

**Współfinansowane z unijnego systemu handlu
uprawnieniami do emisji (Funduszu Modernizacyjnego)**

**Appendix No. 4
SPECIFICATION OF THE CONTRACT TERMS**

SPECIFICATION OF THE CONTRACT TERMS in the procurement procedure for **“Construction of the BESS-H6 electrical energy storage system with a maximum charging and discharging power of 2.0 MW and a nominal capacity of 5.15 MWh”**.

NAME OF THE INVESTMENT PROJECT co-financed by National Fund for Environmental Protection and Water Management:

„Construction of a container-based energy storage facility consisting of a transformer-inverter station and a battery storage facility, along with the construction of a foundation slab and associated technical infrastructure in Jasin, Swarzędz commune, for Clip Ubezpieczenia Sp. z o.o.”

Program Name: Priority Programme No. 1.15 "Energy Transformation Electricity storage facilities and related infrastructure to improve the stability of the Polish power grid"

ORDERING PARTY:

Clip Ubezpieczenia Sp. z o.o.

Rabowicka 65, Jasin

62-020 Swarzędz

Email address: bess-przetarg@clip-group.com

Website address of the person conducting the Proceedings: www.clip-group.com/ongoing-procurements

LOCATION OF THE BUILDING:

Jasin village, Jasin district, Swarzędz commune, Poznań county, Greater Poland Voivodeship

Indication of persons authorized to communicate with Contractors:

The persons authorized to contact the Contractors in technical matters of the Proceedings are exclusively:

Artur Stolarski – Head of Energy Department

T: +48 885 974 128

E: artur.stolarski@clip-group.com

Rafał Wiatr – Development Manager

T: +48 603 723 259

E: rafal.wiatr@clip-group.com

**Współfinansowane z unijnego systemu handlu
uprawnieniami do emisji (Funduszu Modernizacyjnego)**

NAMES AND CPV CODES COVERED BY THE SUBJECT OF THE ORDER:

45200000-9	Construction works involving the erection of complete buildings or parts thereof, as well as works in the field of civil and water engineering
45100000-8	Preparing the site for construction
45113000-2	Work on the construction site
45232000-2	Ancillary works for pipelines and cables
45232200-4	Ancillary works on power lines
45220000-5	Engineering and construction works
45231400-9	Construction works for the construction of power lines
45400000-1	Finishing works in the field of construction facilities
45111291-4	Land development works
51112000-0	Services of installing control and transmission equipment for electricity
31440000-2	Accumulators, batteries
31158000-3	Energy storage units
31155000-7	Inverters
31154000-0	Energy processing and storage devices
09310000-5	Electricity
45310000-3	Electrical installation works
45315400-1	Low voltage installations
50000000-5	Repair and maintenance services
50324100-3	System maintenance services
50332000-1	Telecommunications infrastructure maintenance services
50532000-3	Repair and maintenance services for electrical machines, apparatus and similar devices
53000000-0	Installation works in buildings
53110000-0	Cabling and electrical installation work

PERSONS WHO PREPARED THE SPECIFICATION OF THE CONTRACT TERMS:

- Artur Stolarski – Head of Energy Department,

**Współfinansowane z unijnego systemu handlu
uprawnieniami do emisji (Funduszu Modernizacyjnego)**

Table of Contents

A. DESCRIPTIVE PART OF THE SUBJECT OF THE ORDER.....	4
1. Opis przedmiotu zamówienia.....	Błąd! Nie zdefiniowano zakładki.
1.1 Szczegółowy opis zakresu robót budowlanych.....	Błąd! Nie zdefiniowano zakładki.
1.1.2. Charakterystyczne parametry określające wielkość obiektu i zakres robót budowlanych.....	Błąd! Nie zdefiniowano zakładki.
1.5. Lokalizacja przedmiotu zamówienia.....	Błąd! Nie zdefiniowano zakładki.
2. Opis wymagań Zamawiającego w zakresie realizacji Zamówienia.....	Błąd! Nie zdefiniowano zakładki.
2.1. Uwarunkowania realizacji prac projektowych- wymagania dotyczące dokumentacji projektowej - projekt wykonawczy	13
2.2. Do zakresu obowiązków Wykonawcy należy w szczególności:.....	14
2.3. Inne obowiązki i wymagania	Błąd! Nie zdefiniowano zakładki.
3. Harmonogram realizacji przedmiotu zamówienia	Błąd! Nie zdefiniowano zakładki.
3.1. Terminy realizacji zadań.....	Błąd! Nie zdefiniowano zakładki.
3.2. Organizacja wykonania prac	Błąd! Nie zdefiniowano zakładki.
Inwestycja będzie realizowana według szczegółowego harmonogramu opracowanego przez Wykonawcę odpowiednio dla zakresu Inwestycji. Harmonogram nie może zawierać zapisów sprzecznych z niniejszym Specyfikacji Warunków Zamówienia (SWZ) oraz Harmonogramem Rzeczowo-Finansowym (HRF) stanowiącymi Załączniki do Umowy.....	
3.3. Harmonogram Realizacji Prac:.....	15
3.4. Odbiory częściowe oraz odbiór końcowy:	15
3.5. Termin Realizacji Umowy:.....	16
3.7. Materiały	Błąd! Nie zdefiniowano zakładki.
3.8. Zezwolenia.....	Błąd! Nie zdefiniowano zakładki.
3.9. Odpowiedzialność	Błąd! Nie zdefiniowano zakładki.
3.10. Rozliczenia umowne	Błąd! Nie zdefiniowano zakładki.
3.11. Termin gwarancji i rękojmi.....	Błąd! Nie zdefiniowano zakładki.
B. CZĘŚĆ INFORMACYJNA	18
1. Dokumenty potwierdzające zgodność inwestycji z wymaganiami wynikającymi z odrębnych przepisów Nie dotyczy.....	Błąd! Nie zdefiniowano zakładki.
2. Oświadczenie Zamawiającego dotyczące prawo do dysponowania nieruchomością na cele budowlane Nie dotyczy	Błąd! Nie zdefiniowano zakładki.
3. Dokumenty odniesienia.....	Błąd! Nie zdefiniowano zakładki.
4. Zakres dokumentacji w posiadaniu Zamawiającego:	19

