



START

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Light _builds tomorrow

www.spectra-lighting.pl

A modern industrial building with a dark grey corrugated metal facade. The word "SPECTRA" is mounted in large, white, 3D block letters. To the left of the name is a red, 3D geometric logo consisting of a square with a triangle cut out of it. The building has a white door and a large window with white frames. The foreground is a gravel area with some young plants and a small tree.

SPECTRA

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1.1. Introduction

At Spectra Lighting, we understand that our future and the planet's health depend on the decisions we make today. Sustainability, environmental stewardship, and social responsibility are fundamental to our operations. Our diverse workforce and their innovative ideas drive our commitment to a sustainable future.

For years, we have focused on solutions aligned with the principles of the UN Global Compact and ESG (Environmental, Social, Governance) standards. Our strategy integrates cutting-edge technologies with ecological responsibility, aiming to minimize our environmental footprint. This includes optimizing production processes, reducing CO₂ emissions, and investing in renewable energy sources.

As an active participant in the UN Global Compact, we proudly support the UN Sustainable Development Goals (SDGs). Our efforts are particularly concentrated in sustainable production, energy efficiency, and advancing the circular economy. We uphold corporate social responsibility (CSR) by advocating for human rights, ethical labor practices, and transparent business operations.

In our Environmental Report 2023/2024, we highlight our achievements and actions from the past year. This document serves not only as a record of data but also as a testament to our commitment to creating a more sustainable future for our organization and the environment.

We invite you to explore our initiatives and strategies for the future. Together, through collaboration, accountability, and innovation, we can work toward a more sustainable world.

**Respectfully,
The Management Board of Spectra Lighting Ltd.**



SINCE 2000, WE HAVE ESTABLISHED OURSELVES AS A LEADER IN THE PRODUCTION OF INNOVATIVE LIGHTING SOLUTIONS, DRAWING INSPIRATION FROM DESIGNERS ACROSS THE GLOBE.

Our vision transcends the mere illumination of spaces; we endeavor to craft experiences that enhance quality of life while nurturing our planet for future generations.

25

YEARS ON THE MARKET

48

DISTRIBUTION NATIONS

1.2. Company Overview

Spectra Lighting Ltd. has been a leading manufacturer of contemporary lighting systems for over two decades. Since our founding in 2000, we have combined a passion for illumination with cutting-edge technology, collaborating with designers and architects worldwide. With operations in 48 countries, we provide lighting solutions for offices, hotels, commercial spaces, and public venues. Our approach integrates aesthetics, functionality, and ecological responsibility, ensuring our products enhance both visual appeal and environmental sustainability. All our lighting solutions comply with relevant health, safety, and environmental certifications.

In 2021, we became a participant in the UN Global Compact, the world's largest initiative for businesses committed to the Sustainable Development Goals (SDGs) and ethical business practices. Our sustainability efforts were recognized in the „Yearbook UN GCNP 2024“, which highlights key collaborations between businesses and government partners, evolving corporate strategies, and the latest ESG trends. We take pride in being among the companies shaping the future of responsible business in Poland.



Photo 1. Spectra Lighting at the UN Global Compact Poland Gala in October 2024.

1.2.1. Our people

Our corporate culture is built on strong ethical principles, including the Universal Declaration of Human Rights and the EU Charter of Fundamental Rights. As a UN Global Compact participant, we incorporate these principles into our daily operations, ensuring they guide our workplace policies and business strategies.

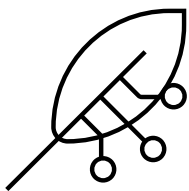
Employee well-being and workplace safety are top priorities. We are committed to fostering a work environment that promotes diversity, collaboration, and professional growth, while maintaining the highest standards of occupational safety and ethics.

1.3. Forward-Looking Initiatives

By 2030, we aim to achieve climate neutrality concerning energy dependence and the potential recycling of materials. However, our commitment extends beyond internal operations. We are dedicated to actively supporting local initiatives.

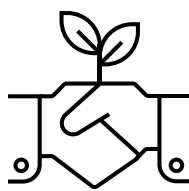
Pro-ecological initiatives, investment in education, and participation in community projects are our focus. Our objective is to foster a better future for subsequent generations, as we hold that genuine change commences with collective action.

Our sustainability strategy is built on three key pillars:



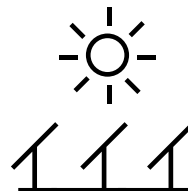
Advancement of sustainable technologies

Our R&D teams focus on developing innovative lighting solutions that reduce energy and material consumption while maintaining superior quality.



Collaboration for Sustainable Development

We build long-term partnerships with suppliers and customers who share our sustainability values, actively participating in ecological initiatives.



Compensation for Unavoidable Emissions

We work with accredited carbon offset programs to mitigate our carbon footprint effectively.

ECOLOGICAL ACCOUNTABILITY

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2.1. Evolving for a Sustainable Future

This report outlines our progress in sustainable lighting, production, logistics, and product life cycle management, with a special focus on energy consumption and efficiency. A significant area of our analysis is the annual review of energy consumption from proprietary

installations, particularly photovoltaic systems at our Załuski and Warsaw locations for 2023 and 2024. The results are presented using numerical data and graphical comparisons, showcasing the positive outcomes of our initiatives.

Our commitment to environmental responsibility is demonstrated through the responsible management of natural resources, continuous improvements in energy efficiency, and efforts to reduce our environmental impact.

Investments in renewable energy, sustainable product design, and digital transformation allow us to minimize our carbon footprint while optimizing resource utilization. Every initiative aligns with international environmental standards, reinforcing our obligations to future generations. However, our goal goes beyond merely mitigating negative impacts; we seek to drive meaningful change across the industry by exemplifying responsible decision-making.

In the upcoming years, we plan to expand our photovoltaic infrastructure and optimize our renewable energy sources further. We will enhance eco-design principles by introducing low-emission materials and innovative

technologies to ensure our products remain both efficient and environmentally responsible. Digitalization and automation will play a crucial role in improving operational efficiency while minimizing resource consumption. At the same time, we are implementing increasingly stringent quality standards and certifications to validate our environmental stewardship.

2.2. Sustainable Lighting

2.2.1. Energy Efficiency and Performance

Energy efficiency is vital for sustainable development, as it reduces greenhouse gas emissions while lowering operational costs. Our approach focuses on maximizing performance while consuming less energy, ensuring that our products contribute to a sustainable future.

Product Efficiency and Longevity

Almost all of our luminaires—99.9%—are based on highly efficient LED technology, significantly lowering power consumption compared to traditional lighting systems. At least 90% of our products achieve a luminous efficiency of no less than 135 lm/W (Class D) and have a service life exceeding 50,000 hours. These features guarantee long-term energy savings and a reduced environmental footprint throughout the product lifecycle (see graph 1).

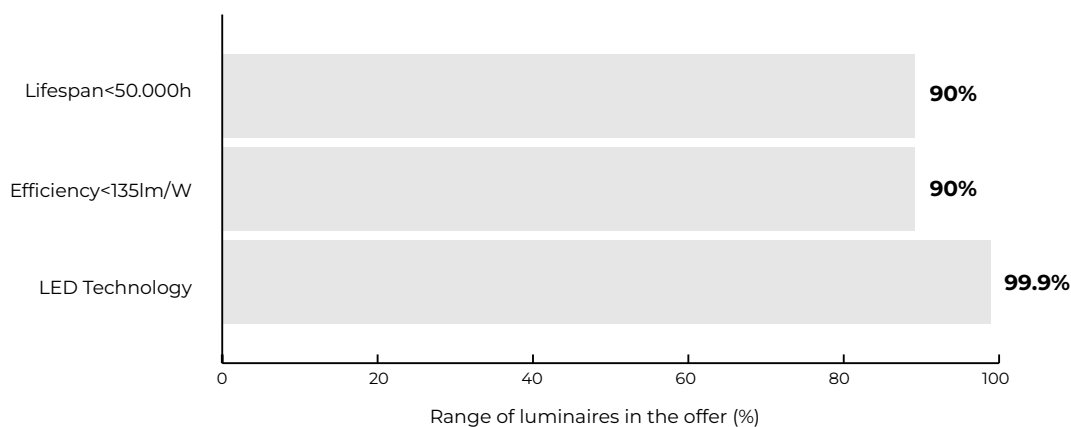
A key technological advancement in our production process is the integration of the new bending center. This high-precision manufacturing system has improved the sustainability of our operations by optimizing material use, en-

hancing light efficiency, and decreasing energy consumption in production. The durability of our luminaires and their modular construction support sustainability by facilitating the easy replacement of individual components, thereby extending the overall lifespan of our products.

