

Technical Agreement of ESC-R100-211-CE All in one BESS



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1. Standards-compliant

The equipment and accessories provided by SELLER shall comply with the following standards but not limited to them. The contents of these standards and specifications have the same legal effect as this technical agreement (in case of any inconsistency, the highest technical requirements shall prevail).

ESC-R100-211-CE IEC UN38.3,

The ESC-R100-211-CE device complies with relevant IEC standards and the UN38.3 transportation certification requirements,, the standards are as follows:

- IEC 62619 Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for secondary lithium cells and batteries, for use in industrial applications”
- IEC 61000-6-2(4) “Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments”
- IEC 62477-1 “Safety requirements for power electronic converter systems and equipment - Part 1: General”
- IEC 60730-1 “Automatic electrical controls - Part 1: General requirements”
- IEC 63056 “Secondary cells and batteries containing alkaline or other non-acid electrolytes Safety requirements for secondary lithium cells and batteries for use in electrical energy storage systems”
- UN38.3 “UN Recommendations on the Transport of Dangerous Goods, Part III: Lithium Batteries”
PCS:

The PCS equipment complies with the following standards:

- IEC/EN 62477-1 “Safety requirements for power electronic converter systems and equipment - Part 1: General”
- IEC/EN 61000-2/4 “Electromagnetic compatibility (EMC) - Part 2: Equipment/Part 4 : Testing and measurement techniques”
- IEC/EN 62109-1/2 “Safety of power converters for use in photovoltaic power systems - Part 1: General requirements/Part 2: Particular requirements for inverters”
- BS EN 50549-10/1 “Grid connection of energy systems via inverters - Part 10: Requirements for generating plants to be connected in parallel with distribution networks/Part 1: General requirements and model description.”
- IEC61727 “Photovoltaic (PV) systems – Characteristics of the utility interface”
- IEC62116 “Utility-interconnected photovoltaic inverters – Test procedure of islanding prevention measures”
- VDE-AR-N 4105 “Generators connected to the low-voltage distribution network – Technical requirements for the connection to and parallel operation with low-voltage distribution networks”

- AS/NZS 4777.2 “Grid connection of energy systems via inverters Part 2: Inverter requirements”
- Belgium, C10/11 “Grid Code for Generators Connected to the Transmission and Distribution Networks”

2. Operating Environment

2.1 Site overview

The station site of this project is located at The European region that meets the product’s operation conditions (see in APPENDIX 4). There are no adverse geological effects distributed in and around the site. The stratigraphic structure of the site is relatively simple.

2.2 Geographical location of the site

The geographical location is suitable for installing this product, and the altitude is $\leq 2000\text{m}$.

2.3 Transportation conditions

Easy to transport equipment to the site.

2.4 Access System Overview

The project is connected to a nearby substation with a voltage level of 400V, and there is currently no system connection report. The final access plan shall be subject to the approval opinions of the access system.

3. Technical Parameters of C&I BESS System

3.1 Technical parameters of energy storage system



Schematic diagram of 211kWh All-in- One BESS

Table of 211kWh All-in-One BESS

Battery parameters			
1	Cell type	3.2V/300Ah	Lithium iron phosphate
2	Rated capacity of the system	211kWh	
3	Battery voltage range	600—803V	
4	Efficiency of battery pack	≥93%	
AC side parameters			
1	Rated power on the communication side	100kW	
2	Overload capacity	173A	
3	Initial system efficiency (ambient temperature 25 °C)	≥85%	Full discharge/Full charge * 100%(including Aux.)
4	Rated voltage on the AC side	400V	
5	Voltage range of power grid	-15% - +15%	
6	Adjustable range of power factor	-0.99 - +0.99 -0.99(leading) - +0.99 (lagging)	
7	Rated frequency	50Hz/60Hz±2.5Hz	
8	AC current distortion rate	<3%	At rated power
9	DC component	<0.5%	At rated power

System parameter			
1	Operating environment temperature range	-20—50°C	45°C Derating above 45 °C
2	Operating humidity range	0—95%	Non-condensing
3	PCS cooling method	Temperature controlled forced air cooling	
4	Working altitude	≤2000m	
5	Protection level	IP55	
6	Fire protection system	Cabinet level firefighting	
7	System communication interface	RS485, Ethernet	
8	System Communication Protocol	Modbus / MQTT	
9	Cabinet size	1340*1300*2300±5	Width * Depth * Height, (mm)
10	Corrosion	System C4 Cabinet C5 Liquid cooling C4 PCS C3	

3.2 Energy storage battery rack parameters

Parameter Table of Liquid Cooled Battery rack

No.	Items	Technical parameter	Remarks
1	(Ah) Rated capacity of battery rack (Ah)	300	25±2°C
2	Combination method	1P220S	
3	Nominal voltage (V)	704	220x (single cell voltage: 3.2V)
4	Working voltage range (V)	600—803	
5	Rated battery capacity of battery rack (kWh)	211	100%DOD
7	Charge/discharge rate (P)	0.5	
9	Storage Temperature Range	-30-60°C (cell temperature)	
10	Operating temperature range	0-50°C (cell temperature)	The liquid cooler is configured
11	Thermal management method	Liquid cooling	