**Współfinansowane z unijnego systemu handlu
uprawnieniami do emisji (Funduszu Modernizacyjnego)**

5. Załączniki**Błąd! Nie zdefiniowano zakładki.**

Współfinansowane z unijnego systemu handlu uprawnieniami do emisji (Funduszu Modernizacyjnego)

A. DESCRIPTIVE PART OF THE SUBJECT OF THE ORDER

This document: SPECIFICATION OF THE CONTRACT TERMS constitutes Annex No. 2 to the Agreement in the contract award procedure referred to above conducted by Clip Logistyka Sp. z o.o. (hereinafter referred to as the "Ordering Party").

The SWZ consists of this document and all annexes that constitute its integral part.

1. Description of the subject of the order

The subject of the contract is the execution of construction works together with the delivery **(purchase, delivery, assembly, connection and launching)** brand new, complete, defect-free devices and other components of the BESS H7 energy storage system, free from damage and signs of use, with an installed capacity of at least 2.0 MW and an installed (total) capacity of not less than 5.15 MWh, meeting EU standards in terms of safety, fire protection and approval, including connection to the grid and accompanying infrastructure, configuration and adaptation of the storage facility, delivery of the BMS and EMS system, as well as obtaining a permit for use, obtaining operator permits and commissioning, along with training of the Ordering Party's operational services, as well as removal of defects during the warranty period and maintenance of operating parameters in relation to the Subject of the Agreement, ensuring compliance with the required technical and operational parameters, including the durability of the ecological effect:

reducing emissions CO₂ - 874,70000 [Mg/year];

reducing primary energy consumption - 15 070,18000 [GJ/ year];

The Contractor undertakes to implement an Energy Storage Facility with guaranteed technical parameters and achieving and maintaining the guaranteed technical parameters, which – by meeting the requirements specified in the Agreement and the provisions of Polish commercial law in force on the date of signing the faultless Final Acceptance Protocol of the Subject of the Agreement – the protocol of taking over the Subject of the Agreement for operation, and to perform all other obligations of the Contractor specified in the Agreement.

The detailed subject of the order includes:

- 1) the Contractor shall prepare complete detailed design documentation and complete the technical and operational documentation for the Investment, as well as any other documents required by law (including analyses, expert opinions, studies, opinions, conditions, agreements, permits, administrative decisions, etc.), based on the Ordering Party's Design Documentation, which constitutes an Annex to the specification of the contract terms (hereinafter referred to as the "TSC"). The detailed design documentation includes, in particular, the technical specifications for the construction works and warranty service, the work implementation schedule, and the investor's cost estimate;
- 2) obtaining all permits, approvals, agreements, technical data, decisions, opinions, expert opinions or any deviations required by law and other documents required by law in the investment process, necessary for the effective and comprehensive implementation of the Investment (including, among others, preparation and submission of applications for issuing administrative

Współfinansowane z unijnego systemu handlu uprawnieniami do emisji (Funduszu Modernizacyjnego)

decisions required by law for the commencement of works/final Building Permit and Occupancy Permit, together with the required attachments) and obtaining on behalf of the Ordering Party the administrative decisions required by law for the commencement of works/final Building Permit and Occupancy Permit;

