

CLIENT: First Solar / STATUS: Construction Completed

Pre-project protocol surveys, plan development, and permitting for biological resources compliance for the proposed development of a 550-MW solar facility near Desert Center, California

## THE PROJECTS

First Solar has completed construction on the Desert Sunlight Solar Farm, a 550-MW facility that is one of the largest PV facilities in the world. The transmission line related to the project is more than 12 miles long and includes areas of high sensitivity for desert tortoise, nesting birds, and jurisdictional waters.

## THE SERVICES

Ironwood has worked cooperatively with First Solar throughout permitting and construction compliance to bring a model of success to how both efficient solar construction and protection of biological resources can be effectively managed.

- · Desert tortoise protocol-level surveys and clearance
- Desert tortoise health assessments, translocation, and monitoring
- · Rare plant surveys, cactus counts, and plant salvage
- · Weed surveys and weed control
- · Insect inventories
- · Burrowing owl, kit fox, and badger surveys, and exclusion
- · Avian point counts, nest surveys, and mortality studies
- Biological Resources Technical Report, Biological Assessment, and management plans

Data is collected on hand held smart phones and tablets, and synched at least daily to provide real-time access for clients and land managers. Data also undergoes a rigorous quality control process so that end user data is accurate and reliable.

## THE RESULTS

The Desert Sunlight project is model for how effective resource protection can be managed without incurring construction delays or high costs. The project was never delayed for biological resource concerns, yet all desert tortoises were successfully translocated, nests avoided, and other resources were managed to the high protection level required on public lands.

- Desert tortoise protocol-level surveys conducted on over 12,000 acres
- · No project delays for biological resource concerns
- Performed project clearance in three phases to prevent expensive re-clearing activities and construction delays
- Re-cleared project following a 100-year storm event in 2013 with no construction downtime
- · Nesting avoidance with over 95% success rate
- First successful long-distance passive relocation of kit fox



**Ironwood Consulting Inc.** (Ironwood), an environmental consulting firm founded in 2008, specializes in biological resource management, environmental impact assessment, regulatory permitting, and monitoring services. The combined experience of Ironwood's partners is extensive, representing over 35 years of environmental consulting for a range of industries including military, utility, engineering, commercial, and residential infrastructure.

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