



December 18, 2020

California Energy Commission
Docket No. 19-SB-100
Docket Office
1516 Ninth Street
Sacramento CA 95814

Submitted Electronically via CEC website to Docket 19-SB-100

Re: Comments on SB 100 December 3, 2020, Draft 2021 SB 100 Report

The Business Network for Offshore Wind, California Wind Energy Association and Offshore Wind California are pleased to provide these comments on the Joint Agencies' December 3, 2020, Draft 2021 SB 100 Report ("Draft Report") that is required by SB 100.

We recognize the significant undertaking of this joint CEC, CPUC, CARB process and commend the staff team for providing ongoing outreach and briefings throughout the year. While we are pleased to see some consideration of offshore wind, we unfortunately find that none of the recommendations that we made in our September 15, 2020, comments (and earlier in this process) have been addressed. We request, therefore, that the Joint Agencies make its publicly funded RESOLVE model available to the public so that parties may further analyze the assumptions and decisions that were made in producing the report. We note that the CPUC made its RESOLVE model available to the public in 2017 and 2019 to enable the parties to build upon CPUC Staff's RESOLVE modeling runs for the Integrated Resource Planning (IRP) process and we see no reason that parties should not be able likewise to access the SB 100 RESOLVE model to generate further insights.¹ We believe this access to modeling assumptions and information is especially critical in the wake of recent outages in the state and the need for strategic long term resource planning to address the dual imperatives of system reliability and aggressive carbon reductions in an equitable and affordable manner for all regions of the state.

¹ For example, CalWEA was able to show, using the RESOLVE IRP model, that a portfolio with greater diversity, but lower levels of customer-side solar, reduces overall costs. See CalWEA's December 17, 2019, comments in CPUC R.16-02-007.

With regard to both of these imperatives, we find that the report underplays the value of resource diversity in several ways. Importantly, however, the report does conclude that “[p]ortfolio diversity, both technological and geographical, is generally valued by the model” and that “[n]early all out-of-state or offshore wind resources are selected when made available [to the model].”² Despite that finding, the Draft Report does not fully or fairly assess the value and benefits of a more diverse resource portfolio, or one that includes offshore wind sooner rather than later to address de-carbonization and reliability in a cost-effective manner. At the same time, the Draft Report includes much higher, far more costly levels of customer-side solar resources in the portfolio without benefit of any analysis at all. This non-transparent bias towards distributed solar tarnishes the credibility of the report. Further, and at least equally importantly, the Draft Report does not begin to sketch out what actions must be taken in the near-term to achieve even a modest level of offshore wind in the portfolio by 2030 to lay the groundwork for the 10 GW of offshore wind that is shown by the model to be cost-effective in 2040 (without considering the benefits of resource diversity per se). We briefly elaborate on these issues.

The Draft Report does not fully or fairly assess the value and benefits of offshore wind, while assuming non-cost-effective levels of customer-side solar. Whereas 39 GW of customer-side solar was assumed as a fixed input to the model based on “projected” customer adoption rates,³ no additional customer-side solar was selected by the model in its resource optimization,⁴ suggesting that the assumption was excessive. Meanwhile, all 10 GW of offshore wind that was made available to the model was selected in the optimization⁵, suggesting that additional offshore wind would have been selected had it been made available. It is therefore reasonable to conclude that a more optimal portfolio would have included less customer-side solar and more offshore wind, but the most cost-effective balance cannot be better understood without conducting additional RESOLVE runs.

² Draft Report at pp. 24 and 107.

³ While the Draft Report notes that further analysis on customer-side solar is needed, it does not mention that its projections are based on the CPUC’s current net energy metering (NEM) tariff and that the CPUC has opened a proceeding to consider tariff reforms. A broad array of parties is calling for major reforms to address the current NEM cost-shift of \$2.5 billion annually, growing to \$4.4 billion annually by 2030, which is being borne by non-NEM customers. See CPUC Docket R.20-08-020, Joint Opening Comments of Southern California Edison Company, Pacific Gas and Electric Company, and San Diego Gas & Electric Company at p. 2 (October 5, 2020). Also see the opening comments the Commission’s Public Advocates Office, the Natural Resources Defense Council, The Utility Reform Network, and the California Coalition of Utility Employees.

⁴ Id. at p. 108.

⁵ Id. at p. 86.

Further, although the model generated portfolios that are almost completely dominated by just two technologies -- solar and batteries,⁶ particularly before 2040, the Draft Report only mentions in passing some of the benefits of resource diversity. The Draft Report notes, for example, that “greater portfolio diversity may reduce utility-scale solar and storage build rates necessary to meet the SB 100 policy goals.”⁷ Those build rates are unprecedented, requiring the maximum historical build rate for solar to be sustained for 25 years with entirely unprecedented growth rates for battery storage.⁸ Relying more heavily on a greater diversity of resources will necessarily reduce the risk that these build rates will not be sustained. And, as our September 15, 2020, comments discuss, greater resource diversity will reduce other critical risks as well, including system reliability risks associated with relying largely on batteries to address system needs when the sun sets, risks associated with changes in land-use and protecting special-status and endangered species, and supply-chain and raw materials risks. These risks may be difficult to quantify, but the stakes are high: achievement of SB 100 goals, system reliability, and public confidence in the state’s ability to deliver on both.

The Draft Report does not begin to sketch out what actions must be taken in the near term to achieve even a modest level of offshore wind deployment. Because the Draft Report pays scant attention to the value of resource diversity, it is not surprising that it does not call attention to the actions that must be taken in the near term to achieve even a modest level of offshore wind in the portfolio by 2030. While the Draft Report briefly acknowledges that “workforce needs, land use planning, resource supply-chains, and regulatory and permitting processes that must be considered for successful implementation of SB 100,” what is missing is any vision or direction on what must be done to address these issues, and to advance the necessary infrastructure development that requires very long lead-times. For California to maximize the economic benefits that may be obtained from offshore wind, the state will need to carefully plan and scale up development, including workforce training and development of the state’s transmission and ports infrastructure.

We urge the Joint Agencies to address these important issues as soon as possible in subsequent SB 100 analyses and other state agency efforts.

⁶ Id. at Figure 2.

⁷ Id. at pp. 107-108

⁸ Id. at p. 20.

Respectfully submitted,



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