- 3) representing the Ordering Party before public administration bodies, infrastructure network administrators or other third parties involved in the implementation of the Subject of the Agreement, to the extent necessary for the proper and comprehensive implementation of the Subject of the Agreement;
- 4) performing authorial supervision to the extent necessary for the proper and comprehensive execution of the Subject Matter of the Agreement;
- 5) construction works aimed at, among others, preparing the ground for the assembly and construction of individual warehouse elements (earthworks, including levelling and hardening the ground, construction of foundations), creating the necessary infrastructure allowing for easy and efficient movement in the workspace, and manufacturing the necessary construction elements;
- 6) comprehensive implementation of the energy storage system, including delivery, assembly and preparation for commissioning of the installation, i.e. battery modules, inverters, energy management systems (BMS, EMS) and fire protection, system integration;
- 7) preparation and establishment of a low-voltage connection, power introduction and supply and assembly of a low-voltage switchboard;
- 8) installation, configuration and integration of functional elements of the electricity storage system as well as adaptation (this scope of work will include the integration and launch of management systems - BMS and EMS, mapping of devices in monitoring systems and ensuring remote access to devices and data; in addition, the energy storage system will undergo the certification and homologation process in accordance with EU standards, which will confirm compliance with technical and safety requirements) and completion of technical and operational documentation;
- 9) carrying out functional tests of the energy storage system and the efficiency of the energy storage system, including: trial run of the installation and carrying out the required technical acceptance tests together with the training of the Ordering Party's employees;
- 10) preparation and submission to the Ordering Party of complete as-built documentation of the Investment;
- 11) warranty service and maintenance of operating parameters in relation to the Subject of the Agreement ensuring compliance with the required technical and operating parameters, including the durability of the ecological effect:
reducing emissions CO₂ - 874,70000 [Mg/year];
reducing primary energy consumption - 15 070,18000 [GJ/ year];

1.1 Detailed description of the scope of construction works

1.1.1 Construction works

The contractor is obliged to:

- a) Preparation of a detailed schedule of construction works,
- b) Marking out the works by an authorized surveyor,

**Współfinansowane z unijnego systemu handlu
uprawnieniami do emisji (Funduszu Modernizacyjnego)**

- c) Construction of the foundation slab,
- d) Installation and construction of the designed energy storage infrastructure,
- e) Construction of electrical and telecommunications infrastructure,
- f) Tidying up the area after construction works – the disturbed area must be restored to its original state.

1.1.2. Characteristic parameters determining the size of the facility and the scope of construction works

a) Foundation slab:

Comprehensive execution of external concrete surface class min. C30/37 XF4, XM2, XD2, XC4, thickness 42.0 cm, reinforced with steel mesh Ø12 15x15 cm at the top and bottom of the slab and polymer fiber in the amount of 2.5 kg/m³, including:

- i. Delivery and installation of a separating layer of 0.2 mm thick PE foil x2 on the existing substructure (overlap approx. 50 cm, without gluing),
- ii. Delivery and assembly of system formwork,
- iii. Delivery and installation of additional reinforcement made of steel mesh Ø10 in 10x10 cm mesh at the top and Ø12 in 15x15 cm mesh at the bottom of the slab, together with bottom and inter-mesh spacers,
- iv. Delivery and placement of concrete surface mix class C30/37 W8, F150, XF4, XM2, XD2, XC4, thickness 42.0 cm, reinforced with steel mesh Ø10 in 10x10 cm mesh at the top and Ø12 in 15x15 cm mesh at the bottom of the slab and polymer fiber in the amount of 2.5 kg/m³,
- v. Mechanical trowelling of the surface with brooming,
- vi. Delivery and surface impregnation of the board with an impregnation agent, e.g. Sika NB1 or equivalent,
- vii. Delivery and installation of systemic contraction joints with cold expansion joint mass after at least 28 days from the completion of the surface,

b) Preparation by the Contractor and delivery to the Ordering Party of complete as-built documentation of the subject of the Investment.

1.1.3. Work related to putting the facility into operation

The Contractor is obliged to:

- a) obtaining on behalf of the Ordering Party the final administrative decisions required by applicable law for the use of the Investment,
- b) providing the Ordering Party with a list of the delivered devices containing their technical and identification data as well as the guarantees of the manufacturers of the devices used,
- c) providing the Ordering Party with electronic versions of all elaborations.

