RIVERSIDE PUBLIC UTILITIES

Board Memorandum

BOARD OF PUBLIC UTILITIES - ELECTRIC COMMITTEE **DATE: MAY 11, 2022**

SUBJECT: INTERMOUNTAIN POWER PROJECT FUEL CONSTRAINT UPDATE

ISSUE:

Receive an update on the recent fuel shortage affecting the Intermountain Power Project and the resulting financial impacts to Riverside Public Utilities.

RECOMMENDATION:

That the Board of Public Utilities Electric Committee receive and file an update on the recent fuel shortage affecting the Intermountain Power Project and the resulting financial impacts to Riverside Public Utilities Power Supply budget.

BACKGROUND:

In 1980, the City of Riverside (Riverside) entered into the Intermountain Power Project (IPP) Power Sales Contract with the Intermountain Power Agency for the purchase of baseload coal-fired electric power and the associated transmission services. IPP consists of 1,800 megawatts (MW) of coal generation located near Delta, Utah and two (2) transmission lines, the Southern Transmission System and Northern Transmission System. Riverside's current entitlement share of IPP generation is 7.617%, or approximately 136 MW. The Los Angeles Department of Water and Power (LADWP) is the Operating Agent for the generating station and transmission facilities. The IPP Power Sales Contract will terminate on June 15, 2027.

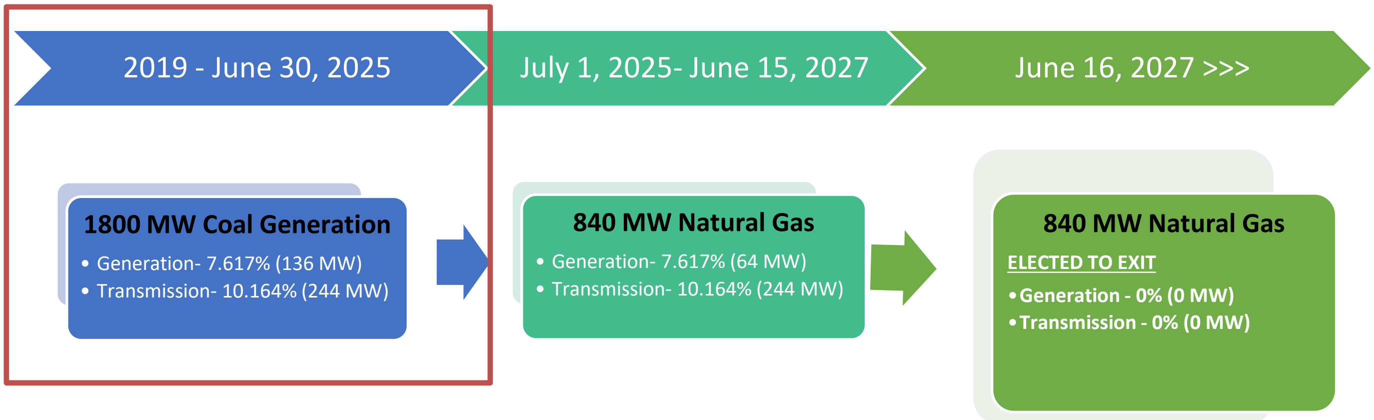
On June 16, 2015, the City Council approved the IPP Second Amendatory Power Sales Contract and the Renewal Power Sales Contract, which allowed IPP to replace the coal units with a 1,200 MW natural gas combined cycle facility, the IPP Repower Project, with an anticipated completion date of June 30, 2025.

On September 11, 2018, the City Council approved "Alternative Repowering" of the IPP Repower Project, which reduced the design capacity of the future gas plant from 1,200 MW to 840 MW.

On May 7, 2019, the City Council approved the termination of the Renewal Power Sales Contract, effective on November 1, 2019, and authorized the City of Riverside to exit from the IPP Repower Project on June 15, 2027, once the current Power Sales Contract expires. The three phases of the IPP Project are shown in Figure 1.

In the current phase shown in blue and until the IPP Repower Project reaches commercial operation in 2025, Riverside is obligated to continue purchase power from the existing coal units. With a maximum entitlement share of 136 MW, IPP remains to be the single largest resource in Riverside's portfolio, and the City relies heavily on this resource for both energy and capacity needs to keep the cost of serving electricity low.

Figure 1. The three phases of the IPP project.



<u>DISCUSSION</u>:

FUEL SHORTAGE AND PLANT DERATE

Fuel management is critical to IPP operation and has never been an issue in its operational history. However, in mid-September of 2021, the IPP Operating Agent, LADWP, announced that the Project was facing an imminent coal supply shortage due to lack of new coal contracts and disruptions in coal deliveries by Union Pacific Railroad. Union Pacific and the trucking industry in Utah have reportedly been experiencing the same labor constraints that have been seen elsewhere in the U.S. economy.

