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**Informal Comments of GreenGenStorage, LLC on the Proposed
Updates to the Pumped Storage Land-Use & Env Screening
Methodology**

Additional submitted attachment is included below.

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California Energy Commission
Dockets Unit
Docket No. 26-LUEP-01
715 P Street, Sacramento, CA 95814

Submitted electronically via the CEC e-filing system to Docket No. 26-LUEP-01.

RE: Informal Comments of GreenGenStorage, LLC on the Proposed Updates to the Pumped Storage Hydro Land-Use and Environmental Screening Methodology (Docket No. 26-LUEP-01)

I. Introduction and Summary

GreenGenStorage, LLC (GreenGen) respectfully submits these informal comments on the proposed updates to the pumped storage hydro (PSH) land-use and environmental screening methodology presented by California Energy Commission (CEC) staff at the June 16, 2026 Modeling Advisory Group webinar.¹ GreenGen is a California-based developer advancing the Mokelumne Pumped Storage Project (Mokelumne Project), a 400 megawatt (MW), eight-hour PSH facility located in Amador and Calaveras Counties that will interconnect to the CAISO grid at the Bellota substation.² The Mokelumne Project uses two existing reservoirs, requires no new reservoirs or dams, and avoids nearly all of the above-ground land disturbance associated with conventional PSH development. Its FERC license application has been accepted for filing and is advancing through review.³

GreenGen supports the direction of the CEC's proposed updates to the PSH environmental evaluation and appreciates staff's engagement with stakeholders over the past year. The proposed shift to a project-boundary evaluation area, the consolidation of closely related environmental metrics, and the retention of a project-specific alignment analysis are meaningful improvements that will make the screening process more accurate and more administrable. GreenGen offers these comments to (1) correct the mapped capacity of the Mokelumne Project, (2) support the proposed methodology with several refinements, (3) identify specific proposals that GreenGen recommends the CEC not adopt, and (4) offer additional recommendations that would strengthen the methodology.

Summary of recommendations

¹California Energy Commission, presentation titled *Land Use and Environmental Analysis Methods and Metrics*, IRP Modeling Advisory Group Webinar, June 16, 2026. Pumped Storage Hydro specific discussion found at pg. 30.

²FERC Project No. P-14796. The existing reservoirs are the Salt Springs and Lower Bear River reservoirs.

³The license application has been accepted for filing. GreenGen has submitted its responses to FERC's additional information requests and is awaiting FERC's Ready for Environmental Analysis determination.

GreenGen recommends the CEC:

1. Correct the mapped capacity of the Mokelumne Project to its full 400 MW design capacity and correct the spelling of the project name.
2. Adopt the proposed project-boundary area of evaluation, the consolidation and averaging of landscape metrics, and the project-specific alignment analysis.
3. Retain averaging and publish the individual component metrics in the dashboard alongside the composite alignment level.
4. Weight the project alignment level at 70 percent and the landscape alignment level at 30 percent.
5. Recognize existing project footprints, and use project-specific FERC and permitting information, including as an indicator of commercial interest.

II. The Record Already Recognizes the Mokelumne Project at its Full 400 MW Design Capacity, and the June 16 Presentation Should be Corrected Accordingly

Slide 31 of the June 16, 2026, presentation lists the Mokelumne Project⁴ at 300 MW.⁵ That figure is incorrect. The Mokelumne Project's design rating is 400 MW, and the California Public Utilities Commission (CPUC) has already recognized the project at its full design capacity in the busbar mapping record for the 2026-2027 Transmission Planning Process. In Decision 26-02-057, the CPUC explicitly increased the amount of PSH mapped at the Bellota substation based on the commercial interest in the full design capacity of the Mokelumne Project.⁶

The correction matters because the amount of location-constrained long-duration energy storage in the CPUC's modeled portfolios has grown substantially, from approximately 1.6 gigawatts (GW) to approximately 5.4 GW by 2036.⁷ The Mokelumne Project is one of the few location-constrained long-duration storage resources mapped to a specific substation rather than generically to a zone. Screening or mapping the project at less than its full design capacity understates the contribution of a resource the modeling shows is increasingly needed, and it can cause downstream transmission planning to be sized to the wrong value.

