**1. General.**

Terms and definitions used herein:

**OL** – AB ORLEN Lietuva

**DCS** – digital control systems

**Electrical SCADA** (hereinafter – **ESCADA**) – process visualization system for power distribution systems.

**Industrial SCADA** (hereinafter – **SCADA)** – process visualization system to monitor production processes.

**WSUS** – Windows server update services.

**DMZ** –network demilitarized zone.

**KVM** (keyboard, video, mouse) – devices that enable the transmission of video signals over long distances.

AB ORLEN Lietuva intends procurement of Siemens software and hardware upgrade and support services for 3 years:

- Siemens WinCC SCADA, ESCADA systems upgrade;

- Extension of support for VEEAM backup and recovery software license;

- Configuration of Symantec Endpoint Protection for users;

- Incorporation of SCADA servers and computerized workstations in WSUS;

- All systems (WSUS, antivirus, SCADA, and ESCADA software) shall receive periodic support and updates for a duration of three years.

- Supply and installation of KVM and monitors.

1. All systems are installed in AB ORLEN Lietuva Refinery.

**2. Attachments.**

Attachment 1. Siemens\_WinCC HW\_SW\_OS.xlsx

Attachment 2. Siemens\_licenses.xlsx

Attachment 3. Siemens\_network\_structure.pdf

Attachment 4. Computers Audit files

Attachment 5. Minimum requirements for servers and computerized workstations.pdf

Attachment 6. Cybersecurity requirements.pdf

Attachment 7. Veam\_licences\_for\_support\_Extension

Attachment 8. Monitor requirements

**3. Description and specifics of work.**

**3.1. Work description.**

3.1.1. Siemens WinCC SCADA, ESCADA systems upgrade;

Siemens WinCC systems in AB Orlen Lietuva are of two types:

* Industrial WinCC SCADA
* Electrical WinCC ESCADA.

3.1.1.1. Industrial WinCC SCADA upgrade

Majority of WinCC SCADA computers are like engineering stations. Workstations have Simatic Step 7 software package. Siemens network structure is presented in Attachment 3.

* Contractor shall upgrade (install) existing Siemens software licenses (WinCC and Step7) and purchase any additional licenses required for the existing system. Additionally, it is necessary to assess and plan the licenses that may be required for the system upgrade to the latest versions. (The list of licenses to be upgraded is provided in Attachment 2.)

The scope of the upgrade shall include all necessary works, materials and services related to the WinCC and Step7 license upgrade:

* Purchase and installation of Siemens licenses. The list of licenses to be extended is provided in Attachment 2;
* Replacement and upgrade of all computerized workstations (hereinafter – computers);
* Contractor shall include in the proposal all costs of hardware replacement (upgrade).
* The list of computers to be replaced is provided in Attachment 1. It also specifies the preliminary planned date (year) for computer replacement.
* If, prior to the periodic upgrade, it is determined that the existing number of computers is insufficient, the Contractor shall plan for their replacement ahead of schedule.

Detailed information, including technical parameters, installed software, and configuration settings of the existing computers, is available in the audit folders. See: Annex 4.

Minimum key requirements for new servers and computerized workstations are provided in Attachment 5.

3.1.1.2. Upgrade of Electrical WinCC ESCADA

WinCC ESCADA servers and computers include additional Siemens SICAMM SCC software, which operates on the standard WinCC platform.

* Contractor shall upgrade the existing Siemens software licenses (WinCC and SICAM SCC) to the latest available versions at the time of the tender. (The list of licenses to be upgraded is provided in Attachment 2.)
* ESCADA facilitates data transmission to the IT network for WEB customers (see Attachment 3). Contractor shall include support services for this infrastructure and the WEB customer component in accordance with new manufacturer solutions.

The scope of the upgrade shall encompass all necessary works, materials and services related to the license upgrade for WinCC and SICAM SCC:

- Purchase and installation of Siemens licenses. The list of licenses to be extended is provided in Attachment 2;

- Replacement and upgrade of all computerized workstations (hereinafter – computers);

- Contractor shall include in the proposal all costs of hardware replacement (upgrade).

The list of computers to be replaced with new ones is provided in Attachment 1;

* The list of computers to be replaced is provided in Attachment 1. It also specifies the preliminary planned date (year) for computer replacement.
* If, prior to the periodic upgrade, it is determined that the existing number of computers is insufficient, the Contractor shall plan for their replacement ahead of schedule.

Detailed information, including technical parameters, installed software, and configuration settings of the existing computers, is available in the audit folders. See: Annex 4.

Minimum key requirements for new servers and computerized workstations are provided in Attachment 5.

3.1.2. - Extension of support for VEEAM backup and recovery software license;

WinCC server and computer backup copies are currently created using Veeam Backup & Replication 11 software, which is installed on the SICAMBACKUP server.

