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SEIA Comments on SB 100 Demand Analysis

Additional submitted attachment is included below.

August 21, 2024

California Energy Commission
Docket Number 23-SB-100
715 P Street
Sacramento, CA 95814

Re: Senate Bill 100 Demand Scenarios

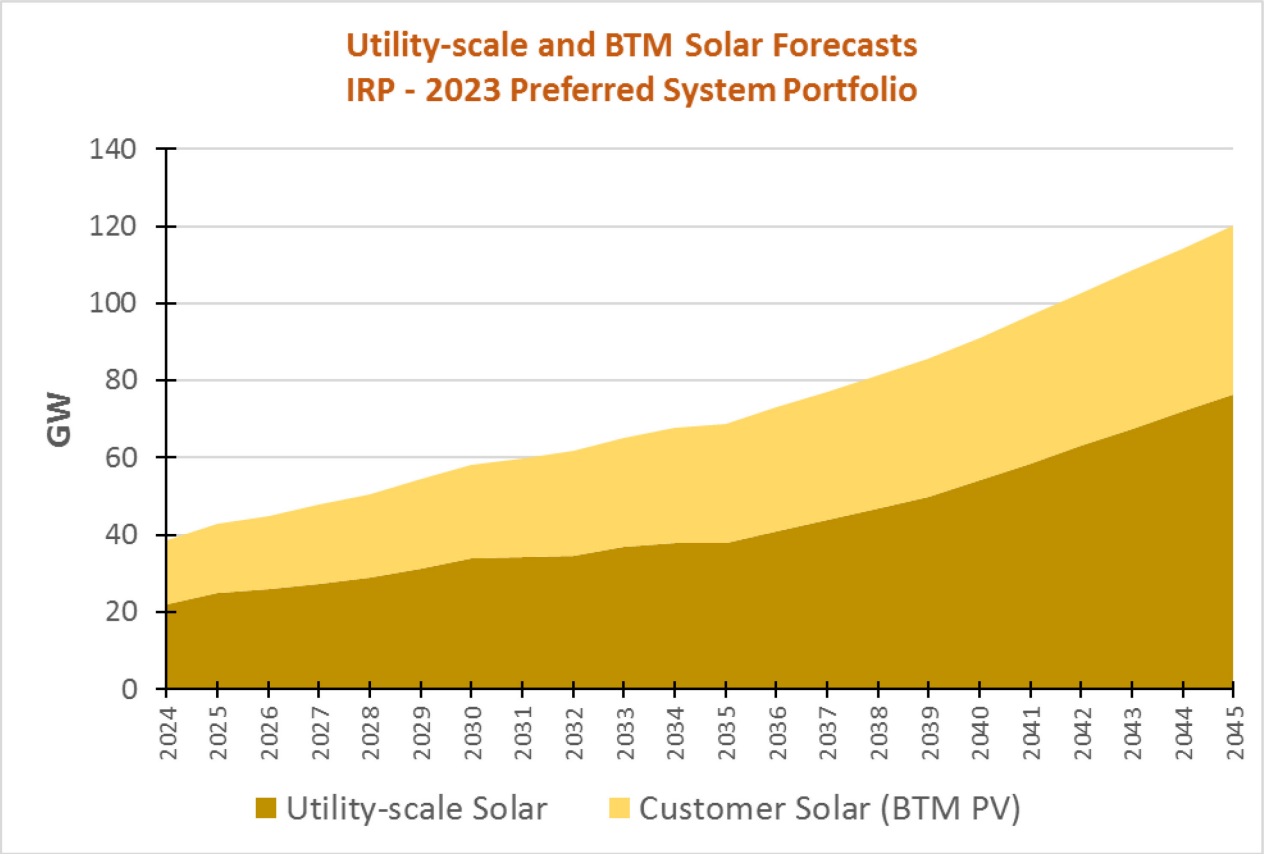
The Solar Energy Industries Association (SEIA) appreciates the opportunity to submit comments on the inputs and assumptions for the demand scenarios which will be used in the analysis of options to achieve the SB 100 target of 100 percent clean electricity by 2045 for presentation in the 2025 SB 100 Joint Agency Report.

Founded in 1974, SEIA is the national trade association for the solar and storage industries, building a comprehensive vision for the advancement of these technologies and helping to lead the transformation to a clean energy economy through advocacy and education. SEIA works with its over 1,200 member companies and other strategic partners to create jobs and diversity in energy production, champion the use of cost-competitive solar in America, remove market barriers, and educate the public on the benefits of solar energy.

SEIA appreciates the work of the California Energy Commission (CEC) to model complicated growth scenarios through 2045 but believes there are recent developments in the policy environment that have not been taken into account in the proposed inputs related to the growth of Distributed Energy Resources (DER). These policy changes could have significant impacts on the results of the SB 100 Joint Agency Report.

