DOCKETED	
Docket Number:	26-LUEP-01
Project Title:	Land Use and Environmental Information for Energy Planning
TN #:	271407
Document Title:	Defenders of Wildlife Comments - Defenders of Wildlife Comments on Land Use Screens Proposed Updates Workshop 26-LUEP-01
Description:	N/A
Filer:	System
Organization:	Defenders of Wildlife
Submitter Role:	Public
Submission Date:	7/13/2026 4:23:16 PM
Docketed Date:	7/13/2026

Comment Received From: Defenders of Wildlife
Submitted On: 7/13/2026
Docket Number: 26-LUEP-01

Defenders of Wildlife Comments on Land Use Screens Proposed Updates Workshop 26-LUEP-01

Additional submitted attachment is included below.

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July 13, 2026

California Energy Commission
Docket Unit, MS-4
Docket No. 26-LUEP-01
715 P Street
Sacramento, California 95814-5512

Delivered via email to: docket@energy.ca.gov

RE: Comments on 2026 Land Use Screens 2.0 Workshop

Defenders of Wildlife (Defenders) respectfully submits these comments on the proposed updates presented at the 2026 Land Use Screens 2.0 Workshop. Defenders protects and restores America's wildlife at risk of extinction, advancing a vision of a future in which wildlife thrives, sustained by broad public support and a resilient network of healthy lands and waters and has 2.1 million members and supporters in the United States, 311,000 of whom reside in California. We employ science, public education and participation, media, legislative advocacy, litigation, and proactive on-the-ground solutions to prevent the extinction of species, associated loss of biological diversity, and habitat alteration and destruction.

We strongly support the development of renewable energy production. A low-carbon energy future is critical for California's economy, communities, and environment. Achieving this future, and *how* we achieve it, is critical for protecting California's internationally treasured wildlife, landscapes, and diverse habitats. We believe transitioning to a renewable energy future need not exacerbate the ongoing extinction crisis by thoughtfully planning projects while protecting habitat critical to species.

Introduction and Overall Position

We appreciate staff's ongoing efforts and collaboration with stakeholders to update and refine the Land Use Screens to integrate environmental, land use, and feasibility

implications into the analysis. We support the five proposed methodology areas introduced at the workshop: existing project footprints, out-of-state (OOS) screens, the Cropland Index Model, Enhanced Geothermal System (EGS) screens, and a possible suitability model. The comments below respond to the questions posed by staff at the workshop. We encourage the CEC to preserve the core strengths of the existing screens: statewide coverage, reliance on authoritative public datasets, and transparent and documented thresholds.

One theme runs through several of our answers. The land use screens are one of the inputs the CPUC uses in busbar mapping within the Integrated Resource Plan proceedings. The land use screens provide environmental and land use context for transmission planning and inform how much technical resource potential is mapped where. They are not intended to guide specific development or site individual projects; however, transmission investments informed by busbar mapping ultimately do direct where projects are developed. The screens' internal choices matter: where a screen omits a buffer or a protection for one category of resource or one sub-type of a technology, it can cause resource potential to be misunderstood and mapped onto lands that carry real environmental conflict, and that mapping then flows downstream into transmission planning. Resource potential mapped onto high-conflict locations can be expected to translate into greater permitting difficulty and delays, higher costs, and questionable viability if development ultimately follows. We urge the CEC to apply protections consistently across resource types and technology sub-classes, and to avoid methodological choices, such as averaging non-substitutable metrics, that obscure where those conflicts are within the mapped potential.

Out-of-State Screens (Questions 1–5)

We support updating the OOS screens so that areas outside of California yet within CAISO (principally southern Nevada and western Arizona) receive a level of environmental screening comparable to in-state lands. The current reliance on the Western Electricity Coordinating Council Environmental Data Task Force Risk Classification layer (Categories 3 and 4, ~2016) does not provide an equivalent level of screening, and large quantities of solar are already being planned in these areas. Bringing OOS screening closer to the in-state methodology is a sound and timely improvement, consistent with CPUC Decision 25-02-026.

