ENVIRONMENTAL PRODUCT DECLARATION

In accordance with ISO 14025 for:

E205 Battery Modules of Energy Storage System

From

BYD Auto Industry Company Limited

Declared product:

Programme operator:	EPD China
Registration number:	EPD-CN-00044
Issued date:	2025-09-29
Valid until:	2030-09-28

Programme Information

EPD Owner	BYD Auto Industry Company Limited Address: No. 3001, 3007 HengPing Road, Pingshan, Shenzhen, P.R. China website: https://www.bydglobal.com/cn/indexmob.html
Product Name	E205 Battery Modules of Energy Storage System
Production Site	No. 1 lianghe Road, Lingli Town, Qingxiu District, Nanning, Guangxi
Identification of product	MC CUBE 0.5C
Field of Application	The product can be assembled into various types of energy storage products for industrial application, in the form of cabinets and containers.
Programme Operator	EPD China Address of Headquarter: Tianping Road, Xuhui District, Shanghai Website: www.epdchina.cn Email: info@epdchina.cn | secretary@epdchina.cn
LCA Practitioner	TÜV Rheinland (China) Ltd.
Responsibility	The EPD owner has the sole ownership, liability, and responsibility for the EPD
Comparability	EPDs within same category of product in different programme operator are not suggested to be compared. Full conformance with a PCR allows EPD comparability only when all stages of a life cycle have been considered. However, variations and deviations are possible even applying the same PCR.
Liability	The EPD owner has the sole ownership, liability, and responsibility for the EPD.
Validity	The EPD is published on 2025-09-29 and valid to2030-09-28
LCA Software (version)	SimaPro 9.6.0.1
LCI Dataset (version)	Ecoinvent 3.9.1
Year(s) of Primary Data	07/2024-06/2025
PCR	-PCR EPDItaly007- Electrical products and system ver.3.1(2026-01-19) -PCR EPDItaly021 – Energy storage systems ver.5.0(2029-03-10)
Other Reference Document	EN50693:2019
Verification statement	
Independent verification of the declaration and data according to EN ISO 14025:2010 ☐ internal ☑ external Third-party institution verification: <Michael ZHU Jiang, on behalf of Ti Certification (Shanghai) Co., Ltd.> is an approved certification body accountable for third-party verification Approved by: EPD China	
Procedure for follow-up of data during EPD validity involves a third-party certification body: ☐ Yes ☑ No	

General Information

1.1 Company information

1. Contact Information of EPD Owner and Programme Operator: BYD Auto Industry Company Limited, headquartered in Shenzhen, Guangdong Province, is a Fortune 500 company listed on the Hong Kong and Shenzhen Stock Exchanges, focusing on automobiles, electronics, new energy, and rail transit.
2. Name and Location of Production Site: Guangxi FinDreams Battery Co., Ltd., located in No. 1 lianghe Road, Lingli Town, Qingxiu District, Nanning, Guangx, is the production site for the specific EPD.
3. Brief Description of the Company: BYD's brand vision is "cooling the earth by 1℃", addressing stakeholder needs and driving innovation in areas such as green energy, low-carbon solutions, and advanced technologies, while maintaining robust certifications like ISO 9001， ISO 14001 and ISO 50001.
4. Through a dual importance assessment, BYD identifies and analyzes their sustainable development demands, and proposes the "DREAMS" sustainable development concept in conjunction with BYD's sustainable development issues. BYD will consistently adhere to the concept of sustainable development and promote the sustainable development of humanity and the earth through practice and innovation in six key areas: green and low-carbon, innovative change, equal opportunities, collaborative cooperation, integrity and value sharing.

1.2 Scope and type of EPD

1. Manufacturing Stage

A. Raw Material Acquisition

This stage involves the extraction and processing of raw materials used in the manufacturing of battery modules. Key materials include lithium iron phosphate (LFP) as the cathode material, graphite as the anode material, copper collector foil, aluminum components, electrolytes, and various separator(e.g., PET and PP). Data for raw material acquisition is sourced from supplier records and modeled using the Ecoinvent 3.9.1 database. Raw material procurement contributes significantly to environmental impacts, particularly in categories such as global warming potential (GWP) and resource depletion. Generic transport assumptions include 19,000 km by sea and 1,000 km by lorry for international raw material transport.