3.3 Energy storage battery pack parameters



Schematic diagram of liquid cooled battery pack

Parameter table of liquid cooled battery pack

No.	Items	technical parameter	Remarks
1	Rated capacity (Ah)	300	25±2°C
2	Rated voltage (V)	140.8	Single cell voltage: 3.2V
3	Continuous charge/discharge rate (P)	0.5	
4	Working voltage range (V)	123.2-158.4	95% DOD, single cell voltage range: 2.8-3.6
5	Nominal Energy (kWh)	42.24	100%DOD,110V-160.6V
6	尺寸 (W*D*H) (mm) Dimensions (W * D * H) (mm)	787*1085*235mm	
7	Weight (kg)	≈313	
8	Thermal management method	Liquid cooling	

3.4 Energy storage battery cell parameters



Schematic diagram of liquid cooled battery cells

Parameter table of liquid cooled battery cells

No.	Items	Technical Parameter	Remarks
1	(Ah) Rated capacity (Ah)	300	25±2°C
2	Rated voltage (V)	3.2	
3	Recommended operating voltage range (V)	2.8~3.6	95%DOD
4	Nominal Energy (Wh)	960	25±2°C, 100%DOD
5	Storage temperature range (°C)	-30~60°C	Optimal storage temperature 10 °C~35 °C
6	Dimensions (W * D * H mm)	(81.0±0.5) * (175.4±0.5) * (202.5±0.5)	
7	Battery weight (kg)	5.998±0.3	
8	Working temperature range (°C)	0°C~ 55°C	Charging temperature range
9	Humidity (%)	≤95%	non-condensing

3.5 Technical parameters of BMS

Items	Technical indicators
Voltage sampling	Total voltage sampling accuracy ≤± 0.5% FS
Current sampling	Error ≤± 0.5%FS (≤ ±1.5A)
Temperature sampling	Resolution ≤ 1 °C; Measurement error ≤ 2 °C, sampling period of 500ms
SOC calculation accuracy	≤ 6%
功能 Function	Real time monitoring of battery status, charging and discharging current, voltage, and fault diagnosis functions. SOC estimation function High and low temperature management function

	Battery high and low voltage control
	Charge/discharge management
Charging overcurrent protection	Support
Discharge overcurrent protection	Support
Total pressure overvoltage protection	Support
Total voltage undervoltage protection	Support
Overcharge protection (individual voltage)	Support
Overdischarge protection (individual voltage)	Support
High temperature protection during charging	Support
Low temperature protection during charging	Support
High temperature protection during discharge	Support
Low temperature protection during discharge	Support
Balanced processing	passive
Communication method	CAN/RS485
Operating temperature range	-20-65 °C

4.6 PCS Main Performance Indicators

4.6.1 Main Parameters

DC Side Parameters		
DC voltage range	DC 600 V-950 V	630V-900V (Full load)
DC maximum current	192A	
Rated DC power	100 kW	
Stabilized voltage precision	$\leq \pm 2\%$	
Stabilized current precision	$\leq \pm 5\%$	
Voltage limiting characteristics	Yes	

Current limiting characteristics	Yes	
AC Grid-connected Parameters		
Rated power	100 kW	
Overload capacity	1.1 times for long-term, 1.2 times for 1-minute	
Rated voltage	AC 400 V	
Rated output current	145 A	
AC access method	Three-phase four-wire	
Isolation mode	Non-isolated	
Grid voltage range	340-460 V	
Grid frequency range	50 Hz/60 Hz \pm 2.5 Hz	
Total harmonic distortion rate of current	\leq 5% (full load)	
Power factor	-0.99-0.99	
Current DC component	\leq 0.5%	
充放电转换时间 Charge and discharge conversion time	<100 ms	
AC Grid-disconnected Parameters		
AC grid-disconnected voltage	AC 400 V	
AC voltage range	AC 400 V \pm 3%	
AC grid-disconnected frequency	50 Hz/60 Hz	
Grid-disconnected output THDU	\leq 3% (linear load)	
Unbalanced load capacity	100%	
Grid-disconnected multi-machine parallel	Nonsupport	
DC side in parallel	Nonsupport	
Other Parameters		
Maximum conversion efficiency	\geq 98%	
Allowable ambient temperature	-25°C-60°C	> 45°C derating

Allowable relative humidity	≤95%	
Noise	≤75 dB	
Protection grade	IP20	
Altitude	3000 m	>2000 m derating
Enclosure Dimensions	W 480 * H 260 * D 720 mm	Cabinet size
Structure and cooling of PCS module	Details of the structure and heat dissipation direction are shown in the appearance and dimensional drawing;	
Weight	70 kg	
Cooling method	Forced air cooling	
Multi-module networking mode	AC side in parallel	
Emergency stop function	Module IO receives emergency stop switch commands	
BMS communication interface	CAN	
EMS communication interface	485	
Communication with the screen	Network interface	

3.6.2 Basic functions

- 1) The PCS converter realizes AC/DC conversion between the power grid and the battery, and completes bidirectional energy flow.
- 2) It adopts a three-phase four-wire topology and can control the single-phase, three-phase active, and reactive power.
- 3) It supports multi-machine parallel connections with good scalability. On-grid Max. parallel number 20units, off-grid Max. parallel number 4 units
- 4) It supports active and reactive power adjustment.

