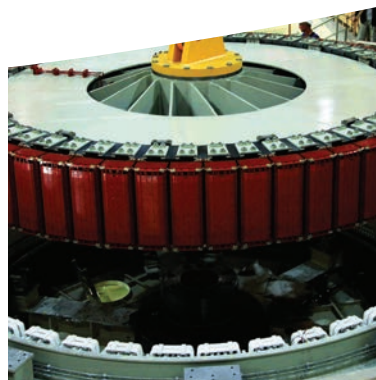
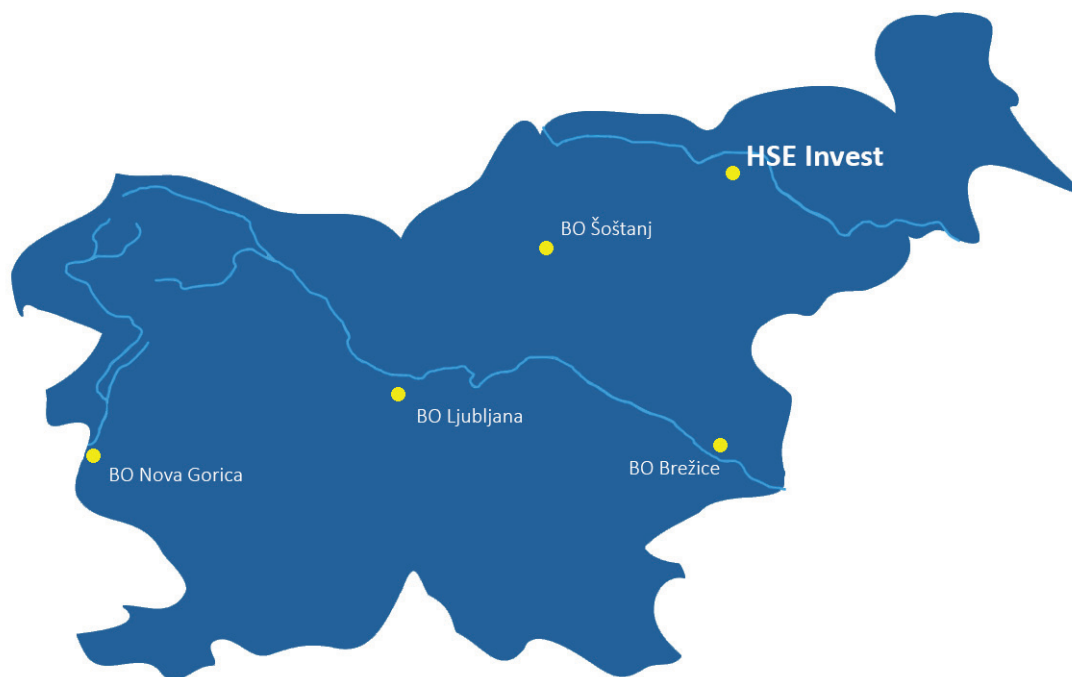




*HSE Invest, družba za inženiring in
izgradnjo energetskih objektov d.o.o.*



Design with knowledge



HSE Invest, družba za inženiring in izgradnjo energetskih objektov, d. o. o.

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HSE INVEST D.O.O. (hereinafter HSE Invest) is an engineering consulting company providing to its clients consulting engineering, design and project management services in the power sector. Since its establishment in 2002, the company has gained extensive experience in the field of energy, hydropower, thermal power, renewable energy sources and infrastructural facilities.

The major activities of the company include management of development projects in the pre-investment phase, construction management of new power facilities, management of refurbishment projects for existing plants and preparation of the whole spectre of engineering design and investment documentation for the construction of power facilities and other projects. The company is carrying out its services in Slovenia, its vision is to extend its activities also abroad.

HSE Invest is a member of the HSE Group, the largest electric power producer in Slovenia with more than 3000 employees, a total energy production of 8,000 GWh and annual sales of about 28,000 GWh. HSE Invest is a limited liability company established by the companies *Holding Slovenske elektrarne, d. o. o.*, *Dravske elektrarne Maribor, d. o. o.*, *Soške elektrarne Nova Gorica, d. o. o.* and *Savske elektrarne Ljubljana, d. o. o.*, each holding equal 25 percent equity shares.

