



RESOLUTION NO. \_\_\_\_\_

**BOARD LETTER APPROVAL**

  
David Hanson (Apr 1, 2025 13:13 PDT)

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**DATE:** March 12, 2025

**SUBJECT:** First Amendment of Heber-1 Geothermal Energy Project Power Sales Agreement No. BP 13-033 Between the City of Los Angeles, Acting by and Through the Department of Water and Power, and the Southern California Public Power Authority

**SUMMARY**

The attached Resolution will authorize the First Amendment to the Heber-1 Geothermal Project (Project) Power Sales Agreement (PSA Amendment) between the City of Los Angeles acting by and through the Los Angeles Department of Water and Power (LADWP) and the Southern California Public Power Authority (SCPPA). The PSA Amendment updates Appendix B of the PSA by confirming the increase in the facility's capacity. The PSA Amendment also serves as an authorization for the Second Amendment of the Project Power Purchase Agreement (PPA Amendment No. 2) between SCPPA and Heber Geothermal Company, which is Appendix D of the PSA. PPA Amendment No. 2 will extend the delivery term of the PPA by 25 years. The existing PSA between SCPPA and LADWP, as amended, will remain operative for the extended term of the PPA.

California Senate Bill (SB) 100 established a Renewables Portfolio Standard (RPS) Program benchmark of 60 percent by 2030 and requires that publicly owned utilities (POU) be carbon free by 2045. Geothermal generation facilities accounted for 21.6 percent of LADWP's RPS acquisitions in 2023. The Project contributed 9.8 percent to LADWP's total RPS acquisition from geothermal generation facilities in 2023.

PPA Amendment No. 2 will continue to deliver Renewable Energy Credits (RECs) for LADWP's RPS requirements and assist in providing baseload energy delivery.

City Council approval is required by ordinance for this PSA Amendment pursuant to Los Angeles City Charter Sections 674 (a) and 101.

## **RECOMMENDATION**

It is requested that the Board of Water and Power Commissioners (Board) adopt the attached Resolution recommending City Council's approval by ordinance of the Project's PSA Amendment.

## **ALTERNATIVES CONSIDERED**

LADWP conducted two market analyses as alternatives to PPA Amendment No. 2: a short-term option and a long-term option (each a "Replacement Product" and together "Replacement Products"). The first alternative would require LADWP to procure Portfolio Content Category (PCC) 1 RECs and enter into a short-term energy agreement elsewhere to meet LADWP's RPS requirements. Please refer to the Background section below for further details associated to PCC and RPS requirements. The second alternative would require LADWP to enter a long-term geothermal energy PPA.

The Replacement Product from the first alternative consists of separately purchased RECs and energy and is estimated to cost \$129.48/megawatt hour (MWh). This Replacement Product consists of the United States Energy Information Administration's (EIA) average projected wholesale electricity prices (\$60.48/MWh) in 2025 with the average projected market prices for PCC1 RECs (\$69/MWh) in 2025. The EIA is the primary authority on energy statistics and analysis for the federal government under the United States Department of Energy, collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy. Although comparable replacement products through the market are extremely limited at this time, procurement of a Replacement Product through a comparable short-term agreement at the end of the existing PPA would cost LADWP 51 percent more than the PPA Amendment No. 2 cost of \$86/MWh.

The Replacement Product from the second alternative would be bundled together in a new PPA. The 2024 Padilla Report states that the weighted average RPS procurement expenditure in 2023 for 50-200 MW capacity geothermal resources was \$98/MWh. <sup>1</sup>

1: The 2024 Padilla Report, published by the California Public Utilities Commission (CPUC), provides an annual overview of the costs and cost savings associated with renewable energy expenditures and contracts for the previous year.

The California Public Utilities Commission sends the Padilla Report to the Legislature by May 1 of each year to comply with Public Utilities Code Section 913.3. LADWP analyzed the Padilla Report, which aggregated costs and cost savings of renewable energy expenditures and contracts for the previous year. Of the three large investor-owned utilities (IOU) listed in the Padilla Report, Southern California Edison was the only IOU to have procured RPS contracts for 50-200 MW geothermal resources. Using the Padilla Report's expenditures as a point of reference for the price of entering a new PPA, this Replacement Product would cost LADWP 14 percent more than the PPA Amendment No. 2 cost of \$86/MWh.

Based on the two market analyses, LADWP expects Replacement Products will be more expensive for ratepayers and LADWP than acquiring PCC 1 RECs and energy through PPA Amendment No. 2. LADWP considers PPA Amendment No. 2 to be the most viable and cost-effective option to meet RPS requirements.

Additionally, LADWP compared the PPA Amendment No. 2 proposal to other proposals submitted to the 2023 SCPA Request for Proposals for Renewable Energy Resources and Energy Storage Solutions. Given the baseload character of geothermal energy and the price per megawatt-hour, LADWP staff has concluded that PPA Amendment No. 2 best fits LADWP's RPS portfolio.

## **FINANCIAL INFORMATION**

Funding is budgeted in the Power Revenue Fund's Fuel and Purchased Energy Renewable Budget in FI 305-3149.

In summary, PPA Amendment No. 2 has the following terms and costs, which include delivered energy and RECs:

- Average generation capacity of 52 MW
- Twenty-five year energy delivery term: starts February 2, 2026, and ends on February 1, 2051
- Average annual production: 305,214 MWh
- Energy price: \$86.00/MWh (with a 1.5 percent annual escalation)

The total energy LADWP will receive from the twenty-five year extension is approximately 7,630,000 MWh. Due to an escalation rate of 1.5 percent per year, the cost of the energy price averages to be \$31,320,000 annually and \$783,000,000 over the twenty-five-year delivery term.

