ENSACO Solutions

Reference List

April 2025

Revisions:

Revision	Date	Description	Author
001	05/02/2020	Initial version of document	Vladan Cvejic
002	30/12/2020	End of year revision	Vladan Cvejic
003	05/03/2021	Q1 revision	Vladan Cvejic
004	22/10/2021	Q3 revision	Vladan Cvejic
005	11/07/2023	Q2 revision	Vladan Cvejic
006	22/04/2025	Q2 revision	Vladan Cvejic

Reference List

Company Name:	**NIS, Pančevo, Serbia**
Project Name:	Maintenance and extension of MES-PA in RNP
Number of Contract (Date):	1. PRE360000/UD-UA/01604 (02.02.2018.) 2. DWN113000/UD-UA/11801 (20.11.2019.)
Year(s):	1. 2018-2019-2020 2. 2020 - 2021
Contact Information:	Dušica Vučićević +381 64 8884075; Zoran Veselinovski +381 64 8884093

Description of work:
MES system extension and maintenance (24/7 service support)

- Business applications (SAP interface, LIMS interface, Commercial orders, Code books, Reports, generation of in/out documentation etc.):
    - o Software updates related to State Law regulations
    - o Software updates as per user requests (process optimization, new functionalities)

- Technology applications (execution of commercial orders through technological orders, Traffic, automatic scale, TIS interface, implementation of communication protocols in accordance with bay equipment (PLC/DCS/flow computers, scales, etc), data processing for balancing, central and field MES-SCADA stations):
    - o Software updates as per user requests (process optimization, new functionalities)
    - o Software changes and new software module implementation initiated by refurbishment and/or changes in technological equipment on loading/unloading sites

Company Name:	**Makpetrol, North Macedonia**
Project Name:	Maintenance and refurbishment of Makpetrol Storage facilities
Number of Contract (Date):	416/18 (21.06.2018.)
Year(s):	2018. – today (unlimited)
Contact Information:	Sašo Boškovski Maintenance director, Makpetrol Skopje +389 72247172

Description of work:
Maintenance and refurbishment of Makpetrol Storage Facilities in North Macedonia which includes:
- - PLC/SCADA systems and connection to the Makpetrol business application for:
    - o Truck and Train Loading Terminals (Ilinden, N. Macedonia)
    - o Bio diesel factory (Ilinden)
    - o Truck Loading Terminal for TNG (Miladinovci, Gostivar, N. Macedonia)
    - o TNG bottles Loading Facility (Miladinovci, N. Macedonia)

Company Name:	**METANOLSKO-SIRĆETNI KOMPLEKS a.d. Kikinda, Serbia**
Project Name:	SCADA and Web application Maintenance
Number of Contract (Date):	1. Nº 4500009455 (28.05.2019.) 2. Nº 4500009776 (23.08.2019.) 3. Nº 4500009944 (17.10.2019.)
Year(s):	2019
Contact Information:	Saša Francuski +381 62 8005759

Description of work:
Maintenance of Industrial SCADA system and associated Web Applications in methanol and acetic acid production factory MSK which includes:
- OPC UA data connection with process stations to SIO Server.
- OPC UA data connection from radar system PC (ENRAF) to SIO Server.
- Integration, connecting and recording data transmission to SIO Server.

Company Name:	**SIEMENS a.d. Beograd, Serbia**
Project Name:	Refurbishment of Track Loading Bays in RNP (MES adaptation)
Number of Contract (Date):	Nº 16957/19 (05.09.2019.)
Year(s):	2019-2020
Contact Information:	Marjan Dimitrijević +381 60 8170211

Description of work:
MES-PA system changes (technological part) due to refurbishment of 8 loading bays (communication and technological equipment changes) on the Truck Loading site for Oil and derivatives in RNP, Pancevo.

Company Name:	**OGRANAK YOKOGAWA EUROPE BRANCHES Belgrade, Serbia**
Project Name:	Integration of 4 new loading places on Rail into MES-PA (InfoMES) for data provision on MES-SOTEICA interface in RNP, Pancevo
Reference Number (Date):	200816 (08.2020.)
Year(s):	2020
Contact Information:	Vladimir Dangubić +381 62 266478

Description of work:
Integration of 4 new loading places on Rail branch B into system MES-PA (infoMES) for data provision on MES-SOTEICA interface (Balancing system):
- Batch DL8000 hardware network integration into existing MES-PAPIS/Rail server on Train terminal
- Update of MES-PA system (software and technical documentation)

Company Name:	**BOFFETTI SPA, Italy**
Project Name:	Integration of Coke Handling System Auto terminals in the MES system in RNP, Pancevo
Reference Number (Date):	20200127.1 (01.2020.)
Year(s):	2020
Contact Information:	Andrea Brambilla +39 348 7554782

Integration of the coke shipment auto terminal into the MES system at the Pancevo Oil Refinery for two loading points.

