Solar Turbines

A Caterpillar Company

Worldwide Turbomachinery Support

Package Refurbishments and Upgrades

INSTALLATION SERVICES – PACKAGE SYSTEM UPGRADE

PRIMARY GOALS:

- Safety Enhancement
- Reduced Downtime
- Installation Optimization
- Operational Efficiency

FIELD INSTALLATION REPRESENTATIVE

Solar Turbines offers worldwide and regionally-based installation services for your package system upgrade or controls retrofit projects. Solar utilizes highly trained and certified Field Installation Representatives (FIR) to efficiently install these aftermarket products. The FIR can be dispatched anywhere your equipment is located to ensure seamless professional integration of your Solar turbomachinery upgrade while minimizing critical downtime.



Solar[®] gas turbine engines and packages are designed and built to run for decades in applications critical to oil and gas, power generation and other manufacturing industries. As technology has continued to advance, Solar has been there to support its customers with the latest in control system retrofits and system upgrades. These renewal projects are inherently complex, requiring the decommissioning of old systems and subsequent installation of new mechanical, electrical and controls hardware. To reduce costly disruptions, Solar's factory-trained FIRs will arrive on site fully equipped with the correct tooling, documentation, materials and expertise to deliver and install any type of Solar system upgrade.

SOLAR FIELD INSTALLATION SERVICES

Solar field installation services typically include:

- A two-man crew for 14-21 days at 12 hours per day, seven days per week (can vary by scope, local regulations and customer schedule requirements)
- Removal of old control console, package system components and wire/cable
- Installation of new control console(s)/junction boxes and/or package system upgrade
- Installation of all required new conduit or cable trays
- Full package rewire and termination at package components and new control console per project specific electrical drawings
- Plumbing of all new package system components per project specific hydro-mechanical drawings

COMMISSIONING SUPPORT

Toward the end of installation, Solar FIRs will hand the project over to a Solar District Field Service Representative (FSR) for recommissioning. Through years of experience, FIRs have developed a process to ensure that the FSR can begin the commissioning process as early as possible (often days before the full installation is complete). This overlap in installation and commissioning activities guarantees a solid handover and maximizes each day Solar personnel are onsite getting your upgrade complete and your unit back online.

REDUCED TURBINE DOWNTIME OPTIONS

If downtime is critical for your turbine package, Solar can perform additional site visits/meetings to generate a custom install plan for your equipment ensuring the shortest turbine downtime possible. This is done through a combination of staggered crews, increased collaboration with your local Solar District Office (FSS and FSR), and Pre-LOTO activities all as applicable to your site and package.

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CUSTOMER TYPICALLY PROVIDES

- Rigging and lifting support •
- Any off-skid component installation
- Any off-skid pipe manifold or tubing work •
- Any off-skid wire, conduit, cable tray including package to control console interconnect when panel remotely located
- Installation of low and medium voltage power supply wiring •

If desired, Solar can provide some or all of this scope of work.

BENEFITS

Solar Turbines installations are engineered to provide the optimum in system performance with factory standards for quality and the latest in enhanced safety. Our extensive field experience gives Solar installation crews the knowledge needed to ensure appropriate system accessibility for future customer maintenance and adjustment. Often the most important benefit, Solar's installation experience with our packaged equipment allows us to reduce customer's downtime with the right people, tooling and materials.

People – OEM factory trained and certified technicians:

- Factory and field experienced
- Knowledge of vintage Solar equipment
- Mechanical and electrical system experts
- Health, safety, security and environment (HSSE) certified • for safe work practices
- Full offshore medical certification
- Additional certifications include: DOT Certified, TWIC • - Gulf of Mexico, BOSIET, PEC Core Safety, First Aid and CPR, SEMS, Marine Trash and Debris, Rigging and Lifting, LOTO Qualified, Fall Protection and Scaffold Use, Fire Extinguishing, Hazard Recognition, Electrical Safety including Arc Flash

Tooling – Factory and field tools required for project:

- Solar specialty tools
- Personnel experienced in use of required installation tools

Materials – Required job materials and consumables:

- Project-specific material consolidation plan and ٠ validation of project scope and deliverables
- Weatherproof FIRM (field installation retrofit module) or multi-piece modules are optionally available for secure, consolidated and simplified consumables



CONTACT US

For additional information about Solar's installation services and Field Installation Representatives, contact Solar's field office nearest you or visit us on the web.

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FOR MORE INFORMATION

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