

# Standard LSE Plan

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PICO RIVERA INNOVATIVE MUNICIPAL ENERGY

2018 INTEGRATED RESOURCE PLAN

August 1, 2018

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# 1. Executive Summary

Although Pico Rivera Innovative Municipal Energy (“PRIME”) qualifies for an alternative plan, PRIME 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 PRIME’s support for the Commission’s efforts to help to achieve the State’s important greenhouse gas (“GHG”) reduction and system reliability goals.<sup>1</sup>

The Commission and PRIME’s governing board exercise concurrent jurisdiction and have shared responsibilities in this Integrated Resource Plan (“IRP”) process. PRIME 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.

PRIME was founded in 2017 and started serving load in September 2017. PRIME currently serves slightly more than 17,000 customers in a service territory that covers the city of Pico Rivera located in southeastern Los Angeles County. Pico Rivera is approximately 11 miles southeast of downtown Los Angeles.

As described in detail in Section 2, below, PRIME 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 PRIME’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. PRIME used the CPUC’s GHG Calculator tool to verify that total portfolio GHG emissions by 2030 would fall below the assigned GHG emissions benchmark.

PRIME’s submitted its IRP its governing board on July 10, 2018. PRIME’s Governing Board formally approved PRIME’s IRP on July 10, 2018 in Resolution No. 6977.

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

PRIME’s conforming portfolio includes the following resources in 2030:

- 5 MW of new Southern California Desert Solar PV generation
- 1 MW of existing CAISO Solar Tracking PV generation
- 6 MW of Behind the Meter Distributed PV generation
- 5 MW of new Tehachapi Wind generation

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<sup>1</sup> 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.

- 1 MW of existing CAISO Wind Generation
- 3 MW of existing Out-Of-State large Hydro-electric generation
- 2 MW of new lithium-ion batteries

PRIME’s preferred portfolio includes the following resources in 2030:

- 18 MW of new Southern California Desert Solar PV generation
- 2 MW of existing CAISO Solar Tracking PV generation
- 20 MW of Behind the Meter Distributed PV generation
- 18 MW of new Tehachapi Wind generation
- 2 MW of existing CAISO Wind Generation
- 9 MW of existing Out-Of-State large Hydro-electric generation
- 6 MW of new lithium-ion batteries
- 14 MW of existing CAISO Unspecified (system energy) generation

PRIME’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 PRIME’s supply portfolio to achieve PRIME’s policy objectives and ensure compliance with all regulatory requirements.

## 2. Study Design

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

### Load Assignment

To project its load from 2018-2030, PRIME used the load forecast set forth in the June 18, 2018 ALJ Ruling for the conforming portfolio and PRIME’s current load forecast for the preferred portfolio. Under this ruling PRIME’s load forecast is 70 GWh for 2030, while PRIME’s projected load for 2030 is 228 GWh.

### Portfolio

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

- PRIME’s portfolio uses the LSE-Specific 2030 GHG Emissions Benchmark of 0.012 Million Metric Tons (“MMT”) assigned to PRIME in the June 18, 2018 ALJ Ruling.
- PRIME’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:
  - PRIME used the load assignment set forth in the June 18, 2018 ALJ Ruling.

- PRIME 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.

PRIME’s alternative, preferred portfolio uses the same planning assumptions other than the load forecast.

### **GHG Emissions Benchmark**

PRIME 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 0.011 MMT of GHG emissions in 2030. This falls below PRIME’s assigned GHG emissions benchmark of 0.012 MMT. For the preferred portfolio, PRIME estimates GHG emissions of 0.0364 MMT in 2030, below the load adjusted CPUC benchmark of 0.0365 MMT.

### **GHG Accounting in IRP Planning**

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

## **2.1. Objectives**

PRIME 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 PRIME’s 2030 GHG emissions to a level *below* PRIME’s GHG Emissions Benchmark.
- Objective 3: select a portfolio that uses cost-effective resources, as determined by PRIME’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 PRIME’s other goals and requirements, interpedently meets PRIME’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 PRIME’s resource policy objectives and supports the optional renewable retail product offerings administered by PRIME.

## 2.2. Methodology

### 2.2.1. Modeling Tool(s)

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

### 2.2.2. Modeling Approach

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

### 2.2.3. Assumptions

In developing its IRP, PRIME 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

PRIME'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 PRIME's conforming and preferred portfolios are itemized in the Data Template Excel workbooks identified as GHG Calculator, Base Resource, and New Resource and included as part of PRIME's IRP. Broadly, PRIME's conforming portfolio identifies the following new resources that PRIME plans to invest in:

- 5 MW of new solar.
- 5 MW of new wind.
- 2 MW of new battery storage.
- 4 MW of new behind-the-meter distributed solar

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

- 1 MW of existing solar.
- 1 MW of existing wind.
- 3 MW of existing large hydroelectric.

