

REGULATION
OF THE MINISTER FOR DIGITAL AFFAIRS¹⁾
of

on the technical conditions for the electricity supply of telecommunications structures or telecommunications facilities²⁾

Pursuant to Article 7(2)(2) of the Act of 7 July 1994 – the Construction Law (Journal of Laws of 2026, items 524, 605, 646 and 1161), the following is hereby decreed:

§ 1. This Regulation lays down the technical conditions for the electricity supply of telecommunications structures or telecommunications facilities and their siting.

1.§ 2. The technical conditions for the electricity supply of telecommunications structures or telecommunications facilities, in respect of the elements of the supply infrastructure, shall apply to the design, construction and reconstruction of such structures or facilities.

2.The provisions of this Regulation shall apply to the reconstruction, extension or superstructure of a telecommunications structure or a telecommunications facility where this is associated with the reconstruction, extension or superstructure of the installation within that structure or facility which serves to supply electricity to telecommunications structures or telecommunications facilities.

3.The provisions of this Regulation shall not apply to structures or facilities used for conducting business activity by energy undertakings engaged in the transmission and distribution of electricity, referred to in Article 3(12)(a) of the Energy Law Act of 10 April 1997 (Journal of Laws of 2026, items 43, 516, 607 and 900).

¹)The Minister for Digital Affairs is in charge of the government administration department of computerisation, pursuant to § 1(2) of the Regulation of the Prime Minister of 18 December 2023 on the detailed scope of activity of the Minister for Digital Affairs (Journal of Laws [Dziennik Ustaw], item 2720).

²)This Regulation was notified to the European Commission on ... under number ... in accordance with § 4 of the Cabinet Regulation of 23 December 2002 on the functioning of the national system for the notification of standards and legal acts (Journal of Laws, item 2039, and of 2004, item 597), which implements the Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services (codification) (OJ L 241, 17.9.2015, p. 1).

§ 3. The terms used in this Regulation shall mean:

- 1) battery – the secondary battery cells referred to in Article 6(1)(b) of the Act of 24 April 2009 on batteries and accumulators (Journal of Laws of 2025, item 809);
- 2) renewable energy source installation – the renewable energy source installation referred to in Article 2(13) of the Act of 20 February 2015 on renewable energy sources (Journal of Laws of 2026, items 68, 516, 900 and 912), excluding biogas plants;
- 3) energy storage facility of a telecommunications structure or telecommunications facility – an installation enabling the storage of electricity, or of fuel that may be used to generate electricity, and the feeding of that electricity into the electricity network or directly to supply receivers;
- 4) telecommunications structures – structures, not being buildings, intended for purposes connected with telecommunications and housing sets of telecommunications devices used for operation in a public telecommunications network or interworking with that network;
- 5) basic operation – the operation of installations and equipment enabling the performance of a function specified by the developer or user where the structure is not supplied from an electricity source ensuring coverage of the full electricity demand of the entire installation and of the receivers in the structure;
- 6) telecommunications facility – a designated part of a structure, not being a building, intended to house a set of telecommunications devices used for operation in a public telecommunications network or operating together with that network;
- 7) public telecommunications network – the public telecommunications network referred to in Article 2(42) of the Electronic Communications Law Act of 12 July 2024 (Journal of Laws, item 1221, of 2025, items 637 and 820; and of 2026, items 252 and 815);
- 8) telecommunications network – the telecommunications network referred to in Article 2(58) of the Electronic Communications Law Act of 12 July 2024;
- 9) power system – the power system referred to in Article 3(23) of the Energy Law Act of 10 April 1997;
- 10) telecommunications – the telecommunications referred to in Article 2(70) of the Electronic Communications Law Act of 12 July 2024;
- 11) guaranteed-voltage power supply – a device or system whose function is the uninterruptible supply of equipment;

12) telecommunications device – the telecommunications device referred to in Article 2(74) of the Electronic Communications Law Act of 12 July 2024;

13) emergency supply – supply from an electricity source that has a sufficient energy reservoir enabling the receivers to remain supplied for the required emergency operating time;

14) uninterruptible supply – supply provided by a guaranteed-voltage power supply, a telecommunications power plant or another source ensuring analogous quality parameters, to which electricity is delivered from the power system, from a generating-set generator or from other energy sources ensuring analogous quality parameters;

15) primary supply – the supply of electricity from the power system under normal conditions;

16) reserve supply – the supply of electricity in the event of loss of the primary supply, while ensuring the supply parameters of the power system or of another supply source ensuring the energy quality parameters required by the equipment supplied.

1. **§ 4.** For the design, construction or reconstruction of electricity supply systems for telecommunications structures or telecommunications facilities intended for operation in a telecommunications network or for interworking with that network, solutions shall be used whose standard is no lower than that specified in the standards referred to in Annex 1 to this Regulation.

