



RIVERSIDE PUBLIC UTILITIES

Board Memorandum

BOARD OF PUBLIC UTILITIES

DATE: APRIL 8, 2024

SUBJECT: 2023 INTEGRATED RESOURCE PLAN – REQUIRED BY SENATE BILL 350

ISSUE:

Consider approving and adopting the 2023 Integrated Resource Plan for Riverside Public Utilities as required by Senate Bill 350.

RECOMMENDATIONS:

That the Board of Public Utilities recommend that the City Council:

1. Approve and adopt the 2023 Integrated Resource Plan for Riverside Public Utilities; and
2. Direct staff to file the adopted 2023 Integrated Resource Plan (2023 IRP) and any applicable supporting material with the California Energy Commission within five (5) business days after adoption of the 2023 IRP.

LEGISLATIVE HISTORY:

On October 7, 2015, the California Legislature adopted Senate Bill (SB) 350, also known as the Clean Energy and Pollution Reduction Act of 2015, which established that a publicly owned utility (POU) with an annual electrical demand exceeding 700 gigawatt hours must, on or before April 30, 2019, have its governing board adopt an Integrated Resource Plan (IRP) and file this Plan with the California Energy Commission (CEC). Additionally, updated Plans must be developed, adopted, and filed with the CEC at least once every five years thereafter.

On September 30, 2017, the California Legislature adopted SB 338, which requires POU governing boards to consider in their IRP the role of existing renewable generation, grid operational efficiencies, energy storage, energy efficiency and distributed energy resources in meeting their energy and reliability needs during the hours of peak demand.

BACKGROUND:

Many utilities, including Riverside Public Utilities (RPU), have periodically developed IRPs as an industry best practice. An IRP is used to help guide a utility's long-term power procurement decisions to meet its customers' future peak load and system energy requirements. As part of the process of developing an IRP, a utility typically would examine both supply- and demand-side resources to identify one or more least-cost, least-risk future resource procurement scenarios that can be used to meet its expected future resource needs.

In 2008, the Board of Public Utilities (Board) approved and adopted RPU's 2008 IRP. In 2011, RPU acquired new state-of-the-art statistical modeling software to assist in analyzing and updating the previous IRP along with incorporating new regulatory mandates and constantly changing market designs. Staff completed most of the modeling and technical analyses in 2014, and in June and July 2015 the Board and City Council, respectively, approved and adopted the RPU 2014 Power Supply Integrated Resource Plan.

Later in 2015, the California Legislature adopted SB 350, which required that qualifying POU's adopt IRPs showing progress toward meeting the following goals outlined in Section 454.52(a)(1) (A-H) of the Public Utilities Code:

- a) Greenhouse gas (GHG) reductions of at least 40 percent from 1990 levels by 2030, as established (and periodically amended) by the California Air Resources Board;
- b) 50 percent eligible renewable energy resources by 2030;
- c) Fulfillment of the obligation to serve customers at just and reasonable rates, and to minimize the impacts on ratepayers' bills;
- d) Assurance of system and local reliability;
- e) Strengthened diversity, sustainability and resiliency of bulk transmission and distribution systems, as well as of local communities;
- f) Enhanced energy efficiency and demand-side energy management; and
- g) Minimization of localized air pollutants and other GHG emissions, with early priority on disadvantaged communities.

Beginning in 2017, SB 350 also required the CEC to review IRPs and provide recommendations to correct any deficiencies. The CEC formally adopted POU IRP Submission and Review Guidelines at their August 9, 2017, Business Meeting. On August 1, 2018, the CEC adopted a Second Edition of the POU IRP Submission and Review Guidelines to include the requirements of SB 338.

On September 10, 2018, the Governor signed into law the 100 Percent Clean Energy Act of 2018 (SB 100). This bill further increases the RPS goals of SBX1-2 and SB 350 by increasing the 33% RPS target by December 31, 2020, to be 44% by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. The current end goal of SB 100 is to have 100% of the state's retail electricity supply generated from a mix of RPS-eligible and zero-carbon resources by December 31, 2045. On August 5, 2022, the CEC issued a Revised Third Edition of the POU IRP Submission and Review Guidelines to include the requirements of SB 100.

Finally, the City's 2025 Strategic Plan, known as [Envision Riverside](#), identifies a clear vision for the future of Riverside's Economy, Community and Environment. The Envision Riverside 2025 Strategic Plan, adopted in October 2020, sets forth the six Strategic Priorities and associated Goals

of the City Council to advance Riverside’s potential and to frame the work efforts of staff through 2025. Within the Environmental Stewardship priority, the first foundational goal that was adopted was **Goal 4.1: Rapidly decrease Riverside’s carbon footprint by acting urgently to reach a zero-carbon electric grid with the goal of reaching 100% zero-carbon electricity production by 2040 while continuing to ensure safe, reliable, and affordable energy for all residents.**

DISCUSSION:

The 2023 IRP provides an intermediate- and long-term analysis of, as well as the types and timing related to, RPU’s acquisition of new supply and demand resources and their corresponding financial impacts on future projected power supply costs in the 2024-2045 timeframe. Additionally, the IRP also includes and discusses the following CEC-required topics: a) load forecasts; b) resource procurement plans (for achieving statutorily required GHG reductions); c) energy efficiency (EE) programs and services; d) forecasted future system and local reliability needs; e) GHG emissions estimates (for all analyzed procurement plans); f) retail rates; g) potential DER impacts on RPU’s distribution system; h) transportation electrification (TE) efforts and impacts; and i) localized air pollutants and disadvantaged communities.

