5 Megawatt Utility Scale Solar PV Generation Unit

- Standardized 5 MW Solar PV Generation Unit Designed & Engineered for **Large Utility Scale Power.**
- Scalable from 0.5 to 200 MegaWatts in multiples of 5 MegaWatt Units
- Each 5 MW Unit is Comprised of 12,000 Total Panels using the PV-460U @ 460 Watts each.
- Total Output Capacity = **5,520,000 Watts DC ; Can be deployed in only 16 months to finish!**

SPECIFICATIONS:

- 40 Acre Footprint = 1/16 sq. mile with a 3:1 Ground to Panel ratio.
- Typical is array is five (5) ~ 1.1 MegaWatt blocks made of 120 rows x 20 panels of 2400 panels ea.
- Access Service Ways are spaced between all 120 rows East to West, 2 panels wide spaced in 5 blocks.
- Hardened for wide Desert Extremes, with 40 Year Design Life
- Typical 23% Capacity Rating in Southwestern USA.
- PV+BOS+O+M = Total Life Cost ~ $4 to $5 / Watt = 13 -15 cents LCOE - Levelized Cost of Energy
- Local & Remote SCADA over IP Instrumentation Package Included
- Galvanized Steel & Thermoplastic Vinyl Polymer Composites is used in most construction materials

BILL OF MATERIALS:

The Falcon DD-505 5 MW Solar PV Gen Unit includes:

- All mounting hardware for 12,000 PV- 460U a-Si Solar PV panels plus;
- 60 ea. 100 KW Inverters at 480 VAC ea. – 3 Phase **
- 60 ea. 100 KVA, 480 to 12 KV – 3 Phase Transformer.
- 60 ea. 100 KVA, 3 Phase HV Vacuum / Mechanical Relays.
- 1 ea. 6 MVA, 138 KV to 12 KV Delta-Wye Transformer.
- 1 ea. 6 MVA, 3 Phase HV Vacuum Relay.
- Over Engineered Wire Runs, Trenches and Underground Conduit Service assures copper life.
- Entry roadways, access roads, service ways, all designed for full access throughout project.
- IOIP & AOIP – Dual Layer Security Fences and Gates included in design.
- Polymer Soil Erosion Abatements, runoff and drainage water control and ground engineering included.
- Best and proper Land Use considers water, runoffs, wildlife, birds, livestock, & native plant flora.
- The DD-505 includes all engineering blueprints and our State Registered PE team signoffs for combined county, state & federal approval of all civil, mechanical & electrical designs and construction plans.
- Site planning with all survey, environmental and construction data for rapid permitting.
- Lowest Cost Operational & Maintenance (O&M) Budget of any Renewable Generation Source.
- ** < 2% Failure Mode for Inverters, MTBF > average ~ 8 months ea.= 30 inverters for 240 month term, with only five (5) actual replacements & remainder reentered into service as rebuilds or factory swap outs.
- Can be deployed in as little as 16 months from site plan to the power sale at less than < $150 / MW-H ***
- A Complete EPC Turnkey Solution Implementing the Future of Utility Scale Large Scale Solar Parks.

FGE - Falcon Green Energy	FGE - A Solar Power Developer
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