B. Manufacturing

The manufacturing stage includes the entire production process of the battery modules at BYD's Guangxi facility. Key processes involve electrode preparation (mixing, coating, drying, calendaring, and slitting), cell assembly (stacking, electrolyte injection, and sealing), and final module production (testing, welding, and packaging). Energy and resource consumption at this phase includes electricity (provided by the China Southern Power Grid), natural gas, and water. Emissions during manufacturing, such as NOx, SO_2, VOCs, and solid waste, are documented based on facility records and secondary data sources. Scrap materials like aluminum, copper, and plastics are collected for recycling at this stage.

2. Distribution Stage

The product distribution stage accounts for the transportation of finished battery modules from the manufacturing facility to their final destination in Europe. It is modeled in three separate transportation phases:

Phase 1: 220 km by lorry from the factory to the port in Beihai.
Phase 2: 19,000 km by sea using container ships.
Phase 3: 1,000 km by lorry to the customer site.
Transportation emissions are accounted for based on the EURO6 truck standards and shipping assumptions aligned with EN50693

guidelines.

3. Installation Stage

The installation stage is primarily manual and involves no use of additional energy or materials. Packaging waste, including plastics and wooden crates, is collected for recycling or proper disposal. Installation emissions are negligible, as all processes are performed without electricity and rely on labor inputs.

4. Use & maintenance Stage

The usage stage is the most impactful phase for energy storage systems, primarily due to the energy required for operation and charge/discharge cycles.

Energy Consumption (Euse): Auxiliary systems like BMS and EMS consume 42422.86 kWh over 10-year service life.

Energy Loss (Eloss): Calculated at 31.34 kWh for charging/discharging inefficiencies, where Eloss consumes 8477.86kWh.

The system does not require maintenance or replacement during its 10-year lifespan. Performance assumptions are based on tables detailed in PCR EN50693. The use stage has the highest GWP due to prolonged energy consumption. Ncycle is considered as one complete charge and discharge cycle per day.

Table 1: Energy consumption of the system during the use stage

year i	Max energyl dischargeable/kwh	SOH	Eusefuli/kwh	DC RTEi	Eloss/kwh
1	31.34	94.03%	29.47	0.93	831.49
2	31.34	91.43%	28.65	0.93	838.57
3	31.34	89.33%	28.00	0.92	843.23
4	31.34	87.52%	27.43	0.92	846.75
5	31.34	85.91%	26.93	0.92	849.25
6	31.34	84.45%	26.47	0.92	851.25
7	31.34	83.11%	26.05	0.92	852.80
8	31.34	81.86%	25.65	0.92	854.00
9	31.34	80.69%	25.29	0.92	854.89
10	31.34	79.59%	24.94	0.91	855.63
Total	/	/	/	/	8477.86

Note：The data is only calculated based on typical application scenarios, and the values of specific energy storage system products need to be determined in combination with product design and application boundaries.

5. End-of-life Stage De-installation

The end-of-life phase assumes manual deconstruction of the battery module with no use of automated processes or electricity. The waste is transported 100 km to the deconstruction site and then an additional 50 km to the recycling and incineration facility respectively. Based on EN50693, recyclable components (e.g., metals, plastics) are separated, while hazardous waste undergoes specialized treatment. The "Polluter Pays Principle (PPP)" is applied, ensuring that disposal impacts are allocated to the final product owner.

6. Benefits & loads beyond the system boundary

Recycling processes generate environmental benefits by offsetting the need for virgin material production. Recycled materials like aluminum, copper, and plastic are allocated as avoided burdens to the next system. All production waste is assumed to be recycled, ensuring that the environmental impact of raw material reuse is reduced, as detailed in Table G.4 of EN50693.

By structuring these six lifecycle phases and the benefit phase separately, the study identifies hotspots such as the use stage and raw material acquisition, ensuring targeted recommendations for sustainability enhancements in BYD's battery module lifecycle.

Please refer to the table below for details.

Table2: Process stages and EPD modules.