Based on the presentation at the August 7, 2024 workshop, the CEC plans to use the 2023 Integrated Energy Policy Report (IEPR) as the source of the DER growth rates in the base case scenario. Both the 2022 and 2023 IEPR projections for behind the meter (BTM) solar photovoltaic (PV) growth show continued steady growth rates for the next 20 years of about 1.3 GW per year, as illustrated in Graph 1 below. This graph shows both the BTM PV ("customer solar") and utility-scale solar included in the 2023 Preferred System Portfolio for the Integrated Resource Plan (IRP) that the California Public Utilities Commission (CPUC) adopted in Decision 24-02-047. The PSP used the 2022 IEPR BTM PV forecast. The 2023 IEPR BTM solar forecast is similar to, and slightly higher than, the 2022 IEPR forecast, with growth rates approaching 2.0 GW per year by 2032.

Graph 1

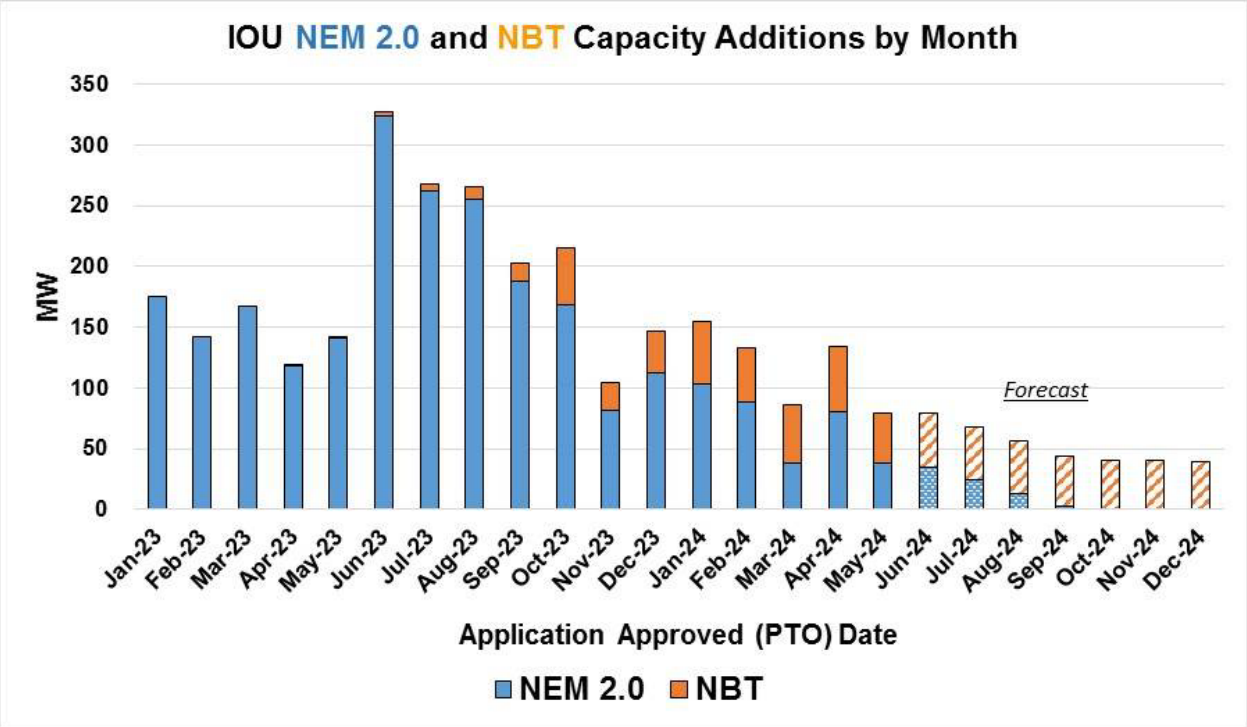


The high DER scenario will have even more BTM PV capacity. However, DERs are no longer on track to grow at a pace of 1.3 GW per year, principally due to the policy changes initiated at the CPUC last year moving from Net Energy Metering (NEM 2) to the Net Billing Tariff (NBT).[1]

In this regard Graph 2 shows recent NEM 2 and NBT rooftop solar additions, using the CPUC's DG Stats database through the end of May 2024, with extrapolations through the end of 2024. Graph 2 shows clearly that the number of installations that qualify for NEM 2 are tailing off rapidly, as installers work through the backlog of projects that qualify for that tariff. NBT installs have been relatively steady thus far in 2024, after ramping up in the second half of 2023, but at a level that is far below what the state achieved under NEM 2.

[1] See generally, CPUC Decision No. 22-12-056, issued in December 2022 and implemented in April 2023.

Graph 2



As can be seen in the graphic, this new analysis projects that rooftop solar additions in 2024 will be 960 MW, about 430 MW NEM 2 and 530 MW NBT. This is lower than the IEPR forecast for 2024 additions (1,300 MW). More important, the NEM 2 backlog will end, and the NBT market going forward is likely to be closer to 530 MW per year rather than the 1,300 MW per year forecasted in the IEPR. Further, the CPUC's recent decision to implement a substantial new fixed charge for residential electric customers in late 2025/early 2026 represents a further erosion in the economic environment for BTM solar for residential customers. The new fixed charge will likely have further adverse impacts on DER uptake, beyond the effects from the implementation of the NBT that are shown in Graph 2.