Współfinansowane z unijnego systemu handlu uprawnieniami do emisji (Funduszu Modernizacyjnego)

1.2. Detailed description of the energy storage system components

a) Energy storage with technical parameters not worse than:

Storage unit type	Battery energy storage
Technology used to store electricity	Lithium-ion LFP cells
Estimated service life [years]	20
Number of units [pcs]	1
Installed power of a single unit [kW]	2000
Achievable power of a single unit [kW]	2000
The power that can be received by the storage facility at its point of connection to the grid [kW]	2000
The power that can be delivered by the storage facility at its point of connection to the grid [kW]	2000
Available power of a single unit [kW]	2000
Nominal capacity of the energy storage [kWh]	5150
Number of life cycles at full cycle (80%)	>8000 cykli
Energy storage efficiency – battery system [%]	93
Energy storage efficiency – AC system [%]	87
Minimum charge level in relation to nominal capacity [%]	10
Maximum charge level in relation to nominal capacity [%]	90
Planned maximum annual amount of electricity delivered to the grid by the electricity storage facility [MWh]	1440
Planned maximum annual amount of electricity received from the grid by the electricity storage facility [MWh]	1540
Maximum number of full operating cycles of the electricity storage unit per hour/day	1
Technical parameters, operational and operating characteristics of the connected installation devices and technical information regarding interference caused by the devices	Battery cell supplier, TIER 1 manufacturer
The planned operating time of the warehouse during which it can supply energy at full capacity (storage duration)	2h
Operating temperature	-30°C / +55 °C
Planned and unplanned availability	97,5%

Współfinansowane z unijnego systemu handlu uprawnieniami do emisji (Funduszu Modernizacyjnego)

Wymagania techniczne systemu magazynowania energii elektrycznej:

Wyprowadzenie mocy na niskim napięciu	0,4kV
Kontener winien być wykonany ze ściany o parametrze minimum	REI240
Electrical installation penetrations should be protected with passive fire protection measures (e.g., fire retardant sealant). Technological and communication openings should be protected with fire gates and doors with a fire resistance rating of at least EI120	EI120
BMS system – designed to continuously measure the voltage and temperature of each cell, module, and array. The BMS signal should be output to a room with constant personnel supervision via a continuous monitoring system, for example, using dedicated applications	
Automatic measurement of room temperature and humidity	
Mechanical ventilation, ATEX version (optional)	optional
Lightning protection installation on facilities	
Fire detection system + CCTV - alarm signal transmitted to a room with a certified fire control panel and constant personal supervision	
The fire detection system protecting the warehouse must have an additional power supply capable of maintaining its operation for at least 24 hours in standby mode and for 2 hours in alarm mode or more, unless regulations indicate otherwise	
Automatic measurement of Volatile Organic Compounds (VOCs). An additional technical solution designed to monitor any incipient cell disintegration process (optional)	optional
Continuous measurement of the temperature of the connections and the battery modules themselves using a thermal imaging camera (thermal imaging cameras) – the signal about anomalies should be sent to a room with constant personal supervision (option)	optional
Coolant and water sensors – designed to detect leaks in liquid energy storage cooling systems and thus inform about the need to take steps to protect the installations to which it is connected	
Extinguishing system – water mist preferred	
The built-in disconnection solution must be able to disconnect individual battery modules/sets under load and/or in the event of a short circuit	

b) Other parameters of the Energy Storage:

- i. minimum operating temperature range from -30°C to +55°C,
- ii. noise level below 60dB,
- iii. purpose: outside the building/parking lot/square,
- iv. color to be agreed with the customer - the possibility of using branding and colors (RAL colors) based on an individual design provided by the customer,
- v. available communication methods – GSM, ETHERNET, WIFI, MODBUS
- vi. dedicated BMS and EMS systems for controlling the operation and management of the Energy Storage

**Współfinansowane z unijnego systemu handlu
uprawnieniami do emisji (Funduszu Modernizacyjnego)**

c) The BMS system must fulfill all necessary functions to control and ensure the safe operation of lithium-ion cells, in particular:

- measurement of the voltage of each cell, with an accuracy greater than or equal to ± 1 mV,
- temperature measurement of each cell, with an accuracy greater than or equal to ± 10 C,
- measurement of the current of each cell with an accuracy greater than or equal to ± 1 mA,
- cell voltage balancing system, with an accuracy greater than or equal to ± 5 mV,
- determining SOC,
- determining SOH, including the number of cycles performed, the number of cycles available,
- undervoltage protection,
- overvoltage protection,
- overtemperature protection,
- overcurrent protection,
- current measurement of each cell branch,
- voltage measurement,
- determining the permissible charging current,
- determining the permissible discharge current,
- generating alarm and warning signals for cells.

The BMS can be installed in a shared housing with the cells or in a separate housing, provided it is properly protected against environmental conditions and accidental damage. Physical access to the BMS electronics must require disassembly of the housing. For example, mounting the BMS as a printed circuit board outside the housing is unacceptable.

d) EMS System

The EMS will be a comprehensive energy management system designed to integrate and optimize the operation of PV and ESS (Energy Storage System) installations. The system will monitor, control, and optimize energy consumption, ensuring compliance with grid operator requirements. (The contractor will provide the EMS with a perpetual license).

