# Solar Turbines

A Caterpillar Company

Powering the Future Through Sustainable, Innovative Energy Solutions

# INTELLIGENT ELECTRIC START SYSTEM

Solar Turbines is pleased to announce the availability of another offering in our line of intelligent system upgrades. The intelligent electric start system (IES) is a compact, cost-effective upgrade solution for customers interested in converting an existing pneumatic start system to an AC electric start motor driven by a variable frequency drive (VFD). The IES design is unique to Solar and was developed to ensure enhanced safety features and start system reliability improvements. This solution can also be combined with other machinery renewals such as turbine overhauls and upgrades.

# **Start System Solution**

The IES is designed to complement existing vintage control systems where interface with the VFD is not possible due to absence or obsolescence of communication protocols required for configuration and operation of a modern VFD. Upgrading your existing pneumatic or electro-hydraulic start system to an electric start system provides the following advantages:

- Precise VFD controlled operation of the new electric start motor throughout the start sequence
- Automatic configuration of VFD programmable parameters
- Interface with existing relay set and PLC-5 based control systems
- Slow roll option available for selected turbine models
- Reduced fugitive hydro-carbon emissions
- Reduced noise level during start up

The IES system upgrade consists of the following major components:

- IES control box
- Variable frequency drive
- Electric start motor
- Gearbox adaptor (if necessary)
- Line reactors (if necessary)

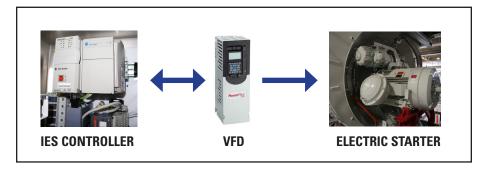
# **System Requirements**

IES system upgrade requires identification of a suitable location for mounting the IES control box (within 100 feet of the VFD). Additionally, these power sources are required:

- 24 VDC, 10 Amp power (IES control box)
- Three phase ac power to VFD (various voltages supported)
- Single phase 120 VAC power (VFD for motor heater)
- Grounding for controls, electric start motor and VFD

# **Intelligent Product Line**

The intelligent line of system upgrade products provides the same customer experience as standard offerings from Solar – reliable solutions with exceptional support throughout the equipment's life cycle. With intelligent modular upgrades, you can convert individual systems on older packages to current technology without the cost and downtime associated with traditional package retrofits. For additional information on intelligent product offerings, please contact your local Solar Account Manager.



# **Additional Information**

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