

# Agenda Report

January 23, 2023

**TO:** Honorable Mayor and City Council

**THROUGH:** Municipal Services Committee (January 17, 2023)

**FROM:** Water and Power Department

**SUBJECT:** **AUTHORIZATION TO ENTER INTO A 10-YEAR POWER SALES CONTRACT WITH SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY FOR GEOTHERMAL ENERGY FROM CALPINE GEYSERS, LLC FOR THE WATER AND POWER DEPARTMENT**

## **RECOMMENDATION:**

It is recommended that the City Council:

1. Find that the proposed action is exempt from the California Environmental Quality Act ("CEQA") pursuant to State CEQA Guidelines Section 15061(b)(3) (Common Sense Exemption [formerly the General Rule]); and
2. Authorize the City Manager to enter into a 10-year contract with Southern California Public Power Authority ("SCPPA") for the purchase of geothermal energy and capacity from Calpine Geysers, LLC in an amount not to exceed 10 megawatts ("MW") for the first two years and 35 MW for the remaining 8 years beginning in January 2025 for a total not-to-exceed contract value of \$188,000,000; Neither Competitive Bidding nor Competitive Selection are required pursuant to City Charter Section 1002(H) and Pasadena Municipal Code Section 4.08.049(A)(3), contracts with other governmental entities.

## **EXECUTIVE SUMMARY:**

Senate Bill ("SB") 100 (2018) requires that 60 percent of retail electricity sales be derived from renewable resources by 2030, with the goal of transitioning to 100 percent carbon-free delivered energy by 2045. To date, Pasadena Water and Power ("PWP") has consistently exceeded the Renewable Portfolio Standard ("RPS") and carbon reduction targets, focusing on resources that are best suited to meet Pasadena's energy needs.

The Calpine Geysers Geothermal Facility ("Calpine Geysers Project") is an existing development located in Sonoma, California with an installed capacity of 725 MW of



geothermal generation. The Calpine Geysers Project has been operating continuously since it started operations in May 1980.

Through an agreement with SCPPA, a Joint Powers Authority and governmental entity comprised of eleven municipal utilities (including PWP) and one irrigation district, Pasadena would receive up to 10 MW of the capacity generated by the Calpine Geysers Project beginning on January 1, 2025, increasing to 35 MW beginning January 1, 2027.

In addition to augmenting PWP's RPS portfolio to help achieve state and local targets, the Calpine Geysers Project will also support reliability by providing approximately 8.9 MW of Resource Adequacy ("RA") in years 2025 and 2026, increasing to 31.2 MW from 2027 through 2034. This RA will partially offset the 108 MW capacity that will be eliminated with the termination of Pasadena's interest in the Intermountain Power Project ("IPP") in June 2027.

The proposed contract will help meet future RPS requirements in alignment with the City of Pasadena's ("City") RPS Procurement Plan and RPS Enforcement Program (collectively, "Pasadena RPS Policy"), which was approved by the City Council on December 10, 2018.

#### **BACKGROUND:**

In 2018, the City Council approved the Power Integrated Resource Plan ("IRP"), which includes a commitment to remove carbon resources from PWP's energy resource portfolio. A key component of the IRP is the termination of PWP's 108 MW interest in the IPP, effective June 2027. In addition, other energy resource contracts representing at least 40 MW are set to expire by the end of 2030, making it imperative to secure replacement renewable capacity.

California has set aggressive RPS and greenhouse gas emission reduction goals. SB 350 (2015) requires that 65 percent of all renewable energy contracts be long-term (at least 10 years in duration) and represent a diverse set of resources and resource types. Additionally, SB 100 (2018) requires that 60 percent of retail sales be served by renewable resources by 2030, with a goal of 100 percent carbon-free delivered energy by 2045. To replace the capacity represented by IPP and other expiring contracts, PWP plans to procure a mix of short and long-term renewable energy products that support reliability, meet future state compliance requirements, and limit potential exposure to long-term stranded investments.

#### ***Calpine Geysers Project Selection Process***

On January 23, 2022, SCPPA issued a Request for Proposals ("RFP") through its website for Renewable Energy Resources and Energy Storage Solutions and continued to accept responses through December 31, 2022. As part of an evaluation process which included participation by PWP stakeholders, over 20 proposals were considered based on criteria defined on the RFP that focuses on resource type and location, electricity reliability, contract duration, and comparability with existing member contracts.



Of the geothermal projects, the proposal submitted by Geyser Power LLC for the Calpine Geysers Project (with whom SCPPA will be contracting) offered the most competitive price and was ultimately determined to be the most responsive because it qualifies for RPS compliance and will provide Resource Adequacy ("RA") capacity of over 8.9 MW for the years 2025 and 2026, and 31.2 MW from 2027 through the end of the contract in 2034 to help meet the requirements set by the California Independent System Operator. PWP is not aware of any local businesses that develop utility-scale renewable energy projects with associated environmental attributes and therefore did not conduct any local outreach.

Due to its Northern California location, which is electrically remote from PWP's service area, the Calpine Geysers Project may be associated with an increased risk of transmission congestion and ultimately higher transmission costs. Therefore, the proposed project includes a separate cost for congestion mitigation.

