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STATE OF CALIFORNIA — NATURAL RESOURCES AGENCY

Gavin Newsom, *Governor*

**CALIFORNIA ENERGY COMMISSION**

715 P Street  
Sacramento, California 95814  
[energy.ca.gov](http://energy.ca.gov)

CEC-70 (Revised 6/2022)



*IN THE MATTER OF:*

*GEM Energy Storage Center*

Docket No. 21-AFC-02

**NOTICE OF PUBLIC SITE VISIT AND INFORMATIONAL HEARING,  
AND COMMITTEE ORDER**

On December 1, 2021, GEM A-CAES LLC (Gem LLC) filed an application for certification (AFC) with the California Energy Commission (CEC) to construct and operate the Gem Energy Storage Center (Gem).<sup>1</sup> Gem would be a nominal 500 megawatt (MW) energy storage center, deploying Hydrostor Inc. (Hydrostor) Advanced Compressed Air Energy Storage (A-CAES) technology. Gem would charge at up to 500 MW for up to 14 hours and deliver up to 4,000 MW-hours (MWhs) over an 8-hour period. Gem would be located on two adjoining parcels totaling 71 acres in an unincorporated area of Kern County with the mailing address of 8684 Sweetser Road, Rosamond, California, 93560. The site is currently undeveloped desert land in an area zoned Estate in the Revised April 2021 Kern County Zoning Ordinance and located within the Willow Springs Specific Plan area of Kern County.

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<sup>1</sup> The application and all filed documents related to the Gem proceeding are available via the "Docket Log (21-AFC- 02)" link on the [Gem proceeding's web page](https://www.energy.ca.gov/powerplant/caes/gem-energy-storage-center) at <https://www.energy.ca.gov/powerplant/caes/gem-energy-storage-center>. The application comprises many separate documents filed in the docket beginning December 1, 2021, e.g., the introduction is TN 240751-2.

**PLEASE TAKE NOTICE** that the CEC has designated a Committee of two commissioners to conduct proceedings on the AFC.<sup>2</sup> The Committee has scheduled a public site visit, as well as an informational hearing to discuss the proposed project as described below:

**THURSDAY, AUGUST 11, 2022**  
**Site Visit begins at 3:00 p.m.**  
**Public Informational Hearing begins at 4:00 p.m.**  
**Rosamond Community Services District**  
**Board Room**  
**3179 35<sup>th</sup> Street West**  
**Rosamond, California 93560**

Prior to the informational hearing, the public is invited to join the Committee on a tour of the proposed site. The Applicant will provide transportation to and from the project site leaving from the Rosamond Community Services District Board Room at 3179 35<sup>th</sup> Street West, Rosamond, CA 93560 at 3:00 p.m. For reservations, please contact the CEC's [Public Advisor](#) at [PublicAdvisor@energy.ca.gov](mailto:PublicAdvisor@energy.ca.gov), or (916) 957-7910. **Please make your reservation before August 8, 2022 at 5:00 p.m. to reserve your spot.**

### **Teleconference Option**

The Committee, Parties, and the Public may attend the informational hearing in person at the above location or via remote teleconference by either Internet or call-in options. For instructions on how to participate remotely, please see the "Remote Access Instructions" below. The informational hearing will begin at 4:00 p.m. or soon thereafter following the conclusion of the site visit.

**Spanish interpretation will be available for persons attending in person and remotely.**

### **Background**

On June 8, 2022, the CEC determined that the application filed for Gem is exempt from the Notice of Intention process normally required for persons proposing to construct a thermal power plant or electric transmission line and other related facilities on a site, and ordered that the project could

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<sup>2</sup> On March 24, 2022, the CEC adopted orders amending the committee assignments for Gem, appointing Kourtney Vaccaro, Commissioner and Presiding Member, and Andrew McAllister, Commissioner and Associate Member for Pecho. (TN 242449).

proceed as an AFC pursuant to Public Resources Code, section 25519.<sup>3</sup> On July 13, 2022, the CEC found that the application contains the information required under Public Resources Code section 25522 and California Code of Regulations, title 20, sections 1704 and 1709 and Appendix B, and that the Gem AFC is complete,<sup>4</sup> commencing a 12-month timeline to issue a final decision on the AFC for the power plant and related facilities pursuant to Public Resources Code, section 25540.6.

