

**DOCKETED**

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**CALIFORNIA ENERGY COMMISSION**

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## **Request for Information Geothermal Power and Lithium Recovery Docket # 23-ERDD-01 Due Date: September 15, 2023**

The California Energy Commission (CEC) is releasing this Request for Information (RFI) to gather information on critical challenges and research needs for geothermal power production and lithium recovery from geothermal brine. Responses to this RFI may inform a future grant funding opportunity (up to \$23M in grant funding) addressing the [Electric Program Investment Charge \(EPIC\) 2021-2025 Investment Plan](#) Topic 2 “Advancing Geothermal Energy and Mineral Recovery Technologies.”

Stakeholders are encouraged to respond to the specific questions they feel most suit their knowledge and background.

### Geothermal Power

1. What technical barriers have the largest impact on development of geothermal power plants that use hydrothermal resources in California? How could research and development (R&D) funding be most effectively applied to help increase deployments of new geothermal power plants that use hydrothermal resources in California? What high priority technical barriers have been the most underfunded, and why have they not been adequately addressed by competitive markets?
2. What novel technologies or techniques for cost-effectively managing silica in geothermal brine have been successfully demonstrated at a Technology Readiness Level (TRL) of 3, 4, or 5? What silica management technologies can be adapted from other industries and applied to geothermal brine?
3. What materials, technologies, or techniques to decrease corrosion or thermal stress-induced failures in existing geothermal plants and wells have been successfully demonstrated at a TRL of 3, 4, or 5? What technologies could be adapted from other industries for use in geothermal power plants and wells?

### Lithium Recovery from Geothermal Brine

4. What are the greatest technical barriers to the commercialization of lithium recovery from geothermal brine? What technologies provide the greatest opportunities to facilitate the commercialization of lithium recovery from geothermal brine? What would be the most effective use of R&D funding to advance commercialization of lithium recovery from

geothermal brine? What specific technologies or approaches are presenting a particular challenge, and what are some alternatives?

5. What brine pretreatment issues have been especially challenging to overcome? What technologies or techniques have been successfully tested at a TRL of 3, 4, or 5?
6. What technologies or processes can reduce waste products from the lithium recovery process (such as by decreasing mass or by recovering additional co-products in the lithium recovery process)? What TRL are these technologies?
7. What co-products are the most feasible to recover? What technologies or processes are available to produce them? What TRL are these technologies? Is any R&D needed prior to conducting a pilot demonstration?

### Comprehensive Brine Management

8. Could a comprehensive new approach to brine management (i.e., one which involves the complete process from start to finish) simultaneously address issues that affect geothermal power production and lithium recovery (such as corrosivity, scaling, and constituents that interfere with the recovery of marketable minerals) while leveraging opportunities to recover profitable co-products? How could a comprehensive approach be implemented in a cost-effective manner?

### **How to Provide Information**

Respondents to this RFI should not include any proprietary or confidential information. Comments must be submitted by 5:00 p.m. on September 15, 2023, using the [e-commenting feature](#) to submit to [Docket 23-ERDD-01](#).

To use the e-commenting system, respondents will be asked for a full name, email address, comment title, and either a comment or an attached document (.doc, .docx, or .pdf format). After a challenge-response test is used by the system to ensure that responses are generated by a human user and not a computer, click on the "Agree & Submit Your Comment" button to submit the information to the CEC's Docket Unit.

Written comments, attachments, and associated contact information included within the documents and attachments will become part of the viewable public record and searchable on the internet.

Interested stakeholders are encouraged to use the electronic filing system described above to submit information. If you are unable to submit electronically, a paper copy of your information may be sent to:

California Energy Commission  
Docket Unit, MS-4  
Re: Docket No. 23-ERDD-01  
715 P Street  
Sacramento, CA 95814-5512

Alternatively, you may email responses to [docket@energy.ca.gov](mailto:docket@energy.ca.gov) with the subject line "23-ERDD-01: RFI Geothermal Lithium".