The prices for the geothermal energy and associated environmental attributes and transmission costs are provided in Table 1. Delivery of power will begin on January 1, 2025, at the time that IPP transitions from coal to natural gas and PWP's energy deliveries will be reduced by 50 percent. The Calpine Geysers Project will also qualify as a long-term contract for RPS compliance purposes.

The annual costs of this contract will be incorporated into future PWP budgets as part of PWP's overall annual electricity resource costs. During the annual budget development process, and in consideration of the five-year outlook, staff will adjust for multiple changing cost and revenue factors and present a balanced annual budget for the City Council's consideration.

Although no rate adjustments are recommended as part of this action, staff will evaluate PWP's overall costs, including those representing replacement of expiring energy contracts. Staff will return to the City Council, if necessary, with any proposed rate adjustments to address revenue requirements not covered by current rates.

**Table 1: Calpine Geysers Project -- Estimated Annual Costs for PWP**

	2025 – 2027	2027-2034
Price of Energy (geothermal) (\$/MWh)	\$79.50	\$79.50
Capacity of Project (MW)	10	35
Transmission Cost (\$/MWh) Not Included in Annual Cost	\$2	\$2
Annual Cost (\$)	\$6,267,780	\$21,937,230

*\*Based on 8,760 hours per year with a 90 percent capacity factor. The cost over the course of the contract is estimated to be approximately \$188 million.*

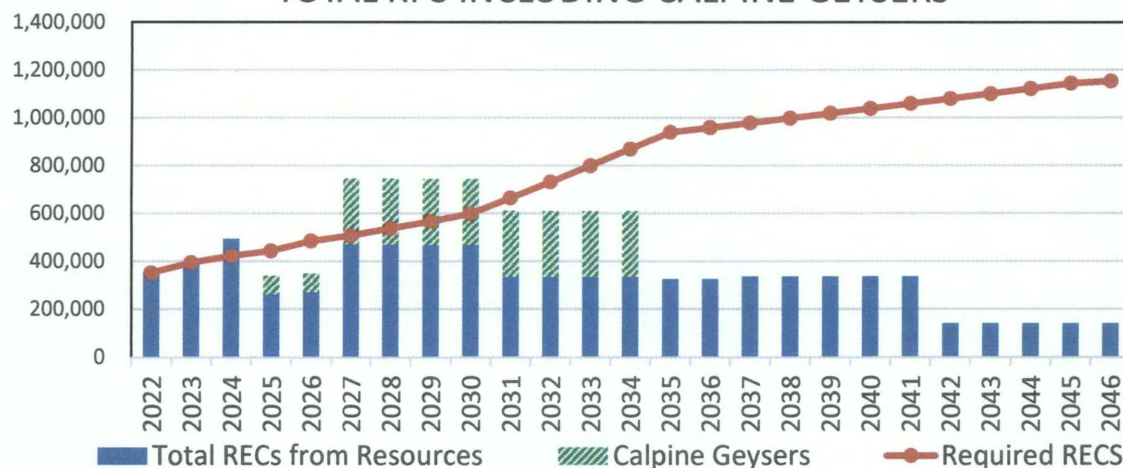
It is respectfully requested that a 10-year contract be approved with SCPPA for Pasadena's share of the Calpine Geysers Project, which will deliver 10 MW for the first two years beginning on January 1, 2025 and increases to 35 MW for the final eight years through 2034. The price per MWh will remain the same during the length of the contract

at \$79.50 per MWh. This contract also references a transmission charge of \$2 per MWh that PWP will absorb as part of its regular transmission costs.

***Projected RPS Impact of the Calpine Geysers Contract on the PWP RPS Energy Portfolio***

The Calpine Geysers Project will provide PWP with approximately 78,840 MWh of Renewable Energy Credits ("RECs") from January 1, 2025 through 2026, increasing to 275,940 MWh from January 1, 2027 through the end of the contract in 2034. This will fulfill 43 percent of PWP's REC deficit in 2025 and over 750 percent starting in 2027, safeguarding against shortages in future years. Figure 1 depicts PWP's RPS needs and additional requirements for each calendar year through 2046.