Intelligent control

Intelligent lighting control systems contribute to further energy reduction. The implementation of advanced automation solutions such as DALI and Casambi allows for precise control of light intensity and color, adapting illumination to user needs in real-time. Integrating these systems with broader building automation platforms, including heating, ventilation, and air conditioning (HVAC), ensures a holistic approach to energy management, significantly minimizing unnecessary consumption.

Percentage of energy-saving and long-lasting products offered by the company



Graph 1. Percentage distribution of products featuring LED technology and the associated luminaires, highlighting enhanced efficiency and durability.

2.2.2. Sustainable materials

A core aspect of our sustainability strategy is to reduce dependency on primary raw materials while increasing the use of recycled content. By focusing on material efficiency, we limit environmental degradation and support a circular economy.

PET felt

A notable example is the use of PET felt, an eco-friendly material derived from plastic waste, which has been integrated into our lighting products launched in 2024. This material not only enhances the aesthetic and functional properties of our luminaires but also provides superior soundproofing capabilities. Our sales catalog for 2024 features the following fixtures:

- HOLY (see photo 2)
- ARC ACOUSTIC (see photo 3)
- PROFILITE ACOUSTIC
- AVALANCHE EC ACOUSTIC
- DAISY ACOUSTIC

The PET felt used in our products contains at least 60% recycled raw materials and offers high acoustic performance, with Noise Reduction Coefficient (NRC) values ranging from 0.40 to 1.00. Additionally, it is flame-retardant, meeting the B-s2, d0 classification for fire safety, ensuring both user protection and regulatory compliance. The production of this material adheres to ISO-certified processes that uphold strict ecological and social standards. By incorporating PET felt into our designs, we significantly reduce waste, support the recycling industry, lower our carbon footprint, and promote sustainable development.

Aluminum

An important step forward in sustainable development is the use of recycled aluminum for our fixtures. Up to 95% of our products are made from this material (see graph 2). Recycled aluminum has a significantly smaller carbon footprint, with its production capable of



Photo 2. Sacred Acoustic acoustic arrangement in the sales proposal.

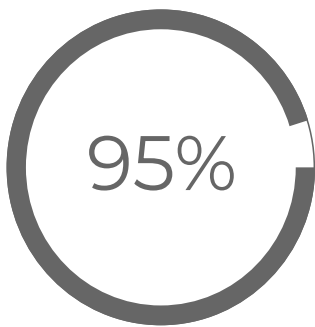


Photo 3. Arc Acoustic acoustic fittings available for purchase.

reducing CO₂ emissions by up to 95% compared to that of primary materials. Additionally, producing aluminum through recycling requires up to 95% less energy than extracting it from bauxite ore, making it a much more environmentally friendly option (see graph 3). By incorporating recycled aluminum into our luminaires, we not only reduce our dependence on primary raw materials but also sup-

port initiatives aimed at lowering greenhouse gas emissions. Our products are designed with a long life cycle in mind and can potentially be reintegrated into the production cycle at the end of their life.

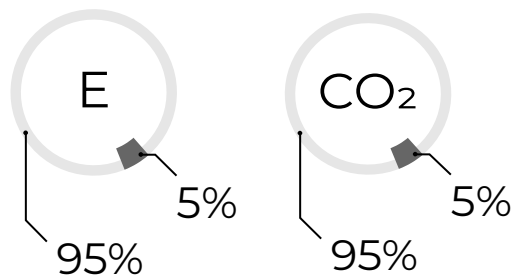
Products in the offering composed of aluminum



- Products made of aluminium
- Other materials

Graph 2. Percentage distribution of products composed of aluminum.

Energy conservation through the utilization of recycled aluminum



- Percentage of use in the manufacturing process
- Saved percentage of use

Graph 3. Percentage distribution conserved energy and reduced carbon dioxide emissions through the utilization of recycled aluminum.



Aluminum is among the most sustainable materials available

due to its exceptional recyclability, energy-efficient processing, and infinite usage cycles.

Photo 4. The manufacturing process of aluminum lighting fixtures at the Spectra facility.

2.3. Sustainable Initiatives

Toxicology

Our company rigorously adheres to the RoHS 3 (2015/863) directive, which prohibits the use of hazardous substances, including mercury and lead, in electrical and electronic devices. Our production processes do not involve materials that could harm the environment or human health. Additionally, our facilities produce only domestic sewage, approximately 260 cm³ per day, and we do not discharge any industrial sewage.

We uphold a strong commitment to technological advancement while fostering an ecological organizational culture. Annually, we responsibly discharge approximately 2,735 m³ of rainwater deemed “clean,” resulting in a negligible impact of our operations on the aquatic environment.

2.3.1. Investments in certified quality standards

To maintain the highest standards of quality and environmental care, we comply with international quality management and environmental protection standards. We hold ISO 9001:2015 certifications that affirm the reliability and effectiveness of our production processes and services. Furthermore, we have ISO 14001 certification, which reinforces our commitment to minimizing environmental impact through efficient resource management and emission reduction.

Through our partnership with Axpo, a leading renewable energy provider in Europe, we are progressively increasing the use of green energy in our operations. Our new photovoltaic installations not only allow us to generate renewable energy independently but also enable us to monitor our consumption and assess our environmental impact in real time. This initiative is a crucial part of our strategy to reduce emissions and achieve climate neutrality by 2030. Our collaboration with Axpo supports detailed emissions reporting and adherence to exemplary ESG (Environmental, Social, Governance) practices. With our green energy certification, we are confident that our production processes are powered by renewable energy sources.

We also hold PZH certificates for select medical lighting products, ensuring their safety and compliance with sanitary standards. Our goal is to expand our presence in the medical sector by offering a broader range of options, not only for reception areas and hospital rooms but also for other environments that require high-quality, certified solutions.



2.4. Sustainable Manufacturing and Logistics

In 2024, we implemented solutions that promote the circular economy, reducing the consumption of natural resources and mitigating adverse environmental effects. These initiatives primarily focus on adopting circular materials management, efficient waste management, and enhancing logistics systems, as

well as utilizing innovative ecological sources of renewable energy. Additionally, we undertook a comprehensive modernization of our production facilities at our plant in Załuski. Each of these initiatives is discussed in detail in this chapter, accompanied by visual aids.

2.4.1. Enhancement of the production environment

Investment in a New Paint Shop

The text outlines the comprehensive modernization initiatives undertaken at the production facility aimed at enhancing quality and environmental sustainability within the painting process. The primary components of the modernization, set to commence in early 2024, include the establishment of an in-house paint shop and the installation of a rail system for the transportation of components. Previously, painting operations were outsourced to external firms, which resulted in limited oversight regarding scheduling, quality, and transport frequency. On average, three transports were needed, with the duration for painting a single batch taking 2-3 days; some products required rework, leading to significantly prolonged implementation timelines, escalated costs, and increased CO₂ emissions associated with inter-plant transport (see Graph 4).

The introduction of the in-house paint shop has fundamentally transformed this process. The time required to process one batch of components has been reduced to a single working day, effectively eliminating delays related to transport and reliance on external services. Enhanced efficiency now allows for the handling of five batches per week, compared to the previous capacity of 2-3 batches, indicating a 100% increase in production capacity (see Graph 5).

