

Solar

We engineer, procure, and construct utility scale solar projects that turn sunlight into lasting value — handling every phase from site assessment to grid connection under one accountable team. One partner, one seamless path from blueprint to energized, delivering projects built for decades of clean, dependable performance.



Building world-class solar projects:

We build solar projects that are 100-700 MWDC in size and with various technologies

- Early contractor engagement
- Feasibility studies and pre-construction support
- Full-service EPC
 - Development Engineering
 - Procurement
 - Self-perform Construction
 - » Civil
 - » Pile Driving
 - » Electrical
 - » Mechanical
 - » Commissioning
- Permitting and regulatory
- PW&A compliance
- Technical drawings, 5D modeling, and more
- Clean-up and reclamation
- Performance Testing
- Interconnection support and handover

Building a utility-scale solar project is more complex than it may appear, and WHC has the experience and skills to lead all stages of development.

WHC self-performs every facet of construction with industry leading site management teams, and skilled craftspeople who work to WHC's high standards. Overseeing this work ourselves means we provide our clients with the level of safety, quality and assured delivery the industry demands.

WHC's Project Controls process allows us to monitor the status of each site in real time and in granular detail. We know if the project is winning or losing at the safety, quality, schedule and budget level daily. WHC's vast owned equipment fleet includes everything needed to execute the most complex Solar Sites. Our fleet of equipment is modern, well maintained and include the latest GPS technologies. Some of these include, pile drivers, cable plow machines, heavy earth moving equipment, and material staging equipment.



3D Model of Solar Project and Substation

Engineering Approach

Our preconstruction and engineering teams work alongside all disciplines — civil, geotech, structural, electrical, SCADA, estimating, procurement, and constructability review — supporting projects from preliminary engineering through capacity testing and commissioning.

Constructability and Design Reviews

- Basis of Estimate (BOE) development
- Basis of Design (BOD) development
- Constructability review — civil, structural, electrical

Layout and Site Optimization

- Site feasibility screening and constraint analysis (wetlands, T&E, FEMA, cultural)
- Buildable area analysis; slope, aspect, and terrain studies
- Constraints overlay mapping

Civil, Grading and Drainage

- Earthwork balance and cut/fill optimization
- Access road design and route optimization
- Bore crossing design for MV cable, fiber, and utility routing.
- GPS machine control on grading equipment validated against drone-derived DTM — grade conformance confirmed in real time, not after the fact

Geotech and Foundation Engineering

- Geotechnical investigation scoping and oversight
- Pile load test program design development and oversight
- Refusal mitigation strategy and engineered field responses
- Subsurface mapping, refusal heatmaps, and soil zoning
- GPS tracked Field production data (pile installation rates, refusal events)

Structural and Tracker Engineering

- Tracker technology selection with cut/fill optimization for best-fit to site
- Slope analysis
- Stick-up height sensitivity analysis
- Pile installation tolerance (survey + construction) analysis

Drone, GIS and Digital Tools

- Drone-based photogrammetry
- Digital terrain model (DTM) generation; 3D site modeling for grading optimization and tracker layout
- Grading analysis across various tracker technologies and cut-and-fill heat mapping
- Depth to bedrock and pile refusal heat mapping
- Flood depth and pile reveal analysis

Pile Driver



Piles



Module Installation



Solar Project



WHC – A Surerus Murphy Company constructs critical infrastructure for the Power sector. We support the full cycle of construction, from early contractor engagement to commissioning and hand-over to the client, and all the steps in between. We are large enough to tackle mega-projects and be successful in managing their complexities, and nimble enough to work on smaller capital projects where there is a need to respond quickly to client needs.

What makes us unique is:

Our bench strength. Between us and our parent companies, there is hardly a challenge we haven't seen before, but if there is, we have a depth of skillsets we can call on to help us find solutions.

Our focus on collaboration. We believe in ongoing, transparent communication and we are willing to have the hard conversations when they are required. We don't just work with our clients, we build partnerships.

Our unwavering commitment to safety. Safety isn't just something we say we do; we live it. It is one of our core values. Working safely anchors our drive to be a contractor of choice because we can't be one without the other.

Our delivery of consistently reliable construction. We care deeply about delivering quality to our customers and providing thoughtful and supportive customer service. When we build reliably, we also deliver quality, safety, partnership and value.

Our commitment to our core values. Our core values of Never Harm, Trust, Integrity and Assured Delivery guide how we work with each other, our stakeholders and our clients. We keep our core values alive and recognize each other when we see them in action.

We successfully build solar projects across the United States, in urban and rural settings, and across a variety of landscapes.

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