2. With regard to:

1) protection against electric shock in the installations of telecommunications structures or telecommunications facilities,

2) lightning and surge protection in the installations of telecommunications structures or telecommunications facilities,

3) the reaction-to-fire class of conductors and cables,

4) the selection of conductors and cables and of their protection with regard to continuous current-carrying capacity and short-circuit withstand strength

- solutions shall be used whose standard is no lower than that specified in the standards referred to in Annex 1 to this Regulation.

§ 5. Telecommunications structures or telecommunications facilities shall be sited in places where their durable, proper and safe functioning can be ensured, taking into account the conditions affecting such functioning.

1. § 6. The power of the primary supply sources shall ensure coverage of the power demanded by the receivers supplied that are necessary for the functioning of the telecommunications structure or telecommunications facility, taking into account auxiliary needs and the anticipated reserve.

2. The power of the reserve supply, emergency supply or uninterruptible supply shall cover at least the power demand of the receivers necessary for basic operation.

1. § 7. 1. The electricity network shall provide the primary supply of the telecommunications structure or telecommunications facility.

2. A renewable energy source installation shall constitute a supplementary supply source for the primary supply or the reserve supply.

3. A renewable energy source installation shall replace, in whole or in part, the primary or reserve supply source, provided that it is equipped with an energy storage facility of the telecommunications structure or telecommunications facility guaranteeing coverage of the power demanded by the receivers for the required time in the event of loss of supply from the renewable energy source.

1. § 8. The energy reservoir of the emergency supply source shall enable autonomous operation of the receivers necessary for the functioning of the telecommunications structure or telecommunications facility in the event of an interruption in the supply of electricity from the electricity network.

2. The autonomous operating time of the emergency supply source shall take into account the permissible interruptions in the supply of electricity arising from contracts with the suppliers of that electricity.

3. The minimum operating time from the energy storage facility of the telecommunications structure or telecommunications facility enabling autonomous operation may not be shorter than 6 hours, unless a different value has been specified in Annex 2 to this Regulation.

4. In the event of a catastrophic interruption, it shall be possible to replenish the reserve or the energy storage facility of the telecommunications structure or telecommunications facility so as to ensure the uninterrupted operation of that structure or facility.

1. § 9. The guaranteed operating time when supplied from batteries, referred to in Annex 2 to this Regulation, is a minimum time.

2. Batteries for uninterruptible supply sources shall be selected according to the constant-power discharge principle, taking into account their ageing, the manufacturing spread of parameters and the effect of ambient temperature.

§ 10. Lithium-ion batteries with a total capacity exceeding 2 kWh shall be installed in accordance with the conditions specified in Annex 3 to this Regulation, in a manner ensuring compliance with the basic fire-safety requirements referred to in Article 5(1)(1)(b) of the Construction Law Act of 7 July 1994.

1. § 11. A telecommunications structure or telecommunications facility in which batteries are one of the sources of electricity shall be equipped with emergency switches intended for use by rescue teams, which disconnect the batteries from all input and output circuits, except for circuits in which the voltage does not exceed 12 V for alternating current and 30 V for direct current.

2. The device actuating the emergency switches referred to in paragraph 1 shall be located at the place of planned access for rescue teams and shall be constructed in a manner preventing accidental disconnection of the supply.

3. The device actuating the emergency switches referred to in paragraph 1 shall be marked with a sign indicating the purpose of that device, bearing the inscription 'BATTERY EMERGENCY SWITCH'.

4. In telecommunications structures or telecommunications facilities equipped with a fire disconnect switch, the actuation of that switch shall trigger the operation of the emergency switches referred to in paragraph 1.

5. Cutting off the current supply by means of the switches referred to in paragraphs 1 and 4 may not cause the automatic switching-on of a second source of electricity, including a generating set.

§ 12. For telecommunications structures and telecommunications facilities, four power-supply reliability groups shall be established, for which the conditions concerning the supply sources to be installed are specified in Annex 2 to this Regulation.

§ 13. Where telecommunications structures or telecommunications facilities belonging to different power-supply reliability groups are co-located, the conditions applicable to the structure classified in the higher reliability group in respect of the supply sources to be installed, as specified in Annex 2 to this Regulation, shall apply to each of those structures or facilities.

§ 14. An energy generating system shall meet requirements of a standard no lower than that specified in the standards referred to in Annex 1 to this Regulation.

1. **§ 15.** Switching between the primary supply and the reserve supply shall take place automatically.

2. The supply system shall enable the automatic selection of the individual supply sources in accordance with a predefined algorithm, except for § 11(5). Where a mobile emergency power source is used, a manual supply changeover switch shall be used.

3. The changeover time to the reserve supply, emergency supply or uninterruptible supply shall not disturb the operation of the telecommunications devices.