3.6.3 Advanced functions

The PCS cooperated with the EMS controller, enables the following advanced application functions:

- 1) Peak-load shifting: The EMS controller calculates the power expected value of the PCS according to the historical curve or the real-time load curve, and the PCS output responds to the power value to achieve the function of "peak-load shifting";

- 2) PCS module charging and discharging control function: the EMS controller can determine the charging and discharging state of the PCS module and the charging and discharging current according to certain control strategies and the battery information returned by the BMS; the PCS can receive and execute the charging and discharging instructions sent by the EMS controller, and it also can receive the BMS instructions.
- 3) Reactive power adjustment: The PCS module can adjust the reactive power output according to the control commands by the EMS controller, and the reactive power regulation does not exceed the range of the apparent power of the PCS module.
- 4) The response characteristics when the frequency is abnormal: the inverter can withstand system frequency abnormalities to a certain extent.
- 5) PCS protection function: PCS provides real-time fault protection based on the voltage and frequency at the grid-connecting side and the operating status itself, including:
 - Overvoltage and undervoltage protection of the power grid
 - High and low frequency protection of the power grid
 - DC overvoltage/undervoltage protection
 - DC overcurrent protection
 - DC polarity reverse protection
 - AC overcurrent protection
 - Overtemperature protection
 - Phase loss protection
 - Anti-islanding protection
 - AC input phase sequence error protection
 - Communication fault protection
 - Protection for IGBT
 - Cooling system protection
 - Have emergency stop protection function
 - Feedback the battery fault information protection based on BMS

3.7 Main Indicators of EMS

4.7.1 Main Parameters

Table 4.5 Main parameter of EMS

Technical parameter	
(L*W*H mm) Motherboard size	196*150*30 mm
Monitor size(inch)	7 inch
Resolution ratio	1024*600
Touchscreen type	Capacitive touch
Power Voltage	6~33V、5W
Maximum power	10W
Work temperature	-40°C~+85°C
Installation Method	Embedded installation of display screen and M3 screw fixation of motherboard;
Communication protocol	MQTT or Modbus, etc.
Motherboard interface	3-channel RS485 isolation interface; 3-channel RS232 interface; 1 channel 10/100M Ethernet interface ; 6 DI inputs and 6 DO output points;

3.7.2 Main Functions

(1) Monitoring Function

The EMS system has various independent functional modules, such as real-time data acquisition, data management, data export, event and log management, and data forwarding management, etc.

The real-time data acquisition module of the monitoring system mainly realizes the channel of data, including the upload of information, and supports various industry and international standard protocols, such as: Modbus protocol, etc.

(2) The real-time display module of the monitoring system displays various real-time data of system equipment on the user interface, divided into the main interface (including system wiring diagram, statistical data module, etc.) and the secondary interface (detailed data display of various equipment).

(3) The data query module of the monitoring system includes real-time data viewing, historical data

viewing, and historical event viewing, which can view the operation of equipment and the faults, alarms and other event information that occurs at any time.

(4) The monitoring system has an operation authority password management function. Any operation that changes the mode of operation and operating parameters requires authority confirmation.

(5) According to project requirements, it is equipped with functions such as peak-load shifting operation strategy, backup power strategy, demand control, load following, etc.

1) Event Recording Function

It has an event recording function. Modifications to operating parameters, battery management unit alarm information, protection actions, charging and discharging start/end times, etc. should all be recorded, and the time record should be accurate to seconds. The event record should have a power-off retention function. Each alarm record should include the defined limits, alarm parameters, and list the alarm time, date, and peak value during the alarm value period.

2) Display Function

It can display or upload the information necessary to ensure the safe and reliable operation of the system, such as related set values, analog measurements, event records, and alarm records, etc.

3.8 Main indicators of fire fighting

3.8.1 Explosion Vent Panel

When pressure rises, the explosion vent opens at the defined breaking point and releases pressure out of the vessel into the surrounding area.

3.8.2 Explosion Venting Panel

Main Parameters of Explosion Venting Panels

Technical data	
Standard burst pressure Pstat	0.1 bar
Max. permitted operating pressure	50 % of Pstat
Temperature	- 40 ~ 180 °C (- 40 ~ 356 °F)
Material	Stainless steel
Gasket material	FDA approved silicon gasket
Tolerance	± 20 % at standard burst pressure
Process	Pulsating/non-pulsating
Standard vacuum resistance	50 % of set pressure at non-pulsating processes
Recommended torque for M10 screws	20 Nm

3.8.3 Aerosol Gas Fire Suppression System

The aerosol gas fire suppression system uses a submerged method for extinguishing fires. It is equipped with an aerosol fire suppression system in the battery compartment. When the relevant detectors detect the occurrence of a fire, the aerosol gas fire suppression system will automatically activate to spray and extinguish the fire.