With Union Pacific's missed deliveries during the first eleven days in October 2021, the IPP Operating Agent initiated a plant derate starting on October 15th to control the diminishing coal stockpile on site and prevent it from falling below the minimum threshold of 500,000 tons. The plant was derated to 540MW, and Riverside's share decreased to 41MW.

The train deliveries did not significantly improve in the months of November and December. As a result, the Operating Agent shut down one of the IPP units starting on January 1st, 2022, while leaving the other unit at a minimum capacity of 270MW, further reducing Riverside's share to 20MW. All IPP Purchasers supported this drastic measure in order to conserve and build up the limited coal supply (702,700 tons as of January 1, 2022). One IPP unit is expected to remain offline through June 2022, so that the participants can accumulate sufficient fuel to run both units at near-full capacity during the critical summer months starting in July. The highest prices for both energy and capacity have tended to occur in July, August and September in the California market, particularly in recent years. Thus, having IPP available at full capacity in the third quarter is critical for the Utility since this energy serves as a significant financial hedge, thereby limiting the Utility's exposure to more expensive market power and Resource Adequacy (capacity) costs.

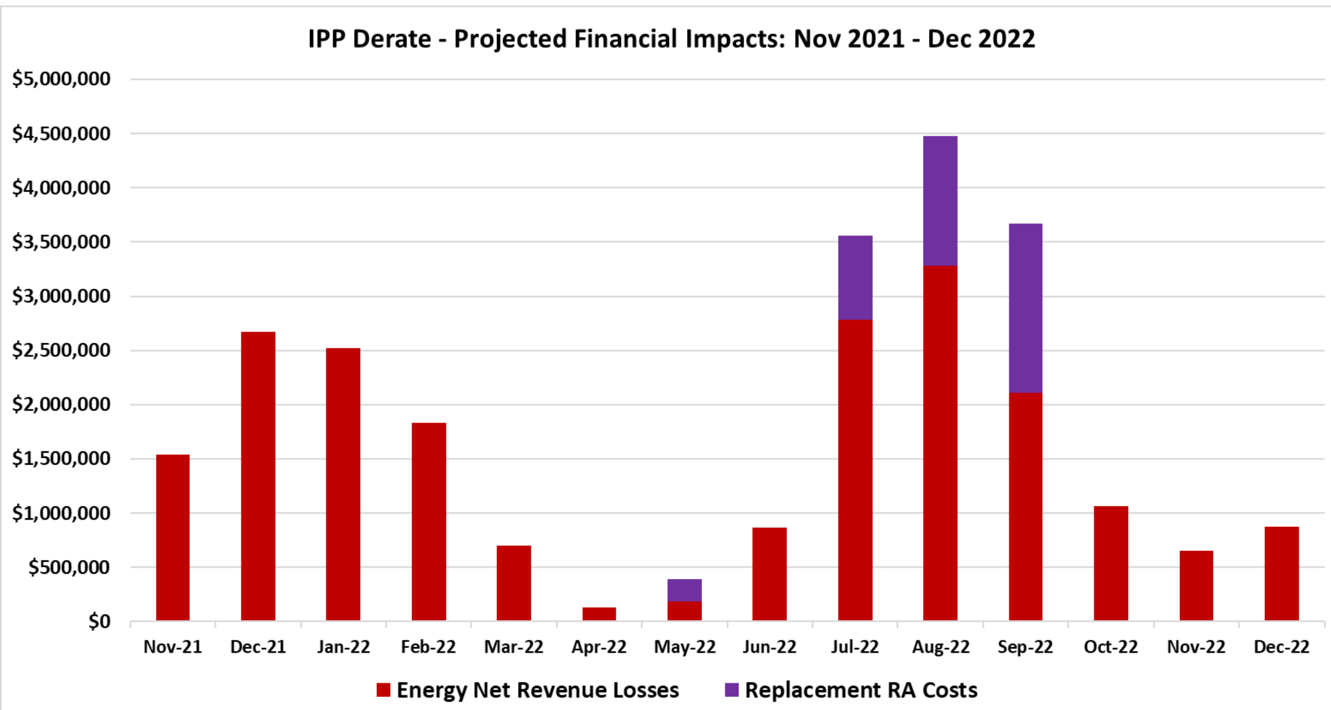
To restore IPP's capacity in the third quarter, a target coal inventory of approximately 1.4 million tons needs to be achieved by end of June 2022. As of March 28, the coal inventory on site was at 1,086,400 tons. If current delivery trends continue, the Operating Agent expects to reach the

1.4 million ton target by or shortly before the end of June.

FINANCIAL IMPACTS TO RIVERSIDE

Unfortunately, the forced derating of IPP since October 15, 2021, has led to unavoidable financial impacts to RPU's Power Supply budget. ROSA staff performed a detailed production cost modeling simulation study back in October that forecasted the expected net revenue impacts associated with an extended IPP derate (e.g., assuming both coal units remained derated through calendar year 2022). Figure 2 below summarizes the expected increased potential energy and capacity costs obtained from this study. Not surprisingly, the most significant financial impacts were projected to occur in the summer of 2022. However, material financial impacts were also forecasted for November 2021 through February 2022, due to high market energy costs.