§ 16. The provision of a telecommunications structure or telecommunications facility with guaranteed supply shall be implemented according to the minimum $n + 1$ principle, where n denotes the number of supply devices necessary for the normal functioning of the telecommunications structure or telecommunications facility, taking into account auxiliary needs and the anticipated reserve.

§ 17. Where the equipment and batteries used in telecommunications structures or telecommunications facilities require specific climatic conditions that impose an obligation to use air conditioning or ventilation, air conditioning or ventilation shall be used in those structures or facilities which:

- 1) maintain the required air temperatures and humidity;
- 2) ensure at least the number of air changes required by the parameters of the operating equipment;
- 3) ensure an indoor environment quality that enables the equipment to operate in a manner that does not create a fire hazard.

1. **§ 18.** A facility containing batteries from which, during their normal operation, flammable gas or flammable liquid vapours capable of forming an explosive mixture may be released shall be equipped with:

1) ventilation ensuring air exchange in a quantity preventing the concentration from exceeding 25 % of the lower explosive limit, on average, within the air-space volume of the facility, being the difference between the volume of the facility and the volume of, in particular, the installations, equipment, appliances or closed packaging located within it;

2) a detection device for detecting an explosive mixture which, upon exceeding the detection thresholds specified in accordance with the hazards associated with the release of gas or vapour:

- a) triggers alarm signalling,
- b) controls the operation of the ventilation referred to in subparagraph 1 – in the case of a facility equipped with mechanical ventilation,
- c) disconnects the batteries from the input and output circuits, except for circuits in which the voltage does not exceed 12 V for alternating current and 30 V for direct current.

2. A facility containing batteries with a total capacity greater than 60 kWh in which, during a fault or an abnormal operating condition, flammable gas or flammable liquid vapours capable of forming an explosive mixture may be released, in particular as a result of thermal runaway, shall be equipped with:

- 1. a detection device for detecting flammable gas or flammable liquid vapours, ensuring the performance of the functions referred to in paragraph 1(2)(a) and (c);
- 2. emergency exhaust ventilation with a capacity ensuring at least 10 air exchanges per hour, controlled by the detection device referred to in subparagraph 1 – where the total capacity of the batteries in that facility exceeds 120 kWh;
- 3. pressure-relief (explosion-relief) devices, such as a diaphragm, flap or opening glazed with ordinary glass, with a total area greater than 0.065 m²/m³ of the volume of that facility.

§ 19. In telecommunications structures or telecommunications facilities subject to requirements arising from the Plan for securing the needs of the Armed Forces fulfilled by entrepreneurs, referred to in Article 651(1) of the Act of 11 March 2022 on the defence of the

homeland (Journal of Laws of 2025, item 825, as amended³⁾), a supply of the highest reliability group shall be used.

1. **§ 20.** In telecommunications structures or telecommunications facilities other than those listed in Annex 2 to this Regulation, a supply shall be used according to individual needs, preceded by a risk analysis concerning the effects of a supply interruption and taking into account the similarities of the telecommunications structure or telecommunications facility to the structures or facilities listed in Annex 2 to this Regulation.

2. After carrying out the risk analysis and the similarity analysis, the supply conditions for the telecommunications structure or telecommunications facility shall be determined analogously to a similar structure or facility listed in Annex 2 to this Regulation, or individual conditions shall be determined where there is no similarity to the structures or facilities referred to in Annex 2 to this Regulation.

§ 21. The supply of a telecommunications structure or telecommunications facility shall take into account the technical solutions contained in the standards referred to in Annex 1 to this Regulation, with regard to:

- 1) the power needed by the structure or facility and by the individual items of equipment;
- 2) the selection of conductors and cables and of their protection with regard to continuous current-carrying capacity and short-circuit withstand strength;
- 3) protection against electric shock;
- 4) lightning and surge protection.

§ 22. The list of standards referred to in this Regulation and applied in the electricity supply of telecommunications structures or telecommunications facilities is set out in Annex 1 to this Regulation.

§ 23. The supply conditions for telecommunications structures or telecommunications facilities with sets of equipment or installations belonging to specified reliability groups are set out in Annex 2 to this Regulation.

³) Amendments to the consolidated text of the aforementioned Act were promulgated in the Journal of Laws of 2025, items 1014 and 1080, and of 2026, items 26, 426, 635, 815 and 1123.

§ 24. The conditions for batteries used to supply electricity to telecommunications structures or telecommunications facilities are set out in Annex 3 to this Regulation.

§ 25. The existing provisions shall apply to telecommunications structures or telecommunications facilities in respect of which, before the date of entry into force of this Regulation, an application was submitted for a decision on a building permit, an application was submitted for a separate decision approving the development plan for the plot or site and the architectural and construction design, or the construction or the carrying out of construction works was notified.

§ 26. This Regulation enters into force on 20 September 2026⁴).

