Solar Development in the San Joaquin Valley

Farmland in Transition

November 1, 2022

Andrew Ayres, Annabelle Rosser, Ellen Hanak, Alvar Escriva-Bou, Darcy Wheeles, Mitchelle De Leon, Curtis Seymour, and Abigail Hart

Supported with funding from the Babbitt Center for Land and Water Policy at the Lincoln Institute of Land Policy, the S.D. Bechtel, Jr. Foundation, and California Strategic Growth Council’s Climate Change Research Program with funds from California Climate Investments.
Much potentially fallowed land is suitable for solar

- Implementing SGMA may require taking >500,000 acres out of irrigation in SJV
- SJV has a very high potential for solar
- SB 100 will require an unprecedented build-out of solar
  - At least 300,000 acres statewide
  - Perhaps 150,000 acres in SJV
- Likely significant overlap between solar suitability and falling estimates

Source: PPIC and TNC’s Power of Place
Solar is already an attractive land use in the SJV

- Solar can be more profitable than many crops
  - Renting land for solar offers >2-5 times the return of annual crops
  - Can even exceed orchard crop returns
  - Key consideration: retaining water rights

- Over 3 GW already installed
- 20+ GW slated in the project queue

Source: CEC and CAISO
How to maximize the benefits from solar in the San Joaquin Valley

1. Increase coordination between disparate planning processes
2. Develop a robust local workforce pipeline
3. Simplify permitting for solar projects
1. Better integrate planning efforts

- Where we build solar will have lasting impacts
- New developments will necessarily follow interconnection capacity
- Link lands likely to come out of production, transmission planning, and other siting considerations

Source: CEC and CAISO
2. Strengthen the local workforce pipeline

- Some agricultural jobs will be lost with fallowing
- Solar could fill part of this gap while providing a pipeline to adjacent trades
- A steady stream of projects and robust apprenticeship programs will help

Aquamarine Westside Solar, SOLV Energy
3. Simplify permitting to meet renewable energy goals

- Programmatic permitting can quicken build-out on highly suitable lands while maximizing co-benefits like:
  - Water savings
  - Soil health
  - Habitat conservation
  - Air quality
Facilitating a transition that supports state clean energy goals and valley communities

- **Coordinate on expanding transmission:** Energy planners, GSAs, and counties
- **Simplify permitting for lands suitable for solar:** Federal, state, and local agencies
- **Maximize local workforce development:** Developers, unions, CBOs, state agencies, counties, and local leaders
- **Facilitate project co-benefits:** Developers and state agencies
Note on the use of these slides

These slides were created to accompany a presentation. They do not include full documentation of sources, data samples, methods, and interpretations. To avoid misinterpretations, please contact:

Annabelle Rosser

rosser@ppic.org

Thank you for your interest in this work.