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CALIFORNIA ENERGY COMMISSION

CALIFORNIA NATURAL RESOURCES AGENCY

STATEMENT OF STAFF APPROVAL OF POST CERTIFICATION CHANGE

GENESIS SOLAR ENERGY PROJECT (09-AFC-08C)

On September 30, 2025, Genesis Solar LLC, the project owner, filed a Post-Certification Petition for Changes in Project Design, Operation or Performance and Amendments to the Commission Decision (Petition) (TN 266238) with the California Energy Commission (CEC) for the Genesis Solar Energy Project (GSEP), pursuant to California Code of Regulations, title 20, section 1769.

The GSEP is a 2-unit, nominal 250-megawatt, concentrated solar electric generating facility located in an undeveloped area of Sonoran Desert at 11995 Wileys Well Road in Blythe, eastern Riverside County.

The project was certified by the CEC on September 29, 2010. Unit 1 began commercial operation on March 7, 2014, and Unit 2 on November 30, 2013.

DESCRIPTION OF PROPOSED CHANGE

The project owner is seeking the CEC approval for the installation of two Hydrogen Removal units (HyMATE); for Units 1 and 2 located in the Heat Transfer Fluid (HTF) area directly underneath the existing Expansion Vessel (EV).

The HyMATE system is mounted inside a high-cube container (20’ L x 8’ W x 9’6” H). The HyMATE system functions by extracting hydrogen from the headspace gas that is maintained above the liquid HTF in the EV and overflow vessels (OFVs). As hydrogen is removed from the headspace gas, dissolved hydrogen in the adjacent HTF transfers to the headspace gas, thereby removing hydrogen from HTF in the EV. Hydrogen in the circulating solar field HTF is removed as it passes through the EV.

For additional information, go to the CEC’s project webpage, (https://www.energy.ca.gov/powerplant/solar-thermal/genesis-solar-energy-project). In the box labeled "Compliance Proceeding," click on “Docket Log” to access documents for this proceeding.

CEC STAFF REVIEW AND CONCLUSIONS

California Code of Regulations, title 20, section 1769(a)(1) requires a project owner to petition the CEC for the approval of any change the project owner proposes to the project design, operation, or performance requirements of a certified facility. Pursuant to 1769(a)(3)(A), the petition may be approved by CEC staff (staff) only if the following criteria are met:

i. There is no possibility that the change may have a significant impact on the environment, or the change is exempt from the California Environmental Quality Act;
ii. The changes would not cause the project to fail to comply with any applicable laws, ordinances, regulations, or standards (LORS); and
iii. The changes would not require a change to, or deletion of, a condition of certification adopted by the Commission in the Final Decision or subsequent amendments.

Staff reviewed the petition for potential environmental effects and consistency with LORS. Staff's conclusions for all technical and environmental areas are summarized in **Table 1**.

TABLE 1
Summary of Conclusions for all Technical and Environmental Areas

Technical Areas Reviewed	CEQA				Conforms with applicable LORS
	Potentially Significant Impact	Less Than Significant Impact with Mitigation (with Revised or New COCs)	Less Than Significant Impact (with or without Existing COCs)	No Impact	
Air Quality				X	X
Biological Resources			X		X
Cultural Resources				X	X
Efficiency				X	
Facility Design					X
Geological and Paleontological Resources			X		X
Hazardous Materials Management			X		X
Land Use				X	X
Noise and Vibration			X		X
Public Health				X	X
Reliability					
Socioeconomics				X	
Soil and Water Resources				X	X
Transportation			X		X
Transmission Line Safety and Nuisance				X	X
Transmission System Engineering					X
Visual Resources				X	X
Waste Management				X	X
Worker Safety and Fire Protection			X		X

Areas shown in gray are not subject to CEQA consideration or have no applicable LORS the project must comply with.

