**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* |  |  |