



## PRELIMINARY PROPOSAL FOR CLIENT REVIEW AND APPROVAL

S3 ENERGY GROUP, is pleased to present S3EG Micro-Grid/BESS “Off-Grid Solar Energy Storage and Portable Generation System Solution,” composed of a 4 size options 300KWh/600KWh/900KWh/ 1200 KWh. S3 ENERGY self-contained Power Module M-G/BESS (Micro-Grid/Battery Energy Storage System) in either 20ft. 30ft, or 40ft container style configurations, is provided with each KWH size module fitted with a standardized 200 Amp 120/ 240 VAC main breaker panel, auto transfer switch and 50-foot umbilical cable for hard wire site facility connection.

Our choice of design was driven by the off-grid capability to deliver Overall Energy Storage capability ranging from 300KWh, 600KWh, 900KWH and 1200KWh Power Modules capable of portable transport.

S3EG Micro-Grid/BESS’ Offering is a turnkey energy storage solution which includes the design, manufacturing, supply and commissioning of the Solar Energy Generation / Battery Energy Storage System composed of Lifeo4-Ion battery technology with a 30kW propane back-up generator.

The lead time from order/contract signed to delivery in the USA is approximately 4 months, with 50% deposit.

The S3EG Micro-Grid/BESS container is delivered on site, pre-assembled. Upon delivery, S3 ENERGY GROUP will proceed to last steps of assembly and inspection in order to make the Power Module ready-to-use. The S3EG Micro-Grid/BESS containerized BESS is one of the most compact BESS solutions on the market for utility scale power in Off Grid sites with the ability to be easily transported to various locations as one portable unit.

Each S3EG Micro-Grid/BESS includes the battery system, the PCS (Power Conversion System), thermal management with air conditioning/HVAC and ventilation cooling system adapted for the local climate, power supply system unit.

For optimized safety, the solution will use a BMS (Battery Management System) and an automatic fire suppressant in each Module. Moreover, the S3EG Micro-Grid/BESS guarantees the efficiency of inverter and battery combined to be higher than 80%.

The battery cells used in most of our projects are Lithium Ferro Phosphate (Lifeo4) Safest Lithium Ion, No fire risk The bidirectional battery inverters act as PCS (Power Conversion System) in order to charge and discharge the batteries according to the following requirements:

