



# Solutions for Gas Turbine Distributed Power



## The Need for Gas Turbine Distributed Power

Throughout the world there is a need for access to electricity in areas not served by electric power grids and centralized power plants. This includes cities far away from central power stations, communities and/or industries in remote areas not served by the national grids, and underdeveloped locations without sufficient access to power.

Distributed power technologies generate power near or at the point of use. PW Power Systems (PWPS) gas turbine technologies can provide 30 MW to 140 MW of power, and can connect at many different distribution voltages using widely available fuels. Distributed power provides a flexible, decentralized source of power for communities, factories, industrial sites, and ports.

### Applications include:

- Stand-alone grids with a need for local power, lacking transmission and distribution networks
- Areas with seasonal or daily power fluctuations resulting in electricity brownouts or blackouts
- Peaking power for backup of non-dispatchable wind and solar, or variable power generation sources
- Emergency power projects in response to drought, earthquakes, or other environmental conditions requiring rapid installation and quick start-up
- Industrial locations requiring fast-responding, reliable power as a backup or supplement to the local grid
- Resorts and remote seasonal areas with intermittent power usage

### Complete Gas Turbine Package

The PWPS distributed power technology package includes everything necessary to provide quick power:

- A complete power generation package that is rugged, self-contained, and easy to install and maintain
- An electrical interconnection system compatible with the local electricity distribution network
- A fuel delivery system to bring natural gas or stored liquid fuel to the package
- Technical training in local language for the operations staff and management
- Remote controls for operation from a central control room
- Remote monitoring and diagnostics
- Access to a worldwide parts and repair service organization
- Controls and logic integration into the “smart grid” to improve grid reliability



## Gas Turbine Solution

PW Power Systems distributed power packages are mobile, allowing the user to quickly install and connect to a site within one day, and if needed, to dismantle, relocate, and reconnect the equipment to a different site. This provides quick, reliable power to remote or underserved locations. Benefits include:

- A pre-commissioned MOBILEPAC® gas turbine package can be driven to a site ready location, reconnected, and generate power in less than one day
- The units are sited on simple foundations and use low cost installation techniques
- The availability of fast power can positively affect the local region's economy, leading to far reaching developmental growth
- Avoidance of the high capital cost and long-term planning for large electrical transmission and distribution networks
- The mobile units can be scaled to the capacity needs of the local grid in 30 MW units
- The SWIFTPAC® stationary power generators can provide up to 140 MW in one stationary package; they are available in 30 to 140 MW sizes
- Adding heat recovery systems can further increase the efficiency of the units and provide combined heating and cooling

## What Is Required from the Customer

- A source of fuel: natural gas, diesel oil, kerosene or similar fuels
- Flat-graded site with minimal preparation
- A tie-in point to the local distribution grid or an industrial substation with sufficient capacity to deliver the electricity
- Operations staff
- (Optional) Demineralized water for emissions control and power augmentation



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