

2020: Year in Review



engineering

FOR
POWER
SUPPLY

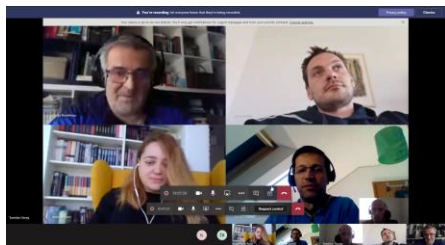
It is difficult to start the review of 2020 without mentioning COVID-19 right at the start. The whole world found itself in a challenging situation last year due to the coronavirus pandemic. HELB responded quickly to the new circumstances by organizing the COVID team and taking into account, first and foremost, the protection and health of its employees, partners and associates. The challenging pandemic environment has changed the way we all work, and, accordingly, HELB has issued a series of instructions to protect the health of its employees.

All of our colleagues, who were able to do so, were working from their homes using teleconferencing tools, while those in the production department strictly adhered to measures in accordance with the Civil Protection Headquarters. The measures at our headquarters include, among others, regular hand disinfection, not sharing personal work equipment, using the shortest route to the office and avoiding close contacts. Of course, in common areas, such as the cafeteria or dressing room, the strict rules of hygiene, wearing a mask, and keeping distance are also implemented.

To further emphasize the importance of Civil Protection Headquarters' recommendations and encourage its employees and partners to comply with regulations, HELB has even redesigned its logo emphasizing the importance of keeping a physical distance.

Throughout the past year, HELB has provided its employees with several types of protective masks and disinfectants. At the entrances to the company HELB has installed devices for automatic disinfection and temperature measurement, and also pulse oximeters that measure blood oxygen saturation, to detect coronavirus symptoms as early as possible. We introduced the obligation to measure the temperature of our employees daily before starting work, both at headquarters and on construction sites. Also, all employees and their family members can take fast antigen corona virus tests several times a week because the health and safety of our employees come first.

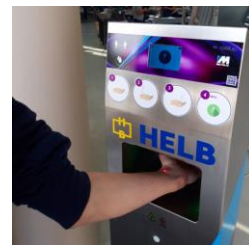
Although this year was difficult for many, it was a year of cooperation and togetherness at all levels and showed the value of company's services. Those where reliability is due to the people: fitters and engineers, as well as all those who give them support. In this challenging year, HELB has successfully completed some major projects, signed contracts for new ones, participated in online expos for the first time, held and participated in education trainings, worked on EU projects and created new workplaces.



Working from home



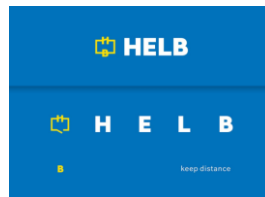
Pulse oximeter



Disinfection and temperature measurement



Physical distance in production



Logo



Field work



PROJECTS

- **Project for Green Hydrogen production**

Together with partners Sunfire GmbH, Paul Wurth S.A., Tenova SpA, French research center CEA and Salzgitter Mannesmann Forschung GmbH, the world's most powerful High-Temperature Electrolyzer (HTE) is being constructed for the energy-efficient production of hydrogen. The GrInHy2.0 project (Green Industrial Hydrogen via steam electrolysis) has an overall budget of € 5.5 million. HELB's scope of work included the design of a programmable logic controller with a PLC and a distribution cabinet. The next step was the production of cabinets, testing, testing for factory acquisition (FAT), and delivery of cabinets to Paul Wurth, where the assembly and commissioning took place. Eight of HELB experts were involved in this project. GrInHy2.0 marks the first implementation of a high-temperature electrolyzer with a nominal power input of 720 kilowatts in an industrial environment.



Project for Paul Wurth



Korlat

- **Korlat wind farm**

Over the past two years, HELB has been working at one of the largest wind farms in Croatia. The Korlat wind farm has a capacity of 58 MW, and is located near Benkovac, about 40 kilometers from Zadar. The plant was put into operation last year and is expected to produce about 170 GWh per year which is enough to supply more than 50,000 households. The wind turbine towers are 114 meters high and the rotor diameter is 131 meters. The scope of HELB's work included all electrical installation works on the 33/110 kV Korlat TS and the internal energy and communication network, testing, parameterization and commissioning of the Korlat TS and the internal cable network of the Korlat Energy Park. The project started in April 2019 and ended by the end of 2020. About 20 HELB members were hired, including fitters, testing engineers, managers and protection engineers.

- **Solar power plant Vis**

The big news marked the domestic energy sector at the end of last year: the largest solar power plant in Croatia was put into operation on the island of Vis! The 3.5 MW plant was built on 5.5 hectares of land and will produce about 5 million kWh of electricity per year, which is enough to supply approximately 1,600 households. HELB is proud that its experts have contributed to this great project.

- **Cabinets for DR Congo and Ghana**

HELB's quality solutions are used all over the world, and in Africa as well! HELB has recently produced control and protection cabinets intended for a hydropower plant in the Democratic Republic of Congo. The cabinets have been sent to the destination after undergoing a special packaging process. This is not the first engagement in Congo: a few years ago, HELB has tested and commissioned power transformers at a facility in the capital city, Kinshasa. Also, at the end of last year, engineers in the production department completed control cabinets for the Ghana market.