Integration consists of three parts:

- Software changes in the MES system
- Implementation of hardware network infrastructure to connect MES and the Coke Handling System
- Software integration of the MES and the Coke Handling System

Software changes in the MES system

- Below are listed required changes in the MES system:
- Configuration of the MES Central SCADA Server
- Extension of the MES Historian
- Extension of MES Monitoring Application
- Extension of MES system with two loading places
- Implementing algorithms that are specific to Coke loading orders
- Generation of Coke specific reports

Company Name:	**BALTICO d.o.o. Belgrade, Serbia**
Project Name:	Training course for OMICRON IEDScout and StationScout
Reference Numbers (Date):	PK-20-3017-0021, PK-20-3017-0023 (11.2020.)
Year(s):	2020
Contact Information:	Aleksandar Jovičić +381 65 3446289

Description of work:
Training course for OMICRON IEDScout and StationScout with basic training for IEC 61850 standard for Serbian Power Distribution Company and TSO "Elektromreza Srbije".

Company Name:	**OGRANAK YOKOGAWA EUROPE BRANCHES Belgrade, Serbia**
Project Name:	Integration of goods quality data into MES-PA in RNP, Pancevo
Reference Number (Date):	PK-20-3015-0018 (08.2020.)
Year(s):	2020
Contact Information:	Vladimir Dangubić +381 62 266478

Description of work:
MES-PA system update according to requirement to integrate quality data related to water percentage in Oil coke:
- Development of new interface Laboratory Informational system <> MES-PA
- Data integration: new conversion algorithms, data rerouting to SAP interface, SOTEICA interface update, Reports and Load Order documents generator update

Company Name:	**BALTICO d.o.o. Belgrade, Serbia**
Project Name:	Training course for OMICRON IEDScout and StationScout
Reference Numbers (Date):	PK-21-3017-0001 (01.2021.)
Year(s):	2021
Contact Information:	Aleksandar Jovičić +381 65 3446289

Description of work:
Two days training course for OMICRON IEDScout and StationScout with basic training for IEC 61850 standard for Serbian Power Distribution Company.

Company Name:	**SIEMENS d.o.o. Belgrade, Serbia**
Project Name:	Expert training course for application aspects of IEC 61850 and Principles and settings of relay protection devices
Reference Numbers (Date):	PK-21-3020-0004, PK-21-3020-0005 (02.2021.)
Year(s):	2021
Contact Information:	Milorad Jovičić +381 60 8170 237

Description of work:
Four days expert training course for application aspect of IEC 61850 with focus on SIEMENS portfolio and Principles and settings of relay protection devices for Montenegro Power Transmission company "CGES" and Serbian Power Transmission Company "Elektromreza Srbije".

Company Name:	**SIEMENS d.o.o. Belgrade, Serbia**
Project Name:	Expert training course for application aspects of IEC 61850
Reference Numbers (Date):	PK-21-3020-0007, PK-21-3020-0008 (06.2021.)
Year(s):	2021
Contact Information:	Milorad Jovičić +381 60 8170 237

Description of work:
Two days expert training course for application aspect of IEC 61850 with focus on SIEMENS portfolio for Serbian distribution company "EPS".

Company Name:	**SIEMENS d.o.o. Belgrade, Serbia**
Project Name:	Training course for SCADA System – SICAM PAS and SCC
Reference Numbers (Date):	PK-21-3020-0011 (09.2021.)
Year(s):	2021
Contact Information:	Nikola Čolović +381 60 8170 063

Description of work:
Ten days hands-on training course related to SCADA system SICAM PAS and SCC (hardware, software, communication protocols IEC 60870-5-101, 103, 104, SNMP, IEC 61850-8-1, testing, deployment etc), for Serbian Power Transmission Company "Elektromreza Srbije".

Company Name:	**Roaming Smart Solutions d.o.o. Belgrade, Serbia**
Project Name:	Custom development of software solution for XML to Modbus conversion
Reference Numbers (Date):	PK-21-3023-0010 (10.2021.)
Year(s):	2021
Contact Information:	Lazar Cvetković +381 66 814 88 72

Description of work:
Development and deployment of custom-made software solution for XML to Modbus conversion in Airport Nikola Tesla extension project.