GreenGen respectfully requests that the CEC update slide 31 and any associated PSH dataset to reflect the Mokelumne Project's full 400 MW design capacity, consistent with the CPUC's final busbar mapping for the 2026-2027 TPP and correct the spelling of the project name.

⁴ GreenGen notes that the project name is misspelled in the slide.

⁵ California Energy Commission, presentation titled *Land Use and Environmental Analysis Methods and Metrics*, IRP Modeling Advisory Group Webinar, June 16, 2026, at slide 31.

⁶ Decision 26-02-057 (Feb. 26, 2026) at 107-108. The project's 400 MW design rating and Bellota interconnection are documented in GreenGen's FERC license application (FERC Project No. P-14796) and in GreenGen's prior comments in R.25-06-019.

⁷ Energy Division RESOLVE modeling for the 2026-2027 TPP base case portfolio, as described in GreenGen's comments in R.25-06-019, Nov. 21, 2025, at pg. 2 and Feb. 6, 2026, at pg. 3.

III. GreenGen Supports the Proposed PSH Screening Methodology

GreenGen supports the core elements of the proposed methodology and encourages the CEC to adopt them.

A. Project-boundary area of evaluation

GreenGen supports replacing the five-mile-radius evaluation area with the project boundary drawn from the applicant's FERC filings. A radius-based evaluation area sweeps in large areas of land that a project will never disturb and attributes environmental characteristics far from the actual project facilities. The project boundary is a more accurate representation of a project's footprint and produces more accurate results, particularly for projects like GreenGen's Mokelumne Project, which uses existing reservoirs and existing infrastructure and therefore disturbs very little new land. A project that operates non-consumptively using existing reservoirs places materially different demands on a watershed than one that must fill and maintain new reservoirs. GreenGen recommends that in applying the project-boundary approach the CEC recognize existing reservoirs, existing dams, and existing transmission corridors within the boundary as existing infrastructure.

B. Consolidation and averaging of landscape metrics, paired with component transparency

GreenGen supports the CEC's proposal to consolidate closely related environmental metrics and to combine landscape metrics into a single alignment level by averaging. Averaging produces a clear, comparable composite score that allows the CEC to evaluate a small set of candidate PSH sites consistently and to compare them against one another on a common basis. This screening step is a comparative planning tool, not a permitting decision or a final siting determination, and a transparent, reproducible composite is well suited to that purpose. The alternative of examining each metric in isolation, with no common measure, reintroduces exactly the case-by-case subjectivity a screen is meant to reduce and makes consistent comparison across sites and regions difficult.

GreenGen recognizes the concern that averaging can, in principle, allow a strong score on one factor to offset a weaker score on another, and that a single decision-relevant factor could be diluted within a composite. GreenGen recommends that the CEC address that concern directly by publishing the individual component metrics in the dashboard alongside the composite alignment level.⁸ Retaining and displaying the component layers preserves all of the underlying information, so that any factor warranting closer attention remains fully visible for project-level review, while the composite continues to serve its comparative function. This approach captures the benefits of a systematic, comparable score without suppressing information.

⁸This is consistent with the transparency the dashboard already provides and with the level of detail the underlying analysis already contains, such as the CEC's recommendation to add a short writeup in-dashboard explaining alignment level reasoning.

Genuinely non-substitutable and legally protected environmental resources or impacts will not be left to an averaged landscape score. Site-specific sensitive resources are identified and addressed through the detailed environmental review that every PSH project must complete under the Federal Power Act licensing process and the California Environmental Quality Act, in addition to the base-exclusion framework that removes areas where development is legally precluded. The comparative composite informs where resources are mapped for planning purposes; it does not approve any project or waive any protection. Averaging at this stage therefore places no environmentally endangered or protected resource at risk.

C. Weighting project and landscape alignment

GreenGen supports combining the landscape alignment rank and the project alignment rank into a single environmental alignment rank through a weighted average. This two-input structure preserves both the site landscape characteristics and the project-specific characteristics that most directly determine a PSH project's actual impact. GreenGen recommends that the CEC weight the project alignment level at 70 percent and the landscape alignment level at 30 percent, consistent with the example presented at the workshop.⁹ GreenGen notes that the presentation appears to reference both a 70/30 and a 60/40 weighting and recommends that the CEC resolve that inconsistency in favor of the 70/30 weighting. The project alignment metrics, whether a project uses existing or new reservoirs and the nature of its water source, are the most reliable available indicators of a PSH project's actual environmental impact, and they are consistent with the CEC's own recognition that a PSH project's most significant impacts are site-specific.