The company head office is located in **Maribor**, Slovenia, where there are the company management and planning, construction and business economics divisions; the company also has branch offices in **Brežice**, managing and coordinating the Lower Sava River HPP construction projects, in **Nova Gorica**, managing and coordinating the Soča River HPP construction projects, in **Ljubljana**, with the environment and spatial planning section and the control systems section, and in **Šoštanj**, managing and coordinating the projects for the Client TEŠ.

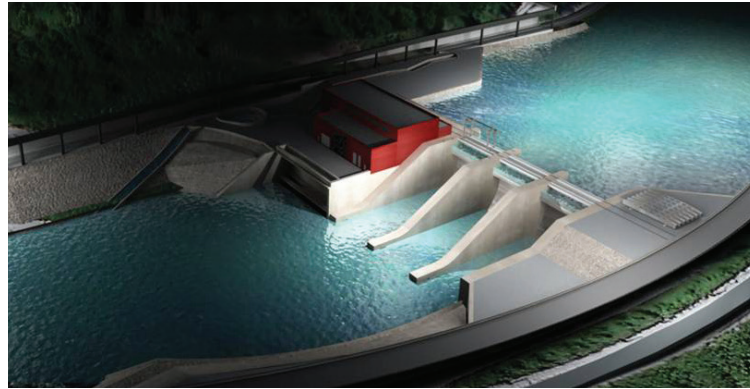


Challenges are taking us forward

The company **MISSION** is to provide to its clients professional expertise and advice in the process of selecting the most favourable solutions for their projects in terms of engineering, technology, economic efficiency and environmental acceptability; to manage the projects in a most rational and efficient way to ensure optimum return on investment; to provide synergy effects by bringing together all professional expertise available within the HSE Group; and to contribute, by its activities, to the reputation and success of the HSE Group.

The company **VISION** is to maintain its position as the leading Slovenian company for concept elaboration, planning, preparation and management of implementation of construction projects in the energy sector, and to expand its activities to the infrastructure, industry and other sectors, when and wherever an opportunity is identified. We want to offer our services to the companies within the HSE Group and to external clients in Slovenia as well as in other countries of the European Union with emphasis on the South-East European countries.

The company **GOALS** are to strengthen the recognised position of the company as the one which is offering engineering services and management of power construction projects for the HSE Group and for external clients in Slovenia; to ensure completion of projects within the planned time schedule, according to the required quality standards and within financial framework as defined by the investment programs. We want to ensure that each client is satisfied with the implementation of its projects and for this purpose to promote and facilitate permanent training and enhancement of know-how of employees in order to stay in close contact with the progress of expertise in individual disciplines. We have to adapt to changing market conditions, in time identify opportunities and introduce new services.



Company Services

Consulting Engineering

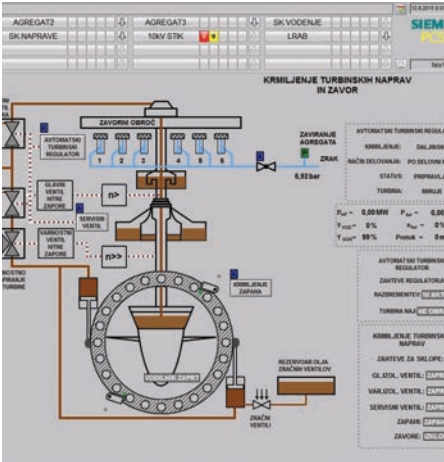
Consulting engineering for all types of plants is **the main company activity**. We carry out consulting engineering services ranging from those required in the earliest projects stages to those essential in construction and taking-over of plants. During the life-cycle of a project, we offer to our clients:

- Preparation of studies and initial investigation documents,
- Documentation preparation and management for all project stages,
- Preparation of investment documentation,
- Preparation of tender documents, conduct of tendering process, selection of tenderers,
- Contract administration services,
- Project management,
- Risk management,
- Obtaining of permits for spatial interventions, construction and purchase of land plots,
- Time scheduling and financial planning,
- Project risk management,
- Quality assurance in factories and at sites,
- Construction supervision,
- Claim management,
- Commissioning,
- Project coordination,
- Conduct of technical inspections,
- Taking-over of plants.

