

**DOCKETED**

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**23-ERDD-01 BlueWave Comment**

*Additional submitted attachment is included below.*

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January 9, 2024

California Energy Commission  
715 P Street  
Sacramento, CA 95814

## **RE: Funding to Advance the Environmental Sustainability of the Clean Energy Transition (Enviro-SET)**

BlueWave thanks the California Energy Commission (CEC) for its thoughtful proposal on research to inform the environmental sustainability of a clean energy transition (Enviro-SET). We are happy to provide the following comments on the proposed topics related to agrivoltaics, and we hope that these comments and our experience can be broadly applied to other CEC programs such as the Climate Innovation Program (CIP). The CEC has many opportunities to demonstrate California's commitment to its agroeconomic, water conservation, and clean energy goals through agrivoltaics.

BlueWave's mission is to protect our planet by transforming access to renewable energy. As a pioneering renewable energy company and certified B Corp, BlueWave is developing several gigawatts of solar and battery storage projects throughout the United States to ensure our grid is reliable and efficient in a clean energy future. Established in 2010 and headquartered in Boston, MA, BlueWave has historically focused on developing solar projects in burgeoning community solar markets such as the leading states in the Northeast and most recently California. BlueWave's transition to long-term asset ownership under Axiom Infrastructure allows us to implement a new standard of development that centers sustainability, conservation, and agriculture.

### **Group 1: Automated mapping of solar energy development footprints and modeling land suitability for dual-use purposes**

We encourage CEC to think bigger than mapping land use suitability for agrivoltaics. Most developers have the tools to evaluate parcels for their topography, sun exposure, soil, and wetland characteristics, therefore proposing suitable project locations. Other suitability factors like grid capacity, desires of individual landholders, and local regulations are not proposed to be or cannot be mapped. However, farmers, landowners, researchers, and policymakers have repeatedly expressed the desire to see how agrivoltaics can work in California. Mapping out the opportunities within and impact to local agroeconomies could be a useful exercise for CEC to plug into this conversation.

For example, combining public data on load predictions and grid investments, salinity, rainfall, and other climate concerns with agroeconomic and community factors could identify regions where transitioning towards lower-input agriculture through agrivoltaics or habitat restoration within solar projects is feasible and beneficial. The output of such an exercise can provide realistic suggestions based on community input and operational habits, like direct-to-consumer opportunities, grazing economies of scale, and processing capacity for row crops. Results could be used by county and local planning agencies who are seeking to adapt to climate change by adjusting agricultural practices and/or promoting responsible solar development through Williamson Act compatibility and solar use easements.

Through this proposed approach, BlueWave wishes to encourage CEC to think creatively about transforming our grid and agricultural systems to meet the moment. Existing plans to fallow large amounts of land in response to water scarcity create a public health hazard of dust and noxious weeds, not to mention the loss of our farming infrastructure. Building large-scale solar without agriculture or

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conservation elements will lead to the same negative outcome. Investing in agrivoltaics, and the research that will convince local leaders and farmers of its viability, is another way to regenerate over-manipulated lands in a changing climate while boosting our local economies and farming families.

## **Group 2: Assessing and minimizing environmental and biological resource impacts of clean energy deployment**

Further assessing the costs and benefits of agrivoltaics will be helpful in demonstrating its use cases. While we offer suggestions in response to the proposal below, we encourage CEC to further define through what lens the costs and benefits are being viewed, and who is being impacted. It is important to evaluate these aspects at a scale that will be most relevant for commercial agrivoltaics operating on California's small to medium farms. Research should prioritize identifying crops, livestock and agronomic practices and equipment with high potential for commercial use.

Agrivoltaic benefits to the surrounding environment could include reduced wind erosion and dust, improved crop water use efficiency, and creation of wildlife habits. Economic benefits to a hosting landowner, and/or reduced lease rates for the farmer or rancher, also factor into the agrivoltaic equation. Drawbacks may include decreased efficiency of farming operations, spread of fungal disease or other pathogens, impact of shade in foggy coastlands, and increased costs for project design and construction. Assessing these costs and benefits in a holistic manner will help explain whether agrivoltaics or another form of conservation solar is "worth it" for a landowner and/or farmer, while also preparing environmental and municipal stewards for the various impacts that should be considered.

The goal of any CEC program related to agrivoltaics, including Enviro-SET and CIP, should be to enable demonstration projects as soon as possible. Climate change is severely impacting our way of life now, while California is on an uncertain path to reaching very aggressive clean energy goals. Agrivoltaics can serve as a meaningful intervention for farming communities, but stakeholders must see these projects operating successfully in California before the practice becomes widely adopted. Learnings from these early demonstration projects can help CEC and permitting authorities better design future programs and incentives to deploy agrivoltaics at scale. We look forward to this continued effort and would be happy to share further thoughts or answer questions based on BlueWave's experience in other markets. Thank you for your consideration of these comments.

Kaitlin Hollinger  
Policy Manager  
[khollinger@bluewave.energy](mailto:khollinger@bluewave.energy)

Gabrielle Hayes  
Sustainable Solar Development Analyst  
[ghayes@bluewave.energy](mailto:ghayes@bluewave.energy)