PKP ENERGETYKA
CAPITAL GROUP

WE ENERGIZE POLISH RAIL

STRATEGY 2030

We are ready for the challenges of the future

Ladies and gentlemen,

Five years ago, PKP Energetyka was a company with high potential and a good market position, employing experts with unique competences. At the same time, it struggled with numerous customer complaints and unsatisfactory financial results. At that time we decided to strive for the untapped potential. First and foremost, we addressed the **quality** of services being provided. We focused more on the **safety** of our work, without accepting any compromises in that area. In addition, we paid more attention to our efforts on building a **dedicated** team. Through hard work and the implementation of numerous innovations, **efficiency**, which we are so proud of, emerged.

These four values which have accompanied us since the beginning of the transformation have built the culture of our company and will remain unchanging for years to come.

In 2020, we are a modern enterprise that is much better at leveraging its potential. We can see it in regularly signed contracts – including the four-year maintenance contract with PKP PLK, subsequent projects of the Modernization of Power Systems (MUZa) or long-term contracts for the sale and distribution of electricity for railway undertakings – in the over 20-fold decrease in the number of catenary failures or a major decrease in the average duration of power supply interruptions (SAIDI), appreciated by our customers. We regularly read and hear positive opinions about us, and after all that was not always the case. Therefore, I thank our business partners for motivating us to continuous improvement. Also thanks to you we feel a stronger team today. We work actively, with optimism and full dedication.

> We have had 5 years of intense transformation. Ahead of us 10 years of sustainable development.

In pursuit of our mission – **"We Energize Polish Rail"**, we will act in line with our DNA. The code reads that we are a stable infrastructural company, very carefully analyzing risks, focused on continuous growth and long-term cooperation. We believe this is the basis for operating in regulated markets at the point of contact between the power and railway sectors. We are also defined by our transparency and concern for our employees

Our values, mission and DNA are a signpost for the future and the foundation of Strategy 2030 through which we will strengthen our position while ensuring continued growth of competitiveness in the railway sector. The strategy consists of four Pillars:

The **1st Pillar** is the further expansion of the distribution infrastructure network and care for the high standard of our services;

The **2nd Pillar** is operational excellence based on launching a sequence of innovations, digitalization, a customer-oriented approach and working on efficiency;

The **3rd Pillar** is the Polish Green Railway. It results both from the development needs of Poland and Europe and a fresh look at our unique role in the power and railway system. Bridging these two worlds on a daily basis has allowed us to develop a plan to change the energy mix of the Polish railway. Together with industry partners, we will detail and implement solutions resulting in trains running on clean energy by 2030. We believe that thanks to this the Polish railway sector will become a true foundation of electromobility with a dynamically growing number of transported passengers and goods;

The **4th Pillar**, that is a responsible company, stands for an even greater focus on the needs of our external stakeholders, employees and associates, as well as care for the environment to create optimal working conditions and a basis for sustainable development.

Reaching all the goals in our ambitious strategy will mean that in 10 years' time we will be able to say that we are an environmentally neutral company in terms of direct and indirect emissions, supplying the railway with over 2.21 TWh of clean electricity. Our distribution network is 60% larger and is among the most modern in Europe. Our customers are happy with the high-quality of service, and together we celebrate 5 years of an accident-free workplace.

I realize that fulfilling this vision requires a lot of work and commitment of all the PKP Energetyka teams as well as good relations and cooperation with our external partners. However, the last few years, when we reached so many ambitious goals, have proven that it is possible. The collective effort has made us fully prepared for the upcoming decade of challenges. I would like to thank all employees for the past five years and I am glad that together we will continue to develop Polish railway.

Wojciech Orzech
President of the
Management Board

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PKP Energetyka – operations and development

Who we are

We are a stable infrastructural company operating at the point of contact between the railway and power sectors. We grow through long-term projects and contracts. We care for the reliability and quality of power supply for the railway transport system in Poland.

click for a definition

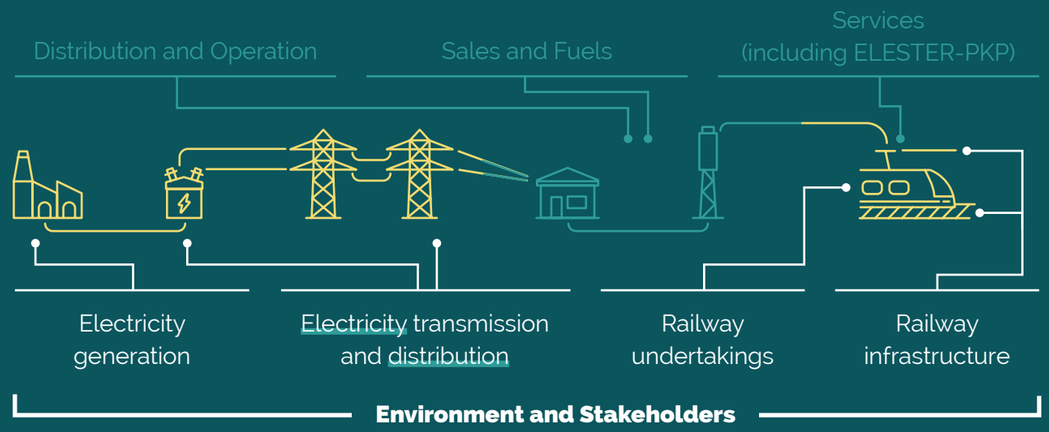
The PKP Energetyka Capital Group is one of the largest power companies in Poland. We are the only ones among Polish distribution system operators (DSOs) having a distribution network throughout the country.

Our main task is to distribute and sell electricity to traction and business customers. Our infrastructure consists of over 600 thousand different types of facilities and system components located along railway lines all over Poland. For example, 21,500 km of our power lines are used to power the catenary.

We supply electricity to individual pieces of equipment, and ultimately to trains. We also provide power services. Our key customers include PKP PLK whose catenary we maintain. The entire infrastructure is monitored by our 4,200 employees organized in 5 distribution and service areas and 5 service plants across the country.

We have been operating since 2001, and since 2015 we have been part of one of the largest investment funds in the world – CVC Capital Partners, operating in several dozen countries in Europe, North America and Asia.

Business areas of the PKP Energetyka Capital Group



Nationwide distribution network owned by PKP Energetyka

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How do we operate?

Customers are always at the center of our activities and efforts. We carefully analyze and manage risk to ensure the safety of operations for customers and the entire railway system. Engaged employees supported by modern tools and processes are our strength.

The engagement of employees from all levels is one of the key factors in the process of adapting our company to changing reality, bearing in mind not only the technological aspect but equally the ecological one.

We are a modern company, already 85% digitized. We, however, strive for full automation of the company resources and processes, as consistent implementation of the latest technological solutions increases the safety and efficiency of our operations as well as customer service quality.

PKP Energetyka is actively involved in the Center for Railway Energy Efficiency (CEEK). It is a joint initiative of the railway industry to save energy. Our response in this area is the Polish Green Railway.

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4 200
employees

600 000
facilities and system elements

6
dispatch centers

PLN 7 billion
worth MUZa program

4 TWh
of energy supplied per year

22 → 5
central control rooms

70
catenary services

21 500 km
of power lines

1 584
fleet vehicles

814
traction substations

50 000
smart energy meters (AMI)

18
fuel stations

6 213
other power stations

9 000
transformers

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Summary of Strategic Vision 2015–2020

What was the objective of Strategic Vision 2020?

A few months after the change of ownership, still in 2015, we adopted Strategic Vision 2020, which set the basic directions for the transformation toward 2020. We set the objective to act in order to become a better company every day, first and foremost through employee engagement, competence and technology development, and work organization optimization. We wanted to become the preferred partner for the railway, supplying energy in a way that meets the highest requirements.

Today we can say with all certainty that Strategic Vision 2015–2020 has been achieved. We are now not only a recognized entity, but an active promoter of change in our industry. In 2020, we completed a major upgrade to our business. It is now time for the next stage of development.

Robert Ryszkowski
Management Board
Representative for Strategy

What was the key change made as part of Strategic Vision 2020?

The most important change has taken place in the minds of employees. There has been a shift from a "task-based" view of one's work to the "cathedral building" approach. I see that most people know the broader context of their tasks and their ultimate goal. In 2015, there was a widespread belief that railway failures must happen. Today, the teams that maintain the catenary know that they are doing it so that trains run smoothly and passengers reach their destinations on time and safely. Due to this awareness and with the support of the right tools, the number of failures in group one has dropped from 300 to under 20. We are now also aware of our impact on our own and our colleagues' safety. This resulted in a reduction of accidents by 34%.

Zbigniew Jastrzębski
Director of the Mazowiecki
Regional Plant

Why was it important to regularly measure the effects of implementing Strategic Vision 2020?

The various ways we used to measure the effects of our activities reinforced the culture of data-based management in PKP Energetyka, according to the principle: "what you do not measure, you do not manage". Regular achievements of targets confirm that the adopted methodology and way of working have yielded the expected results, and the company has reached the successive stages in its pursuit of world-class standards.

Marek Lelątko
Director of the Controlling Department

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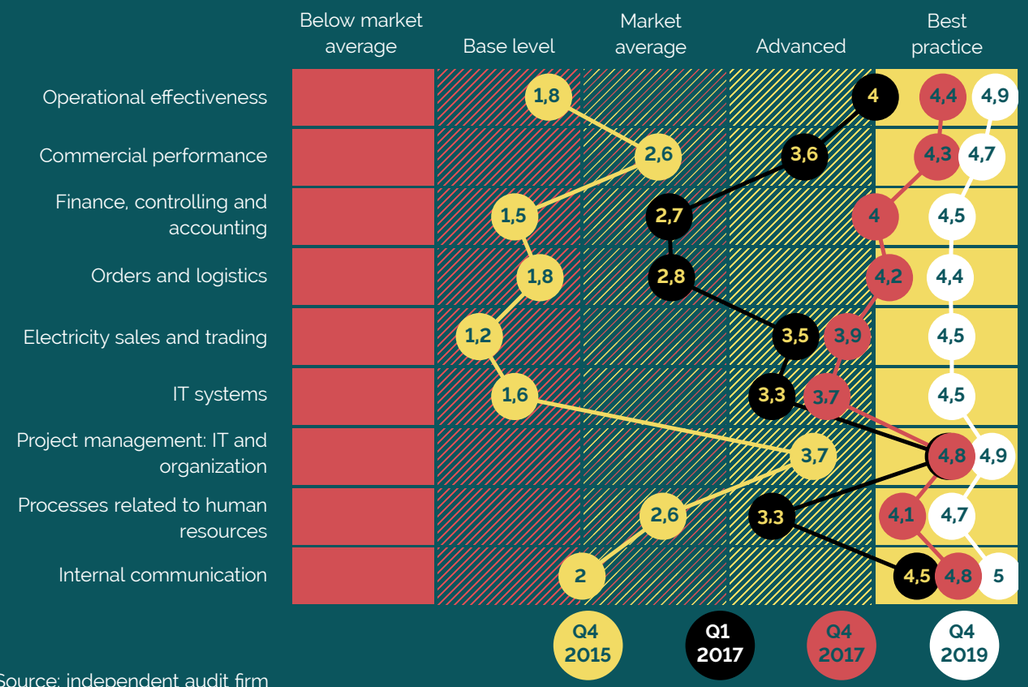
We learned from our successes and mistakes – systematically measuring the progress of improving the effectiveness of management practices achieved as part of Strategic Vision 2015–2020



Source: independent audit firm

An independent audit completed in December 2019 assessing process effectiveness suggests a significant increase in the level of effectiveness of PKP Energetyka in all the business areas compared to 2015.