Control Systems

Today control systems represent one of the key factors of each technological system, particularly this applies to electric power facilities where without such systems operation thereof would hardly be possible. HSE Invest has a team of experienced professionals in the field of control systems that can offer to clients a comprehensive array of services as follows:

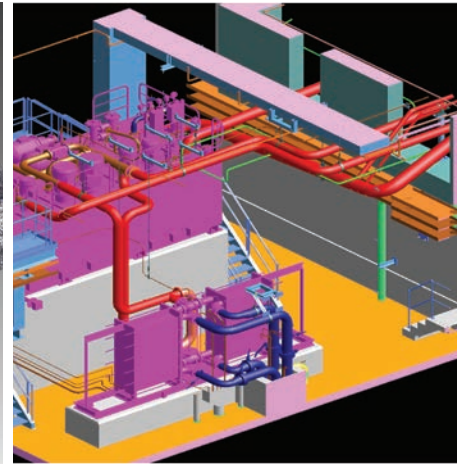
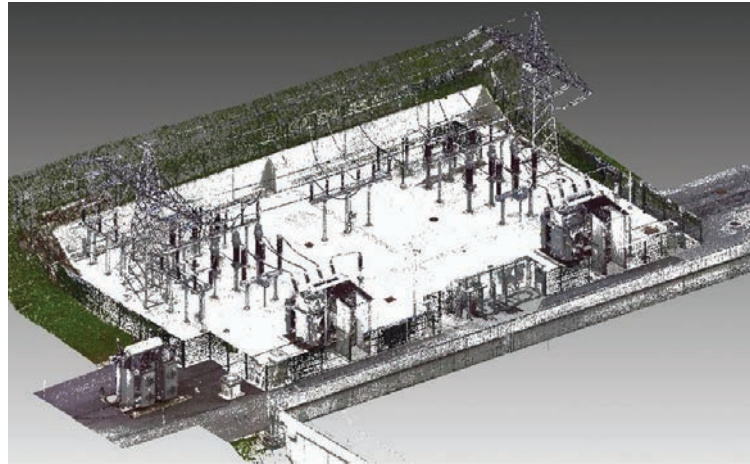
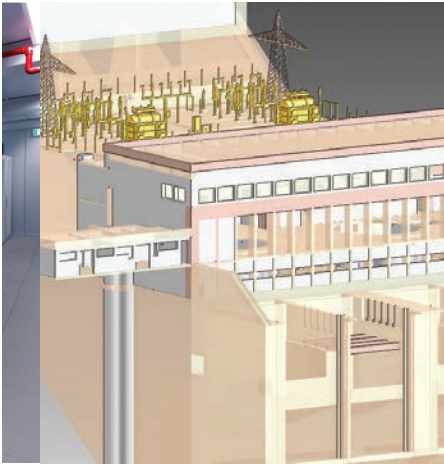
- Preparation of proposals for solutions to control system issues relating to hardware as well as software,
- Examination and optimisation of existing processes,
- Drafting of documentation for control equipment,
- Preparation of functional specifications,
- Preparation of application software,
- Performance of factory acceptance tests FAT,
- Testing and commissioning of equipment SAT,
- Maintenance of control centres,
- Support services for control system.

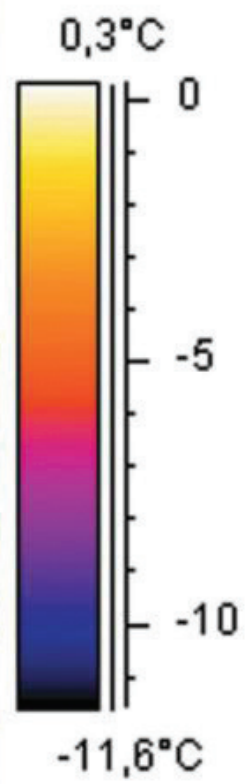


3D Design and BIM Modelling

We started using 3D design in 2010 and have since been constantly upgrading it with new services. We have successfully transferred laser scanning into 3D model, in 2015 3D design was upgraded into BIM modelling. We have the latest up-to date equipment of this type available and are constantly taking additional training in this field. The main advantages of 3D design and BIM modelling are as follows:

- The complete plant with all installations, materials and equipment is available in one spot,
- Overview of the whole plant, detailed treatment of civil structure, mechanical and electrical equipment with all specifications and materials properties, equipment types,
- Parallel work of several technical experts and several designers,
- Checking and control of collisions between installations and civil structures,
- Fast preparation of 2D documentation for random cross-sections,
- Immediate possibility to use the model at site during construction - assistance to contractors, designers and supervisors,
- Checking of installed quantities of concrete and other materials,
- Immediate entry at site of modifications into the model,
- Maintenance of the plant model during the whole life-cycle of the project until its disassembly and/or demolition.





