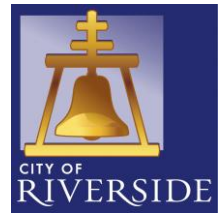




CITY OF RIVERSIDE PUBLIC UTILITIES DEPARTMENT



2020 RIVERSIDE RESOURCE ADEQUACY PROGRAM

Revised and Adopted: _____

This 2020 Riverside Resource Adequacy Program shall become effective upon the approval by the City of Riverside ("Riverside") City Council and the Board of Public Utilities and will supersede the existing Revised Resource Adequacy Program, adopted by Resolution 22389 on June 5, 2012. The following are the previous approvals:

- May 23, 2006: The City Council adopted the Public Utilities Resource Adequacy Program, established in response to the California Independent System Operator Corporation's ("CAISO") 2006 Interim Reliability Requirements Tariff, as amended from time to time via CAISO Tariff amendments.
- June 5, 2012: The City Council adopted the Revised Resource Adequacy Program, updating the program to accommodate amended CAISO Tariff requirements regarding Resource Adequacy as well as changing market conditions.

This 2020 Riverside Resource Adequacy Program is hereby updated and shall remain in effect until modified by the City Council of the City of Riverside. Capitalized terms not otherwise defined herein shall be defined as set forth in the Master Definitions Supplement of the CAISO's Operating Agreement and Tariff.

The 2020 Riverside Resource Adequacy Program involves establishing Annual and Monthly capacity requirements, submitting Annual and Monthly RA Plans to the CAISO, creating and maintaining peak load forecasts, and identifying methodologies used to calculate capacity for Riverside's resources. The components of the 2020 Riverside Resource Adequacy Program are broken down in further detail in the following sections:

1. RESOURCE ADEQUACY PLANS:

The Public Utilities Department ("Department") is required by the CAISO to develop Resource Adequacy Plans ("Plans") to guide the procurement of capacity resources adequate to serve the electrical requirements of the City's customers consistent with Good Utility Practice and applicable reliability requirements.

1.1 RA Requirements: The CAISO has three distinct requirements for Resource Adequacy Plans: System RA requirements, Local RA requirements and Flexible RA requirements.

1.1.1 System RA requirements are determined based on each Load Serving Entities California Energy Commission's adjusted forecast plus a planning reserve margin adopted by the Local Regulatory Authority. The City Council of the City of Riverside is the Local Regulatory Authority. The Planning Reserve Margin for System RA Requirements will be set at 15% above the California Energy Commission's adjusted forecast.

1.1.2 Local RA requirements are determined based on an annual CAISO study using a 1-10 weather year and an N-1-1 contingency.

1.1.3 Flexible RA Requirements are based on an annual CAISO study that evaluates the ramping capacity needed for each month to run the system reliably.

1.2 Types of RA Plans: Annual Resource Adequacy Plan and Monthly Resource Adequacy Plans.

1.2.1 Annual Resource Adequacy Plan: The Department shall prepare an Annual Resource Adequacy Plan each year for the following calendar year. The Annual Resource Adequacy Plan shall identify capacity resources owned or contracted for by the City sufficient to meet at least 90% of the City's System RA Requirement for each month of the coming compliance year. Additionally, the Department must demonstrate that they meet 90% of the Flexible Requirements and 100% of the Local Requirements for each month of the coming compliance year. The Department shall present the Plan to the Public Utilities Board and the City Council and shall submit the Plan approved by the City Council to the CAISO pursuant to the date specified in the CAISO Tariff and Business Practice Manuals.

1.2.2 Monthly Resource Adequacy Plan: The Department shall also prepare a Monthly Resource Adequacy Plan. Except as provided for in Section 1.3 below, the Department must demonstrate they have procured 100% of their monthly System and Flexible RA obligation. The Public Utilities General Manager, or his designee, shall certify whether each Plan does or does not comply with the requirements of this Resource Adequacy Program. The Public Utilities General Manager shall advise the Public Utilities Board and the City Council of any noncompliance with this Resource Adequacy Program. Each Monthly Resource Adequacy Plan shall be provided to the CAISO to the extent required by the CAISO Tariff.

1.3 Minimum Reserve Margin Under Exigent Circumstances Beyond Department's Control: The Minimum Reserve Margin can be reduced under exigent circumstances

due to unforeseen transmission or generation outages beyond the Department's control, if such outages impact the Department's power resources, even after all best efforts have been exhausted to restore the availability of the Department's resources and/or finding suitable replacement resources. If the Department is still unable to restore sufficient resources to meet the monthly System RA Requirements as specified in Section 1.2.2, then City Council may waive the reserve requirement in Section 1.2.2, provided however such waiver shall not violate the absolute minimum reserve margin of 7% (107% of the City's forecasted maximum peak demand for the month covered by the Plan) as established in the mandatory reliability standard promulgated by Western Electricity Coordinating Council ("WECC") or North American Electric Reliability Corporation ("NERC").