Required EMS functionalities:

1. Balancing production and demand:

- EMS should monitor energy production from PV installations in real time,

Współfinansowane z unijnego systemu handlu uprawnieniami do emisji (Funduszu Modernizacyjnego)

- by controlling the charging and discharging of ESS, the system should ensure the balancing of supply and demand, minimizing the need to import energy from the grid or export surpluses,
 - EMS implementation should enable the reduction of operating costs, especially during periods of high demand,
2. Shifting energy production over time:
- The EMS should store surplus PV energy in the ESS during periods of high production (e.g. during the day) and low demand, and then release it during periods of low PV production (e.g. at night) and high demand;
3. Maximizing the use of renewable energy production:
- EMS should prioritize the use of energy from the PV installation, ensuring its maximum consumption on site,
 - surpluses should be stored in the ESS and export to the grid should be minimized, which will increase the economic efficiency of the system;
4. Price arbitrage:
- The EMS should monitor energy prices in the market and optimize the charging and discharging of ESSs to take advantage of price differences (for example, the system will charge ESSs when energy prices are low and discharge them when prices are high, which will reduce the overall energy costs);
5. Reactive power compensation and improvement of energy quality parameters:
- EMS should manage reactive power compensation, keeping the power factor within the limits specified by the grid operator;
 - the system will improve the quality of energy parameters, such as harmonics, which is important for grid stability and compliance with connection conditions.

e) Integration requirements

- EMS should be integrated with the energy storage system, enabling control and monitoring of parameters such as state of charge (SOC) and energy flows. Additionally, it should be connected to the PV inverter system to receive real-time production data, allowing for precise energy management,
- EMS should be connected to the energy measurement system of the PV installation, the EMS will monitor the demand, which will enable effective balancing,
- the system should support communication with the SCADA and DM systems of the distribution network operator, in accordance with the connection requirements,
- EMS should provide remote monitoring and control, including alarms and notifications, which will facilitate system management,
- recording of charge-discharge cycles along with cycle depth,

**Współfinansowane z unijnego systemu handlu
uprawnieniami do emisji (Funduszu Modernizacyjnego)**

- conversion of registered cycles into billing cycles counted for warranty purposes, using a method agreed with the Ordering Party,
- counting billing cycles,
- generating warning and alarm states (based on BMS measurements).

f) Control Algorithm:

- The micro-grid control algorithm takes into account the availability of various energy sources, prioritizes the use of the cheapest and most efficient sources (PV and energy storage), minimizes operating costs and manages the risk of failure,

g) Requirements for the local panel and SCADA servers

- Both HMI panels and panel computers with touch screens can be used as local panels.
- The ordering party must have full administrative access at the operating system level to all panel computers.
- Panel computers can only use software with perpetual licenses (permanent).
- Access to SCADA visualization must be via up-to-date Internet browsers using encrypted communication protocols.
- Access to SCADA visualization cannot require the installation of additional dedicated software.
- Access to SCADA visualization must be possible from the OSD operator station.
- Access to SCADA visualization from outside the Energy Storage network is required for the Ordering Party's operational and service staff. The Contractor will agree on the terms of this access with the Ordering Party at the design stage.
- The selection of SCADA server software is subject to consultation with the Ordering Party and its acceptance.

h) The contractor is obliged to provide minimum quality guarantee periods:

- i. for the entire energy storage system, including maintaining the charging/discharging function and the integrity of the connections and the cooling/management system – 60 months,
- ii. for components:
 - for battery modules, regarding cell durability, chemical safety, failure resistance – 60 months,
 - for inverters, AC/DC conversion operation – 60 months,
 - for the battery management system (EMS, BMS) - correct operation of control and monitoring - 60 months,

Współfinansowane z unijnego systemu handlu uprawnieniami do emisji (Funduszu Modernizacyjnego)

- for technical infrastructure elements (housing, containers, air conditioning, security), tightness, IP protection, corrosion resistance – 60 months,
- iii. guarantee of the integrity of technical parameters:
 - charging power [MW] – 2 MW,
 - discharge power [kW/MW] – 2 MW,
 - the guaranteed efficiency of the warehouse loading and unloading cycle will not be lower than 80%,
 - guaranteed operational stability in the voltage range (e.g. 400V/15kV) and frequency 50 Hz,
 - the system is to guarantee a full charging or discharging cycle in no more than 2.5 hours when operating at rated power,
 - degradation of module capacity after 5 years > 4MWh, the parameter will be subject to verification at the end of the warranty period,
- iv. guarantee of sustainable ecological effects:
 - reducing CO₂ emission - 874,70000 [Mg/year];
 - reducing primary energy consumption - 15 070,18000 [GJ/ year];

quality guarantee periods will be counted from the date of faultless final acceptance of the Subject of the order/contract, i.e. after the technological start-up has been carried out and completed and the energy storage system has achieved the assumed technological parameters.