Phases	Manufacturing Stage	Distribution Stage	Installation Stage	Use & maintenance stage	End-of-life Stage De-installation	Benefits & loads beyond the system boundary
	IN ACCORDANCETOEN50693					
Phases declared	X	X	X	X	X	ND

- Statement on the type of EPD (Specific or Average):
  - The EPD for E205 Battery Modules of Energy Storage System is specific, as it pertains to a distinct product and its associated environmental performance data.
- Background Database Description:
  - The EPD incorporates background data using upstream and downstream generic data. These data represent processes and systems that lie beyond the manufacturer's direct influence (e.g., raw material extraction, supply chain effects, and end-of-life scenarios). Specific datasets used in this context are derived from the **Ecoinvent 3.9.1** database.
- Applied LCA Software/Tools:
  - The Life Cycle Assessment (LCA) calculations and environmental analyses were performed using the SimaPro 9.6.0.1 software with its integrated datasets and modeling tools.

2 Detailed Product Description

1. Description of the product

Battery Modules of the Stationary Energy Storage adopts lithium iron phosphate (LFP) chemistry as its cathode material, offering outstanding safety performance, an ultra-long cycle life, and excellent temperature adaptability. It also delivers advantages such as high energy density, low cost, and zero pollution. The products applying for EPD certification in this study: E205 with battery capacity of 31.34kWh. And it can be assembled into various types of energy storage products, such as cabinets and containers.

This product represents a new generation of blade battery energy storage system solutions, featuring a unique Cell-to-System (CTS) design. Through innovative engineering, the blade battery significantly enhances system energy density, safety, maintainability, flexibility, lifespan, and efficiency while notably reducing energy consumption, costs, and physical footprint. Leveraging its superior cell performance and extended lifespan, it provides customers with efficient and reliable energy storage solutions that cater to diversified storage needs. This module is applicable to the MC CUBE 0.5C energy storage system products. The detailed parameters are shown in Table 3.

Table3: Information of E205 Battery Modules of Energy Storage System

Parameter	Value & unit
Model	E205
Multiply power	0.5C
Cell type	LFP
Combination	1P26S
Rated capacity	31.34kWh
Weight（without coolant）	202±2%kg

Statement: The calculated weight of E205 is relatively high because in actual production, the scrap rate of some raw materials is relatively high. After scrap and incorporating it into the qualified finished product, the calculated weight of the product is higher than the actual weight.

Figure2: Picture of the declared product.

2. Description of the production processes preferably visualised, application, technical data, condition of delivery

The flowchart of the production process stages for the Battery Modules of the Stationary Energy Storage System product is shown in Figure 3. For simplicity, only the main manufacturing stages are presented: the production of the battery's positive and negative electrodes. The raw materials and auxiliary processes considered in the LCA are not included in the figure, as BYD's manufacturing plant does not cover the production processes for raw materials.