MINISTER FOR DIGITAL AFFAIRS

In agreement with:

**MINISTER FOR FINANCE AND THE
ECONOMY**

Certified as correct in legal,
legislative and editorial terms
Magdalena Witkowska-Krzymowska
Director of the Legal Department
at the Ministry of Digital Affairs
/signed electronically/

⁴ This Regulation was preceded by the Regulation of the Minister for Communications of 21 April 1995 on the technical conditions for the electricity supply of communications structures (Journal of Laws, item 271), which ceases to have effect on the date of entry into force of this Regulation in accordance with Article 66 of the Act of 19 July 2019 on ensuring accessibility for persons with special needs (Journal of Laws of 2024, item 1411).

Annexes to the Regulation
of the Minister for Digital Affairs
of (Journal of Laws,
item)

Annex 1

**LIST OF STANDARDS REFERRED TO IN THE REGULATION AND APPLIED IN THE
ELECTRICITY SUPPLY OF TELECOMMUNICATIONS STRUCTURES OR
TELECOMMUNICATIONS FACILITIES**

No .	Provision to which the standard relates	Standard number*)	Standard title (scope of reference)
1	2	3	4
1	§ 4(1), § 6(1)	PN-EN 50160	Voltage characteristics of electricity supplied by public electricity networks
2	§ 4(1)	PN-EN 12101-10	Smoke and heat control systems – Part 10: Power supplies
3	§ 4(1)	PN-EN IEC 62485-5	Safety requirements for secondary batteries and battery installations – Part 5: Safe operation of stationary lithium-ion batteries
4	§ 4(1)	PN-EN IEC 62485-2	Safety requirements for secondary batteries and battery installations – Part 2: Stationary batteries
5	§ 4(2)(2)	PN-HD 60364-4-443	Low-voltage electrical installations – Part 4- 443: Protection for safety – Protection against voltage disturbances and electromagnetic disturbances – Protection against transient overvoltages of atmospheric origin or due to switching
		PN-EN 61643-21	Low-voltage surge protective devices – Part 21: Surge protective devices connected to telecommunications and signalling networks – Performance requirements and testing methods
		PN-EN 61643-11	Low-voltage surge protective devices – Part 11: Surge protective devices connected to low-voltage power distribution systems – Requirements and test methods

No .	Provision to which the standard relates	Standard number*)	Standard title (scope of reference)
1	2	3	4
		PN-IEC 61643-12	Low-voltage surge protective devices – Part 12: Surge protective devices connected to low-voltage a.c. power distribution systems – Selection and application principles
6	§ 4(1), § 4(2)	PN-HD 60364-5-52	Low-voltage electrical installations – Part 5-52: Selection and erection of electrical equipment – Wiring systems
7	§ 4(2)(2)	PN-HD 60364-5-53	Low-voltage electrical installations – Part 5-53: Selection and erection of electrical equipment – Switchgear and controlgear
8	§ 4(1), § 4(2)(1)	PN-HD 60364-5-54	Low-voltage electrical installations – Part 5-54: Selection and erection of electrical equipment – Earthing arrangements and protective conductors
9	§ 4(1)	PN-HD 60364-5-56	Low-voltage electrical installations – Part 5-56: Selection and erection of electrical equipment – Safety services
10	§ 9(1), § 9(2)	PN-EN 60896-11	Stationary lead-acid batteries – Part 11: Vented types – General requirements and methods of test
11	§ 9(1), § 9(2)	PN-EN 60896-21	Stationary lead-acid batteries – Part 21: Valve regulated types – Methods of test
12	§ 4(1)	PN-EN IEC 61439-1	Low-voltage switchgear and controlgear assemblies – Part 1: General rules
13	§ 4(1)	PN-EN IEC 61439-2	Low-voltage switchgear and controlgear assemblies – Part 2: Power switchgear and controlgear assemblies
14	§ 4(1)	PN-EN IEC 61439-3	Low-voltage switchgear and controlgear assemblies – Part 3: Distribution boards intended to be operated by ordinary persons (DBO)
15	§ 4(1)	PN-EN IEC 61439-6	Low-voltage switchgear and controlgear assemblies – Part 6: Busbar trunking systems
16	§ 4(1), § 6(1)	PN-EN IEC 62040-1	Uninterruptible power systems (UPS) – Part 1: Safety requirements
17	§ 4(2)(2)	PN-EN IEC 62305-1	Protection against lightning – Part 1: General principles
18	§ 4(2)(2)	PN-EN IEC 62305-2	Protection against lightning – Part 2: Risk management
19	§ 4(2)(2)	PN-EN IEC 62305-3	Protection against lightning – Part 3: Physical damage to structures and life hazard
20	§ 4(2)(2)	PN-EN IEC 62305-4	Protection against lightning – Part 4: Electrical and electronic systems within

