




2022: Year in Review



engineering
FOR
POWER
SUPPLY



In 2022, HELB successfully completed some large projects, simultaneously signed contracts for new ones, opened new jobs, participated in expos and conferences, prepared EU projects, held lectures, organized team building and the Best Colleague contest, and celebrated Health and safety at work day, and the Day of Good Deeds.

PROJECTS

- **Zadar 2P and Zadar 3P wind farms**

During the summer of 2022, HELB started laying and connecting power and communication cables at the ZD2P and ZD3P wind farms in Bruška, near Benkovac. HELB was in charge of laying the medium voltage cable of the wind power plants WF ZD2P and WF ZD3P, from the SS Bruška to the MV switchgear in the wind turbine, including cable terminations and surge arresters at the cable terminations. HELB also worked on the telecommunications connection of the wind turbines in WF ZD2P and WF ZD3P, with SS Bruška. Testing and commissioning will follow after the assembly and connection of the wind generator are finished. For this project, HELB's experts also made a special tool, a cable-laying machine that was mounted on a truck. About 15 experts were on site, and the project is expected to be completed in the spring of 2023.



Tool for cable laying



- **Electrical cabinets for the Vis power plant**

In 2022, HELB made electrical cabinets for battery storage at the Vis solar power plant. The scope of work was the delivery of equipment, electrical and construction work on the installation and calibration of the BSPEE Vis. The basic part of the battery system for energy storage (BSPEE) consists of accumulator batteries. After a detailed analysis, NMC batteries from the company Polarium were selected for BSPEE Vis due to their very good properties for the contracted application. The battery module with a voltage of 50.8 V and a capacity of 205.8 Ah can store electricity up to 10.45 kWh. A total of 12 cabinets were installed in the system at Vis with the possibility of storing electricity of 1.8 MWh.





Vis solar power plant

- **Project Iceland**

At the beginning of 2022, HELB started a big project in Iceland. Dozens of HELB experts were on site throughout the year, and the project will continue in 2023.



Iceland



Cabinets for the wind farm in USA

- **Cabinets for USA**

For a large offshore wind farm in the United States of America, HELB started the preparation of 60 electrical cabinets a few months ago. The continuation of production, as well as the delivery and assembly of the cabinets, will follow in 2023.

- **SS 35/0,4kV Machine room hydropower plant Varaždin**

With Our partner HEP Varaždin, HELB worked on the construction of the new substation SS 35/0.4kV Machine room HPP Varaždin and the connecting 35kV cable lines. The newly built SS is a modified concrete compact substation, to accommodate a 35/0.4kV transformer for self-consumption, auxiliary supply plants, measurement panels, and remote control systems. Some of the work that HELB did there was excavation work on cable lines, installation of 35kV plant, complete assembly, cable laying, grounding, installation of the power supply system, functional testing, and commissioning.



SS Machine room HPP Varaždin

EXPOS AND CONFERENCES

- **HRO CIGRÉ**

In November, HELB participated in the 15th HRO CIGRE Symposium, which took place in Cavtat from the 6th to 9th of November. HELB sponsored the symposium, and at the same time had its exhibition booth, where the new research project DINGO was presented. The system for optimizing losses in advanced networks attracted great interest and positive visitor reactions. Many stopped at our booth to play a fun touchscreen game and to exchange experiences from the past year in pleasant conversation. The event gathered a large number of visitors, and this was a great opportunity to socialize with partners and experts from the power industry sector. This year's Hro Cigre was visited by more than 800 professionals and scientists from the power industry sector, while 95 expert papers were published.



HRO CIGRÉ 2022.

- **Job Fair**

In May, HELB participated in the 15th FER Job Fair, which was held for the first time in the Martinovka sports hall. The two-day event was attended by more than five thousand visitors, while 134 companies, including HELB, presented their businesses to students and future employees. HELB hosted numerous students at its booth, mostly from the energy major, to whom it presented its company, references, job openings, and how to apply for summer internships. It also presented, in an interesting way with a help of a video game, its new project within IRI, DINGO – System for optimization of losses in advanced networks.



Job Fair 2022.

- **Dovik FERIT**

HELB participated in the 4th edition of the career event DOVIK@FERIT, which was held in October at FERIT university in Osijek. In addition to having its own stand, HELB's employees held a lecture on the subject of medium voltage CT testing. The students showed a great interest in our company, and it was great to talk to the young experts who will soon embark on professional challenges.