3.8.4 Aerosol Design Parameter

- 1) Aerosol fire suppression design: $100 \pm 10 \text{g/m}^3$
- 2) Activation method: Temperature activation
- 3) Designed discharge time: $\leq 35 \text{s}$

3.8.5 Requirements for Smoke Detectors

- 1) Accuracy requirement: $\leq 0.02\text{dB/m}$
- 2) 围Protection area: 60 m^2

3.8.6 Requirements for Heat Detectors

- 1) Accuracy requirement: $\pm 2^\circ\text{C}$
- 2) Protection area: 60 m^2

3.8.7 Li-ion Detector

- 1) Detected gases: Hydrogen/Carbon Monoxide/Volatile Organic Compounds
- 2) Operating temperature range: -10 to 60°C
- 3) Response time: $\leq 5\text{s}$

3.9 liquid cooling system

Table of Technical parameters

Items	Technical indicators
Operating voltage range	$220\text{V}\pm 15\%$ 50/60Hz
Operating environment temperature range	-30°C - 55°C
Operating relative humidity range	5%–95%
Storage environment temperature range	-40°C - 70°C
Storage environment relative humidity range	5%–95%
Transport performance	Adapt to land, air and sea transportation, etc.
Working altitude	$\leq 4000\text{m}$, 1000m , 每上升 1000m 3%。 0m–4000m, the refrigerating capacity is derated when the altitude is above 1000m, and the refrigerating capacity will be derated by 3% for every 1000m increase.
Unit size (W×D×H)	275 mm*1050 mm*800 mm

Coolant operating temperature range	5°C–35°C
Coolant operating pressure range	0.1bar–2.8bar
IP level	IPX5 (whole chiller)
ROHS	ROHS2.0

3.10 System External Communication Interfaces and Protocols

Interface: 1*RS485, Protocol: Modbus-RTU;

Interface: 1*Ethernet, Protocol: Modbus- TCP;

Interface: 1*RS232 (Reserved);

4. Performance guarantee

The products provided by SELLER shall meet the promised technical requirements. If they do not meet the requirements, SELLER shall be responsible for repairing, replacing or handling the problematic materials or equipment in order to meet the operational requirements. During the defect liability period, if the complete set of equipment and components provided by SELLER fails, SELLER shall be responsible for repairing and replacing them.

Main performance guarantee (filled in according to the performance guarantee requirements of the project)

1)

All equipment and spare parts provided by SELLER, including all accessories and equipment obtained from third parties, shall comply with industry standards, International Electrotechnical Commission (IEC) standards, and BUYER's enterprise standards.

2)

After the battery cells are assembled into modules, the energy storage system should have a cycle life of no less than 6000 cycles under the following conditions: 0.5P, Rsoc 50%, 25°C, 90% DOD, and either 70% EOL or 10 years (whichever comes first).

3)

Lithium iron phosphate single cell batteries must comply with IEC 62619:2017 "Secondary cells and batteries containing alkaline or other non-acid electrodes - Safety requirements for secondary lithium cells and batteries", for use in industrial applications", And provide corresponding testing reports, the battery module also needs to meet the performance requirements in this specification. The acceptance of this project shall be strictly carried out in accordance with the national and local acceptance standards and specifications for energy storage power stations.

5. Warranty

The basic warranty for the 211kWh product shall be in accordance with the terms of Appendix V. If an extended warranty is required, both parties will confirm the detailed costs in the specific commercial contract.

Attachment 1: Scope of Supply

SELLER shall provide BUYER with XX sets of integrated energy storage systems with a capacity of 100 kW/ 211 kWh. Internally integrated with lithium iron phosphate battery pack, energy storage bidirectional converter, BMS, EMS, control box, and equipped with temperature control system, fire protection system, auxiliary system, and cables.

Table of Supply List of Energy Storage System

No.	Name	Specification and model	UOM	Quantity
1	ESC-R100-211-CE Integrated Industrial and Commercial Energy Storage System	Width * Depth * Height: 1340*1300*(2300±5) (mm)	Nos	XX
1.1	Battery rack	Battery rack: 1P44S * 5 (704V, 211.2kWh) Battery pack: 1P44S (140.8V, 42.24kWh)	Nos	1
1.2	PCS	rated power: 100kW	Set	1
1.3	Liquid cooler system	Including the liquid cooling unit and pipeline system, the pipeline system consists of multi-level pipelines and control valve groups	Set	1
1.4	Battery management system	Level 1 BMS (quantity: 5), Level 2 BMS (quantity: 1),	Set	1
1.5	Fire protection system	Including lithium-ion concentration sensors, temperature sensors, smoke sensors, aerosol fire suppression systems and explosion relief panels.	Set	1

1.6	Controller	Including EMS motherboard	Set	1
1.7	Serial port screen		Nos	1

Attachment II: Quality Assurance, Inspection/Acceptance Specifications, and Maintenance