No .	Provision to which the standard relates	Standard number*)	Standard title (scope of reference)
1	2	3	4
			structures
21	§ 4(1)	PN-T-83102:1996	Power supply equipment in telecommunications – DC telecommunications power plants – Requirements and tests
22	§ 4(1)	PN-E-05100-1:1998	Overhead power lines – Design and construction – Alternating current lines with bare conductors
23	§ 4(1)	PN-EN 50522:2011	Earthing of power installations exceeding 1 kV a.c.
24	§ 4(1)	PN-EN 61936-1:2011/A1:2014-10	Power installations exceeding 1 kV a.c. – Part 1: Common rules
25	§ 14	PN-ISO 8528-5:1997	Reciprocating internal combustion engine driven alternating current generating sets – Generating sets
26	§ 4(2)(3)	PN-HD 60364-4-42	Low-voltage electrical installations – Part 4-42: Protection for safety – Protection against thermal effects
27	§ 4(1), § 4(2)(1)	PN-HD 60364-4-41	Low-voltage electrical installations – Part 4-41: Protection for safety – Protection against electric shock
28	§ 14	PN-EN 88528-11	Reciprocating internal combustion engine driven alternating current generating sets – Part 11: Rotary uninterruptible power systems – Performance requirements and test methods
29	§ 4(1), § 10, Annex 3	PN-EN 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
30	Annex 3	PN-EN 14604:2006	Smoke alarm devices
31	Annex 3	PN-EN 14604:2006/AC:2009	Smoke alarm devices
32	Annex 3	PN-EN 50291-1:2018-06	Gas detectors – Electrical apparatus for the detection of carbon monoxide in domestic premises – Part 1: Test methods and performance requirements
*) Where an undated Polish Standard is referred to, the latest corresponding standard shall be applied.			

**SUPPLY CONDITIONS FOR TELECOMMUNICATIONS STRUCTURES OR
TELECOMMUNICATIONS FACILITIES WITH SETS OF EQUIPMENT OR
INSTALLATIONS BELONGING TO SPECIFIED RELIABILITY GROUPS**

Reliability groups		Telecommunications structure or telecommunication's facility with sets of equipment or installations	Supply			
			Primary, reserve from the power system	Emergency (ES)	Uninterruptible (UPS; TPP; DRUPS)	Minimum SES operating time in [h]
					Guaranteed operating time (backup time) in [h]	
1		2	3	4	5	6
A	1	international and long-distance exchanges	primary*) and reserve	SES	2 or in the case of DRUPS operation in tandem with the SES, allowing uninterruptible operation until the SES is started	24
	2	exchanges for mobile telephony	primary double-ended and reserve	SES	2 or in the case of DRUPS operation in tandem with the SES, allowing uninterruptible operation until the SES is started	24
	3	teletransmission and data-transmission facilities serving exchanges in reliability group A	primary single-ended	SES	2	24
				MES	6	not applicable
	4	radio and television equipment operating in a nationwide network with an emission power exceeding 25 kW ERP**)	primary single-ended	SES	an interruption in the supply of equipment during changeover to the emergency power source, resulting from the start-up time of the generating set, is permitted	36

Reliability groups		Telecommunications structure or telecommunication's facility with sets of equipment or installations	Supply			
			Primary, reserve from the power system	Emergency (ES)	Uninterruptible (UPS; TPP; DRUPS)	Minimum SES operating time in [h]
					Guaranteed operating time (backup time) in [h]	
1	2	3	4	5	6	
B	1	coverage mobile telephony base stations***)	primary single-ended	SES	1	6
				MES	4	not applicable
	2	local telecommunication's exchanges and AUS	primary single-ended	SES	1	6
				MES	4	not applicable
	3	teletransmission and data-transmission facilities serving exchanges in reliability group B	primary single-ended	MES	6	not applicable
C	1	mobile telephony base stations other than coverage base stations	primary single-ended	MES	2	not applicable
	2	remote subscriber stages, outdoor and indoor	primary single-ended	MES	2	not applicable
	3	teletransmission and data-transmission facilities serving outdoor and indoor remote subscriber stages in reliability group C	primary single-ended	MES	2	not applicable

Reliability groups		Telecommunications structure or telecommunication's facility with sets of equipment or installations	Supply			
			Primary, reserve from the power system	Emergency (ES)	Uninterruptible (UPS; TPP; DRUPS)	Minimum SES operating time in [h]
					Guaranteed operating time (backup time) in [h]	
1		2	3	4	5	6
D	1	radio and television transmitting equipment operating in a nationwide network below 25 kW ERP****) and of local range	primary single-ended	PŽA	an interruption in the supply of equipment during changeover to the emergency power source, resulting from the start-up time of the generating set, is permitted	24
*) Means that at least a primary single-ended supply shall be used. **) Does not apply to radio and television equipment operating in a nationwide network with an emission power exceeding 25 kW ERP, located in structures under heritage protection or entered in the register of monuments. ***) Radiocommunication installations which, according to the risk analysis carried out by the operator regarding the effects of a supply interruption, are the most significant from the point of view of the continuity of telephone services and of ensuring data transmission for them in the operator's network, based on any frequency and technology. ****) Does not apply to radio and television equipment operating in a nationwide network with an emission power below 25 kW ERP, located in structures under heritage protection or entered in the register of monuments.						