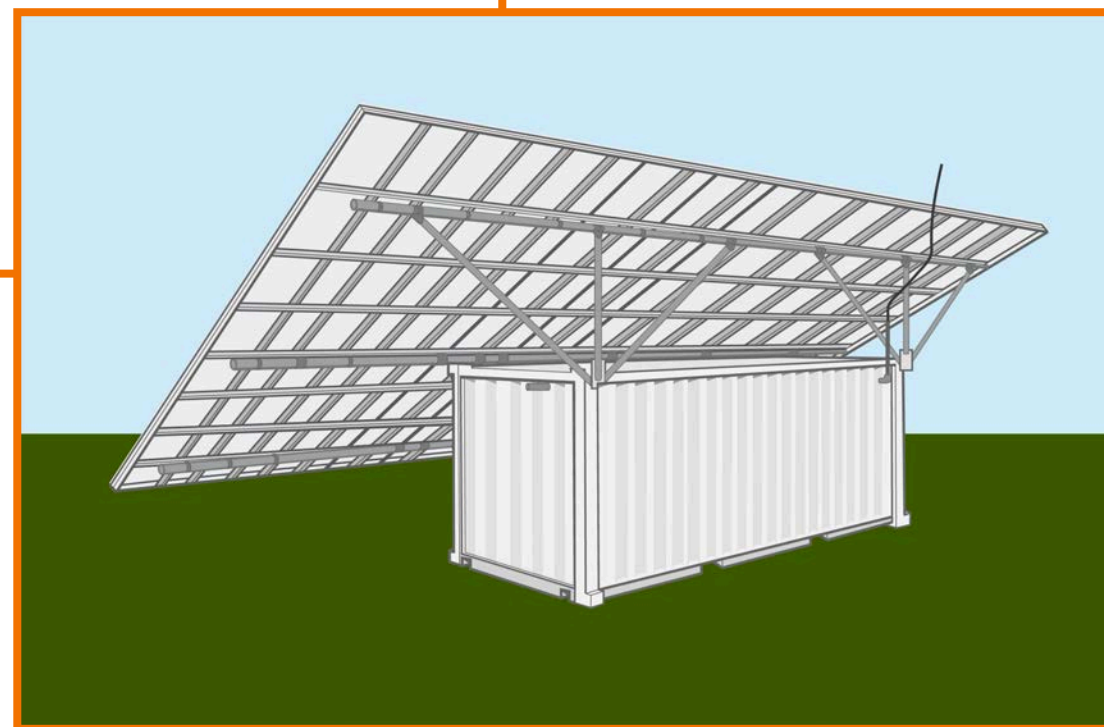
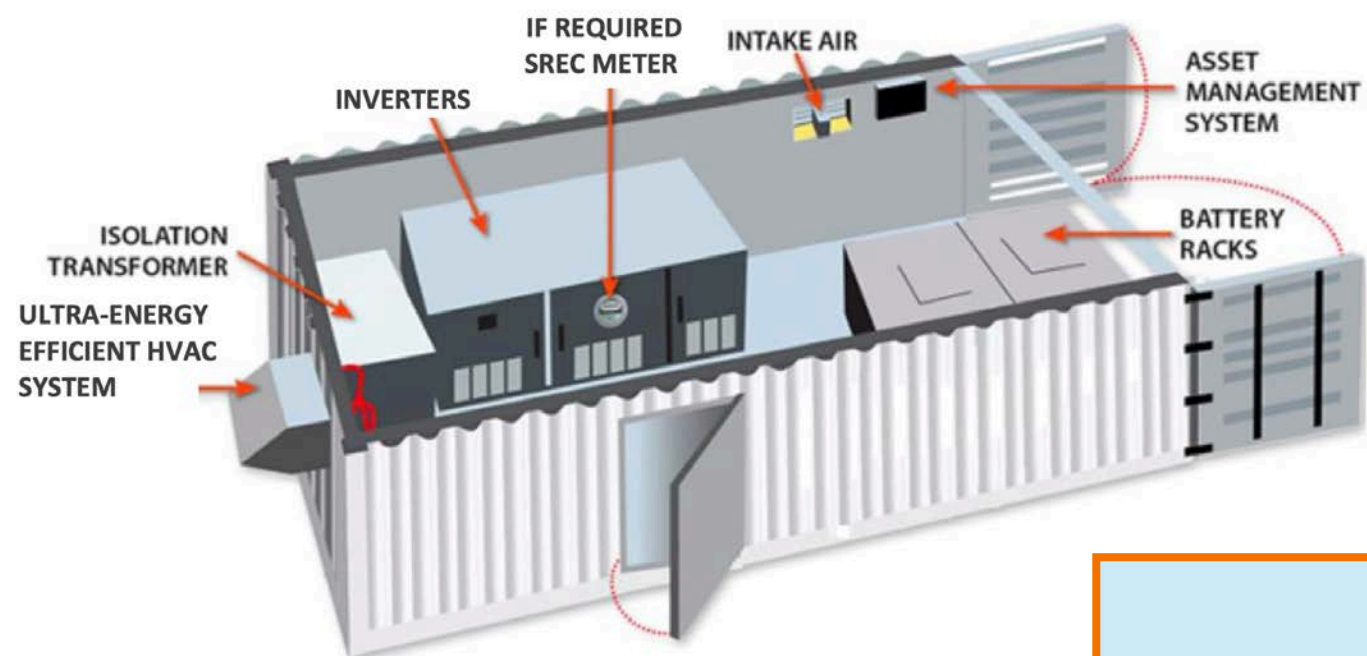
- PCS warranty extended to 10 (ten) years included.
- 96+% minimum conversion efficiency designed for the PCS (value depends on project specific criteria).

The S3EG Micro-Grid/BESS has a 10-year guarantee for performance with at least 6,000 cycles at 80% DOD.

The S3EG Micro-Grid/BESS has dedicated auxiliary electric power systems to serve BESS ancillary loads (HVAC, lighting, etc.) and be able to be auto-transferred to a reliable backup source.

#### **Important Notice:**

**This preliminary System Custom Design is based upon the specific criteria extracted from the Product Checklist supplied for Off Grid Portable Solar Powered Module. Product might be altered or modified depending on unknown supply chain issues, and further review and discussions with Client. This Custom Design is based upon providing the Best of Class client flexibility in utilizing these units in various diverse applications of unknown energy demand. Further negotiations shall be made in order to enter into a legally bidding Sole Source contract, based upon this core design platform. This preliminary offer is Confidential and shall not be shared with any persons or entity outside the Buyer designated in such offer.**



**System Overview** The S3EG Micro-Grid/BESS (Micro-Grid/Battery Energy Storage System) will be custom-made and designed, manufactured and tested in full compliance with the latest edition of UL, IEC, EN standards, codes, rules and regulations.

Additional requirements from the “customer” shall be addressed to S3 Energy Group, and we will work with customer to adapt the design to meet their needs.

**Module Transport Ready Portability System** Each Module will be provided with an integrated portability transport system to enable the Module to be easily moved either on-site or cross country via highway utilizing a minimum of a One Ton Heavy Duty pickup truck with fifth wheel configuration, or a conventional Semi Tractor. This feature provides the maximum application flexibility to accommodate emergency response requirements effectively.

**Air-conditioning/HVAC** The S3EG Micro-Grid/BESS is fully contained in weatherproof, environmentally-conditioned enclosures made of 20ft. 30ft, or 40ft Module designed to operate efficiently in diverse and extreme weather conditions.

The air-conditioning system selected complies with diverse weather conditions and the conditions to maintain operating temperature range for the battery system.

**General Area LED lights** Each Module will be equipped with a minimum of two (2) Flood light type LED fixtures with fully automated controllers to provide general area lighting for safety and maintenance services.

**Fire Suppression System** The Module will be equipped with the fire sensors and alarms, as well as, appropriate halon or equivalent fire suppression systems to avert any catastrophic issues.

