

PP9CONTROLL

TECHNOLOGIES UNDER CONTROL



Assessment of the Company's Overall Development in 2018

PPA CONTROLL group activity in 2018 could be briefly described as a successful effort to stabilize the existing positions on the domestic market and a significant development of our business activities abroad. The completion of the nuclear power plant Mochovce, blocks 3 and 4, continuous services and deliveries for the petrochemical and automotive industry provided by PPA ENERGO s.r.o. were the traditional areas of our activities. The works on the fusion reactor within the ITER project, the nuclear plant Doel Belgium have started, we have widened the services for Samsung, we have continued on the work for Jaguar Land Rover, we have launched the works on the Fortischem carbide furnace No. 1, etc.

PPA INŽINIERING, s.r.o. as the EPC supplier has fully started the works and deliveries on the 1st block of the FELTON thermal power plant reconstruction, they continued with the activities for the highway and road programme, they have acquired an important contract for Martinská teplárenská, they have executed the contract for the production factory of Minebea mechatronic drives.

PPA Power DS s.r.o. has recorded the increase in turnover for the management and maintenance of the objects by 88%, they have taken up for the management several new halls within the D1 Senec industrial park, they continued with the construction of the new underground services, they have extended the management for ZF Slovakia with the Šahy factory, they have acquired a new distribution network HC Plaza Bratislava and they have extended MDS Nitra.

Other companies have also contributed to the good economic results of the group, namely PPA TRADE, spol. s.r.o. by their successful business with components and spare parts for the power engineering and the industry, as well as FTV3 s.r.o., the operator of the photovoltaic power plants.



Expected future development of the company

PPA CONTROLL group is commercially well-prepared for the next period. The contracts in the amount of approximately 150 million Euros were concluded and will be executed in 2019. These are the projects and deliveries in our stable and traditional areas as the nuclear energy industry, classical energy industry and deliveries for the industry. The ongoing Felton project execution will reflect to the increase in overall performance, together with the promising starting activities in Hungary, continuing works on the nuclear fusion reactor in France, as well as the above-mentioned important contracts in the areas of power engineering industry, thermal economy and industry here in Slovakia. The development activities in the management of energy networks, prepared acquisition and expansion of the PPA CONTROLL group production programme, dynamizing cooperation with the selected important customers on the Slovak market and the cooperation with Russian and Czech partners should also positively reflect in the company results in next two years. We would like to stay active in the Latin America sector in the medium-term horizon.

> Ing. Bystrík Berthoty Managing Director





General Information about the Company

Legal identity	
Business name:	PPA CONTROLL, a. s.
Registered office:	Vajnorská 137
	830 00 Bratislava
Legal form:	joint-stock company
Company ID:	17 055 164
VAT Reg. No.:	SK2020459078
Date of incorporation:	September 2, 1991
Stock capital:	€ 1,052,008

The Company is incorporated in the Bratislava 1 District Court Commercial Register Section Sa, Insert No. 159/B

Corporate Philosophy

As a engineering and supply company in the field of electric systems, instrumentation, control and process automation we can look back at over 65 years of success, while currently being in a stable financial position. Furthermore, we would like to continue providing our partners with full, professional services of the highest guality and optimal solutions to help them streamline their operations and raise competitiveness. We are creating a stable environment for our staff that encourages professional and personal growth. Our main goal is for the company to achieve sustainable growth and strengthen its stable position in the domestic and international market.

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The Company's basic Values

- The Company endeavours to ensure that all its employees develop their personal efforts aimed at achieving success together while proceeding based on the following fundamental values:
- Customer needs, expectations and satisfaction are paramount
- Negotiating in a professional and accommodating
- manner and providing services at the maximum level of quality
- Developing skills and professional growth of our employees Transparency, honesty and integrity
- Compliance with legal and normative requirements,
- responsible quality and safety management,
- environmentally friendly approach

Company Milestones and History

- ZPA-DP Praha (Prague Industrial Automation 1951 and Supply Company Works) founded
- Branch office in Bratislava (ZPA-OZ) founded 1969
- Elektromont, k.p. founded in Bratislava with the merger 1985 of ZPA-OZ and Elektromontážne závody Bratislava (Bratislava Electro Plants)
- Elektromont, s.p. in Prague and its suppliers throughout 1990 the ČSFR liquidated and PPA, š.p. founded in Bratislava
- PPA CONTROLL, a.s. established 1991
 - Received certificate of quality under STN EN ISO 9001
- Received certificate of integrated management system 2013 under ISO 14001 – Environmental Management and OHSAS 18001 – Occupational Health and Safety
 - acquiring the Safety Management System Certificate according to the SCC^P: 2011 standard



Line of Business

Studies, designs, deliveries, installation, commissioning and services in the areas of:

Instrumentation and Control Systems

- · Measuring temperatures, loops of pressures, pressure differences, flows, levels, displacements and other physical variables
- Special measurements, detection of toxic combustion gases, environmental measurements
- · Systems for analyzing liquids and gases
- Control valves and actuators
- Regulators and evaluation systems
- Connections to control and LV systems

Automated Control Systems

- Control systems for technological processes (DCS and PLC systems)
- Building control systems
- Systems for collecting and evaluating energy information
- Process analysis and creation of user software
- Commissioning of technologies and optimization
- System integration
- Visualization and operator control of technological processes

Electrical Systems

- LV and HV underground cable lines
- LV, HV and UHV transformer and substation
- LV cabling
- Power protection
- Building cabling
- Weak current systems (fire, intrusion, CCTV, etc.)
- Parking systems
- Voice communication
- Search and repair the faults of LV power cables (wirina)
- Search and location the ground electrical and communication lines

Switchboard Production

- 0.4 kV LV SMO switchboard (Rittal, Sarel, Profiline, Schrack enclosure)
- 0.4 kV LV switchboard for nuclear power plant conditions (SMO-S, SBO, NRS-S)
- RVB modular switchboard with withdrawable blocks (Logstrup boxes)
- System switchboards for control systems, servers and PC
- Switchboards for industrial and data communications
- Power-factor correction switchboard
- Wall-mounted NRS and NRS-P switchboard
- Control room panels and racks
- Road signs

Information and Telecommunication Systems

- Integrated light-current distributors
- Data LAN, MAN and WAN networks
- Cisco solutions
- Structured metalic and optic fiber cabling systems
- Data centers
- Search and repair the faults of communication metallic and fiber optic cables

Technological Equipment for Motorways and Tunnels

- Supply of electric power for tunnels HV, LV, UPS, backup sources
- Tunnel lighting
- Tunnel ventilation
- Tunnel radio
- Radio connection in tunnels
- Measuring of physical variables in tunnels
- Emergency call telephones
- Measuring meteorological variables



- Traffic monitoring systems
- Traffic management systems variable traffic signs, traffic control systems
- Security systems rooms (fire alarm system, electrical security system, CCTV, voice alarm control)
- Technology control systems
- Integration of individual technological devices
- Operator station control
- LED variable traffic signs exclusive representation of the DMV manufacturer

Energy Outsourcing

- Managing power distribution and equipment
- Maintenance, repair, servicing, technical inspection and testing of electrical equipment
- Measuring and monitoring of electric power
- Supply and distribution of electricity and optimizing electric power consumption
- Audits