1.3. Infrastructure description

The Contractor is obliged to carry out the investment (including the adaptation of the existing infrastructure) in accordance with the Conditions of Connection to the Glosbe electricity network, based on the requirements of the Ordering Party, based on declarations of conformity of the devices with the EU requirements and national standards in the field of safety and fire protection;

a) Electricity infrastructure:

Power output with power connection:

Power output via cable line in accordance with the attached technical design (Appendix No. 6)

b) Telecommunications infrastructure:

- i. 1-mode 96J – SM fiber optic cable welded at each end LC duplex in HDPE conduit
- ii. the selected fiber optic cable technology must enable infrastructure repairs in the future.

1.4. Description of other requirements

a) The energy storage system must meet the following requirements:

- Language support (minimum Polish, English).

Współfinansowane z unijnego systemu handlu uprawnieniami do emisji (Funduszu Modernizacyjnego)

- The documentation should include, among others, solutions related to the construction industry (foundation on a slab), electrical (power supply, cable routes, connections) and the necessary agreements in this area.
- b) The investment must be carried out in a way that ensures:
 - not limiting equal access to resources (goods, services, infrastructure) on the basis of gender, racial or ethnic origin, religion or belief, disability, age or sexual orientation;
 - compliance with the DNSH (Do No Significant Harm) principle (compliance with the DNSH principle according to the Technical Criteria according to Annexes I and II to Regulation 2021/2139);
 - compliance with Directive (EU) 2022/2555 of the European Parliament and of the Council of 14 December 2022 concerning measures for a high common level of cybersecurity across the Union, amending Regulation (EU) No 910/2014 and Directive (EU) 2018/1972 and repealing Directive (EU) 2016/1148 [NIS Directive 2]

1.5. Location of the subject of the order

The investment is located (the site sketch is attached as Appendix 1 to the Agreement) in the following area:

Voivodeship: Greater Poland

County: Poznań

Commune: Swarzędz – rural area

Town: Jasin

Precinct: Jasin

Plot No: 307/14

The energy storage facility will be connected to the power system owned by the distribution network operator Glosbe Sp. z o.o. and the Ordering Party's PV installation.

2. Description of the Ordering Party's requirements regarding the execution of the Order

2.1. Conditions for the implementation of design work - requirements for design documentation - detailed design

As part of the executive design, it is necessary to prepare:

- documentation meeting the detailed requirements of this document and allowing for the proper implementation of the subject of the task, prepared and signed by designers with unlimited design authorizations, entered on the list of members of the relevant chamber of engineers/architects,
- drawings, details, lists and diagrams necessary for the proper implementation of the task,
- at least synthetic material combinations,
- agreement on documentation with the Ordering Party,
- technical description and drawings of the electricity supply,

Współfinansowane z unijnego systemu handlu uprawnieniami do emisji (Funduszu Modernizacyjnego)

2.2. The scope of the Contractor's responsibilities includes in particular:

- a) Taking over the construction site and preparing the area as well as carrying out all reconstruction works after the construction is completed.
- b) Delivery and assembly of the energy storage unit with accessories.
- c) Connecting/configuring the energy storage with existing energy sources.
- d) Carrying out the works necessary to connect the energy storage facility to the electricity distribution network of OSD Glosbe.
- e) Delivery and configuration of the EMS system (with perpetual license).
- f) Carrying out control measurements, performing performance tests of the installation, commissioning and adjusting the installation.
- g) Implementation and maintenance for at least 5 years of a system enabling remote reading of information on the amount of electricity stored in the energy storage facility.
- h) User training.
- i) Preparation of operating instructions.
- j) Handing over to the Ordering Party 3 copies of as-built documentation, operating instructions and a set of warranty cards.
- k) Annual reporting by the Contractor to the Ordering Party on the amount of stored and released electricity as well as on the annual ecological effect achieved by the energy storage facility constructed as part of the project, for a period of 5 years after installation, in values not lower than:
 - reducing CO₂ emission - 874,70000 [Mg/year];
 - reducing primary energy consumption - 15 070,18000 [GJ/ year].

2.3. Other Responsibilities and Requirements

The Contractor's obligations also include, among others:

- a) appointment of a Construction Manager,
- b) author's supervision,
- c) execution of design works (executive, workshop, as-built) in accordance with the provisions of the Construction Law, Polish Standards, or equivalent EU standards, technical and construction regulations and in accordance with the art of construction and the principles of modern technical knowledge, the Contractor's offer, the Request for Quotation together with this Technical Specification and any instructions and recommendations of the Ordering Party,
- d) compliance with environmental protection law and the requirements of the Ordering Party regarding environmental activities during the implementation of the task covered by the contract,
- e) The Contractor is obliged to perform the Subject Matter of the Agreement taking into account the DNSH ("Do No Significant Harm") principle, in the manner specified in

Współfinansowane z unijnego systemu handlu uprawnieniami do emisji (Funduszu Modernizacyjnego)

Appendix No. 3 In connection with the implementation of this obligation, the Contractor is obliged from the moment of commencement of the task implementation to:

- ongoing collection of information, data and documentation that confirm the implementation of the Subject Matter of the Agreement in accordance with the DNSH principle,
 - preparation of a periodic, monthly report confirming the implementation of the Subject Matter of the Agreement in accordance with the DNSH principle.
- f) The Contractor is obliged to apply the Guidelines on compliance with the principles of equal opportunities, social inclusion and non-discrimination (constituting Annex No. 4),
- g) The Contractor undertakes to carry out the Investment in accordance with the NIS Directive 2.