Question 1. ***Are there other datasets that we should consider for OOS areas?***

The OOS datasets presented on slides 22–28 are solid choices, and we recognize that the methodology already incorporates several of the layers that would otherwise be obvious suggestions. For this update, we suggest the CEC consider these additional sources for the proposed OOS set:

- **Groundwater-dependent ecosystems.** The Natural Communities Commonly Associated with Groundwater dataset (and comparable mapping for NV/AZ) identifies springs, seeps, and phreatophyte communities in Great Basin and Mojave landscapes, which are vulnerable to the hydrological effects of development.
- **Desert tortoise and other special status arid-land species habitat.** USFWS Critical Habitat captures designated areas, but modeled habitat and connectivity for wide-ranging arid-land species (e.g., desert tortoise and cactus ferruginous pygmy-owl) in the Mojave portions of the OOS footprint may add value beyond designated critical habitat alone.

Question 2. ***Are there strengths/limitations to the datasets listed that we should take into account?***

- **Vintage.** Several data layers are from 2019–2020 (Recognized Biodiversity Value, Connectivity and Climate Flow, Terrestrial Development Index, the climate-resilience datasets). The CEC should plan to refresh them on the same two-year cycle used for the screens overall.

Question 3. ***In lieu of a 1:1 matching of in-state Areas of Conservation Emphasis (ACE) biodiversity, connectivity, and irreplaceability datasets, could a single national dataset represent some or all of those components?***

No comment at this time.

Question 4. ***What is the best way to incorporate these factors into a single screen?***

We recommend the CEC keep the OOS screen structurally parallel to the in-state Core screen so results are comparable across the state line:

- **Preserve the two-tier structure.** Apply base exclusions first (an OOS Protected Area Layer analog plus techno-economic (TE) exclusions), then apply the environmental/land-use planning considerations, mirroring the in-state Core Land Use Screen.
- **Report in acres and MW.** Continue converting screened area to capacity using consistent power densities (e.g., 7 acres/MW for solar and 40 acres/MW for wind) so OOS potential can be summed with in-state potential in busbar mapping and RESOLVE.

Question 5. ***For cropland data specifically: (a) Is crop production a major land use factor that we should include in NV and AZ? (b) Do you have recommendations on which of the two methods we should pursue?***

Crop production is a smaller share of the landscape in the CAISO OOS areas of southern Nevada and western Arizona than in California's Central Valley. Available water for irrigated agriculture in that region is decreasing and will continue to do so. As with the San Joaquin and Antelope valleys, retired agricultural lands may be desirable for solar development. We recommend including cropland data to identify areas that can be expected to transition to non-agricultural uses.

Cropland Index Model Development (Questions 6–9)

Declining water availability under the Sustainable Groundwater Management Act (SGMA) is expected to drive substantial farmland retirement in the San Joaquin Valley. We support adding factors that reflect future land use change driven by water availability.

Question 6. ***What other factors should we include in the Cropland Index Model to account for future land use changes in highly productive agricultural lands? Are there any specific datasets you would recommend?***

We recommend the CEC prioritize water-related and land-status factors that specifically predict where farmland is most likely to be retired or repurposed:

- **Groundwater sustainability status under SGMA.** Incorporate the DWR SGMA basin prioritization and Groundwater Sustainability Plan projected pumping

reductions / sustainable yield deficits. Areas facing the largest mandated cutbacks are the most likely to fallow and transition to other uses.

- **Water source composition and reliability.** The share of a parcel's supply from local surface water, imported surface water (project reliability class), and groundwater: lands most dependent on unreliable or declining supplies are the most likely repurposing candidates.
- **Groundwater-level trend.** DWR periodic groundwater-level and subsidence data to capture chronic overdraft.

Question 7. ***Is bringing in past water import and water source data to indicate water stress/availability to a region valuable, even if it's modeled?***

Yes. Historical water-source composition and import reliability are strong indicators of future fallowing, which parcel-level observed data cannot yet capture.

