

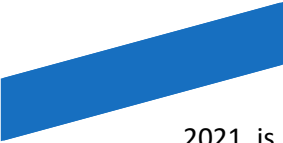


2021: Year in Review



engineering

FOR
POWER
SUPPLY



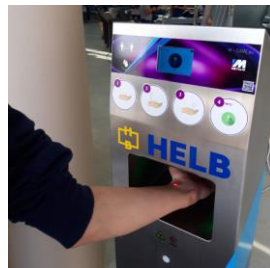
2021 is another year marked by a pandemic. Another year, full of uncertainty, unfulfilled contracts, difficulties in the supply of goods and services, the implementation of protection measures against infection, illness of colleagues, and even the painful loss of our friends and family members. To protect the health and safety of employees, HELB has taken sustained measures throughout the past year, from working from home and regular antigen testing of employees and their families to providing all the necessary equipment to prevent infection, such as protective masks, disinfectants, devices for automatic disinfection and temperature measurement.

For more than 30 years, HELB has nurtured the values of cooperation, community, openness, trust, responsibility, creativity, flexibility, love and care for others, which, despite the global crisis, we strive to preserve and be guided by. As pointed out in the mission, the HELB team is based on experience, excellence and partnership that provides solutions above expectations, it is what sets them apart from others, makes them recognizable and desirable for cooperation, and is the key to further successful development.

In this challenging and dynamic year, HELB has successfully completed some major projects, signed contracts for new ones, participated in expos and conferences, prepared EU projects, organized team building, created new jobs and marked World's health and safety at work day for the first time.



Antigen testing



Disinfection and temperature measurement



Antigen testing

PROJECTS

- **Wind Farm Senj**

HELB participated in the construction of the largest wind farm in Croatia, which included the construction of 39 wind turbines with an individual capacity of 4 MW on an area of 64 square kilometers in the City of Senj and the municipality of Brinje. HELB is proud to be part of this important project that will contribute to Croatia's green transition. At SS Senj, HELB experts were in charge of installing power transformers, laying, connecting, and testing power and signal control cables, making studies of protection settings and other studies, functional testing of MV plants, testing of numerical protection, and measuring the resistance of grounding. Tasks at SS Brinje included the design, and construction of a 220 kV transmission field to which the entire wind farm is connected, on a turnkey basis.





Wind farm Senj



SS Senj

- **CATC – Over 100 facilities in 6 months**

HELB has successfully completed the project of energy audit of a large company for Croatian Air Traffic Control at over 100 facilities that Croatian Air Traffic Control uses for its activities throughout Croatia. HELB was the main contractor for the project, which lasted six months, and four other companies participated, with a total of six engineers from various professions. The energy audit included an overview of each location in the construction, mechanical and electrical part, analysis and modeling of consumption of all forms of energy, and proposing measures to increase energy efficiency. As part of the review, energy certification of 11 buildings with complex technical systems was performed without delay compared to the set plan, although the Agreement was implemented during epidemic restrictions and measures. The project took place in phases at HKZP facilities located in attractive locations such as Mali Lošinj, Koločep, Cres, Čiovo, Kavran in Istria, or Promin and Psunj.



Croatian Air Traffic Control

- **GEKA – Three substations in Germany**

The first phase of a major project for Germany's leading cosmetics manufacturer, GEKA, has been successfully completed. For the first month, there was the preparation, laying of cables, and cabling. Three substations were completed. Unexpectedly, there was a change at MV plant in two substations, so everything had to be finished in one weekend. Prepare two substations, cable head terminations, perform testing and commissioning and supply LV plants, which HELB's team successfully completed within the deadline. In addition to electrical installation work and testing, HELB also delivered compensation cabinets and a low-voltage plant. The first phase of the project lasted a month and a half, and around 20 HELB employees participated.





