ON-SITE ADJUSTMENTS AND REAL-TIME CONFIGURABILITY DURING SOLAR FARM CONSTRUCTION

One of the top 10 EPCs in the United States selected TE Connectivity to provide the Electrical Balance of System (EBoS) for a 75 MW utility-scale solar farm in New Mexico. During construction, engineers encountered an unexpected challenge which could only be resolved thanks to the flexibility and adaptability of TE's Customizable Trunk Solution CTS.

The Challenge

TE's engineers were brought in very early in the construction process to assist the customer with design recommendations and drawings. Everything was going to plan at the preliminary stage, but as the land was being prepared, a sacred burial site - including valuable, archeological artifacts - was uncovered. The on-site team had to find a way to re-configure the solar farm layout, without disturbing the protected area.

Country
United States of America

Industry
Solar

Challenges
- Re-configure block panel design to avoid sacred burial ground
- Manage adaptations within time and budget constraints

Solutions
TE's Customizable Trunk Solution CTS: E-W orientation with installation training

Key Figures
- 75 MW solar farm
- Zero Change Orders & zero Liquidated Damages
- 12 MW area re-configured

The Solution

The customer chose TE's CTS consisting of: Solar Insulation Piercing Connectors SIPCs, PV wiring harnesses and disconnect boxes, according to the preliminary block design. TE's engineers also provided on-site training to ensure the local crew had the necessary knowledge and equipment to build TE's trunk bus system in the field.

Once the burial ground was discovered, the EPC project team was able to adapt the original cabling design to meet the new 'Issued for Construction' (IFC) solar array drawings. This would have been impossible with a prefabricated EBoS which offers little to no flexibility in the field. As the project progressed, the area that required protecting was found to be much larger. This required additional modifications and numerous blocks were reshaped and moved to circumvent the sacred site, until the 'As Built' layout was achieved.

The Outcome

Thanks to the plug-and-play flexibility of TE's CTS architecture, the EPC was able to use the same quantity of cabling, harnesses, SIPCs and disconnect boxes in the revised design. As a result, there were no Change Orders or Liquidated Damages and the project was completed within the original timeframe.

Key Highlights

- Zero Change Orders and zero Liquated Damages.
- 12 MW area reconfigured in the field with new block design, maintaining the project budget and implementation velocity
- Trained installers were equipped with the skills and confidence to make necessary adaptations in the field to protect the sacred site
- The quality and durability of TE's CTS components provide high-performance longevity throughout the lifetime of the solar farm

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02-24

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