

voestalpine Steel Service Center Romania streamlines energy costs with a 210 kWp photovoltaic plant

The voestalpine Steel Service Center Romania project, developed in partnership with 4ENVIGO, is an example of fast and efficient implementation of an industrial photovoltaic solution, which combines technical performance with a significant economic and ecological impact. voestalpine demonstrates a proactive approach to the sustainability of its operations, consolidating its position as a responsible and innovative leader in steel and high performance metals industry.

In numbers, about voestalpine AG:

85 years in steel and technology industry
500 production centers in 50 countries on 5 continents

Over 49,700 employees globaly
475 employees allocated for Romanian operations

16,7 Bn euro consolidated turnover
233 Mn. euro turnover in Romania



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Market context

The steel industry contributes around 7–8% of global CO_2 emissions, facing increasing pressure to reduce operational costs and meet sustainability requirements. In Europe, the steel sector is included in the EU Emissions Trading System, with steel production responsible for around 180–185 million tonnes of CO_2, or around 5–6% of the European Union's total carbon emissions.

Legislative measures, such as Fit for 55, are driving the reduction of carbon emissions to 55% by 2030 and climate neutrality by 2050. At the same time, European legislation is encouraging the shift to renewables and increased energy efficiency in production chains. Demand for low-carbon steel from customers such as the automotive industry, which is itself facing ESG requirements from investors and business partners, is driving labelling and standardisation schemes for steel made with low carbon emissions in the production process.

For a well-established company like voestalpine AG, a global leader in the production of special steels and integrated industrial solutions, adopting energy efficiency measures has become a priority in the sustainable development strategy. The group, recognized for its high standards of quality and innovation, operates in an energy-intensive field, where any optimization has a direct impact on the profitability and sustainability of operations.

In this context, investments in increasing energy efficiency and the transition to green energy are becoming a strategic pillar for increasing competitiveness. Such investments offer the advantage of predictable operating costs, while also contributing to reducing the carbon footprint and strengthening the reputation of an environmentally responsible organization.

The challenge for voestalpine Steel Service Center România

With strong roots in the Austrian steel tradition of Linz, voestalpine AG has developed over the past 85 years from a local manufacturer to an international group focused on high-performance materials, steels and special alloys for applications with a strong technological component for the automotive, rail and energy industries. With over 49,000 employees, voestalpine AG has approximately 500 distribution and production companies operating on 5 continents, divided into 4 divisions: Steel, High Performance Metals, Metal Engineering and Metal Forming.

Opened in Giurgiu in 2012, through an investment of 20 million Euros, voestalpine Steel Service Center Romania has an annual production capacity of 130,000 tons of steel strips and sheets, materials intended for customers in the automotive, energy and household appliance industries. The constant increase in energy costs and price volatility led to the company's decision to optimize its operating costs and adopt a sustainable solution for electricity production. At the beginning of 2025, voestalpine Steel Service Center started a market analysis to identify a partner specialized in industrial photovoltaic solutions, which would meet the following challenges:

- Energy costs predictability.
- Maintaining the continuity of production activities.
- Utilizing the available space, analyzing the soil characteristics and land orientation to obtain maximum energy efficiency.
- The need to comply with legal regulations in compliance with all applicable regulations regarding the safety and operation of photovoltaic plants.

„The collaboration with 4ENVIGO was exemplary, from the initial technical analysis to the commissioning of the photovoltaic plant. For us, this project represents more than an investment in energy efficiency: it is a new step in the development of a sustainable business model, aligned with European decarbonization standards."



Dan Mihai Nidelea
Managing Director
voestalpine Steel Service Center România

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The solution

At the beginning of 2025, voestalpine Steel Service Center Romania evaluated the technical capabilities and references of several photovoltaic solution providers in the local market. Following market research, the company chose 4ENVIGO, due to the professionalism demonstrated in proposing a customized technical solution and the ability to deliver an integrated service package, which included not only the design, acquisition, installation and commissioning of the photovoltaic plant, but also technical consultancy in relation to public authorities, in order to comply with the regulations in force regarding the operation of such a plant.

The 4ENVIGO technical proposal started from a detailed analysis of the energy needs of voestalpine Steel Service Center Romania, evaluating the load curves, daily energy consumption, power peaks and the particularities of the existing infrastructure. Based on this data, a customized technical solution was configured, designed to ensure an optimal balance between performance, reliability and cost. After validating the economic and impact benefits, the solution proposed by 4ENVIGO received the approval of voestalpine management in October 2025. The project was executed in just 2 weeks, between 14 and 28 October 2025.

