolio" that is demonstrated to be consistent with the Reference System Portfolio according to the following criteria: (1) use of either the GHG Planning Prices or the LSE-Specific 2030 GHG Emissions Benchmark, (2) use of input assumptions matching those used in developing the Reference System Portfolio, and (3) consistent with the 2017 IEPR "mid Baseline mid AAEE mid AAPV" forecast, unless superseded by Administrative Law Judge ruling.*

DAC *- Disadvantaged Community. For the purposes of IRP, and consistent with the results of the California Communities Environmental Health Screening Tool Version 3 (CalEnviroScreen 3.0), "disadvantaged communities" refer to the 25% highest scoring census tracts in the state along with the 22 census tracts that score in the highest 5% of CalEnviroScreen's pollution burden, but which do not have an overall CalEnviroScreen score because of unreliable socioeconomic or health data.*

Data Template *– Data provided by the LSE should be reported in the "Baseline Resource Data Template" and the "New Resource Data Template" provided by the Commission. "Baseline" means existing resources and costs. "Existing" includes resources on the 3/15/2018 NQC List, or projects not yet online but that have secured a contract and may therefore be identified in the Commission's RPS Contracts Database or an Application filed at the Commission, as of January 1, 2018. "New" means any new (incremental to the baseline) resources and costs associated with a particular LSE portfolio.*

Distributed Resource Plans *- Plans that identify optimal locations for the deployment of distributed resources.*

EPA / USEPA – The United States Environmental Protection Agency.

Finalizing ALJ Ruling *- Ruling finalizing individual LSE load forecasts for 2030 and associated GHG benchmarks for use in the IRP filings due August 1, 2018, as required by Commission Decision 18-02-018.*

GHG *– Greenhouse Gas.*

GHG Emissions Benchmark *– Each LSE filing a Standard LSE Plan must use either the GHG Emissions Benchmark or GHG Planning Price in developing its Conforming Portfolio. The LSE-specific benchmarks have been provided in an ALJ ruling. If the total emissions attributable to the LSE's preferred portfolio exceed its GHG Emissions Benchmark for 2030, the LSE must explain the difference and describe additional measures it would take over the following 1 - 3 years to close the gap, along with the cost of those measures.*

GHG Planning Price *–The GHG Planning Price is equivalent to the marginal cost of GHG abatement associated with the 42 MMT Scenario for the years 2018 to 2026 (i.e., a curve that slopes upward from ~$15/ton to ~$23/ton), followed by a straight-line increase from ~$23/ton in 2026 to $150/ton in 2030, as shown in Table A. Each LSE must use either the GHG Planning Price or GHG Emissions Benchmark in developing its Conforming Portfolio.*

IEPR *– The CAISO's Integrated Energy Policy Report.*

IRP *– Integrated Resource Plan.*

IRP Planning Horizon *– The IRP Planning Horizon will typically cover 20 years. However, for the purposes of this IRP 2017-18 cycle, the IRP Planning Horizon will cover only up to the year 2030.*

LCA *– Local Capacity Area.*

Long term *– 10 or more years (unless otherwise specified)*

LSE *– Load-Serving Entity.*

NOx *– Nitrogen Oxides.*

Portfolio *– A portfolio is a set of supply and/or demand resources with certain attributes that together serve a particular level of load.*

Preferred Portfolio *– Among all the portfolios developed by the LSE, the LSE will identify one as the most suitable to its own needs, deemed its "Preferred Portfolio." Any deviations from the Conforming Portfolio must be justified and explained.*

PV *– Photovoltaic resources*.

RA *– Resource Adequacy.*

Reference System Plan *– The Reference System Plan refers to the Commission-approved integrated resource plan that includes an optimal portfolio (Reference System Portfolio) of future resources for serving load in the CAISO balancing authority area and meeting multiple state goals, including meeting GHG reduction and reliability targets at least cost.*

Reference System Portfolio *– The Reference System Plan refers to the Commission-approved portfolio that is responsive to statutory requirements per Pub. Util. Code 454.51; it is part of the Reference System Plan.*

RESOLVE *– The model used by the Commission to develop the Reference System Plan and Reference System Portfolio.*

RPS – Renewable Portfolio Standard.

Scenario *– A scenario is a portfolio together with a set of assumptions about future conditions.*

Short term *– 1 to 3 years (unless otherwise specified)*

Standard LSE Plan *– A Standard LSE Plan is the type of integrated resource plan that an LSE is required to file if its assigned load forecast is ≥ 700 GWh in any of the first five years of the IRP planning horizon.*

Standard LSE Plan Template *– Each LSE required to file a Standard LSE Plan must use the Standard LSE Plan Template according to the instructions provided herein.*

(End of Appendix A)