• foul water drainage and storm sewers

Comprehensive Industrial Site Management

Management and administration reports

- Preparing and reviewing budgets, records of costs and management processes, coordination of suppliers
- quantities AC/DC
- Infrared measurements

Technical management

- Servicing, maintenance and repairs of technical facilities
- Expert inspections and technical testing of classified
- technical equipment:
- electrical
- gas
- pressure

Non-technical site management

 Waste management, road maintenance, green maintenance, cleaning, guard service

Construction and Development of Infrastructure in D1 Park Senec

- roads HV and LV power lines
- gas pipeline
- water pipeline

Operation and Maintenance

- Warranty and post-warranty service and
 - maintenance of all supplied systems and equipment
- Calibrations and repairs of physical and chemical
 - measurement systems
- Calibration of temperatures, pressures and electrical



CORPORATE SOCIAL RESPONSIBILITY

Within their business activities, all the companies in the PPA CONTROLL Group follow the principles of corporate social responsibility, which in practice means that they voluntarily integrate social, economic, and ecological values into their day-to-day corporate activities both externally as concerns their business partners and internally as concerns their employees. The implementation of the principles of corporate social responsibility beyond the framework required by relevant legislation is reflected in the fact that the companies of the PPA CONTROLL Group put an emphasis on transparency, fight against corruption and bribery, innovativeness and sustainability of their growth, minimization of environmental impacts, and responsible waste management within their business activities. In the area of social care, priorities include measures safeguarding occupational health and safety of employees, non-discriminatory behaviour, equal opportunities and, last but not least, corporate philanthropy.

Quality Management System

PPA CONTROLL, a.s. and its subsidiaries successfully completed a re-certification audit in 2018, which was associated with the transition to a new quality management system standard according to EN ISO 9001: 2015. It has been confirmed that certified companies have thoroughly implemented the requirements of the said standard within their processes and have been working to improve the guality management system on a continuous basis.

Results of assessment of efficiency of the quality management system and results of identification of opportunities, risks, and internal and external factors are used within long-term planning, product/service innovations, and improvement of quality of supplied products and services.

In particular, an emphasis has been put on safeguarding continuing satisfaction and full-scale fulfilment of needs and expectations of customers, employees, and other stakeholders.

Safety Management System According to OHSAS 18001 and SCC, Environmental Management System According to ISO 14001

Activities of the PPA CONTROLL, a.s. company and its subsidiaries focus on creation of a suitable infrastructure and better working conditions, achievement of a high

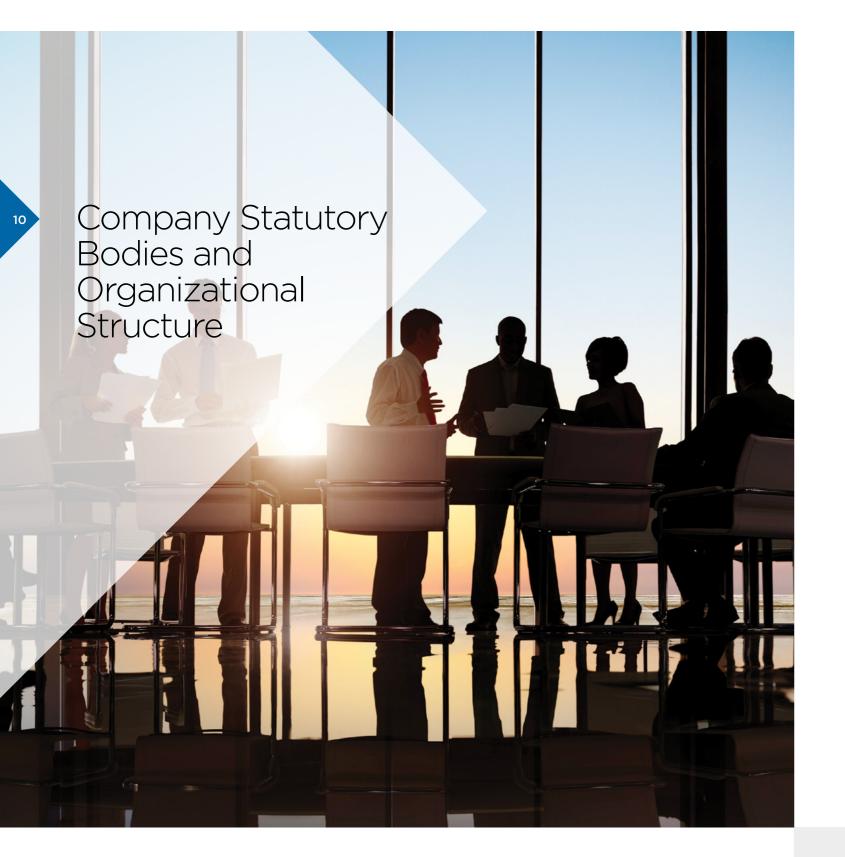


level of safety culture, fulfilment of specific requirements associated with safety, working environment, health protection, environmental protection, and efficient functioning of relevant management systems.

Application of individual systems and the communication concerning their importance and related requirements are carried out with the aim to increase awareness of employees and contractors' employees as to environmental, safety, and occupational (HSE) risks and subsequently, to integrate their HSE behaviour into everyday work activities.

We educate employees on a continuous basis and discuss openly potential unwanted situations/incidents, risks, and opportunities to enhance their understanding of own responsibility, personal obligations, and desirable contribution towards safety, protection of health, protection of working environment, and environmental protection.

TECHNOLOGIES UNDER CONTROL



Executive Board

Ing. Bystrík Berthoty, Chairman

Born August 9, 1965 and a graduate of the University of Economics in Bratislava. He joined the Company in 1999. At present, he has been Managing Director since 2012 and Chairman of the Executive Board since 2015

Ing. Ladislav Ondriš, Vice Chairman

Born November 22, 1956 and a graduate of the University of Economics in Bratislava. Between 1999 and 2014 he was Chairman of the Supervisory Board. He has been Vice Chairman of the Executive Board since 2015.

Supervisory Board

Mgr. Darina Pavlů, MBA, Chairman

Born December 14, 1981. She graduated from the Faculty of Law, Comenius University in Bratislava, and in Business Administration, EADA Business School in Barcelona. She has been holding the office of Chairman of the Supervisory Board since 2018.

Ing. Karol Pavlů, Vice Chairman

Born December 19, 1941. Graduate of the University of Economics in Bratislava. . In the past, he held offices in several bodies of the Company: chairman of the Supervisory Board (since 1991), vice-chairman of the Executive Board (since 1996), vice-chairman of the Supervisory Board (since 2002), and chairman of the Supervisory Board (since 2014). He has been holding the office of Vice Chairman of the Supervisory Board since 2018.

Ing. Zoltán Lovász, Member

Born April 18, 1969 and a graduate of the Slovak University of Technology in Bratislava. He joined the Company in 1999. He was appointed to his current position of Director at PPA ENERGO s.r.o. in 2009. He became a member of the Executive Board in 2012.

Ing. Marián Kolenčík, Member

Born September 19, 1967 and a graduate of the Slovak University of Technology in Bratislava. He joined the Company in 1990. He was appointed to his current position of Director at PPA INŽINIERING, s.r.o. and became a member of the Executive Board in 2013.