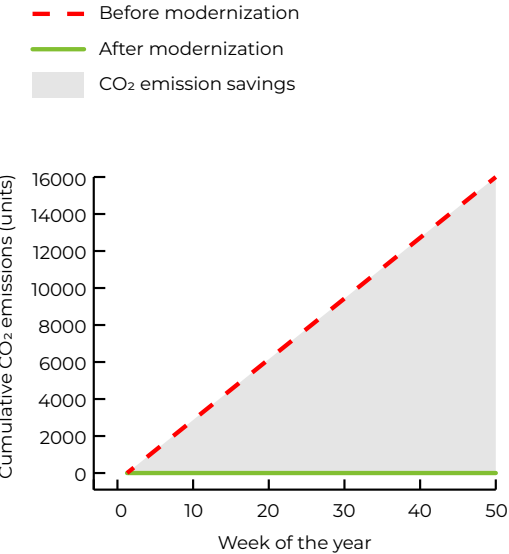


Photo 5. Illustration of the streamlined process for inserting a production batch into the oven, facilitated by the rail transport system.

We have also implemented a powder paint recycling system that recovers at least 90% of the material, significantly conserving resources and mitigating environmental impact (discussed in Chapter 2.4.2 on the Implementation of the Circular Economy). The reduction of production cycle time and elimination of downtime have contributed to a decrease in overall energy consumption per unit product.

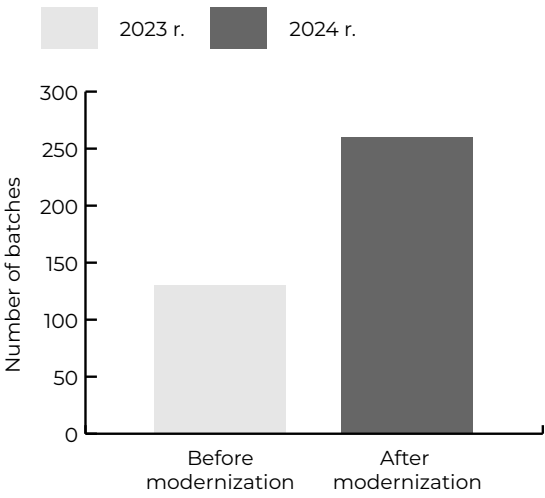
Overall, the modernization has not only enhanced operational efficiency but also enabled the company to achieve its ambitious environmental objectives. The establishment of our own paint shop and an automated transport system represents a holistic approach to modernization. Essential components of this upgrade include complete oversight of the painting process, resolution of transport and

Reduction of transportation and carbon dioxide emissions



Graph 4. Reduction of CO2 emissions achieved by discontinuing the transportation of goods from the external paint shop.

Enhanced plant efficiency due to the new paint shop.



Graph 5. Annual illustration of the company's enhanced productivity resulting from the investment in a new paint shop.

By establishing its own paint shop and automating transportation, the plant doubled its production capacity, lowered costs and CO₂ emissions, while simultaneously enhancing quality and oversight of the production process.

correction issues, improved production efficiency, product quality, and work ergonomics, along with reductions in energy and material consumption.

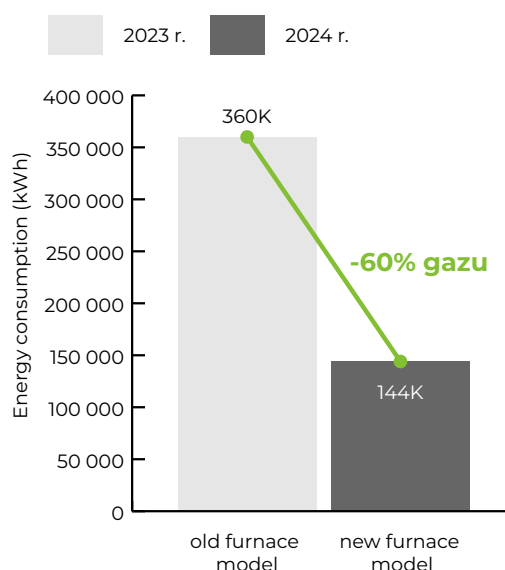
The advancements in recycling systems and meticulous processes, combined with the proactive execution of the company's environmental objectives aimed at reducing CO₂ emissions and overall energy consumption, have yielded significant benefits. This modernization has doubled production efficiency while enhancing quality and ecological standards. Through precise process control, the plant is now able to pursue sustainable development goals while swiftly addressing customer demands and enhancing competitiveness in the market.

New Furnace for the Paint Shop

In the third quarter of 2024, we invested in a modern furnace for heat treatment on the painting line (see Photo 6). This new equipment enhances energy efficiency, decreases greenhouse gas emissions, and minimizes energy losses. Improved thermal insulation and precise control of process parameters have contributed to a reduction in the percentage of defective products.

The new furnace features an advanced Siemens Simatic HMI control panel (see Photo 7), enabling meticulous management of essential operating parameters, such as temperature and cycle time. The implementation of an automated system for controlling technological parameters has optimized the production process and further reduced energy losses. As a result, the average annual gas consumption of the new furnace has

Enhanced plant efficiency due to the new paint shop.



Graph 6. Annual comparison of energy consumption between the old furnace model and the new one.

decreased by 60% compared to the previous model, yielding annual savings of approximately 216,000 kWh (see Graph 6).

The new furnace enables automatic monitoring and documentation of process parameters, such as achieved temperatures, cycle durations, and energy consumption. Its real-time data recording capability for potential errors allows for thorough analysis and the implementation of corrective measures. The automatic documentation of parameters



Photo 6. The procedure of firing a batch of products in a new furnace at the manufacturing facility.



Photo 7. Siemens Simatic HMI control panel integrated into the production furnace.

eliminates the need for manual reporting, reducing the risk of human error and enhancing the efficiency of information flow.

Additionally, the furnace includes a visual and auditory signaling system that alerts operators when a cycle is complete. This feature facilitates prompt responses, minimizes downtime, and increases operational efficiency, allowing operators to engage in concurrent tasks. As a result, productivity at production stations improves, and the average service time per cycle is reduced.

A similar level of automation has been achieved with the new washing station, which operates using closed water circulation technology. The addition of oil and sludge filters helps maintain high process quality and reduces production waste. Detailed information about the implementation of the closed-loop economy is provided in Chapter 2.4.2.

Precision Bending Center

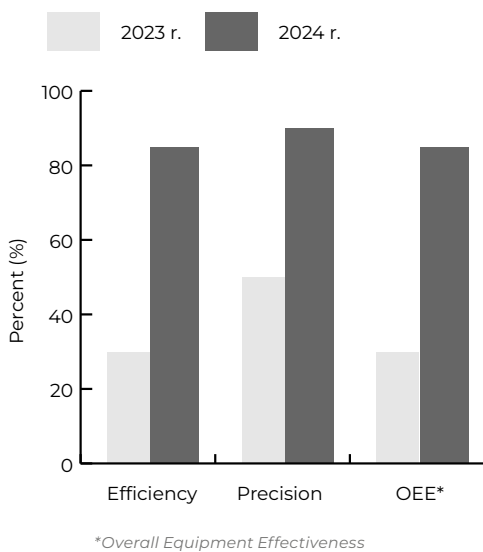
Our new bending machine was integrated into our facility in the first quarter of 2024 (see Photo 8). Before this integration, the sheet metal bending process was performed manually, requiring manual placement of the material and repositioning of the sheet for each continuation of the process.



Photo 8. New bending station operational since 2024 at the production facility in Załuski.