The 2015–2020 plan was based on hard data (e.g. SAIDI, number of catenary failures, effectiveness of support processes). The monitoring of its implementation also included a series of both internal and external audits (repeated every year). On their basis, we made annual, necessary additions to Strategic Vision 2020.

The measurements of the most important service quality indicators and the very good results in customer satisfaction surveys prove that we have met these objectives.

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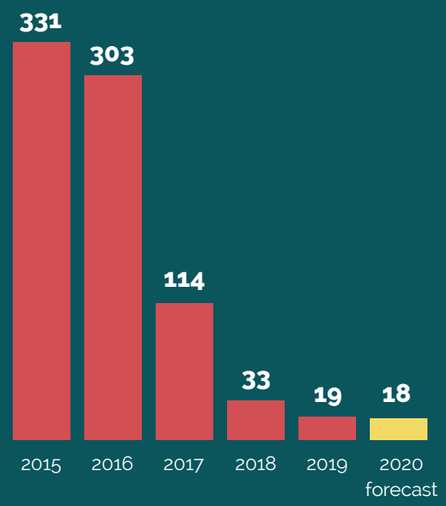
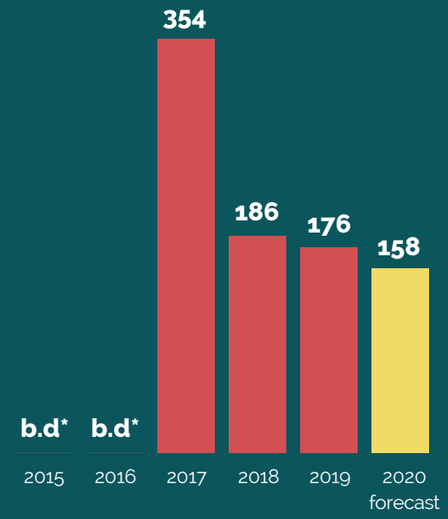
Number of catenary failures



SAIDI (min)



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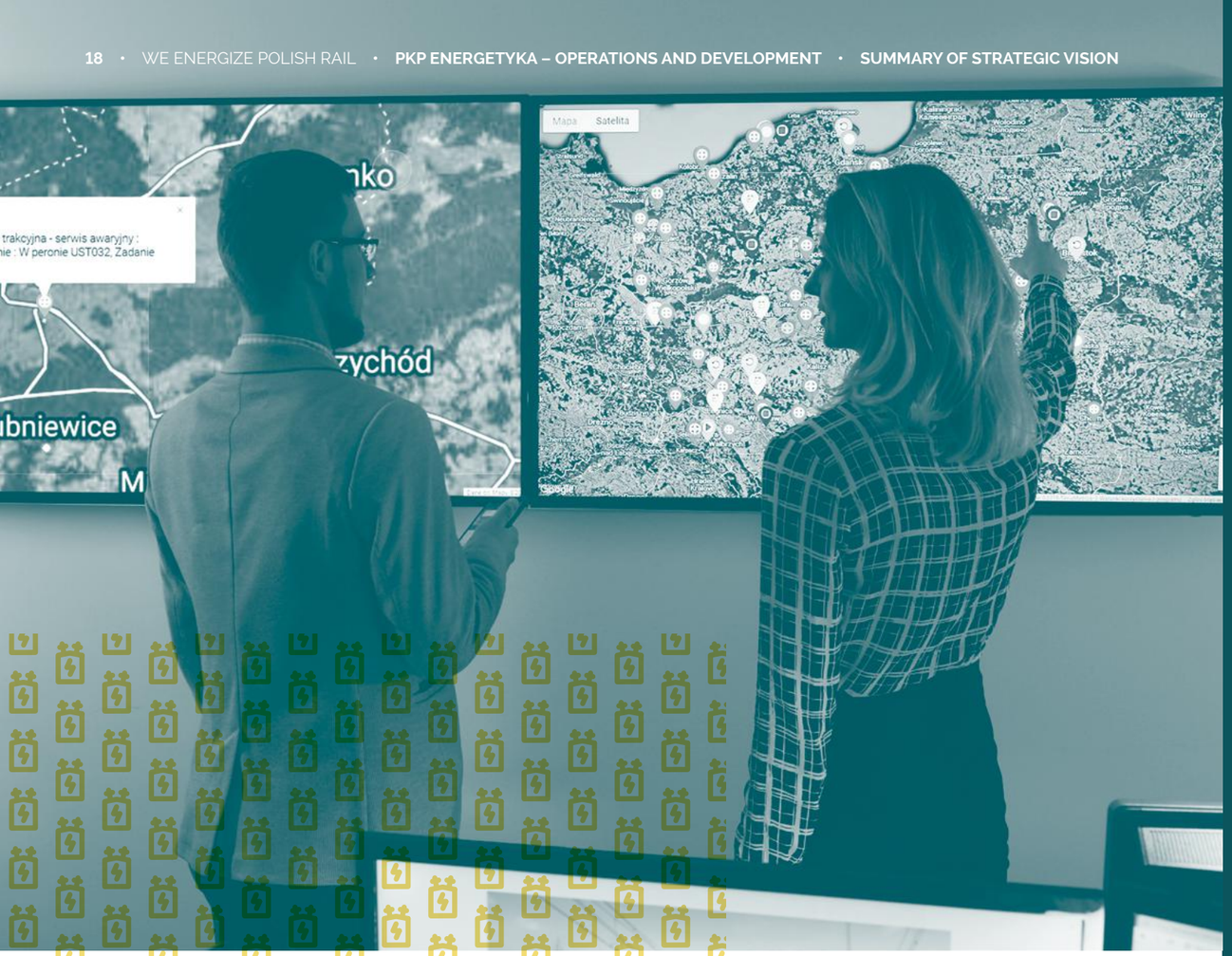

A five-year transformation as a basis for sustainable development

At a time when PKP Energetyka was undergoing major changes following the privatization process and the entire railway sector was preparing for the National Railway Program (KPK), a good strategic plan was essential to meet all the challenges.

We focus on quality, understanding customer needs and an open dialog. At the same time, we have created an engaging workplace supported by modern tools.

This is how Strategic Vision 2015–2020 was created – the result of the work of several dozen PKP Energetyka employees as part of the "Diamond" Value Creation Program. It includes about 130 initiatives implemented between 2015 and 2020, monitored transparently and regularly in terms of the progress and results achieved.

Strategic Vision 2015–2020 reflected our aspiration to build the railway as first choice transport.

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Some of our initiatives

Selected initiatives out of the 130 implemented between 2015 and 2020 click for a definition

→ click for a definition

AMI – a system of 50,000 smart meters

Simple and transparent remuneration policy

A paperless company – digitizing 600,000 pages of documentation. HR SAP Fiori Portal

ESG strategy – environment, ethical standards, dialog with stakeholders

Initiative and Idea Management Program (ZIP)

Complaint process quality improvement program

MBO (management by objectives) system

Regular measurement of employee engagement

Launch of the Shared Services Center in Łódź

Passporting and GIS – a digital map of 150,000 facilities of the nationwide energy infrastructure

PLANER team management system – 4,300 employees

Continuous improvement program on the quality of catenary maintenance services

Regular customer satisfaction survey

Portal 24 and the Near Miss Reporting System

SAP Hana – data quality improvement

Mobile driving simulator

Talent development and planning strategy

Launch of IT applications (e.g. invoicing, sales, asset management)

ZMS – network asset management software

2015 | 2016 | 2017 | 2018

→ click for a definition

Aerial inspections of the distribution network

Safety culture building program – Mission ZERO

Building a Winning Team – TOP40

Obtaining financing for the energy storage project from the National Center for Research and Development (NCBiR)

Internal customer service quality survey – NPS index

Feedback process, task setting and accountability system

Implementation of the KAIZEN continuous excellence improvement program

Fleet management system

SCADA system, centralization and 5 modern dispatch centers

Railway information recognition system

Minimizing working capital – optimization of settlements, invoicing and payments

First edition of the Grantspołeczni program

Reducing the power outage time (SAIDI) to 170 min

Establishment of the Center for Railway Energy Efficiency (CEEK)

Foreman Academy for 1,745 persons

PKP Energetyka among the best employers in TOP Employer

Extension of the Maintenance Agreement with PKP PLK

Development and implementation of modern control command and signaling systems by Elester, 5 awards at the TRAKO fair

Implementation of compliance and abuse prevention procedures

Commissioning of the training ground

Power System Modernization Program. Expenditures in the years 2015–2020: PLN 1.7 billion

Consolidation and unification of purchasing processes, IVALUA platform

2019

2020

Changes in PKP Energetyka in the eyes of employees

Big changes step by step

I have been working at PKP Energetyka since 1993. I'm an operations foreman. My colleagues and I are responsible for maintaining the distribution network.

What does that mean? We fix failures, carry out maintenance of power equipment, connect new energy consumers. Recently, we have also been involved in the construction of a traction substation. This is what we do every day, but our work is more than that. We energize the Polish railway, homes and businesses. We make the current flow in all those places, which is required for everything – for traveling, medical treatment, food production and school homework.

Do I like my job? Yes. It is demanding, requiring responsibility, and important for the whole country. If I do my job right, at the other end of the network electricity will flow into a pantograph and passengers will start their journey on time. I enjoy what I do because I have a great team and modern tools, including PLANER – a system installed on our smartphones where we have daily set tasks and tick off completed works. They are planned in advance according to priority and urgency. PLANER is linked to SAP, which allows us to enter a holiday request or check the payslip in a few seconds – conveniently, directly on our phones.

What else? GIS – Geographic Information System – thanks to which all parts of our infrastructure along with descriptions and photos are in one computer database. Planners and managers have access to it. They enter the system and know what the failed equipment looks like. This way we know in advance what kind of job we are going to do and what tools and equipment we should take with us. We also have AMI smart meters that automatically send information about power outages, so we know right away where exactly the failure is located. A lot of paperwork is now gone here, too. You no longer need to fill out documents when replacing a meter. Now it's all flowing down on an ongoing basis.

Has it always been like this? Our company started to change a lot around 2016. Still in 2015, we documented the performance of a distribution equipment inspection entirely on paper. We did not have AMI meters. Customers had to call us and report a power failure. And we would check what happened only when we got there. It took a very long time. Then we also had to get the work done quickly because the customer was impatient.

Is the company better now? Before 2015, we didn't know how long the total power outages lasted. It wasn't until smart meters came along that we got data on what is called SAIDI. It turned out to be over 300 minutes a year. Now there are half as many outages, so we are twice as good at supplying power.

Is it safer? When I say: modern, more quality, I also think: safer. In fact, the number of accidents has decreased. Technical innovations help us, but first of all our own attitudes have changed. Safety is everyone's personal responsibility. Not just for themselves, but for their colleagues, and for their safe returns to their homes and families.

What did the changes look like? At first, it was difficult. The new solutions took time to get used to. Take PLANER. We didn't always remember to check the completed tasks on our phones. We often forgot to bring them or the GPS would freak out and show a different location. There was the famous Berestecka Street in Warsaw where there is a shopping mall near our plant. According to PLANER, we were "shopping" all day instead of fixing failures :). However, we learned how to use the app and devices pretty quickly. At least myself and my team. Kaizen also helped a lot.