Question 8. ***How should we account for water stress in the Cropland Index Model?***

No comment at this time.

Question 9. ***What are the best ways to account for land that has the most opportunity for repurposing?***

We suggest considering SGMA-deficit and water-reliability factors with the mapped footprints of active repurposing efforts (e.g., Valley Clean Infrastructure Plan and Sierra San Joaquin Jobs Initiative, and the Department of Conservation's Multibenefit Land Repurposing Program) to identify convergence: lands that are both water-stressed and already targeted for transition.

Enhanced Geothermal Systems (Questions 10–11)

EGS, including horizontal drilling and hydraulic stimulation, brings both opportunities and new challenges. EGS is an industrial land use whose impacts on adjacent protected lands and water resources arise regardless of whether the resource is classified as Near-Field or Deep-Field. Our central recommendation is that the

screens characterize sensitive resources *consistently* across both EGS sub-types and across resource categories, so that the environmental and land use context the screens provide to busbar mapping does not understate conflict for one sub-type and thereby map resource potential onto lands the methodology would otherwise flag.

Question 10. ***Should near-field and deep-field EGS have additional land use screens applied, beyond the PAL and TE exclusions, to estimate technical resource potential? Should distance from fault lines be considered as a screening component?***

Apply the Deep-Field TE exclusions equally to Near-Field EGS. Slide 43 of the June 11, 2026 presentation proposes TE exclusions for Deep-Field EGS including buffers from urban areas, water bodies, airports, active mines, and military lands but does not apply them to Near-Field EGS. Intensifying conventional geothermal sites with Near-Field EGS can reasonably be expected to create additional land use and environmental consequences for these same sensitive uses.

The Near-Field and Deep-Field distinction reflects resource geology and development economics; it is not a proxy for reduced impact on an adjacent sensitive use, and it should not be used as one in the screen. If only Deep-Field EGS carries the buffer, the methodology creates an artificial modeling preference for siting Near-Field EGS against sensitive boundaries precisely where Deep-Field would be excluded, steering mapped development toward conflicts rather than away from them. That undercuts the purpose of the busbar mapping and risks portfolios proposed to be built on high-conflict locations, where projects can be expected to face greater permitting difficulty and delays, higher costs, and ultimately questionable viability.

<u>Recommendation:</u> Establish a 1,000-meter exclusion buffer around water bodies and protected areas, for both Deep-Field and Near-Field EGS. The 250-meter water-body buffer proposed on Slide 43 should be expanded to 1,000 meters, and protected lands should be afforded the same 1,000-meter buffer. EGS exploration and operations produce impacts that do not stop at a project's surface boundary: habitat fragmentation and edge effects; the noise, light and visual intrusion of industrial activity; and disruption of hydrological connections, including groundwater depletion and drawdown, the migration or release of fluids that can degrade water

quality, and changes to surface water and the flows that sustain groundwater-dependent ecosystems. Because these effects extend beyond the property line, a boundary-only screen is inadequate and a buffer is the appropriate instrument. Protected lands typically have statutory or management mandates and have little tolerance for impacts from energy development. A 1,000-meter buffer is a reasonable minimum: large enough to abate adjacency and edge effects on parks and conserved habitat and to provide a margin for hydrological connections, yet modest enough not to foreclose development across broad areas. It is also consistent with the 1,000-meter buffer the methodology already affords other sensitive uses (urban areas, airports, active mines, military lands). Water bodies and protected areas deserve at least the same level of protection.

On distance from fault lines: Seismicity associated with hydraulic stimulation and injection is a topic worth examining as the CEC develops EGS screens, and we support the CEC studying the USGS Earthquake Faults and Folds data and the Department of Energy analyses referenced in the workshop.