**Figure 1: Pasadena's Projected RPS Procurement Need by Calendar Year**  
**TOTAL RPS INCLUDING CALPINE GEYSERS**

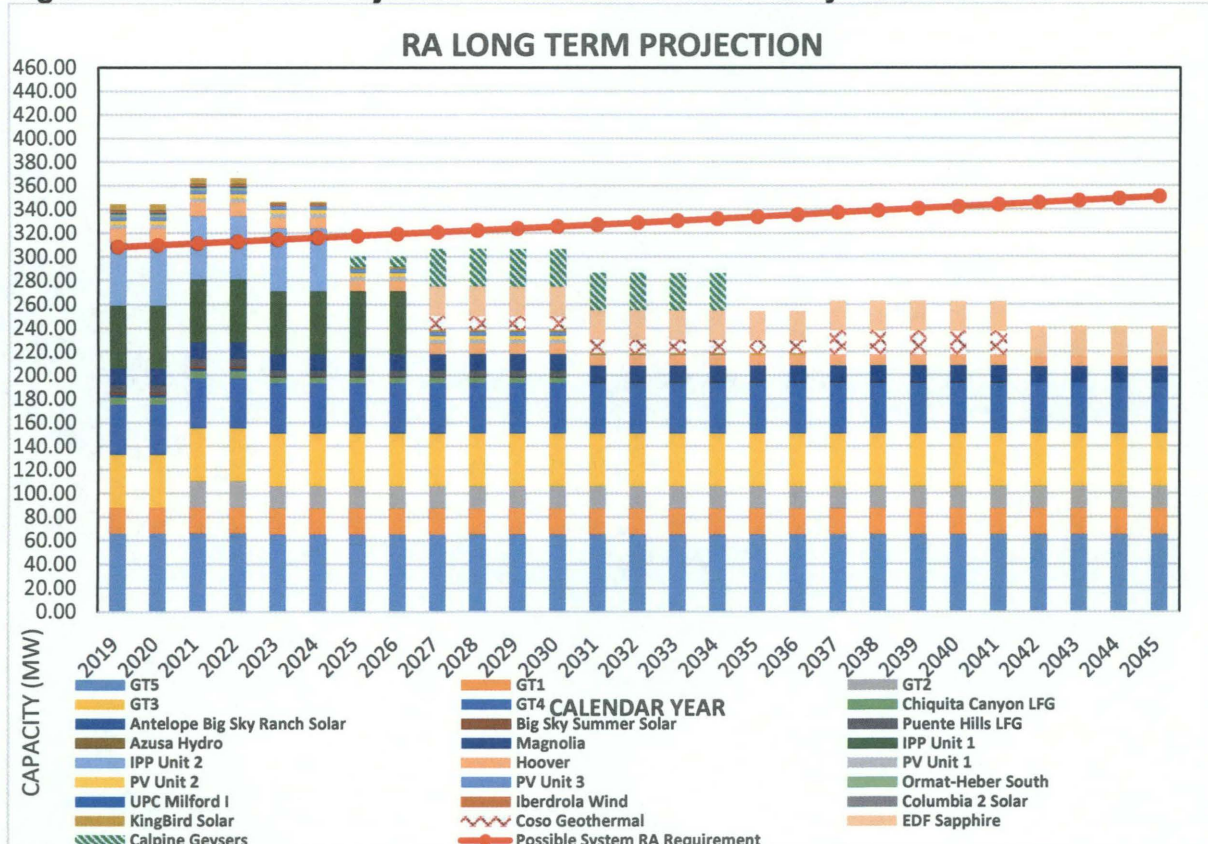


The Calpine Geysers Project will provide PWP with approximately 8.9 MW of RA for the first two years from January 1, 2025 through 2026, increasing to 31.15 MW of RA from January 1, 2027 through the end of the contract in 2034. This will fulfil 32 percent of the RA deficit in 2025, increasing to 44 percent beginning in 2027.

Figure 2 depicts Pasadena's RA position through 2046.



**Figure 2: Pasadena's Projected RA Procurement Need by Calendar Year**



### **COUNCIL POLICY CONSIDERATION:**

The Calpine Geysers Project, which supports an increase in renewable energy resources and reduction in greenhouse gas emissions, is consistent with the City's Urban Environmental Accords -- specifically, Action 1, Renewable Energy; Action 2, Energy Efficiency; and Action 3, Climate Change. The project also supports the City Council-approved Power Integrated Resource Plan.

### **ENVIRONMENTAL ANALYSIS:**

The proposed contract has been determined to be exempt from the California Environmental Quality Act pursuant to State CEQA Guidelines Section 15061(b)(3), the Common Sense Exemption (formerly the General Rule) that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. Since this contract is based on an existing resource built by others and in which Pasadena will have no ownership interest, there is no construction by or for Pasadena, nor is there any other direct physical change in the environment attributable to Pasadena; the use of renewable energy would have a beneficial effect on the environment by reducing greenhouse gas emissions and air pollutants. Therefore, as it


applies to Pasadena, it is exempt from CEQA under the Common Sense Exemption set forth in CEQA Guidelines Section 15061(b)(3).

**FISCAL IMPACT:**

Based upon the projected price ranges, the estimated costs associated with this contract range from \$6,267,780 annually from 2025 through 2026, to \$21,937,230 annually from 2027 through 2034 for a total estimated contract value of \$188,000,000 over the 10-year term. The proposed contract will replace energy and costs from PWP's IPP contract which terminates in 2027. As PWP continues to expand its portfolio of renewable resources and pursue replacement of the coal energy currently provided by IPP, staff will continue to evaluate the net impact of the new resources and work to develop future balanced budgets incorporating all system costs and revenues, including but not limited to future proposed rate increases.

Funding for this action will be addressed in future appropriations to the Power Operating Budget from Fiscal Year ("FY") 2025 to FY 2035.

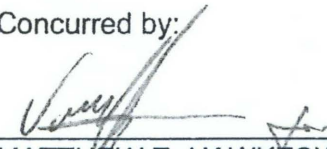
Respectfully submitted,

  
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