**Annex 2: Technical Responsiveness Table**

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| **Item No** | **Requested Specifications** | **Technical compliance (yes/no)** | **Offered specifications** ***(Please provide detailed description/ specifications for each of the items listed below)*** ***Please insert brand name details,*** ***Provide leaflet, catalogue links*** |
| **SCHEDULE NO.1 - PLANT AND EQUIPMENT, INCLUDING MANDATORY SPARE PARTS** |
| **1.** | **CENTRAL DISPATCH AND CONTROL OFFICE (DCO)** |
| 1.1  | **Rack IT Enclosure incl. passive elements (accessories)**- Sheet steel- 85% of vented surface area- Dimensions – enough to install the necessary equipment, plus 30%.- The industry standard rack cabinet 19” - All needed accessories for mounting.*For detailed requirements see chapter 3.1.1 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 1.2 | **Server**- Form factor - Rack Server.- Processor CPU Xeon® (or equivalent).- Memory 32 GB DDR4.- SSD 2x256GB in RAID-1 as a boot disk.- HDD 2x1.2TB 12Gbps.- RAID 5 configuration support.- Power supply 2xPSU, redundant 550 W AC.- Network interface 1 x IMM and 4 × 1 Gb.- Platform Module built-in USB Ports / VGA Ports Up to 3 front (1 x USB 3.0, 2 x USB 2.0) and 4, 1 internal (USB 3.0) / 1 front and 1 back**- Server shall be from the same manufacturer as all workstations** - Operating System: * Windows® Server x64 bit – English
* Licenses - Windows® Server x64 bit– Multilanguage
* Microsoft ® Office tools: Office Home & Business 2023 64 English or higher
* **Limited 3-year warranty and upgrades available.**

*For detailed requirements see chapter 3.1.2 of Annex 1*  |  | **Manufacturer:****Model:**  |
| 1.3 | **Network hardware (VPN Router, Ethernet Switch)**- 19” Rack-mount VPN router.- Minimum of 8x 1Gb/s Ethernet ports; 1x1Gb/s WAN port.- All needed accessories for mounting in server enclosures.*For detailed requirements see chapter 3.1.3 of Annex 1*  |  | **Manufacturer:** **Model:**  |
| 1.4 | **Uninterruptible power supply UPS**- The UPS shall ensure minimum of 1-hour backup time server.- At least 3000VA.- 160 to 280 VAC Input with automatic 50/60 detection, with full time multi-pole noise filtering, 0.3% IEEE surge let through, zero clamping response time.- The UPS shall have audible alarms, automatic internal bypass, and automatic load restart after UPS shutdown, automatic self-test, and predictive failure notification.- Continuous battery recharging, even if the power button is set to OFF. The UPS shall have a battery replacement indicator, disconnected battery notification, and shall allow batteries to be replaced with equipment energized.- WEB/SNMP connectivity device.- All needed accessories for connection of both servers.*For detailed requirements see chapter 3.1.4 of Annex 1* |  | **Manufacturer:** **Model:** |
| 1.5 | **Operator Workstation**- Processor: i5 Core last generation.- Operating System: Windows® 11 Professional.- Memory: 16GB, DDR4.- Optical Drive: 16X DVD+/-RW and 8X DVD- SSD 1x256GB as a boot disk- Hard Drive: 500GB.- Network Adapter: 1GbE NIC, Dual Port.- At least three (3) USB ports.- 3xMonitor: Minimum 27-inch full QHD screen, VGA/DVI with incorporated or separate speakers.- Keyboard: USB Entry Quiet key, No Hot Keys.- Mouse: USB Optical Mouse with scroll, All Black Design with mouse pad.- UPS 1000VA.- Productivity software for PC shall be Microsoft® Office Business Edition.- 1xLaser printer, color, with A4 paper format.The Operator Workstation shall be supplied with preinstalled system and all configured drivers.*For detailed requirements see chapter 3.2 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 1.6 | **SCADA Software for server**The SCADA software shall have the following minimum features:- Open system architecture with relational database management system.- Feature for checking the healthiness of the system and communication links.- Sufficient capacity in terms of memory and I/O to perform the required functions.- User-friendliness using ‘Windows’ based applications.- Keeping of statistics of errors encountered in communication.- Prioritization of tasks like alarm processing.- Database for storing and retrieval of various parameters, historical data etc.- Historical data archiving on hard disk as well as on removable media for at least 4 years. Multiple levels of security for users with predefined access rights and password protected access. Alarm generation with timestamping.- Trending of real-time and historical data in different user configurable formats.- Flexible reporting system providing pre-formatted standard reports for common requirements as well as generation of free format reports configurable by the user, available on demand, event/ application initiation or at pre-set time intervals.- Information display in various formats including bar graph, chart etc.* Possibility of mobile client integration. Web services for 2 (two) web browser-based clients.