Energy Management

The goal of transition to a low-carbon society also calls for energy saving. We at HSE Invest are well aware of this challenge and are therefore offering a wide array of services related to energy management. We can offer to our clients:

- Analyses of energy status and energy management,
- A wide range of possible measures towards efficient energy use and reduction of energy consumption,
- Analyses of selected measures for efficient energy use,
- Proposal of optimum measures in terms of costs/savings,
- Keeping of energy management records,
- Performance of energy management reviews,
- Issue of energy management certificates.

Employees

The staff at HSE Invest numbers 70 plus employees who cover practically all required disciplines, i.e. civil, electrical, mechanical, legal and environmental. Where and when necessary, third party professionals or companies are engaged for specific fields.

The HSE Invest staff is highly qualified, more than 85 percent of all employees hold at least a college degree, many of them are recognised experts with extensive experience gathered already prior to joining HSE Invest. The company is providing adequate working conditions and a stimulating environment, and is taking care of permanent training and motivation of its staff.

The employees are regularly following the latest technical developments in their respective fields and acquiring new expertise, they are participating in national and international conferences and professional events either as lecturers or regular participants.





References and projects in course

The company has numerous project references. The total installed capacity of these projects is over 1,000 MW, their total value is in excess of 2 billion EUR. In the years since the company's establishment, we have successfully completed or are still involved in over 200 projects. The projects that HSE Invest has been participating in include hydroelectric plants with capacities ranging from 0.2 to 185 MW with spillway structures up to a discharge of 4000 m³/s, and thermal power plants up to 600 MW capacity. In addition to hydroelectric and thermal power plants, our references include also renewable energy sources, infrastructure facilities and environmental projects.



HYDROELECTRIC PROJECTS

RUN-OF-RIVER POWER PLANTS

The major part of our references refers to hydropower, where we started our activities immediately after establishment of the company in 2002 by getting involved in the Lower Sava River Hydropower Project covering the construction of five hydroelectric power plants. We provided to the client consulting engineering services at all project stages. Since 2002, we have successfully completed, for the client HESS, the following projects:

- **HE Boštanj**, 3 x 11 MW 2006,
- **HE Arto-Blanca**, 3 x 13 MW, 2010,
- **HE Krško**, 3 x 13 MVA, 2013.

At present we are participating in the construction of the 3 x 15 MW **Brežice HPP**, where in addition to the role of the Engineer we also function as the designer for spillways and an extension to the dam structure. Further, we are actively participating in the preparatory activities for the construction of the last power plant of the Lower Sava River chain, i.e. 3 x 10 MW **Mokrice HPP**. Consulting engineering services are being provided for the secondary equipment refurbishment project at **Fala HPP**, where we are also preparing application software. We are providing consulting engineering services in the pre-investment phase for the construction of three **hydropower plants on the Mura River**. For the construction of **hydropower plants on the Middle Sava River**, we have drafted the preliminary design for the first three power plants, i.e. 2 x 18 MW **Renke HPP**, 2 x 18 MW **Trbovlje HPP** and 2 x 22 MW **Suhadol HPP**.



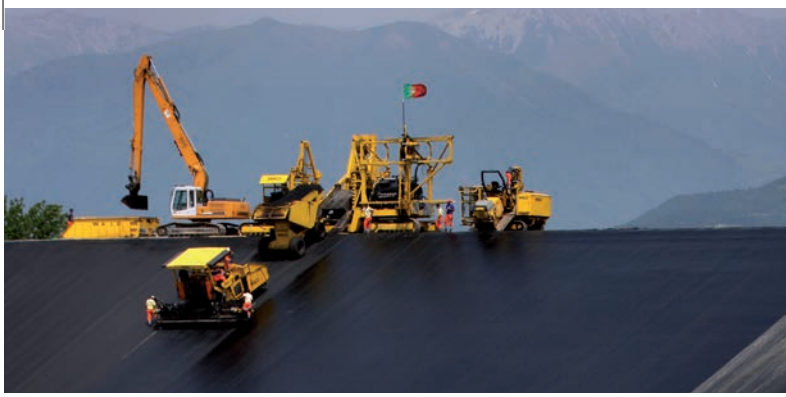
REFURBISHMENT OF HPPs AND SMALL HPPs

We have been participating in the refurbishment of existing power plants in Slovenia. In 2013 we successfully completed the project of refurbishment of the largest hydroelectric power plant in Slovenia, i.e. 2 x 85 MW **Zlatoličje HPP**, which also included refurbishment of the Melje dam and the 17 km long supply channel. In 2014 the 3 x 16 MVA **Doblar 1 HPP** refurbishment project was completed.