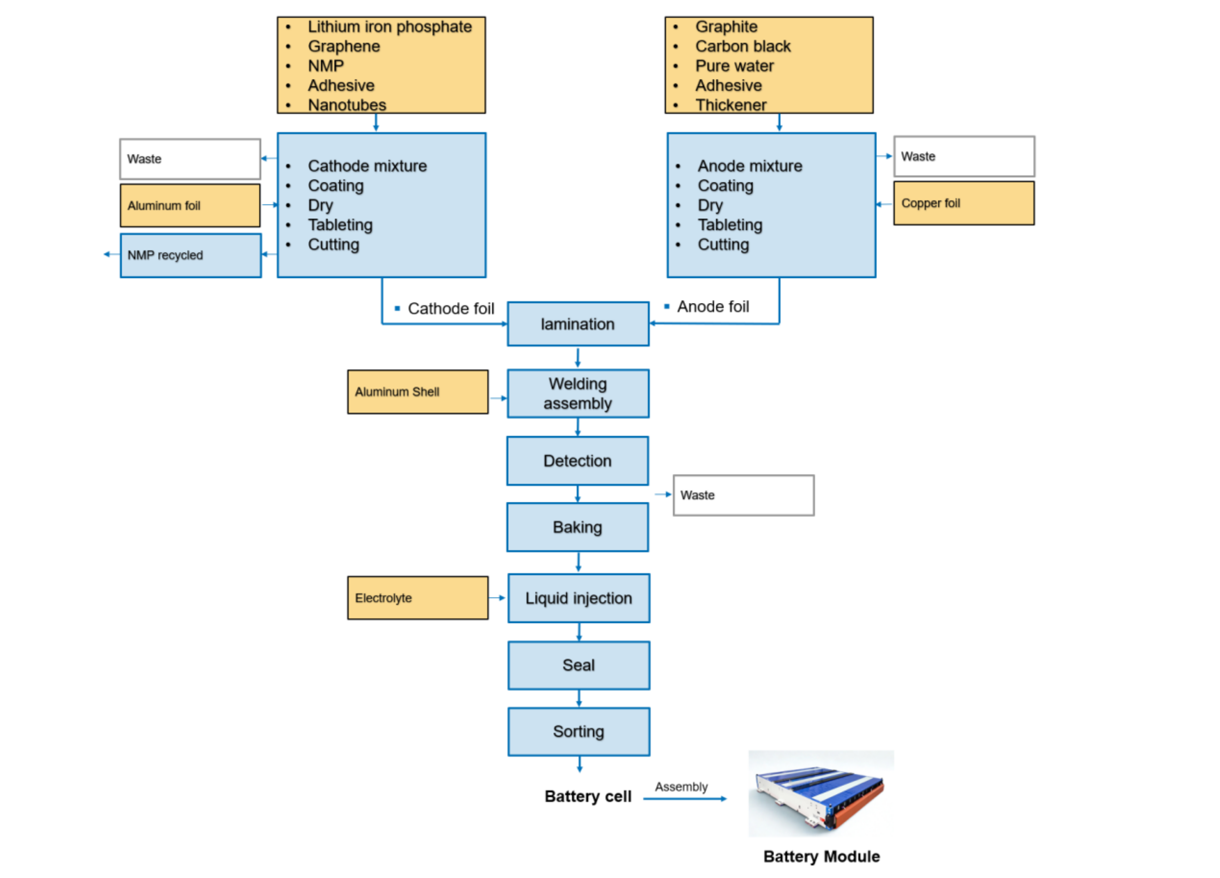

Figure3: The production process in selected stages.

3. Product components, main product content, packaging materials, SVHC.

The description of the product components is provided to help users of the Environmental Product Declaration (EPD) gain a clear understanding of the composition of the product as delivered. This information is also intended to ensure the safe and effective installation, use, and disposal of the product.

Product Components:

- Battery Modules: The stationary energy storage system includes components of lithium iron phosphate (LFP) chemistry as the cathode material, providing key benefits such as enhanced safety, long cycle life, and high energy density.
- Structural Components: The product incorporates various materials such as aluminum, copper collector foil (used in battery assembly), PET films, polypropylene (PP) *separator*, protective gaskets, bolts, adhesive seals, and glass fiber elements for durability and functionality.
- Key Raw Materials: The main raw materials include lithium iron phosphate, graphite (for anodes), copper collector foil, electrolytes for Li-ion batteries, and other additives such as N-methyl-2-pyrrolidone (NMP), styrene, butadiene, and

acrylic acid.

Main Product Content (Per Funcatioal Unit):

- Battery Chemistry: Core components such as lithium iron phosphate (LFP), graphite for anodes, and electrolytes are dominant in the total product mass.
- Structural Metals: Aluminum and copper are used extensively to maintain mechanical integrity and electrical performance.
- Polymeric Materials: PET, PE, and PP films are used for insulation, protection, and sealing.

The packaging system includes the following materials:

- Wooden crates with outer protective cardboard layers.
- Polyester-based binding straps for securing components.
- Corrugated board boxes and pearl cotton elements (used for shock absorption).
- Low-density polyethylene (LDPE) self-sealing packing films for small component protections.

Substances of Very High Concern (SVHC):

SVHC compliance is closely monitored based on REACH regulations to ensure safe product delivery. No prohibited or restricted SVHC substances are known to be present in the product components or packaging materials.

Material safety compliance is ensured with periodic evaluation against EU standards and regulations.

This detailed description aims to ensure transparency, proper usage, and compliance with environmental, health, and safety protocols across the product lifecycle.

Table4: Main product components and packaging materials per unit.

