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LSA Comments on March 13 CEC Workshop on Land Use Screens

Additional submitted attachment is included below.



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**Re: Docket No. 21-SIT-01 – SB 100 Implementation Planning for SB 100 Resource Build.
Comments on CEC Workshop on Land Use Screens.**

The Large-scale Solar Association (LSA)¹ appreciates the opportunity to provide comments on the recent proposed updates to the CEC Land Use Screens.

We would first like to thank and commend the Commission and staff for extending the timeline of this process to facilitate more comprehensive discussions with stakeholders. The additional time and proposed modifications reflect the wider input of the public, and LSA believes this will result in a more effective set of screens. We believe the following changes are both particularly useful and more accurately reflective of the development potential in the State:

1. The inclusion of the DRECP Variance Areas and General Public Lands for development consideration.
2. The change in treatment to protected areas, including removal of the 1-km buffer around those areas.
3. The change in the use of the Cropland Index and consideration of SGMA implementation that more accurately represents land availability in the Central Valley.
4. The development of parcelization and existing project footprint layers to help provide a more accurate perspective.
5. The mapping of existing development areas.

Context

Recent developments since the initial release of the Land Use Screen updates last fall have heightened their significance for planning purposes. Given the extensive use of these Screens in state planning, it is important to take a moment here to highlight the context in which they will be applied.

¹ Large-scale Solar Association (LSA) is a non-partisan association of solar and battery storage developers that advocates appropriate policies to enable market penetration of utility-scale solar technologies in California and the Western United States. LSA's members are leaders in the utility-scale solar industry with deep experience in all disciplines necessary to site develop, engineer, construct, finance and operate utility scale solar and battery storage systems. LSA's member companies are principally responsible for developing most of the operational and planned solar and storage capacity in California today.

In February 2023, the California Public Utilities Commission (CPUC) issued a Decision in R.20-05-003, which provided new Resource Portfolios for the California Independent System Operator (CAISO) to use for the 2023-24 Transmission Planning Process. The magnitude of the portfolios surpassed historical state projections, increasing planned capacity from 36 GW by 2032, as issued in the 2022 Integrated Resource Plan (IRP) decision, to approximately 86 GW by 2035. To achieve this goal, California must increase its rate of building new projects from less than 2000 MW per year to nearly 7000 MW per year.² Planning for this unprecedented expansion of new resources, particularly as it relates to transmission and busbar mapping, requires the state to expand and clarify its perspective when it comes to balancing new generation resource development with land use considerations.

In addition, the Administration has proposed trailer bill language currently under legislative consideration, aiming to enforce direct alignment between Load Serving Entity (LSE) procurement and IRP resource plans. This development emphasizes the importance of the Screens in the IRP RESOLVE model's selection of resource types and locations. If this bill passes, Screens that in the past provided only directional planning targets could instead dictate final procurement decisions.

The state is also contending with significant interconnection challenges and transmission infrastructure constraints. CAISO's recent Interconnection Process Enhancements (IPE) Issue Paper and Straw Proposal proposes to align interconnection processes more closely with state planning decisions, such as the IRP. The proposal also introduces prioritization of project interconnections based on project locations within zones identified in the resource and transmission planning process:

“The ISO expects that further clarity in its transmission plans identifying areas or zones where transmission is being planned to meet the resource plans in the CPUC portfolios, coupled with clear prioritization of those zones in the interconnection process, will shape future interconnection request activity by encouraging developers to focus on those areas. We believe that clearer direction from the CPUC to load-serving entities to focus procurement activities in those preferred zones will also drive greater overall resource development efficacy as described in the MOU.”³

If the state intends to not only direct projects to general areas but to also prioritize projects at specific locations within these regions, it is crucial for the agencies to achieve more accuracy in the data used to identify such areas. Additionally, the agencies must ensure the methods used for area identification and the factors considered during this process are developed in a transparent public process and are ultimately sound. Although decisions regarding the IPE have not yet been made, LSA recognizes that the substantial requirement for new energy resources to meet state decarbonization targets calls for a thoughtful approach to resource planning that

² See California Energy Commission data on historical build-out rates at [Electric Generation Capacity and Energy](#).

³ P. 13 2023 Interconnection Process Enhancements Issue Paper and Straw Proposal, CAISO

is guided by principles related to project timing, cost and viability, as well as resource protection, among other elements.

In addition, land-use screens must be coordinated with the massive volume of transmission upgrades that CAISO has indicated are necessary to meet state climate and reliability goals. The planned locations of new transmission, a draft of which was recently released in the 2022-23 Transmission Plan⁴, will drive significant project development in locations that will benefit from this new infrastructure. State land use planning for electricity must involve consideration of this new infrastructure and find ways to maximize related project development interconnection capabilities in those areas.