**SCADA, controller, EMS** S3EG Micro-Grid/BESS will use its proprietary/qualified SCADA, controller and EMS (Energy Management Software) and adapt/configure the S3EG Micro-Grid/BESS API to include off-grid commands. The Module will also be equipped with GPS location technology which will also include real time monitoring and generator engine diagnostics to enable alarms and alerts for unmanned sites.

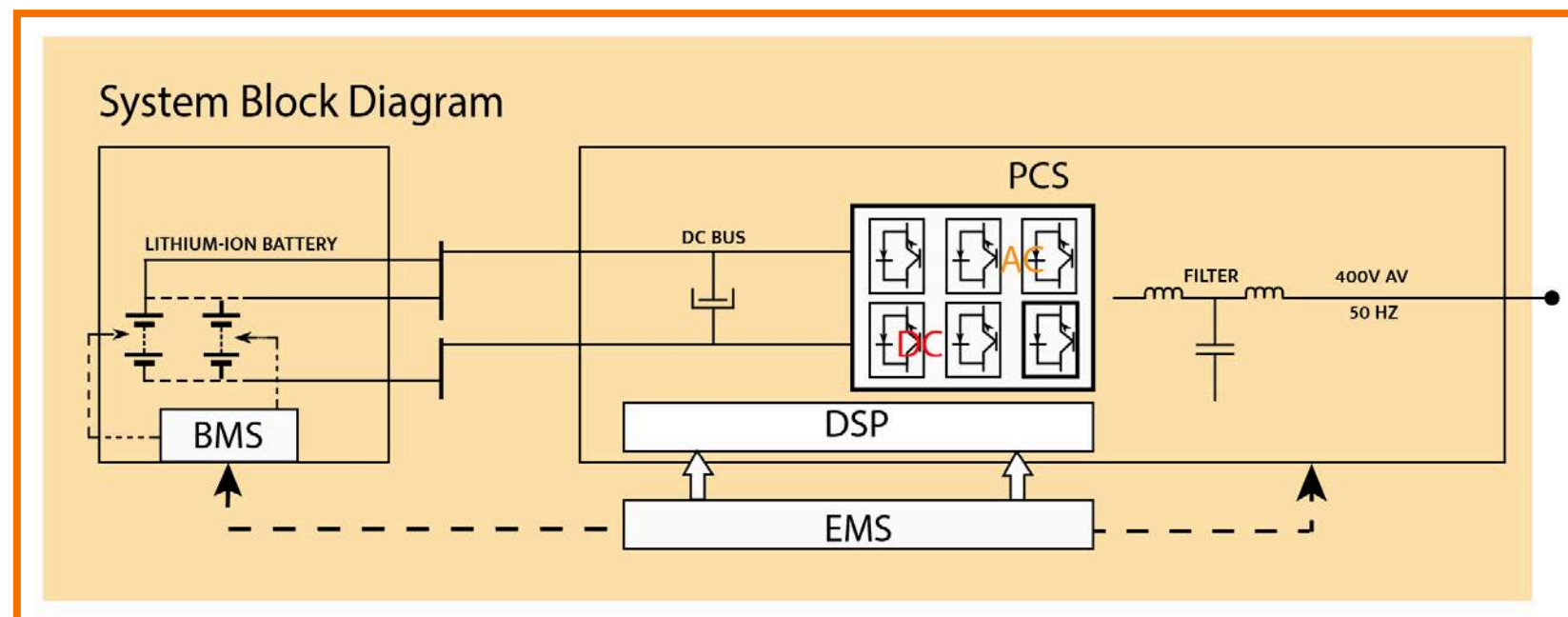


The communication protocol as well as the main list of commands shall be shared with S3EG Micro-Grid/BESS in order to allow [www.s3energy.com](http://www.s3energy.com) such compatibility with our hardware. S3EG Micro-Grid/BESS will proceed to testing the compatibility and adjust if possibly its S3EG Micro-Grid/BESS hardware and adapt or remove the S3EG Micro-Grid/BESS main software commands if needed.

### Warranties

- 10 years performance guarantee on the batteries including 3,000 cycles at 80% DOD (higher depending on projects).
- 10 years product warranty on all the equipment (including PCS ... see page 1).
- 3 years warranty for the PCS (extension to 5 years optional).

Maintenance and Service Agreement A separate 5-year operational Maintenance and Service agreement will be provided for each Power Module, based upon the delivery date of each unit serial number. Full details of the inclusiveness of the services remains to be completely defined.



## Technical Data

Model	S3EG Micro-Grid/BESS
Energy Storage	300KWh, 600KWh, 900KWh, 1200KWh
Power Rating	200 AMPS AC
AC Voltage	120 /240VAC
Grid Frequency	50 /60 Hz
Total Harmonic Distortion	< 3%
Operating Temperature Range	-20 – 50° C
Protection Level	IP 54
Dimension	20'/30'/40' x 9' x 9'

**≤ 1200kW**  
Scalable Capacity

**20+ Hrs.**  
Discharge Duration

**≥ 90%**  
System Efficiency (AC / AC)

**≤ 100ms**  
Rapid Response Time

