

TBB LITHIUM BATTERY LIMITED WARRANTY

This Limited Warranty (hereinafter referred to as the "Warranty") as outlined below pertains to the Battery Energy Storage System and the accessory components (hereinafter referred to as the "Products") provided by TBB Renewable (Xiamen) Co., Ltd. (hereinafter referred to as "TBB Renewable") to the End User through an Authorized Seller (hereinafter or "Seller").

End User Definition

The term "End User" (hereinafter referred to as the "Buyer") denotes the buyer who initiates the operation of the Products for the first time through a method authorized by TBB Renewable.

Authorized Seller Definition

"Authorized Sellers" encompass Agents, Distributors, and Partners duly authorized by TBB Renewable.

1. Purpose

The primary objective of the Limited Warranty section is to provide clear and precise guidelines pertaining to the warranty policy for Products.

The primary objective of the after-sales service section is to establish comprehensive guidelines regarding the precautions associated with the use of Products.

2. Applicable Product Type

Battery Energy Storage System

Applicable Product Type:

- ES100 Lithium Battery Module
- ES100 II Lithium Battery Module
- PS5 Lithium Battery Module
- PS10 Lithium Battery Module

TBB Renewable extends the following warranty to the End User.

3. Product Warranty

3.1. Warranty Start Date Definition

The warranty start date is determined by the earlier of the following dates:

- 1) Six (6) months subsequent to the date of shipment.
- 2) The date of product sale to the customer.

It's essential to note that the warranty duration for Products remains unchanged even after the warranty has been completed within the specified period.

3.2. Warranty Period

The Standard Warranty Period for Products is seven (7) years, commencing on the warranty start date. Upon registration of the products on the TBB NOVA Online Portal within six (6) months of installation completion and maintained in continuous online presence on NOVA, the warranty period will be automatically extended to ten (10) years. The duration of the extended warranty will be automatically calculated by NOVA.

It's crucial to clarify that this warranty pertains to a capacity equivalent to 1 full cycle per day. A full cycle is defined as the discharge of the nominal capacity of a fully charged battery followed by a full recharge. Micro cycles aggregate into full cycles based on the amount of energy charged and discharged. Please take note that Products are unable to safeguard themselves from deep discharge/charging in the absence of communication connection.

For Products without communication connection, the warranty period is four (4) years from the warranty start date.

This warranty policy is established to provide clarity and ensure transparency regarding the warranty period and conditions applicable to TBB Renewable's Products.

4. Performance Warranty (Standard)

4.1. Capacity Performance Warranty

The capacity performance warranty ceases to be effective upon the occurrence of either of the following conditions, whichever transpires first:

- 1) After a period of ten (10) years from the warranty start date, provided that the products maintain at least seventy-five percent (75%) of their Nominal Energy.
- 2) When the products reach the Minimum Through Output Energy threshold, as depicted in the figure below.

The term "Nominal Energy" herein refers to the originally specified energy capacity of the products, as indicated on the label affixed to the Products.

It is imperative to emphasize that the precondition for availing the valid 10-year

Performance Warranty is the diligent use of the Products in strict accordance with the guidelines outlined in the provided Appendix.

1 - Usage and Transportation Requirements

Product Type	Nominal Energy	Minimum Energy Through Output
ES100 Lithium Battery Module	5.04kWh	15.8MWh
ES100 II Lithium Battery Module	5.04kWh	15.8MWh
PS5 Lithium Battery Module	5.04kWh	15.8MWh
PS10 Lithium Battery Module	10.08kWh	31.6MWh

4.2. Capacity Measurement Conditions

The capacity measurement conditions for the Products are as follows:

Ambient Temperature: 25~30°C

Initial Battery Temperature (from BMS): 25~30°C

Charging/Discharging Method:

Charge: (0.2) CC/CV (Constant voltage: (53.5) V/ Cut-off current (0.05) C)

Discharge: (0.2) CC (Cut-off voltage: (40) V) Current at (0.2) C

Note: Current and voltage measurements are taken at the battery DC side.

5. Exclusion of Warranty

This Limited Warranty does not cover damage to the Products resulting from any of the following activities:

- 1) The Buyer may, without making immediate payment, allocate the outstanding amount to the Seller in support of a warranty claim. However, the Seller reserves the right to refuse the request in accordance with the provisions of this clause.
- 2) Failure to comply with TBB Renewable's official user manual for the product and "Appendix 1 - Usage and Transportation Requirements."