PhDr. Darina Pavlů, Member

Born June 4, 1946 and a graduate of the Faculty of Philosophy at Comenius University in Bratislava. She was a member of the Supervisory Board since 2005, the vicechairman of the Supervisory Board since 2012, and since 2018, she has been a member of the Supervisory Board.

Ing. Mgr. Tibor Gregor, Member

Born June 29, 1971 and a graduate of the Faculty of Technical Cybernetics at the Military Academy in Liptovský Mikuláš and the Faculty of Management at Comenius University in Bratislava. He became a member of the Supervisory Board in 2011.

TECHNOLOGIES UNDER CONTROL INSTRUMENTATION AND AUTOMATION PP9CONTROLL



Senior Management

Ing. Bystrík Berthoty Managing Director

Ing. Erik Vicena Deputy CEO for Business Affairs

Ing. Marta Kramárová Finance Director

Ing. Milan Michalík Commercial Director

RNDr. Viera Cehláriková Management Systems Director

RNDr. Valéria Kormanová Human Resources Director

JUDr. Marek Jurina In-house Legal Counsel

Subsidiary Company Management

PPA ENERGO s.r.o.

Ing. Zoltán Lovász Executive Director

Ing. Katarína Krchnáková Finance and Human Resources Director

Ing. Peter Broškovič Technical Director

Ing. Peter Spilý Commercial Director

Ing. Peter Špaňo/Ing. Vladimír Malátek Production Director

PPA INŽINIERING, s.r.o.

Ing. Marián Kolenčík Executive Director

Ing. Igor Jamnický Director of Traffic Technology Department

Ing. Karol Letko Foreign Engagement Director

Kvetoslava Smejová Finance and Human Resources Director

Ing. Roderik Gröne Assembly Director

PPA Power DS s. r. o.

Ing. Roman Nemček Executive Director

Peter Hatina Director of Facility Management Department

Ing. Michal Kolimár Director of Energy Distribution Department

Ing. Eva Turňová Director of Economic Department

PPA Power s.r.o.

Ing. Roman Nemček Executive Director

PPA TRADE, spol. s r.o.

Ing. Peter Gašparových Executive Director

PPA SLAVUTIČ KYJEV. s.r.o.

Ing. Peter Gašparových **Executive Director**

PPA CONTROLL CZ. a.s.

Ing. Milan Michalík Executive Director

PPA RUS, s.r.o.

Mgr. Jaroslava Glutová Executive Director

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Structure of Employees

The companies of the PPA CONTROLL Group employed 768 employees as at 31 December 2018. The fluctuation rate in the Company does not exceed sound limits that are deep below the average rate in the Slovak Republic. The Employee Stability Index increased to 63% in 2018 (the percentage of employees working with us for over 5 years out of the total number of employees). Out of the total number of employees, men account for 83% and women account for 17%. The average age in the company is 45 years.

Development of Employees

Development of employees, support for their education, and enhancement of their technical and linguistic skills are the areas to which we have been paying attention on a continuous basis. In 2018, we continued the successful project entitled Management Academy while focusing on enhancement of managerial competencies of the middle management and targeted development of sales staff and we launched the Leadership Program for the TOP management of the Company.

In 2018 the company invested EUR 242,396 in staff training, which represents EUR 319 per employee on average. The PPA CONTROLL, a.s. company appreciates the loyalty of its employees and puts an emphasis on the care and stabilization of its employees in a long run and this not only through financial remuneration but also through a system of benefits, support for healthy lifestyle, sport, regeneration and by granting awards for innovative ideas and initiatives. The PPA CONTROLL, a.s. company has been active in the area of personnel marketing focusing on secondary schools and universities. We have been developing cooperation with secondary schools focusing on electrical engineering and tertiary education institutions in various areas of engineering, offering them excursions, practical training programs, internships, and consultations concerning bachelor and diploma theses.



















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Number of employees in PPA CONTROLL group

Number of employees by Education

	2017	2018	% 2018
Primary	6	7	1 %
Secondary	434	424	55 %
University	324	337	44 %
Total	764	798	100 %

Number of employees by Age

	18-29	30-39	40-49	50-59	Over 59	Average Age
017	102	183	202	202	75	44
)18	86	190	210	208	74	45

Number of employees by Gender

	2017	2018
Women	124	133
Men	640	635
Total	764	768

Employee structure by Professions

	2016	2017	2018	% 2018
Management	26	26	24	3%
ales and Procurement	79	74	68	9%
Project management	32	35	46	6%
esigners, programmers	155	140	149	19%
Administration	77	82	85	11%
Technicians	153	162	155	20%
Assembly workers	213	197	228	30%
Others	53	48	13	2%
Total	788	764	768	100%

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ENERGY

Slovenské elektrárne a.s. Bratislava,

Jaslovské Bohunice Nuclear Power Plant

V-2 Nuclear Power Plant Units 3 and 4

- Replacing existing emergency arc protection systems in substations at NPP V-2 Units 3 and 4, the Pečeňady Central Filtration Station and the Trnava Exchanger Station
- Replacement of accumulator batteries used to supply safety systems of V-2 NPP (system installations that ensure liquidation of primary circuit accidents and reactor aftercooling) - design documentation, assembly, testing and commissioning (as subcontractor of EnerSys)
- Ensuring data collection from electricity meters (billing measurements) of V2 reserve power supply, processing and display thereof in workplaces of SE, a. s., ZSD, a. s.
- Water alarm completion in selected rooms in the basement of building structures of V2 Blocks 3 and 4 - execution of the electrical part and assembly of Inspection and Control System (ICS) facilities – (as subcontractor of VUJE)
- Overhaul of visualization PCs and the central server in the Diesel Generator Station
- Replacement of 0.4 kV ARV circuit breakers during GOs in Bohunice NPP in 2018 and 2019 - supply of circuit breakers and related documentation, work on replacement of circuit breakers during GOs, tests, approved documentation, training
- Replacement of batteries 1.2EE04, 14, 05 and a diesel generator station (a subcontract for EnerSys s.r.o.)
- Implementation of projects involving modifications of electrical parts and the ICS of V2, units 3 and 4

• Reactive Power Measurement TG31, 32, 41, 42 Cancellation of the auto mode for the adjusting valve on the bypass of the Condensate Treatment Plant · Assistance during technical inspections and technical tests (TIs and TTs) and other related inspection activities on electrical equipment and the ICS during GOs of units of Bohunice NPP in 2018 • Software modifications, updates, and engineering support, phone support in case of failures of the technology computer system (TCS) and corrective maintenance of the TCS hardware at the Bohunice Nuclear Power Plant

• Replacement of drawer cabinets at cooling towers • Expansion of the existing TCS at Bohunice NPP, units 3 and 4 - connection of the existing system to the autonomous system within implementation of the project IPR EBO 10404 ELEKTROKOTOL EBO -NEW STEAM SUPPLY SOURCE - modification of the visualization application, including new fragments, modification of archiving servers, supply of SW components (a subcontract for SAT AUTOMATION)