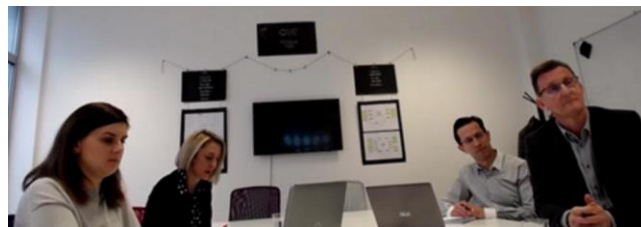
DOVIK 2022.

EDUKACIJE

Unlike previous years, where HELB participated in different lectures and trainings, in 2022 HELB held numerous lectures on very important topics.

- **Series of Croatian Chamber of Commerce workshops on CDS**

Kako bi korisnicima približio pojam i pogodnosti Zatvorenih distribucijskih sustava (ZDS), HELB je u suradnji s Hrvatskom gospodarskom komorom održao online radionice „Kako Zatvoreni distribucijski sustavi električne energije podižu konkurentnost poduzeća?“. Koliko je ova tema relevantna pokazuje i velik interes od preko 100 sudionika kroz 4 radionice s vrlo konkretnim i aktualnim pitanjima. HELB je među prvima u Hrvatskoj prepoznao važnost koju ima Operator zatvorenih distribucijskih sustava (OZDS), te nudi rješenja za uspostavu i vođenja ZDS svim budućim vlasnicima i korisnicima. Cilj radionica je bio sudionicima približiti kako novi *Zakon o tržištu električne energije* rješava probleme postojećeg stanja, pojasniti pojmove kao što su ZDS, OZDS, uloge regulatora i inspektorata, navesti tipične primjere iz prakse te najvažnije, pojasniti pogodnosti za vlasnike i za korisnike. Radionice su namijenjene svim vlasnicima poslovnih sustava koji su u obvezi uspostaviti model ZDS-a kao i korisnicima budućih zatvorenih distribucijskih sastava.



CCC workshops on CDS

- **Internship for professor**

HELB joined the praiseworthy “Teachers in companies – practice for teachers” organized by the Agency for Vocational and Adult Education, Advantage Austria, HOK, Croatian Chamber of Commerce, German – Croatian Chamber of Industry and Commerce, Swiss Embassy in Croatia, Switzerland – Croatia economic association, and the Knowledge in Action Foundation. The main goal of the initiative is that the vocational schoolteachers get to know the “real” life in companies through internships, what awaits their students after graduation, and what competencies are required in a particular job, company, or sector. For three days, HELB hosted teacher Damir Čolig, an electrical engineer and teacher from the Zagreb School of Electrical Engineering, who works as a teacher of practical classes and laboratory exercises and leads the Cabinet of Renewable Energy Sources. Both partners are aware of the importance of cooperation between the economy and the education sector, and Mr. Čolig points out that the main goal of the project has been achieved and that HELB employees were very friendly to him during the three-day internship.



Professor at an internship in HELB

- **Dingo**

At the recent SST - International Conference on Smart Systems and Technologies in Osijek, HELB held a presentation on what the Dingo system is. How can smart networks and devices be used in low-voltage networks in Croatia? Innovative solutions for electric power systems were presented by HELB together with partners from Sedam IT, FER, and HEP.



DINGO presentation

- **CDSO at the Faculty of Electrical Engineering and Computing**

At the 44th international conference "Planning and Projecting - Renewable Energy Sources and Green Energy Transition.", at the Faculty of Electrical Engineering and Computing in Zagreb, HELB held a lecture whose conclusions were that energy self-sufficiency ensures long-term stability and competitiveness, and the closed distribution system (CDS) model is the most favourable solution for new business systems with multiple users.



CDSO lecture

A DAY TO REMEMBER

- **Women's Day**

Every year, HELB celebrates Women's Day with a small token of appreciation and a short, but sweet gathering.



Women's Day 2022.

