

Application Solutions

Majorpower Inverters Deployed in Telecom Build Out.

The project was configured with embedded DC power plants and battery banks linking a private network of remote node sites. The new network overlay equipment, including routers and multiplexers, is only available in a standard 120 VAC power input. Network engineering evaluated the options to power the equipment giving primary consideration to quality of service and network reliability. The three primary options under consideration:

Option A: Small UPS

Advantages – Small footprint, inexpensive initial outlay

Disadvantages – Only minutes of back-up time and short lifespan

Option B: Large UPS

Advantages – Several hours of back-up time

Disadvantages – Large space requirement, expensive installation, extensive service contract

Option C: Inverter

Advantages – Hours of back-up time, small footprint, increased reliability because of the integrated redundancy

Disadvantages – load planning considerations of existing DC Plant

Option C was Selected because using a Majorsine Inverter utilizes the DC power system to originate pure sine wave AC power for the new equipment. The hours of back-up is only limited by the size of the DC system. Reliability is enhanced because all the equipment in the building is on the same support system.

Redundancy maintains the network overlay equipment by utilizing the Majorsine Inverter's integrated AC bypass as an alternate power source in the event of a catastrophic DC failure. The Majorsine switches back to the client preferred state once the primary DC is restored.

Utilizing the existing DC plant to power the AC equipment gave the telecom company dramatically better reliability than using either UPS option and will prove to be a more cost efficient solution in the long term. The Majorsine has been specified in to the design of all future sites and network overlay build programs, due to the success on this project

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