As a designer, we have prepared preliminary design documentation for three power plants on the Middle Sava River: **Trbovlje**, **Renke** and **Suhadol**. For the last one also the basic design was prepared in 2012. At present, we are carrying out design services for the **Hrastje Mota HPP** on the Mura River and preparing documentation for the refurbishment of **Plave HPP** on the Soča River.

As regards small HPPs, our references cover consulting engineering services as well as the whole area of design. We have successfully completed the **Klavžarica SHPP**, **Ruše SHPP** and **Markovci SHPP**. We carried out supervision of refurbishment of **Činžat SHPP**, as a designer we are participating in the design of a series of small HPPs. For small HPPs we are providing updating of software and optimisation of operation at projects in Slovenia and abroad.





PUMPED STORAGE POWER PLANTS

AVČE PSP

HSE Invest provided consulting engineering services for the construction of the first pumped storage power plant in Slovenia, i.e. **Avče PSP**. Key data of the 185 MW power plant are as follows:

- Maximum head: 521,00 m,
- Effective storage basin volume: 2.2 million m³,
- Rated discharge (turbine mode): 40 m³/s,
- Rated discharge (pump mode): 34 m³/s,
- Installed turbine capacity: 185 MW,
- Installed pumping capacity: 180 MW,
- Annual production: 426 GWh,
- Annual consumption for pumping: 553 GWh,
- Penstock (incl. supply tunnel) : length 2264 m, diameter from min. 2.6 m to max. 3.3 m,
- Powerhouse installed in a 18 m dia and 80 m deep shaft accommodating a 185 MW turbine/pump with pumping capacity from 26 m³/s to 32 m³/s and turbine mode capacity of 40 m³/s at nominal speed of 600 rpm (variable), Varspeed generator,
- Grid connection via a 110 kV double-system overhead transmission line and underground cable.

KOZJAK PSP

For the planned **Kozjak PSP**, the Client DEM selected HSE Invest to provide consulting engineering and design services. Our services till now include the conduct of tendering procedure for the supply of a turbine generator, optimisation of design solution, preparation of investment program, participation in the process of obtaining of the national spatial plan and start of acquisition of land plots. At present, due to the prevailing situation on the electric energy market, the project is on hold. The design data of the project are as follows:

- Storage basin volume: 3,0 million m³,
- Penstock length: 2,400 m,
- Head: 713.2 m,
- Capacity: 2 x 220 MW
- Rated speed: 600 +/- 4 % rpm,
- Turbine type: 2 x reversible Francis,
- Generator type: Varspeed 2 x 228 MW,
- Annual production: 860 GWh,
- Grid connection: 400 kV TL.



TERMAL PROJECTS

For the construction of the **600 MW Unit 6 at Thermal Power Plant Šoštanj**, HSE Invest provided consulting engineering and design services. The plant was successfully commissioned within time schedule in 2015, which is to a large extent attributable also to our services. HSE Invest carried out 3D design, prepared design documentation for the building permit for the whole plant and obtained the building permit, prepared the detailed design documentation for the civil part, carried out nostrification of the main equipment supplier's documentation, carried out project supervision, provided QA/QC services, prepared tendering documents and conducted the tendering procedure according EBRD rules, provided contract administration and occupational safety services, took care of administrative procedures etc.

Key technical data of the plant are as follows:

- Rated capacity: 600 MW,
- Efficiency: 43 percent,
- Fuel: lignite,
- Annual operating hours: 6,500 h/y,
- Annual production: 3,500 GWh,
- Annual coal consumption: 3 million tons,
- CO₂ emissions: 0.87 kg/kWh,
- Life cycle: 40 years.



Renewable Energy Sources

For RES construction projects, we are offering a wide range of services for various types of plants. We have provided design and engineering services for the construction of photovoltaic power plants, the largest among them is the 750 kW **Zlatoličje PV** power plant. We have experience with wind potential measurement and preparation of preliminary designs for wind parks. Our experience also includes projects for waste heat utilisation, combined heat and power production and exploitation of geothermal energy.