- **Good Deeds Day**

Togetherness and caring for others are immensely important in building a better world for all of us! On April 3, Good Deeds Day was marked in Croatia for the first time, on the occasion of which

HELB, in cooperation with the Association for Economy of Communion, organized a humanitarian action. HELB collected donations for the needs of two families in Banija whose homes were destroyed in a devastating earthquake in late 2020. In addition to collecting donations and gifts, HELB's team visited the families on location to support them and hear their stories. It was a day filled with emotions and warmth.



Good Deeds Day

- **Day of Health and Safety at Work**

For the second year in a row, HELB marked the World Day for Health and Safety at Work by rewarding employees who, through their work and behaviour, promote work in a safe way, prevent accidents and thus become a role model for everyone else. The competition lasted from the 6th to the 20th of April, and employees competed in five categories. Including two quizzes on Health and Safety in offices and on-site, where they had to show enviable knowledge of the facts and laws regarding Health and Safety at work. The safest worker won the most votes from colleagues, the surprise award was given by the members of the commission, and the last award was given to the best video on the topic of H&S at work.



28th April – Day of Health and Safety at Work

- **Team building**

In the middle of September, HELB organized an unforgettable gathering outdoors, at the location of the "Zec" Hunting Lodge, Rugvica. The team building program was truly diverse and included orienteering, sports competitions, table football, a presentation of traditional spirit making, and



several other fun activities. Of course, everything was accompanied by good music, laughter, and delicious food.



Team building 2022

- **Ugly Christmas Sweater Day**

To contribute to the warm, holiday atmosphere, and to ensure laughter with colleagues, HELB employees decided that every Friday in December they will come to work dressed in fun sweaters with colourful holiday motifs.

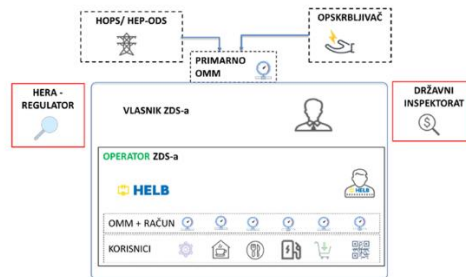


Ugly Christmas Sweater Day

NEW IN 2022

- **License and new service**

The Electricity Market Act introduced a new energy activity – the Closed Distribution System Operator (CDSO), which will establish transparent relations between the participants in the exchange of electric energy. By obtaining a license, HELB became the first licensed CDSO in the Republic of Croatia and offers complete services for obtaining the status of CDS, construction and arrangement of electricity distribution network, connection, and establishment of metering points, system management, electricity supply, reading and billing electricity consumption.



First licensed CDSO in Croatia

- **The Best Colleagues**

To highlight good examples and share stories that promote values such as cooperation, community, honesty, responsibility, and contribution, HELB held an election for the Best Colleagues of 2021. With this selection, HELB wanted to recognize and reward colleagues whose expertise and attitude towards work are an example to others and at the same time spread good and positive energy within the company. All HELB employees were able to nominate and be nominated within three categories: “Always for Cooperation” – someone who shows understanding, respect, helps when needed, and communicates in good faith and with confidence. “Give more of themselves” – someone who is exceptionally engaged in the team, who is responsible, gives more than what is expected in a regular job. “One who knows the knowledge” – someone who shows above-average knowledge related to the work he/she does, and his/ her work is of high quality and they are happy to share knowledge.



Best Colleagues award

- **New EU project**

As part of “Commercialization Innovation” HELB implements the project “Commercialization of innovative control and distribution power devices” for which grants have been approved for projects financed by the European Structural and Investment Funds. The subject of the project is the commercialization of the completed two groups of products, which should be adapted to the requirements of the target markets, production and technical documentation should be created, integration with the central monitoring centre, intellectual property protection, acquisition of production equipment to achieve standards, and adaptation of SW and IT-equipment for



improvement process. The implementation will make it possible to adapt the product to the need for market placement, increase the competitiveness of HELB on the domestic and especially foreign markets, and increase the innovative capacity.



- **Nihao Europe – Chinese TV episode**

HELB was visited by a Chinese television station to record an interview with HELB CEO. The reason for this was HELB's successful cooperation with the Chinese company Norinco on the project of building the Senj WPP, the largest wind farm in Croatia. The 65 km² wind farm was put into trial operation in December and will produce 530 million kWh of electricity a year. The interview covered more detail about the project and the experience of working with Norinco, but also the challenges the industry faced in the pandemic times.



Nihao Europe Interview