##### Extend support for Veeam Backup Essentials Universal Perpetual Enterprise Plus Edition licenses.

##### The list of licenses that requires a support extension is provided in Attachment 2.

* A license support extension must be purchased for a period of three years.

3.1.3 Configuration of Symantec Endpoint Protection users on new computers;

OT\_DMZ zone has virtual server SICAMBACKUP with Symantec Endpoint protection manager software, which downloads all updates from upstream server of IT\_DMZ zone. Current Siemens network structure is presented in Attachment 3.

* After upgrading SCADA servers, computerized workstations (3.1.1.1, 3.1.1.2), Contractor must configure SCADA servers and computers by integrating Symantec Endpoint protection users for centralized antivirus software management through Symantec Endpoint Protection Manager.
* Symantec Endpoint Protection licenses in Symantec Endpoint Protection Manager. Licenses provided by OL.

3.1.4. Incorporation of SCADA servers and computerized workstations in WSUS.

3.1.4.1. OT\_DMZ zone has virtual server SICAMBACKUP with Microsoft WSUS service (which uploads updates and all settings from WSUS in IT\_DMZ zone. Siemens network architecture is presented in Attachment 3. After upgrading SCADA servers and computerized workstations (3.1.1.1, 3.1.1.2), the Contractor must manually apply all necessary changes to Windows update settings on OT computers to enable update searches via the WSUS service. Confirmed updates will be automatically uploaded to computers but will be manually introduced every six months.

3.1.5 Supply and installation of KVM and monitors.

3.1.5.1 Supply of the required types and quantities of KVM in accordance with the information provided in Attachment 1.

3.1.5.2 DP-DVI adapters shall be supplied for each set of KVM extenders.

3.1.5.3 Supply of the required monitors. The required quantity of monitors is specified in Attachment 1 and the monitor requirements are outlined in Attachment 8.

3.1.5.4 Installation of KVM and monitors.

**3.2. Special requirements (if any).**

3.2.1. Contractor shall plan no less than 2 visits to OL per year (every 6 months) to install all Siemens updates and patches/hotfixes recommended by Windows and antivirus software. Patches/hotfixes to be installed shall be tested and verified by Siemens manufacturer.

3.2.2. Contractor in its proposal shall indicate the prices of the following works and materials according to the following items:

a) Industrial WinCC SCADA upgrade (3.1.1.1)

b) Electrical WinCC ESCADA upgrade (3.1.1.2)

c) Extension of support for VEEAM backup and recovery software license (3.1.2);

d) Configuration of Symantec Endpoint Protection users on new computers (3.1.3);

e) Incorporation of upgraded SCADA servers and computerized workstations in WSUS (3.1.4)

3.2.2. Upgraded system shall comply with cybersecurity requirements (Attachment 6).

3.2.3. Contractor shall consult the Owner's specialists on system software and hardware operation and other engineering issues during the system upgrade and installation.

3.2.4. Each year, Contractor shall present an offer for support contract renewal, if OL introduces new additional systems.

3.2. In the event of computer or WinCC SCADA software failures (unresponsiveness) following the upgrade, the Contractor shall be responsible for remedying the issues. The Contractor shall respond within three business days upon receiving notice of failure.

**3.3. Requirements for work execution and documentation.**

3.3.1. Contractor shall present its preliminary work schedule and payment schedule detailed (split) by years, month and works performed. Payment for materials and works will be executed based on such schedule.

**3.4. Qualification requirements for Contractor.**

3.4.1. Contractor must be an official representative of Siemens authorized to sell the products and provide support services.

3.4.2. Contractor and/or its personnel shall have and present Siemens WinCC, Step7, Tia-Portal certificates.

3.4.3. Contractor and/or its personnel shall have and present ‘Siemens Solution Partner for factory automation’ certificates.

3.4.4. Contractor and/or its personnel shall have 3-year experience of similar works related to upgrade of WinCC software and hardware.

**4. Materials, equipment, and services to be provided by the Owner.**

4.1. Symantec Endpoint Protection licenses shall be provided by Owner;

4.2. Configuration using Veem Backup & Replication 12 software made by Owner;

**5. Materials, equipment, and services to be provided by the Contractor.**

5.1. All necessary licenses, equipment and works required for Siemens systems upgrade (under 3.1.1, 3.1.2, 3.1.3, 3.1.4, 3.1.5, 3.1.6);

5.2. Any installation and dismantling works shall be done by the Contractor.

5.3 Supply three spare workstations to the Owner.

5.4 Supply one spare server to the Owner.

**6. Requirements for work completion.**

Reports on performed works and fixed/unfixed drawbacks to be provided after each visit.

**7. Requirements for work acceptance.**

7.1. Reports on performed works and fixed/unfixed drawbacks to be provided after each visit.

**8. Requirements for work schedule.**

3-year contract.