

## RFP-KYV-24-0245

### Attachment B to RFP: Detailed Technical Specifications

#### I. List of equipment to ensure uninterrupted power supply of communication nodes

No	Description of the Equipment	Quantity
1	Delta RT-Series 2kVA / 1800W(Set_1), or an analogue	1
2	Delta communication card SNMP card IPV6(Set_1), or an analogue	1
3	Delta strengthening TOWER RT 1-20K(Set_1), or an analogue	2
4	Delta RT-Series 3kVA / 2700W(Set_2), or an analogue	1
5	Delta communication card SNMP card IPV6(Set_2), or an analogue	1
6	Delta strengthening TOWER RT 1-20K(Set_2), or an analogue	2
7	Installation of uninterruptible power supply with a capacity of 10 to 40 kVA	1

#### Technical requirements

##### Installation of uninterruptible power supply systems for switching nodes

1. Installation of 2 uninterruptible power supplies with a capacity of 3kVA/2700W using long-term batteries (at least 8 years) to ensure the autonomous operation of switching equipment with a total capacity of 1.5 kW for at least 1 hour.

Dual conversion UPS providing constant sine wave power, support for networks, servers, VoIP and telecommunications.

The UPS must have:

0.9 output power factor and AC-AC efficiency up to 94%, resulting in greater energy savings;

the ability to connect additional external batteries for longer backup power times;

cold start capability;

hot-swappable batteries;

intelligent battery management;

the ability to configure the placement of a "rack and tower" size of 2 U -4U in a communication cabinet;

connect smart control software via RS232 or USB port.

#### Input

Rated Voltage	minimum requirements: 220/230/240 VAC
Voltage range	minimum requirements: 175-280VAC (full load)
Frequency	minimum requirements: 40~70 Hz
Power factor	minimum requirements: > 0,99 (full load)
Harmonic current distortion	minimum requirements: < 5%

### Output

Power factor	minimum requirements: 0,9
Voltage	minimum requirements: 220/230/240VAC
Voltage regulation	minimum requirements: $\pm 1\%$ (Linear load)
Frequency	minimum requirements: 50/60 Hz $\pm 0,05$ Hz
Harmonic voltage distortions	minimum requirements: < 2% (Linear load)
Possibility of overloading	minimum requirements: < 105%: Continuously 105-125%: 1 minute 125-150%: 15 seconds
Output capacity:	At least IEC C13 or Schuko x6

Display: LCD and LED Indicators

Matching CE, TISI, RCM, EAC

Rechargeable batteries produced no more than 6 months before the date of delivery of the goods.

Each UPS is equipped with 2 blocks of 19" 1U sockets for 9 Schuko connections for the server cabinet (the material is aluminum, the connection type corresponds to the UPS output, the cable length: at least 1 m).

These requirements are minimal and are not exhaustive.

#### 1. Calibration and configuration of uninterruptible power supply systems.

The work is carried out by specialists of appropriate qualifications who have a valid certificate issued by the manufacturer or official distributor/partner of the equipment manufacturer on the territory of Ukraine, which confirms the completion of training on the maintenance of UPS of the corresponding model range.

## II. List of equipment for restoring the health of the uninterruptible power supply of the data processing plant

No	Description of the Equipment	Quantity
1	Rechargeable battery 12FGHL34 (Long Life) 12V * 9A/H, or an analogue	330
2	Installation of the battery module of the Liebert ARM System (Setup and calibration of the source uninterrupted power supply)	1

### Technical requirements for restoring the uninterruptible power supply of the data center

*Emerson APM Series UPS Battery Pack Upgrade*

1. Replacement of old batteries in the amount of 330 units with new long-term batteries (at least 8 years) FIAMM (12FGHL34) or equivalent:

Technology:	AGM (Multi-Gel)
Voltage, V:	12
Capacity, Ah:	9
Size, mm:	151×65×99
Features:	Terminal Type: F2

Rechargeable batteries produced no more than 6 months before the date of delivery of the goods.

2. Calibration and configuration of the uninterruptible power supply system.  
The work is carried out by specialists of appropriate qualifications who have a valid certificate issued by the manufacturer or official distributor/partner of the equipment manufacturer VERTIV (Emerson) on the territory of Ukraine, which confirms the completion of training on the maintenance of the Emerson APM series UPS.

**III. REQUIREMENTS FOR THE EXPERIENCE OF THE CONTRACTOR:**

The Service Provider must have experience in implementing at least two similar projects over the past three years that meet the objectives of the project "Modernization of the server room uninterruptible power supply system and Installation of uninterruptible power supply systems for switching rooms", namely, the Service Provider must provide information in its proposal confirming that the implemented projects included the following:

- Replacing UPS batteries with new long-term batteries;
- Installing uninterruptible power supplies using long-term batteries;
- Calibration and configuration of uninterruptible power supply systems.

**IV. STAFF QUALIFICATION REQUIREMENTS:**

The Service Provider must have a team of specialists who meet the task of "Updating the Emerson APM series UPS battery complex", which consists in replacing old batteries in the amount of 330 units with new long-life batteries, calibration and configuration. Namely, the Service Provider, as part of its tender offer, must provide information confirming the relevant qualifications of specialists who have a valid certificate issued by the manufacturer or official distributor/partner of the equipment manufacturer VERTIV (Emerson) in Ukraine, which confirms the completion of training on servicing Emerson APM series UPS.

The Service Provider must also have a team of specialists who meet the task of "Providing uninterrupted power supply for the functioning of two switching rooms", which consists in installing 2 uninterruptible power supplies, calibration and configuration. For confirmation, the Service Provider, as part of its

tender offer, must provide information on the relevant qualifications of specialists who have a valid certificate issued by the manufacturer or official distributor/partner of the equipment manufacturer in Ukraine, which confirms the completion of training on UPS service of the relevant model range.

Providing certificates/diplomas confirming the qualifications of specialists is mandatory.

**IMPORTANT:** The information provided will be considered when evaluating the technical part of the proposal.