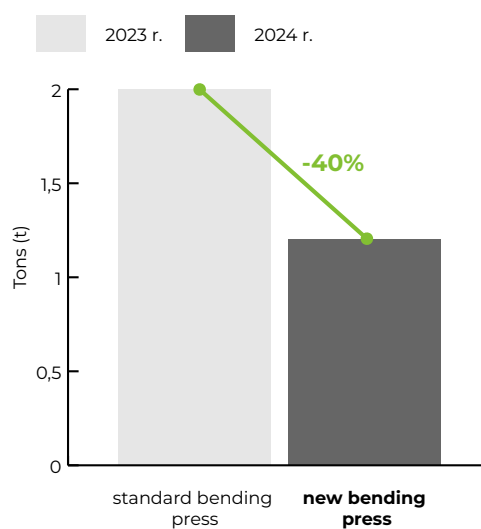
With the new machine, we have significantly automated the bending process, eliminating the need for manual configuration and enhancing the precision and repeatability of bends. The machine operates with an electricity consumption of less than 3 kW. Under our current two-shift work schedule, the to-

Evidence of the increase in plant efficiency thanks to the new bending machine



Graph 7. Comparison of the efficiency achieved by the company during the years 2023–2024 as a result of the investment in the new bending machine.

Minimizing production waste with the innovative bending press



Graph 8. Illustration of the decrease in waste generation in 2023 and 2024 attributable to the investment in the new machine.

tal energy consumption of the machine is approximately 240 kWh per week, which is notably lower than that of traditional systems, such as press brakes, which can require two to three times more energy (see Graph 7). Additionally, the improved automation and precise process control have reduced waste by approximately 40% compared to conventional sheet metal bending methods, significantly lowering our raw material consumption (see Graph 8). The machine's compact

dimensions (8 m²) save space in the production hall, reducing the need for additional infrastructure and minimizing energy-intensive air conditioning and lighting systems. Integrated IoT solutions, such as LINKS, enable real-time performance monitoring and optimization, further maximizing our Overall Equipment Effectiveness (OEE) to approximately 85%, which significantly exceeds the standard 30% typically seen in traditional bending systems.

2.4.2. Implementation of a Circular Economy

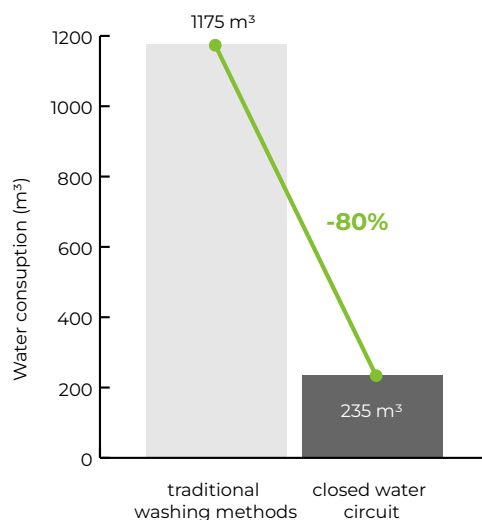
Closed Water Circulation

During the modernization of our production area, we introduced a closed water circulation system in the luminaire washing sector. This technology allows for the repeated use of water, significantly reducing the consumption of this vital resource. By utilizing filters and recirculation systems, we have achieved an 80% reduction in overall water consumption per washing cycle compared to traditional methods (see Graph 9).

Additionally, a recirculation system incorporates modern water filtration techniques that remove contaminants such as oils, solid particles, and chemical residues. As a result, the water can be reintegrated into the washing process without compromising its quality or efficiency. The adoption of a closed water circuit also leads to notable environmental benefits, including a reduction in industrial wastewater generation. This system enables us to

The closed water circulation system utilized in the washing process facilitates annual water savings of approximately 40,000 liters.

Water conservation achieved through closed-loop washing



Graph 9. Comparison of annual water consumption savings resulting from water recirculation in the washer.

decrease discharged wastewater by as much as 75% compared to conventional methods.

Closed circuit of powder paints

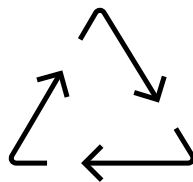
In establishing our paint shop, we also invested in an automated powder paint recovery system. A key feature of this system is a specialized container designed to collect excess paint (refer to photo 8), which allows for the continuous recycling of white material. The recovery process is highly efficient, enabling us to retrieve 90% to 95% of the material used (see graph 10). Consequently, only a small percentage of material is wasted during the painting process.

Paint recycling occurs in real time; the container captures excess powder during appli-

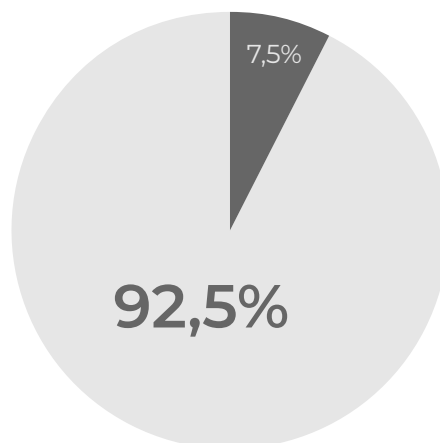
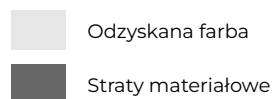
cation and transfers the recovered material for reuse in the painting process. This system eliminates the need for long-term storage of surplus paint, allowing for continuous recovery without interrupting production. It effectively combines economic optimization with environmental responsibility, reducing production waste, lowering costs associated with purchasing new materials, and minimizing the negative impacts of our operations. Aluminum is one of the most valuable materials in terms of recycling potential, as its waste retains nearly the same value as the primary raw material, and processing it requires only a fraction of the energy compared to extracting aluminum from raw sources. In our facility, we ensure that both production scraps and used products are reintegrated into circulation. During the manufacturing of lighting fixtures, waste is generated from scraps and residues of larger components, which we estimate to amount to approximately 2 tones annually.

We recycle this waste through our collaboration with Global, a key focus of our operations. We aim for optimal recovery of raw materials,

and through this partnership and the implementation of streamlined collection and segregation processes, we achieve an aluminum recovery rate of 95%. The remaining 5% consists of minor waste, such as dust, which poses greater processing challenges. Our strategy prioritizes the maximum utilization of raw materials within a single production cycle. An illustration of this approach is the repurposing of residues from larger aluminum components to manufacture smaller parts, including brackets, fasteners, or housings for small fixtures. This practice allows us to reduce waste and minimize material losses.



Odzysk farby proszkowej



Graph 10. Recovery of powder paint during the painting cycle.

Photo 9. Paint recovery container Powder coating has been installed in the paint shop of the production facility in Załuski.

2.4.3. Efficient waste management

At Spectra Lighting, we prioritize waste management with the aim of reducing waste volume at every stage of the product life cycle. Our efforts span luminaire design, production processes, logistics, and packaging management, all focused on minimizing our environmental impact.

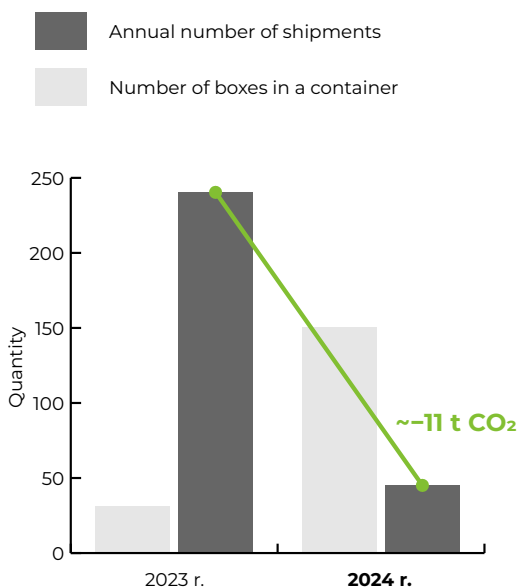
Modular design of luminaires

Our luminaires feature a modular design, allowing for the easy replacement of essential components, such as light sources or power supplies, without needing to replace the entire unit. Following our investments in 2024, our factory is now equipped to manufacture damaged components as well. This strategy significantly extends the life cycle of our products, thereby reducing waste generation. Such an approach aligns with the principle of „repair rather than discard” and offers customers more sustainable and cost-effective solutions.

