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**GSCE comment on SB 100 report draft results workshop**

*Additional submitted attachment is included below.*

**BEFORE THE ENERGY COMMISSION  
OF THE STATE OF CALIFORNIA**

*SB 100 Joint Agency Report: Charting a  
path to a 100% Clean Energy Future*

19-SB-100  
(August 16, 2019)

**COMMENTS OF GOLDEN STATE CLEAN ENERGY, LLC, ON  
SB 100 REPORT DRAFT RESULTS AND WORKSHOP**

Golden State Clean Energy, the developer of the Westlands Solar Park, appreciates the opportunity to submit this comment on the SB 100 Joint Agency Report Draft Results Workshop held on September 2, 2020. The Westlands Solar Park (“WSP”) is a 20,000+ acre and 2,700 MW competitive renewable energy zone development in the southern part of the Westlands Water District in California’s Central Valley. This competitive renewable energy zone was identified by the State of California in the Renewable Energy Transmission Initiative as a zone that holds the greatest potential for cost-effective and environmentally responsible renewable energy development. This project has strong support from environmental and agricultural stakeholders, as it is located entirely on drainage-impaired farmland and sited adjacent to existing transmission corridors that can deliver clean renewable electricity to both northern and southern California.

During a recent press conference held in Butte County where Governor Newsom was discussing the devastating fires and role of climate change in driving the intensity and severity of California’s wildfires, the Governor stated, “This is a climate damn emergency. . . [our goals are] inadequate to meet the challenges of the state.” “We have to step up our game. As we lead the nation in low carbon green growth, we’ll have to fast track our efforts.”<sup>1</sup> Governor Newsom accurately depicts this situation as a climate emergency. California is facing increasingly larger and longer fire seasons in large part due to climate change. It is imperative that California look at all of our current goals and mandates with an eye towards accelerating both the reduction of greenhouse gas emissions and the building of renewable generation in order to change our future outlook. Our current rate of generation and transmission development may not allow us to reach carbon neutrality by 2045, let alone a more aggressive target.

GSCE requests that the joint agencies adopt recommendations for an “all of the above strategy” that includes broad-scale electrification of buildings and transportation; faster and greater utility-scale renewable build out; necessary bulk electric transmission grid build-out to support the requisite future generation fleet; significant bulk storage capability, including strategic long

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<sup>1</sup> CalMatters, ‘Debate is over,’ California’s governor says. ‘This is a climate damn emergency.’, Sept. 11, 2020, available at: <https://calmatters.org/environment/2020/09/california-governor-climate-emergency/>.

duration storage; appropriate planned distributed energy resources; and an approach for the development of green hydrogen infrastructure in the state. In order for California to pursue an “all of the above” strategy at the necessary rate of development, the state must immediately transition planning efforts into action and begin development activities immediately. GSCE believes this involves the following steps:

1. The joint agencies should immediately plan for and require the construction of new in-state foundational transmission lines and grid infrastructure needed to ensure that renewable generation can be delivered to load and storage resources. All existing modeling scenarios will require that significant new transmission facilities be constructed to meet the SB 100 report’s core or accelerated timelines. This means that even as California continues to debate the varying modeling scenarios and pathways forward, there are least-regrets transmission projects that need to be identified so that permitting and construction can begin. New transmission cannot come soon enough, as renewable resources are already facing increasing levels of curtailment.<sup>2</sup>

Given that planning and development for long lead-time infrastructure like transmission lines takes a decade or more, the state needs to identify new transmission facilities immediately. We agree with the California ISO’s concern, expressed during the workshop’s grid planning implications panel, that something more is needed for the SB 100 report to translate into actionable transmission planning. The missing connection between planning and implementation points to a significant gap that leaves California’s transmission development far behind generation resource development. The Public Utilities Commission’s integrated resources planning has not yet resulted in identifying transmission needed to accommodate future renewable generation development in California and ensure that the energy production can be maximized to serve load in California.<sup>3</sup> This gap between planning and development will especially hamper new

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<sup>2</sup> See Cal. Independent System Operator, Managing oversupply webpage, *available at*: <http://www.caiso.com/informed/Pages/ManagingOversupply.aspx>. In the first five months of this year alone, California had already curtailed over a million megawatt-hours of renewable energy. Cal. Independent System Operator, Managing oversupply webpage, Wind and solar curtailment by day, June 10, 2020, p. 3, *available at*: [http://www.caiso.com/Documents/Wind\\_SolarReal-TimeDispatchCurtailmentReportJun10\\_2020.pdf](http://www.caiso.com/Documents/Wind_SolarReal-TimeDispatchCurtailmentReportJun10_2020.pdf) (Year-to-date renewable energy curtailed as of this June 10 report was 1,172,434 MWh.). Even accounting for the impact COVID-19 has had on demand this year, there has been a clear and growing reliance on curtailment over the past several years. To put things into perspective, this level of in-state renewable curtailment in just the first five months of 2020 has offset the avoided curtailment benefits the Western Energy Imbalance Market has provided over its 5 years of operation. Western EIM Benefits Report, First Quarter 2020, April 30, 2020, p. 16, *available at*: <https://www.westerneim.com/Documents/ISO-EIMBenefitsReportQ1-2020.pdf> (Through March of 2020, the EIM purports to have been responsible for 1,098,890 MWh of avoided renewable curtailment.).