The terms used in this Annex shall mean:

- 1) ES – an energy source for emergency supply that has a sufficient energy reservoir enabling the receivers to remain supplied for the required emergency operating time;
- 2) MES – a mobile source of electricity for emergency supply that has a sufficient energy reservoir enabling the receivers to remain supplied for the required emergency operating time. A source of this type is intended for periodic interworking with the installation, in particular for the purpose of carrying out specific works or in the event of a failure;
- 3) SES – a stationary source of electricity for emergency supply that has a sufficient energy reservoir enabling the receivers to remain supplied for the required emergency operating time. A source of this type is intended for permanent interworking with the installation and is tasked with supplying the equipment without the need for additional operation;

- 4) single-ended supply – supply from a single transformer station or power line;
- 5) double-ended supply – supply from two transformer stations or two power lines;
- 6) UPS – a guaranteed-voltage power supply;
- 7) TPP – a telecommunications power plant – a device or system whose function is the uninterruptible supply of telephone exchanges or telecommunications devices requiring a constant voltage;
- 8) DRUPS (*Dynamic Rotary UPS*) – a device replacing a generating set and a static UPS, being at the same time an SES and a ES;
- 9) ERP (*Effective Radiated Power*) – effective radiated power.

**CONDITIONS FOR BATTERIES USED TO SUPPLY ELECTRICITY TO
TELECOMMUNICATIONS STRUCTURES OR TELECOMMUNICATIONS
FACILITIES**

No .	Siting of the batteries	Total capacity	Requirement
1	2	3	4
1	Outside the structure at a distance: 1) of not less than 1.5 m from that structure – for batteries with a total capacity of up to 120 kWh, 2) of not less than 4 m from that structure – for batteries with a total capacity of more than 120 up to 300 kWh, 3) of not less than 8 m from that structure – for batteries with a total capacity of more than 300 kWh, 4) of less than that specified in subparagraphs 1–3, or directly adjacent to the structure – where the batteries are separated from the structure by a fire separation wall with a fire resistance class of at least REI 120, projecting vertically and	in accordance with the total battery capacity determined depending on their siting indicated in column 2	A Battery Management System (BMS) meeting the requirements of PN-EN IEC 62619, or other protective measures, which: 1) continuously monitor the basic operating parameters of the batteries, such as the voltage, current and temperature of the cell pack; 2) prevent the batteries from being charged above their permissible state of charge and from being discharged below a safe level; 3) prevent the occurrence of excessive current during the charging and discharging of the batteries; 4) provide protection against short-circuit currents (short circuits); 5) signal faults and abnormal operating conditions, in particular where the temperature of the cells rises above a safe level; 6) respond to hazards associated with the occurrence of faults or abnormal operating conditions, in particular by emergency disconnection of the battery.

No	Siting of the batteries	Total capacity	Requirement
1	2	3	4
	horizontally at least 0.3 m beyond the outline of the batteries and constructed in a manner limiting the possibility of fire spread – unless a greater distance is required under other provisions		
2	Outside the structure at a distance of less than 1.5 m from the structure, or on its external wall or its flat roof	up to 120 kWh – for batteries placed at a distance of less than 1.5 m from the structure or on the external wall of the structure, and for batteries on the flat roof – up to 600 kWh	A Battery Management System (BMS) meeting the requirements of PN-EN IEC 62619, or other protective measures, which: 1) continuously monitor the basic operating parameters of the batteries, such as the voltage, current and temperature of the cell pack; 2) prevent the batteries from being charged above their permissible state of charge and from being discharged below a safe level; 3) prevent the occurrence of excessive current during the charging and discharging of the batteries; 4) provide protection against short-circuit currents (short circuits); 5) signal faults and abnormal operating conditions, in particular where the temperature of the cells rises above a safe level; 6) respond to hazards associated with the occurrence of faults or abnormal operating conditions, in particular by emergency disconnection of the battery. The battery enclosure shall be made of construction materials and products with a reaction to fire class of A1 or A2,d0, in a manner protecting against mechanical damage. The batteries shall be placed at a height

