



RESOURCE ADEQUACY PURCHASE AND FINANCIAL ENERGY SETTLEMENT AGREEMENT FROM THE BALDY MESA C FACILITY

Public Utilities Department

City Council
February 25, 2025

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BACKGROUND

1. Resource Adequacy (RA) describes an electric utility's procurement of sufficient power supply capacity to serve its customers' projected electricity requirements, plus an additional amount to be held in reserve for unanticipated circumstances
2. RA Program requirements are governed by the CAISO Tariff
 - a. CAISO Tariff provides an option for the local regulatory authorities of publicly owned utilities to adopt their own guidelines that meet certain criteria



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RPU RA PROGRAM HISTORY

1. May 23, 2006 – City Council established its own RA Program accordance with the CAISO Tariff
2. June 5, 2012 – City Council approved a revised RA Program which reflected the current market conditions and ensured efficient implementation while enhancing reliability
3. August 18, 2020 – City Council approved specific revisions to the RA Program to eliminate provisions that were no longer applicable and facilitated the ability to acquire less expensive RA



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RPU RA PROGRAM HISTORY

4. RPU meets most of its RA requirements by purchasing the capacity attributes from generation resources under long term power purchase agreements (PPAs). However, RPU still needs to buy additional RA for non-winter months, with most of this need occurring during July, August, and September
5. This additional RA need has grown over time as the City has procured more wind and solar resources, since these resources do not provide the same amounts of qualifying RA
6. California's accelerated retirements of natural gas resources has now created a supply shortage of RA



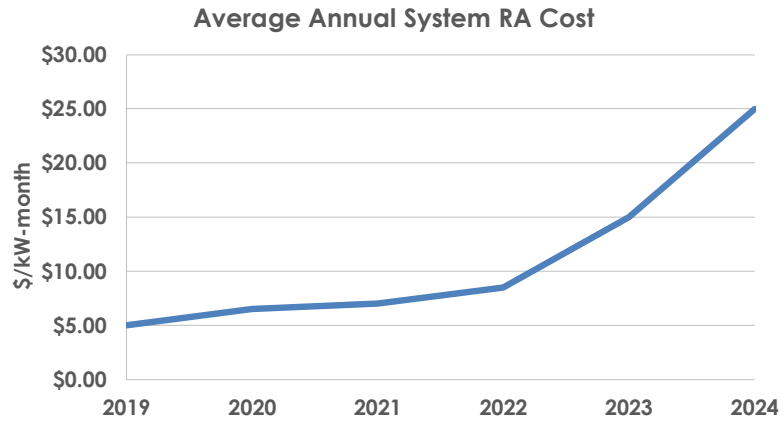
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SOCAL SYSTEM RA PRICES SINCE 2019

| Year | Q3 Marks – System RA (\$/kW-month) |
|------|------------------------------------|
| 2019 | Under \$10.00 |
| 2020 | \$10.00-\$15.00 |
| 2021 | \$15.00-\$20.00 |
| 2022 | \$20.00-\$40.00 |
| 2023 | \$35.00-\$55.00 |
| 2024 | \$65.00-\$100.00 |



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RECENT RPU RA PRICE DATA

| Year | Market Operations RA Request for Offers Responses | Average Price |
|------|---|------------------|
| 2022 | 7 Offers | \$6.65/kW-month |
| 2023 | 4 Offers | \$13.06/kW-month |
| 2024 | 2 Offers | \$35.53/kW-month |

1. RPU staff have witnessed increasing RA cost pressures firsthand in the merchant responses to Market Operations RA Request for Offers (RFOs)
2. While the exorbitant price increases are showing signs of stabilizing, staff expect that the CA merchant capacity market may remain excessively volatile for the next 2-5 years



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BALDY MESA C STORAGE AGREEMENT

1. In 2023, staff began looking for Battery Energy Storage solutions to address the following concerns:
 - RPU has a growing need for RA
 - RA prices continue to increase
 - RPU's sustainability and carbon reduction goals
2. In July 2024, RPU executed its first long-term RA contract with Vesi 15, LLC:
 - 15-Year Agreement for 80 MWs of BESS Capacity
 - Replaces 59% of the RA capacity that Riverside will lose after the retirement of Intermountain Power Project (IPP) in 2027
3. This proposed Baldy Mesa C RA and Energy Settlement Agreement is:
 - Located in Adelanto, CA
 - 50 MW/ 200 MWh of RA
 - Effectively replace an additional 50 MW (37%) of the retiring IPP RA



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AGREEMENT TERMS

1. **Contract Price:** \$8/kW-month for RA, \$9/kW-month for Energy hedge, fixed for 15 years
2. **Monthly Energy Settlement:**
 - a. Uses each month's four highest and five lowest Day Ahead index prices to offset the fixed price \$9/kW-month hedge payment
 - b. Should effectively lower the total cost of this Agreement
3. **Guaranteed Commercial Operation Date:** March 1, 2027
 - a. Failure to achieve commercial operation by March 1st will result in liquidated damages of \$30,000/per day to RPU.
 - b. Failure to achieve commercial operation by the Outside Commercial Operation Date – September 1, 2027; RPU has the right to terminate



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AGREEMENT TERMS

4. **Delivered Product:** RA attributes include both System RA and Flexible RA benefits.
5. **Resource Adequacy Guarantees:**
 - a. Provides RA benefits throughout the term of the Agreement
 - b. Failure to deliver RA benefits could result in the payment of liquidated damages
6. **Decommissioning Costs:** RPU has no responsibility or liability for any decommissioning or demolition costs of the Facility



