

MEMAT TRADING CO. L.L.C

SOLAR ENERGY COMPANY PROFILE



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1. About Us

1.1 Introduction

Memat Trading Co. L.L.C., launched in 2022 and headquartered in Dubai, delivers turnkey solar-energy systems—high-efficiency PV modules, smart inverters, and scalable battery storage—across the Gulf, Asia, and Africa. From irradiance studies and ROI modeling through DEWA-compliant design, certified installation, and 24/7 remote O&M, we ensure >95% uptime, 30–40% energy-cost savings, and deep carbon-footprint reductions.

Headlines for Our Other Activities

- Raw Materials Supply
- Construction Materials Distribution
- Traffic Safety Solutions
- Request a Quote
- Coverage & Delivery



2. Mission & Vision

2.1 MISSION

- Leadership position in Sudan's renewable energy sector
- Focus on innovation and nationwide impact
- Commitment to sustainable development

2.2 VISION

- Reliability and affordability of solutions
- Technology-driven approach
- Customer-focused service model
- Dual focus on energy access and environmental benefits



3. Solar Energy Solutions & Services

- Core Offerings:
 - Supply & installation of solar panels (monocrystalline, polycrystalline, thin-film).
 - Solar inverters, batteries, and hybrid systems.
 - Solar water pumps for agricultural/industrial use.
 - Customized solutions for homes, businesses, and large-scale projects.
- End-to-End Services:
 - Site assessment, design, installation, and maintenance.
 - Energy efficiency consulting.



4. Technical Specifications Ranges for Solar Components Solar Energy Solutions & Services



4.1 Solar Panels

- Power Output:
 - Standard PV panels: 300W–700W per panel (e.g., Dualsun SPRING hybrid PVT panel: 425Wp PV power)
 - Hybrid PVT panels: Generate 6–8x more energy than standard PV panels by combining electricity (e.g., 425Wp) and thermal output (e.g., 940W max thermal power)
- Efficiency:
 - TOPCon technology panels: Up to 22–24% cell efficiency
- Lifespan:
 - 25–30 years with performance warranties (e.g., Dualsun offers a 30-year warranty)
- Temperature Range:
 - Operating: -20°C to +50°C for most panels



4.2 Batteries

- Chemistry:
 - Lithium-ion (LiFePO4): Dominant for solar storage due to high energy density (e.g., 350–450 Wh/kg for NMC/LMFP cathodes) and long cycle life 612.
 - Lead-acid: Fading use due to lower depth of discharge (DoD) and lifespan 12.
- Capacity & Voltage:
 - Residential: 2.56 kWh–5.12 kWh (e.g., AL-S series LFP batteries at 12.8V–51.2V) 8.
 - Industrial: Up to 232.9 kWh (e.g., GSL Energy's container systems) 15.
- Charging/Discharging:
 - Fast-charging solid-state batteries: Up to 3C rate (70% in <20 mins) 6.
 - DoD: 95% for lithium-ion vs. ~50% for lead-acid 12.
- Lifespan:
 - LiFePO4: 5,000–10,000 cycles (10+ years)



4.3 Inverters

- Types:
 - Hybrid Inverters: Combine grid-tied and battery management (e.g., 6–15.4 kW power range) 15.
 - Microinverters: Module-level control (0.5–2.8 kW, 96.5–97.5% efficiency) 15.
- Efficiency:
 - High-end models: 97–99% (e.g., AL-S5000 inverter at 99%) 815.
- Input/Output:
 - DC Input: 18–150V MPPT range (varies by model) 8.
 - AC Output: 110V/220V, 50/60Hz 815.
- Grid Interaction:
 - Hybrid inverters support bidirectional flow for net metering 312.
- Temperature Range:
 - Operating: -20°C to +50°C (common for most inverters)



5. Services

1- Design & Consultation

Energy audits, customized system design, and feasibility studies

2- Supply & Installation

Premium components + professional turnkey installation

3-Maintenance & Support

Preventive checks, 24/7 troubleshooting, and warranty management

4- Solar Water Pumps

Reliable irrigation and water supply solutions

5- Energy Storage

Battery backups and hybrid energy management

6- Commercial/Industrial Solutions

Rooftop/ground-mounted systems with net metering support

7- Training Programs

User workshops and technician skill development

Partners





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