Product components	Weight, kg	Weight-% (versus the product)
Module	20.2827	8.91%
Steel	11.2836	4.95%
Plastic	3.8876	1.71%
Aluminium	3.7274	1.64%
Copper	2.1601	0.95%
Nickel	0.0045	0.00%
Others	1.2101	0.53%
LFP Cell	207.4693	91.09%
Plastic	9.4751	4.16%
Aluminium	19.4120	8.52%
Copper	14.7715	6.49%
Lithium iron phosphate	79.4316	34.88%
Others	84.3793	37.05%
TOTAL	227.7520	100%
Packaging materials	**Weight, kg**	**Weight-% (versus the product)**
Wooden Pallet	2.15E-02	0.01%
Bundling strap	1.83E-03	0.00%

Wooden box	3.63E-01	0.16%
Carton	8.47E-03	0.00%
Self-sealing bag	1.34E-05	0.00%
Foam pearl cotton	4.80E-05	0.00%
PE bag	5.05E-05	0.00%
Wooden Pallet	2.11E-02	0.01%
Paper corner protector	5.63E-04	0.00%
Carton	3.07E-03	0.00%
Carton	1.23E-02	0.01%
Foam pearl cotton	1.69E-02	0.01%
Foam pearl cotton	6.61E-04	0.00%
Foam pearl cotton	2.25E-04	0.00%
Plywood	4.29E-00	1.89%
TOTAL	4.49E-01	0.20%

4. When other substances causing indoor air pollution or radioactivity are dealt with.

Not applicable.

5. Declared unit/ functional unit Reference service life (RSL)

The functional unit reference service life of the target product is 10 years.

6. Representativeness of the average when an average EPD is declared. Useful information is:

Not applicable.

3 LCA results according to EN 50693

3.1 Environmental Impacts

The results of the underlying LCA is provided in this section as environmental impacts, resource use, output flows and additional information on biogenic carbon. All pre-set parameters of EN 50693 are required.

Table5: Environmental impacts according to EN 50693.

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT per functional unit						
Core indicator	Unit	Manufacturing Stage	Distribution Stage	Installation Stage	Use& Maintenance Stage De-installation	End-of-life Stage
Global Warming Potential total (GWP-total)	[kg CO2 eq.]	5.93E+01	3.38E+01	4.91E-02	8.59E+02	1.69E+01
Global Warming Potential fossil fuels (GWP-fossil)	[kg CO2 eq.]	5.91E+01	3.38E+01	2.06E-03	8.57E+02	1.66E+01
Global Warming Potential biogenic (GWP-biogenic)	[kg CO2 eq.]	1.81E-01	1.14E-02	4.70E-02	2.38E+00	3.17E-01
Global Warming Potential land use and land use change (GWP-luluc)	[kg CO2 eq.]	6.74E-02	1.68E-02	8.51E-07	1.10E-01	1.53E-02
Depletion potential of the stratospheric ozone layer (ODP)	[kg CFC 11 eq.]	1.76E-04	7.47E-07	2.79E-11	2.04E-05	1.25E-06

Acidification potential, Accumulated Exceedance (AP)	[mol H+ eq.]	2.29E+00	7.84E-02	1.07E-05	2.49E+00	7.02E-02
Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-freshwater)	[kg P eq.]	4.74E-03	2.83E-04	1.65E-08	1.56E-02	4.52E-04
Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine)	[kg N eq.]	1.28E-01	1.98E-02	9.65E-06	4.65E-01	1.20E-02
Eutrophication potential, Accumulated Exceedance (EP-terrestrial)	[mol N eq.]	8.16E+00	2.07E-01	3.75E-05	5.28E+00	1.33E-01
Formation potential of tropospheric ozone (POCP)	[kg NMVOC eq.]	2.61E-01	1.23E-01	2.41E-05	2.33E+00	4.04E-02
Abiotic depletion potential for non-fossil resources (ADP-minerals&metals)	[kg Sb eq.]	4.73E-03	1.08E-04	5.04E-09	4.78E-04	9.36E-05
Abiotic depletion potential for fossil resources (ADP-fossil)	MJ, net calorific value	6.77E+02	4.92E+02	2.33E-02	1.28E+04	1.44E+02
Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	[m3 world eq. Deprived]	2.27E+01	2.15E+00	1.69E-04	2.32E+02	4.80E+00

3.2 Resource use and waste categories

Table6: Resource use and waste categories according to EN 50693.