- 3) Product damage resulting from modification, alteration, disassembly, repair, or replacement maintenance, and other services conducted by personnel unauthorized by TBB Renewable.
- 4) Damage or defects arising due to the Buyer's unauthorized use of their own design, materials, mixing, function alteration, or service to the Products.
- 5) Improper use, mixed-use, misuse, or abuse that does not conform to the User Manual.
- 6) Damage to the appearance, deformation, abrasion, staining, rust, mildew, or similar external influences caused by the Buyer during use.
- 7) Improper transportation, storage, installation, wiring, and use with faulty or incompatible devices by the Buyer. If the Buyer fails to utilize the original packaging materials provided by the Seller during the transportation of the equipment, any resulting damage or failure of the Products shall not fall under the warranty scope of the product.
- 8) Alteration, erasure, or rendering unrecognizable of the model number, nameplate, or product serial number of the product, or arbitrary damage to the tamper-evident logo.
- 9) Product damage resulting from external influences, including unusual physical forces, natural forces, electrical stress (power failure surges, inrush current, lightning, flood, fire, accidental breakage, etc.).
- 10) Product damage resulting from external force, force majeure (events such as unforeseeable, unavoidable, and insurmountable objective occurrences, including but not limited to war, civil war, strikes, riots, or other activities intervened by the government, terrorism, war, riots, strikes, unavailability of suitable and sufficient labor or materials, and other events beyond the control of TBB Renewable), or actions of third parties.
- 11) Damage to Products arising due to changes in national or regional laws or regulations.
- 12) Product damage and defects caused deliberately or by willful acts of the End User.
- 13) Use of an incompatible inverter, rectifier, or PCS.
- 14) Failure to report Product failure to the Seller or TBB Authorized Service Partner

within 2 weeks of becoming aware of the failure.

- 15) The defect cannot be rectified under the technological conditions existing at the time when the Product was sold to the End User.
- 16) The specified warranty period has already expired.

6. About Service Products/Parts

6.1. Fault Handling

- 1) In the event of a product failure, the Buyer is expected to collaborate with the Seller to acquire detailed information regarding the faulty equipment's usage. This information includes, but is not limited to, the faulty equipment's serial number, operating temperature, usage mode, details of the energy storage inverter manufacturer/model/specifications, power consumption equipment power information, PV system configuration, fault symptoms, operational procedures, and battery operation logs, among others.
- 2) This warranty covers the repair or replacement of a defective component upon mutual agreement that the product qualifies for warranty coverage. To initiate the warranty process, prior written confirmation from the Buyer to the Seller is required. This confirmation should include the serial numbers of the defective product and the spare parts designated for installation.
- 3) If both parties concur that the product falls within the scope of warranty coverage and the defective product cannot be repaired, the Buyer should proceed to replace the defective product. To initiate the warranty process, prior written confirmation from the Buyer to the Seller is required. This confirmation should include the serial numbers of the defective product and the spare parts designated for installation.
- 4) In the event of a disagreement between both parties regarding whether the faulty equipment meets the warranty conditions, a joint testing of the products may be arranged through methods approved by both parties. Alternatively, the products may be subjected to testing by third-party institutions recognized by both parties. Both parties reserve the right to offer reasonable input on the testing methods, criteria, and conclusions. Initially, the testing costs shall be borne by the Buyer. If the test results affirm that the product satisfies the warranty conditions, the Seller shall cover the transportation and testing costs in full and take responsibility for the warranty of the faulty equipment.

7. Claim Payment Policy

TBB Renewable reserves the right to decline product warranty claims in cases where proper documentation and requisite information are lacking.

Claims under this Warranty must be initiated by notifying the Seller from whom the Products were purchased within 2 weeks of becoming aware of the issue. To facilitate the processing of a Warranty Claim, it must include, but is not limited to, the following items:

- 1) Proof of the original purchase.
- 2) A detailed description of the alleged defect(s) from an authorized service center.
- 3) The relevant Product's serial number and the initial date of the warranty.

Buyers who encounter difficulties in contacting the Seller from whom the Product was acquired are encouraged to reach out to TBB Renewable (Xiamen) Co., Ltd. through the "Contact Us" section of our official website.