PP9 CONTROLL TECHNOLOGIES UNDER CONTROL INSTRUMENTATION AND AUTOMATION



Mochovce Nuclear Power Plant

Mochovce NPP Units 1 and 2

- Severe accident management I&C and electric systems (as subcontractor of VUJE) for the following subprojects:
- Long-term heat removal from the hermetic zone
 including modification of the outlets for flooding the
 hermetic zone
- Seismic review of the Civil Defence Installation under the Administrative Building (Emergency Control Center). Execution of the electrical part and the ICS (subcontract for Metrostav, a. s.)
- Water alarm completion in selected rooms in the basement of building structures of Blocks 1 and 2 of the Mochovce nuclear power plant – subcontract for VUJE
- Execution of expert inspections and tests of electrical equipment during GOs of unit 1 of the Mochovce Nuclear Power Plant
- Reconstruction of protective systems of TGs in units 1 and 2 - Partial replacement of the reliable protective system (RPS) at the Mochovce Nuclear Power Plant
- Diagnostics and servicing of electrical condensate traps for SE-EMO (Slovenské elektrárne - Mochovce NPP)

Completion of Units 3 and 4 at Mochovce NPP

- Design and engineering activities
- for Nuclear Island
- for Conventional Island project documentation, verification of documentation at the site
- NPP own consumption equipment 6 kV busducts, 6/0.4 kV transformers, 6 kV own consumption

switchboards, 0.4 kV switchboards, 0.4 kV motor control centres, Emergency power supply system of category 1 (rectifiers, converters, inverters, batteries and UPS), Control and Diagnostic System of Power Dispatching of central electrical control room, protections of generator and power transmission control system and protections of 110 kV back-up power substation – production of 0.4 kV switchboards, equipment supply, engineering, installation and commissioning

- Complete training in electrical equipment
- Renovation, improvement and completion of main facilities/buildings and external surface finishes

 electrical part - design, supply, installation and commissioning
- Main reactor building installation of electrical wiring for building part
- Supply and installation of cables for reactor protection system (RRCS) as subcontractor of Škoda JS a.s.
- Supply and installation of selected parts of I&C and electric systems for Nuclear Island – main cable routes, sensors of technological parameters, sample system for sensors of technological parameters, hermetical pipe penetrations, hermetical cable penetrations, cabling, chemical analyzers – engineering, supply, installation and commissioning
- Supply and installation of switchboards powering the EXCORE system
- I&C, safety systems and operational management systems – installation and assistance during commissioning (as subcontractor of AREVA NP - control system supplier)
- Interim power supply of pumps of after-installation cleaning operations (as subcontractor of Enseco)

- Delivery and installation of secondary cable routes for the PERIS system (subcontract for VUEZ)
- Delivery and installation of secondary cable routes for INCORE and BORON systems (subcontract for VUJE)
- Delivery of new field instrumentation equipment and upgrading of the existing sensors and converters
- Installation of switchboards and nuclear sensors for Rolls-Royce Civil Nuclear SAS
- Technical activities within cabling installation work
 performed by inspection engineers
- Dismantling of external and internal temporary HV and LV electrical equipment and electrical wiring during finishing works on Mochovce NPP, units 3 and 4
- Completion of electrical components within the structure "High pressure compressor station"
- Verification and required modifications of documentations concerning 8BJE85, 8BNK86, 8BNL86, and 8BNM86 switchboards. Incorporation of all modifications of switchboards executed in order to comply with valid technical standards.
- Correction and revision of calculations regarding the power cable
- Correction of switchboard signalling
- Demarcation of secondary cable routes
- New marking of existing cable routes and relocation of cables
- Engineering activities Electrical wiring diagrams
- Replacement of ABB circuit breakers by Schneider Electric circuit breakers, inspections, individual tests

figure on the left: NPP Mochovce

Nováky Power Plant

 Reconstruction of the 110kV substation -Development of automated data collection from newly established measuring points

Trenčín Hydroelectric Power Plant

- General overhaul of the automated systems and accessories of the TG1 turbine, Kráľová Hydroelectric Power Plant - electro part
- Compensation of self-consumption power factor -Ružín HPP - PSHPP (a pumped storage hydro power plant), Veľké Kozmálovce SHPS (a small hydroelectric power station), Mikšová HPP, Horná Streda HPP, Kostolná HPP, Hričov HPP, Nové Mesto nad Váhom HPP
- Office building in Trenčín installation of a lightning conductor system



Jadrová a vyraďovacia spoločnosť a.s. Bratislava

- The Bohunice V-1 International Decommissioning Support Fund project) - A5.A3 – Optimisation of Electric Scheme - optimisation and modification of power supply of the individual equipment and gradual disconnecting and dismantling of not required equipment during V1 NPP decommissioning. Ensuring reliable power supply over the whole period when the relevant equipment of Main Reactor Building, Interconnection Bridge, Stack, Auxiliary Service Building, Water Pumping Station and Transformer Station must be functioning.
- Project of the V1/Bohunice NPP International Decommissioning Support Fund - D4.1 Modification of the power plant and installation of new equipment - full-scale implementation and supplies for electro
- parts and the ICS in compliance with PIP 1-6 (project implementation plans)
- heavy-current distribution system power supply and operations
- technological process management system
- light-current distribution system and structured cabling (a subcontract for METROSTAV a.s.)
- Completion of SNF (spent nuclear fuel) storage facilities
- implementation of the ELEKTRO part
- supply and installation of electrical wiring
- relocation of utility lines
- supply and installation of a site switchboard (a subcontract for VUJE a.s.)
- Project of the V1/Bohunice International Decommissioning Support Fund - C7.A4 RAW (radioactive waste) remelting plant - electrical

installation works, supply of materials and cabling, installation (a subcontract for VUJE a.s.)

- LLW (low-level waste) repository construction of the third double row of the Mochovce National Radioactive Waste Repository - implementation of the ELEKTRO part a heavy current distribution system for power supply and operations, cabling, an artificial lighting system and an internal heavy-current distribution system, outdoor lighting system (a subcontract for STEMP)
- Project of the V1/Bohunice International decommissioning Support Fund - D4.2 Disassembly of large components of the primary circuit - supply of site switchboards with measuring devices for invoicing purposes, supply of switchboards, installation of the ELEKTRO part, including relevant documentation (a subcontract for VUJE a.s.)

Planta Centro Thermal Power Plant. Venezuela

Reconstruction of 400 MW Boiler No. 5 – EPC Contract

- 420 kV power transmission line (surge arresters)
- 30 MVA transformers 5BT01 and 5BT02
- Generator outlet and zero
- Generator exciter system
- Electrical protections and measurements, MicroSCADA
- HV block substation
- LV block substation
- Subordinate + 6.1m substation
- Subordinate water treatment distributor
- Subordinate pumping station distributor
- Grounding and lightning protection for technological structures

- Lighting and socket wiring for technological machinery
- Direct current sources and wiring
- Diesel generator

Doel Nuclear Power Plant (Belgium)

Installation of ICS electrical wiring and electrical equipment (a subcontract for FRAMATOME GmbH)

SERVICING, REPAIRING AND INSPECTION OF FQUIPMENT

Slovenské elektrárne a.s.