No .	Siting of the batteries	Total capacity	Requirement
1	2	3	4
			of not more than 25 m above ground level. This restriction shall not apply if the batteries are protected by a fixed automatic fire-extinguishing device or are installed outside the structure on a flat roof with a fire resistance class of at least REI 60 and a reaction to fire class of A1 or A2,d0, with the exception of the roofing and the insulation layer with a reaction to fire class of A2,d1, A2,d2, B or C, where a cover with a reaction to fire class of A1 or A2,d0, or a mineral layer made in particular of gravel or stone with a thickness of at least 5 cm, is applied on the roofing. The maximum capacity of a battery placed at a distance of less than 1.5 m from the structure or on the external wall of the structure shall not exceed 30 kWh. The distance between batteries shall be at least 1.5 m horizontally and 3 m vertically; this condition shall not apply to groups of batteries placed on a flat roof and separated from one another by a wall with a fire resistance class of at least EI 120, projecting vertically and horizontally at least 0.3 m beyond the outline of the enclosure of those batteries and constructed in a manner limiting the possibility of fire spreading from one group of batteries to another. The distance of a battery from a window, daylighting element, door or ventilation opening shall be at least 1.5 m and, in the case of doors used for evacuation purposes, at least 3 m. The external wall at the place of installation of the battery and within at least 1.5 m of its enclosure – and at least 3 m above the enclosure – shall be made of materials and products with a reaction to fire class of A1 or A2,d0, or, at those places, shall have on the

No .	Siting of the batteries	Total capacity	Requirement
1	2	3	4
			battery side a lining of materials with a reaction to fire class of A1 or A2,d0, constructed in a manner limiting the possibility of fire spread.
			The covering of the flat roof at the place of installation of the battery and within at least 1.5 m of its enclosure shall be made of construction materials and products with a reaction to fire class of A1 or A2,d0; at those places, the flat-roof covering of class BROOF (t1) may be made of products with a reaction to fire class of A2,d1, A2,d2, B or C, where a cover with a reaction to fire class of A1 or A2,d0, or a mineral layer made in particular of gravel or stone with a thickness of at least 5 cm, is applied on the roofing.
			The distance of a battery placed on a flat roof shall be at least 1.5 m from the edge of the flat roof.
3	Inside a telecommunications structure or in a telecommunications facility	up to 30 kWh	A Battery Management System (BMS) meeting the requirements of PN-EN IEC 62619, or other protective measures, which: 1) continuously monitor the basic operating parameters of the batteries, such as the voltage, current and temperature of the cell pack; 2) prevent the batteries from being charged above their permissible state of charge and from being discharged below a safe level; 3) prevent the occurrence of excessive current during the charging and discharging of the batteries; 4) provide protection against short-circuit currents (short circuits); 5) signal faults and abnormal operating conditions, in particular where the temperature of the cells rises above a safe level; 6) respond to hazards associated with the occurrence of faults or abnormal operating conditions, in particular by

No	Siting of the batteries	Total capacity	Requirement
1	2	3	4
			emergency disconnection of the battery.
			The battery enclosure shall be made of construction materials and products with a reaction to fire class of A1 or A2,d0, in a manner protecting against mechanical damage
		more than 30 kWh up to 60 kWh	A Battery Management System (BMS) meeting the requirements of PN-EN IEC 62619, or other protective measures, which: 1) continuously monitor the basic operating parameters of the batteries, such as the voltage, current and temperature of the cell pack; 2) prevent the batteries from being charged above their permissible state of charge and from being discharged below a safe level; 3) prevent the occurrence of excessive current during the charging and discharging of the batteries; 4) provide protection against short-circuit currents (short circuits); 5) signal faults and abnormal operating conditions, in particular where the temperature of the cells rises above a safe level; 6) respond to hazards associated with the occurrence of faults or abnormal operating conditions, in particular by emergency disconnection of the battery.
			The batteries shall be placed in a technical facility or in a telecommunications facility: 1) equipped with at least one self-contained smoke detector meeting the requirements of the standard concerning smoke alarm devices and at least one self-contained carbon

No .	Siting of the batteries	Total capacity	Requirement
1	2	3	4
			monoxide detector meeting the requirements of the Polish Standard concerning electrical apparatus for the detection of carbon monoxide; this equipment shall enable information about a fire hazard to be transmitted to the persons responsible for verifying it and for immediately notifying the emergency notification centre or a fire-protection unit; 2) fire-separated from the other facilities by internal walls and a ceiling, and from the roof structure and covering with a reaction to fire class other than A1 or A2,d0 by partitions, with a fire resistance class of at least EI 30 or REI 30 and a reaction to fire class of A1, A2,d0 or B,d0, and closed with doors having a fire resistance class of at least EI 30, and also having an external door, gate or window with an area of at least 1 m². The requirements referred to in subparagraph 1 shall not apply to a battery facility equipped with a fire alarm system. The requirements referred to in subparagraph 2, concerning the fire separation of the technical facility or the telecommunications facility, shall not apply where the batteries are placed in a fire-resistant cabinet intended for the storage and charging of batteries which meets the following conditions: 1) has a fire resistance of at least 30 minutes under fire exposure from the outside and from the inside, in respect of fire integrity and fire insulation; 2) has appropriate ventilation or other solutions ensuring an indoor environment quality that enables the