## **Project Description**

Gem would be a nominal 500-MW energy storage center, deploying Hydrostor's A-CAES technology. The Application states that Hydrostor's A-CAES technology would provide long-duration, quick-starting, flexible, controllable generation with the ability to ramp up and down through a wide range of electrical output to facilitate the integration of renewable energy into the electrical grid in satisfaction of California's Renewables Portfolio Standard (RPS) and climate objectives, by displacing older and less efficient generation.<sup>5</sup>

According to the Applicant, Hydrostor's A-CAES technology stores compressed air in a purpose-built underground storage cavern. During the "charge cycle," electricity from the grid will be used to drive the facility's air compressors, converting the electrical energy from the grid into potential energy in the form of compressed air. The air is then stored within the underground storage cavern and kept at a near-constant air pressure from the weight of water flooded into the cavern through a hydraulic conduit from the surface level water storage compensation reservoir. Heat energy from the air compression process is captured and stored via heat exchangers in the thermal energy management system. To generate electricity during the "discharge cycle," compressed air is discharged from the underground storage cavern. The cool high-pressure air exiting the underground storage cavern is reheated using the heat stored by the thermal management system and the same set of heat exchangers that were initially used to extract it. The reheated compressed air is then used to drive air expansion turbine-generators which efficiently convert the stored potential energy back into electricity that is delivered to the grid. Gem would charge at up to 500 MW for up to 14 hours and deliver up to 4,000 MWhs over an 8-hour period when discharging at nameplate capacity.

Gem would require, among other things, construction of: five all-electric air compressor trains and five 100-MW air-driven power turbine generators housed inside a 100-foot tall, 65-foot-wide by 1,365-foot-long main turbine hall and compressor building; a purpose-built underground compressed air storage cavern approximately 2,000 feet deep; a sealed air conduit to facilitate

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<sup>3</sup> Adoption Order on Joint Decision Regarding Exemption from the Notice of Intention Process (TN 243543).

<sup>4</sup> Order Finding the Application for Certification Complete (TN 244093).

<sup>5</sup> See TN 240751-2.

injection, storage, and release of compressed air for power generation; an aboveground 31-acre hydrostatically compensating water reservoir capable of holding about 565 acre feet of water to regulate the air pressure in the underground storage cavern via hydraulic conduit; auxiliary facilities; onsite 230-kV substation; and a 10.9-mile interconnection to the Southern California Edison Whirlwind Substation or a 3.5-mile interconnection to the future Los Angeles Department of Water and Power Rosamond Substation.

The 71-acre site for Gem with the mailing address of 8684 Sweetser Road, Rosamond, California, 93560 is currently undeveloped desert land in an area zoned Estate in the Revised April 2021 Kern County Zoning Ordinance and located within the Willow Springs Specific Plan area of Kern County. The Application states that in areas zoned as Estate, the Zoning Ordinance permits the following uses: Agricultural Uses, Residential Uses, Commercial Uses, Utility and Communication Facilities, Resource Extraction and Energy Development Uses, and various miscellaneous uses.<sup>6</sup>

The engineering and environmental details of the proposed project are contained in the AFC, which may be viewed in the [Gem Docket Log: 21-AFC-02](https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-AFC-02), at: <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-AFC-02>.

### **Purpose of the Informational Hearing**

The CEC's power plant licensing process, which incorporates requirements equivalent to the environmental impact report process of the California Environmental Quality Act (CEQA), considers all relevant engineering and environmental aspects of the proposed project. The power plant licensing process provides a public forum allowing the Applicant, CEC staff (Staff), intervening parties, governmental agencies, adjacent landowners, and members of the general public to discuss the advantages and disadvantages of the project, and to propose changes, mitigation measures, and alternatives as necessary.