Website: www.tbbrenewable.com

Email: sales@tbbrenewable.com

Fax: +86-592-5796070

8. Applicable Law

This Warranty is governed by international law.

9. Scope of Policy Adjustment

The warranty terms outlined in V1.2 are applicable to orders placed on or after October 1, 2023.

Appendix 1

Usage and Transportation Requirements

This product comprises Lithium iron phosphate batteries and Accessory Components. To guarantee that the buyer is eligible for the complete warranty policy, the following provisions must be rigorously adhered to during product transportation and utilization. Please be aware that product failure or damage resulting from the violation of the ensuing requirements is not covered by this Limited Warranty.

1. Operating Environment Requirements

- Operating temperature: -20°C ~ +55°C.

- Operating humidity: 15% ~ 90% RH.
- Altitude: < 2000 meters.
- No presence of conductive dust and corrosive gas.
- Install the product away from the sea to avoid exposure to brine and high humidity environments.
- Ensure the ground is flat and level.
- Prevent flammable or explosive substances from being in close proximity to the installation site.
- Keep the product away from dusty and cluttered areas, water sources, and heat sources to prevent water ingress and overheating.

2. Storage Environment Requirements

- Short-term storage (within 3 months):
 - Temperature range: -20°C ~ +45°C.
 - Relative humidity: < 85% RH.
 - No presence of corrosive gases.
- Long-term storage (more than 3 months):
 - Temperature range: 0°C ~ +35°C.
 - Relative humidity: < 65% RH.
 - No presence of corrosive gases.
- For long-term storage, recharge every 6 months, ensuring that the state of charge (SOC) remains above 80%.
- Keep the product away from dusty and cluttered areas, water sources, and heat sources to prevent water ingress and overheating.

3. Transportation Requirements

- When transporting individual products separately, use the original packaging materials provided by the Seller.
- For long-distance transportation, such as sea transport, take additional packaging measures to ensure safe transportation. Stacking of products during transportation should not exceed 4 layers.
- If the original packaging materials from the Seller are not used for transportation, the Buyer should consider the risks of vibration, dropping, and collision during transport and take adequate measures to protect the product.

4. Equipment installation requirements

1	Visual Inspection	Check the appearance of the product for any damage. Verify that the attachments match the variety and quantity specified in the packing list. Ensure that the device is in the off state.
2	Electrical Specification	Confirm that the rated working voltage of the energy storage pack is 48V.

	Confirmation	<p>Check that the battery interface parameters of the energy storage inverter are consistent with the battery parameters.</p> <p>Verify that the maximum charging and discharging current designed by the system meets the specification requirements of the energy storage pack.</p> <p>Ensure that the external power supply does not generate surges, as this could damage the battery or BMS.</p>
3	Connection	<p>When connecting the power line, be cautious about the positive and negative electrodes to avoid reverse connection and short-circuit.</p> <p>Never connect the battery directly to the AC power source.</p> <p>Batteries can be used in parallel but not in series.</p> <p>Do not mix batteries from different manufacturers or other types of batteries.</p> <p>Ensure that the battery is reliably grounded, with a grounding resistance of less than 1 Ω.</p>

5. Equipment Use

1	Charging	<p>The battery's long-term continuous charging current should be kept at or below 0.5C.</p> <p>If the battery's capacity is fully depleted, it should be recharged within 48 hours.</p>
2	Discharging	<p>The long-term continuous discharge current of the battery should not exceed 0.5C.</p> <p>The recommended maximum Depth of Discharge (DOD) for the battery pack should not exceed 90%.</p>
3	Cycles	<p>This Warranty covers a capacity equivalent to 1 full cycle per day for ten (10) years.</p> <p>A full cycle involves discharging the nominal capacity of a fully charged battery and then fully recharging it afterward.</p> <p>Micro cycles accumulate to full cycles based on the amount of energy charged and discharged.</p>
4	Moving	<p>To remove the battery, disconnect the external power supply and turn off the switch.</p>
5	Maintenance	<p>Do not open the battery shell or dismantle the components without obtaining written authorization from the Seller.</p>
6	Fire Emergency	<p>In the event of a fire emergency, use dry powder fire extinguishers only.</p>