* Historian part will have to be included.

All Software specifications and licenses shall be ready installed and additionally delivered on licensed DVD/CD to the Employer.*For detailed requirements see chapter 3.4 of Annex 1* |  |  |
| 1.7 | **SCADA Software for Operator Workstation***For detailed requirements see chapter 3.5 of Annex 1* |  |  |
| **2.** | **STATIONS** |
| 2.1 | **Local Data Acquisition and Control Equipment for PS-1 (Stația de Pompare Treapta I)**- Wall mounted panel (incl. Mounted accessories and necessary wiring)- PLC with all necessary modules (please refer to particular specifications)- HMI (please refer to particular specifications)- Measurement equipment *(See chapter 5.1.1 of Annex 1)*- All necessary consumable for installation*For detailed requirements see chapter 4 and 5 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 2.2 | **Local Data Acquisition and Control Equipment for PS-2 (Stația de Pompare Treapta II)**- Wall mounted panel (incl. Mounted accessories and necessary wiring)- PLC with all necessary modules (please refer to particular specifications)- HMI (please refer to particular specifications)- Measurement equipment *(See chapter 5.1.2 of Annex 1)*- All necessary consumable for installation*For detailed requirements see chapter 4 and 5 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 2.3 | **Local Data Acquisition and Control Equipment for WTP (Stația de tartare)**- Wall mounted panel (incl. Mounted accessories and necessary wiring)- PLC with all necessary modules (please refer to particular specifications)- HMI (please refer to particular specifications)- Measurement equipment *(See chapter 5.2 of Annex 1)*- All necessary consumable for installation*For detailed requirements see chapter 4 and 5 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 2.4 | **Local Data Acquisition and Control Equipment for BPS-1 (str. Nicolae Iorga)**- Wall mounted panel (incl. Mounted accessories and necessary wiring)- PLC with all necessary modules (please refer to particular specifications)- HMI (please refer to particular specifications)- Measurement equipment *(See chapter 5.3.1 of Annex 1)*- All necessary consumable for installation*For detailed requirements see chapter 4 and 5 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 2.5 | **Local Data Acquisition and Control Equipment for BPS-2 (str. Romană 26)**- Wall mounted panel (incl. Mounted accessories and necessary wiring)- PLC with all necessary modules (please refer to particular specifications)- HMI (please refer to particular specifications)- Measurement equipment *(See chapter 5.3.2 of Annex 1)*- All necessary consumable for installation*For detailed requirements see chapter 4 and 5 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 2.6 | **Local Data Acquisition and Control Equipment for BPS-3 (str. Romană 66)**- Wall mounted panel (incl. Mounted accessories and necessary wiring)- PLC with all necessary modules (please refer to particular specifications)- HMI (please refer to particular specifications)- Measurement equipment *(See chapter 5.3.3 of Annex 1)*- All necessary consumable for installation*For detailed requirements see chapter 4 and 5 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 2.7 | **Local Data Acquisition and Control Equipment for BPS-4 (str. Națională 33)**- Wall mounted panel (incl. Mounted accessories and necessary wiring- PLC with all necessary modules (please refer to particular specifications)- HMI (please refer to particular specifications)- Measurement equipment *(See chapter 5.3.4 of Annex 1)*- All necessary consumable for installation*For detailed requirements see chapter 4 and 5 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 2.8 | **Local Data Acquisition and Control Equipment for BPS-5 (str. Romană 112)**- Wall mounted panel (incl. Mounted accessories and necessary wiring)- PLC with all necessary modules (please refer to particular specifications)- HMI (please refer to particular specifications)- Measurement equipment *(See chapter 5.3.5 of Annex 1)*- All necessary consumable for installation*For detailed requirements see chapter 4 and 5 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 2.9 | **Local Data Acquisition and Control Equipment for BPS-6 (str. Ungureanu 9)**- Wall mounted panel (incl. Mounted accessories and necessary wiring)- PLC with