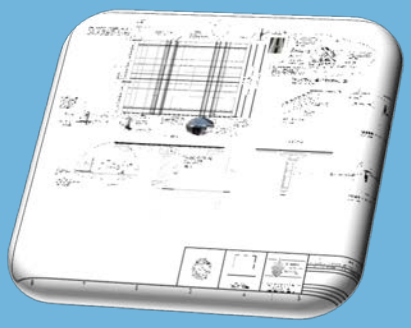

Tech Park Dual Axis Tracker 2.5MW Solar Facility

Tucson, **AZ**

Electrical and Structural Engineering for 2.5MWAC Dual Axis Tracker Solar Refurbishment Project within the solar zone at the Premier Arizona Technical Park Research Center in Tucson, Arizona. The solar zone is a partnership between the University of Arizona and Tucson Electric Power and is one of the largest multi-technology solar testing and demonstration sites in the world. Project consisted of converting 40 Amonix dual axis trackers to conventional silicon solar panels with dual axis tracking capability.

Electrical design included Canadian Solar 390 watts solar modules in 18/19 module strings at 1000V DC with each tracker connected to one SMA 62.5kW Core1 480VAC Inverter. Using the dual axis tracking capabilities allows a 45% increase in energy production over a fixed tilt system. Trackers will automatically rotate to track the sun and to go into 'stow' mode under high wind conditions. The 40 inverters outputs are combined at two 2500A AC Power Combiner Panels and then stepped up to 13.8kV and delivered to Tucson Electric Power. Performed design, QA/QC over construction, commissioning, and start up support. Design drawings include; site plan, demolition, foundations, grounding, stringing, details, single line diagram, three-line diagrams, DC line diagrams, signage, and equipment data sheets. Structural design included reviewing existing support structures for modules, inverters, and supporting equipment and devising new support structures for all three.

Owner:

Design: June 2020

In Service: October 2020