Cardboard crushing and packaging recycling

In 2024, the company continued to segregate cardboard boxes and implemented a crushing system (see photo 10). This new initiative improved our packaging waste management by minimizing volume and facilitating recycling. Through the use of compactors, the volume of cardboard waste can be reduced by up to 80%, resulting in substantial space savings in containers. Uncompacted cardboard with a volume of 1 m³, after crushing, occupies only 0.1 to 0.2 m³. As a result, a single container can accommodate 5 to 10 times more waste than in 2023. The decreased volume of cardboard also allowed for a reduction in the number of transport trips, leading to a decrease in disposal costs by up to 70% and a significant reduction in CO₂ emissions (see graph 11).

Comparison of space efficiency and shipment frequency with a cardboard compactor



Graph 11. Projected annual comparison of space savings in the cardboard waste container for the years 2023-2024, attributable to the investment in the crushing machine.

Approximate values based on decreasing the volume of the box from 1 m³ to roughly 0.1-0.2 m³.



Photo 10. A machine designed for the crushing and packaging of paper waste at the production facility in Załuski.

Replacing the tank with liquid nitrogen

In 2024, we introduced a large liquid nitrogen tank (see photo 11), replacing the previous system that relied on smaller gas cylinders. This change has resulted in substantial environmental and economic advantages. The former model generated waste in the form of plastic valves, metal covers, and other disposable safety components with each gas delivery, amounting to approximately 300-400 kg of waste annually that ended up in landfills as non-recyclable material. The implementation of the large tank has completely eliminated this type of disposable material, marking a significant advancement in our circular economy strategy that focuses not just on recycling, but more importantly, on waste reduction at the source. Consequently, we have minimized our environmental impact and decreased costs associated with industrial waste disposal. Additionally, the reduction in the frequency of gas transports (as discussed in Chapter 2.4.4. Optimization of Logistics) has further contributed to decreased waste generated during transportation.

Digitalization of product catalogs

Our product catalogs are now available in digital format, allowing customers to easily access up-to-date information. Printed catalogs are produced only upon customer request or by our sales representatives, reducing excess production and minimizing resource waste. This approach conserves raw materials such as paper and printing inks and helps reduce emissions associated with transportation and storage of materials.



Photo 11. Installation of a liquid nitrogen tank at the manufacturing facility in Załuski.

2.4.4. Optimization of Logistics

The optimization of logistics processes is essential for the effective implementation of sustainable development strategies and resource management within an enterprise. Our primary goals for modernizing logistics include reducing CO₂ emissions, lowering operating costs, and enhancing workplace safety, all of which help minimize the negative impact on the environment. By adopting modern solutions in transportation, storage, and material management, we have successfully decreased energy consumption and emissions while improving the efficiency and ergonomics of our processes.

Shielding gas supply

The implementation of a substantial liquid nitrogen tank has significantly improved the logistics process for supplying shielding gas used in laser operations. In the previous system, we had to deliver smaller gas cylinders weekly, resulting in as many as 52 transport trips annually. This model was linked to high

CO₂ emissions due to the frequent deliveries and required considerable effort to replace the cylinders.

With the new large tank, we have reduced the number of deliveries to just 45 per year, reflecting a 90% decrease in transport frequency (see fig. 1). Consequently, this has led to a significant reduction in carbon dioxide emissions. Assuming each transport produced approximately 50 kg of CO₂, this reduction equates to about 2.5 tons of carbon dioxide emissions saved (see graph 12).

The new system has also enhanced workplace safety and ergonomics. Previously, replacing gas cylinders involved numerous logistical operations, including lifting heavy components, significantly increasing the risk of accidents. Now, maintaining the liquid nitrogen tank requires only occasional attention, which has greatly improved working conditions and reduced employee workload by 80% in this area.

Reduction of CO₂ emissions due to decreased frequency of gas deliveries

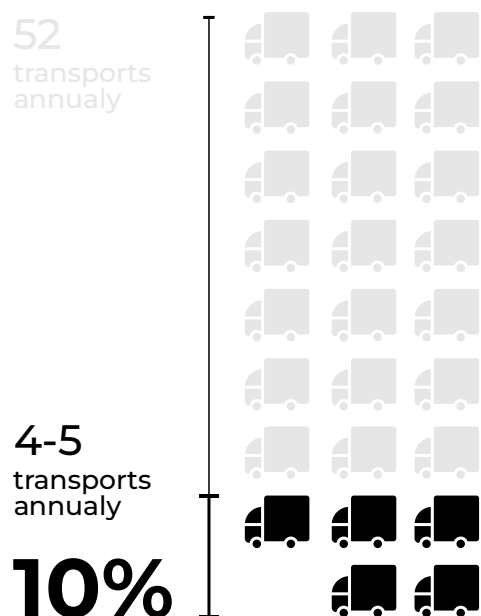
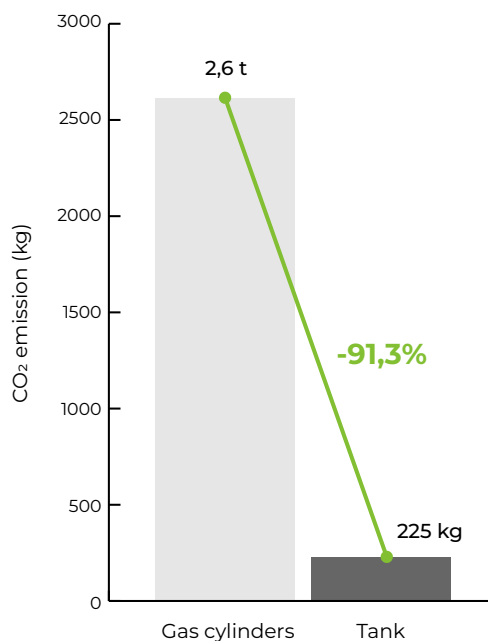


Fig. 1. Diagram illustrating the annual percentage of transports saved in comparison to the previous liquid nitrogen supply system.

Percentage reduction in CO₂ emissions following the replacement of the tank with nitrogen



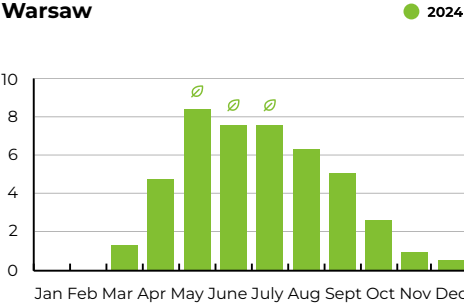
Graph 12. Chart illustrating percentage of CO₂ emissions reduced annually following the replacement of the tank with liquid nitrogen.

2.4.5. Sustainable energy

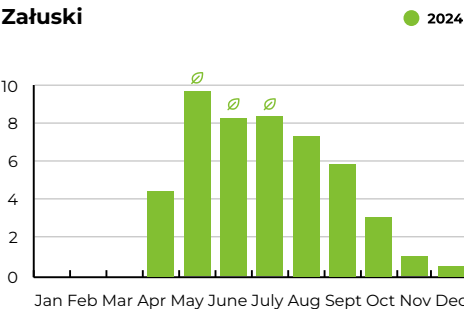
This document analyzes electricity consumption and associated costs incurred by the company in 2023 and 2024, taking into account the results of energy production from photovoltaic (PV) installations in Załuski and Warsaw (see Graph 13). The report outlines how initiatives in sustainable energy management and investments in renewable energy sources impact the operational efficiency of the enterprise.

Impact of investment on renewable energy

Investments in photovoltaic installations at both locations have been crucial for the development of renewable energy. The total capacity of the PV systems has allowed for a significant portion of electricity demand to be met while simultaneously reducing carbon dioxide emissions by approximately 120 tons annually. The results for 2024 indicate that the installation in Załuski generated 44.37 MWh of energy, which represents 13.1% of the annual energy demand at this site. Meanwhile, the production in Warsaw reached 45.32 MWh, fulfilling 26.3% of its demand (see Graphs 14 and 15). This marks a significant advancement in energy management compared to 2023, when photovoltaic production was nonexistent.

