



**California Energy Commission
May 31, 2023 Business Meeting
Backup Materials for Agenda Item No 04:
Morton Bay Geothermal Project (MBGP) (23-AFC-01)**

The following backup materials for the above-referenced agenda item are available as described below:

1. Proposed Order, attached below.
2. 2003 Obsidian Energy (Salton Sea Unit 6) Study; TN 249913 [Previous Resource Adequacy Testimony](#)
3. Executive Director Recommendation Memo; TN 250066 [Staff's Data Adequacy Recommendation](#)
4. 2023 Morton Bay GeothermEx Study; TN 250042 [Morton Bay Resource Adequacy Report](#)
5. CalGEM letter of support; TN 250207 [Geothermal Resource Evaluation](#)
6. Notice of Hearing on Geothermal Resources; TN 250216 [Notice of Hearing on Geothermal Resources](#)

For the complete record, please visit: [California Energy Commission : Docket Log](#).

To stay informed about this project and receive documents as they are filed, please subscribe to the proceeding Topic, which can be accessed here: [Morton Bay Geothermal Project \(MBGP\) | California Energy Commission](#). The Topic sends out email notifications and direct links when documents are filed in the proceeding docket.

STATE OF CALIFORNIA
STATE ENERGY RESOURCES
CONSERVATION AND DEVELOPMENT COMMISSION

IN THE MATTER OF:

Morton Bay Geothermal Project

Docket No.: 23-AFC-01

**[Proposed] ORDER FINDING THE
APPLICATION FOR CERTIFICATION
INCOMPLETE, ESTABLISHING A
COMMITTEE, AND THAT THE
PROJECT SITE IS CAPABLE OF
PROVIDING GEOTHERMAL
RESOURCES IN COMMERCIAL
QUANTITIES**

I. BACKGROUND

On April 18, 2023, Morton Bay Geothermal, LLC, an indirect, wholly owned subsidiary of BHE Renewables, LLC (BHER) filed an Application for Certification (AFC) with the California Energy Commission (CEC) for the Morton Bay Geothermal Project (MBGP or project). The project is on 63 acres of unincorporated Imperial County, bounded by McDonald Road to the north, Davis Road to the east, Schrimpf Road to the south, and the Salton Sea to the immediate west. The location is within the Salton Sea Known Geothermal Resource Area.

The project would have a maximum continuous rating of approximately 157 megawatts (MW) gross, with an expected net output of roughly 140 MW. The project includes geothermal production wells, pipelines, fluid and steam handling facilities, a solids handling system, a 3.2 mile aboveground transmission line, a Class II surface impoundment, a service water pond, a stormwater retention basin, process fluid injection pumps, three power distribution centers, borrow pits, and injection wells.

II. STAFF RECOMMENDATIONS

Based on the record described herein, the following actions are recommended by CEC staff (Staff) to process this AFC:

Completeness of Application

Public Resources Code section 25540.1 requires the CEC to determine, within 30 days of the receipt of an application for a geothermal powerplant, whether the application is

complete. Such determination shall be in writing, and if the application is determined to be incomplete, shall specify those parts of the application that are incomplete and shall indicate the manner in which they may be made complete. Within 30 days of the CEC's receipt of the additional information requested by CEC from applicant, the commission shall determine whether the subsequent filing is sufficient to complete the notice or application.

On May 8, 2023, the executive director filed in the docket a recommendation regarding the completeness of the MBGP AFC. That recommendation concluded the AFC was not complete. Specifically, the recommendation identified seven of the 23 technical disciplines required for a complete AFC that were deficient based on an analysis under Appendix B, in Title 20 of the California Code of Regulations. The listed deficient areas are Air Quality, Biological Resources, Cultural Resources, Noise and Vibration, Project Overview, Public Health, and Transmission Line Safety and Nuisance.

The executive director recommends the CEC adopt the list of deficiencies identified in the recommendation, and not accept the application as complete until the additional information specified in Attachment B to Staff's Data Adequacy Recommendation [TN 250066] filed May 8, 2023, is provided and accepted.

Committee Assignment

Public Resources Code section 25211, as implemented in California Code of Regulations, title 20, section 1204, authorizes the CEC to appoint a committee to hold hearings and make recommended findings regarding the merits of the application. Staff is requesting the CEC assign a committee.