Both intermediate-term (2024-2030) and long-term (2024-2045) time periods are analyzed in the 2023 IRP with respect to SB 350 requirements and CEC guideline topics, along with other relevant analyses and discussion pertinent to RPU’s planning efforts. The 2023 IRP presents these topics and analyses across 19 chapters as follows:

- 1) Introduction
- 2) RPU System Load & Peak Demand Forecasts
- 3) RPU Generation and Transmission Resources
- 4) RPU Existing Electric System
- 5) Important Legislation and Regulatory Mandates and CAISO Initiatives
- 6) Demand Side Management: Energy Efficiency, Fuel Substitution, and DR Resources
- 7) Market Fundamentals
- 8) Intermediate Term (Five-Year Forward) Power Resource Forecasts
- 9) GHG Emission Targets and Forecasts
- 10) Future Resource Adequacy Capacity Needs
- 11) Modeling Assumptions for Current and Future Generation Resources
- 12) Long-term Portfolio Analyses
- 13) Distribution System Studies of Distributed Energy Resource Impacts
- 14) Evaluating the Impact of Increasing Energy Efficiency Program Targets
- 15) Retail Rate Design
- 16) Transportation Electrification
- 17) Minimizing Localized Air Pollutants and GHG Emissions in Disadvantaged Communities
- 18) Potential Future Studies
- 19) Conclusion

The chapter organization and contents address the following broad themes: background information (Chapters 2-4), mandates and initiatives (Chapter 5), EE and DSM programs (Chapters 6 and 14), forward market views and intermediate term portfolio forecasts (Chapters 7-9), longer term resource planning issues (Chapters 10-12), preliminary distribution studies on TE/DER impacts (Chapter 13), and related IRP topics (rate design, TE efforts, disadvantaged communities, and IRP topics requiring further research: Chapters 15-18). In addition to addressing the required elements of SB

350 and the CEC guidelines, the IRP's analyses, findings, and recommendations are designed to assist RPU in continuing to provide the highest quality electric services at the lowest possible rates to proactively benefit our local community.

As part of the submission requirements to the CEC, a POU must submit an IRP filing consisting of the utility's IRP, supporting information (if applicable) and four standardized tables summarizing the following resource planning information: 1) capacity resource accounting; 2) energy balance; 3) RPS procurement; and 4) GHG emissions accounting. Upon receiving the IRP filing, the CEC will conduct a two-step review process – one for completeness, and the other for consistency with IRP requirements. In addition, the CEC will post the IRP filing on its website and accept public comment for 30 calendar days following the electronic filing. Any public comments received related to the consistency of the IRP may be considered by the CEC as part of its determination of consistency review.

During the CEC review, additional information may be requested of the POU. Upon completion of the review, the CEC will issue an Executive Director's determination stating if the IRP was consistent or inconsistent. If the IRP is determined to be inconsistent, then it will include recommendations to correct any deficiencies.

Additionally, RPU conducted two public community meetings to discuss the contents of the IRP and gather comments and feedback prior to this request for approval.

STRATEGIC PLAN ALIGNMENT:

RPU's 2023 IRP directly contributes to Strategic Priority 4, Environmental Stewardship Goals 4.1 and 4.6:

Goal 4.1: Rapidly decrease Riverside's carbon footprint by acting urgently to reach a zero-carbon electric grid with the goal of reaching 100% zero-carbon electricity production by 2040 while continuing to ensure safe, reliable, and affordable energy for all residents.

Goal 4.6: Implement the requisite measures to achieve citywide carbon neutrality no later than 2040.

The item aligns with EACH of the five Cross Cutting Threads as follows:

1. **Community Trust** – RPU is committed to transparency and accountability in its energy portfolio and planning efforts. Integrated Resource Plans are adopted and approved in a public process by the Board of Public Utilities and City Council to ensure transparency and community trust.
2. **Equity** – RPU's resource portfolio serves energy throughout the community. Through its ongoing strategic procurement of renewable and carbon-free resources, RPU is committed to ensuring that every member of the community has equal access to clean energy.
3. **Fiscal Responsibility** – RPU is committed to fiscal responsibility principles in its energy procurements and compliance. All prospective resources undergo a complete economic evaluation to ensure their cost-effectiveness in RPU's power resource portfolio and minimize impacts to the utility's cost of service.

4. **Innovation** – Staff keep up to date on the changing regulations and requirements for Integrated Resource Plans. RPU continuously evaluates the market viability and maturity of current and future renewable and carbon-free generation technologies (along with supporting energy storage technologies), incorporating them into its long-term planning where appropriate.
5. **Sustainability & Resiliency** – RPU's resource planning efforts are focused towards acquiring, managing, and maintaining sustainable and resilient sources of power for the benefit of the entire community.

FISCAL IMPACT:

There is no fiscal impact associated with this report.

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Attachments:

1. 2023 Integrated Resource Plan
2. Presentation