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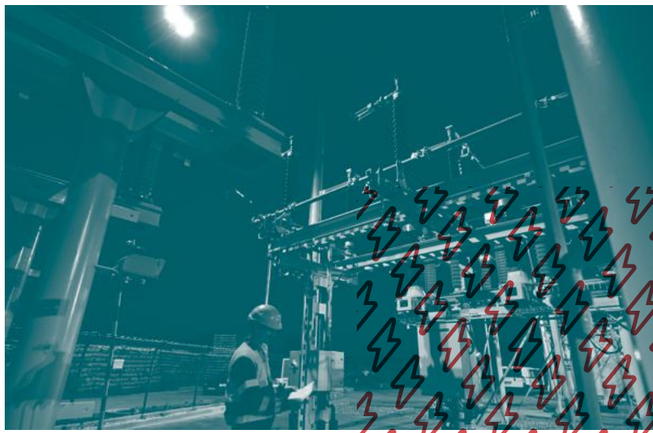

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What is Kaizen? It is a "step-by-step" program thanks to which we improve something every day and overall it produces great results. With Kaizen we received plenty of modern and very practical tools. We've tidied up our workplaces and introduced standards. Our bags have become several kilos lighter. Kaizen sounds strange, but the effects are very concrete and useful here in Poland, in our substations.

What else has changed... Now me and my team are building a traction substation and I can see that it is very modern, digital and remote-controlled. This also makes it safer as you can switch off power remotely, drive some of the equipment out of the switching station and only then start working. And now we are launching the Polish Green Railway program. I know that solar panels are already popping up in many places in our substations. In the future, we will also supply clean energy to trains.

Does it matter? It's definitely something good. The whole world is going in that direction. It is about time we became more eco-friendly in railways also. I like these changes. Certainly, like the previous ones, we will do them step by step.

Rafał Dylewski
Foreman, East Service Area

The Management Board's door is always open

I joined the company a few months before the privatization process. It was a period when there were a number of critical risks, yet it was difficult to discuss them openly with the key managers or the Management Board. After the change of ownership, it turned out that the corporate world can look different – we talk about every problem openly and look for solutions. In my daily work I appreciate the opportunity to create, influence and implement tasks which significantly improve the safety of the Company. Also important to me is the clear message from the Management Board: "remember that our door is always open". It really is an energy booster in your work and motivates you to take on more challenges.

Radosław Lewandowski
Director of the Risk Management and Regulatory Office

Safety first

I've recently had meetings with division managers. I could clearly see that as managers they require employees to complete assigned tasks primarily in a safe manner. Employees, on their part, feel that they can report deficiencies or errors without being exposed to unpleasant situations. It wasn't always the case – once, if occupational health and safety rules were observed, it was only to avoid getting penalized. Changing attitudes has been a long and challenging process. Today I work in a company where people report problems, but also take responsibility for each other, so everyone gets back to their family at the end of the day. And that is the norm.

Marcin Pawlik
Chief OH&S Specialist

Everyone can be an innovator here

When I look at the hundreds of initiatives and ideas submitted through the ZIP (Initiative and Idea Management) program being a fully electronic platform with real-time commenting and voting features available to everybody in the organization, it is hard for me to believe that just 4 years ago it was a program for submitting... rationalization proposals. They were submitted on paper to your manager. There were no objective criteria for evaluation, so most of them ended up on the shelf. Now they are forwarded for implementation, which shows how many creative minds we have at PKP Energetyka.

Piotr Obrycki
Director of the Research & Development Office

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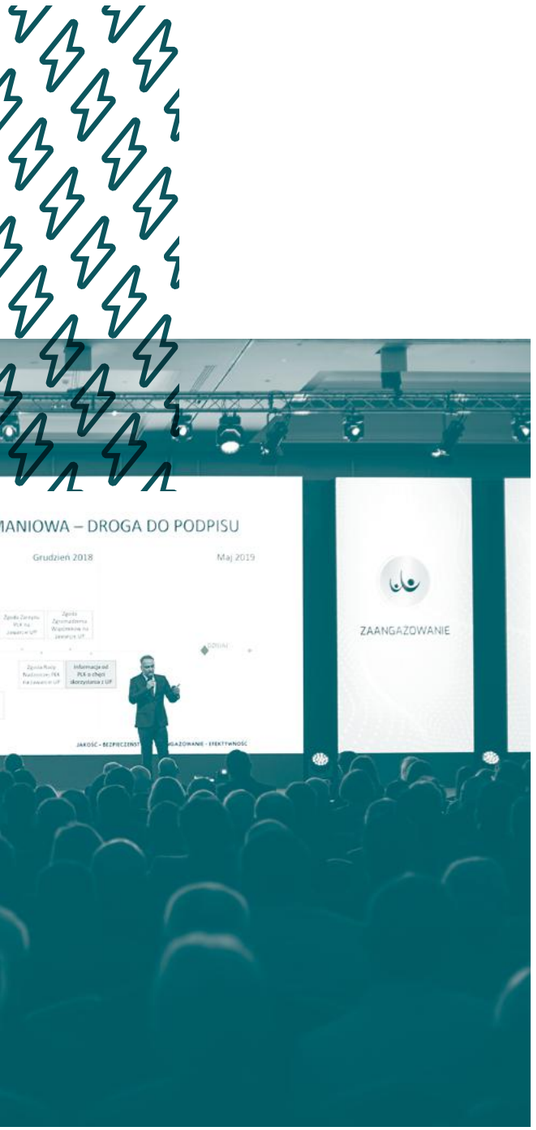
Significant improvement in customer attitudes

My dad worked at PKP Energetyka as a dispatcher until 2012. I followed in his footsteps in 1997 when I started working in the electrical engineering unit. The company clearly started growing in 2016. At that time my father was already retired. When we introduced PLANER, I told my dad about the app. But he was very skeptical about that innovation. He did not believe in its effectiveness. It was not until I showed him on my laptop how it worked – that you can actually check locations and employee current tasks of employees (the information is refreshed every few minutes) – that he changed his mind.

In these five years when PLANER has been in use, I have felt a marked improvement in customer attitudes. PKP PLK sees an increase in the quality of our services, appreciating our technological potential – innovations which help us reduce the number of failures. The diagnostician no longer has to check up on us as they did a few years ago. They have the PKPE24 system where they can see the defects being fixed on an ongoing basis. And I, as Manager of the Maintenance Department, also know immediately what else remains to be done. If there are many inspections in a month, we sit down with the unit manager and figure out together how to accomplish all the scheduled tasks. It makes things much easier and helps the team, avllowing them to collaborate better. I can no longer imagine working without such applications as PLANER or the PKPE24 portal.

Marek Dula
Manager of the Maintenance Department at the Mazowiecki Regional Plant



Annual energizer

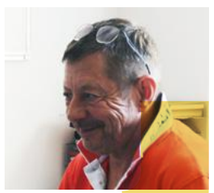
I remember the first Top400 managers' meeting we held in March 2016. Over 400 people in the room and... a distance between us. A sensed lack of comfort in a formula that is all about an honest group discussion! But the subsequent meetings were an opportunity for deeper and deeper integration between us, mutual inspiration, and a chance to get to know people and their views. The event has become a permanent item of the company calendar. Every year we offer something new. There have been workshops, debates, interactive voting. In 2020, the whole event took place online, in a virtual studio. Technology helps us to communicate transparently. And Top400 today is the "energizer" that fuels us with positivity for work all year long.

Krzysztof Kiełmiński
Director of the Communications Office

Safety in the railway family

When I joined the company, what surprised me the most was the openness of PKP Energetyka's employees and their willingness to work together on safety in the company. I did not really go through a period of adaptation, introduction or overcoming resistance. It was clear from the get-go in which direction we were going and that it would be a common path. Here everyone is problem-solving oriented and open-minded. At each level of the organization. I remember going to the field and visiting teams in catenary services, including the one in Krzyż. The gentlemen demonstrated how they performed their tasks. I asked a lot of questions. At the end I heard: "Welcome to our railway family". It was touching and very motivating.

Urszula Gawrysiak
Director of the Occupational Safety and Health Office



Change starts with a dialog

After retiring from the Legions, my grandfather took a job in the railway. It was 1920 and Poland was celebrating the reestablishment of its independence. Later my father also became a railwayman. No wonder both my brother and I had them as our role models. This year marks 47 years since I started working in the railway energy sector. A lot has changed over that time. The thing that makes me the happiest is that the culture of dialog and good communication in our company is becoming more and more evident. Today people are open to talking not only about the positives, but also about what is difficult and needs improvement. They are not afraid to ask questions or offer ideas. With this attitude of employees, who knows what other heights we will climb together.

Dariusz Bekas
Chief Specialist
in the Communications Office

From an island to a cloud

When I started working at PKP Energetyka more than 4 years ago, I found an environment consisting largely of isolated server solutions. Only a small portion of the systems was integrated. We now operate in a virtualized environment. We have 400% more servers than we did in 2015, and IT supports the company processes almost on a 24/7 basis. We test from start to finish not individual solutions but entire processes. The future we are now entering is one of cloud solutions.

Ryszard Bryła
Director of the IT Department

An open mind for digitalization

Digital change had to happen at some point. When we implemented the PLANER system, there was much uncertainty at the start. Not all the executives were convinced by digital development – and the fact that it was a railway company was not helping. What is more, we were to implement innovations with the help of an external company, which raised even more skepticism. I really liked the new system and learned it quickly. I kept an open mind and absorbed all that was new. I was glad that I joined a company where I could learn so much about new technologies. I was happy to listen to comments, which allowed me to implement new features and develop the tool. Today we have a system that corrects plenty of unnecessary activities, streamlines the work of the unit, and saves time. I look forward to more changes.

Grzegorz Żyła
Senior Specialist in the Operational Management Department

Partnership

I remember my first meeting with the Management Board of PKP Energetyka. It was 5 years ago, just after an undoubtedly important event being the acquisition of a shareholding of our company. After nearly 20 years since the company was established, ELESTER-PKP had the first opportunity of increased operational integration with the PKP Energetyka Group. I wondered what directions would be set for us and how we would adjust to the new expectations. Meanwhile, I found myself in the center of an open discussion about our growth proposals. My intention was to listen, but instead I was the one who was talking – I spoke about our activities, ideas for new control command and signaling (SRK) equipment, and the potential that our team had. That meeting started the period of partnership during which we can freely use the good practices of PKP Energetyka.

Dorota Załęcka
President of the Management Board of ELESTER-PKP

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Selected awards granted to PKP Energetyka between 2016 and 2020

TOP Employer 2019 and 2020
top certified employer

Eagle of Innovation
the best company in the category of "Organizational Innovations"

Global Kaizen Award
finalist, one of the eight companies in the world

Digital Excellence Award
winner in the "Spectacular Transformation" category

Nielsen Norman Intranet Design Annual Award
Intranet at an international level

Socially Responsible Railway Company
CSR leader, an award for a mature strategic approach to the CSR and original innovative good practice projects

Safety Culture in Railway Transport, Office of Rail Transport
one of the best companies in terms of safety

Strategy 2030

Our market environment

The scale of investments in railway infrastructure in Poland and trends caused by climate change generate a high potential to be exploited by the whole railway industry for many years to come.

The Polish railway has one of the most extensive track infrastructures in Europe. At the same time, its utilization is very low compared to other European countries. Traveling by train is an everyday activity for most people in Europe – it is ecological, efficient and comfortable. In Poland, the fashion for railways is on a comeback. Numerous measures are being taken to increase the utilization of our country's railway potential and to increase the number of passengers and the volume of goods transported by rail. Public spending being realized and planned at the national and EU levels is historically at its highest level. For example, by the end of 2030, 60% of power substations will be upgraded in terms of how they will power the railway and provide high-speed rail connections between major Polish cities (i.e. up to 250 km/h).

One of the biggest challenges of the power and railway sectors is moving to the “green side”. This is due to the need to adapt to the ambitious goals Poland has set for itself as part of the following projects: "Energy Policy of Poland until 2040" and "National Energy and Climate Plan 2021–2030". They respond to the need to revise the energy and climate policy in line with the European Green Deal, and for the EU to achieve net climate neutrality by 2050.