In the Data Adequacy Recommendation, docketed May 8, 2023, staff originally requested the CEC delegate to the committee the consideration of the completeness of the application. Staff withdraws this request pursuant to Public Resources Code section 25540.1, which provides that the determination of whether the application is complete shall be made by the full commission.

Commercial Quantities of Geothermal Resources

For geothermal powerplant projects, if the applicant can demonstrate at the outset of the proceeding that the proposed site is capable of providing geothermal resources in commercial quantities, the applicant is excused from the requirement to first file a Notice of Intent pursuant to Public Resources Code section 25502. (Pub. Resources Code §25540.2 subd. (a).) California Code of Regulations, title 20, section 1804 subdivision (a) defines commercial quantities of geothermal resources to mean "enough geothermal steam or hot water resources from a sufficient number of wells to support a reasonable conclusion that a proposed powerplant will be able to achieve the applicant's estimated gross capacity over the life of the project."

California Code of Regulations, title 20, section 1809 subdivisions (b), (c) and (d) provide procedures for the commission's determination of this fact. These procedures require 1) the applicant to present testimony, studies or other evidence in support of its contention that sufficient geothermal resources have been confirmed at the site; 2) CEC

staff to present its evaluation of the site's resource capabilities; 3) the California Division of Oil and Gas (now the California Geologic Energy Management Division or CalGEM) to be requested to review the application and all well records filed with the division concerning wells completed at the site, and 4) CalGEM be requested to present at the hearing its conclusions based on professional experience whether the site is reasonably capable of providing geothermal resources in commercial quantities. If, after considering the evidence, the commission determines the site is reasonably capable of providing geothermal resources in commercial quantities, the application shall proceed in accordance with section 1803 subdivision (b) of title 20 of the California Code of Regulations (completion of the application process within 12-months of the date the application is accepted).

Subdivision (a) of section 1809 permits a committee to make the determination of geothermal resource adequacy if it holds a hearing solely dedicated to making this factual determination. However, California Code of Regulations, title 20 section 1204 subdivision (c), authorizes the commission to, at any time, withdraw any matter from a committee to allow consideration of the matter by the full commission.

The studies filed in the docket evidence that the region's geothermal resources are underdeveloped compared to the field's potential generation and that historically, the geothermal production wells have maintained pressure for decades with minimal loss. The 2023 study (TN 250042) concludes that the geothermal reservoir of the Salton Sea Geothermal Field is quite robust. The simulated forecast demonstrates that the resource can accommodate both existing geothermal power plants and the proposed geothermal power plants including Black Rock, Elmore North, and Morton Bay over the horizon of the evaluation through 2065.

The State's geological experts on geothermal fields, from CalGEM, concur regarding the ability of this site to provide geothermal resources in commercial quantities.

Based on these facts, Staff concludes it is reasonable to expect the proposed project would maintain its gross generating capacity for the project's life, and that the applicant has reasonably demonstrated the site is capable of providing geothermal resources in commercial quantities. Since the current record supports this finding, Staff recommends the CEC conclude pursuant to California Code of Regulations, title 20, section 1809 subdivision (d) that the site is reasonably capable of providing geothermal resources in commercial quantities, and that the application be processed in accordance with California Code of Regulations, title 20, section 1803 subdivision (b). Section 1803 subdivision (b) establishes a 12-month timeline in which to conclude the proceeding, commencing upon the date the commission determines the application has been accepted as complete.

III. RECORD SUPPORTING FINDING OF COMMERCIAL QUANTITIES OF GEOTHERMAL RESOURCES

The record of this proceeding, as contained in the public docket 23-AFC-01 and presented at the business meeting hearing, has been considered by the CEC. The recommended Order is supported by the following evidence in the record:

1. Salton Sea Unit 6 Project Geothermal Resource Evaluation, dated November 13, 2002, containing an evaluation of the adequacy of the Salton Sea Known Geothermal Resource, filed in the Docket on April 28, 2023, by applicant's representative Jerry Salamy (TN 249913);
2. Numerical Reservoir Simulation of the Salton Sea Geothermal Resource for Power Generation, by BHE Renewables LLC and GeothermEx Consulting Services, dated May 2023, filed in the docket on May 8, 2023, by applicant's representative Jerry Salamy (TN 250042);
3. Staff's Data Adequacy Recommendation (TN 250066), page 3, filed May 8, 2023, which states:

The project is in an area with demonstrated suitability and a history of successful geothermal electricity production, in a region designated as a Known Geothermal Resource Area (KGRA) by the United States Department of the Interior, Bureau of Land Management and by the United States Geological Service. The ENGP and project components, including transmission, pipelines, and wells, are in areas of the county that support geothermal energy production. As determined in 2003 as part of the certification of the Salton Sea Unit 6 project (Docket 02-AFC-02), the CEC found this geothermal resource area contained geothermal resources in commercial quantities. (Docket 23-AFC-01, TN 249913)

To determine whether this previous finding was still valid, Staff reviewed the original analysis, additional updated information, and project specific studies filed into the current project's docket. Staff consulted with the California Department of Conservation, Geologic Energy Management Division (CalGEM), which has expertise in geothermal fields. The studies evidence that the region's geothermal resources are underdeveloped compared to the field's potential generation and that historically, the geothermal production wells have maintained pressure for decades with minimal loss.

Based on these facts, Staff concludes it is reasonable to expect the proposed project would maintain its gross generating capacity for the project's life. Based on the entire record, Staff also concludes that the applicant has reasonably demonstrated the site to be capable of providing geothermal resources in commercial quantities.

4. CalGEM's Geothermal Resource Evaluation (TN 250207), at page 3, filed May 18, 2023, concluding that, "[b]ased on the current knowledge of the geologic structure of the Salton Trough and the Salton Sea Geothermal Field specifically, the updated reservoir modeling as explained in the resources outlined [in the report]..., and our knowledge of reservoir modeling and assessment, we agree with the various studies' contention that there is adequate geothermal resource to support the proposed BHER projects totaling 357 net MW for 30 years."

IV. ENERGY COMMISSION FINDINGS

Based on the entire record, including the studies, reports and documents filed into the proceeding's public docket, 23-AFC-01, the CEC makes the following findings:

1. Under Public Resources Code section 25540.1 and California Code of Regulations, title 20, sections 1704 and 1709, the CEC concurs with the executive director's recommendation and finds that the AFC is deficient in the information required for an AFC under Appendix B, as identified in the executive director's recommendation dated May 8, 2023.
2. The determination of whether the applicant has reasonably demonstrated the proposed site is capable of providing geothermal resources in commercial quantities is properly before the commission at this hearing because Notice of this hearing was filed in the proceeding's docket on May 19, 2023, and posted as backup material for the business meeting. Also, California Code of Regulations, title 20, section 1204 subdivision (c), permits the commission to at any time withdraw any matter from a committee to allow consideration of the matter by the commission, and California Code of Regulations, title 20, section 1809 subdivision (d) permits the commission to make this determination.
3. In the Salton Sea Unit 6 project proceeding (Docket 02-AFC-02), the CEC previously found the area in which this project is proposed to be capable of providing geothermal resources in commercial quantities as set forth in Public Resources Code section 25540.2.
4. Consistent with California Code of Regulations, title 20, section 1809 subdivision (b), the applicant has presented studies and other evidence in support of its contention that it has reasonably demonstrated that commercial quantities of geothermal resources exist at the site.
5. Consistent with California Code of Regulations, title 20, section 1809 subdivision (c), CalGEM has presented information that the site is reasonably capable of providing geothermal resources in commercial quantities.
6. Based on the evidence in the record, the applicant has reasonably demonstrated that the site is capable of providing geothermal resources in commercial quantities consistent with Public Resources Code section 25540.2.
7. Based on Finding number 6, and pursuant of Public Resources Code section 25540.2(a), no Notice of Intent is required to be filed for this project.

V. CONCLUSION AND ORDER

Therefore, we order the following:

1. The application is data inadequate and incomplete. The list of deficiencies set forth in the executive director's recommendation dated May 8, 2023, is adopted, and establishes that the application is deficient in the areas as set forth above in this Order.
2. The assigned committee will be Commissioner Gallardo as the presiding member and Commissioner McAllister as the associate member.

3. The final determination of whether the application is deemed complete remains with the commission, upon future recommendation by the executive director.
4. The project is not required to file a Notice of Intent.

IT IS SO ORDERED.

CERTIFICATION

The undersigned Secretariat to the CEC does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the CEC held on May 31, 2023.

AYE:

NAY:

ABSENT:

ABSTAIN:

Dated:

Liza Lopez
Secretariat