## **BACKGROUND**

On June 19, 2013, the Board adopted Resolution No. 013 310, which authorized LADWP to purchase geothermal energy through SCPA from Heber Geothermal

Company, a subsidiary of Ormat Nevada, Inc. (Ormat). The Project has an average generation capacity of 52 MW and is located in Imperial Valley, California. The Project is a shared SCPPA project between LADWP and Imperial Irrigation District (IID). LADWP's current entitlement share is 78 percent, and IID's entitlement share is 22 percent. The initial 10-year delivery term of the PPA commenced on the commercial operation date of February 2, 2016, and will end on February 1, 2026.

On September 22, 2017, SCPPA approved the First Amendment of Heber-1 Geothermal PPA (PPA Amendment No. 1) to install a new generating unit. The new generating unit added 5 MW of net capacity to support the Project's ability to meet the annual minimum generation requirements under the PPA. PPA Amendment No. 1 also increased the delivery term performance security required to be posted by Ormat from \$22,000,000 to \$25,300,000.

On February 26, 2022, a generating unit suffered from a fire. Due to the fire, Ormat repowered the Project on April 10, 2023, through May 18, 2023, to increase the average generating capacity from 46 MW to 52 MW, enabling the Project to meet its forecasted minimum generation requirements without increasing the maximum delivered energy that LADWP must purchase.

The PSA Amendment will extend the Project's delivery term by twenty-five years, establish a new lower price for the extended term, confirm the increase in the facility's average generating capacity from 46 MW to 52 MW, and update LADWP business policies for the Project PPA. The Project supports LADWP's ability to meet RPS requirements and the City of Los Angeles' (City) initiative to supply 100 percent zero-carbon energy to end-use customers. The Project will also deliver highly valuable baseload energy to support reliability.

Approval of the PSA Amendment authorizes PPA Amendment No. 2 on the same terms as the PSA Amendment. The PPA is Appendix D of the PSA. The Board and City Council must first approve the PSA Amendment in order for SCPPA to execute PPA Amendment No. 2.

### Cost Savings

LADWP projects the energy price under the existing PPA to be \$91.47/MWh in 2026, which marks the final year of the original contract term. In 2026, LADWP estimates the cost for a long-term Replacement Product to be \$98/MWh. PPA Amendment No. 2 will establish a new price of \$86/MWh for the first year of the extended term. The cost savings from choosing PPA Amendment No. 2 over the long-term Replacement Product is estimated to be \$4,121,000 annually and \$103,030,000 over the twenty-five-year delivery term. These savings align with LADWP's goal of providing cost-effective power.

## RPS Requirements

LADWP is working to meet its RPS requirements in response to changes in state legislation to meet environmental mandates and regulatory, reliability, and economic challenges. LADWP's Strategic Long-Term Resource Plan, which serves as a comprehensive roadmap through 2045 to supply reliable electricity in an environmentally responsible and cost-effective manner, along with its RPS Policy, serve as guiding principles to achieve the necessary energy targets. SB 100 established a new renewable portfolio benchmark of 60 percent by 2030 and requires that POUs be carbon free by 2045. In alignment with SB 100, the City's Green New Deal set a goal of 55 percent by 2025, 80 percent by 2036, and 100 percent by 2045.

LADWP demonstrates compliance with such renewable energy mandates by utilizing RECs, which serve as environmental attributes associated with producing electricity from renewable energy resources. The state of California's RPS program requires specific quality control of RECs by categorizing them as PCC 1, 2, or 3, and the Portfolio Balance Requirement specifies minimum or maximum quantities of each PCC. PCC 1 RECs, which have a minimum procurement requirement of 75 percent for current and future compliance periods, are associated with facilities delivering electricity into a California Balancing Authority. PCC 3 RECs, which have a maximum limit of 10 percent for current and future compliance periods, are unbundled RECs originally associated with electricity eligible for use in California's RPS program.

Geothermal energy from the Project contributed 9.8 percent of LADWP's total RPS acquisition from geothermal generation facilities in 2023. POUs must demonstrate their compliance with the RPS program by utilizing sufficient RECs to meet or exceed the Procurement Target (PT) for a given Compliance Period (CP). CP 4 of the RPS program requires 44 percent of total retail sales to be RPS-eligible procurements. By the end of CP 6 (December 31, 2030), the PT increases to 60 percent of total retail sales. LADWP needs to acquire more PCC 1 RECs to meet these increasing RPS requirements for the current and future compliance periods. PPA Amendment No. 2 will allow LADWP to continue to acquire PCC 1 RECs from the Project for an additional twenty-five (25) years.

## Delivery of Baseload Energy

Geothermal projects are vital assets to the existing renewable portfolio for its delivery of baseload energy. Wind and solar generation comprise most of the existing and near-term additional renewable energy. Unlike solar and wind generation, which are intermittent resources that cannot supply energy twenty-four hours a day, geothermal generation facilities provide reliability since they are available at all times to meet baseload generation needs.

## City Administrative Officer's (CAO) Report

In accordance with the Mayor's Executive Directive No. 4, the CAO Report was approved on January 15, 2025.

## **ENVIRONMENTAL DETERMINATION**

Determine item is exempt pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15061(b)(3). It has been determined that entering into, and renewing existing, power purchase agreements between Heber Geothermal Company and the LADWP to purchase renewable geothermal power is exempt pursuant to the General Exemption described in CEQA Guidelines Section 15061(b)(3). General Exemptions apply in situations 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.

## **CITY ATTORNEY**

The Office of the City Attorney reviewed and approved the Resolution and PSA Amendment as to form and legality.

## **ATTACHMENTS**

- Resolution
- First Amendment of Heber-1 Geothermal Energy Project PSA
- Ordinance (draft)
- CAO Report