- Maintenance of I&C and electric systems Jaslovské Bohunice NPP
- Maintenance of I&C and electric systems Mochovce NPP
- Post-warranty service of automated collection system of electricity consumption data
- Post-warranty service assistance for 1-minute automated collection system of electricity consumption data
- Repair of machinery at heat exchange stations in Hlohovec, Leopoldov, Jaslovske Bohunice

- Service of I&C and electric systems and machinery at central heat exchange stations
- Preventive maintenance of fire doors open position signalling at V-2 NPP
- Modification, upgrading and engineering support of software and corrective maintenance of hardware
- in the technology computer system
- Preventive and corrective maintenance of SIMATIC control systems at V-2 NPP
- Corrective maintenance of HW components and
- modification of SW for equipment at V-2 NPP
- Servicing the elements of electronic interlock system - Novaky Power Plant
- Repairs on GESTRA steam traps NPP V-2
- Diagnostics and servicing of drain pipes for steam
- turbine-generators Mochovce NPP
- Servicing of equipment access control system
- at Mochovce NPP. Units 3 and 4

Jadrová a vyraďovacia spoločnosť a. s. Bratislava

- Complex performance of technical inspections and testing of electric systems
- Repairs and maintenance of electric systems



INDUSTRY

Volkswagen Slovakia, a.s. - Bratislava

VW 0.4kV lines for H3a ha and diesel generator

- Supply and installation of LV switchboards
- Delivery and installation of diesel aggregate
- Installation of lighting switchboards
- Supply and installation of indoor lighting
- Supply and installation of heavy current lines (raceways, LV cables including termination)
- Connection of technological equipment
- Supply and installation of lightning rod

VW Extension of H8 hall

- Extension of 22kV R1.8 transformer switching station with field No.13
- Indoor and outdoor wiring, including termination
- Supply and installation of socket wiring
- Supply and installation of LV switchboards
- Connection of technological equipment
- · Complete supply of heavy current lines and artificial lighting, including emergency, escape and outdoor lighting
- Supply and installation of cable support systems
- Supply and installation of earthing system and lightning rod
- Protective bonding

VW H4c – LV busbar system and S- stations

- Supply and installation of 2,500A LV bus bar system
- Supply and installation of penthouse transformer stations

VW Finish centre – Extension of H3 hall

- Supply and installation of main switchboards RM1, RM2
- Supply and installation of lighting switchboards RS1
- Supply and installation of illumination of H3 hall with a connection to RS Luxmate
- Supply and installation of heavy current lines (cable routes, LV cables including termination)
- Supply and installation of earthing system and liahtnina rod

VW Conveyors (Dürr Systems Slovakia)

- Installation of conveyor technology switchboards
- Conveyor technology connection
- Installation of conveyor electrotechnology
- Design and installation of conveyor lighting, including its control

Jaguar Land Rover

Paint shop - complete execution of the electrical part, measurement and regulation (M&R), fire alarm system (FAS) and evacuation intercom (EI):

- Main and emergency lighting
- Control system of main and emergency lighting
- Transformer stations 22 kV/400 V transformers, including standby transformer control
- Switchboards (high-voltage, 22 kV; main low-voltage) switchboards, active filters and compensation
- switchboards; secondary low-voltage switchboards)
- HV and LV cable routing and cabling
- Fire alarm system and evacuation intercom
- Measurement and regulation the Building Management System
- · Lightning conductor
- Earthing

within the scope of: project documentation preparation, delivery and installation of equipment and material, production of main (socket-outlet) and secondary (cubicle) low-voltage switchboards, complex testing, inspections and examinations and commissioning of the equipment delivered. The project execution also complied with the Breeam standard (to achieve the required EXCELLENT level for the building.)

Training Centre – execution of the electrical part

- Production and delivery of LV switchboards
- Cable routing and cabling for LV mains and for the light-current distribution system
- Main and emergency lighting
- Fire alarm system and evacuation intercom
- · Lightning conductor

delivered.

• Programming and control of the lighting system in the technological section

• Earthing

- Structured cabling
- Access control system, camera system, security system,
- emergency call system for disabled people
- within the scope of delivery and installation of
- equipment and material, complex testing, inspections
- and examinations and commissioning of the equipment

Supply and installation for the technological section of the paint shop

- Supply and installation of a lighting system for the technological section
- Supply and installation of an emergency lighting
- system, including connection to the emergency
- lighting monitoring system

Energy Centre – the execution of building earthing **Service Contract** – handling activities in the MSA substation and SS1 – SS8 22 kV transformer stations, B-command issuance

- Delivery of Siemens control system components Connection of WIFI components - electrical installations, supply
- Connection of HMI scanners electrical installations, supply

Infrastructure - car park lighting systems

 Supply and installation of outdoor car park lighting systems



Duslo, a.s., Šaľa

- Reconstruction of weighing systems VJ*H W9068 the control system section
- Control system reset in NH3 Warehouse
- Reconstruction of T7S and T8S transformers 22-25
- HAZOP implementation of conclusions
- Nitric acid preheaters C&I part
- Reconstruction of the ZP FIQ balance measurement system
- Modernization of digging machines DO a video camera system
- Replacement of HV equipment within HTR I and HTR II (main transformer substations)
- Modernization of substations Circulation waterworks (a subcontract for ABB, s.r.o.)
- Modernization of substations Small manufacturing plants (a subcontract for ABB, s.r.o.)
- Connection of TR11 and TR12 transformers
- Replacement of HV cables within the LAD plant
- TN reactor temperature triplication
- Yokogawa control system software modifications (a subcontract for Menert s.r.o.)
- Replacement of the H14 device cabling (a subcontract for A-DEMO s.r.o.)
- Online granulometry measurement at the UGL plant
- Transformer modification for cable connection purposes (a subcontract for Schneider Electric Slovakia)
- Replacement of DUDEK converters
- HTER contact measurement
- Reconstruction of a lighting system project (a subcontract for EXTEC s.r.o.)
- DCS Upgrade (a subcontract for YOKOGAWA)
- Service repair of electrical equipment and C&I devices

Slovnaft.a.s.

Project: Construction of the ethylene storage tank, block 71

- Supply, assembly, and installation of power distributors within the site
- Supply and installation of grounding and lightning conductor for temporary site buildings
- Supply and installation of a site lighting system (a subcontract for OT Industries General Contracting Co Budapest)

Derby&Derbyshire waste treatment centre

Delivery and installation of wiring

- Production, delivery and installation of switchboards, interconnecting boxes, switch boxes
- Delivery and installation of 110 V DC and 400 V AC UPS
- Delivery and installation of armoured cables, cable support systems for low voltage distribution, instrumentation and optical networks
- Testing of cable systems, instrumentation and optical networks
- Engineering support of the project and installation
- Actual execution documentation preparation

LiV Elektra a. s.

SCADA client innovation - PS Západ Križovany

Nafta a. s.