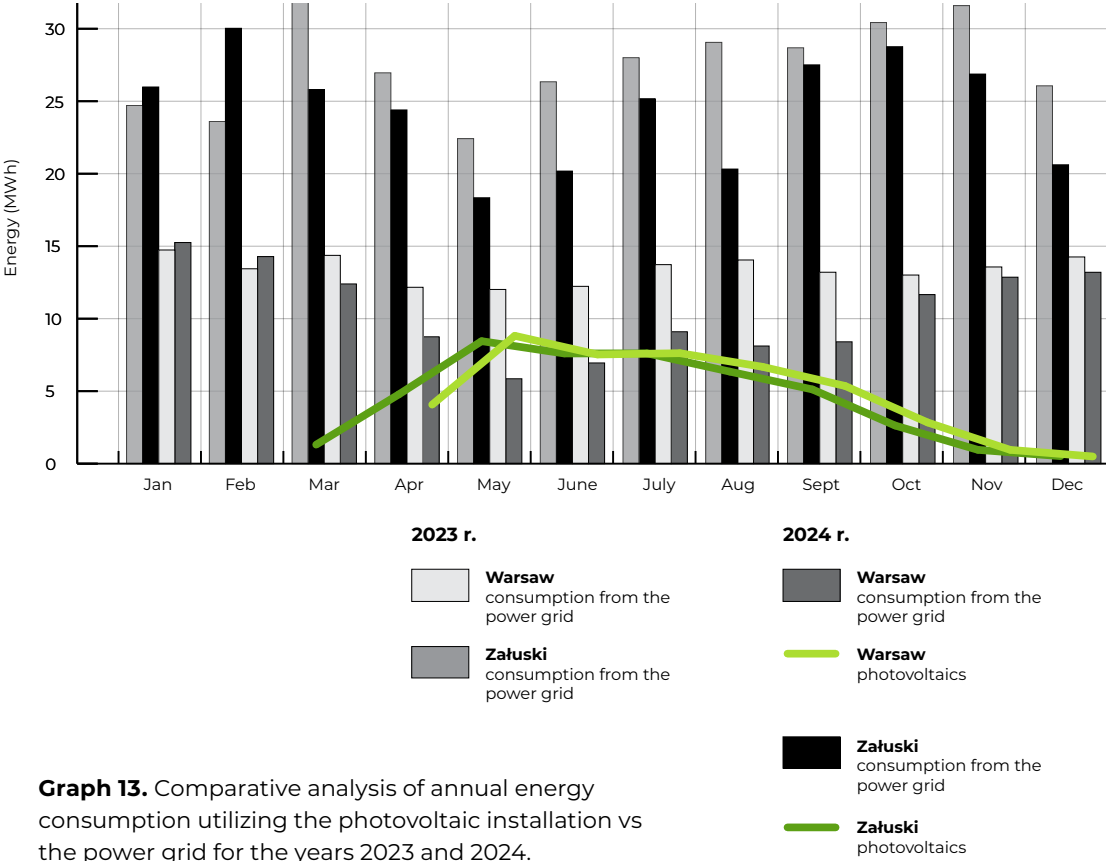


Graph 14. Overview of monthly energy generated by PV in Warsaw in 2024



Graph 15. Overview of monthly energy production from PV in Załuski for 2024

Energy consumption in annual report



Graph 13. Comparative analysis of annual energy consumption utilizing the photovoltaic installation vs the power grid for the years 2023 and 2024.

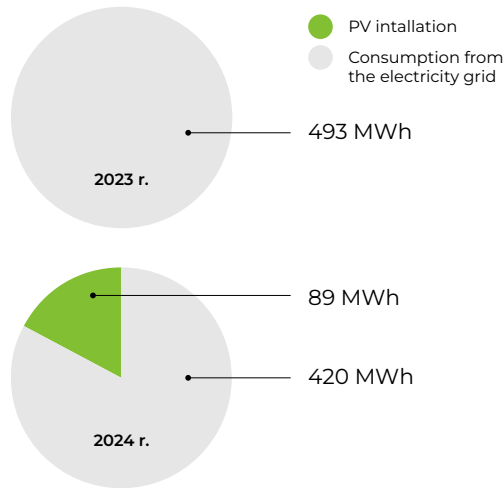
Electricity consumption analysis

The investments in renewable energy and optimized resource management in 2024 yielded substantial environmental and economic benefits. The analysis of energy consumption revealed a notable decrease in reliance on grid energy and an increase in the proportion of renewable energy within the overall energy mix. The company's total energy consumption rose from 493 MWh in 2023 to 509 MWh in 2024. This increase was primarily driven by the 89 MWh of clean energy produced by the photovoltaic installations, which diminished the demand for grid-supplied energy (see Graph 16). A detailed examination of energy consumption by location indicates a clear downward trend. In Załuski, total energy consumption decreased from 331.94 MWh in 2023 to 294.00 MWh in 2024, reflecting an 11.5% reduction in grid energy consumption. Conversely, in Warsaw, energy consumption fell from 160.78 MWh in 2023 to 126.83 MWh in 2024, representing a decrease of 21.1% (see Graph 17).

Comparison of energy consumption costs

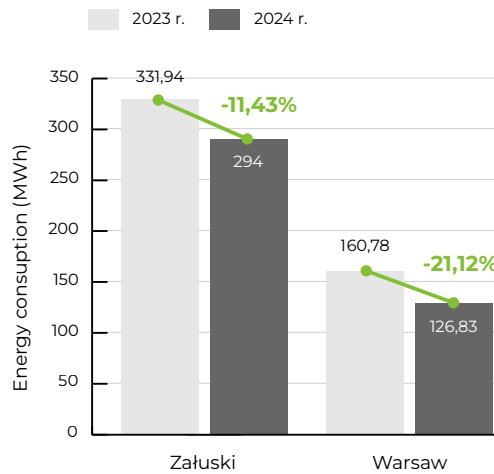
The analysis of energy consumption costs between 2023 and 2024 reveals the beneficial impact of investments in renewable energy sources, particularly photovoltaic installations. While the overall trend is encouraging, variations in costs across different locations stem from distinct operating conditions and the extent of renewable energy utilization. The most notable savings were observed in Warsaw, where electricity expenses decreased from PLN 502.03 in 2023 to PLN 69,865.51 in 2024 (see Graph 18). The primary factor contributing to this reduction was the significant share of energy generated from photovoltaic panels, which enabled a decrease in energy consumption from the grid, thereby lowering overall expenses.

Energy consumption by the company



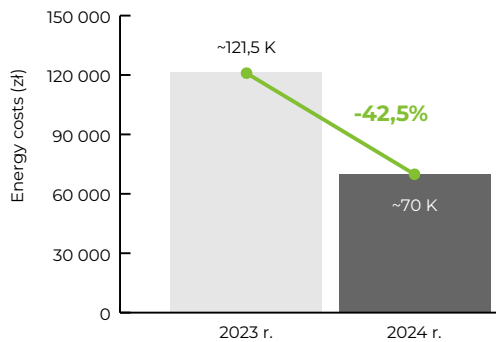
Graph 16. Yearly comparison of the total energy consumed by the company utilizing a photovoltaic installation in 2023-2024.

Total energy consumption from the power grid



Graph 17. Overview of the reduction in energy consumption in both locations during the years 2023-2024.

Energy expenses incurred



Graph 18. Overview of energy coverage expenses incurred by the company in 2023-2024.