<sup>3</sup> CAISO’s transmission planning process has not produced policy-driven transmission projects in recent years, transmission projects that should be most associated with meeting policy goals like accommodating SB 100’s generation resource needs. CAISO’s TPP is based on the generation portfolios produced in the CPUC’s IRP process, but the IRP has experienced several issues and one could conclude these issues led to overly-conservative estimates of the future generation fleet’s impact on the transmission grid, such as delays in using updated GHG emissions targets for 2030 and inclusion of energy-only deliverability status resources that provide less grid impacts during transmission studies while not having a market to support the need for EO resource assumptions.

transmission lines because of their long lead-time. The grid necessary to satisfy SB 100's legislative mandates, Governor Newsom's proclamation, and support our future renewable generation fleet, requires more actionable planning and a new form of policy guidance from the state. We must also look at transmission planning that is not limited to a 10-year planning horizon. We must plan the grid (and all long lead-time infrastructure) for what California will need in 2030, 2040 and beyond.

2. The joint agencies should require additional procurement of new renewable generation. In the draft report presentation, the Energy Commission staff and the E3 consultants described the state needing to procure 70 GW of new utility-scale solar by 2045 in the SB 100 core scenario,<sup>4</sup> which is estimated to require on average 1.7-2.7 GW of solar to be constructed annually.<sup>5</sup> This is alarming because the draft results show California's average solar build out over the last ten year to be about 1 GW per year.<sup>6</sup> Without more aggressive annual procurement by load serving entities (or a central procurement process), the state is in significant danger of not meeting its SB 100 goals even under the core scenario.
3. The joint agencies should emphasize the land use planning that is done up-front to accommodate the construction of 70 GW or more of utility-scale solar, along with bulk storage. Further, the land use planning for new renewable generation resources needs to more strongly guide major transmission projects needed to support the amount of solar coming online.

The CEC staff described the state needing 417,000 acres or more of land to build out utility-scale solar in the core scenario and upwards of 612,000 acres needed in the in-state only scenario. This amount of land will require local-state-federal coordination to begin now so that these projects can begin the interconnection and permitting process. Without policy direction and local coordination to identify, evaluate and permit this massive acreage, the state risks creating a problem where private development occurs in an uncoordinated and inefficient manner, resulting in litigation, further delays and ultimately either higher costs passed on to ratepayers or a failure to meet these critical goals and requirements. Further, major transmission projects are more likely to move forward and be economical if coordinated to deliver energy from areas known to be targeted for generation development.

GSCE suggests that the joint agencies consider opening up a stakeholder process to begin planning for the permitting and land use considerations of building the significant amount of renewable generation required in California to meet SB 100. California also

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<sup>4</sup> Cal. Energy Comm'n, SB 100 Draft Results, at slide 15 (Results: Capacity Additions), Sept. 2, 2020, *available at*: <https://efiling.energy.ca.gov/getdocument.aspx?tn=234549>.

<sup>5</sup> *Id.* at slide 22 (Resource Build Rates).

<sup>6</sup> *Id.*

needs to make sure that all currently planned and permitted transmission facilities are 'right-sized' to meet the SB 100 requirements.

4. The joint agencies should be planning to develop several new long-duration storage projects (such as pumped-storage hydropower projects) as well as repurposing existing pumped-storage (like the Helms pumped-storage facility) to be exclusively used for long-duration and seasonal storage of renewable generation, to support the state's climate objectives. Considering how long it takes to permit such facilities, the joint agencies should quickly begin the process of studying where these new facilities should be located to provide the most cost-effective resource to meet California's needs and how to get the related transmission infrastructure planned and approved.
5. Lastly, the joint agencies should convene a stakeholder process on how the state will support green hydrogen infrastructure and where the renewable generation will come from to support the production of hydrogen. The amount of energy needed to meet the high hydrogen load forecast dramatically increases from 2035 to 2045 and continues to climb thereafter.<sup>7</sup> This amount of demand for hydrogen production, if additive to the load in the core scenario, will dramatically increase the amount of renewable generation needed.

We commend the joint agencies for the significant efforts undertaken so far, but we cannot overstate the urgency for California to move much more quickly to the transition to a carbon-free energy supply. Thank you again for the opportunity to comment on the SB 100 report draft and workshop.

Dated: September 15, 2020

Respectfully submitted,

/s/ Daniel Kim

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<sup>7</sup> *Id.* at slide 10 (Core Assumptions: Demand Scenarios).