



Off-Grid Renewable Energy

Solar and Hybrid Power Solutions

➤ *Total Power Solutions*



The Alpha Group - Total Power Solutions

Alpha Energy

Alpha Energy is an engineering and project development group that provides innovative power conversion solutions that integrate solar, wind and alternative resources to provide reliable electric power for the most demanding remote off-grid applications.

Total Power System Solution Management

- Projects that are on time and on budget
- Engineering designs done accurately and effectively
- Integrating solar, wind and alternative energy resources
- People trained on the latest solar technologies and methods

Off-Grid SPS



Solar Power systems configured to provide a range of DC or AC power outputs, featuring turnkey installation with electronic controls and power management.

- Security
- Traffic
- Emergency Power
- Cathodic Protection
- WiMax
- SCADA

Off-Grid HPS



Innovative power conversion solutions integrating solar, wind and alternate resources for custom and standard solar/hybrid applications including:

- Telecommunication
- Oil and Gas
- Railroad
- Government

Serving The Global Market

With millions of powering systems installed and sales, manufacturing and service facilities located around the world, we are able to help you in a language you'll understand. This global reach gives us the expertise to provide your specific power solution.





Telecommunications

Alpha has powered the telecommunications industry around the world for more than 35 years. Known for its rigorous and high-quality powering standards, the telecommunications industry also demands dynamic, constantly evolving technologies to stay a step ahead of the needs of companies, governments, countries and growing populations to transmit accelerating amounts of data, voice and information in a secure, cost-effective manner.

Being on the forefront of this powering standard, Alpha knows what it means to provide telecommunications-grade powering solutions. This extends to renewable energy systems, as telecommunications networks expand into the most remote areas of the world. The ability to adapt profitably to these regions depends on the engineering and installation of rapid, repeatable solar power solutions.

WiFi, WiMax, GSM, 3G, 4G, CDMA and other new technologies all require high reliability to ensure networks both large and small, both undeveloped and urban, stay online and productive without the benefit of an external power source.

Our complete, integrated power systems bring solar power to critical telecommunication loads including switches, BTS, fiber optics, switches and repeaters.

Alpha can deliver a broad array of solutions for solving the critical solar power requirements of the telecommunication industry where utility power is either unavailable or unreliable. And of course, in places where alternate energy sources are available, we have the expertise to

integrate wind, back-up generators and other energy sources into optimized hybrid solar power solutions.

Thanks to our extensive application expertise and to our millions of telecommunications powering systems installed around the World, we have developed a wide range of repeatable, pre-engineered solar energy solutions that respond to the challenges of telecommunication power requirements in any climate or region.





Oil and Gas

Powering requirements in the Oil and Gas industry extraction, processing and transportation include versatility, durability and extreme reliability. While ensuring safety for personnel and communities is paramount, efficiency and high productivity operations are critical.

Given the nature of the remote environments and harsh conditions, as well as the operational, maintenance, governmental and HSE challenges, the standards for equipment and the availability of reliable power are set very high.

Alpha Energy brings more than 35 years of power systems experience and knowledge to provide innovative, integrated turn-key solar power systems to meet that high standard.

Whether serving onshore production, wellhead operations, unmanned offshore facilities, desolate pipelines or security monitoring facilities, Alpha Energy's remote control and communications systems, combined with our in house system design, engineering, installation and service ensure confidence.

Our diverse powering systems experience helps us provide you single-source solar or hybrid powering solutions to work in any environment or geographical location.

Alpha offers comprehensive support packages including customized engineering, proactive service and sales support, extensive training and a variety of field services. Our solar power systems are ideal for the Oil and Gas industry because they deliver clean, reliable, renewable power year after year after year.

OUR BROAD PORTFOLIO OF SOLUTIONS FOR OIL AND GAS

- *Scalable pre-packaged or custom solar power systems from 5 watt to more than 60 Kilowatts*
- *Pre-assembles and factory tested*
- *Designed for maximum reliability*
- *12, 24 or 48Vdc power systems with other system voltages available*
- *UL 1703 Certified Solar modules; approved for Class 1, Division II Groups A, B, C and D*
- *Systems Compliant with Class I, Division II Groups A, B, C and D and the NEC*
- *Thorough system documentation*



Complete Project Capabilities

The Approach

Alpha's in-house, start to finish capabilities for remote solar and hybrid power solutions are unique in the industry. Covering project design, integration, testing, delivery and ongoing support, Alpha ties it all together with a

comprehensive project management philosophy. It is the blend of engineering, integration and project management capabilities that are the foundation of Total Power System Management.

Engineering Services



Our experienced engineering and technical support staff help our clients evaluate and implement emerging renewable technologies in photovoltaic electrical power systems design, alternative hybrid technologies, mechanical and civil design in addition to current National Electrical Code regulations.



Integration Services

Alpha Energy's integration services provide the discipline that brings together photovoltaic technologies, wind energy, balance of system and installation requirements to develop the most secure and reliable integration approach for your specific applications.

Project Management



The Total Solar Solution Project Management approach uses a defined framework to help you overcome the challenges of planning, executing and controlling simple to complex renewable projects. Our proven approach manages your solar energy power application from concept to production, from in-depth technical and site assessments to full turnkey design and system commissioning.



Education and Testing

Our expertise in power system integration comes from continual education, testing and innovation. This commitment is demonstrated by our Bellingham Campus test facility where we help evaluate and implement emerging techniques with existing power technologies.



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