Ormari za Kongo



Priprema ormara za Ganu

- **Croatian Radio and Television - HRT**

As part of long-term cooperation with the Croatian Radio and Television, HELB has completed another successful and interesting project. It was the reconstruction of electrical installations of redundant UPS power supply of the Master in the House of HRT in Zagreb, which included replacements and reconstructions of technological electrical installations and distributors that supply the Master's space and it's technological lighting. The specificity of the project is that the entire work was done during the night and on weekends because it was necessary to ensure the smooth operation of other devices and equipment in the space during the works. As this is an extremely important technological space that is in function 24/7, it was necessary to prepare all new installations and devices during the night. HELB's scope of work included dismantling and electrical work, planning, manufacturing of equipment, power distribution, distribution cabinets, installations, automation of technological switchboards, construction work and testing.



TV studio



- **SS Ivanić Grad**

HELB has written another important project in its reference book! The engagement was on the reconstruction and expansion of the 110 kV plant in SS 110/35 kV Ivanić Grad. The client on the project was Končar - Energy and Transport Engineering. The entire project started two years ago, and depending on the dynamics of the work, between two and six HELB's employees were regularly engaged in it. HELB's tasks included design, disassembly and assembly, electrical installation work, commissioning, various tests, and documentation preparation.

- **Modernization of the railway Zaprešić – Zabok**

As subcontractors of the main contractor Končar KET, HELB has been involved for some time in extensive projects of modernization and electrification of the 23 km long railway line on the Zaprešić – Zabok section. HELB's task were electrical installation works, such as installation of grounding, laying, and connecting cables, installation of cabinets and transformers, installation of equipment for connection to the catenary, etc. The works are performed at several locations, i.e. stations at the mentioned section of the railway, and their completion is expected by the spring. At the moment, there are a dozen of our diligent colleagues on the site.



Željeznička pruga

- **Energy audits of large companies**

As part of the energy audit project of a large company, this summer HELB's experts visited as many as 91 locations in the areas of Zagreb, Osijek, Rijeka, Pula, Zadar, Split and Dubrovnik. On the way, they had the opportunity to visit the mountains Promina, Vidova gora, Psunj and Kozjak and see the islands of Koločep, Krk, Cres, Lošinj, Čiovo and Brač. During the realization of the work, everything went according to plan. Client representatives were always ready to cooperate and help, and there were also excellent collaborators in the field of mechanical engineering and architecture. In addition to this demanding project, an energy audit of a large company that produces dried timber and parquet using raw oak material from the well-known Slavonian forests was successfully completed. Namely, the company Bjelin has modern production facilities in northern Croatia and Sweden, and its business is guided by the principles of sustainable production, which is reflected in the recycling of materials and minimizing the amount of waste. HELB completed all tasks in a short time and received praise from a client who was "extremely satisfied with the professionalism in the work and the quality of the contracted services."

EU PROJECTS

- **System for optimization of losses in advanced networks**

HELB signed a contract for a new research and development project "System for optimization of losses in advanced networks", co-financed by the Ministry of Economy and Sustainable Development and the Croatian Agency for Small Business, Innovation and Investment, as part of the call *Increasing the development of new products and services arising from research and development activities - phase 2*. Plan is to develop a system for monitoring the energy flows of the secondary distribution network and thus provide in-depth insight into the state of the electricity network. The system includes measuring equipment for the installation of a secondary distribution network, a software platform for receiving, processing and analyzing data. The expected result of the established system is to provide a concrete insight into the secondary distribution in order to carry out informed optimization of the electricity distribution network by more precise geographical location and estimation and prediction of losses on transformer station lines.



IRI project

- **Improving the competitiveness and efficiency of SMEs through ICT**

HELB will, through the implementation of the project, acquire the ICT equipment and software needed to improve services, increase the efficiency of information management and achieve a high level of business process integration. The existing ERP / DMS system Altibiz will be improved by introducing new and upgrading existing modules, while providing more efficient support for business processes. It will directly contribute to job creation, increase worker productivity and increase sales in export markets.



EDUCATION

- **The Efficient Use of Energy - Commitments, Opportunities, Possibilities**

HELB's Energy Efficiency Projects Manager participated in the expert workshop called "The Efficient Use of Energy - Commitments, Opportunities, Possibilities", which was held in the organization of the Institute for Economy of Energy and Environment and the Faculty of Economics & Business in Zagreb. At the workshop, in order to provide support and knowledge related to energy efficiency obligations, topics such as legal obligations, opportunities and risks of business models in this field were discussed, and some of the good practices were presented.

The workshop was led by experts from Slovenia and Croatia with international and domestic experience in energy sector. The conclusion is that many subjects today are interested in the energy efficiency and therefore it is necessary to act as quickly as possible in order to align the legal framework with the EU regulations and start seriously implementing it.