Consumer trends are no less important as the awareness of environmental issues is growing in the Polish society. 73% of Poles are already declaring that they intend to use sustainable public transport.*

The accelerating technology race is also an important element. Building a strong market position requires having the best solutions available on the market, leading to business automation and robotization. Global trends are not sparing the railway industry and innovative infrastructure is essential e.g. to achieve carbon footprint reduction targets.

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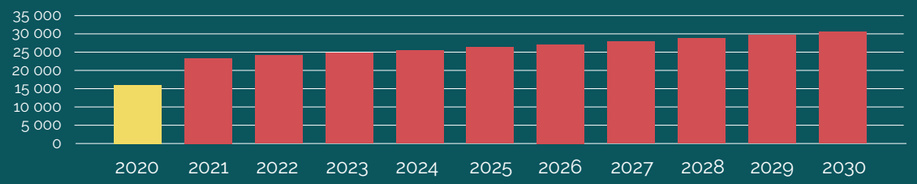
*Source: 2nd European Investment Bank Climate Survey conducted in cooperation with BVA: https://www.wnp.pl/wiadomosci/

Forecast of passenger transport rating in Poland (million pass km)



Source: Office of Rail Transport forecasts + COVID-19 impact in 2020 (in-house estimate)

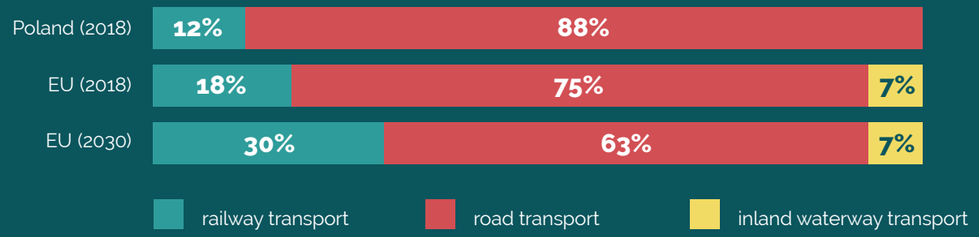
PKP Energetyka will take an active part in the transformation of energy and transport in connection with the implementation of the European Green Deal. But our ambition reaches further – we want to support the creation of sustainable competitive advantage for the railway using climate-friendly energy produced using the best available technology.

Our Strategy 2030 is a response to the observed directions of the energy and climate policy and the developments in the transport industry. By participating in successive editions of the MUZa Program, we actively contribute to the improvement of the quality and efficiency of railway infrastructure. And the Polish Green Railway is our response to the challenges of zero emissions in the transport industry.

We also keep in mind investments in innovative solutions in the area of energy efficiency, such as energy storage.

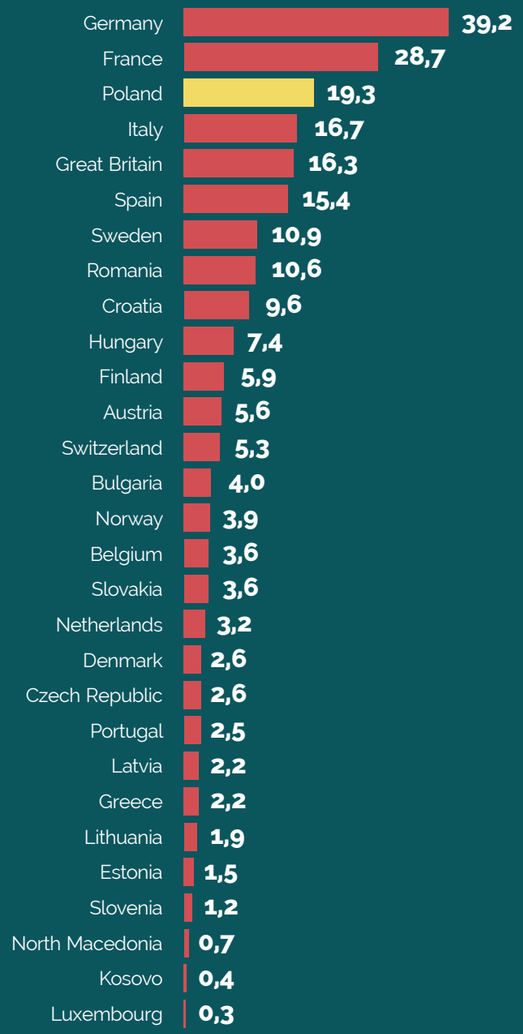
wyjaśnienia pojęć po kliknięciu ②

Current and planned transport equipment shares in Europe according to the EU (in %)



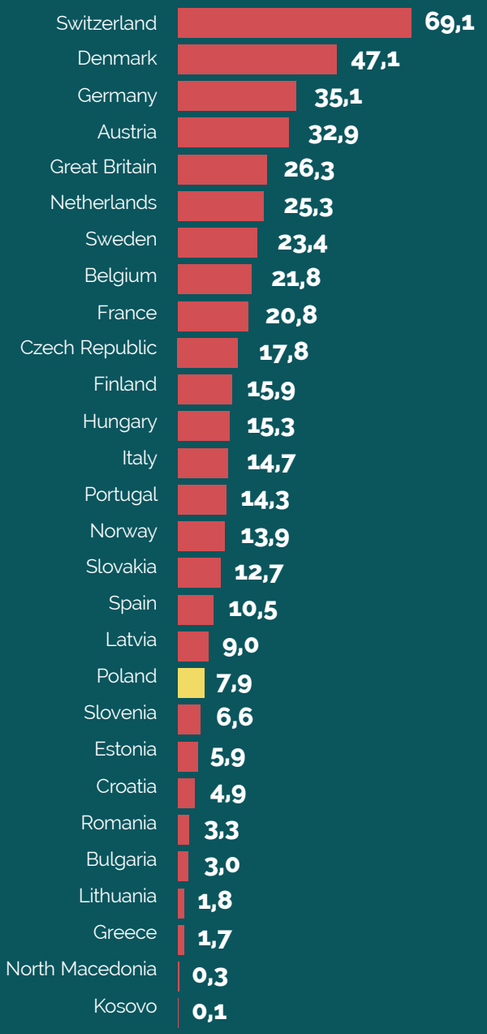
Source: Rail Freight Forward. European (EU28 + Norway + Switzerland) road, rail and inland waterway transport, data and forecasts excluding external sea and air transport.

Length of railway lines (km x 1,000)



Source: Pro Kolej Foundation

Average number of travels per passenger (annual)



Regulatory environment

The role of the regulatory environment and the importance of proper and partner cooperation with public institutions continue to grow. Therefore, at PKP Energetyka, we not only act in full compliance with regulations, but we also come up with additional initiatives in the area of safety of the provided services.

Our ambition is to implement the highest standards in the regulatory area. There is nothing more valuable in the railway and power sector than safety.

Rafał Ciećwierz
Attorney-at-law

A major portion of our business is subject to regulators: the President of the Energy Regulatory Office (URE) and the President of the Office of Rail Transport (UTK). As the number of domestic and EU regulations increases, so does the level of involvement of regulators in the markets under their supervision. We assume that this trend will continue and the importance of regulation will increase in the coming years, which we take into account in both our current activities and Strategy 2030.

We work hard to ensure the company is fully compliant with legal requirements and regulator expectations. We maintain an open relationship with them, discussing fundamental issues influencing the operation of the market. We are active in providing opinions on drafts of new regulations. It is possible thanks to the competent and committed team of the Risk Management and Regulatory Office which was established at PKP Energetyka, as well as the knowledge of our experts in the teams responsible for the power and railway areas.

Operating in areas of regulatory oversight is directly related to our values. Strategy 2030 not only assumes strict compliance with regulations and decisions of regulators, but also cooperation and active participation in the creation of regulations. However, we demand even more from ourselves. Our ambition is to implement the highest standards so as to provide our customers, business partners and employees with full safety.

We attach major importance to ensuring compliance of our activities with the requirements of using EU funds. So far, we have not obtained any significant support from the EU. However, we assume that this form of financing our development will increase significantly in the coming years, in particular in connection with our involvement in renewable energy projects, including the Polish Green Railway program.

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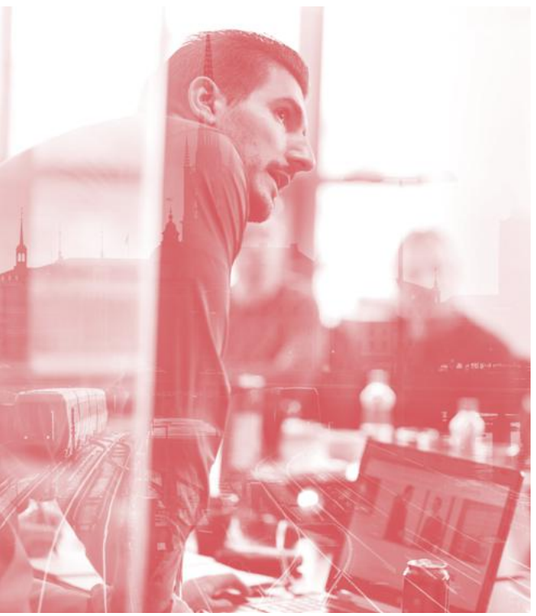
Strategy 2030 in a nutshell

Our strategy for the next 10 years assumes sustainable development. We will strive to strengthen the market position of PKP Energetyka, at the same time ensuring continuous growth of competitiveness of the whole railway sector.

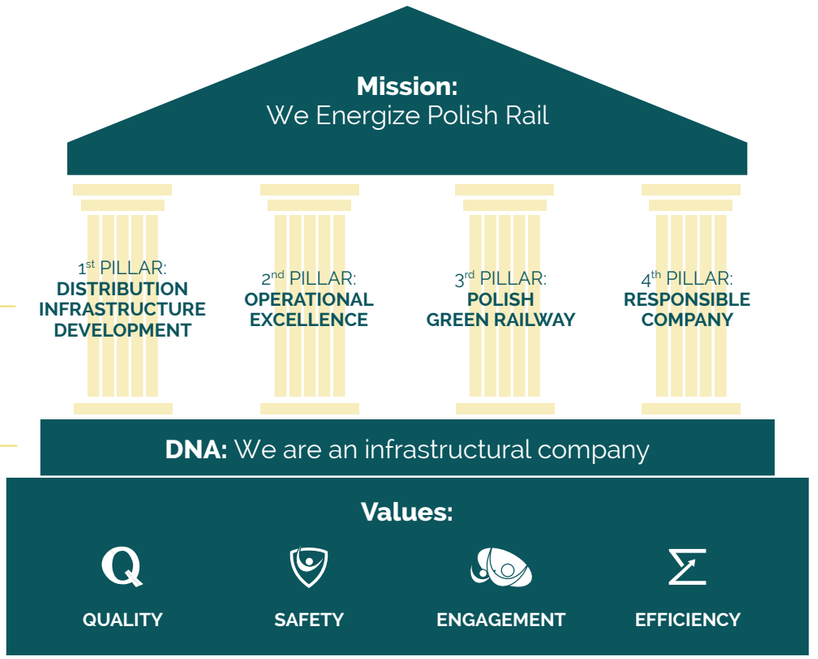


The foundation of our strategy has been invariably for five years the following values: **quality, safety, engagement and efficiency.** They define the culture of PKP Energetyka.

Those values are the basis of the DNA of our organization which defines us and shows us the directions of growth – **we are a stable infrastructural company operating at the point of contact between the railway and power sectors. We grow through long-term projects and contracts. We thoroughly analyze and manage risk. Engaged employees supported by modern tools and processes are our strength.**

The values and DNA – which strongly determine who we are – have been of great help to us in formulating the Pillars of Strategy 2030 including specific assumptions, plans and tools.