Company Name:	**NIS, Pančevo, Serbia**
Project Name:	Maintenance and extension of MES-PA in RNP
o Number of Contract (Date):	WN111000/UD-RA/10383/2021
Year(s):	2022
Contact Information:	Dušica Vučićević +381 64 8884075; Zoran Veselinovski +381 64 8884093

Description of work:
MES system extension and maintenance (24/7 service support)

- Business applications (SAP interface, LIMS interface, Commercial orders, Code books, Reports, generation of in/out documentation etc.):
    - o Software updates related to State Law regulations
    - o Software updates as per user requests (process optimization, new functionalities)

- Technology applications (execution of commercial orders through technological orders, Traffic, automatic scale, TIS interface, implementation of communication protocols in accordance with bay equipment (PLC/DCS/flow computers, scales, etc), data processing for balancing, central and field MES-SCADA stations):
    - o Software updates as per user requests (process optimization, new functionalities)
    - o Software changes and new software module implementation initiated by refurbishment and/or changes in technological equipment on loading/unloading sites

Company Name:	**ACE, Pančevo, Serbia**
Project Name:	Crude Oil unloading system upgrade
Number of Contract (Date):	U-22-3208-0001 (24.05.2022.)
Year(s):	2022
Contact Information:	Dušica Vučićević +381 64 8884075; Zoran Veselinovski +381 64 8884093

Description of work:
Connection and integration of process Skids with Flow Computers and other MES system equipment.
Realisation of electrical order for Crude Oil truck unloading on two unload bays (order download/upload to DL8000 for fluid custody transfer).
Realisation of Crude Oil unloading by usage of Flow computer as primary and by usage of Scale as secondary option.

Company Name:	**NIS, Pančevo, Serbia**
Project Name:	MES PA HMI client for Coke Handling System Auto terminals in RNP, Pancevo
Reference Number (Date):	---
Year(s):	2022
Contact Information:	Dušica Vučićević +381 64 8884075

Delivery of operating workstation, and communication equpment for integration
Implementation of MES PA HMI client for Coke Handling System Auto terminals.

Company Name:	**CIP d.o.o. Belgrade, Serbia**
Project Name:	Consulting support for Digital substation project Pancevo 1 (EMS, Serbia)
Reference Numbers (Date):	PK-22-3033-0009 (06.2022.)
Year(s):	2022-2023
Contact Information:	Radomir Dimitrijević +381 65 8410 986

Description of work:
Consulting support related to – digital substation concept, automation system modeling, other technical inquiries with regards to IEC 61850 standard.
Tender documentation and offer evaluation, technical commenting
Testing and FAT&SAT witnessing

Company Name:	**NIS, Pančevo, Serbia**
Project Name:	MES PA HMI client for Crude Oil Unload System Auto terminals in RNP, Pancevo
Reference Number (Date):	---
Year(s):	2023
Contact Information:	Dušica Vučićević +381 64 8884075

Implementation of MES PA HMI client for Crude Oil Unload System Auto terminals.

Company Name:	**NIS, Pančevo, Serbia**
Project Name:	Maintenance and extension of MES-PA in RNP
Number of Contract (Date):	NN-042700/UD-RA/04276/2023
Year(s):	2023
Contact Information:	Dušica Vučićević +381 64 8884075; Zoran Veselinovski +381 64 8884093

Description of work:
MES system extension and maintenance (24/7 service support)
- Business applications (SAP interface, LIMS interface, Commercial orders, Code books, Reports, generation of in/out documentation etc.):
  - o Software updates related to State Law regulations
  - o Software updates as per user requests (process optimization, new functionalities)

- Technology applications (execution of commercial orders through technological orders, Traffic, automatic scale, TIS interface, implementation of communication protocols in accordance with bay equipment (PLC/DCS/flow computers, scales, etc), data processing for balancing, central and field MES-SCADA stations):
  - o Software updates as per user requests (process optimization, new functionalities)
  - o Software changes and new software module implementation initiated by refurbishment and/or changes in technological equipment on loading/unloading sites

Company Name:	**UCA International Users Group, Shell Knob, Missouri, USA**
Project Name:	IEC 61850 LAB and conformance test accreditor
Reference Numbers (Date):	---
Year(s):	2023
Contact Information:	Herbert Falk +1-248-846-8017

Description of work:
IEC 61850 Testing Laboratory and conformance test accreditor

Company Name:	**SIEMENS ENERGY doo, Belgrade, Serbia**
Project Name:	Extension of MES-PA for Additives and Markers in RNP
Number of Contract (Date):	1524/23
Year(s):	2023
Contact Information:	Vladimir Šutić +381 64 8884075

Description of work:
- Configuration and commissioning of MES-PA-PIS/Auto communication – Extension for Additivities and Marking
- Configuration and commissioning of MES-PA-DS (Data Server on Cluster) – Extension for Additivities and Marking
- Application programs for MES-PA-Proxy server – Tags for PHD
- Module MES-PA-EIS.MatB (Interface/output for MES data for material balancing)
- Modification of existing MES-PA modules
- New MES modules integration
- MES Client for marking supervision
- Generation of shipping documentation for Auto terminal
- Reports
- MES interfaces for integration with Level 3 Marking software
- User manual
- As-built project
- Integration of Level 3 Marking and Interfaces