RESULTS OF THE LCA - Resource use and waste categories per functional unit						
Core indicator	Unit	Manufacturing Stage	Distribution Stage	Installation Stage	Use& Maintenance Stage De-installation	End-of-life Stage
Use of renewable primary energy excluding renewable primary energy resources used as raw materials (PERE)	MJ	1.48E+00	3.59E+00	1.46E-04	2.68E+02	4.43E+00
Use of renewable primary energy resources used as raw materials (PERM)	MJ	1.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources (PERT) (primary energy and primary energy resources used as raw materials)	MJ	1.90E+01	3.59E+00	1.46E-04	2.68E+02	4.43E+00
Use of non-renewable primary energy excluding non- renewable primary energy resources used as raw materials (PENRE)	MJ	1.09E+02	4.92E+02	2.33E-02	1.28E+04	1.44E+02
Use of non-renewable primary energy resources used as raw materials (PENRM)	MJ	5.68E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources (PENRT) (primary energy and primary energy resources used as raw materials)	MJ	6.77E+02	4.92E+02	2.33E-02	1.28E+04	1.44E+02
Use of secondary material (SM)	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of renewable secondary fuels (RSF)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels (NRSF)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water (FW)	m3	1.08E+00	7.46E-02	5.55E-06	7.92E+00	1.27E+00
Hazardous waste disposed (HWD)	kg	1.13E-02	3.10E-03	1.48E-07	4.34E-02	4.98E-04
Non-hazardous waste disposed (NHWD)	kg	1.50E+01	3.10E+01	1.44E-03	2.91E+01	4.20E+00
Radioactive waste disposed (RWD)	kg	6.13E-04	1.68E-04	5.10E-09	1.98E-02	2.11E-04
Components for re-use (CRU)	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling (MR)	kg	0.00E+00	0.00E+00	0.00E+00	4.61E+00	0.00E+00
Materials for energy recovery (MER)	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy (EE)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

3.3 Information on biogenic carbon content

Information on biogenic carbon content which shall be included in the EPD as follows:

Biogenic carbon content	Unit (expressed per functional unit)
Biogenic carbon content in product	0 kg C
Biogenic carbon content in accompanying packaging	0.28kg C
NOTE：1 kg biogenic carbon is equivalent to 44/12 kg of CO2.	

3.4 Additional impact indicators

Table7: Optional additional impact indicators according to EN 50693.

RESULTS OF THE LCA - ADDITIONAL ENVIRONMENTAL IMPACT per functional unit						
Parameter	Unit	Manufacturing Stage	Distribution Stage	Installation Stage	Use& Maintenance Stage De-installation	End-of-life Stage
Potential Human exposure efficiency relative to U235 (IRP)	[kBq U235 eq]	1.00E+00	2.59E-01	8.80E-06	2.74E+01	3.94E-01
Ecotoxicity, freshwater	CTUe	1.00E+00	2.59E-01	8.80E-06	2.74E+01	3.94E-01
Human toxicity, cancer	CTUh	1.52E+03	4.86E+02	1.46E-01	2.83E+03	3.90E+02
Human toxicity, non-cancer	CTUh	1.34E-07	1.53E-08	2.48E-11	2.29E-07	8.53E-08
Land use	dimensionless	4.68E-06	3.47E-07	1.13E-10	3.23E-06	1.79E-07

4 Supplementary information

4.1 Calculation rules

- Functional unit

The functional unit has been defined as 1kWh stored by a single battery module, with 10 years' reference service life of the product.

- The mass reference is needed in an ECO Platform EPD. kWh / declared unit.

31.34kWh / declared unit.