Our values, the corporate DNA and the Pillars of Strategy 2030 have been the inspiration for defining our mission: **"We Energize Polish Rail"**. What does it mean? Driving the industry forward by launching high technologies, integrating solutions, or upholding the sector's reputation, for example by acting as an ambassador for best practices in energy conservation.



The strategic direction adopted for the next decade is a result of intensive analyses conducted by a large group of over 200 PKP Energetyka employees, summarizing both the achievements and failures to date.

Values

Over the years, our four values have become firmly embedded in the company. They are specific and up-to-date, so we will also rest our new projects on them.

We are an infrastructural company that is responsible for the distribution of energy for the railway. **Quality in our work** is, therefore, essential for our company's infrastructure to work in the long term. Over the years, it has reliably and safely served our customers and the entire railway system.

Equally important to us is our **care for safety** in terms of reducing risks of each workplace, as well as ensuring that all our facilities (e.g. machinery and processes) guarantee the safety of our employees and reliable transportation of people and goods.

We want to build a **an engaged team** at all levels of the structure. The idea is that superiors inspire others to change their attitudes, and all employees feel responsible for their work, as well as aware of its role in the development of the entire organization and industry.

Efficiency is important in everything we do. We focus on optimal use of available materials, efficient asset management, and automation of some of our work.

Our values

Quality

We strive to be perceived by our customers as a company with the highest standards of quality.

Safety

Our goal is to operate on an accident-free basis in a safe workplace.

Efficiency

We act economically to achieve our goals.

Engagement

We are proud of the results of our work. We give it our all.

Our DNA

DNA indicates who we are and defines our traits and strengths. It is closely related to our values and supports the building of an organizational culture. Defining DNA has put Strategy 2030 on a very solid footing: we know exactly what we need to do, how and why.

click for a definition

What do we do?

We grow through investments, accept low risk and no speculation (e.g. when buying on the energy exchange). A predictable, long-term, non-speculative margin based on multi-year contracts is important to us.

How?

We operate transparently, putting the customer at the center of our attention. Our mission is carried out throughout Poland by a competent and committed team of employees supported by innovative systems and processes.

Why?

Our activities are inextricably linked with who we are – PKP Energetyka is an infrastructural company with precisely defined areas of operation. We mainly serve business customers in regulated markets at the point of contact between the power and railway sectors.

How are the Pillars of Strategy 2030 connected to our DNA?

What fits well into the company's DNA in the 1st Pillar is the area related to customer care. Actions taken today, putting the customer at the center of our attention, are important and necessary especially in the long run. If we respect the customer, i.e. we do our job honestly and keep our word, they will stay with us. Moreover, they recommend our company externally, and that contributes not only to the development of PKP Energetyka, but also to building a positive image of the railway as a competitive means of transport.

Marek Kleszczewski
Member of th Management Board, 1st Pillar: Distribution Infrastructure Development

The DNA stems from the specific nature of our role – a public utility that should be stable and reliable. In the context of the 2nd Pillar, it is important to ensure an increase in quality and efficiency through digitalization and effective management. The reality is changing and we constantly need to monitor the situation, adapt, implement to build the company's competitiveness in the public interest in the long term.

Christopher Biedermann
Member of the Management Board, 2nd Pillar: Operational excellence

The ability to build long-term partnerships with our customers and suppliers. The green railway is a very good example of how the Polish Green Railway Pillar links with the DNA of the company.

The perspective of a 10-year project implementation will require the creation of an attractive cooperation model for both RES energy generators and our key customers, in this case railway undertakings. Such projects can be afforded by stable companies, such as ours, which plan strategically and operate on the basis of long-term relations they developed.

click for a definition

Leszek Hołda
Member of the Management Board, 3rd Pillar: Polish Green Railway

Long-term development is very much linked with the Responsible Company Pillar. In the long term, we need to have an expert team of engaged employees. We should also take care of the external environment – we should act as partners, and this, in turn, will be achieved through ethics and transparency.

Beata Górniak
Member of the Management Board, 4th Pillar: Responsible company

Pillars of Strategy 2030

Based on our DNA and Values, we have developed four pillars on which our strategy for the next 10 years is based:

1st Pillar:
DISTRIBUTION INFRASTRUCTURE DEVELOPMENT

Continuation of projects necessary for the development of the railway in Poland.

2nd Pillar:
OPERATIONAL EXCELLENCE

Improved quality and more efficient use of company resources.

3rd Pillar:
POLISH GREEN RAILWAY

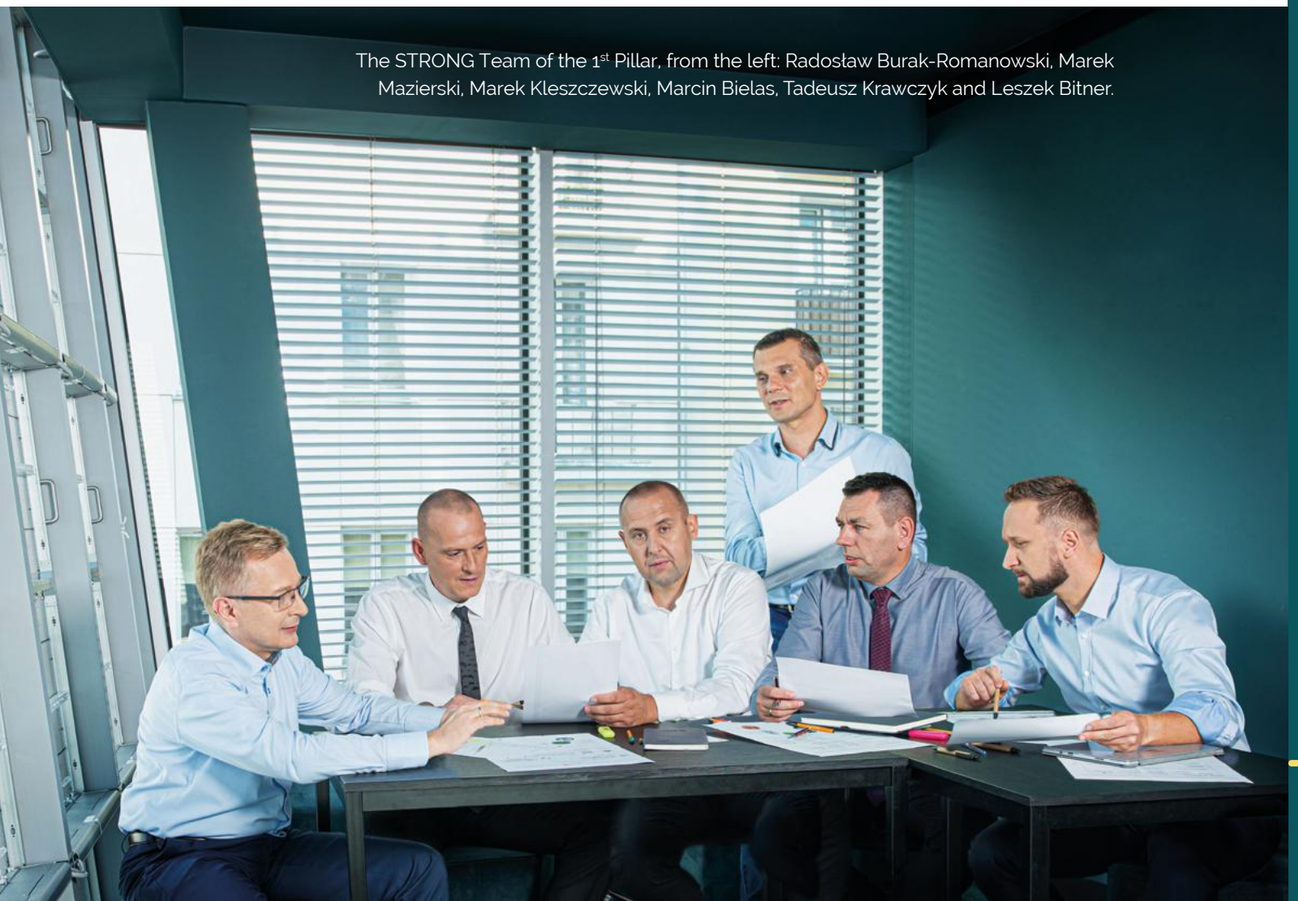
Changing the energy mix of PKP Energetyka and development of the entirety of Polish railway towards zero emission.

4th Pillar:
RESPONSIBLE COMPANY

Creating an attractive workplace and building a socially responsible company.

click for a definition

1st Pillar: Distribution Infrastructure Development



The STRONG Team of the 1st Pillar, from the left: Radosław Burak-Romanowski, Marek Mazierski, Marek Kleszczewski, Marcin Bielas, Tadeusz Krawczyk and Leszek Bitner.

in:

1 year

A significant increase in distribution customer service quality evident in satisfaction survey results.

5 years

Our projects are being implemented at the pace of railway development (passenger number growth, traveling speeds and increased power from RES)

We are implementing further IT and technology systems, reducing the number of power outages to the European average.

10 years

We have modernized 60% of our assets.

We provide power supply for the railway traction in full compliance with the needs of the Polish railway in every power supply system required: 3 kV DC and 25 kV AC.

click for a definition

How will the 1st Pillar be implemented on a day-to-day basis?

We are building, modernizing and taking care of the assets and infrastructure which is supposed to operate safely for many years and, above all, serve railway passengers and our customers. Every bit, no matter how small, testifies to the quality of our work. If done right, it will be used for decades. This is why diligence is so important in what we do.

Marek Kleszczewski
Member of the Management Board

1st Pillar: Distribution Infrastructure Development

The level of railway utilization in Poland (especially that of passenger transport) is one of the lowest in Europe. However, the situation is changing: 2010–2030 is a period of the biggest investments in the Polish railway infrastructure. PKP Energetyka is changing along with the industry and customers, and in some areas it anticipates and initiates those changes. We want to respond to customer needs – we put them at the center of our attention.

To meet the increase in demand for railway transport, we need to have the right infrastructure in place. Therefore, we will invest in distribution assets and continue working on the biggest investment program in the company's history – MUZa (Modernizacja Układów Zasilania; English: Modernization of Power Systems). It clearly improves the stability and quality of railway power supply, which results in a significant reduction of power supply interruptions, and it is one of the leading objectives of PKP Energetyka as a traction power supplier.

The key value for the 1st Pillar is quality understood as operational diligence ensuring the sustainability of assets and customer satisfaction. It is firmly embedded in our DNA. PKP Energetyka is a company which adopts a long-term view. By implementing Strategy 2030, we intend to introduce, among others, a Total Cost of Ownership (TCO) culture by installing better and more reliable equipment. This will allow us to reduce the total costs of its repair and upgrades for many years down the road.

click for a definition

Programs as part of the 1st Pillar

The customer at the center of our activities

Objective

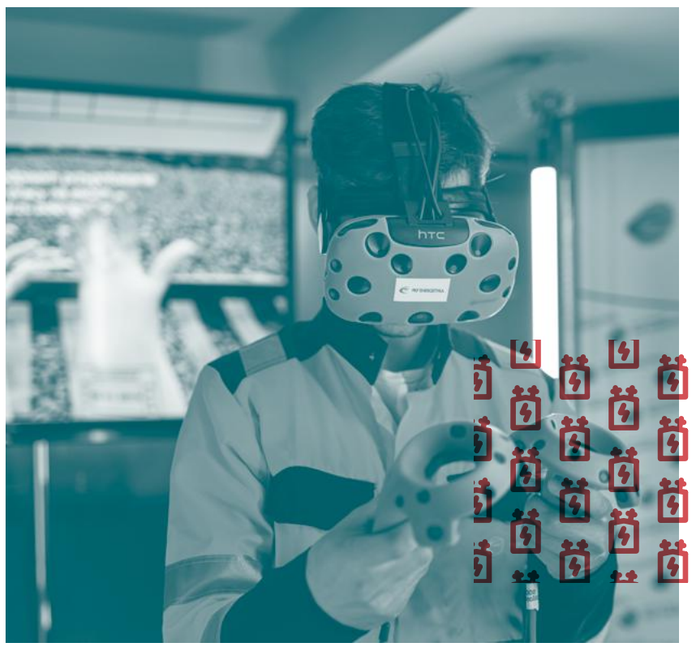
Customer service focused on their needs.