Quality Assurance, Inspection/Acceptance Specifications, and Maintenance

(1) General

- 1) This clause is used to inspect and perform performance acceptance tests on the equipment (including purchased equipment) provided by SELLER during the contract execution period, ensuring that the equipment provided by SELLER complies with the requirements of the technical agreement.
- 2) After the contract becomes effective, SELLER shall provide the monitoring and inspection standards related to the contract equipment in a timely manner according to BUYER's requirements. These standards shall be in accordance with the provisions of the technical agreement.
- 3) SELLER guarantees to BUYER that the supplied equipment is brand new. The design and material selection are accurate and free of errors, and the manufacturing process is free of defects and mistakes.
- 4) SELLER has effective methods to control the quality and service of all outsourced and purchased parts to meet the requirements of this specification.
- 5) During the quality assurance period, if any part of SELLER's product is damaged due to poor manufacturing or improper design or fails to meet the various indicators stipulated in the contract, the SELLER shall repair or replace the parts for the BUYER free of charge.
- 6) This technical agreement is only applicable to this supply.

(2) Factory Inspection

- 1) SELLER must strictly carry out inspections and tests of each production link in the factory and share the results via a factory acceptance test (FAT) report.
- 2) The results of SELLER's inspection must meet the requirements of the technical agreement. If there are any discrepancies or if the standards are not met, SELLER must take action until the requirements are satisfied.

(3) Special Provisions

Buyer should plan the delivery schedule appropriately, ensuring that the equipment is fully integrated and grid-connected within 90 working days from the commencement of shipment. During the acceptance process, consideration should be given to the natural degradation that may occur due to on-site storage. In the event that the equipment cannot be grid-connected promptly (if the equipment is stored for more than three months), the Buyer should provide a temporary power supply and the necessary conditions for charging and discharging to carry out a battery cell maintenance procedure.

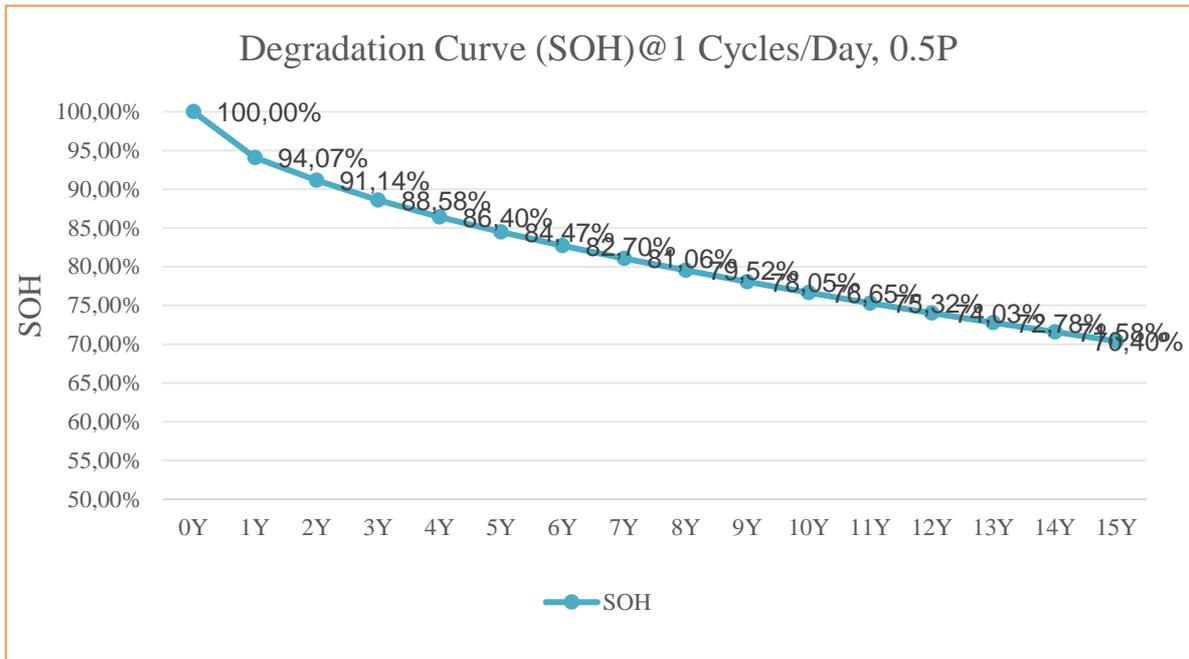
Attachment 3: SOH Curve

The following data is simulated data, only for reference values, not as a performance warranty requirements

Table A – SOH Data (1 Cycles/Day)

	A	B	C	D
ROW	Months after Commissioning	Cycles	Depth of Discharge	Original Guaranteed SOH
at FAT	at FAT	0	90.00%	100.00%
at SAT	at SAT (180 days of FAT to SAT, 25-35°C)	0	90.00%	100.00%
1	12	365	90.00%	94.07%
2	24	730	90.00%	91.14%
3	36	1095	90.00%	88.58%
4	48	1460	90.00%	86.40%
5	60	1825	90.00%	84.47%
6	72	2190	90.00%	82.70%
7	84	2555	90.00%	81.06%
8	96	2920	90.00%	79.52%
9	108	3285	90.00%	78.05%
10	120	3650	90.00%	76.65%
11	132	4015	90.00%	75.32%
12	144	4380	90.00%	74.03%
13	156	4745	90.00%	72.78%
14	168	5110	90.00%	71.58%
15	180	5475	90.00%	70.40%