2. DEMAND FORECASTS:

2.1 The Department shall be responsible for developing and maintaining demand forecasts, consistent with Good Utility Practice, reflecting the projected maximum annual and monthly peak loads for the City's service area. The most current demand forecasts shall be included in the annual and monthly Resource Adequacy Plans.

3. CRITERIA FOR QUALIFYING CAPACITY:

3.1 The Department's determination of all qualifying RA capacity for City Owned Facilities, Contracted Resources, Demand Response Resources, and Load Reduction Resources will be consistent with the RA calculation methodologies identified in the current CAISO Tariff and Business Practice Manuals.

4. AVAILABILITY OF RESOURCES TO THE CAISO:

4.1 Availability During Normal Operating Conditions: The City shall comply with CAISO's Tariff and Business Practice Manual protocols in the submittal of bids and any offer obligation related to City's power resources.

4.2 Availability During System Emergencies: If the CAISO declares a System Emergency pursuant to its Operating Procedures, the City shall make available to the CAISO any available energy (including load reduction resources) from the City's Resource Adequacy Resources that is not required to serve the City's customers.

5. COMPLIANCE PROCESS:

5.1 In the event of non-compliance or a reasonable expectation of non-compliance with the provisions herein, the Department shall compile a report stating the reason(s) for non-compliance and the corrective actions to be undertaken. The Department shall promptly provide such report to the CAISO to the extent required by the CAISO Tariff. The Public Utilities General Manager, or his designee, shall advise the Public Utilities

Board and the City Council of each non-compliance incident pursuant to Sections 1.2.1, 1.2.2, and 1.3. Any reports to the Public Utilities Board and the City Council must clearly identify the incident or incidents of non-compliance, describe in detail the actions the Department has taken or will take to re-establish full compliance with this program, and set forth a timeline for such actions.

Definitions

Term	Acronym	Definition
Business Practice Manuals	BPMs	A collection of documents made available by the California ISO on the California ISO Website that contain the rules, policies, procedures and guidelines established by the California ISO for operational, planning, accounting and settlement requirements of California ISO Market activities, consistent with the California ISO Tariff.
California Independent System Operator	CAISO	The California ISO provides open and non-discriminatory access to the bulk of the state's wholesale transmission grid, supported by a competitive energy market and comprehensive infrastructure planning efforts. The California ISO is regulated by the Federal Energy Regulatory Commission, an independent federal agency that regulates the interstate transmission of electricity, natural gas, and oil. The California Public Utilities Commission regulates investor-owned utilities operating in the ISO balancing authority area. Publicly owned utilities in California are regulated by their respective city councils or other governance bodies.
CAISO Tariff	CAISO	The California Independent System Operator Corporation Operating Agreement and Tariff, dated March 31, 1997, as it may be modified from time to time. The California ISO operates under the terms and conditions of its FERC-approved tariff, which is modified, amended, supplemented or restated as needed. Each section or appendix of the tariff is maintained and updated independently according to effective dates of the FERC accepted tariff amendments. If a provision of an existing ISO contract, business practice manual or operating procedure conflicts with it, the tariff will prevail to the extent of the inconsistency.
Federal Energy Regulatory Commission	FERC	The Federal Energy Regulatory Commission, or FERC, is an independent agency that regulates the interstate transmission of natural gas, oil, and electricity. FERC also regulates natural gas and hydropower projects.
Local Regulatory Authority	LRA	The state or local governmental authority, or the board of directors of an electric cooperative, responsible for the regulation or oversight of a utility.
Load Serving Entity	LSE	Any entity (or the duly designated agent of such an entity, including, e.g., a Scheduling Coordinator), including a load aggregator or power marketer, that (a) (i) serves End Users within the California ISO Balancing Authority Area and (ii) has been granted authority or has an obligation pursuant to California state or local

		law, regulation, or franchise to sell electric energy to End Users located within the California ISO Balancing Authority Area; (b) is a federal power marketing authority that serves End Users; or (c) is the State Water Resources Development System commonly known as the State Water Project of the California Department of Water Resources.
NERC Reliability Standards	NERC	The standards that have been developed by NERC and/or a Regional Entity, and have been approved by FERC, to ensure the reliability of the bulk power system. The NERC Reliability Standards set forth the specific requirements that responsible entities must perform with respect to the functions defined in NERC's Functional Model.
The Western Electricity Coordinating Council	WECC	WECC promotes bulk power system reliability and security in the Western Interconnection. WECC is the Regional Entity responsible for compliance monitoring and enforcement and oversees reliability planning and assessments. In addition, WECC provides an environment for the development of Reliability Standards and the coordination of the operating and planning activities of its members as set forth in the WECC Bylaws.