By not accounting for these policy changes and the clear drop in DER adoption seen over the last year, the CEC risks significantly overestimating the scale of DER deployment that will occur going forward. As a result, the CEC's SB 100 analysis may underestimate the amount of incremental utility-scale generation and transmission infrastructure that will be needed.

Over the last five years (2019-2023), the state has achieved the necessary pace of overall solar deployment that is included in the current IRP – approximately 4 GW per year. However, this result is because the rooftop market has averaged 25% more than the 1.3 GW/year level of rooftop deployment forecasted in the IRP. Utility-scale solar development, however, has been lower than the pace expected in the IRP. This data is shown in Table 1.[2]

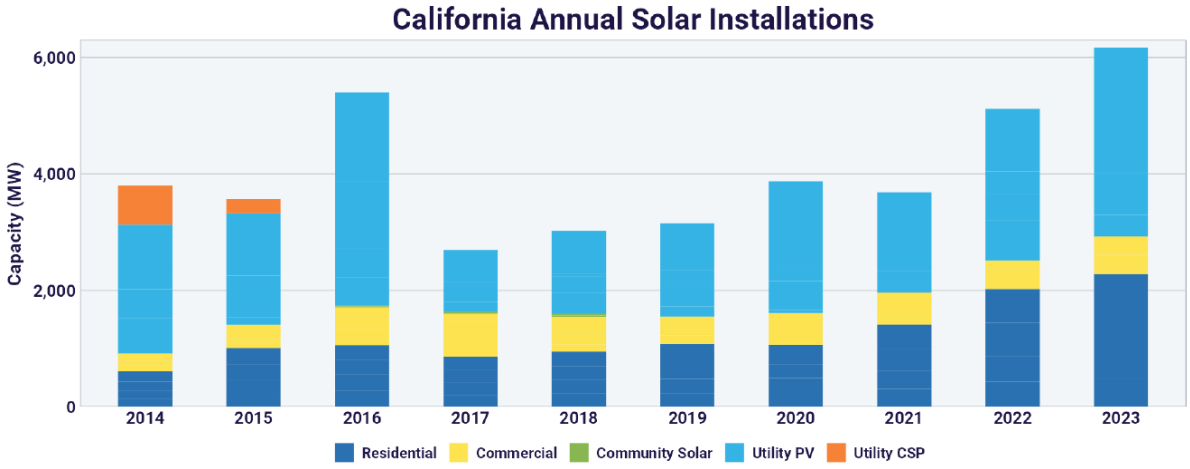
[2] The rooftop solar data is from DGStats; the utility scale data is from SEIA – see Graph 3.

Table 1: *Historical and Forecasted Solar Deployment in California (GW per year)*

Solar Market	Historical			IRP Forecast
	2019-2023	Best Year		
	GW/year	*Year*	*GW/year*	*GW/year*
Rooftop	1.6	2023	2.3	1.3
Utility-scale	2.4	2023	3.6	2.6
Total	4.0	2023	5.9	3.9

In addition, the pace of utility-scale solar deployment has been more volatile from year-to-year, ranging from 1.0 GW/year in 2017 to 3.6 GW/year in 2014 and 2023. As the CEC is well aware, utility-scale generation and transmission continue to face difficulties in siting, permitting, and interconnection. And these difficulties are likely to become more acute further out in the planning horizon as the best utility-scale sites get developed, and new development shifts to locations that may be more difficult to site and permit. In contrast, the year-to-year installations of rooftop solar have been steadier. This can be seen clearly in Graph 3, which shows SEIA data on the past deployment of both utility-scale and customer solar in California.[3]

Graph 3



SEIA recommends that either the DER forecasts be lowered in the baseline forecast to reflect the new reality that DERs (and particularly BTM solar) are facing, or that the report acknowledge the uncertainty around its forecasted DER growth levels. In the long run, SEIA believes that robust and sustainable markets in California for both rooftop and utility-scale solar are essential if the state is to meet its long-term climate and clean energy goals.

[3] The SEIA data is from https://www.seia.org/sites/default/files/2024-03/California.pdf. As this data is for the entire state, the data includes both rooftop and utility-scale solar installed in the territories of the California municipal utilities that serve 25% of the state. Thus, the utility-scale data certainly overestimates the amount of utility-scale solar on the CAISO system.

SEIA has also been hopeful that small, distribution-connected community solar-plus-storage projects developed pursuant to AB 2316 and the CPUC's ongoing A. 22-05-022 on community solar can mitigate some of the decline in BTM solar. California has received federal incentive funds under the Solar For All program to support such projects. However, A. 22-05-022 is still in process, and the CPUC is still considering both a final structure for the new community solar program and how best to deploy the incentive funds. As a result, it is unclear whether the available funding will support a new community solar program of meaningful size. When the scope and size of the final AB 2316 community solar program are clear, SEIA recommends that the expected additional energy and capacity from the new distribution-level community solar-plus-storage projects be included in future state planning forecasts such as this SB 100 report.

SEIA respectfully asks the Commission to incorporate these comments into the preparation of the 2025 SB 100 Joint Agency Report.

Respectfully,

/s/ Stephanie Doyle

California Director
Solar Energy Industries Association