Chart A: Degradation Curve (SOH)@1 Cycles/Day, 0.5P

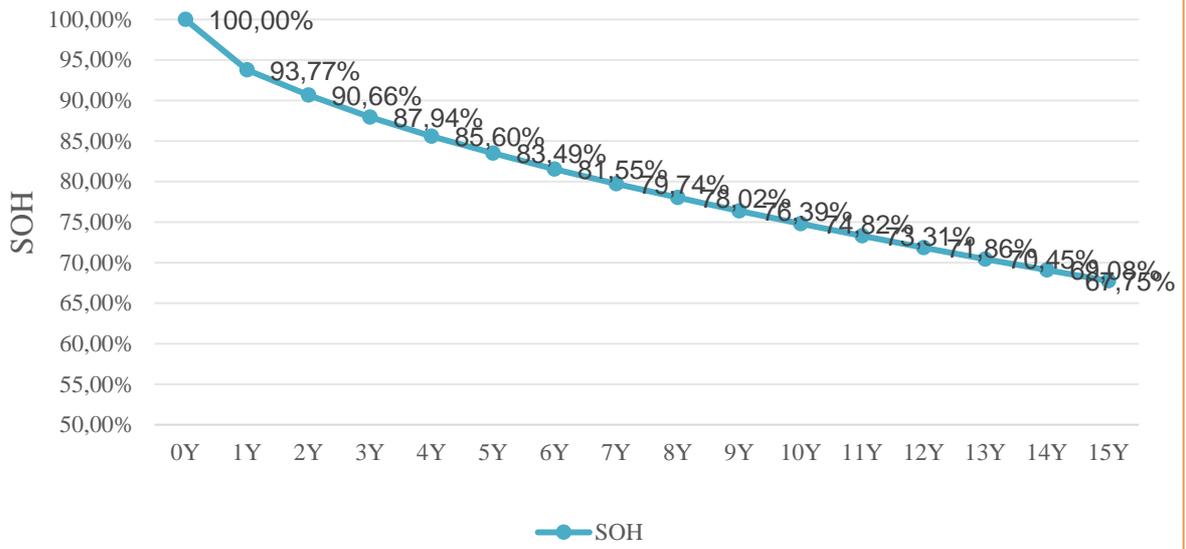


表B-SOH 数据 Table B – SOH Data (1.5 Cycles/Day)

	A	B	C	D
ROW	月 Months after Commissioning	Cycles	Depth of Discharge	Original Guaranteed SOH
at FAT	at FAT	0	90.00%	100.00%
at SAT	at SAT (180 days of FAT to SAT, 25-35°C)	0	90.00%	100.00%
1	12	547.5	90.00%	93.77%
2	24	1095	90.00%	90.66%
3	36	1642.5	90.00%	87.94%
4	48	2190	90.00%	85.60%
5	60	2737.5	90.00%	83.49%
6	72	3285	90.00%	81.55%
7	84	3832.5	90.00%	79.74%
8	96	4380	90.00%	78.02%
9	108	4927.5	90.00%	76.39%
10	120	5475	90.00%	74.82%
11	132	6022.5	90.00%	73.31%
12	144	6570	90.00%	71.86%
13	156	7117.5	90.00%	70.45%
14	168	7665	90.00%	69.08%
15	180	8212.5	90.00%	67.75%