The importance of getting this right this cannot be overstated. Lessons learned from previous landscape level planning exercises for renewable energy must be applied here, to avoid the chilling effect and development delays experienced in those areas.

Furthermore, project development is continually evolving, with solar project footprints growing in size to achieve economies of scale in an increasingly challenging environment. This trend necessitates more careful consideration of areas that can accommodate larger projects and other factors involved in project siting.

In addition, the state is also facing multiple pressures on land use for housing and transportation against a rapidly changing landscape due to the early impacts of climate change. It is thus critical for the Commission to consider not only the accuracy and scope of the data used but perhaps more importantly, its application across various state planning exercises, including IRP modeling, busbar mapping, SB 100 capacity expansion modeling, and long lead-time transmission infrastructure planning.

It is also critical for the State to balance land use planning with its goals to promote development with Local Capacity Reliability (LCR). Resources built within LCR areas are critical because they reduce the need for costly new transmission. In particular, LCR areas that can accommodate solar become prime locations for battery storage/solar paired resources, which are the foundational building block of the state's plan to meet its climate and reliability goals.

Finally, it is essential to recognize California's role within the broader national context. As California aims to add 39 GW of new utility-scale solar by 2035, with modeled projections indicating a need for at least 70 GW by 2045, numerous other states have also adopted decarbonization and clean energy targets. Consequently, there is a significant demand for solar projects nationwide. However, supply chain constraints and limited access to cost-effective financing have made solar developers' resources finite.

Renewable energy development in California has long been intricate and costly. If the process becomes even more complex and expensive, developers may be forced to redirect limited

⁴ [Draft-2022-2023-Transmission-Plan.pdf \(caiso.com\)](#)

resources to other states. With this in mind, and considering California's dynamically evolving energy landscape, LSA encourages the Commission to prioritize simplicity and practicality in its overall guidance regarding solar development, both in terms of location and implementation.

Response to Questions from March 13 Workshop

The CEC and CPUC staff posed questions during the workshop. LSA's responses are below.

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

How geospatial data is applied to land availability around substations holds significant importance - perhaps even more so than the data itself. A confluence of factors, including escalating pressure on land resources, has rendered project and transmission infrastructure siting increasingly challenging. It is thus vital for planners to optimize the existing infrastructure capacity to the fullest extent in order to minimize the need for new construction. This calls for a new approach to assessing land availability around substations and facilitating the expansion of existing substations.

The use of parcelization, project footprint, and built environment datasets will help to provide planners with insights into genuine land availability and project viability when it comes to aggregating parcels for project siting around substations. Beyond the use of that data, LSA recommends the busbar mapping process apply *only* the Revised Protected Area Layer dataset as an indicator of land availability. Developers conduct detailed project-level analyses, adhering to CEQA requirements for avoiding, minimizing, and mitigating on-the-ground conflicts, relying on more precise and granular data than Land Use Screens can offer. On that basis, LSA cautions against the application of other biological datasets that would effectively reduce substation megawatt allocations and unnecessarily force the need for new substations elsewhere.

LSA also recommends extending the radius considered around substations, particularly for higher voltage infrastructure. Finding contiguous areas within a 10-mile radius poses significant challenges; thus, LSA proposes expanding the radius to 30 miles to accommodate larger project sizes and account for potential conflicts. Larger projects, and those sharing Interconnection Facilities, can bear the higher cost of longer gen-tie lines to the Point of Interconnection.

- 3. 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?**

In addition to using project footprint, built environment and parcelization datasets, LSA recommends prioritizing the use of datasets related to both commercial interest in the interconnection queue, and substations' total available transmission capacity and transmission capacity expansion capability. By focusing on these factors, the state can maximize the use of

existing infrastructure and minimize the new conflicts and additional costs associated with constructing new substations.

Commercial interest, as reflected in the interconnection queue, is a good proxy for other factors not captured in models. If there is commercial interest in areas not otherwise indicated as preferential, it is likely that developers are considering other conditions favorable to development that merit additional focus.

Beyond that, we emphasize recommendations in response to Questions 1 and 2 above.

- 4. How might the CEC update the environmental and land-use evaluation to be able to evaluate decisions across multiple land-use objectives?**
- 5. What environmental and land-use metrics could the CEC report back to the CPUC?**

As the CEC is seeking to achieve multiple land-use objectives and balance multiple needs, CEC could collect data on: 1. Acres of land developed for solar by land-cover type each year; 2. Acres of solar developed that has integrated agricultural practices; 3. Acres of solar developed over areas with groundwater overdraft; 4. Acres of land conserved as part of solar development; 5. Acres of solar developed in various Land Use Screens (biological planning priorities [ACE Biodiversity (Rank 5)] and cropland index [above threshold]). This data should be carefully reviewed and interpreted as it will reflect real-world economic decisions regarding solar development on the landscape.]