GreenGen further recommends that the CEC not reduce the weight according to the project alignment level below the proposed level because doing so would obscure the existing versus new reservoir distinction that most directly determines a project's environmental footprint and impact.

IV. GreenGen Recommends the CEC Retain Project and Landscape Metric Averaging and Reject a Maximum-value or Single-axis Avoidance Approach

GreenGen has reviewed a suggestion that the CEC replace the proposed averaging approach with a method that scores each site by its single worst metric or that treats any one elevated metric as a basis for avoidance. GreenGen recommends against that change, which would reduce the accuracy of the screen and disadvantage location-constrained resources without a corresponding environmental benefit.

A maximum-value or single-axis approach would allow one factor, including a factor drawn from a coarse regional dataset that does not accurately reflect on-the-ground conditions, to determine a site's entire score. For other resource types, which have many candidate locations, a

⁹California Energy Commission, presentation titled *Land Use and Environmental Analysis Methods and Metrics*, IRP Modeling Advisory Group Webinar, June 16, 2026, at slide 44 (70/30 weighting example). The presentation also appears to reference a 60/40 weighting at slide 36.

single-axis avoidance rule still leaves ample siting options. PSH is different because the number of technically viable PSH sites is very small and the resource depends on specific topography, hydrology, and access to existing reservoirs or suitable reservoir sites. A single-axis avoidance rule would operate as a near-categorical exclusion of a location-constrained resource that the state's own modeling shows is increasingly needed, and it would disproportionately affect on-stream projects, which will register some overlap with aquatic metrics by virtue of their location regardless of their actual incremental impact. Averaging, paired with the component transparency described above, is the more accurate and better-balanced approach.

V. Additional Recommendations.

A. Recognize existing project footprints

GreenGen encourages the CEC, as part of its broader Land Use Screens 2.0 effort, to recognize existing project footprints for PSH in the same spirit as its work identifying existing solar and wind footprints.¹⁰ Existing reservoirs, existing dams, and existing transmission corridors are already-disturbed features. A project that reuses them should be credited for avoiding new disturbance rather than screened as though it were developing undisturbed land. Recognizing existing infrastructure footprints in the PSH analysis would align the screen with the CEC's objective of directing development toward lower-impact locations and would improve the accuracy of the results for the projects that most clearly advance that objective.

B. Use project-specific information and recognize FERC licensing progress as commercial interest

GreenGen supports using project-specific environmental and permitting information for advanced-stage PSH projects, where that information is already developed through the FERC licensing and state permitting processes, to supplement or refine the results produced by coarse regional datasets. The number of commercially credible PSH projects is very small, and their design and siting characteristics do not lend themselves to generalized screening. GreenGen also supports the recognition, reflected in the proposed commercial-interest updates, that development interest can be demonstrated through means other than a CAISO interconnection queue position. For a long-lead-time resource, substantial investment in FERC licensing and state permitting is a strong and verifiable indicator of commercial commitment. GreenGen recommends that the CEC treat demonstrated FERC licensing progress as a high-confidence indicator of commercial interest and recommends against making a CAISO interconnection queue position a prerequisite for evaluating or mapping a PSH project, because long-lead-time resources typically obtain queue positions later in their development than the licensing milestones that already demonstrate their seriousness.

¹⁰CEC, 2026 Land Use Screens 2.0 Workshop materials (June 11, 2026), Docket No. 26-LUEP-01 (Existing Project Footprints).

VI. Conclusion

California's transmission planning must reconcile two objectives the state has embraced together: maintaining a reliable and increasingly decarbonized electricity system and protecting the state's habitat and biological resources. A screening methodology that produces clear, comparable, and accurate results serves both. The proposed updates move the methodology in that direction. GreenGen appreciates the opportunity to comment and looks forward to continued participation.

Respectfully submitted,

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