



IPP FUEL SHORTAGE UPDATE & IMPACTS TO RIVERSIDE

Riverside Public Utilities

Board of Public Utilities – Electric Committee
May 11, 2022

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INTERMOUNTAIN POWER PROJECT (IPP)



1. Located near Delta, Utah
2. 36 Participants (6-California, 30-Utah)
3. Total 1800 MW Capacity
4. Riverside existing share 7.617% - 136 MW
5. Current Power Sales Contract expires on June 15, 2027
6. SB1368 prohibits CA purchasers from renewing IPP as a coal-fueled generator, since CO₂ emissions are over 1,110 lb/MWh



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BACKGROUND-REVIEW

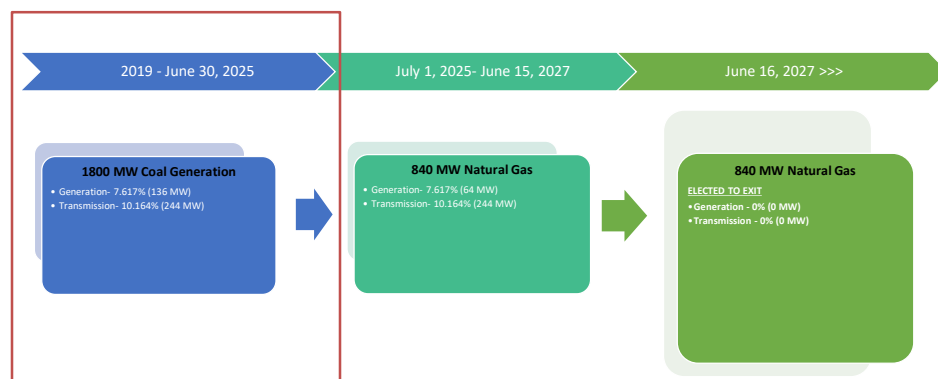
1. On June 16, 2015, the City Council approved the IPP Second Amendatory Power Sales Contract and the Renewal Power Sales Contract, which allowed IPP to replace the coal units with a 1,200 MW natural gas combined cycle facility, the IPP Repower Project, with an anticipated completion date of June 30, 2025.
2. 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.
3. 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.



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BACKGROUND-REVIEW



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FUEL CONSTRAINT EVENTS

September 13, 2021 – IPP Operating Agent first announces coal supply shortage in Q4/2021 and possibly through 2022, due to lack of new coal contracts and reductions in Union Pacific train deliveries.

September 27, 2021 – IPP Operating Agent announces execution of three new coal purchases, totaling 470,000 tons. But missed delivery schedules are also getting worse (e.g., occurring more frequently).

October 13, 2021 – IPP Operating Agent announces the need for an imminent plant derate starting on October 15, 2021 due to Union Pacific's missed deliveries during first 11 days of Oct. (Without derate, coal inventory would have fallen below the minimum allowable 500,000 tons.)



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FUEL CONSTRAINT EVENTS

December 20, 2021 – Due to continuing restricted train deliveries, IPP Operating Agent proposes to shut down one unit beginning 01/01/22 through 6/30/22 in order to maximize build-up of coal reserves. The 2nd unit is expected to run at minimum (270MW) during the same period. All participants unanimously agreed to this new strategy, subject to being able to bringing the 2nd unit back on-line sooner if the volume of coal deliveries significantly improve.

January 30, 2022 – As of end of January, the coal inventory was at **779,948** tons.



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CURRENT STATUS

1. IPP Unit 1 is currently derated to 270 MW and Unit 2 is completely off-line. Most likely, Unit 2 will remain off-line through June 30, 2022.
2. CAISO purchasers have already experienced material financial impacts from this derate due to high winter energy prices.
3. All purchasers are still primarily concerned about plant capability for Q3/2022. However, as of March 28, 2022 the coal inventory had increased to **1,086,400** tons and the Operating Agent expects to receive enough coal by June 30, 2022 to allow for both units to dispatch normally during the summer.