all necessary modules (please refer to particular specifications)- HMI (please refer to particular specifications)- Measurement equipment *(See chapter 5.3.6 of Annex 1)*- All necessary consumable for installation*For detailed requirements see chapter 4 and 5 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 2.10 | **Local Data Acquisition and Control Equipment for BPS-7 (str. Cristiuc 11)**- Wall mounted panel (incl. Mounted accessories and necessary wiring)- PLC with all necessary modules (please refer to particular specifications)- HMI (please refer to particular specifications)- Measurement equipment *(See chapter 5.3.7 of Annex 1)*- All necessary consumable for installation*For detailed requirements see chapter 4 and 5 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 2.11 | **Local Data Acquisition and Control Equipment for BPS-8 (str. Boico 5-7)**- Wall mounted panel (incl. Mounted accessories and necessary wiring- PLC with all necessary modules (please refer to particular specifications).- HMI (please refer to particular specifications- Measurement equipment *(See chapter 5.3.8 of Annex 1)*- All necessary consumable for installation*For detailed requirements see chapter 4 and 5 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 2.12 | **Local Data Acquisition and Control Equipment for BPS-9 (str. Porumbescu 3)**- Wall mounted panel (incl. Mounted accessories and necessary wiring- PLC with all necessary modules (please refer to particular specifications)- HMI (please refer to particular specifications)- Measurement equipment *(See chapter 5.3.9 of Annex 1)*- All necessary consumable for installation*For detailed requirements see chapter 4 and 5 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 2.13 | **Local Data Acquisition and Control Equipment for WWPS-1 (SPAU-1) – (str. Tereza Sobolevschi)**- Wall mounted panel (incl. Mounted accessories and necessary wiring)- PLC with all necessary modules (please refer to particular specifications)- HMI (please refer to particular specifications)- Measurement equipment. *(See chapter 5.4.1 of Annex 1)*- All necessary consumable for installation*For detailed requirements see chapter 4 and 5 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 2.14 | **Local Data Acquisition and Control Equipment for WWPS-2 (SPAU-2) – (str. Cetireni)**- Wall mounted panel (incl. Mounted accessories and necessary wiring)- PLC with all necessary modules (please refer to particular specifications)- HMI (please refer to particular specifications)- Measurement equipment. *(See chapter 5.4.2 of Annex 1)*- All necessary consumable for installation*For detailed requirements see chapter 4 and 5 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 2.15 | **Local Data Acquisition and Control Equipment for WWPS-3 (SPAU-3) – (str. Ion Neculce)**- Wall mounted panel (incl. Mounted accessories and necessary wiring)- PLC with all necessary modules (please refer to particular specifications)- HMI (please refer to particular specifications)- Measurement equipment. *(See chapter 5.4.3 of Annex 1)*- All necessary consumable for installation*For detailed requirements see chapter 4 and 5 of Annex 1* |  | **Manufacturer:** **Model:**  |
| 2.16 | **Local Data Acquisition and Control Equipment for WWPS-4 (str. Ungureanu 15)**- Wall mounted panel (incl. Mounted accessories and necessary wiring)- PLC with all necessary modules (please refer to particular specifications)- HMI (please refer to particular specifications)- Measurement equipment. *(See chapter 5.4.4 of Annex 1)*- All necessary consumable for installation*For detailed requirements see chapter 4 and 5 of Annex 1* |  | **Manufacturer:** **Model:**  |
| **3.** | **MANDATORY SPARE PARTS** |
| 3.1 | PLC + DI + AI (Programmable logic controller + digital input module + analogic input module*For detailed requirements see chapter 4.12 of Annex 1* |  |  |
| 3.2 | **Pressure transmitter*** Type of sensor: ceramic.
* Measuring range: suction pipe: 0…10 bar, pressure pipe: 0…16 bar.
* Process temperature: -20 °C +50 °C.
* Fluid temperature: 0 °C +50 °C.
* Media resistance: high.
* Media environment: water.
* Protection class: IP 67.
* Accuracy: 0.5%.
* Power supply: 12/24 (24VDC) for probe.
* Output signal: 4-20 mA.
* Standards and Guidelines: DIN EN 60770 (IEC 60770); DIN EN 61003-1.
* Edition: 1993-12; IEC 60529; DIN 16086.

