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Additional submitted attachment is included below.

March 30, 2023

California Energy CEC
Docket Unit, MS-4
Docket No. 21-SIT-01
715 P Street
Sacramento, California 95814-5512

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

RE: Docket No. 21-SIT-01 — SB100 Implementation Planning for SB 100 Resource Build
Comments on CEC Workshop on Land Use Screens

Defenders of Wildlife and Sierra Club California respectfully submit these comments in response to the March 13, 2023 Commissioner's workshop on Land Use Screens for Electric System Planning and the Electric System Planning Web Mapping Application (Mapping Tool). Defenders of Wildlife, on behalf of our 316,000 members and supporters in California, works towards protecting wildlife, ecosystems, and landscapes while supporting the timely development of renewable energy resources in California. On behalf of its 400,000 members, Sierra Club California works to promote the preservation, restoration, and enjoyment of California's environment. Achieving a low carbon energy future is critical for California – for our economy, our communities, and the environment. Achieving this future—and *how* we achieve it—is critical for protecting California's internationally treasured wildlife, landscapes, productive farmlands, and diverse habitats.

We have been long-time supporters of geospatial planning for generation and transmission that is fundamentally built upon robust biodiversity, habitat, and agricultural datasets to identify appropriate least conflict areas for energy and transmission development. We appreciate the California Energy Commission (CEC) and staff's efforts in updating the Mapping Tool and

refinement of the methodology in response to agency and stakeholder input since the October 2022 workshop. The significant improvements to the Mapping Tool are the result of the CEC project team's collaborative engagement with stakeholders and intensive work. As California works to meet SB 100 and Executive Order N-82-20 (30x30) goals, the continued development and ground truthing of methodology, datasets, and mapping outputs is evermore essential to balance clean energy development with natural and working lands protection.

Comments and Recommendations

Moving forward, California needs to transition from developer driven, reactive transmission planning to proactive planning that identifies appropriate locations for investment in transmission and generation. Land use planning must be the foundation for identifying available land areas for substation-level transmission planning. We offer the following comments and recommendations in response to CEC staff's questions to stakeholders in the Workshop presentation slides.

1. *What geospatial data could be used in the determination of available land area for substation-level capacity additions for transmission planning?*

   Geospatial analysis to identify areas for conservation should be the first step in determining where capacity additions would be viable. In addition to basic conservation data sets of critical habitat, biodiversity, connectivity, intactness, wetlands, and Important Plant and Bird areas, terrestrial climate resilience must be included in the Core Land Use Screen. Utility scale renewable energy projects are long term conversions of land to an industrial land use. It is extraordinarily unlikely a project site will return to a less intensive use once the projects and the supporting gen-tie are developed. For this reason, it is essential that development projects not be located on lands that will provide climate resilience and refugia.

2. *Should the geospatial areas identified in the Core Land-Use Screen be used in busbar mapping to quantify available land area around a substation? Should additional datasets be considered given that busbar mapping occurs at a finer-scale resolution than the statewide land-use screens for resource potential? If so, what datasets?*

   While busbar mapping is energy planning, it cannot be separated from land use planning. It is essential to realistically evaluate the development potential for available land around a substation. Simply considering acres of vacant land and developer interest does not result

in identifying the actual viability of development. Lands with high environmental implications have low viability for energy development due to higher costs, longer permitting time, and the threat of litigation. Directing development and investment to substations in areas of high conflict undermines reaching California's energy and environmental goals.

We recommend the Land Use Screen be used for the busbar mapping with some modifications. At a very minimum, the geospatial areas in the Core Land Screen should be used to quantify available land area around a substation. However, we recommend the inclusion of the ACE Terrestrial Climate Resilience, Audubon Important Bird Areas, California Native Plant Society Important Plant Areas, and (California Public Utility Commission) CPUC High Fire Threat maps.

3. *How might the CEC update the environmental and land-use evaluation to be able to evaluate decisions across multiple land-use objectives?*

   Inclusion of the datasets discussed above will enable informed, proactive decision making to identify locations most appropriate for viable, cost effective energy and transmission development that meets California's energy and environmental goals.

4. *What environmental and land-use metrics could the CEC report back to the CPUC?*

   The CEC should provide the CPUC with metrics on available acres and environmental implications at the transmission zone and busbar level including acres and corresponding megawatts of low environmental implication land within 10 miles of substations. The CEC and CPUC should use that analysis to identify where reallocation to other substations is required to reduce environmental impacts. The 10 mile radius should not be expanded to seek additional lands at high environmental implication substations since the additional acres will only cause additional pressure to develop near those substations.

5. *Considerations for Updates to Busbar Mapping Methodology*

   The CEC's new dataset for existing solar footprints is extremely informative. It highlights the fact that significant solar has been developed (and, according to CEC staff, is continuing to develop at a very fast rate) in many areas excluded by the CPUC techno-economic exclusion screen. We understand that the CEC will be assisting the CPUC in updating its busbar methodology and inputs and assumptions. However, this screen currently excludes areas that may be low conflict/implication. This disconnect needs to be addressed before

the CEC's Land-Use Screens for Electric System Planning is finalized.

Assumptions about candidate resources and other datasets underlying the CPUC techno-economic exclusion screen are opaque or entirely absent in the cited *Inputs & Assumptions: 2019-2020 Integrated Resource Planning* (CPUC November 2019):

- How was large-scale solar defined? And how does it relate to "utility-scale" renewable energy? [1]
- What were the assumed minimum capacity factor threshold and polygon size in the CPUC screen, and how were they determined?
- Likewise, what assumptions underlaid the screen's determination of economic feasibility or lack thereof?
- How did the CPUC screen define densely populated areas?

For an example of a metric, National Renewable Energy Labs has assumed large-scale solar to be 10MW or greater, which would translate to a 70-acre minimum footprint for a large-scale solar project at the CEC.[2] How many 70 acre projects were assumed by CPUC to comprise a candidate project area for solar, and under what economic metrics?

The concern is that the CPUC techno-economic screen excludes low implication areas such as urbanized industrial areas (e.g., warehouses in Ontario). This skews the land use screen results. The assumptions behind the exclusion datasets in the CPUC techno-economic exclusion screen should be made transparent for reviewers, and updated to reflect the availability of newer information, including the rapid ramp up of renewable energy at or near load centers, – and the initial screen for the final CEC's *Land-Use Screens for Electric System Planning* revised accordingly.

Conclusion

Thank you for the opportunity to provide initial comments on the draft Land Use Screens and staff's questions for stakeholders. We support the CPUC's use of the CEC's methodology and Mapping Tool for busbar mapping after the methodology and Mapping Tool are updated to address the above issues and recommendations. We look forward to actively participating in the continued development and implementation of the Land Use Screens and busbar mapping

[1] 2021 SB Joint Agency 100 Report (which also used the RESOLVE model) used the following definition: "A utility-scale solar power plant, using either photovoltaic [PV] or concentrating solar thermal technology, that sells its electricity to wholesale utility buyers. Often, utility-scale solar projects are described as being "in front of the meter" as opposed to small distributed generation systems, which tend to be 'behind the meter.'"

[2] The 7 acre per MW assumption may be outdated; the most recently approved projects in a DRECP development focus area ranged from 5.2 to 6 acres per MW, including in most instances four hours of battery energy storage.

and methodology. Please contact Pamela Flick at pflick@defenders.org, Brandon Dawson at brandon.dawson@sierraclub.org, or Kate Kelly at kate@kgconsulting.net with any questions.

Sincerely,

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