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FORECASTED IMPACTS TO RIVERSIDE

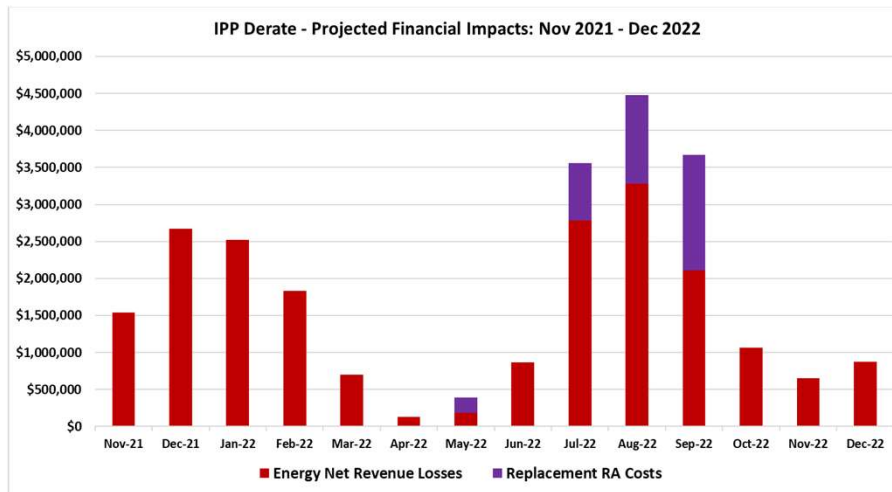
1. The forced derating of IPP since October 15, 2021 has led to unavoidable financial impacts to RPU's Power Supply budget.
2. ROSA staff performed a detailed production cost modeling simulation study back in October that forecasted the expected net revenue impacts associated with an extended IPP derate (through calendar year 2022).



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FORECASTED IMPACTS TO RIVERSIDE



Most significant financial impacts:
07/22-09/22

Additional material financial impacts:
11/21-02/22



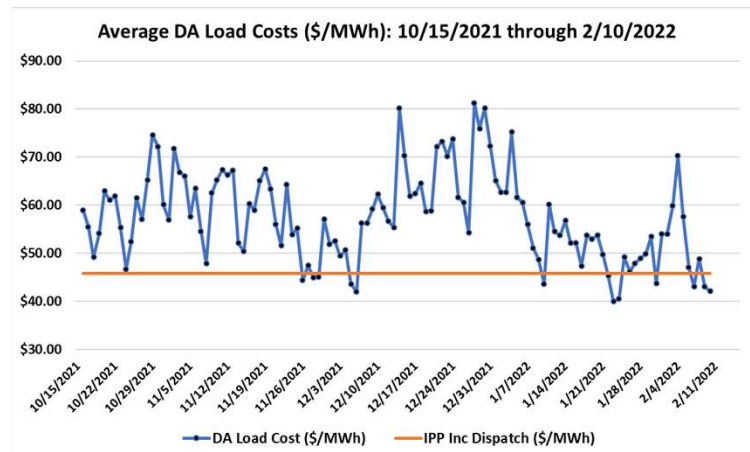
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AVERAGE DA LOAD COSTS

Average winter day-ahead market energy prices have been higher than normal.

RPU has experienced energy costs > budget forecasts since November, due to our inability to dispatch less expensive IPP energy during hours experiencing high market energy prices.



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OBSERVED FINANCIAL IMPACTS TO DATE

RPU energy costs in excess of budget forecasts since November 2022

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



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EXPECTED REMAINING 2022 IMPACTS

1. Staff does not currently expect material excess energy costs to occur in either April or May 2022, due to lower expected market energy prices.
2. RPU has already purchased forward energy products to cover the anticipated lost IPP energy during the months of June, October, November and December 2022.
3. The Operating Agent 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).
4. Staff is cautiously optimistic that the ongoing financial impacts from this IPP derate event will be less material than what has occurred to date, at least for the remainder of calendar year 2022.



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FUTURE OUTLOOK

Year 2022-2024:

There are enough current coal contracts on hand to support up to a 45% plant CF, assuming that the contracted coal can be delivered on time.

Year 2025:

No coal contracts are currently in place for 2025; LADWP expects Repowering project to come online early in 2025.

Continuing Issues:

Union Pacific's delivery performance is still the **primary problem**, and truck deliveries are also failing to meet their schedules; both caused by continuing labor shortages and supply-chain issues.

If more coal contracts need to be purchased in upcoming years, any elevated coal prices will need to be reflected in future IPP budgets.



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FUTURE IPP OPERATION

1. IPP participants are currently planning for the potential need to operate the remaining few years of the IPP coal facility under a "fuel-restricted" dispatch scenario.
2. Methods for how to implement various restricted dispatch scenarios are still being developed; as such, potential future financial impacts remain highly uncertain.
3. 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 (and incorporate such anticipated excess costs into future Power Supply budgets).



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STRATEGIC PLAN ALIGNMENT



No. 5: High Performing Government

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.

Cross-Cutting Threads



Community Trust



Fiscal Responsibility



Sustainability &
Resiliency



Equity



Innovation



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RECOMMENDATION

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



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