3. Schedule for the implementation of the subject of the order

3.1. Task completion deadlines

- 3.1.1. Preparation and submission of complete detailed documentation for the Investment to the Ordering Party: April 29, 2026,
- 3.1.2. Delivery and comprehensive assembly of all components of the electricity storage system: July 31, 2026,
- 3.1.3. Installation, configuration, and integration of functional elements of the electricity storage system: August 31, 2026,
- 3.1.4. Commissioning: October 31, 2026,
- 3.1.5. Confirmation of achieving the material effect: November 30, 2026
- 3.1.6. Confirmation of achieving the ecological effect: October 31, 2027
- 3.1.7. Confirmation of achieving the ecological effect: November 30, 2027

3.2. Organization of work execution

The investment will be implemented according to a detailed schedule developed by the Contractor, appropriate to the scope of the investment. The schedule must not contain any provisions that conflict with these specification of the contract terms and the Material and Financial Schedule, which constitute Annexes to the Agreement.

3.3. Work Schedule:

The Contractor will define the detailed scope of the Subject Matter of the Order/Agreement being implemented in the Work Schedule. This will be broken down into stages and the timeline for their completion, with particular emphasis on phased-in works and technologically closed stages subject to partial acceptance. The Contractor is obligated to define in the Work Schedule the acceptance dates referred to in point 3.4 below.

3.4. Partial and final acceptance:

The Contractor shall inform the Ordering Party in writing about the readiness for individual partial acceptances and the final acceptance, which shall be confirmed each time by an appropriate entry in the construction log.

Współfinansowane z unijnego systemu handlu uprawnieniami do emisji (Funduszu Modernizacyjnego)

3.5. Contract Completion Date:

the date by which the contractor is obligated to fully complete the contract. Final acceptance (signing of a defect-free Final Acceptance Protocol for the Subject of the Contract) will be carried out after the following key objectives have been achieved:

- 3.5.1. Implementation stage (construction works) – construction of the foundation slab,
- 3.5.2. Implementation stage (connection) – implementation of power output and connection,
- 3.5.3. Implementation stage (delivery) – delivery of the container energy storage unit to the construction site along with DC cabling and the BMS and EMS systems – completed with a delivery protocol,
- 3.5.4. Commissioning stage - technological commissioning and its completion - i.e. tests of technical parameters (power, capacity, Depth of Discharge, efficiency) and achievement of the assumed technical parameters by the Energy Storage, - confirmed by a Site Acceptance Test (SAT) as well as the transfer of access and protocols from the BMS and EMS commissioning,
- 3.5.5. Acceptance stage – commissioning of the Energy Storage, submission of as-built and warranty documentation, and training of the Ordering Party's staff.

3.6. Warranty service deadline

The date by which the Contractor is obliged to implement the provisions of the Agreement after signing a faultless Final Acceptance Protocol for the Subject of the Agreement

- 3.6.1. Material effect confirmation stage – report
- 3.6.2. Stage of confirming the ecological effect - report
- 3.6.3. Stage of confirming the sustainability of the achieved effects - final report of the Subject Matter of the Agreement.

3.7. Materials

The Contractor is obligated to use only materials that meet the requirements of the Building Law, are compliant with Polish standards transposing harmonized European standards (or equivalent), have the required approvals for use in construction, and have the appropriate certificates or declarations of conformity. If materials are delivered that do not have the certificates or approvals required by Polish law or are not accepted by the Ordering Party, such materials cannot be used and will be replaced or removed at the Contractor's risk and expense, unless the Contractor provides the appropriate certificates or documents within seven business days. The Ordering Party has the right to refuse acceptance of a given material only if the material does not have the appropriate certificates or approvals required by current law or deviates from the assumptions specified by the Ordering Party.

Współfinansowane z unijnego systemu handlu uprawnieniami do emisji (Funduszu Modernizacyjnego)

For meeting the quantitative and qualitative requirements regarding materials (these must be brand new, first-class quality materials, free from manufacturing defects and bearing no signs of use).

The supplied BMS and EMS materials, devices and software must meet EU standards in terms of safety, fire protection and approval, as well as the NIS2 Directive.