- Renovation of HMI panels + Relocation of the control
- room (project documentation) for the central station of the underground natural gas storage tank in Láb
- Preparation of project documentation for the project "Reconstruction of C&I lines within the central station in Plavecký Štvrtok - project documentation"
- Relocation of the control room of the central station of the underground natural gas storage tank in Láb electrical part

U. S. Steel Košice

Reconstruction of the TD4 turbine

- Delivery and installation of internal electrical wiring, cable support systems and equipment connection
- Delivery and installation of a rotor starter, temperature and pressure sensors, electro-pneumatic servo drivers
- Delivery and installation of LV switchboards and a control system with Symatic S7 visualisation
- Visualisation programming
- Testing and commissioning

Repair of electrical installations, I&C and auxiliary drives for TD5 turbocharger

- Supply and installation of indoor electrical installations, cable support systems
- Supply and installation of rotor starter, temperature and pressure sensors, electro pneumatic actuators in explosive atmospheres
- Supply and installation of LV switchboards and Symatic S7 Control System & Visualization

new transducers • Connecting and activating the equipment

Reconstruction of 5ST TANDEM transducers

- Installation of indoor electrical installations
- · Dismantling of existing switchgears and installation of

Reconstruction and modernization of boiler house, Stage 1 – K7 boiler

- Supply and installation of indoor electrical installations
- and cable support systems
- Supply and installation of lighting fixtures and electrical appliances
- Supply and installation of LV switchboards
- Supply and installation of central battery system

Low-emission coke guenching VKB1 – national limitelectrical part

- Realization of electrical installation works within the framework of the PD
- Supply and installation of electrical connection
- for technological switchboards, cable routes and
- connection of switchgears of technological equipment
- Testing and commissioning

PZ2 Galvanizing Line No.2 Material Tracking

- Supply and installation of indoor electrical installations
- and cable support systems
- Installation of cabling to connect I&C elements
- Installation of switchboards and control cabinets
- Testing and commissioning

TECHNOLOGIES UNDER CONTROL INSTRUMENTATION AND AUTOMATION



Fortischem a.s.

General overhaul of carbide furnace No. 1

- Preparation of the project implementation plans, including an expert opinion on the documentation concerning specified technical equipment (STE) in compliance with the requirements of Decree no. 508/2009 of the Ministry of Labour, Social Affairs, and Family of the SR; provision of the as-built project documentation after completion.
- General overhauls of LV electrical equipment modernization of electrical equipment, modernization of LV switchboards.
- Dismantling, inspection, repair, installation of secondary strips.
- Reconstruction of electric heating cables replacement of heating cables by new ones, including heating controllers (thermostats), connection boxes, termination kits, and insulation.
- Modernization of motor power supply, using frequency converters.
- Installation of the HVAC equipment in HV and LV substations and transformer stations - disassembly of installed cables, supply and installation of cable lines, installation of cables.
- HV and LV cabling construction of cable distribution systems (mains and other cable interconnections).
- The zero point of the carbide furnace bottom replacement of the zero point equipment of the carbide furnace bottom.
- Electrical connection (power supply, signalling, control) of heating units with fans.

- Coating of trolleys, reconstruction of LV switchboards

 replacement of circuit breakers and switching and
 control elements in existing switchboards and supply
 of new control boxes buttons.
- Modernization of artificial and emergency lighting systems of the carbide furnaces KP1 and KP2, including the cooling hall.

Zemianske Kostoľany – Reconstruction of Fuel Underground Storage

- Supply and installation of heavy current and weak current lines in PS01 Indication of fuel leakage in T53-60
- Supply and installation of I&C for HVAC
- Temporary tunnel lighting under repositories throughout construction

Minebea Slovakia s.r.o.

Production plant for mechatronic drives UB

- Supply and installation of two transformer stations
- Supply and installation of HV cabling
- Supply and installation of outdoor LV cabling
- Supply and installation of outdoor light-current cabling
- Supply and installation of a public lighting system
- Supply and installation of light and socket wiring
- Supply and installation of weak-current wiring
- Supply and installation of power lines for technologies
- Supply and installation of an electric fire alarm system
- Supply and installation of a voice fire alarm system
- Supply and installation of a CCTV system

LAKÓGÉP Kft. (Hungary)

Project "JWH NMP REG Komárom" - electrical wiring

installation, electrical part, and the ICS

Elias Eng Kft. (Hungary)

Electrical installations at the battery innovation plant in Komárom, Hungary, of the SK Battery Hungary Gyártó Kft company

BENSTAV spol. s r.o.

Supply and installation of electrical wiring and lighting systems within reconstruction of the building of the Ministry of Labour, Social Affairs, and Family of the SR

SEYON E-HWA AUTOMOTIVE SLOVAKIA

Production and logistics plant in Čadca - supply and

installation of electrical wiring - transformer station,

heavy-current distribution system, low-voltage cabling, an outdoor lighting system, grounding, lightning conductors, heating (a subcontract for INGSTEEL spol. s r.o.)

ABB s. r. o. Brno

• Electrical installations - installation of switchboards

0.011

Samsung Engineering

Installation of the electrical part for the Samsung production hall in Göde (SDIHU K-PROJECT Hungary)

- Temporary site connection
- Grounding and lightning conductor
- LV switchboards
- HV and LV cabling
- Main and emergency lighting systems
- 4000 A busbar system
- supply and installation of equipment and materials,
- full testing, inspections, and examinations and
- commissioning of the supplied equipment.

CRH (Slovensko) a.s.

- Replacement of the process control system (PCS) –
- delivery and modification of switchboards
- and power supply
- Rohožník cement plant Mill F reconstruction –
- electrical part
- Rohožník cement plant lighting of Mill F technology after reconstruction
- Supply and installation of switchboards
- Servicing for electro sections
- Replacement of MV switches within the R6 substation
- replacement of the 6.3kV technology within the R6
- substation and non-compliant cabling within the
- Rohožník plant (supply, installation, official verification,
- testing, and commissioning)



Fells Rotaform

FELSS Ilava Hall - Technological equipment power supply

- Delivery and installation of the transformer and its connection to HV
- Delivery and installation of the LV RH03 switchboard
- Delivery and installation of the RH03 compensation switchboard
- Delivery and installation of the SIEMENS PS2500/PS1600 busbar system
- Power supply of production technology, including carrier routes
- Services: project documentation, individual, complex testing, commissioning, personnel training, participation in guarantee testing

Ikea Industry Malacky

Analysis of data collection from AHUs

- Analysis of possible data collection from AHUs
- Design of technical solution for data collection from AHUs
- Programming and data acquisition of AHUs
- Supply of SW Wonderware
- Supply of application software for SW Wonderware

Bekaert Slovakia s. r. o.

Bekaert Sládkovičovo production hall

• HVAC project package – execution of the electrical part and I&C

ZF Slovakia a.s.

ZF Levice – Geňa – Reconstruction of main lighting ZF Trnava – General overhaul of lighting in PKW production hall in building No. 24

 Dismantling of original and supply and installation of new lighting fixtures, heavy current lines and communication wiring to DALI control system (supplied by Philips)

Imuna Pharm a.s., Šarišské Michaľany

Infusion solution storage area

- Supply and installation of indoor heavy current and weak current electrical installations
- Supply and installation of cable support systems
- Supply and installation of HV switchgear and HV transformer
- Establishing HV connection

MTA Slovakia s.r.o., Bánovce

Supply and installation of heavy current electrical wiring in a production and storage plant

- Supply and installation of heavy current electrical wiring in newly built hall
- Supply and installation of a busbar system
- Supply and installation of external area lighting and heating of roads
- Supply and installation of HV connection and HV distribution cabling
- Supply and installation of transformer station

Adler Pelzer Automotive Slovakia, s.r.o.