Staff has determined that the modified project would continue to comply with applicable LORS, and the project change would not result in any significant adverse environmental impacts. The basis for each of staff's conclusions are provided below:

AIR QUALITY

The proposed HyMATE units would be mounted on high-cube containers, and the operation of the units would not result in criteria air pollutant or greenhouse gas emissions. Stationary source air permits would not be required through the local air district. In addition, the use of any construction equipment or vehicles, if necessary, would be temporary and minimal. Therefore, with existing conditions of certification(COCs), the proposed HyMATE units would not cause significant impacts to air quality or greenhouse gases. The project would continue to comply with applicable air quality and greenhouse gases LORS.

BIOLOGICAL RESOURCES

The proposed installation of two HyMATE units would occur on existing concrete foundations within the permanent impact footprint of the existing project. Proposed construction activities have the potential to occur during nesting bird season (February 1 through July 31), which may disturb onsite or nearby nesting activities. The proposed project modifications are not expected to disturb any other special status wildlife, plants, or habitat. Adherence to the existing Conditions of Certification **BIO-1** (Designated Biologist Selection and Qualifications), **BIO-5** (Designated Biologist and Biological Monitor Authority), **BIO-6** (Worker Environmental Awareness Program), **BIO-8** (Impact Avoidance and Minimization Measures), and **BIO-15** (Pre-Construction Nest Surveys and Avoidance Measures) would ensure project compliance with applicable LORS and that the proposed modifications would have less than significant impacts on biological resources.

CULTURAL RESOURCES

The proposed HyMATE units would be mounted on extant concrete pads directly underneath the expansion vessels. Installation of the HyMATE units in high-cube containers would not require ground disturbance. Therefore, the proposed modifications have no potential to affect archaeological resources. The project owner has also proposed installation of the HyMATE units for the Units 1 and 2 power blocks, which are surrounded by solar array fields. As such, the addition of the HyMATE units would not cause visual impacts to any historic built environment or tribal cultural resources. The proposed modifications would not have any impact on cultural resources, and the project would remain in compliance with applicable LORS.

EFFICIENCY

The HyMATE hydrogen-removal system installation would slightly improve the solar field's thermal performance by continuously removing dissolved hydrogen from the heat transfer fluid. By limiting hydrogen accumulation in the receiver loops, the system would support higher effective thermal efficiency and help sustain stable output during normal operation. This modification would not increase the power plant's maximum net output at the interconnection point. The catalytic oxidizer, membrane module, and associated control systems are auxiliary components that support hydrogen removal but do not influence the overall power plant's efficiency. No LORS apply to the power plant efficiency. There would be no adverse impact on the power plant efficiency.

FACILITY DESIGN

For the installation of the HyMATE units, CEC's Delegate Chief Building Official (DCBO) will ensure this compliance. The project would remain in compliance with applicable LORS.

GEOLOGICAL AND PALEONTOLOGICAL RESOURCES

The proposed HyMATE units would be mounted on extant concrete pads directly underneath expansion vessels. Compliance with existing Condition of Certification **GEN-1** would ensure the design, construction, and operation of HyMATE units comply with all applicable codes and thus mitigate potential impacts from geologic hazards, such as strong seismic ground shaking, to less-than significant.

Installation of the HyMATE units in high-cube containers would not require ground disturbance and thus would have no impact on paleontological, geologic, or mineral resources of commercial, recreational, or scientific value.

HAZARDOUS MATERIALS MANAGEMENT

The proposed changes to install two HyMATE units would not involve extremely hazardous materials. During construction, hazardous materials such as gasoline, solvents, lubricants, paints, and welding gases would be used in minimal quantities. Hazardous materials would be stored, handled, and used in accordance with applicable LORS. During operation, the HyMATE unit's catalytic oxidizer would convert all hazardous hydrogen gas into water vapor. Compliance with applicable LORS would ensure less than significant impacts related to hazardous materials management. Therefore, the proposed changes would have a less than significant impact to the offsite public or the environment.

LAND USE

The two HyMATE units would be installed under the existing expansion vessel in each of the two power blocks. The project modifications would cause no impacts on land use, and the project would remain in compliance with applicable LORS.