Chart B: Degradation Curve (SOH)@1.5 Cycles/Day, 0.5P

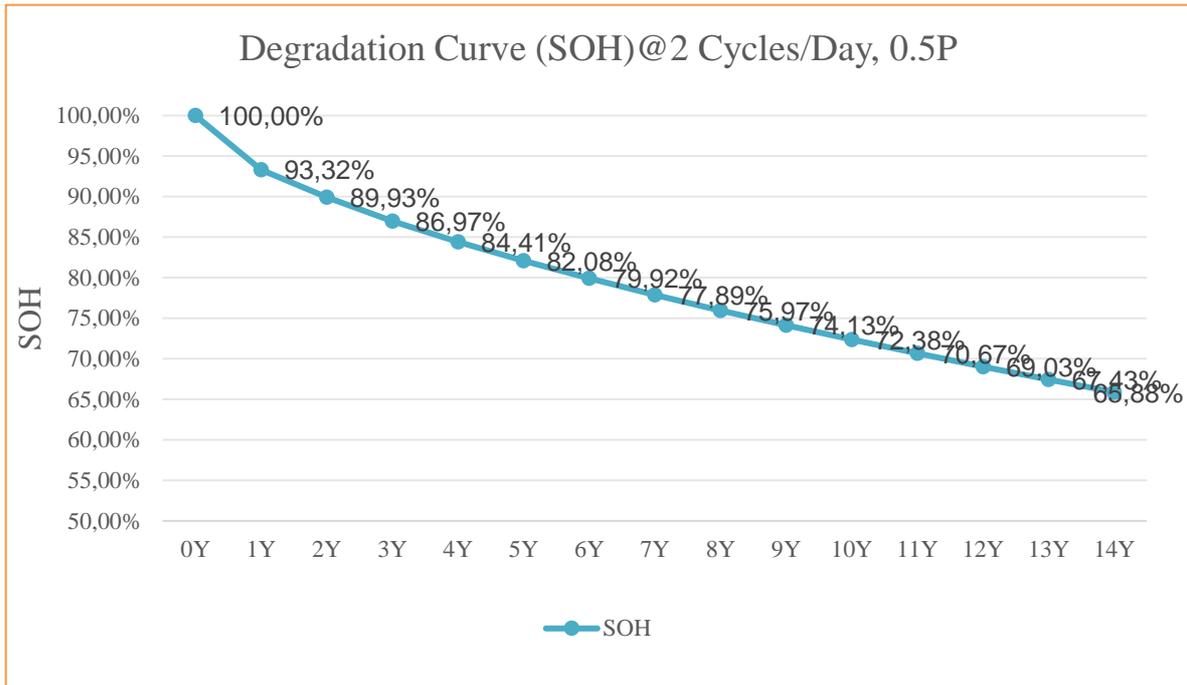
Degradation Curve (SOH)@1.5 Cycles/Day, 0.5P



C-SOH Table B – SOH Data (2 Cycles/Day)

	A	B	C	D
ROW	Months after Commissioning	Cycles	Depth of Discharge	Original Guaranteed SOH
at FAT	at FAT	0	90.00%	100.00%
at SAT	at SAT (180 days of FAT to SAT, 25-35°C)	0	90.00%	100.00%
1	12	730	90.00%	93.32%
2	24	1460	90.00%	89.93%
3	36	2190	90.00%	86.97%
4	48	2920	90.00%	84.41%
5	60	3650	90.00%	82.08%
6	72	4380	90.00%	79.92%
7	84	5110	90.00%	77.89%
8	96	5840	90.00%	75.97%
9	108	6570	90.00%	74.13%
10	120	7300	90.00%	72.38%
11	132	8030	90.00%	70.67%
12	144	8760	90.00%	69.03%
13	156	9490	90.00%	67.43%
14	168	10220	90.00%	65.88%

Chart C: Degradation Curve (SOH)@2 Cycles/Day, 0.5P



Remarks:

- (1) In the Chart-A ,the performance data conditions are 50% resting SOC, [0.5P], [90%] DOD, at a temperature of 25°C, with no more than 2 cycle per day and no more than 365 cycles per year;
- (2) In the Chart-B ,the performance data conditions are 50% resting SOC, [0.5P], [90%] DOD, at a temperature of 25°C, with no more than 2.5 cycle per day and no more than 547.5 cycles per year;
- (3) In the Chart-C ,the performance data conditions are 50% resting SOC, [0.5P], [90%] DOD, at a temperature of 25°C, with no more than 3 cycle per day and no more than 730 cycles per year;
- (4) Performance data calculations do not consider auxiliary consumption;
- (5) **For the renovation of the energy storage power station involved in this project, as well as changes in the position of the battery container and the parallel connection method, it is necessary to seek the opinions of the seller in advance.**

Country list Attachment 4

Country
Germany
Netherlands
Spain
Belgium
Italy
Poland
Romania

WARRANTY POLICY

1, Warranty Period

1.1, : The Warranty Commencement Date shall be the earlier date between:

- (a) The end date of commissioning on site, or
- (b) Three (3) months after the products or devices leave the factory.

1.2, The warranty period shall be five (5) years with respect to the complete battery system

1.3, The seller may provide the Buyer with paid lifetime service for the products or devices, such as repairs or upgrade to its latest models after the expiry of the warranty period provided that both sides reach an agreement on the matter.

2, Warranty Content

2.1, During the warranty period, the Seller shall be responsible for the quality and performance of the products or devices. The seller has sole responsibility and discretion for determining the cause and nature of the issues associated with the quality and performance. Upon the receipt of the Buyer's written complaining notice with respect to quality or performance issues, the Seller shall promptly give feedback on whether the complaint is accepted. If the complaint is accepted, the Seller shall be based on the specific circumstances of the defects or deficiencies, choose the appropriate method independently, at its own cost and expense, repair the defects or deficiencies of the products or devices which occurred in the course of normal use, to ensure that quality or performance issues can be solved timely.

2.2, The Buyer shall be responsible for additional costs arising from detailed analysis or third party inspection if it disputes the decision of the Seller with respect to the cause and nature of quality or performance issues.

2.3, The Seller may, for the purpose of convenience, appoint a third party to carry out repairing service on its behalf, in which case the Seller shall notify the Buyer in writing, without the Buyer's consent, however, the Seller shall be responsible for repairing activities and its results of such third party.