The informational hearing provides an opportunity for members of the community in the project vicinity to learn about and understand the proposed project. The public will be able to obtain information, identify areas of environmental concern to be addressed during the environmental review of the project, offer comments, and view the project site. During the informational hearing, the Applicant will explain its plans for constructing and operating the project and the related facilities. Staff will explain the administrative licensing process and Staff's role in reviewing the AFC. The Public Advisor will describe how the parties, interested persons, and the public can participate in the licensing process conducted by the Committee and the decisions made by the CEC. The Committee will allow questions to the Applicant and Staff from any persons regarding the proposed

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<sup>6</sup> TN 240751-12, p. 5-6-19.

project. Please see the agenda for the public site visit and informational hearing attached to this Notice and Order.

## **ORDER RE: PROPOSED SCHEDULE AND ISSUES IDENTIFICATION REPORT**

Pursuant to California Code of Regulations, title 20, section 1709.7, the Committee hereby

### **ORDERS:**

- By August 4, 2022, Staff shall file a proposed schedule for conducting the certification process and an Issues Identification Report summarizing the major issues that Staff believes will be presented in the matter.
- By August 9, 2022, Applicant shall file its response to Staff's proposed schedule and Issues Identification Report.
- Applicant shall deliver a presentation at the informational hearing describing the proposed project.
- Staff shall deliver a presentation at the informational hearing describing Staff's role in review of the AFC.
- The Applicant and Staff shall submit any slides they wish to present during their respective presentations, converted into a PDF document, into the Gem docket no later than August 9, 2022.
- At the informational hearing, Applicant and Staff shall indicate whether anticipated responses to Staff's data requests would resolve issues of concern raised in Staff's Issues Identification Report.

### **Schedule**

Pursuant to California Code of Regulations, title 20, section 1709.7(c), the Presiding Member shall establish the schedule for the prehearing phase of the proceeding no later than 15 days after the last informational hearing.

### **Remote Access Instructions**

Remote access is available by either Internet via Zoom or call-in options.

**Zoom:** [Click here to join the August 11, 2022, 4 p.m. Public Informational Hearing](#) and provide public comment via Zoom:

<https://energy.zoom.us/j/93563988384?pwd=d1NJVUcyV244cFRNNUZ3eW9WU2R6UT09>

Zoom may also be accessed at <https://zoom.us/join>. To join, enter the Webinar ID **935 6398 8384** and the password **GAFC@0811**.

**Call-In by Phone:** To participate by phone, dial (669) 900-6833 or toll free at (888) 475-4499 and enter Webinar ID **935 6398 8384**. For Zoom technical support dial (888) 799-9666 ext. 2 or contact the CEC's Public Advisor for help at [publicadvisor@energy.ca.gov](mailto:publicadvisor@energy.ca.gov) and (916) 957-7910.

**Public comment periods will be available during the informational hearing.** Depending on the number of members of the public seeking to make a comment or ask a question, the Hearing Officer may adjust the total time allotted for public comment and the time allotted for each comment.

**If participating via Zoom's online platform, use the "raise hand" feature to indicate you would like to make a comment.** The Public Advisor will open your line to speak. Please restate and spell your name for the record; indicate if you have an affiliation and begin your comments.

**If participating by telephone, press \*9 to "raise your hand" and \*6 to mute/unmute.** The Public Advisor will announce the last three digits of the phone number listed and open your line. Make sure to unmute your phone before speaking then restate and spell your name for the record, indicate if you have an affiliation; and begin your comments.