NOISE AND VIBRATION

Activities associated with this petition would be identical to those that take place during normal maintenance events and scheduled outages. Any noise generated during these activities would be low, temporary, and intermittent. The HyMATE hydrogen-removal system installation would not increase noise at nearby residences. The operational noise would not be affected. Furthermore, the project would continue to meet the operational noise requirements established in the Decision. Therefore, the noise generated due to construction or operation would create a less-than-significant impact with the implementation of the existing noise COCs in the Decision.

PUBLIC HEALTH

The proposed HyMATE units would be mounted on high-cube containers, and the operation of the units would not result in toxic air contaminants (TACs). In addition, the use of any construction equipment or vehicles, if necessary, would be temporary and minimal. Also, GSEP is well outside of the city of Blythe and is located approximately 6 miles from Wiley's Well Road rest area on Interstate I-10. There are no neighbors near the facility and therefore, no threat to outside public residences. Therefore, the impact of the proposed changes on public health would be less than significant with implementation of the existing COCs. The project would continue to comply with applicable public health LORS.

RELIABILITY

The modifications proposed in this petition would not affect the power plant's overall reliability or power generation capability.

SOCIOECONOMICS

The installation of two HyMATE units would have no workforce-related impact on population, housing, and public services. There are no socioeconomic related LORS or COCs applicable to the proposed modifications.

SOIL AND WATER

This Petition to Amend (PTA) proposes to add a HyMATE system that would remove hydrogen from heat transforming fluid (HTF) in the expansion vessels and overflow

vessels of Power Block Unit 1 and Unit 2. According to the PTA, the proposed modification would not result in any impact to soil and water resources. The modification would conform to applicable LORS related to soil and water resources and no changes to the existing COCs would be required.

TRANSPORTATION

The two HyMATE units would be installed close to the expansion vessels in an area within the two power blocks where there is ample height and width clearance. The location is accessible from the adjacent paved road, and the main components and accessories would be unloaded from a flatbed truck and positioned onto the concrete pad with a forklift or crane. Therefore, no new impacts on transportation would occur, and the project would remain in compliance with applicable LORS.

TRANSMISSION LINE SAFETY AND NUISANCE

The proposed installation of two HyMATE units would not include activities affecting the transmission line safety and nuisance (TLSN). Therefore, the project would remain in compliance with applicable TLSN LORS and would not require any change to the COCs.

TRANSMISSION SYSTEM ENGINEERING

The proposed installation of two HyMATE units would not include activities affecting the transmission lines and would have no impact on the transmission grid. Therefore, the project would remain in compliance with applicable Transmission System Engineering LORS and would not require changes to any of its existing COCs.

VISUAL RESOURCES

Each HyMATE unit would be housed within a container measuring 20 feet long by 8 feet wide by 9 feet 6 inches in height. One HyMATE would be installed at Unit 1 and the other at Unit 2, and both would be located within the power block at surface level on a concrete pad beneath the existing expansion vessel.

The GSEP is located on approximately 1,800 acres at 11995 Wiley's Well Road, about 25 miles west of the city of Blythe, in eastern Riverside County, California.

Staff reviewed the project site and surrounding area, aerial and street view imagery (Google Maps), site and vicinity photographs, and project diagrams and drawings. Based on this review, staff concluded that the proposed equipment would not be located within a "scenic vista" and would not eliminate or obstruct public views of a "scenic resource." The proposed equipment would not degrade the existing visual character or quality of public views of the site and surroundings, nor would it create a new source of substantial light or glare in the area.

The physical visual modification introduced by the HyMATE units would not necessitate a revision to the adopted Visual Resources COCs in the Decision. The requested modifications would not result in a significant effect on the environment, and the project would continue to conform to applicable LORS related to aesthetics and visual resources.

WASTE MANAGEMENT

This Petition to Amend (PTA) proposes to add a HyMATE system that would remove hydrogen from heat transforming fluid (HTF) in the expansion vessels and overflow vessels of Power Block Unit 1 and Unit 2. According to the PTA, the proposed modification would not result in any impact to waste management. The modification would conform to applicable LORS related to waste management and no changes to the existing COCs would be required.

