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*Comment Received From: Large-scale Solar Association  
Submitted On: 10/22/2024  
Docket Number: 24-OIIP-03*

**LSA Comments on NEI -24-OIIP-03**

*Additional submitted attachment is included below.*



October 22, 2024

Re: Large-scale Solar Association Comments on DOCKET NO. 24-OIIP-03,  
Informational Proceeding on Non-Energy Benefits and Social Costs

The Large-scale Solar Association (LSA) provides the following comments on the California Energy Commission's (CEC's) initial workshop for the Non-Energy Impacts Informational Proceeding.

Our comments detail the following:

- Solar as most cost-effective resource on the grid.
- The net-positive impacts of solar on air quality in the San Joaquin Valley.
- The local community benefits from solar, including job creation and revenue.
- Mitigation funds from solar projects that will go towards conservation.

## Introduction

LSA is a non-partisan association of solar and battery storage developers that advocates appropriate policies to enable market penetration of utility-scale solar technologies in California and the Western United States. LSA's members are leaders in the utility-scale solar industry with extensive technical experience in all disciplines necessary to site, develop, engineer, construct, finance and operate utility scale solar and battery storage systems. LSA's member companies are principally responsible for developing much of the operational and planned large-scale solar and storage capacity in California today.

As the fifth largest economy in the world, California's plan to achieve a net-zero carbon economy by 2045 remains a North Star for the nation's effort to meet the climate imperative. To achieve this goal, California is expected to add more than 165,000 Megawatts (MW) of new utility-scale clean energy to the grid, including approximately 70,000 MW of utility-scale solar.<sup>1</sup> Siting these solar projects will require an estimated 600,000 to 700,000 acres of land in a state wrangling with multiple land-use pressures,

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<sup>1</sup> California Independent System Operator. (2024). *2024 20-Year Transmission Outlook*. <https://stakeholdercenter.caiso.com/RecurringStakeholderProcesses/20-Year-transmission-outlook-2023-2024>.

visionary conservation targets, and unprecedented climate impacts. With solar as the backbone of California’s energy portfolio, minimizing and mitigating negative non-energy impacts while encouraging social benefits from utility-scale renewable energy is key to ensuring California meets its clean energy goals sustainably.

### **Utility-scale Solar: The most cost-effective resource**

Solar continues to be the leading cost-effective renewable resource,<sup>2</sup> with costs 80% lower than ten years ago. In light of the ratepayer affordability crisis, it’s important for the state to prioritize cost-competitive resources that can help maintain energy affordability. For this reason, large-scale solar development is part of the solution when non-energy impacts are discussed. Procuring large-scale solar energy can help keep rates low as California brings more renewable energy online.

### **Non-Energy Impacts from Solar**

#### *Air Pollution Net Benefits*

Negative air quality and health impacts from conventional power sources are well-documented and undisputed. LSA encourages the CEC to study and even quantify how those impacts shift as the state transitions away from conventional resources. As California works to meet its SB 100 goals, the state should see an improvement in local emissions and in local air quality.

Utility-scale solar development creates a net-zero dust impact from projects. As with any development, utility-scale solar development emits dust during construction. However, large-scale solar developers are creating methods to minimize dust during construction activities, and they are required to draft dedicated dust management plans for each project. Once constructed, dust emissions no longer occur once the project is in full operation, especially if developers revegetate as part of their management plans. Most importantly, large solar projects provide significant air quality improvements as compared with active agriculture operations<sup>3</sup> – this is particularly important for the San Joaquin Valley (SJV).

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<sup>2</sup> Lazard. (2024). *Lazard’s Levelized Cost of Energy Analysis – Version 17.0*. <https://www.lazard.com/research-insights/levelized-cost-of-energyplus/>.

<sup>3</sup> Public Policy Institute of California. (2022). “Land Transitions and Dust in the San Joaquin Valley.” <https://www.ppic.org/publication/land-transitions-and-dust-in-the-san-joaquin-valley/#:~:text=Agricultural%20operations%20and%20wind%20erosion,and%20the%20time%20of%20year.>

LSA recommends the CEC analyze the net-impact on air quality, the terrestrial ecosystem, and local communities over projects' lifespans (from construction through operation) to better understand air pollution impacts. This analysis should be done both in comparison with conventional power sources and former agricultural activities that utilized harmful pesticides and performed disruptive tilling activities.

### *Job Creation & Local Revenue*

Large-scale solar development can bring jobs, tax benefits, and overall economic uplift to communities where projects are built. Focusing on the SJV, we append a [link](#) to a study by ECONorthwest on the future benefits utility-scale solar and battery energy storage system (BESS) development can bring to the region.<sup>4</sup> The study assesses the economic and fiscal impacts of solar development in the SJV (Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare counties) under a modified solar use easement statute. This would allow for the development of solar energy on fallowed agricultural land into without requiring the cancellation of WA contracts. It is anticipated that agricultural producers will voluntarily convert land impacted by water supply changes to solar energy production, leading to significant positive impacts for landowners and local communities impacted by the Sustainable Groundwater Management Act (SGMA) - and more broadly, positive impacts in the regional economy.

SGMA is estimated to result in the fallowing of approximately 870,000 acres of irrigated agricultural land in the SJV Region by 2040, representing up to a 32% reduction in some counties. This will represent a major economic shift for landowners, farmers and local communities. Developing solar on some of these lands could help to provide uplift to the Valley for the next 20 years, allowing landowners to diversify income streams on SGMA impacted land, stabilize existing agricultural operations, creating jobs and income for local residents, and providing revenue for local taxing districts, all while safeguarding the larger regional economy in the wake of SGMA.

According to the study, in 2045, solar operations alone, at full build out are projected to be able support 1,800 jobs (including direct, indirect and induced jobs), with an associated labor income of \$183.6 million. Cumulatively between 2024 and 2045, operational impacts are anticipated to create 19,300 jobs and \$2.0 billion in labor income.

Construction jobs in the eight-county area - which will be ongoing over multiple years - are much higher, with an expected annual average of 9,800 construction jobs for solar and

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<sup>4</sup> ECONorthwest. (2024). "Economic Assessment of Solar and BESS Resource Development under a Williamson Act Solar Use Easement Statute – Technical Report." Attached.

BESS resource development (including direct, indirect, and induced jobs) over the construction period and support \$717.8 million in annual labor income. Cumulatively, over the period from 2024 to 2045, this is expected to support approximately 205,200 FTE jobs and \$15.1 billion in labor income.

Lastly, building solar and BESS projects on agricultural land in the SJV could generate \$119.2 million annually in revenue for local governments following the sunset of the renewable tax exemption. Over the analytical period of 2024-2045, a buildout of large-scale solar on agricultural land is anticipated to generate a cumulative \$2.3 billion in fiscal revenue for local governments.

The full report is attached. We encourage the CEC to undertake similar economic assessments in its NEI process.

#### *Mitigation Funding*

In addition to the societal benefits from utility-scale solar, there are also terrestrial ecosystem conservation benefits. Solar projects are expected to provide hundreds of thousands of acres of permanently protected mitigation lands. A typical project contributes mitigation lands, mitigation measures, risk minimization, and onsite species management funds to protect species on development sites. Based on today's estimates, the 70,000 MW of solar needed to meet the state's 2045 goals will result in more than \$3.5B in conservation spending. LSA recommends the CEC quantify environmental benefits as part of their non-energy impacts analysis.

#### **Conclusion**

Solar is expected to form the backbone of the state's grid, and we recognize that the economic, jobs, and community benefits from these projects will provide substantial uplift to local communities – particularly in the wake of water scarcity, which threatens to erode the economic well-being of so many communities throughout the state. Meeting the climate imperative – particularly against the backdrop of now irrefutably-increasing climate impacts and the pressures they create for everyone – will require extraordinary cooperation and commitment to work together.

LSA looks forward to ongoing conversations with the Commission and the communities as we work together to address these challenges.