Commissioned on 28 October 2025, the project consisted of installing a photovoltaic plant with a total capacity of 210 kWp, mounted on the ground with a south orientation, to maximize the solar radiation output. Fully financed from Voestapine's own funds, the system implemented by 4ENVIGO benefits from an estimated lifespan of 25 years, with a guaranteed performance of 85.5% at the end of the operating period. The panels benefit from a 12-year product warranty and a 25-year power performance warranty, while the inverters and mounting structure benefit from a 10-year warranty.

Project description

The 4ENVIGO team coordinated all stages of the project, from preliminary study, approval, design, acquisition, transportation, construction, assembly and testing and launch into production. 356 Jinko Solar 590 W monocrystalline photovoltaic panels were used, recognized for their resistance in industrial operating conditions, 2 Huawei 100 kW inverters, with advanced monitoring and optimization functions of the energy flow, installed on a galvanized clamping structure, designed for stability and durability in environments exposed to vibrations and temperature variations.

The estimated life of the system is 25 years, with a guaranteed performance of 85.5%, which ensures a constant supply of green energy in the long term. The guarantees are conditional on the annual performance of preventive maintenance, provided by the 4ENVIGO team. Thus, technical assistance allows constant supervision of the system performance, monitoring of the generated energy, remote assessment of the efficiency of the solar panels and electronic components and the performance of essential maintenance activities.

The voestalpine project was distinguished by a record execution time, made possible by efficient collaboration between all parties involved. Compliance with the assumed deadlines was ensured by 2 4ENVIGO specialists, involved in project management and technical coordination of a design team consisting of 2 technical experts specialized in energy engineering and a team of 10 technicians, specialized in the assembly and installation of professional photovoltaic systems. On behalf of voestalpine Steel Service Center Romania, a local technical manager ensured operational coordination on the ground and access to the existing infrastructure, and a member of the management team ensured a rapid decision-making flow.

„The partnership with voestalpine Steel Service Center Romania demonstrates once again that the transition to green energy can be done quickly, safely and with immediate impact. We are proud to have delivered such a complex project in just two weeks, without interruptions in production, and to be able to contribute to increasing the energy independence of a leading company in the high-performance metallurgical industry."



Andrei Ivan
Managing Partner
4ENVIGO

Results

Increased energy independence:

The photovoltaic plant will generate an estimated annual production of over 295 MWh, covering a significant part of voestalpine Steel Service Romania's energy consumption.

Fast return of investment:

The solution is designed to bring annual savings of approximately 58,000 euros on the electricity bill, thus ensuring a rapid recovery of the investment.

Carbon footprint reduction:

The system contributes to reducing the carbon footprint by approximately 90 tons of CO_2 annually, equivalent to the emissions generated by the annual energy consumption of over 50 households.

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„voestalpine's investment in this photovoltaic system reflects our strong commitment to adopting energy-efficient solutions, and to transforming sustainability into a real competitive advantage. The partnership with 4ENVIGO demonstrates that speed of execution, economic performance and environmental responsibility are possible when you have partners who deliver quickly, reliably and to the highest standards."



Wolfgang Kriegner,
Managing Director
voestalpine Steel Service Center Polska and Romania



Conclusion

The voestalpine Steel Service Center Romania project is an example of a fast and efficient implementation of an industrial photovoltaic solution, which combines technical performance with a significant economic and ecological impact. voestalpine demonstrates a proactive approach to the sustainability of its operations, consolidating its position as a responsible and innovative leader in steel and high performance metals industry.

The success of this project is due to the close collaboration between the technical teams, the rigorous management and the experience of 4ENVIGO in developing turnkey solutions for the industrial sector. By delivering this complex system in just 2 weeks, 4ENVIGO reconfirms its position as a reliable partner for companies that aim to become more sustainable, competitive and energy efficient - quickly, without interruption of activity and in compliance with all technical regulations in force.



About 4ENVIGO

4ENVIGO was established to help private and public organizations to achieve superior ESG rating with the lowest environmental impact in their journey to net zero carbon emissions, by increasing energy efficiency with the fastest financial return. 4ENVIGO is a one-stop-shop provider for organizations seeking for end-to-end, high-quality services, from ESG strategy to implementation of complex turnkey EPCM projects.

4ENVIGO's portfolio includes names such as Salesianer, Regina Maria, Mairon Galați, Viile Metamorfosis, Profi, MidTown Retail, Globalworth, IPSO, SanoVita, Electroputere Parc, Nexteam Brănești or voestalpine Steel Service Center, with an installed capacity of over 30,000MWh per year through more than 100,000 photovoltaic panels delivered to large organizations in real estate, manufacturing, agriculture, and public sector..

You Came to the Right Place

If you are looking for a reliable partner that can help you reduce your carbon footprint while still achieving success, contact us today!

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