Project Geka



HOPS Rijeka

- **Project with HOPS in the transmission area of Rijeka**

With the Croatian Transmission System Operator Ltd (HOPS) another large project was successfully completed. HELB was the main contractor for the replacement of CBE 110 kV type disconnectors in plants at the transmission area of Rijeka. The work was done at several locations: SS 110/35 kV Lički Osik, EVP110/25 kV Moravice, SS 110/35 kV Delnice, SS 110/20 kV Crikvenica, SS 110/35 kV Krasica, SS 110/20 kV Matulji, SS 110/10 kV Butoniga, SS 110/20 kV Pazin i SS 110/20 kV Poreč. HELB was in charge of determining the existing condition, detailed electrical design, detailed construction project – steel structures of the apparatus, dismantling of the existing 110kV disconnector, installation of a new 110kV disconnector, assembly of electric motor drives, and functional testing of disconnectors, and high voltage plant level is 110kV.

- **Maintenance of a solar power plant in Zagreb**

For solar power plants to work efficiently and properly, it is necessary to regularly take care of the cleanliness of their photovoltaic modules and gutters. It is also one of the services offered by HELB within the contract on services and maintenance of photovoltaic power plants. One of the solar power plants with an annual maintenance contract is the one in Zagreb.




Solar power plant on the roof of the building



SS Beli Manastir

- **SS Beli Manastir**

The 110/35/10 kV Beli Manastir plant has been in operation since 1972 and it is the main power supply point for the electricity supply of the whole Baranja region. As a part of the cooperation with the main contractor Končar KET, HELB was participating in the reconstruction of this plant, which replaced obsolete equipment and introduce modern technological solutions. HELB's project tasks included the supply of connection and assembly equipment (including MV cables,



installation, earthing and lightning protection equipment), delivery and installation of 35/10 kV Beli Manastir temporary power plant, dismantling of 35kV and 10 kV equipment, electrical installation work, and functional testing and commissioning of the equipment in question.

- **Oil Refinery in Rijeka**

With the newly built plant, the refinery will produce a new valuable product, high purity propylene which is used as a semi-finished product in the petrochemical industry. This extensive undertaking presented the challenge of coordinating electrical work with other professions involved in the process, such as construction, mechanical engineering, etc. The client is IVICOM Consulting LTD, and the greatest emphasis was placed on the safety of people, therefore the work was performed according to the highest HSE standards. HELB's job description includes the reconstruction of transformer substations 312 and 306, the construction of new substations 391 and 207, the construction of electrical installations for process spaces, testing, and participation in commissioning. At substation 312, the reconstruction included three 6.3 kV cells where all the primary and secondary equipment was replaced, protection relays were parameterized, and testing and participation in commissioning were performed.



Oil Refinery in Rijeka

- **SS Poreč**

With partner Končar Engineering for Energy and Transport - KET, HELB has completed another successful project at SS 110kV Poreč. HELB's scope of work included the installation of new secondary equipment inside the substation, the installation of cabinets, external electric motor drives, the extraction of existing cables and the laying of new ones, connection, testing, and finally commissioning. A total of 8980 hours were spent on works and 160 hours on testing.



SS Poreč



EXPO'S AND CONFERENCES

- **HRO CIGRÉ**

HELB participated in the 15th HRO CIGRE, which took place in Šibenik from 7th to 10th of November. As part of this renowned professional event, at its booth, HELB showed a video about the windfarm Senj, where we participated in the construction.

Also, the team introduced a video game whose protagonist is a cute energy-saving dog Dingo. HELB was one of the sponsors and is a regular participant in this renowned professional event. The rich and meaningful program was not absent, so we saw a series of quality presentations and lectures in the first two days and of course, everything was held following epidemiological measures.




HRO CIGRÉ 2021.

- **Job Fair MeetUp**

In mid-May, HELB participated in a new edition of the career event organized by FER, which brings together technology companies and STEM students with the aim of meeting and exchanging knowledge. The rich program includes "talks", workshops and panel discussions, and this year 55 companies participated. Five days, 45 talks, 22 networking blocks, 11 workshops, and 4 panel discussions. HELB presented what the business in the energy sector looks like.



Job fair MeetUp 2021.



- **Days of the Sun**

On the sunniest Croatian island, Hvar, a conference “Days of the Sun” was held, dedicated to the use of solar energy and it was organized by the Renewable Energy Sources Croatia and the Island Movement. The conference brought together key stakeholders of the energy transition in Croatia and in a joint discussion tried to find the possibility of efficient use of solar energy and stronger project development. HELB has been active in the renewable energy segment for almost 15 years. Energy infrastructure for wind, sun, biomass, and hydro energy is HELB’s everyday life, and this is confirmed by this year’s Days of the Sun. Representatives from the EU, representatives of the scientific community and the ministry stressed out that the trend of increasing the share of solar energy in the energy mix is inevitable and strong. Croatia has the benefit of its geographical position that enables it to have quality projects.