No	Siting of the batteries	Total capacity	Requirement
1	2	3	4
			storage, charging and discharging of batteries in a manner that does not create a fire or explosion hazard.
		more than 60 kWh up to 120 kWh	A Battery Management System (BMS) meeting the requirements of PN-EN IEC 62619, or other protective measures, which: 1) continuously monitor the basic operating parameters of the batteries, such as the voltage, current and temperature of the cell pack; 2) prevent the batteries from being charged above their permissible state of charge and from being discharged below a safe level; 3) prevent the occurrence of excessive current during the charging and discharging of the batteries; 4) provide protection against short-circuit currents (short circuits); 5) signal faults and abnormal operating conditions, in particular where the temperature of the cells rises above a safe level; 6) respond to hazards associated with the occurrence of faults or abnormal operating conditions, in particular by emergency disconnection of the battery.
			The batteries shall be placed in a technical facility intended for electrical installations or equipment or in a telecommunications facility: 1) equipped with at least one self-contained smoke detector meeting the requirements of the standard

No .	Siting of the batteries	Total capacity	Requirement
1	2	3	4
			concerning smoke alarm devices and at least one self-contained carbon monoxide detector meeting the requirements of the Polish Standard concerning electrical apparatus for the detection of carbon monoxide; this equipment shall enable information about a fire hazard to be transmitted to the persons responsible for verifying it and for immediately notifying the emergency notification centre or a fire-protection unit; 2) fire-separated from the other facilities by internal walls and a ceiling, and from the roof structure and covering with a reaction to fire class other than A1 or A2,d0 by partitions, with a fire resistance class of at least EI 60 or REI 60 and a reaction to fire class of A1, A2,d0 or B,d0, and closed with doors having a fire resistance class of at least EI 30, and also having an external door, gate or window with an area of at least 1 m². The requirements referred to in subparagraph 1 shall not apply to a battery facility equipped with a fire alarm system. The requirements referred to in subparagraph 2, concerning the fire separation of the technical facility or the telecommunications facility, shall not apply where the batteries are placed in a fire-resistant cabinet intended for the storage and charging of batteries which meets the following conditions: 1) has a fire resistance of at least 60 minutes under fire exposure from the outside and from the inside, in respect of fire integrity and fire insulation; 2) has appropriate ventilation or other

No .	Siting of the batteries	Total capacity	Requirement
1	2	3	4
			solutions ensuring an indoor environment quality that enables the storage, charging and discharging of batteries in a manner that does not create a fire or explosion hazard.
		more than 120 kWh	A Battery Management System (BMS) meeting the requirements of PN-EN IEC 62619, or other protective measures, which: 1) continuously monitor the basic operating parameters of the batteries, such as the voltage, current and temperature of the cell pack; 2) prevent the batteries from being charged above their permissible state of charge and from being discharged below a safe level; 3) prevent the occurrence of excessive current during the charging and discharging of the batteries; 4) provide protection against short-circuit currents (short circuits); 5) signal faults and abnormal operating conditions, in particular where the temperature of the cells rises above a safe level; 6) respond to hazards associated with the occurrence of faults or abnormal operating conditions, in particular by emergency disconnection of the battery. The batteries shall be placed in a technical facility intended exclusively for this purpose or in a telecommunications facility: 1) fire-separated from the other facilities by internal walls and ceilings with a fire resistance class of at least EI 120 or REI 120 and a reaction to fire class of A1, A2,d0 or B,d0, and from the roof structure and covering with a reaction to fire class other than A1 or A2,d0 by partitions with a fire resistance class of at least EI 30 and a

No .	Siting of the batteries	Total capacity	Requirement
1	2	3	4
			reaction to fire class of A1, A2,d0 or B,d0, and closed with doors having a fire resistance class of at least EI 60, and also having an external door, gate or window with an area of at least 1 m²; 2) equipped with a fire alarm system; 3) equipped with fixed automatic fire-extinguishing devices – where the total capacity of the batteries in the facility exceeds 300 kWh. The requirements referred to in subparagraph 2 concerning the fire alarm system shall not apply where a battery facility with a total battery capacity of up to 300 kWh is protected by a fixed automatic fire-extinguishing device appropriate to the fire hazards present. The requirements concerning the fire separation of the technical facility or the telecommunications facility shall not apply where the batteries are placed in a fire-resistant cabinet intended for the storage and charging of batteries which meets the following conditions: 1) has a fire resistance of at least 120 minutes under fire exposure from the outside and from the inside, in respect of fire integrity and fire insulation; 2) has appropriate ventilation or other solutions ensuring an indoor environment quality that enables the storage, charging and discharging of batteries in a manner that does not create a fire or explosion hazard.