Infrastructure

Increasingly HSE Invest is undertaking to provide design and engineering services for infrastructural projects. Our design engineers, who have many years of previous experience, have participated in numerous infrastructural projects such as construction of motorways, bridges, viaducts, retaining walls and building construction. As a company, we have already obtained references as designers of the reservoir for the **Krško HPP** and the bridge at **Brežice HPP**. At present we are carrying out several projects for restoration and construction of bridges, embankments, local infrastructure, fish paths, roads etc.



Quality and Environmental Accountability

Special attention is being paid to the quality of our services, which is supported by the established efficient project management system and management system for all processes being the subject of our business activities. We maintain respective certificates according to the requirements of the ISO 9001:2008 and BS OHSAS 18001:2007 standards, which are annually audited by an independent institution.

We are well aware of the interdependency with the environment where we live and work. We cater for a respective attitude towards the environment and nature, observe the requirements for conservation of nature, rational handling of natural resources, optimum utilisation of materials and energy. As far as its powers allow, HSE Invest is playing a socially responsible role in the community and is contributing to individuals, associations and institutions which carry out socially beneficial missions. So we try to make our co-existence more pleasant for all.

But we also never forget our most precious capital - the employees and their knowledge. We are aware of the fact that efficient, socially and environmentally acceptable performance of work processes can only be achieved by people who have the required knowledge and capabilities, who sense that their work is respected and who feel secure and satisfied in their work environment.



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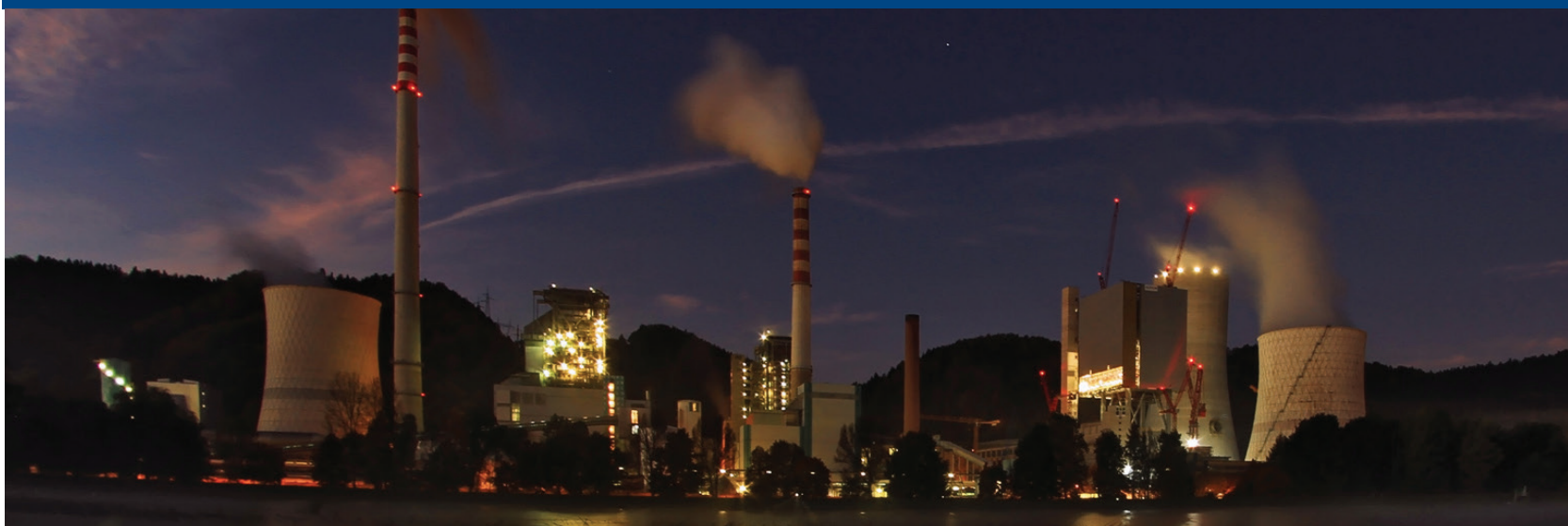
Published by: **HSE Invest d. o. o.**

Text: **HSE Invest d. o. o.**

Design and production: **HSE invest d. o. o.**

Print: **HTZ Velenje, I. P., d. o. o.**

Copies: **300**



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