Tools

Developing appropriate customer service standards.

Building a customer-oriented team that cares for the communication with the customer at every stage of cooperation.

Introduction of customer satisfaction metrics: time of issuing connection conditions, handling of complaints and meeting contractual deadlines.



click for a definition

Continuous improvement in the quality of electricity distribution to support operational effectiveness

Objective

Continuation of the quality improvement works started 5 years ago.

Tools

Leveraging information gained thanks to the metering systems and tools such as SCADA and ZMS implemented during the previous strategy period, which are designed for precise, appropriate planning-based investments in reliable infrastructure (initiatives: "Development of a failure prediction model", "Development of a model for the implementation of project and maintenance works", and "Standardization of designing and processes of construction, acceptance and maintenance of distribution assets").

What is the impact of the new technologies on the 1st Pillar?

The digital revolution makes us want to change. We will continue to upgrade the infrastructure and even further improve the competences of our team to operate it properly. We certainly already have some of the skills, resources and tools, but there are new challenges ahead as we develop the IT and OT tools. In the process of rapid technology developments, it is important to have the best professionals on board. Therefore, expert knowledge will be collected, developed and transferred within our organization.

Grzegorz Sawastian
Director of the East Service Area

Implementation of the 25 kV power supply system as scheduled and in line with the needs of the railway

Objective

PKP Energetyka as the most suitable partner in the implementation of power supply projects in the 25 kV system and, primarily, as the common and only distribution network operator for all electrified railway lines.

Tools

Building appropriate competencies: preparing dispatchers for controlling such infrastructure and the maintenance team for servicing the new catenary.

Developing standards and ensuring that design solutions come with the necessary certificates, approvals and attestations.

click for a definition

Implementation of the MUZa program

Objective

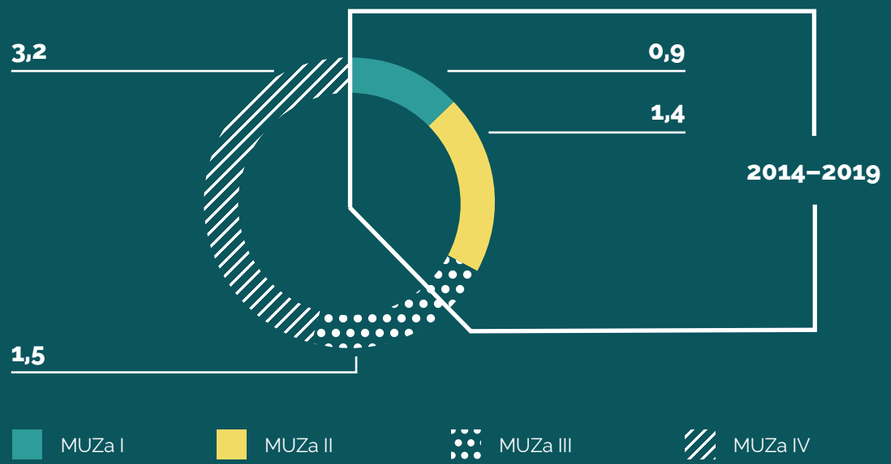
Performance of the connections envisaged for the MUZa II and MUZa III projects within the assumed time limit and budget.

Tools

Introducing standardization and unification in the asset extension process.

Use of proven technology solutions ensuring reduction of the total project costs.

Cumulative capital expenditures for MUZa amount to PLN 7 billion



How will the implementation of MUZa change?

We are focusing on implementing an increased number of projects. Therefore, we will work on an even more efficient management and development of partnerships with design offices, equipment suppliers and construction subcontractors. We are beginning to review our procedures and technical standards to develop top solutions that can be implemented regardless of the facility or power supply system locations.

Krzysztof Wolski
Deputy Director of the Project Preparation and Implementation Department

2nd Pillar: Operational excellence

The STRONG Team of the 2nd Pillar, from the left: Łukasz Świderski, Jarosław Leniec, Marek Mazierski, Dorota Załęcka, Ryszard Bryła, Mariusz Pietrzak, Christopher Biedermann, Wojciech Smardz and Tomasz Besztak.

in:

1 year

A strong position in catenary maintenance.

click for a definition

5 years

100% digitalization of support systems.

Automation of key processes (drone nests for aerial inspections, intelligent image recognition, etc.).

10 years

Catenary and distribution network maintenance based on failure prediction.

World-class operational excellence.

What are the primary objectives of the Operational Excellence Pillar?

The last 5 years have been a period of dynamic growth. It is, therefore, a time of major change. We have implemented modern systems, such as SAP or EOD. We see significant results, but, as in any process, there is still much to be done.

Our goal is to further increase efficiency through digitalization and effective management. The market, the customers and the regulator require it from us. The reality is changing, so we have to adapt as well. This is a way to both improve the quality of our services and optimize costs.

Christopher Biedermann
Member of the Management Board

Increasing the quality of services and customer satisfaction are the key tasks of the 2nd Pillar. We continue to work on the effectiveness of our operations. By this we mean operating based on a smaller operational risk and generating higher revenues. We assume strict cost discipline: we will review operating costs we are currently incurring and reduce those that are not necessary. At the same time, we will optimally identify where we need to direct our spending so that our capital expenditures can best serve our customers, partners and employees.

On the other hand, we need to focus on monitoring ineffective activities and investing in a technology that automates work, that is, makes it easier and faster to perform our duties. The time saved in this manner can be devoted to our customers.

As part of our business is already largely modernized, Strategy 2030 will include reviewing the efficiency of the implemented systems. We want to be sure that we are using them to their full potential.

2nd Pillar: Operational excellence

Programs as part of the 2nd Pillar

Quality and efficiency in operation and maintenance

Objective

Optimization of operating costs.

Tools

Introduction of technical equipment and technology standards.

Optimizing the use of tools and machinery as well as business processes, including the sale of unnecessary materials, e.g. cable and wire offcuts left after construction contracts.

More efficient use of the company's core resources, e.g. through energy and water conservation and better packaging management.

Quality and efficiency of support areas

Objective

Improving the effectiveness of support processes.

Tools

Implementing a Service Level Agreement (SLA) for selected activities.

Standardization of logistics for construction projects.

Improving our approach to customers – increasing the quality of operation, including speeding up selected processes and increasing administration back-office automation.

click for a definition

Digitalization and automation

Objectives

Fully digitalized customer service (elimination of paper documentation).

Simplifying internal procedures.

Tools

Convincing our key customers to communicate and exchange documentation using new technologies (e.g. electronic data interchange).

Digitalization and automation of purchasing processes.

Reducing the number of paper documents in circulation, including printouts.

What is the most important task for the 2nd Pillar?

Our task is to continuously improve the quality of customer service, which is supported by digitalization. At present, support processes are mainly carried out by high-end IT systems and are digitized at 85%. Looking at the Polish market in terms of administration digitalization, we are at the forefront. Our aspiration is to match global companies in the infrastructural, power and railway industries.

Mariusz Pietrzak
President of the Management Board of the Shared Services Center

Continuous improvement culture

Objective

Improving work culture.

Tools

Covering the entire organization with the Kaizen program.

Making an awareness change – each of us creates the culture of PKP Energetyka (from taking care of one's own workstation and the area around our traction substations and sectioning points to the representation of the company e.g. before external stakeholders).

click for a definition

Delivering innovative, customer-oriented solutions

Objective

Focusing activities on solving customer problems instead of spending time on unnecessary documentation.

Tools

Developing the Research & Development Office.

Increasing the exchange of information with the customer through modern communication channels (rather than on paper): implementation of electronic certificates, e-invoices, and development of two-way communication tools, such as the PKPE24 applications.

Operational excellence during the performance of maintenance contract

Objectives

Reducing the number of failures.

Continuing cost optimization.

Tools

Implementing new technologies as an opportunity to both deliver new quality and optimize costs.

25,000 km of catenary track kilometers – a system in which we want to develop new values and solutions benefiting the entire railway sector (value-added services are complementary to our core business).

click for a definition

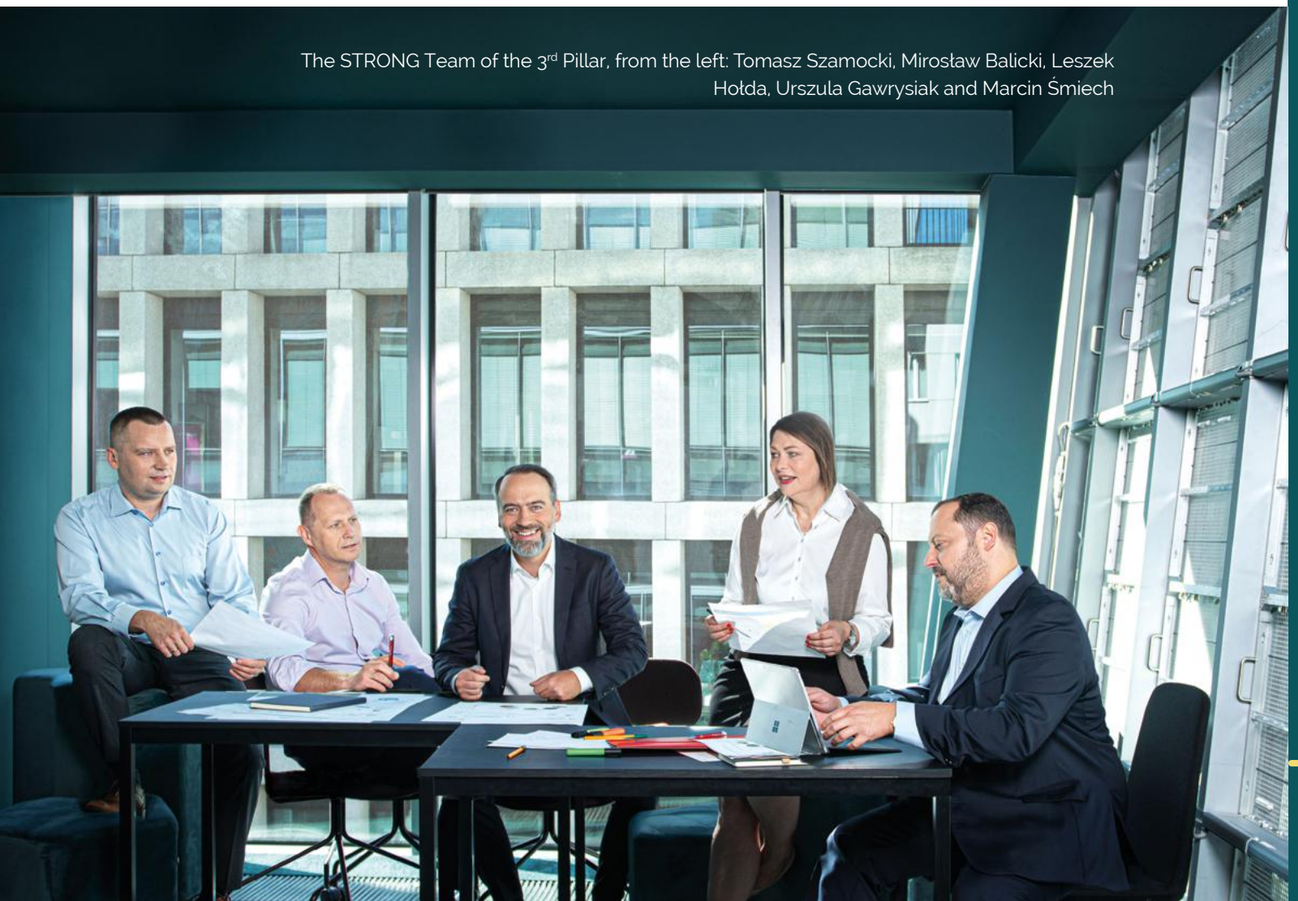
Why will PKP Energetyka invest in technologies on such a big scale?