2.4, In the process of the repairing, if any parts or components of the products or devices have ceased the production or are no longer available, the Seller may, at its sole discretion, choose to use the parts or components of different sizes, appearance and models provided that they are compatible with the existing products or devices, and ensure that quality requirements are met after repairing;

2.5, The Seller may, at its own discretion, take one or more measures as listed hereunder:

(a); Dispatch on-site service personnel (its employees, agents or authorized third party) to project site where the defective products or devices are located;

(b) Investigate the issue of the defective products or devices;

(c) Repairing the defective products or devices;

(d) Testing and repairing the defect units or parts in the place of the Seller or authorized third party;

(e) Replace the products or devices, or supply additional products or devices to compensate the loss of capacity;

(f) Reimburse the portion of loss capacity in accordance with the regulations of Supply Agreement.

2.6, The liabilities associated with this limited warranty are subject to the limits of liability set forth in the Supply Agreement.

3, The Obligations of the Buyer

3.1, The products or devices must be used by the Buyer for its intended purpose in compliance with the specifications and within the environment prescribed in the Operations & Maintenance Manual furnished by the Seller. In addition, the Buyer shall spare no efforts to protect the products or devices against further damage if any defect has been identified.

3.2, The Buyer shall provide the Seller with necessary convenience for repairing activities, including but not limited to: arranging necessary downtime, providing the access, assigning supporting personnel, providing tools and power, etc., and the Buyer shall not be entitled to claim the fees arising from such convenience or the losses caused by the downtime of the products or devices against the Seller.

3.3, The Buyer shall be responsible for the safety of service personnel dispatched by the Seller or the third party authorized by the Seller. Repairing site must be free from hazards or obstructions. Furthermore, all applicable safety precautions must be strictly implemented at the site of repairing.

3.4, The Buyer shall provide the Seller with relevant information or reports as it is necessary and required by the Seller to validate the defect and implement the repairing, including but

not limited to:

(a) Ambient condition information such as temperature & humidity log data;

(b) Battery log data;

(c) Inspection or defect reports;

(d) Necessary photos or other forms of evidences.

3.5,



If the failure reported by the Buyer is confirmed not to be defective or not within the scope of the Seller or otherwise not covered by this warranty, the Buyer shall be responsible for all associated expenses incurred to the Seller, which shall be fully paid in one-time payment within thirty (30) days after the invoice has been issued by the Seller.

3.6, During the period of paid service, the service charge shall be fully paid in one-time payment within thirty (30) days after the invoice has been issued by the Seller.

3.7, The replaced parts, components or products shall become the property of the Seller after the repairing, in case that the Seller wish to retain them, the Buyer shall store them properly for a reasonable period of time at the request of the Seller, if requested by the Seller, the Buyer is obliged to send back the replaced parts for analysis.

4, Assignment

4.1, This limited warranty is for the sole and exclusive benefit of the Buyer and there are no third party beneficiaries hereof. However, subject to prior written consent of the Seller, this entire limited warranty may be assigned in whole but not in part to any permitted successor or the owner of the products or devices.

5, Special Provision

5.1,

The Buyer and the Seller specifically acknowledge that, the United Nations Conventions on Contracts for the International Sale of Goods (1980) shall not apply to this warranty or any aspect of any dispute relating to this warranty.

6, Exclusions

6.1, This warranty does not cover any defect or performance deficiency caused by any of the following events, including but not limited to:

- (a) Daily operation and normal maintenance with respect to the products or devices are not strictly conducted by the Buyer in compliance with Operations & Maintenance Manual furnished by the Seller.
- (b) Misuse, abuse, neglect with respect to the products or devices, or the products or devices are exposed to hazardous or corrosive substances;
- (c) Without written permission from the Seller, remove or re-installation at any location other than the physical location in which it was originally installed by the Seller;
- (d) The products or devices are repaired or altered by the Buyer or a third party invited by the Buyer without written permission from the Seller;

- (e) Improper transportation, unloading or storage by the Buyer;
- (f) The Buyer fails to comply with applicable laws or standards;
- (g) The Buyer fails to comply with applicable product instruction, guidelines, warnings or technical specification, etc.
- (h) Damage to the products or devices triggered by the components or systems supplied by others;
- (i) A universally recognized event of force majeure;
- (j) Conditions exceeding the voltage, wind, snow load specifications, and any other operational specifications;
- (k) Power failure surges, telecommunication breakdown, grid outage or voltage spike;
- (l) Damage from persons or biological activity;
- (m) Flaws that do not adversely affect the proper functioning of the products or devices (e.g. cosmetic defects)
 - (n) Fair wear and tear;

6.2, This warranty shall be void under the condition that serial numbers of the products or devices have been altered, manipulated, or cannot be clearly identified;

6.3, All rights of the Buyer under this warranty policy are subject to full payment of the amount due from the Buyer to the Seller;

6.4, The warranty set forth herein is the Seller's sole warranty. All other warranties, expressed or implied, including warranties of merchantability and fitness for a particular purpose, are specifically excluded.

Signature Page

Buyer:

Signature:

Phone Number:

Date:

Email Address:

Company info:

Seller: Gotion BESS Ltd.

Signature:

Phone Number:

Date:

Email Address:

Company info: