



WHAT IS PROJECT NEXUS?

Project Nexus includes the installation of solar panel canopies over various sections of Turlock Irrigation District's (TID) irrigation canals. Project Nexus will serve as a Proof of Concept to pilot and further study solar over canal design, deployment, and co-benefits on behalf of the State of California using TID infrastructure and electrical grid access.

With Project Nexus, existing water conveyance infrastructure will serve as the foundation for solar canopies to produce renewable energy. The water in the conveyance infrastructure has the potential to cool the solar panels, increasing their efficiency. The solar panels provide shade and wind protection over the water, reducing evaporation and also leading to a reduction in aquatic growth improving water quality. Project Nexus has the potential to demonstrate a new, innovative water-energy nexus project that can be replicated elsewhere in the state and nation to increase efficiencies in managing limited natural resources.

PROJECT NEXUS GOALS

- Demonstrate proof of concept of narrow and wide-span canal coverage with solar panels.
- Increase renewable power generation.
- Experience water quality improvements.
- Reduce vegetative growth in the canal.
- Investigate integration between renewable power generation and energy storage.

UC MERCED STUDY

A 2021 study showed that covering all of the approximately 4,000 miles of public water delivery system infrastructure in California with solar panels can result in significant water, energy and cost savings for the state. The study illustrates a savings of 63 billion gallons of water annually (enough to irrigate 50,000 acres of farmland or meet the residential water needs of more than 2 million people).

Based on data from the published study, the researchers estimated that covering the state's canals with solar would generate 13 gigawatts of power, which is more than half the projected new solar capacity needed by 2030 to meet the state's decarbonization goals. A copy of the UC Merced Study is available at go.nature.com/3sejFj0.

FAST FACTS

- First in the Nation project.
- TID was the first publicly-owned irrigation district in CA.
- Public/Private/Academic collaboration.
- DWR will provide funding and technical assistance for the project.
- There are two project sites planned along various sections of TID's canal system.
- Energy storage to be incorporated.

TID.org/ProjectNexus

PROJECT NEXUS PODCAST



Learn more about Project Nexus by tuning into the TID Water & Power Podcast. On the podcast episode, we discuss the benefits of Project Nexus, how TID became the agency to pilot the project, and how the District plans to implement this unique project.

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SCAN ME

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