Zoom's closed captioning service will be enabled for the Informational Hearing. Attendees can use the service by clicking on the "live transcript" icon and then choosing either "show subtitle" or "view full transcript." The closed captioning service can be stopped by exiting out of the "live transcript" or selecting the "hide subtitle" icon. If using a phone, closed captioning is automatic and cannot be turned off. While the closed captioning is available in real-time, it typically includes errors. A full and formal transcript rendered by a professional court reporter will be posted in the "Docket Log (21-AFC-02)" link on the [Gem proceeding's web page](#) at <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=21-AFC-02>

### **Public Advisor Assistance**

For questions about how to participate in the informational hearing or to request interpreting services or other reasonable modifications and accommodations, contact the Public Advisor at [publicadvisor@energy.ca.gov](mailto:publicadvisor@energy.ca.gov) or by phone at (916) 957-7910. Requests for interpreting services other than Spanish, reasonable accommodations, and other modifications should be made as soon as possible and at least five days in advance. The CEC will work diligently to meet all requests based on the availability of the service or resource needed. Additionally, the Public Advisor may upon the request of public participants who may be absent from the Informational Hearing, neutrally and publicly relate those participants' points to the Committee on behalf of members of the public. If you are interested in this service, please email concise comments, specifying your main points, before the start of the informational hearing to the Public Advisor. Comments submitted after the informational hearing starts will be filed in the proceeding's docket.

## Availability of Documents

All documents filed in this proceeding are available via the "Docket Log (21-AFC-02)" link on the [Gem proceeding's web page](https://www.energy.ca.gov/powerplant/caes/gem-energy-storage-center) at <https://www.energy.ca.gov/powerplant/caes/gem-energy-storage-center>, or scan (use the camera on your mobile device and hold it over the QR code) the following QR code:



## Automated Email Notifications

Any person may subscribe to receive an automated email when a document is filed in the proceeding. Parties who are on the Proof of Service List will receive these automated emails and do not need to additionally subscribe for the proceeding. The proceeding's web page listed above provides a box to subscribe for automated email notifications, or [manage automated email subscriptions](https://www.energy.ca.gov/subscriptions) at <https://www.energy.ca.gov/subscriptions>, or scan the following QR code:



## Questions

Parties and members of the public may contact Hearing Officer René Webster-Hawkins at [renee.webster-hawkins@energy.ca.gov](mailto:renee.webster-hawkins@energy.ca.gov) or (916) 237-2507 for clarifications about this order or general procedural questions.

The CEC's Public Advisor provides assistance to members of the public participating in CEC proceedings. For information on how to participate in this proceeding, please contact the [Public Advisor](#) at PublicAdvisor@energy.ca.gov, or (916) 957-7910.

Dated: July 27, 2022

Dated: July 26, 2022

***APPROVED BY:***

***APPROVED BY:***

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Kourtney Vaccaro  
Commissioner and Presiding Member  
Gem Energy Storage Center  
AFC Committee

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Andrew McAllister  
Commissioner and Associate Member  
Gem Energy Storage Center  
AFC Committee

Mailed to List Number: 7544



## AGENDA

### **Gem Energy Storage Center AFC (21-AFC-02) Public Site Visit and Informational Hearing**

**Thursday, August 11, 2022  
Public Site Visit begins at 3:00 p.m.**

**Informational Hearing begins at 4:00 p.m.  
or upon the conclusion of the site visit**

1. **3:00 p.m. Public Site Visit.** The public site visit begins at 3:00 p.m. and the bus will begin boarding at 2:45 p.m. (Complimentary bus transportation leaves the Rosamond Community Services District building for the project site at approximately 3:00 p.m.)
2. **4:00 p.m. Informational Hearing.**
  - a. Presentations by the Hearing Officer, Applicant, Staff, and Public Advisor
  - b. Discussion of the environmental and other identified issues
  - c. Discussion of schedule for the review of the project
  - d. Discussion and resolution of any motions
3. **Public Comment.** Members of the public and other interested persons and entities may speak for up to three minutes on a matter related to this proceeding.
4. **Possible Committee closed session on the Gem Energy Storage Center AFC (21-AFC-02).** The Committee may adjourn to closed session to deliberate on matters for decision by the Committee such as the schedule for the review of the project, pending motions and other matters which may arise during the course of the informational hearing. Government Code section 11126(c)(3) allows a state body, including a delegated committee, to hold a closed session to deliberate on a decision to be reached in a proceeding the state body was required by law to conduct. The Committee may adjourn to closed session at any point during the meeting and may conduct multiple closed sessions as necessary.
5. **Adjourn**