WORKER SAFETY AND FIRE PROTECTION

During construction of the proposed changes to install two hydrogen removal units, existing Condition of Certification **WORKER SAFETY-1** would ensure compliance with applicable LORS and would ensure less than significant impacts related to worker safety and fire protection. Therefore, the proposed changes would have a less-than-significant impact on offsite public health and worker's safety.

ENVIRONMENTAL JUSTICE

Staff used the 2020 census blocks in the six-mile radius around the Genesis Energy Solar Project site to identify minority populations and low-income populations. The six-mile radius around a project site based on the parameters for dispersion modeling used in staff's air quality analysis. There are no census blocks with a population in the 6-mile radius of the Genesis Energy Solar Project site, and thus, there is no EJ population.

CEC STAFF DETERMINATION

Staff has determined that the Petition meets the criteria for approval by staff, and therefore, submission to the CEC for approval is not required. Specifically, based on the environmental and other analysis set forth above, as well as Section 3.4 of the Genesis Solar Petition to amend-Hydrogen removal equipment rev 01 (TN 266933), evidencing exemptions from CEQA, staff has determined the proposed changes described in the petition meet the following requirements:

1. There is no possibility that the change may have a significant impact on the environment, or the change is exempt from the California Environmental Quality Act;

2. The changes would not cause the project to fail to comply with any applicable laws, ordinances, regulations, or standards;
3. The changes would not require a change to, or deletion of, a condition of certification adopted by the Commission in the final decision or subsequent amendments; and
4. The amendment is exempt under the Common Sense Exemption (CEQA Guidelines § 15061), Class 1: Existing Facilities (CEQA Guidelines § 15301), and Class 3: New Construction of Small Structures (CEQA Guidelines § 15303).

Staff also concludes that none of the findings specified in 1748(b) apply to the proposed changes and the proposed changes do not meet any of the criteria requiring the production of subsequent or supplemental review pursuant to Public Resources Code section 21166 and California Code of Regulations, tit. 20, section 15162.

WRITTEN COMMENTS

This statement of staff summary and approval of the proposed project changes has been filed in the docket for this project. Pursuant to California Code of Regulations, title 20, section 1769(a)(3)(C), any person may file an objection to the CEC staff's determination within 14 days of the filing of this statement on the grounds that the project change does not meet the criteria set forth in sections 1769(a)(3)(A) or (a)(3)(B). Absent any objections as specified in section 1769(a)(3)(C), this petition will be approved 14 days after this statement is filed.

The CEC's project webpage, has a link to the petition to amend and this Staff Approval of Project Change. In the box labeled "Compliance Proceeding," click on the "Docket Log" to access documents for this Proceeding.

Written comments or objections to staff's determination may be submitted using the CEC's e-Commenting feature, as follows: Go to the CEC's project webpage, and click on either the "Comment on this Proceeding," or "Submit e-Comment" link. When your comments are filed, you will receive an email with a link to them.

Written comments or objections may also be mailed to:

California Energy Commission
Docket Unit, MS-4
Docket No. 09-AFC-08C
715 P Street
Sacramento, CA 95814-5512

All comments and materials filed with the Docket Unit will be added to the facility Docket Log and be publicly accessible on the CEC's project webpage.

If you have questions about this document, please contact Compliance Project Manager Anwar Ali, Compliance Monitoring and Enforcement Unit, Safety and Reliability Branch, at (916) 698-7498, or via email at anwar.ali@energy.ca.gov.

For information on public participation, please contact the CEC's Office of Public Advisor, Energy Equity, and Tribal Affairs at (916) 957-7910 or email at publicadvisor@energy.ca.gov.

News media inquiries should be directed to the CEC's Media Office at (916) 654-4989, or by email at mediaoffice@energy.ca.gov.

Subscription List: Genesis Solar Energy Project