

Empowering Your Business with
Solar Systems



POWERING CONNECTIONS



**Scalable Renewable
Energy Solutions**

- ✓ Turnkey Solar Power Solutions: Comprehensive design, procurement, installation, and commissioning of grid-tied, off-grid, and hybrid solar photovoltaic (PV) systems for residential, commercial, industrial, and utility-scale applications, optimizing energy generation and consumption.
- ✓ High-Efficiency Photovoltaic Modules: Utilization of monocrystalline and polycrystalline silicon PV modules with efficiencies exceeding 21%, coupled with advanced cell technologies (e.g., PERC, Half-Cut, Bifacial) to maximize energy yield even in challenging environmental conditions.
- ✓ Advanced Inverter Technology: Deployment of string inverters, central inverters, or micro inverters with Maximum Power Point Tracking (MPPT) algorithms, ensuring optimal energy harvest, grid synchronization, and robust protection features against overvoltage, islanding, and ground faults.
- ✓ Comprehensive Monitoring and Maintenance: Integration of cloud-based monitoring platforms for real-time performance tracking, fault detection, and energy yield analysis. Provision of preventive and corrective maintenance services, including module cleaning, inverter checks, and electrical inspections.

Technical Specifications

Features	Specifications
✓ System Type	✓ Grid-tied, Off-grid, Hybrid Solar PV System
✓ Module Type	✓ Monocrystalline (PERC, Half-Cut, Bifacial), Polycrystalline Silicon
✓ Module Efficiency	✓ > 21% (typical)
✓ Inverter Type	✓ String Inverter, Central Inverter, Micro-inverter with MPPT
✓ System Capacity	✓ 10kW to Multi-MW (Scalable)
✓ Mounting Structure	✓ Roof-mounted (pitched/flat), Ground-mounted, Carport, Solar Tracker
✓ Battery Storage	✓ Optional: Lithium-ion (LiFePO4) or Lead-Acid for off-grid/hybrid systems
✓ Grid Connection	✓ On-grid (with anti-islanding protection) or Off-grid (with charge controller)
✓ Monitoring	✓ Cloud-based SCADA, Mobile App, Real-time Performance Data, Fault Alerts
✓ Protection	✓ Overcurrent, Overvoltage, Surge, Ground Fault, Anti-islanding
✓ Compliance	✓ IEC 61215, IEC 61730 (Modules), IEC 62109, IEC 61727 (Inverters), Local Grid Codes

Why Choose Us?

- 01.** Sustainable Energy Independence: Our turnkey solar solutions empower you to generate clean, renewable energy, significantly reducing your reliance on fossil fuels, lowering your carbon footprint, and contributing to a sustainable future while achieving long-term energy independence.
- 02.** Maximized Financial Returns: By leveraging high-efficiency PV modules and advanced inverter technology, our systems are designed to maximize energy yield, leading to substantial reductions in electricity bills, eligibility for incentives, and attractive return on investment over the system's lifespan.
- 03.** Reliable Performance and Support: We ensure the highest quality components and meticulous installation, backed by comprehensive monitoring and proactive maintenance, guaranteeing reliable system performance, optimal energy production, and peace of mind for decades.

GET IN TOUCH WITH US

Phone
+971 (0) 429 67114

Mail
info@mactek.ae

Website
www.mactek.ae

Location
805B Ibn Battuta Gate, Dubai,
UAE