- Assumptions
  - Raw materials, waste, and packaging transportation use "Transport, freight, lorry, unspecified {RoW}".
  - "Transport, freight, lorry 16-32 metric ton, EURO6 {RoW}," "sea, container ship {GLO}," and "lorry 16-32 metric ton, EURO6 {RER}." were selected with international transport assumed as 19,000 km by ship and 1,000 km by lorry, and local transport as 1,000 km by lorry (85% payload).
  - During installation, no electricity or materials are used, and waste transportation employs specified vehicles.
  - No module replacement is required during the product's 10-year service life, and de-construction is carried out entirely by manpower without electricity or materials.
  - No module replacement is required during the product's 10-year service life, and de-construction is carried out entirely by manpower without electricity or materials.
  - At the end-of-life stage, the waste is transported 100 km to the deconstruction site and then an additional 50 km to the recycling and incineration facility respectively.
  - Disposal handles the recycled portion as per Table G.4 in EN 50693, while the remaining waste is treated as hazardous and sent for incineration.
  - Both waste process during production and end-of-life waste are treated as recycled material, calculated based on the recycling proportions in Table G.4 of EN 50693.
- Cut off rules

Flows shall not be omitted to avoid hiding significant impacts.

  - Production, use and disposal of the packaging of components and semi-finished intermediates.
  - Materials making up the storage system itself, whose total mass does not exceed 1% of the total weight of the device.
  - Material and energy flows related to the installation stage.
  - Material and energy flows related to dismantling phase, whenever it is reasonable to assume that dismantling is performed by adopting manual tools (e.g. screwdrivers, hammers, etc.).
  - Devices external to the product itself required for installation.
- Data quality

For the calculation of Data quality indicator, the contribution of generic data used for material production and processing in the supply chain shall be calculated in % referring to GWP-total.

$$\text{Data quality indicator} = 100\% - x.$$

X is the contribution of generic data related to material production and processing in the supply chain, calculated for GWP-total indicator. Where the materials represent the compositional elements of which the product is made.

The data quality indicator is 92%.

- Allocations

According to EN 50693 and the core PCR, this study applies allocation procedures for energy consumption and waste, with energy-related emissions allocated per energy storage unit produced and production waste impacts allocated to the next lifecycle stage. For end-of-life, the "cut-off by classification" model and the Polluter Pays Principle (PPP) are applied, excluding recycling burdens or benefits from the primary product lifecycle, in adherence to the modularity principle.

4.2 Scenarios and additional technical information

- Key Stages and Assumptions:

Transportation includes global shipping (19,000 km by sea, 1,000 km by lorry) and local transport (1,000 km by lorry, 85% payload). Installation assumes no energy or material use, and waste transportation relies on specific transport modes (e.g., EURO6 lorries and container ships). No module replacement is expected during the 10-year use stage, and deconstruction is carried out manually without energy input.

- End-of-Life Management:

Waste transportation for recycling or incineration is assumed to cover a distance of 50 km. Recycling and waste treatment follow EN50693 guidelines, with recyclable materials identified and treated as per Table G.4. Valuable production waste is entirely recycled, and processes are aligned with the Polluter Pays Principle (PPP).

- Limitations and Data Quality:

Secondary data from Ecoinvent 3.9.1 is used for generic flows, which may lack site-specific accuracy. Minor flows and regional differences (e.g., water scarcity) are excluded. However, transparent documentation and sensitivity analyses ensure the robustness and reliability of results for EPD interpretation.

4.3 Dangerous substances

Additional information regarding the release of dangerous substances into indoor air, oil and water during use stage.
Not applicable.

References

- PCR EPDItaly007- Electrical products and system ver.3.1(2026-01-19)
- PCR EPDItaly021 – Energy storage systems Version5(2029-03-10)
- EN50693:2019 Product category rules for life cycle assessments of electronic and electrical products and systems
- ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations Principles and procedures.
- ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.
- ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.
- Ecoinvent 3.9.1 database.
- LCA REPORT-Battery Modules of the Stationary Energy Storage System

Revision history

Original Version of the EPD, 2025-08-19

Revision 1, 2025-09-12,

Differences versus the previously published version: Modify the model data.

Revision 2, 2025-09-19,

Differences versus the previously published version: Modify the model structure.

Revision 3, 2025-09-23,

Differences versus the previously published version: Modify the description in the LCA and EPD report.

Revision 4, 2025-11-14,

Supplement product information such as DC RTEi. in the LCA and EPD report.

Annex

LCA REPORT_E205&E206 Battery Modules of Energy Storage System_version4

EPD 中国项目 值得信赖

The first EPD Programme Operator registered in China, contributing to the EPD system building in China

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ENVIRONMENTAL

PRODUCT

DECLARATION