Question 11. ***Do near-field and deep-field EGS have the same siting flexibility (to avoid potential environmental impacts) as conventional geothermal? If so, how (if at all) should screens account for this?***

The near-field / deep-field classification should not be treated as a proxy for impact or for reduced need for screening. Both are industrial land uses that impose the same categories of impact on adjacent protected lands, water bodies, and groundwater-dependent ecosystems. The screens should therefore account for siting flexibility by screening *consistently* across both sub-types, not by relaxing screening for one of them:

- **Apply the same TE exclusions and the same 1,000-meter buffers** (water bodies and protected areas) to Near-Field and Deep-Field EGS alike, as described under Question 10. Screening one sub-type less than the other would cause its resource potential to be mapped with less environmental context, understating conflict in the busbar inputs, exactly the distortion the screens exist to prevent.
- **Reflect siting flexibility as context, not as a rationale for lighter screening.** To the extent EGS can flexibly locate surface facilities within a resource area, that is a reason to characterize the area's constraints fully in the screen, so the

busbar inputs show where the lower-conflict portions are, not a reason to relax the screen for a whole sub-type.

Suitability Model (Questions 12–15)

For too long California has allowed commercial interest to drive where transmission investments are made to support energy development. As long as commercial development is used as a proxy for identifying areas for additional or new transmission capacity, the state will always be tied to areas chosen by developers and not to areas identified by energy planners utilizing the best data including land use, natural and cultural resources, and disadvantaged communities.

We support the CEC developing a suitability model approach to identify areas appropriate for energy development. The Desert Renewable Energy Conservation Plan (DRECP) demonstrates the value of identifying where energy development should be directed and where lands should be conserved. The fact that no project developed under the DRECP on development focus areas has been litigated clearly shows the success of this approach.[1]

Question 12. ***Should CEC pursue development of a "suitability model" approach to Land Use Screens?*** and

We support the CEC developing a suitability model approach, as a complement to, not a replacement for, the current binary screens (see Question 15). A well-designed suitability model that can distinguish highly suitable land from merely "not excluded" land will give a more nuanced picture of environmental and land use context.

Question 13. ***How would a suitability model for renewable energy best be used in energy and land use planning processes?***

See response to Question 12.

[1] Defenders of Wildlife. (2025). *Data in the desert: A comparative analysis of clean energy planning and deployment within the DRECP planning area*. Prepared by E. Leslie & J. Hack (Montara). https://defenders.org/sites/default/files/2026-02/Data-in-the-Desert.pdf

Question 14. ***What data or other information could be included to help improve identification of areas for renewable resource build that is not reflected in the current land use screens?***

No comment at this time.

Question 15. ***Is there a role in energy planning processes for both "binary" land use screens and a more nuanced type of suitability model for renewable energy?***

We recommend the CEC retain the binary screens while adding a suitability model built on parallel, non-averaged criteria:

- **Binary screens** remain essential for capacity-expansion and transmission models (RESOLVE, busbar mapping, the CAISO TPP) that require a defined quantity of available land and MW. They provide hard legal/policy preclusions (the Protected Area Layer) and provide transparent, reproducible acreage-to-capacity accounting. They should continue to be the backbone for "what is available."
- **A suitability model** adds a more nuanced "how sensitive is the available land" view, as long as it keeps criteria separable so a single decisive axis is never averaged away.

Used together, the two approaches reinforce rather than compete. This preserves the strengths that make the current screens valuable while adding more nuanced, criteria-transparent information to the busbar-mapping inputs. We encourage the CEC to develop the suitability model on the same principles that have made the binary screens credible, and specifically to avoid reducing distinct landscape and aquatic metrics to a single weighted-average score.

Conclusion

We thank the Commission staff for the opportunity to provide input on the proposed updates discussed in the 2026 Land Use Screens 2.0 Workshop and look forward to actively participating in the ongoing updates and refinement of the Land Use Screens. Please contact Pamela Flick at (916) 442-5746 or pflick@defenders.org or Kate Kelly at (530) 902-1615 or kate@kgconsulting.net with any questions.

Sincerely,

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