BRA1 hall - HP PELZER - Power supply of technological switchboards

- Development of PD
- Supply and installation of LV switchboards (with compensation)
- Supply and installation of cable support systems
- Supply and installation of power cables, including termination

- Implementation of HV connection HV relaying
- Transformer delivery, installation and HV connection
- Delivery and installation of HV disconnectors including connection to HV supply in VH4
- Delivery and installation of switchboards in the VH6 substation, fields RH11/x and RH12/x, and their connection to respective transformers

SCA Hygiene Products Slovakia, s. r. o.

PS02 HV connection and VH6 substation switchboards

- Delivery and installation of RC11 and RC12 compensation switchboards on the premises of SCA Hygiene Products Slovakia, s. r. o.
- · Services: project documentation, individual, complex testing, commissioning, personnel training, participation in guarantee testing

Zvolenská teplárenská, a. s.

Remote control

Hotline, service and emergency service

Konti a.s.

Production hall of SEW Bernolákovo

• supply and installation of wiring, switchboards, lighting systems, lightning conductor

Eurotalc. a.s.

Talc processing plant Gemerská Poloma

- Supply and assembly of complete power and
- weak-current wiring in six production halls and one
- administrative building
- · Supply and installation of heavy current, weak current
- lines and fibre optic network throughout the facilities

Continental Matador Rubber s.r.o., Púchov

• Supply and installation of electrical equipment (HV switchboards, transformer station, HV transformer) Increase of T28 transformer station power output

Wastewater treatment plant (WWTP)

WWTP Veľký Krtíš, Čierny Balog, Volkswagen Slovakia, Krupina, Brezová, Sereď, Slovenská Ľupča



TECHNOLOGICAL EQUIPMENT FOR ROADWAY TUNNELS. MOTORWAYS AND RAILWAYS

NDS, a.s. (National Motorway Company)

D3 motorway between Žilina (Strážov) and Žilina (Brodno) - the structure of the year 2017

Within the construction of the D3 motorway between Žilina (Strážov) and Žilina (Brodno), the company PPA CONTROLL, a. s., made complete delivery of the following facilities of the technological part of the Považský Chlmec tunnel:

- Complete fire alarm system (FAS)
- Delivery, installation of switchboards of the central control system, including the SIMATIC S7 control system
- Programming of the traffic control system and tunnel technology control system
- Delivery and installation of illuminated and LED variable traffic signs
- Dispatching telephone
- Visualisation in the Integrated Operator Workplace of the Považská Bystrica Motorway Administration and Maintenance Centre

Within the construction of the D3 motorway between Žilina (Strážov) and Žilina (Brodno) we also made complete delivery of construction and technological parts of the Motorway Information System (MIS):

- Communication and connection infrastructure
- Delivery, installation, integration and management of complete variable traffic signs

- Traffic signals
- Technology nodes
- Cut-off signal-circuit controllers
- Delivery, installation, integration and visualisation of meteorological stations
- Surveillance cameras
- Electrical security system
- SIMATIC S7 control system
- Visualisation in the Integrated Operator Workplace of the Považská Bystrica Motorway Administration and Maintenance Centre

Delivery, assembly and maintenance of our installations of road tunnels

Horelica Tunnel

- Maintenance of central control system
- Breakdown repairs

Branisko Tunnel

- Maintenance of fire alarm system, fixed firefighting system, high voltage supply
- Maintenance of D1 motorway Studenec Behárovce
- Maintenance of D1 motorway Jablonov Studenec
- Breakdown repairs

Bôrik Tunnel

- Standby power systems
- Emergency call equipment SOS boxes
- Surveillance closed circuit TV in the tunnel
- Radio connection
- Communication circuits transmission system
- Telephone connection
- Tunnel radio
- Fire doors
- Central control system
- Measuring of physical variables
- Traffic signs
- Control centre equipment
- Fire alarm system
- Tunnel lighting
- Tunnel ventilation
- Fire water supply electric systems

Motorway D1: Sverepec – Vrtižer

- Outdoor illumination
- Breakdown repairs

Maintenance of Motorway Information Systems (MIS)

- Motorway D1: Vrtižer Hričovske Podhradie
- Motorway D1: Hričovske Podhradie Žilina (Stražov)
- Motorway D1: Važec Mengusovce
- Motorway D1: Mengusovce Janovce
- Motorway D1: Studenec Beharovce

Scope:

- Construction (power supply distributors, cabling, grounding)
- Electronic security alarms
- Surveillance cameras

• Emergency call stands

Technological communication switchboards

- Variable message signs laminated • Variable message signs – LED
- Road signal lights
- Radio transmission
- Cut off signal-circuit controllers
- Operator station

Automatic traffic counters

 Delivery and installation of automatic traffic counters Delivery of software Testing and commissioning

Project documentation

- D2 motorway between Bratislava, Lamač and the state boarder SR/CR – MIS completion – project documentation: building permit documentation,
- tender documentation
- Operational documentation of the Bôrik road tunnel:
- Chapter H Traffic Operational Status File
- Chapter I Technology Operational Status File
- Chapter J Tunnel Exceptional and Emergency Modes
- D1 motorway between Poprad and Levoča, completion
- of the Motorway Information Control System, road
- markings technical study

Dopravoprojekt, a.s.

- D3 Motorway Žilina(Strážov) Žilina(Brodno) –
- technologies of Považský Chlmec tunnel
- detailed design
- D4/R7 Bratislava ring road, project documentation:
- building permit documentation and construction
- execution documentation for the entire electrical part,
- including the MIS



OUTSOURCING OF ENERGY MANAGEMENT

Comprehensive Industrial Site Management

Administration of technological equipment of buildings, energy networks of industrial sites, energy process optimisation, energy supply, local energy distribution, engineering and supply activities:

- D1 Park Senec
- Prologis Park Senec
- DHL Headquarters Senec
- Manufacturing plant ZF Slovakia Trnava, Levice
- Automotive Industrial Park, Lozorno

Management and administration

- Preparing and reviewing budgets
- Records of costs and management processes
- Coordination of suppliers

Management of utility networks

- · Servicing, maintenance and repairs of:
- HV and LV power lines
- Gas pipelines
- Heat pipelines
- Water pipelines
- Foul water drainage and storm sewers

Construction and development of infrastructure in D1 Park Senec

- Roads
- HV and LV power lines
- Gas pipeline
- Water pipeline
- Intelligent data collection from meters
- Foul drainage and storm sewers

Technical building management

- Servicing, maintenance and repairs of:
- Heating systems
- Air conditioning and cooling systems
- Fire technical and safeguarding systems
- Compressed air distribution
- HV, LV and I&C systems
- Lifting devices
- Expert inspections and technical testing of classified technical equipment:
- electrical
- gas
- pressure

Non-technical building management

- Waste management
- Road maintenance, green maintenance
- Cleaning
- Guard service

Delivery and Distribution of Energy

- P3 Logistics Park, Lozorno & Bratislava Airport
- D&K Küster Industrial Park, Devinska Nova Ves
- Košice Airport Industrial Park
- EUROVEA Shopping Centre, Bratislava
- Galeria Shopping Centre, Lučenec
- Automotive Industrial Park, Lozorno

Deliveries of electricity and gas

- Both electricity/gas supply
- Online electricity and gas consumption surveys
- Notifications of cut-off points and defined parameters

Operation of energy distribution networks

- Creation of local distribution networks
- Registration of offtake points, legislative certification
- Preparation and approval of own distribution pricelists
- Consumption measurements, billing for the
- Energy management via mobile applications and Power IEM web portal
- Local energy sources

consumption

Operation of water and sewer systems

- acting as professional representative for the operation of public water mains
- acting as professional representative for the operation of public sewers
- servicing, maintenance and repairs

Technical operation of plants • Trouble-free operation of plants, servicing, maintenance Legislative resource management

figure on the left: D1 Park Senec

Implementing austerity plans

Energy Audits and Optimization Services

Železničná spoločnosť Slovensko Plastic Omnium Auto Exterios SLOVALCO Žiar nad Hronom ProLogis Slovak Republic Faurecia Slovakia s.r.o. IAC Group (Slovakia) s.r.o. Calmit, spol. s r.o.

