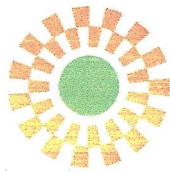


<b>DOCKETED</b>	
<b>Docket Number:</b>	19-SB-100
<b>Project Title:</b>	SB 100 Joint Agency Report: Charting a path to a 100% Clean Energy Future
<b>TN #:</b>	236031
<b>Document Title:</b>	Ultra Low-Carbon Solar Alliance Comments - Ultra Low-Carbon Solar Alliance Comments on SB 100 Draft Report Workshop
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*Comment Received From: Ultra Low-Carbon Solar Alliance  
Submitted On: 12/18/2020  
Docket Number: 19-SB-100*

**Ultra Low-Carbon Solar Alliance Comments on SB 100 Draft Report  
Workshop**

*Additional submitted attachment is included below.*



# ULTRA LOW-CARBON SOLAR ALLIANCE

December 18, 2020

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

RE: Docket 19-SB-100 – SB 100 Joint Agency Draft Report

The Ultra Low Carbon Solar Alliance (Alliance) appreciates the opportunity to submit comments on the SB 100 Draft Report that was presented at the December 4, 2020, Joint Agency Workshop. The Alliance is encouraged by the leadership of the California Energy Commission (CEC), California Air Resources Board (CARB), and California Public Utilities Commission (CPUC) in crafting the first iteration of the Joint Agency Report, and supports California's tremendous effort to achieve 100% renewable electricity by 2045.

The Alliance consists of leading companies across the solar PV value chain who through technology innovation and energy efficient manufacturing are producing solar components from polysilicon through finished modules with markedly lower embodied supply chain carbon emissions. These products are fully commercialized and competing in solar energy's price driven market. Our members believe that expanded market awareness and deployment of ultra low carbon solar can create a virtuous circle in which near term solar supply chain carbon emissions are reduced and help ensure that the next tranche of global solar industry growth embraces lower carbon manufacturing. Using ultra low carbon solar can cut the embodied carbon of solar projects almost in half, and demonstrates the potential to further decarbonize the solar industry.

It is an unfortunate fact that much of the growth in the solar supply chain in recent years has been based on solar products manufactured with coal fired electricity. Given the explosive growth in solar projected in the coming years, we believe it is critical to begin to send the signal now that this growth should embrace low carbon manufacturing if California is to avoid the significant, but entirely unnecessary, carbon emissions that will otherwise occur. We should not embrace clean energy made with coal.

According to the report, California may need as much as 67 GW of utility scale solar and an additional 39 GW of customer solar in over the next 25 years. This massive scale up of solar will be critical for helping the state to achieve SB 100 goals. The state should recognize that the decarbonization impact of this build-out depends on how it is implemented, and not only on achieving its ultimate energy output. Not all solar is equal; carbon emissions used in manufacturing its components can be significant but can also be avoided by using ultra low carbon solar.

The significant embodied carbon differences in the solar supply chain and the resulting solar panels deserve attention. Published studies demonstrate the smaller carbon footprint of more sustainably produced materials in PV modules through innovation, more efficient manufacturing processes and the use of cleaner energy in manufacturing. While the EU market has begun to place value on this better carbon performance, such as France's embodied carbon standard for utility solar, the US market has only begun to recognize this value.



A recent article by Utility Dive<sup>1</sup> outlines this exact problem; renewables provide an overall benefit to the environment on an emission and lifecycle basis, but they are not perfect. When there are easy, low- or no-cost measures that renewables such as solar and wind can take to lower their own carbon and other environmental impacts, including supply chain emissions, they should do so. Upstream emissions must be addressed now before they become a larger problem as the scale up of renewables begins to happen.

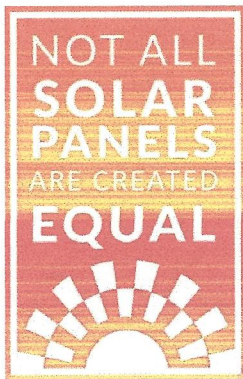
California has an important opportunity to make meaningful reductions in solar supply chain emissions. It should consider establishing preferences or requirements for low carbon PV panels in solar installations, both utility scale and rooftop. A move towards the use of lower carbon PV would be important for California to further its underlying climate goals. The Alliance believes that California would be doing a disservice to its decarbonization goals by going forward with this buildout of solar without being thoughtful about its aggregated impacts. Paying attention to how it achieves its overall goals, and not just whether it achieves those goals, would solidify California's effort.

Thank you for your consideration of these comments. We look forward to continuing to work with CEC, CARB, and CPUC in their efforts to implement SB 100 and make progress toward California's clean and equitable energy transition.

Sincerely,

A handwritten signature in blue ink that reads "Michael Parr". The signature is fluid and cursive, with the first name being more prominent.

Michael Parr  
Executive Director  
The Ultra Low Carbon Solar Alliance



<sup>1</sup> <https://www.utilitydive.com/news/no-green-halo-for-renewables-first-solar-veolia-others-tackle-wind-and/589249/>