Figure 2. Projected financial impacts from an extended IPP derate.



Average day-ahead market energy prices during this recent winter season were unfortunately higher than normal (primarily due to atypically high natural gas prices). As such, RPU has been experiencing energy costs above budget forecasts since November, due to our inability to dispatch less expensive IPP energy during hours experiencing high market energy prices. As shown in Table 1, RPU's actual energy costs have exceeded their budget forecasts by $8.62 million from November through February, respectively. Additionally, March energy costs are currently forecasted to exceed their budgeted value by approximately $800,000. Staff estimates that about 80% to 90% of these excess costs can be directly attributed to the IPP derate issue.

Table 1. Budget versus actual Power Supply energy costs since November 2021

Month	Budget ($)	Actual ($)	Over Budget ($)
November 2021	$8,087,000	$9,987,900	$1,900,900
December 2021	$8,109,300	$10,521,900	$2,412,600
January 2022	$8,502,900	$10,565,700	$2,062,800
February 2022	$7,043,600	$9,291,400	$2,247,800
March 2022	$8,592,100	TBD	TBD
April 2022	$8,784,000	TBD	TBD
May 2022	$9,263,500	TBD	TBD

Staff does not currently expect any material excess energy costs to accumulate in either April or May 2022, due to lower expected market energy prices. Additionally, RPU has already purchased forward energy products to cover the anticipated lost IPP energy during the months of June, October, November, and December 2022. Finally, staff anticipates that sufficient coal will be on hand to run both units at near-full capacity during the critical summer months (e.g., July through September). Thus, staff is cautiously optimistic that the ongoing financial impacts from this IPP derate event will be far less significant than what has occurred to date, at least for the remainder of calendar year 2022.

Longer term, the ability to operate the IPP facility with full dispatch flexibility will depend upon 1) the Operating Agent's ability to source reasonably priced future coal contracts, and 2) the improved delivery performance of both Union Pacific Railroad and the trucking companies. Currently, it is difficult to anticipate the potential longer-term outcomes of either of these issues, due to the significant and persistent supply chain disruptions still occurring throughout the United States. Unfortunately, both issues are primarily outside the control of Operating Agent; these regional, macro-economic issues will most likely require more time to sort out.

For now, the IPP participants are actively planning for the potential need to operate the remaining few years of the IPP coal facility under a "fuel-restricted" dispatch scenario. Methods for implementing various restricted dispatch scenarios are still being developed; as such, potential future financial impacts remain highly uncertain. However, the severity of these potential future impacts will ultimately depend upon how much additional coal can be sourced and delivered to the facility. Once a likely future coal delivery scenario can be reasonably ascertained, staff will propose and implement a fuel-restricted dispatch strategy that minimizes potential future excess energy costs to the greatest extent possible (and incorporate such anticipated excess costs into future Power Supply budgets).

STRATEGIC PLAN ALIGNMENT:

This item contributes to the **Strategic Priority 5 – High Performing Government** and **Goal 5.2** - Utilize technology, data and process improvement strategies to increase efficiencies and guide decision making; and **Goal 5.4** - Achieve and maintain financial health by addressing gaps between revenues and expenditures and aligning resources with strategic priorities.

This item aligns with each of the five Cross-Cutting Threads:

1. **Community Trust** – This staff report presents a timely and transparent update on the recent fuel shortage issue affecting the Intermountain Power Project and quantifies the resulting financial impacts to Riverside Public Utilities Power Supply budget.

2. **Equity** – RPU is committed to managing its power supply contracts to ensure that all RPU ratepayers benefit from responsibly sourced, reliable power obtained at the lowest possible cost.

3. **Fiscal Responsibility** – Staff is actively working to mitigate potential future financial impacts associated with this IPP derate issue to the greatest extent possible.

4. **Innovation** – Staff have been actively engaged with the IPP Operating Agent to design and implement optimal future fuel allotment strategies for various potential fuel-restricted dispatch scenarios.

5. **Sustainability & Resiliency** – Staff is committed to managing the remaining years of this IPP contract in a sustainable, resilient, and financially responsible manner.

FISCAL IMPACT:

There is no fiscal impact directly associated with this staff report.

Due primarily to the ongoing IPP derate event, FY21/22 Power Supply costs are anticipated to exceed their budgeted levels by approximately $9.4 to $9.8 million. However, staff does not anticipate the need for a supplemental budget request, since the Utility expects to realize budgetary savings greater than this amount within other Electric budget categories (e.g., lower than expected personnel costs and CIP expenditures).

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Certifies availability of funds: Edward Enriquez, Chief Financial Officer/City Treasurer

Attachment: Presentation