*For detailed requirements see chapter 4.15 of Annex 1* |  | **Manufacturer:** **Model:**  |
| **SCHEDULE NO.2 - INSTALLATION AND OTHER SERVICES** |
| **Item No** | **Minimum requirements** | **Technical compliance (yes/no)** | **Offered specifications** ***(Please confirm that the offered design and stations will meet the requirements of Annex 1)***  |
| **1.** | **CENTRAL DISPATCH AND CONTROL OFFICE (DCO)** |
| 1.1 | **Detailed design of SCADA system to central DCO***For detailed requirements see chapter 2 of Annex 1* |  |  |
| 1.2 | **Detailed design of SCADA system at facilities***For detailed requirements see chapter 2 of Annex 1* |  |  |
| 1.3 | **Installation and development of SCADA Server software applications according to beneficiary requirements***For detailed information see Annex 1* |  |  |
| 1.4 | **Installation of SCADA Server Equipment to Central DCO***For detailed requirements see chapter 6.7 of Annex 1* |  |  |
| 1.5 | **Installation of SCADA software for Operator according to beneficiary requirements***For detailed requirements see chapter 6.7 of Annex 1* |  |  |
| **2.** | **STATIONS** |
| 2.1 | **Local Data Acquisition and Control Equipment for PS-1 (Stația de Pompare Treapta I)***For detailed requirements see chapter 5 and 6.8 of Annex 1* |  |  |
| 2.2 | **Local Data Acquisition and Control Equipment for PS-2 (Stația de Pompare Treapta II)***For detailed requirements see chapter 5 and 6.8 of Annex 1* |  |  |
| 2.3 | **Local Data Acquisition and Control Equipment for WTP (Stația de tartare)***For detailed requirements see chapter 5 and 6.8 of Annex 1* |  |  |
| 2.4 | **Local Data Acquisition and Control Equipment for BPS-1 (str. Nicolae Iorga)***For detailed requirements see chapter 5 and 6.8 of Annex 1* |  |  |
| 2.5 | **Local Data Acquisition and Control Equipment for BPS-2 (str. Romană 26)***For detailed requirements see chapter 5 and 6.8 of Annex 1* |  |  |
| 2.6 | **Local Data Acquisition and Control Equipment for BPS-3 (str. Romană 66)***For detailed requirements see chapter 5 and 6.8 of Annex 1* |  |  |
| 2.7 | **Local Data Acquisition and Control Equipment for BPS-4 (str. Națională 33)***For detailed requirements see chapter 5 and 6.8 of The Requirements - Technical Specifications document.* |  |  |
| 2.8 | **Local Data Acquisition and Control Equipment for BPS-5 (str. Romană 112)***For detailed requirements see chapter 5 and 6.8 of Annex 1* |  |  |
| 2.9 | **Local Data Acquisition and Control Equipment for BPS-6 (Ungureanu 9)***For detailed requirements see chapter 5 and 6.8 of Annex 1* |  |  |
| 2.10 | **Local Data Acquisition and Control Equipment for BPS-7 (str. Cristiuc 11)***For detailed requirements see chapter 5 and 6.8 of Annex 1* |  |  |
| 2.11 | **Local Data Acquisition and Control Equipment for BPS-8 (str. Boico 5-7)***For detailed requirements see chapter 5 and 6.8 of The Requirements - Technical Specifications document.* |  |  |
| 2.12 | **Local Data Acquisition and Control Equipment for BPS-9 (str. Porumbescu 3)***For detailed requirements see chapter 5 and 6.8 of Annex 1* |  |  |
| 2.13 | **Local Data Acquisition and Control Equipment for WWPS-1 (SPAU-1) – (str. Tereza Sobolevschi)***For detailed requirements see chapter 5 and 6.8 of Annex 1* |  |  |
| 2.14 | **Local Data Acquisition and Control Equipment for WWPS-2 (SPAU-2) – (str. Cetireni)***For detailed requirements see chapter 5 and 6.8 of Annex 1* |  |  |
| 2.15 | **Local Data Acquisition and Control Equipment for WWPS-3 (SPAU-3) – (str. Ion Neculce)***For detailed requirements see chapter 5 and 6.8 of Annex 1* |  |  |
| 2.16 | **Local Data Acquisition and Control Equipment for WWPS-4 – (str. Ungureanu 15)***For detailed requirements see chapter 5 and 6.8 of Annex 1* |  |  |