- 6. How can the working group assess mapping potential beyond existing and planned substations?**

This question speaks to the pressure on land resources in California and calls for a critical evaluation of whether and how to direct and aggregate projects in existing developed areas and how to expand into new regions. To address this, LSA recommends that the CEC and CPUC launch a stakeholder process that combines the subregional analyses and datasets used in the Land Use Screens with input from renewable developers, conservation and environmental justice groups, tribal representatives, and the public. This collaborative approach could help to identify the most suitable, low-conflict areas for new development, considering a range of real-world factors beyond environmental data. While modeled information offers an initial glimpse into potential locations, an iterative and transparent stakeholder process would assist in identifying the best areas for longer-lead time development.

LSA further emphasizes the importance of learning from past planning exercises, including the Desert Renewable Energy Conservation Plan (DRECP), Renewable Energy Transmission Initiative (RETI), and Competitive Renewable Energy Zones (CREZ) processes. Through years of implementation, stakeholders have learned what works and what does not when it comes to siting and building new transmission and project infrastructure. Given the urgency to build new resources to meet near-term climate targets, the state cannot afford to repeat past mistakes.

Engaging in a public process that consolidates the knowledge of all parties could facilitate efficient and informed decision-making that aligns with multiple state goals.

Finally, to amplify previous comments, LSA recommends prioritizing low-conflict, readily developable areas with existing infrastructure:

- First, look at existing transmission and substation capacity and assess where it would be most feasible to expand or pair with additional substations.
- Second, consider the criteria for identifying new areas that can accommodate new projects and which merit new infrastructure, similar to the Tehachapi process/line.

Additional Recommendations

1. The March 13 workshop states: “Future system modeling and land-use impacts must be coordinated with any recommendations from the Climate Smart Strategy called for in Executive Order N-82-20 and the AB 32 Scoping Plan.” (Source: 2021 SB 100 Report, Page 114).” In response to the Executive Order and Scoping Plan, the CEC proposes to use the ACE Terrestrial Climate Resilience dataset to exclude areas for consideration in the SB 100 Study Screen.

As stated previously, LSA believes the use of this dataset unnecessarily narrows the planning field of vision, effectively indicating that solar cannot be developed either where species are now or where they *might be* in the future – including in areas that are expected to be degraded by climate change which might be otherwise suitable for solar. This omission should be addressed before the ACE Terrestrial Climate Resilience Layer is used for this purpose.

This layer also introduces unnecessary exclusions as solar projects have demonstrated their ability to be designed compatibly with the needs of multiple species. In some cases, projects have been shown to even enhance habitats compared to the degraded conditions resulting from intensive agricultural practices.

While we continue to recommend against using this dataset even in the SB 100 Climate Study Screen, we understand the Commission’s goal of responding to the EO and Scoping Plan and will devote further thought to potential solutions.

2. In previous comments and in discussions with CPUC and CEC staff, LSA proposed the use of a Development Feasibility Index to better inform the process regarding the viability and cost of building projects considering factors that include parcelization, distance to transmission infrastructure, and interconnection capacity at substations. This information will help planners better understand the viability of development in various zones and can help inform planning decisions. We continue to encourage the use of this index, particularly in busbar mapping and transmission planning applications. LSA further recommends that the busbar mapping process be made more transparent and involve party input early in the process, and have been pleased by recent signals by the CPUC that these types of changes could happen this year.

3. The Land Use Screens datasets and their application warrant closer examination and refinement. For instance, consider the Critical Habitat layer in the Data Viewer tool. When this layer is activated in the Viewer, the city of Tracy, along with existing solar projects and farmland in the area, are all depicted as Critical Habitat. Beyond the fact that projects can – and routinely do – mitigate these conflicts, this highlights the necessity of using the datasets and the Land Use Screens only as general guides – particularly in busbar mapping. They should not be used to define boundaries or exclusion zones.
4. Given the need for projects to accommodate multiple conflicts on the ground, LSA continues to recommend the use of a 10 acres/MW metric for statewide planning purposes.
5. Considering the recent advancements in project design, LSA recommends utilizing a 15% slope in the techno-economic screen to better reflect current capabilities.
6. The Inflation Reduction Act introduced significant cost-saving incentives for projects located in Energy Communities. The Internal Revenue Service (IRS) just this week issued formal guidance about Energy Communities, and LSA encourages the CPUC to proactively explore methods to incorporate these areas within the RESOLVE model to gain the most benefit for ratepayers.

We thank the Commission for its work on the Land Use Screens, and for considering the views of LSA and the utility-scale solar industry. Please contact us if you have any questions.

Sincerely,

/s/ Shannon Eddy

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