SOCIAL RESPONSIBILITY

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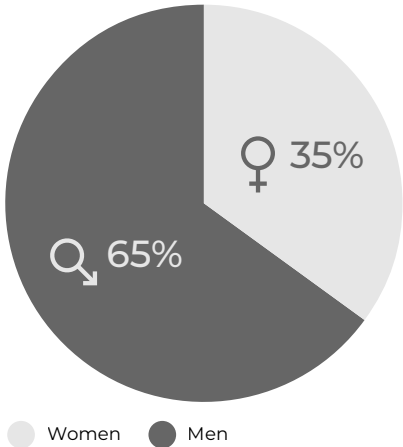
3.1. People and Organizational Culture

Sustainability at Spectra Lighting is built on three key pillars: environmental responsibility, technological innovation, and a people-centered approach. Our HR strategy reflects a long-term commitment to creating a stable and inclusive work environment that promotes both individual employee development and the enhancement of our organizational culture.

Employment structure and workforce composition

In the face of global challenges such as economic uncertainty and dynamic shifts in the labor market, Spectra Lighting remains committed to maintaining stable employment levels. This commitment is a testament to our effective HR policies and our focus on employee well-being. By investing in professional development, workplace comfort, and employee engagement, we are laying a strong foundation for the company's future. As of the end of November 2023 and 2024, Spectra Lighting employed 119 people, demonstrating our ability to sustain a consistent workforce despite market fluctuations (see Graph 19). Gender balance is an important aspect of our HR policy, with 42 employees being women, representing 35% of the total workforce.

Employment classification of personnel



Graph 19. Distribution of employed individuals categorized by gender.

The majority of our employees, 87%, are employed full-time, ensuring job security and access to a comprehensive benefits package, including paid leave, sick leave, and additional social support programs (see Graph 20). Spectra Lighting's HR policy is founded on equal opportunities and transparency in remuneration and career advancement.

We are committed to ensuring fair treatment for all employees, regardless of position, experience, or tenure. We actively support diversity in the workplace, as we believe that a broad range of perspectives and competencies is a key driver of innovation and long-term organizational success.

Long-term employee engagement and development

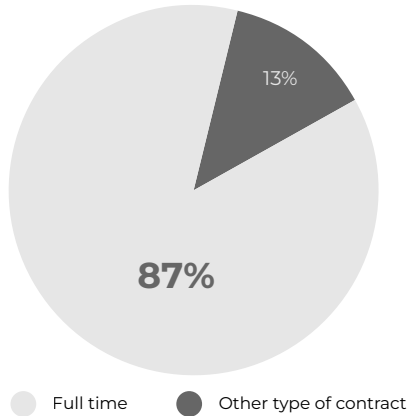
One of our key priorities is building lasting relationships with our workforce, which is reflected in a high employee retention rate. Many of our specialists have been with the company for years, with some having been part of Spectra Lighting since its inception. Retaining an experienced workforce is crucial, as their expertise and dedication directly contribute to high-quality project execution and operational efficiency.

We support continuous learning and professional development through a variety of educational and training initiatives (detailed in Section 3.1.1 – Investments in Education). Employees have access to industry-specific courses, certification programs, and training in innovative technologies. Personalized development paths are tailored to each employee's role and competencies, enabling efficient skill utilization and better adaptation to market challenges. As part of our HR strategy, we place a strong emphasis on open communication and a culture of collaboration. Regular team meetings, workshops, and integration initiatives help strengthen employee engagement and a sense of belonging within the company.

Organizational structure and key areas of operation

Spectra Lighting is not just a company that sells lighting solutions—it is a technology-driven innovator, designing and developing cutting-edge solutions that require a diverse

Employment classification of personnel



Graph 20. Proportion of individuals employed, categorized by full-time and alternative contract types.

range of expertise and specialization. Our organizational structure is divided into four key departments:

- **Administration and Accounting** – managing financial and operational processes.
- **Marketing and Sales** – developing market strategies and customer relations.
- **Production and Logistics (BiR)** – ensuring efficient production processes and supply chain management.
- **Research & Development (R&D)** – driving innovation and technological advancements.

Employee health, safety, and well-being

Workplace Safety and Health Regulations
Ensuring safe working conditions is a top priority at Spectra Lighting. Our company fully complies with the Labor Code and the Regulation of the Minister of Health dated December 30, 2004, concerning employee medical examinations (Journal of Laws 2005 No. 7, item 46, as amended).

To protect the health and safety of our employees, we have implemented a comprehensive occupational health monitoring system. This includes regular medical check-ups and risk assessments, ensuring that all employees receive health examinations tailored to their job roles. Production workers undergo medical examinations every two years, while office employees are examined every five years, in accordance with occupational risk assessments. We continuously monitor workplace conditions, evaluating environmental factors such

as noise levels, workstation lighting, and ergonomic standards. We believe that preventative measures and regular assessments are key to maintaining workplace comfort and minimizing potential hazards.

Health support and employee benefits

To further promote employee well-being, we offer a co-financed private healthcare package, which provides access to a wide range of diagnostic tests and specialist consultations. The cost-sharing model between the company and employees is 80% employer-funded and 20% employee-funded, allowing for affordable access to high-quality medical services. The following table (see Table 1) summarizes the key health and safety benefits available to our employees.

PRELIMINARY, PERIODIC, AND CONTROL ASSESSMENTS	
Executed in accordance with the schedule derived from the characteristics of the positions:	
Manufacture assessments biennially	Corporate every five years, in accordance with the occupational risk assessment
RISK FACTOR EVALUATION	
In the production environment, we consistently monitor elements such as noise levels, workstation illumination, and ergonomic conditions	
PRIVATE HEALTHCARE	
co-financed healthcare package, offering access to an extensive array of diagnostic assessments and specialist consultations	
Cost analysis within the package (employer versus employee):	
80%	20%

Table 1. Overview of Benefits Provided and Employee Safety.

3.1.1. Educational Investments

Development of employee competencies

Spectra Lighting has long been dedicated to enhancing the competencies of its employees by providing access to various training courses tailored to the specific needs of each department. These courses are a fundamental aspect of the company's strategy, which emphasizes that improving staff qualifications is vital for maintaining market competitiveness and fostering sustainable growth.

The accounting department regularly participates in training sessions focused on updates to tax and legal regulations, allowing for swift adaptation to evolving standards. Specialized training programs in the logistics and warehouse departments are conducted in collaboration with external trainers and logistics system suppliers. Meanwhile, the sales and projects department prioritizes training in customer service, negotiation skills, and the introduction of innovative products to the market. Additionally, employees can request training in specialized programs such as DIALux, Relux, and Autodesk.

At the production facility in Załuski, there is a strong emphasis on developing skills related to operating advanced machinery and equipment. In 2024, the company will offer a series of training courses categorized by key thematic areas, as outlined in Table 2.

Internships at Spectra Lighting

Spectra Lighting is committed to supporting young individuals starting their professional journeys by offering practical experience through employment opportunities. This initiative is structured around flexible contracts,

with the company fully covering the interns' salaries. This policy not only provides financial stability for students but also allows them to acquire valuable knowledge and skills in real work environments.

In 2023 and 2024, interns had the opportunity to engage in various departments, including logistics, production, design, and sales. They contributed to daily operations such as managing logistics systems, analyzing design documentation, and assisting in the rollout of new products. The company's efforts in this area align with its sustainable development strategy, which emphasizes the importance of supporting education and enhancing the local labor market. These internships also help bolster technical competencies among young individuals, which is particularly significant in the context of the rapidly evolving lighting industry.

Internships at Spectra Lighting provide young individuals with the opportunity to acquire valuable professional experience, accompanied by comprehensive financial and substantive support.