3.8. Permits

The Contractor should obtain any required permits, approvals, or other decisions from the relevant authorities at its own expense. The Contractor will provide the Ordering Party with a list of all permits required to commence operation of the Energy Storage Facility.

3.9. Liability

The specification of the contract terms are not fully comprehensive, as they cannot cover all the details of the Project. The Contractor should take this into account when offering the Energy Storage System, selecting equipment, installation, and accessories. The Contractor may not exploit any errors or omissions in the specification of the contract terms. Upon discovery, the Contractor must immediately notify the Ordering Party, which will make appropriate corrections, additions, or interpretations.

3.10. Contractual settlements

Prices for the implementation of the Investment subject of the Order are lump sum prices. These prices will not be indexed.

Prices should include all costs related to the execution of the works specified in the Agreement.

The condition for issuing a VAT invoice is a bilaterally signed acceptance protocol.

The fee will be paid based on the original VAT invoice, correctly issued and delivered to the Ordering Party. The payment deadline for invoices issued by the Contractor is 30 days from the date the correctly issued invoice is delivered to the Ordering Party.

3.11. Warranty and guarantee period

The Contractor provides the Ordering Party with a guarantee for the correctness and highest quality of functioning of the Subject of the Order for a period of 60 months from the date of signing by the Parties of the faultless Final Acceptance Protocol of the Subject of the Contract.

The warranty period for defects will be the same as the guarantee period.

**Współfinansowane z unijnego systemu handlu
uprawnieniami do emisji (Funduszu Modernizacyjnego)**

B. INFORMATION PART

In order to estimate and value the scope of works of the subject of the Order, the results of field visits and own inventories, the results of own studies and the provisions of this specification of the contract terms should be taken into account.

1. **Documents confirming the compliance of the investment with the requirements resulting from separate regulations** Not applicable
2. **Declaration of the Ordering Party regarding the right to use the property for construction purposes** Not applicable

3. Reference documents

The Contractor is obligated to comply with national laws and standards during design and construction work. The Contractor will continuously inform the Client of its activities by providing copies of permits and other relevant documents.

Legal regulations and standards related to the design and implementation of investments:

- a) Act of 27 April 2001 - Environmental Protection Law (consolidated text: Journal of Laws of 2017, item 519, as amended),
- b) Act of 14 December 2012 on waste (consolidated text: Journal of Laws of 2016, item 1987, as amended),
- c) Act of 24 August 1991 on fire protection (consolidated text: Journal of Laws of 2017, item 736, as amended),
- d) Act of 7 July 1994 – Building Law (consolidated text: Journal of Laws of 2017, item 1332, as amended),
- e) Regulation of the Minister of Climate and Environment of 22 March 2023 on detailed conditions for the operation of the power system (Journal of Laws of 2023, item 819),
- f) PN (EN-PN) standards or relevant standards of EU countries within the scope adopted by Polish legislation, with the Ordering Party accepting equivalent standards.

In this case, the requirements contained in the standards must be met:

PN-EN 50274:2004	Low-voltage stations and control gear - Protection against electric shock - Protection against unintentional direct contact with hazardous live parts
PN-EN IEC 62619	Secondary cells and lithium batteries used in industrial applications - Safety requirements
PN-EN IEC 63056	Secondary batteries and alkaline or other acid-free electrolyte batteries - Safety requirements for secondary lithium cells and batteries used in energy storage systems
PN-EN 62208:2006	Empty enclosures for low-voltage stations and control cabinets - General requirements
PN-E 05163	Low-voltage enclosed control stations and gears - Guidelines for testing under conditions of arc discharge resulting from an internal short circuit

**Współfinansowane z unijnego systemu handlu
uprawnieniami do emisji (Funduszu Modernizacyjnego)**

PN-EN 60695-11-10:2014-02	Fire hazard testing - Part 11-10: Test flames - 50 W horizontal and vertical flame test methods
PN-EN ISO 14040:2009	Environmental management - Life cycle assessment - Principles and framework
PN-EN ISO 14044:2009	Environmental management - Life cycle assessment - Requirements and guidelines
PN-EN 61000-6	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments

4. Scope of documentation held by the Ordering Party:

Base map to scale 1:500

5. Attachments

- a) Illustrative maps of the Investment scope - Appendix No. 1
- b) Technical conditions for connection to the electricity grid – Appendix No. 2
- c) Environmental requirements for the implementation of the subject of the contract – Appendix No. 3
- d) Guidelines on compliance with the principles of equal opportunities, social inclusion and non-discrimination – Appendix 4
- e) Technical design of the construction industry of the foundation slab and the energy storage container – Appendix No. 5
- f) Technical design of the energy storage facility for the power industry, including the connection – Appendix No. 6
- g) Energy storage construction design – Appendix No. 7