Technology offers an opportunity to obtain useful information. The quality and completeness of data enhance our knowledge, and thus help increase the quality of customer service. We will be able to draw even better conclusions, more precisely and efficiently upgrade distribution assets to better serve our customers. Our plans primarily include automating tasks that are repetitive and simple. The effects of automation will support employees to better organize the workplace and develop competencies. Therefore, we will improve the PLANER system implemented 4 years ago, develop the ZMS and GIS systems, automate the processing of video data from aerial network inspections and implement systems for the preventive maintenance of distribution assets and failure prediction.

The real change will consist in expanding our employees' capabilities of taking the new opportunities that are offered up by these distribution network data analytics technologies on a daily basis.

Marek Mazierski
President of the Management Board of PKP Energetyka Obsługa

3rd Pillar: Polish Green Railway



The STRONG Team of the 3rd Pillar, from the left: Tomasz Szamocki, Mirosław Balicki, Leszek Hołda, Urszula Gawrysiak and Marcin Śmiech

in:

1 year

PKP Energetyka is recognized as a leader in promoting energy efficiency of the railway.

5 years

Polish railway powered by clean energy in 50%.

PKP Energetyka's readiness to use technologies based on hydrogen and energy storage facilities.

10 years

PKP Energetyka is a net zero company – neutral in terms of CO_2 emissions.

Polish railway relies 85% on energy coming from RES. "Green ticket" is common in the railway.

click for a definition

Why is the Polish Green Railway project important for PKP Energetyka and the whole industry?

Energy generated from renewable sources is the future of power generation. We want to be among the leading companies setting the tone for change in the energy sector, so we want to supply green energy to our customers. It is also an opportunity for us to enter the market of RES generation projects, but we are still analyzing this issue and leaving it as an option.

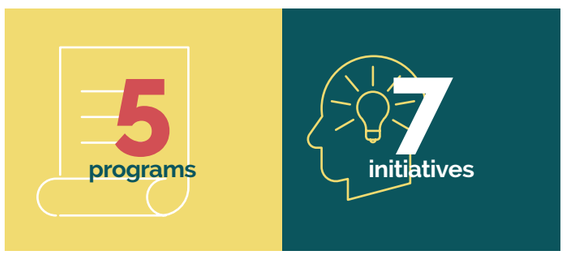
This project is also a possibility to be a precursor of the zero emission technology in the transport sector, while increasing its competitiveness. Through the Polish Green Railway, we act in accordance with the goals of our country's climate and energy policy.

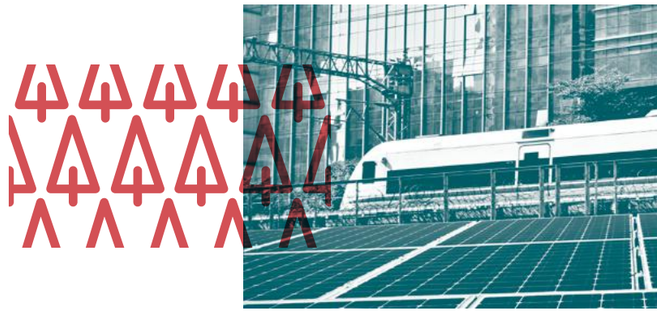
In addition, due to the economic turmoil associated with the fight against the COVID-19 pandemic, tools are being sought to unleash economic growth. Investing in green energy is very much in line with these needs.

Leszek Hołda
Member of the Management Board

click for a definition

3rd Pillar: Polish Green Railway





For PKP Energetyka, Polish Green Railway is a completely new experience. The project assumes not only changes within our organization, but also aims to change the energy mix of the entire Polish railway. We work together with other entities (e.g. as part of CEEK) and assume that by 2030 trains in Poland will be powered by clean energy at 85%. In this way, we hope to create a new market for companies willing to invest in RES dedicated to the railway sector.

The implementation of these assumptions will put the railway in the whole country clearly in the lead when it comes to RES solutions, and therefore it will become more competitive. In the long run, this will, among others, contribute to choosing the railway as the preferred means of transport.

Change starts with ourselves. PKP Energetyka will strive to, among other things, limit CO_2 emissions coming from the company's operations down to zero ("net zero"). At the start, we will equip all our traction substations with solar panels, creating a zero-emission and self-sufficient infrastructure. In this way, we want to demonstrate the benefits of green solutions and ways to implement them effectively.

click for a definition

Programs as part of the 3rd Pillar

Zero-emission PKP Energetyka

Objective

Reducing the carbon footprint of PKP Energetyka.

Tools

Developing a plan of a zero-emission and energy-efficient company.

Measuring the effectiveness of our actions (e.g. carbon footprint per employee or carbon footprint calculated as the sum of emissions from e.g. electricity consumption for internal needs and emission from fuel consumption for heating purposes).

Railway energy efficiency (CEEK)

click for a definition

Objective

Being active as part of the CEEK initiative, which provides a platform for sharing knowledge and achieving energy saving goals in the railway sector.

Tools

Acting as a competence base for CEEK, actively sharing our resources.

Inspiring others to adopt energy-efficient solutions (e.g. eco-driving, energy recuperation).

Drawing on the experience of others to enhance the ultimate effect of increasing railway energy efficiency.

Zero emission of railway companies

Objective

Reducing the railway's carbon footprint.

Tools

PKP Energetyka as an ambassador of good practices in the area of building the Polish Green Railway.

Offering recommendations for the railway sector, including educating and inspiring other companies which operate in the sector (the expected outcome is the green railway added also to the strategies of other companies).

Measuring the effects (carbon footprint reduction) across the sector using international standards.

Changing the railway energy mix using energy from RES

Objective

Changing the profile of the energy flowing into the distribution network of PKP Energetyka: by 2030, the energy obtained from RES will amount to 85%

click for a definition

Tools

Acting as an integrator and supplier of green energy.

Creating the Polish Green Railway investment program for investors building RES.

Creating an image and communications policy for the whole railway, including the use of our advantage over other modes of transport (the railway is already electrified and low-carbon in over 60%, unlike e.g. the automotive industry).

What are the additional benefits of implementing RES power supply and the zero emission policy?

The Polish Green Railway offers a wide range of possibilities in terms of acquiring EU funding for the transformation of the European economy to a low-carbon economy. Already today the share of green energy in potential projects is one of the key criteria of project evaluation, not only by EU institutions, but by most European banking groups and financial institutions.

Magdalena Kaczorowska
Director of the Financial Office

RES investment (strategic option)

Objective

Defining the role and strategy of PKP Energetyka in generating green energy, e.g. by investing in solar systems and wind farms.

Tools

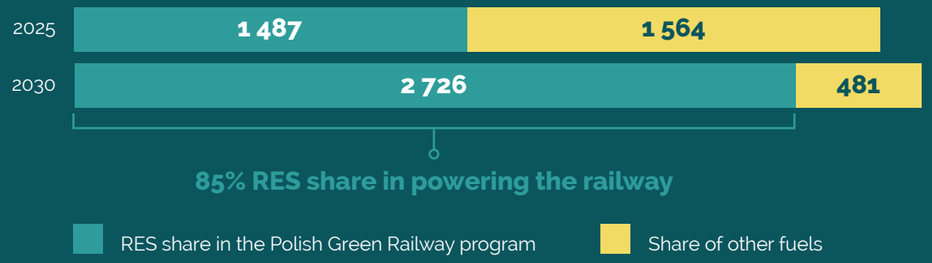
Preparation of a business case for the project (primarily in terms of the risks of this type of projects and the DNA of our company).

What is the biggest challenge for the 3rd Pillar: Polish Green Railway?

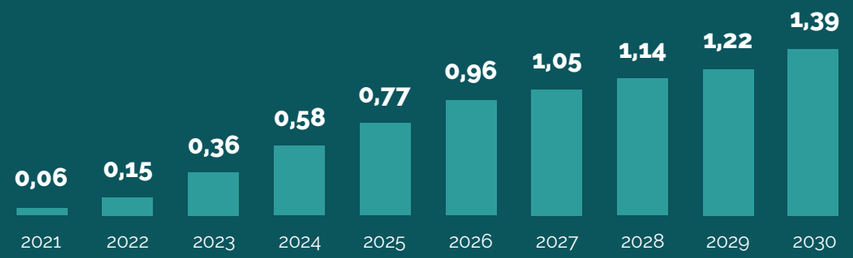
The biggest challenge is coordinating the activities of the entire industry. The Polish Green Railway is a task for the whole sector. The tasks ahead of us include e.g. those related to the management of distributed and unstable energy sources and complementing the network with energy storage facilities (which involves process requirements and additional costs). That is why cooperation with other entities and the role of PKP Energetyka as an ambassador of this idea and an integrator in its implementation are so important.

Marcin Śmiech
Acting Director of the Green Railway Branch

Increase in the share of RES through the implementation of the Polish Green Railway Program (GWh)



Planned CO_2 emission reduction per year
(in million tonnes)



8 million tonnes of CO_2 less

Reduction by 8 million tonnes of CO_2 between 2021 and 2030

The average annual reduction in emissions by approx. 800 thousand tonnes of CO_2 achieved thanks to the program corresponds to almost 34 thousand hectares of forests absorbing carbon dioxide, i.e. an area 3 times the size of the Białowieża National Park.

4th Pillar: Responsible company

The STRONG Team of the 4th Pillar, from the left: Gabriela Romanowska, Urszula Gawrysiak, Anna Przygoda, Beata Górniak, Joanna Czyżewska and Krzysztof Kiełmiński.

in:

1 year

Specialist and technical training system implemented based on the knowledge and expertise of internal trainers.

5 years

PKP Energetyka is an accident-free workplace.

10 years

Best employer in the industry as rated by employees and job candidates.

What does the 4th Pillar: Responsible company refer to?

This pillar refers to changing habits. We want every employee to always put safety first. But it also concerns PKP Energetyka which is becoming a company ensuring not only safety, but also the comfort of continuous professional development.

External entities – cooperating institutions, suppliers and customers – are just as important. We want to be perceived as a trustworthy partner and an organization that operates in accordance with the principles of corporate responsibility.

All these elements are closely linked with each other. How a company operates internally is of key importance for the kind of organization we are externally.

Beata Górniak
Member of the Management Board

4th Pillar: Responsible company

For a critical infrastructure manager such as PKP Energetyka, stability and effectiveness of operations is inextricably linked with the employment of experienced and competent professionals. We want employees to grow within the organization and stay with us for longer. This guarantees the consistency of competences "on board" our company. Hence programs that will motivate on the one hand, and ensure growth and knowledge transfer between teams on the other.

We continue to place a strong emphasis on safety. Over the past 5 years, we have developed an awareness of personal responsibility for it in every employee. Now it's time for Mission ZERO, that is, a truly accident-free workplace. We have as many as 5 programs addressing the improvement of safety on many levels, and additionally 2 programs related to the engagement of our employees and building a socially responsible company.

