Intelligent Microgrid Solutions™
Integrating Energy Security and Energy Efficiency
Intelligent Microgrid Solutions™

Day-to-day operations require a dependable power system that ensures power is provided to important loads without disruption. Intelligent Microgrid Solutions provide an efficient, reliable and secure energy system that integrates existing power generation assets with new or existing renewable power sources. Its sophisticated configurations improve energy demand management by reducing strain on the utility grid. The intelligent power system supports mandates to improve energy efficiency, reduce greenhouse gas emission, and increase the use of renewable energy, while reducing energy costs. The smart energy solution can also operate connected or independent of the grid, providing more user options and ensuring continuous power.

Efficient Energy Management

The Intelligent Microgrid manages power through central and distributed controls, seamlessly integrating with existing building/environmental power management systems when necessary. Distributed controls connect a variety of power sources, loads and even energy storage units onto a common network. The centralized controller optimizes the system to ensure the most efficient use of the distributed power resources. The overall control system design allows the microgrid to scale with a customer’s needs and incorporate a diverse set of energy resources, including indigenous, renewable and nuclear sources, in order to maintain uninterrupted, high quality power in remote or campus locations.

Reliable Power Source

When faced with a power grid failure, attack or natural disaster, an Intelligent Microgrid ensures power quality is maintained, seamlessly transitioning from a grid-tied mode to an independent or “islanded” mode. Intelligent control technology can instantly analyze a power disruption and route available power to essential locations, enabling vital areas to remain operational. For customers connected to utilities, Intelligent Microgrids offer the ultimate in energy surety. For those who are not connected to a utility, microgrids offer reliable energy independence. Lockheed Martin's thorough microgrid analysis and implementation ensure the most reliable energy solution. Prior to deployment of any microgrid solution, a detailed microgrid analysis, design and verification is conducted to guarantee a system that achieves optimal customer goals.

Secure and Affordable Solution

A range of cyber security options is available to provide secure communications to, from and within the microgrid. Several financing options can be tailored to offer the microgrid’s significant benefits at an affordable cost.

Applications

- Fixed (i.e., facilities, campuses, industrial sites)
- Remote (i.e., rural electrification, islands, forward operating bases)
- Mobile (i.e., first responders, disaster relief, deployable power)
- Nuclear (i.e., main control rooms, critical operations)

Features

- Centralized and Distributed Control
- Multi-Mode Operation
- Plug-and-Play Sources/Loads
- Flexible and Scalable Solution
- Secure Communications

Benefits

- **Scalable**: Plug-and-play integration of wide variety of sources and loads
- **Flexible**: Multi-mode options allow reconfiguration as assets or missions change
- **Fault Tolerant**: Seamless fault coordination and recovery
- **Intelligent**: Automated centralized and distributed control
- **Affordable**: Flexible financing options
- **Verifiable**: Thorough microgrid analysis and Microgrid Development Center testing

Lockheed Martin Corporation
Missiles and Fire Control
Business Development
Phone: (407) 356-5467
www.lockheedmartin.com/mfc

© Copyright 2013 Lockheed Martin Corporation
Intelligent Microgrid Solutions is a trademark of Lockheed Martin Corporation. All rights reserved.
DPCMB0432. Approved for Public Release DAL201211006