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AGREEMENT TERMS

7. **Project Development Security:** Within 10 days of contract execution provide \$5,000,000 (\$100,000 per MW of installed capacity)
8. **Project Delivery Term Security:** Within 10 days of COD provide \$6,000,000 (\$120,000 per MW of storage contract capacity)



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FINANCIAL ASSESSMENT – RA CAPACITY VALUE

1. Average annual RA Capacity cost for the Baldy Mesa C Project is \$8.00/kW-month, fixed for 15 years
 - a. Approx \$4.09M annually. Total cost decreases as available capacity decreases (over time).
2. Normalized RA Capacity value in the market is forecasted to be \$10.06/kW-month
 - a. Approx \$5.14M annually

Estimated Savings: \$1.05M annually



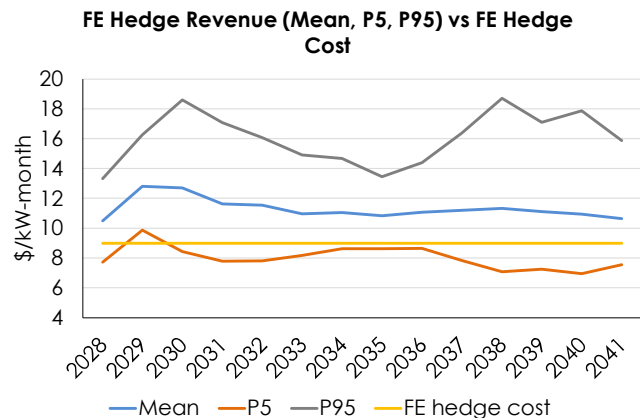
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FINANCIAL ASSESSMENT – FINANCIAL HEDGE

1. The Financial Energy hedge cost for this agreement is \$9.00/kW-month
 - Average cost \$4.60M annually
2. The expected revenue from this Financial Energy hedge is expected to be ~ \$11.06/kW-month
 - Approx revenue \$5.66M annually



Estimated Net Revenue: \$1.06M annually



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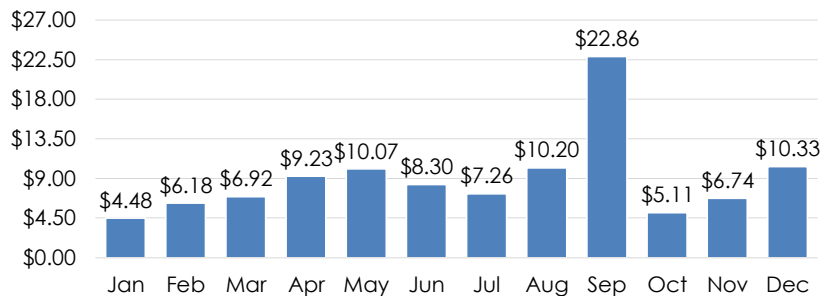
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HISTORICAL ASSESSMENT – FINANCIAL HEDGE

Top4-Bottom5 annual revenue streams (\$/kW-month) for years 2019-2023 at the SCE Roadway interconnection point

| Year | 2019 | 2020 | 2021 | 2022 | 2023 |
|-------------|--------|--------|--------|--------|--------|
| \$/kW-month | \$4.40 | \$6.06 | \$6.30 | \$8.99 | \$8.35 |

2022 Monthly FE Hedge Values (\$/kW-mo): SCE Roadway



Financial hedge will settle monthly.

Will help protect RPU revenue stream in months exhibiting significant intraday energy price deviations.



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FINANCIAL ASSESSMENT – COMBINED

1. \$8.00/kW-month RA cost is materially lower than the anticipated annual value of future system RA
2. The assessment of the Financial Energy Hedge suggests the hedge instrument should usually pay out a gross revenue greater than the annual hedge cost (and thus generate a net revenue stream)
3. Overall, the net project cost for the RA from this facility is projected to decrease to \$5.94/kW-month. This equates to an annual savings of approximately \$2.11M in Power Supply capacity costs



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STRATEGIC PLAN ALIGNMENT



Strategic Priority 2 – Community Well-Being

Goal 2.6 - Strengthen community preparedness for emergencies and disruptive events to ensure effective response and recovery.

Cross-Cutting Threads



Community Trust



Equity



Fiscal Responsibility



Innovation



Sustainability & Resiliency



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RECOMMENDATIONS

That the City Council:

1. Approve the Resource Adequacy Purchase and Financial Energy Settlement Agreement with Baldy Mesa C, LLC for 50 megawatts of battery energy storage capacity from the Baldy Mesa C Facility for a term of fifteen years and an estimated initial annual net capacity cost of \$4,800,000; and
2. Authorize the City Manager, or designee, to execute the Resource Adequacy Purchase and Financial Energy Settlement Agreement and all documents necessary to administer the Agreement including the ability to make non-substantive changes, as well as to execute future amendments to the Resource Adequacy and Financial Energy Settlement Agreement under terms and conditions substantially similar or superior to the Resource Adequacy Purchase and Financial Energy Settlement Agreement or, if needed, to terminate the Resource Adequacy Purchase and Financial Energy Settlement Agreement in accordance with Agreement terms and conditions.



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