- 4 MW of existing CAISO system energy.
- 2 MW of existing behind-the-meter distributed solar

PRIME’s preferred portfolio identifies the following new resources that PRIME plans to invest in:

- 18 MW of new solar.
- 18 MW of new wind.
- 6 MW of new battery storage.
- 15 MW of new behind-the-meter distributed solar

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

- 2 MW of existing solar.
- 2 MW of existing wind.
- 9 MW of existing large hydroelectric.
- 14 MW of existing CAISO system energy.
- 5 MW of existing behind-the-meter distributed solar

### **3.2. Conforming Portfolio**

PRIME’s prefers its alternative portfolio for planning purposes, and this is the portfolio that was approved by PRIME’s governing board and is hereby provided by PRIME to the Commission for certification. PRIME’s governing board has approved PRIME’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, PRIME is including a conforming portfolio, which utilizes the load forecast set for in the May 25<sup>th</sup>, 2018 Commission Ruling; however, PRIME believes this load forecast to be low by approximately 300%.

#### **3.2.1. Local Air Pollutant Minimization**

PRIME’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, PRIME 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:

- PRIME serves the following census tracts, identified as a DAC: numbers 6037502601, 6037502602, 6037502500, 6037502401, 6037500700, 6037500600, 6037500402, 6037500501, 6037500404, and 6037500403.

PRIME is a local government agency that serves a relatively small and discrete community. PRIME does not have any localized air pollutant emitting electric generation facilities within its borders. PRIME'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, PRIME 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).

PRIME also has the following current and planned activities/programs carried out in/for DACs:

- Pursue Community Solar Program
- Develop Electric Vehicle Incentive Program

### **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. PRIME's governing board has determined that PRIME's portfolio achieves environmental, reliability, and other benefits in a cost-effective manner.

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 PRIME 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, PRIME'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,<sup>2</sup> PRIME estimates that its

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

proportional share<sup>3</sup> of the RA value for these resources is 2 MW for the conforming portfolio, and 5 MW for the preferred portfolio.

### 3.3. Deviations from Current Resource Plans

PRIME’s portfolio does not deviate from any of PRIME’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

PRIME’s portfolio provides PRIME’s share of its capacity area’s (“LCA”) local needs requirement. Under the CPUC’s Resource Adequacy Program, PRIME must procure a specified portion of its Resource Adequacy obligation from resources located within the Big Creek/Ventura and LA Basin Local Reliability Areas.<sup>4</sup> 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

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

- Existing Resource Adequacy Capacity procurement.
- Planned Resource Adequacy Capacity procurement.
- Resource Adequacy associated with planned renewable resource procurement.

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<sup>3</sup> 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

<sup>4</sup> PRIME 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.

- Allocated Resource Adequacy Capacity credits from Southern California Edison (“SCE”) CAM and Demand Response resources.

## **4. Action Plan**

### **4.1. Proposed Activities**

PRIME 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 PRIME’s supply portfolio to achieve PRIME’s policy objectives and ensure compliance with all regulatory requirements

In addition, PRIME plans to undertake the following activities to conduct outreach and seek input from any DACs that could be impacted by procurement resulting from the implementation of PRIME’s plan:

- Community Outreach through Town Hall discussions regarding programs available to DAC
- Direct Mail Campaign and to encourage participation in Electric Vehicle Incentive Program

Conduct Public Hearings during governing board meetings at which actions related to procurement activity occurs. As a small, community-based utility, PRIME has not adopted a specific methodology for evaluating proposed procurement located in disadvantaged communities.

### **Barrier Analysis**

PRIME has identified the following market, regulatory, financial, or other barriers or risks that may impede PRIME’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 PRIME customer costs such as potential regulatory changes relating to the treatment of SCE generation costs and the share of costs allocated to PRIME customers
- The potential for reduced availability of large hydro-electric energy due to draught or increasing demand

## **4.2. Proposed Commission Direction**

Not applicable.

## **5. Data**

### **5.1. Baseline Resource Data Template**

PRIME has provided the required baseline resource portfolio data in the attached Baseline Resource Data Templates, titled [Data\_PRIME\_BaseRsrc\_Conforming\_20180801\_\_revised20180525 Clean draft; and Data\_PRIME\_BaseRsrc\_PREFERRED\_20180801\_\_revised20180525 Clean draft]. This data includes all resources under obligation to serve PRIME load, including resources under contract and resources owned by PRIME.

### **5.2. New Resource Data Template**

PRIME's IRP includes a conforming portfolio and an alternative, preferred portfolio. PRIME has provided the required new resource portfolio data in the attached New Resource Data Templates, titled [Data\_PRIME\_NewRsrc\_Conforming\_20180801\_\_revised20180525 Clean draft; and Data\_PRIME\_NewRsrc\_PREFERRED\_20180801\_\_revised20180525 Clean draft]. This data includes:

- Identification of all new resources, that PRIME 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, PRIME is providing the following additional data as part of its IRP:

- Clean Net Short Calculator results in the attached template, titled [PRIME GHG Calculator Conforming for IRP v1.4.5 Clean draft; and PRIME GHG Calculator Preferred for IRP v1.4.5 Clean draft]

## **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 CEC’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.

**NO<sub>x</sub>** – 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  $\geq 700$  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)