Days of the Sun Hvar 2021.

NEW in 2021

- **CDSO – New service in HELB**

HELB becomes the first Closed Distribution System Operator (CDSO) in the Republic of Croatia. A Closed Distribution System (CDS) is any business system that distributes electricity within a geographically restricted industrial or commercial location or where there is more than one user who is supplied with electricity through a common metering point. The most common examples are economic zones, shopping and business centers, health rehabilitation facilities, hotel and tourist facilities, transport and logistics systems, and special purpose zones such as customs zones, etc. Since the supply of electricity is an energy service, and to prevent unregistered performance of energy services, the Law stipulates that the establishment, management, and exchange of electricity in closed distribution systems are entrusted to a licensed energy entity - Closed Distribution System Operator (CDSO). The basic role of the CDSO includes: conducting procedures for obtaining the status of CSD, development, management, and maintenance of a safe, reliable, and efficient CDS, delivery of electricity of the prescribed quality to CDS users. The CDSO is also obliged to ensure objective and transparent conditions for access to the CSD, metering, and billing of electricity consumption, and payment of liabilities according to bills at the primary billing metering point.





CDSO

- **DINGO video game**

As part of the visibility for the EU IRI project, the "System for optimizing losses in advanced networks", HELB has developed the DINGO GO video game. The purpose of the game is to, in a fun and easy way, explain how the system works to future service users. The main hero of the game is the cute dog Dingo who saves energy by repairing faulty substations and driving away thieves who steal electricity. The game was first presented at the Hro Cigre Conference, where it provoked great interest among visitors.



Dingo GO

- **Team building**

Despite the pandemic, HELB managed to have its traditional team building this year. In mid-September, HELB's team organized an unforgettable gathering in the environment of nature at the location of the Hunting Society "Zec", Rugvica. According to the employees, this was the best gathering so far, where they had the opportunity to enjoy numerous sports activities, such as archery, bowling, football, foot tennis, and the best teams were awarded medals. The program included, among other things, a fun game of questions and the construction of a rollercoaster, as well as lots of laughter and exciting moments. The gathering was held according to the epidemiological situation, so the employees were tested before the team building, their temperature was measured upon arrival, and protective masks and disinfectants were available at the location, so there were no consequences.



Team building 2021.

- **Day of Health and safety at work**

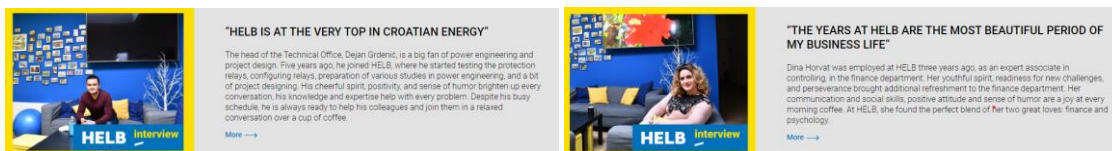
For the first time, HELB marked World's Day for health and safety at work. Namely, HELB rewarded employees who, through their work and behavior, promote work in a safe way, prevent accidents and thus become a role model for everyone else. Colleagues could nominate each other in categories such as best knowledge of Health and safety in production or office, the safest worker on-site, safest manager, etc. The main goal of this competition was to raise safety at work to a higher level and improve business results. The International Labor Organization (ILO) declared April 28th the World Day for Health and Safety at Work. This day is celebrated in 120 countries around the world as a day of remembrance for all workers who died in accidents at work or died due to occupational diseases.



28th April – World's Day for health and safety at work

- **Interview column**

On its website, HELB has introduced a new section - interview. The main goal of the column is to present employees, who they are, in which departments they work, what makes them special, what they think about HELB, and what would they like to change. In the past year, seven interviews were published, which provoked great interest among website visitors and followers on social networks, because those posts show the highest traffic.



Interview Dejan Grdenić and Dina Horvat