Workshop – The Efficient Use of Energy

- **HELB's internal education - Medium voltage plants**

HELB always gives its employees the opportunity to acquire new knowledge. Thus, in the middle of the last year, an internal training was organized for the employees of the sales, project management and technical office departments, in order to better acquaint them with the activities of our company in medium voltage plants. The lecture was led by Željko Cesar, an expert with more than 30 years of experience in the field of power engineering. HELB employees had the opportunity to strengthen their knowledge of the distribution transformer stations, classification of medium voltage networks, the types of tests performed at plants, organization of construction sites and a number of other interesting and useful things.



HELB MV workshop

- **German language course**

After last year's German language course and passing the exam, HELB enabled its employees to continue learning the language and move on to the next level. Learning a foreign language is a beautiful thing, which brings other cultures closer, broadens perspective, and contributes to personal growth and development, as well as the development of the company itself. Therefore, every Monday and Wednesday, for an hour and a half, HELB's employees return to school or follow classes online. With their knowledge, they will soon be able to contribute to even greater and better development of HELB within the EU.

- **Professional training by Croatian Railways**

HELB's employees began their preparation for the works on the Croatian Railways (HŽ) as a part of a major project of their modernization and electrification, with the Croatian Railways professional training. HELB's tasks include the installation of railroad switch heaters, column substations and signaling. However, before any work, 23 of HELB's installers participating in the project had to undergo training by HŽ Company. The main topic of the education, which was led by Krunoslav Ižaković from HŽ Infrastruktura, was the introduction to specific challenges and protection measures while working on railways.



Professional training by HŽ

EXPOS AND CONFERENCES

As COVID - 19 has completely paralyzed the world of expos and conferences in all industries, many trade fairs have been cancelled, only several have sought an alternative in the digital space in an attempt to take full advantage of the digitalization era.

- **HRO CIGRÉ**

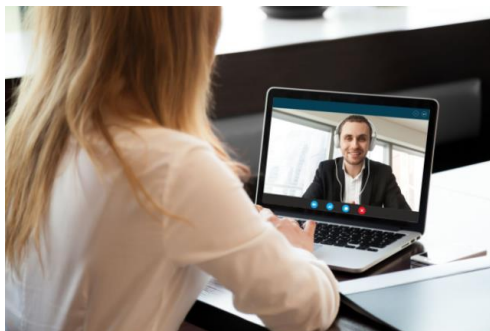
In November, HELB participated in the first-ever online HRO CIGRÉ symposium. The online event lasted from 9th to 13th November, where HELB was one of the sponsors, and also has regularly, throughout the years, participated in this renowned professional event. Even in the virtual environment, the rich and substantial program was not absent, so in the first two days we already saw a series of quality presentations and lectures on the topic of power system management.



HRO CIGRÉ 2020.

- **Career Speed Dating**

At the end of last year, HELB participated in the first online edition of the Career Speed Dating. It is an interesting project that connects employers and STEM students through a series of eight-minute interviews. In this short period, companies present themselves to students and vice versa, followed by two minutes for mutual assessment. This is the fourth time that HELB has participated in this event and the first time remotely. The organizers received praise from the participants, and HELB is happy and satisfied to have had the opportunity to meet and talk to young people eager to learn and gain experience. This event is a step closer to future cooperation with great young minds.



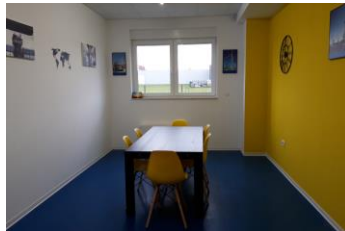
Online Career Speed Dating 2020.

WHAT IS NEW?

HELB turned 30 years old 😊. May 28th, 1990 Vladimir Horvat and Petar Bogovac founded the company with the intention to engage in electrical work, which they pointed out in the very name "**H**orvat **E**lektro **B**ogovac", so HELB was created. All these years have been filled with the sacrifices, growth and changes of each individual, but more importantly, HELB has managed to strengthen the mutual connection of its staff. As HELB was not able to make the celebration they wanted on the occasion of the special anniversary this year, HELB tried to thank its employees, partners and friends for their cooperation and trust using all available resources, such as video greetings cards, letters from the director, calls, video conferences, gifts, etc.

- **Design and expansion of business premises**

In anticipation of the thirtieth anniversary, HELB redesigned the website, produced new brochures, built new offices, and began the expansion of business premises. Two meeting rooms also got a new and fresh look. Although they were not used as much as planned this year, they are often used in situations when there are meetings for small group of people, of course while using the protective masks.



VIP meeting room



Meeting room

- **Mechanical cable laying**

HELB always uses modern equipment to perform works professionally, fast and with high quality. In assembly projects, HELB has recently used a special machine for automated cable laying, the largest of its kind in Croatia. The purchased device was additionally adjusted and upgraded for HELB's needs, and thanks to it, the work of laying underground electric cables was significantly simplified and made easier to colleagues in the field.



Machine for automated cable laying