Company Name:	**PROINTEGRIS Zagreb, Croatia**
Project Name:	Consulting support for IEC 61850
Reference Numbers (Date):	PK-22-3044-0006 (12.2023.)
Year(s):	2023
Contact Information:	Goran Pregrad +385 98 423 424

Description of work:
Consulting support related to:
- Improvement of the development process for software tools for IEC 61850 systems
- Preparation of specifications and use cases for software solutions
- Testing of existing software tools as well as those under development
- Development of generalized test procedures for testing IEC 61850 systems
- Development of project solutions for IEC 61850 systems
- Development of support services related to IEC 61850 systems
- Other technical issues within the scope of the IEC 61850 standard
- General engineering and technical support

Company Name:	**NIS, Pančevo, Serbia**
Project Name:	MES PA system upgrade in RNP, Pancevo
Reference Number (Date):	NM_042700/UD-RA/03451-2024
Year(s):	2024
Contact Information:	Dejan Broš +381 64 8453 986

Upgrade of hardware and software of MES PA system including:
- Complete overhaul of the hardware infrastructure (servers, storage, Ethernet switches, and router)
- Deployment of a new architecture (private cloud solution)
- Configuration, deployment, and reintegration of LINN TMS with existing business and technological systems

Company Name:	**Indas Automation doo, Novi Sad, Serbia**
Project Name:	Extension of MES-PA for Additives and Markers in RNP
Number of Contract (Date):	1A17-2434 (03.2024.)
Year(s):	2024
Contact Information:	Aleksandar Mijić +381 63 109 0598

Description of work:
- Configuration and commissioning of MES-PA-PIS/Auto communication – Extension for Additivities and Marking
- Configuration and commissioning of MES-PA-DS (Data Server on Cluster) – Extension for Additivities and Marking
- Application programs for MES-PA-Proxy server – Tags for PHD
- Module MES-PA-EIS.MatB (Interface/output for MES data for material balancing)
- Modification of existing MES-PA modules
- New MES modules integration

- MES Client for marking supervision
- Generation of shipping documentation for Auto terminal
- Reports
- MES interfaces for integration with Level 3 Marking software
- User manual
- As-built project
- Integration of Level 3 Marking and Interfaces

Company Name:	**NETICO d.o.o. Niš, Serbia**
Project Name:	Training course for IEC 61850 standard
Reference Numbers (Date):	PK-24-3046-0002 (03.2024.)
Year(s):	2024
Contact Information:	Miodrag Stojanović +381 64 8931 817

Description of work:
Two days hands-on training course related to IEC 61850 standard (Introduction, Modeling and services, SCL language and engineering of the system, Process bus, Testing, Certification process)

Company Name:	**ELEKTROZAPAD d.o.o. Belgrade, Serbia**
Project Name:	Parametrization of relay protection and automation systems for Substation 400/110kV Bor 6 (EMS, Serbia)
Reference Numbers (Date):	PK-24-3049-0005 (06.2024.)
Year(s):	2024
Contact Information:	Miloš Savić +381 65 8410 986

Description of work:
The protection and control system in the mentioned substation is a hybrid digital system with a process communication network that features full communication redundancy. It is implemented using technologies in accordance with the SRPS EN 61850 standard.
Configuration of the protection and control devices as well as the accompanying communication systems in accordance with the requirements of the transmission system operator, including:

- Configuration of individual SIPROTEC 5 devices as well as the associated busbar protection system on both voltage levels.
- Configuration of individual ABB protection relay devices.
- Parameterization of the redundant SICAM PAS system in accordance with first two bullets.
- Integration of new signals into the SCADA system (SICAM SCC software).
- Creation of the necessary graphical representations in the SCADA system.
- Parameterization of all communication network elements (including associated Ethernet switches, RedBox devices, time servers, etc.).

Company Name:	**ENEDIS, France**
Project Name:	Support on IEC 61850 for future PACS

Reference Numbers (Date):	PK-24-3048-0004 (06.2024.)
Year(s):	2024
Contact Information:	Christophe Camélis +33 6 99 82 46 66

Description of work:
- Development of IEC 61850 based functional descriptions, i.e. development of an IEC 61850 data model that is representing substation PACS functions (using ENEDIS tools/licences e.g. Enterprise Architect with EDF Modsarus plugin). This includes generation of SCL specific files (ISD, SSD…).
- Development of use-cases for extension or proposal for new IEC 61850 LNs and their presentation at TC57 WG10 User Feedback Taskforce meetings. This is for those cases where gaps are found between the ENEDIS data model and the IEC 61850 data model.
- Other technical issues related to the IEC 61850 Standard.