General identification of energy management

 Professional assessment of the condition of buildings, technologies and facilities • Determining energy demand and potential savings

Developing economically recoverable austerity plans

 Measures requiring no capital investment Low-cost measures and long-term measures

Coordination of processes, potential financial partnership

Operation of Energy Sources

Photovoltaic power plant, Drahovce Photovoltaic power plant, Čechánky Photovoltaic power plant, Selany

 Compliance with plant legislative obligations, monitoring, billing inputs, reporting of mandatory data



OTHER

Svet zdravia, a. s.

New Generation Hospital Michalovce

- Delivery and installation of high-current wiring, cable support systems and installation of terminators
- Delivery and installation of a low-voltage connection to the new hospital building
- Services: individual, complex testing, commissioning, personnel training, participation in guarantee testing

NSP Bardeiov (a hospital with polyclinic)

Construction of the urgent medicine section

- Supply and installation of heavy current cabling
- Supply and installation of light and socket wiring
- Supply and installation of an electric fire alarm system
- Supply and installation of a voice fire alarm system
- Supply and installation of a CCTV system
- Supply and installation of a public lighting system

City Arena Trnava - Construction of the Year 2015

Electro-installation works – supply and installation of heavycurrent part and installation of football stadium lighting.

- Production, supply and installation of power switchboards and subdistribution switchboards
- Supply and installation of cable support systems
- Supply and installation of lighting of all stadium areas
- Installation of lighting of the playing field
- Design, production, supply and installation of switchgears for lighting of the playing field
- Supply and installation of emergency lighting system including lighting loops of the central battery system
- Supply and installation of terminal and control elements (switches and sockets) in all stadium areas
- Supply and installation of lightning protection system
- Supply and installation of electrical heating of sanitary facilities

J & T Real Estate, a.s.

Zuckermandel - ČSOB bank

- Supply, installation, and as-built documentation
- LV cabling
- LV switchboards
- indoor and outdoor lighting systems
- grounding system and lightning rod
- 800 kVA diesel generator

Zuckermandel - administrative buildings

- Installation of main LV switchboards
- Installation of lighting switchboards
- Supply and installation of indoor lighting
- Supply and installation of heavy current lines (cable routes, LV cables including termination)
- · Connection of technological equipment
- Supply and installation of lightning protection system

Zuckermandel – Block B

- Installation of heavy-current wire distributors and lighting circuits
- Central battery system
- Actual execution documentation preparation

Westend Quadrant Bratislava

- Supply, installation and as-built design
- HV substation, transformers
- HV, LV cabling
- LV switchboards
- UPS
- Internal and external lighting
- · Grounding and lightning protection

 Central battery system Operation of transformer station

SUPPLY OF SWITCHBOARDS -VARIOUS CUSTOMERS

• Supply of distributors for the project "Renovation of the ICS within non-unit elementary systems of the Temelín NPP - a subcontract for PPA Controll CZ a.s. Supply of switchboards for the project Renovation of the ICS of the Felton Power Plant (Cuba) a subcontract for PPA Inžiniering s.r.o. Fatra Napajedla • Deltech a.s. BIZZCOM • EXTEC s.r.o. INTECH Control s.r.o. Bekaert Slovakia s.r.o. • EGEM s.r.o. • ITP Control s. r. o. CRH (Slovensko) a.s.



Consolidated Balance Sheet ending with the 31st December 2018 in thousands of EURO

Consolidated Profit and Loss Account ending with the 31st December 2018

in thousands of EURO

Non-current assets Intangible assets Tangible assets Other movable propert Goodwill Non-current financial as Other financial assets Long-term receivables Deferred tax assets

Short-term assets

Inventory Receivables Other receivables Short-term accruals Cash and bank account Total assets

Equity attributed to sh

Share capital Fund of exchange diffe Capital and Statutory fu Funds of profit Retained earnings

Profit for the period attr

Equity attributed to non Total equity

Long-term liabilities Long-term trade and ot Deferred tax liabilities

Long-term provisions

Current liabilities Short-term trade payal Liabilities to the state Other current liabilities Short-term income and

Short-term provisions Short-term borrowing

Total liabilities Total equity and liabil

ales
ost of goods sold
haft material and ene
kternal services
ccupational loan
epreciation

Gross margin Other operating in Other operating expe Operating profit

Financial income Financial expenses Profit before tax Income tax Profit after tax Shares in associated co

Discontinued operation Profit from discontinue Profit for the period Assigned to: holders of the parent co non-controlling shares



	To 31/12/2018 To 31/12/201	
	12.524	12.314
	150	145
	9.568	9.716
ty	2.051	1.923
	0	0
ssets	2	2
	112	126
	186	28
	455	374
	78.239	66.492
	2.509	2.256
	47.828	31.043
	3.243	1.263
+- h-l	2.241	312
ts balances	22.418	31.618
	90.763	78.806
hareholders	47.266	41.818
	1.052	1.052
rences	33	34
unds	291	284
	8.038	6.584
	29.660	24.988
tributed to shareholders of the mother company	8.192	8.876
n-controlling shares	2	1
	47.268	41.819
	9.958	9.556
ther payables	1.187	905
	65	66
	8.706	8.585
	33.537	27.431
bles	26.828	22.523
	1.972	2.160
	3163	1.722
d accrued expenses	28	7
	1.539	1.009
	7	10
	43.495	36.987
lities	90.763	78.806
	Year 2018	Year 2017
	119.532	115.002
	-10.822	-10.321
ergy	-41.621	-35.925
	-26.274	-28.780
	-27.764	-26.090
	-1.258	-1.176
	11.793	12.710
ne	257	-256
nses	-1 242	-613

ne	257	-256
nses	-1.242	-613
	10.808	11.841
	219	230
	-539	-684
	10.488	11.387
	-2.294	-2.510
	8.194	8.877
mpanies affiliated operations	0	0

tions		
ed operations	0	0
	8.194	8.877
ompany	8.192	8.876
	2	1

PP9CONTROLL

TECHNOLOGIES UNDER CONTROL RUMENTATION AND AUTOMATION



PPA CONTROLL, a.s.

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Annual Report Availability

The printed annual report is available at the company's registered office and can be sent by post upon request. The report can be downloaded in PDF format from **www.ppa.sk** Tel.: +421 2 492 37 335, E-mail: lasik@ppa.sk



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