

SVERDRUP ENGINEERING SERVICES

PROJECT EXPERIENCE



Jacobson 5MW FT Solar Facility

Kingman, AZ

Civil, Electrical, and Structural system design for 5MWDC fixed tilt system near Kingman, Arizona. Civil design included survey and initial site plan for pre-application permitting purposes. After preliminary approval, civil design continued with drainage report, storm water retention area, road design, site grading and drainage, fencing, and permitting support. Structural design included specify and review geotechnical report, transformer/inverter foundation design, review of rack support/foundation design from rack manufacturer, DC combiner/disconnect support/foundation, and weather station support/foundation design.

Electrical design included 25-year energy production estimate using PVsyst, DC field layout, rack/post layout, modules, string sizing, AC one-line, DC wiring diagrams, cable/conduit schedule, cable/conduit routing, weather station, grounding, and detail sheets. A full material list was provided with manufacturers part numbers to ensure cost control and that contractor purchased and installed quality components that would last 25 years. Calculations include; string sizing, voltage drop, row to row spacing (shading), conduit fill, cable ampacity, cable/conduit pull, grounding, short circuit, protection device coordination, and arc flash calculations. Major system components were SMA SC2200-US inverters, REC 315-watt modules, Schletter racking, Bentek combiner boxes, and Eaton DC disconnects. Performed QA/QC over construction, specified commissioning requirements, and oversaw start up.

Owner: UNS Electric, Inc.

Design: June 2016

Inservice: March 2017