Trainings scheduled for 2024

Category	Training topic	Completion
Compulsory training	Regular occupational health and safety training for new employees, along with periodic training for existing staff	Current
	Programs compliant with labor law regulations, including training related to quality management systems	III, IX
	Changes in tax and legal regulations	As needed
Technical training	Operation of modern manufacturing machinery (milling machines, panel saws, industrial plotters)	IV, III
	Courses on advanced software, including those supporting management and production processes	VIII
	Workshops on new industry standards, including current requirements for lighting manufacturers	I, X
	Training in the use of design and simulation software	As needed
	Training in control and programming systems for CNC machines, covering programming and graphical simulation	VIII
Product training	For the sales and warehouse departments, conducted by suppliers, including power supply programming and operation of new product lines	X
	New obligations arising from PN-EN 60598-1:2021-07 standards	As needed
Development training	Programs supporting the development of soft skills, including negotiation, customer service, and project management	As needed
	Workshops on implementing innovative product and service solutions	XI

Table 2. Training courses conducted by Spectra Lighting in 2024.

3.2. Integrating Commitment into Corporate Culture

Spectra Lighting consistently cultivates its organizational culture around the principles of sustainable development, transparency, and mutual respect. The company ensures that employees feel integrated within the organization, actively engage in decision-making processes, and have a tangible influence on the company's direction. This management philosophy fosters greater team engagement and reinforces a collective sense of responsibility for the projects undertaken.

A key component of the Corporate Social Responsibility (CSR) strategy is open communication with employees. Regular meetings and consultations are organized to address current challenges and explore potential training opportunities. The company emphasizes dialogue and collaboration, enabling employees to propose their own ideas for enhancing operational, marketing, and production processes. Such initiatives are integral to the long-term sustainable development strategy and strengthen employees' sense of affiliation with the organization.

Involvement in the local community

Spectra Lighting has been actively engaged in initiatives that support the development of local communities for many years. The company participates in activities that promote an active lifestyle, education, and sustainable development. A notable example of this involvement is its long-term support of the Załuski Team Cycling Club, which aims to popularize cycling and a healthy lifestyle among the region's residents. By sponsoring the club, the company fosters the growth of sports and champions values associated with physical activity, determination, and teamwork.

Work organization in human resources management

At Spectra Lighting, work organization in human resources management is customized to the unique needs of each department, founded on adaptable organizational strategies. For employees in the sales department, the company provides options for remote work and flexible hours, facilitating a



Photo 12. The Załuski Team Cycling Club, which receives consistent support for its development from Spectra Lighting.

better balance between work and personal life. In production facilities, however, a two-shift system is implemented (from 6:00 AM to 10:00 PM), allowing optimal utilization of production capacity while enabling employees to tailor their work schedules to their individual needs. The careful organization of shifts demonstrates consideration for workplace comfort, ensuring operational fluidity and timely order fulfillment. Effective communication between teams operating in different shifts allows for the seamless transfer of information and maintenance of operational continuity.

Pro-ecological initiatives

Spectra Lighting has long focused on minimizing the environmental impact of its operations. Ecological responsibility is increasingly integrated into the company's strategy, which includes efforts to optimize raw material consumption and modernize infrastructure for enhanced energy efficiency. Waste segregation is standard practice not just in production facilities but also in offices and communal areas. Employees have access to designated containers for paper, plastic, glass, mixed waste, and hazardous materials, including used batteries and electronic devices. Promoting these practices fosters pro-ecological attitudes and enhances environmental awareness among staff. Another crucial aspect of sustainable development is optimizing electricity usage. All office and common areas are equipped with energy-efficient LED lighting that has motion

sensors, enabling automatic shut-off in unoccupied spaces. Furthermore, as part of the production hall modernization in 2024, automatic closing doors were installed to minimize drafts, reduce noise, and maintain a stable temperature, thereby improving the efficiency of heating and cooling systems. The company is continually seeking innovative solutions to further diminish its carbon footprint and minimize resource consumption.

Plans for 2025

In the upcoming year, Spectra Lighting intends to further advance and implement innovative solutions that align with ESG (Environmental, Social, and Governance) objectives. A primary initiative is the launch of an internal portal for employees, which will serve as a central hub for exchanging information, documents, and ideas. Digitizing internal communication will enhance collaboration among departments and increase the transparency of management processes. In response to the dynamic evolution of the lighting market, the company also plans to expand its marketing team to enable more effective support for sales departments and reach a broader customer base. Additionally, Spectra Lighting will introduce a system of intelligent gas meters to facilitate precise monitoring of raw material consumption, along with a system for tracking waste production. Through these initiatives, the company will manage resources more effectively and optimize its processes in accordance with sustainability principles.

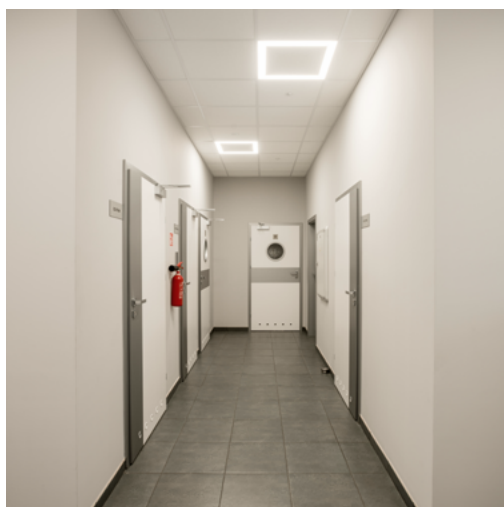


Photo 13. Corridor of the production facility featuring automatic lighting and self-closing doors.

3.3. Embracing Corporate Responsibility

Spectra Lighting acknowledges its responsibility towards the environment, employees, and all stakeholders. We understand that transformation must begin within the organization, and a work environment that fosters change can only be achieved with commitment from the highest levels of management. We believe in being transparent and accountable for our actions, which is why we adhere

to clearly defined standards. Since 2021, as a participant in the UN Global Compact initiative, we have been expressing our commitments and outlining our actions taken to fulfill the UN Sustainable Development Goals. Additionally, we hold a green energy certificate from Axpo, affirming our dedication to utilizing renewable energy sources.

Spectra Lighting endorses the United Nations Sustainable Development Goals and its commitment.



3.3.1. Fostering Sustainable Collaboration and Development

Spectra Lighting employs production strategies that promote sustainable development and business growth while upholding ethical practices and partnerships. We recognize that the extent of our success dictates the level of responsibility we must assume. To maintain high standards, we implement various measures to ensure the sustainability of our operations. Our management is dedicated to providing the necessary resources to establish a sustainable operational organization. In alignment with the principles of the UN Global Compact initiative, Spectra Lighting advocates for the development and implementation of environmentally friendly technologies. For decades, we have worked to create lighting concepts that significantly reduce energy consumption. Furthermore, we aim to minimize our environmental footprint through careful selection of materials and technologies starting from the design phase. We undertake initiatives to enhance ecological responsibility and apply the precautionary principle to environmental challenges. Economic, social, and environmental impacts, along with associated risks and opportunities, are routinely analyzed through annual risk assessments and management reviews in accordance with ISO 9001/14001 standards.

Our dedication to corporate responsibility is an integral aspect of the organizational culture at Spectra Lighting, aligning with the twelve principles of the UN Global Compact initiative and ensuring adherence to human rights across all facets of our operations. A comprehensive overview of our initiatives

in this domain is outlined in the document "Sustainable Development – Global Success Strategy," which is accessible on our website (www.spectra-lighting.pl/do-pobrania). We hold ourselves accountable for our actions each day. In our Code of Ethics (also available on our website www.spectra-lighting.pl/do-pobrania), we pledge to respect international human rights in all our operations. We categorically reject child labor and forced labor, and our suppliers affirm that they do not engage young workers in hazardous conditions or during nighttime hours.

Spectra Lighting is committed to providing equal opportunities and fair treatment for all employees in alignment with local laws and international standards. We place significant emphasis on ethical business practices and uphold the personal dignity of every individual, regardless of ethnic origin, race, culture, religion, worldview, age, disability, skin color, sexual identity, or gender. We strive to create a safe and supportive environment for all employees, enabling them to fully leverage their skills and pursue professional development. Respectful communication and collaboration, both internally and externally, are paramount to us. Employees have the right to terminate their employment freely and are entitled to associate and engage in collective bargaining without any restrictions.

CONTACT INFORMATION

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