Programs as part of the 4th Pillar

Mission ZERO – Leadership

Objectives

Building a credible team of leaders who care for open communication and occupational safety of their teams.

Embedding the idea that every leader is responsible for the safety of his or her employees ("Foreman/Supervisor – the first line of safety") and inspires them to change incorrect attitudes and habits ("Safety visits").

Tools

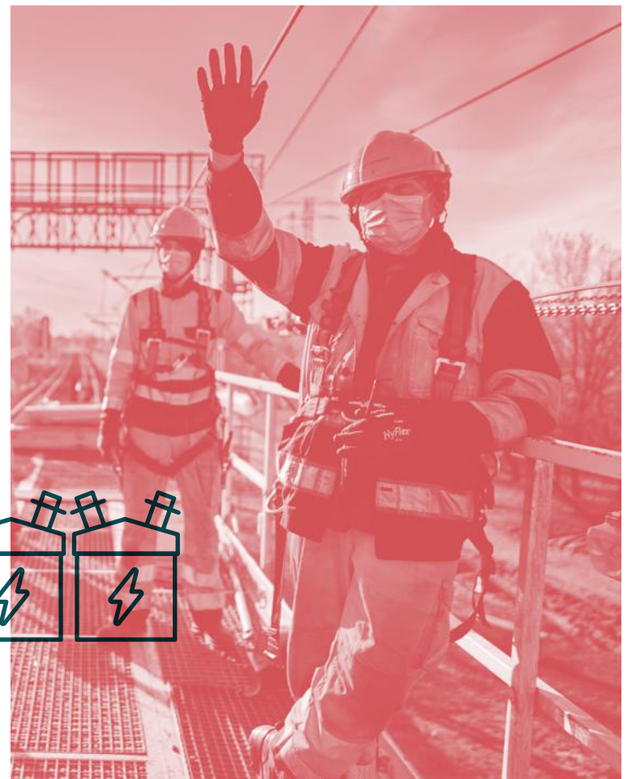
Incentive and training programs (e.g. the "Internal Coaches" program).

What are the most important features of Mission ZERO?

It is crucial that all of us at PKP Energetyka not only understand but accept that safety is non-negotiable. "I follow safe work procedures, use personal protective equipment, and if I cannot do the job safely, I say « STOP! » to both myself and my colleagues" – it needs to become a daily practice for every worker.

It's important that we communicate well and talk a lot about what Mission ZERO is. After all, we all have the same goal: getting back home safely.

Bartłomiej Wrzosek
Director of the North Plant



Mission ZERO – Risk management

Objectives

Reducing serious accidents to zero by 2025.

Changing the habits of employees at all levels.

Tools

Showing employees that accidents do not have to be an inherent part of working in our industry (the "12 life-saving rules" campaign).

Establishing a system for managing safety data and feedback from employees. It is supposed to encourage them to report unsafe situations (the "Reporting HSE observations" initiative).

Misja ZERO – Systemy

Objectives

Reducing the number of hazardous situations.

Tools

Changing our work routine in terms of working standards based on good practices.

Introducing easy-to-implement and easy-to-read standards of work performance covering repetitive activities and tasks (e.g. easily applicable EBH manual presented in an accessible form corresponding to employee needs).

click for a definition

click for a definition

Mission ZERO – People

Objectives

Directly guaranteeing safety to our employees.

Reducing the number of incidents in operation and traffic management (AOM).

Tools

Changing our work routine in terms of working standards based on good practices.

Creation and implementation of an educational system in the field of occupational safety and environmental protection (e.g. "PKPE Academy").

Emphasizing the role of each employee in developing safety in the entire organization (programs such as: "Health Care Prevention," "Promoting Safety Leaders", or the "Breaking out of a Routine" campaign).

Mission ZERO – Safe machinery, facilities and workplaces

Objectives

Risk mitigation in our workplaces.

Ensuring security of supplies, goods and people.

Tools

Emphasizing seemingly insignificant activities that affect our day-to-day safety ("My Locker Room").

Paying attention to safety issues in the context of the company's infrastructure (initiatives such as "Standardization of the Machinery and Equipment Inspection Process" and "Safety of Catenary Services").

Are new technologies important in the process of building a socially responsible company?

Yes, because they significantly improve safety. They also help with work organization and internal communication. At the same time, the more technology, the more human dimension. Therefore, as part of Mission ZERO, we will care not only for systems, but most of all for commitment and good relations between employees and superiors.

Grzegorz Wciórka
Director of the West Service Area

Sustainable development strategy

Objectives

Building a socially responsible company.

Tools

Creating a reputation as a reliable and trustworthy business by taking care of relations with external partners.

Increasing the attractiveness of PKP Energetyka as a target employer (including cooperation with schools and universities, remuneration based on market data analysis).

Minimizing or, where possible, reducing PKP Energetyka's negative impact on the environment (e.g. analyzing the carbon footprint, water footprint, waste sorting level, reduction of waste on a per type basis).

MOCNY SKŁAD Tutaj pracują najlepsi English: STRONG TEAM. Where the best ones work.

Building and developing the Winning Team

Objectives

Growing competences inside the organization.

Preventing a generation gap.

Increasing employee engagement.

Tools

Talent search ("Winning Team Talent Development Program").

Providing tools necessary to acquire hard and soft skills ("Foreman Development") and improving the quality of daily work ("Interactive Communication with Employees").

Motivating our experienced employees to share their knowledge with younger colleagues.

How are we going to implement our Strategy 2030?

We have developed a precise plan for operationalization, or strategy implementation, based on the recognized Balanced Scorecard (BSC) method.

According to the BSC methodology, effectiveness in strategy implementation depends on the preparation of a detailed plan of strategic initiatives, activities monitoring their implementation and identifying deviations in implementation, and corrective actions. Also, it depends on good communication of the strategy to employees. Having Scorecards supports the communication process.

The operationalization of Strategy 2030 will follow a similar standard across all business areas and support functions. We will measure the progress of each strategic initiative on a regular basis. How? Through an analysis of the achievement of the key performance indicators (KPIs) which we will evaluate from four perspectives closely linked with our values.

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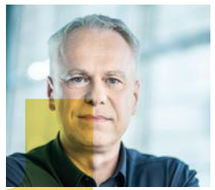
The adopted standard for operationalizing Strategy 2030 includes:

1. preparation of Balanced Scorecards
2. drawing up short-term plans of actions to be implemented
3. supporting employees in maintaining the implemented standard
4. regular operational meetings



What is the most important in operationalizing the strategy?

As a first step, it is necessary to prepare a detailed plan for the implementation of strategic initiatives and to create processes for its updates from time to time. The strategy must be a "living" one, and its implementation must at all times take into consideration the dynamic of changes in the organization and its environment. The mechanisms for measuring and periodically reviewing the effects of initiatives being implemented have an important role to play. The key to success, however, is for employees to understand the strategy and know how each of us can implement it in our daily work.

Wojciech Smardz
Director of the Process Improvement Office

Where we are going to be in a decade.

This statement could end with a question mark – because we don't know what will happen over such a long period. However, it ends with a full stop, because we need to plan our strategy to be well prepared for different scenarios. The COVID-19 pandemic has shown that we need to predict the future even more accurately and analyze trends to have an idea of how to deal with as many future unknowns as possible. Hence, good planning must be accompanied by a high level of flexibility in organization. Agility that will let us achieve the objectives that have been set in different ways adapted to the changing situation. These two aspects: predictability based on the development of scenarios and flexibility will obviously accompany us within the nearest decade and are well set in our strategy.

The direction of development of the global economy is defined today by two megatrends: technological progress and sustainable development.

New technologies include widespread digitization, extensive use of automation and robotics, and the use of artificial intelligence. The changes will also affect transport which will become “mobility as a service”. Technological advances will enable large-scale energy storage and distributed energy system management.

Sustainable development involves the concern for climate, reduction of CO_2 emissions and energy efficiency – because we all need clean air which decides about the quality of our life. It involves RES as the basis of the energy mix supplemented by the use of alternative fuels (e.g. hydrogen). Sustainable development also involves the concern for people, their active involvement in the development processes of economies and companies. This is where diversity, H2H (Human to Human), ESG and human rights can help.

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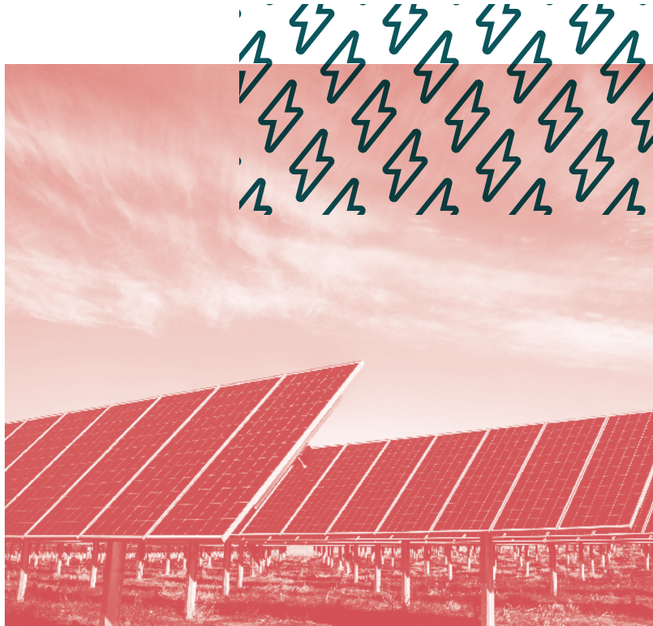
How does our company fit into these trends? How do we carry out the mission of supporting the development of Polish railway?



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Where are we going to be in 10 years? To answer these key questions I will mention several of the most important elements:

- In 10 years, we are a strong, stable and predictable company based on solid foundations, yet agile and flexible, which has smoothly gone through many unforeseen events and learned a lot.
- Our distribution network is 60% larger and is one of the most modern networks in Europe. 60% of our equipment is modernized. Digital traction substations are managed remotely using next-generation mobile technologies. Both the distribution network and the catenary system are maintained using predictive maintenance – possible failures are detected and removed in advance.
- The average time of power supply interruptions is below 100 minutes.
- The introduction of modern methods of prediction, prevention and defect removal helps to keep the number of catenary system failures at a very low level, and passenger train delays are negligible from the perspective of a train passenger.
- We are in the process of constructing and integrating sections of the 25 kV network sections with the 3 kV system, which – thanks to the cooperation with PKP PLK and Centralny Port Komunikacyjny (CPK) – constitute a well-functioning power supply ecosystem for the Polish railway.
- We supply more than 4.5 TWh of energy, including 2.21 TWh of clean electricity for railways, supplemented with new generation fuel.
- With the distributed generation system we have developed, which includes an effective energy storage system, we are also powering other means of communication that complement the transportation ecosystem – with railways as the backbone of electromobility.
- The entire company is environmentally neutral in terms of direct and indirect greenhouse gas emissions. We are preparing to control the emissions of our suppliers and customers, that is, along the entire added value chain.
- We make full use of renewable energy sources for internal needs.
- The railway sector is the leader in reducing pollution – CO_2 emissions have fallen by 8 million tonnes (which is equivalent to “planting” 3 Białowieża National Parks every year).

- The Polish Green Railway Program has been successfully implemented in several developing countries under the supervision of several dozen PKP Energetyka experts with the status of international consultants.
- Thanks to the green ticket the number of railway passengers has increased by 1.5 fold to 600 million a year, and the average number of travels per passenger has increased 5 fold to approximately 40 per year (today’s level of German railway).
- The employees of PKP Energetyka are highly specialized experts, using the most modern technologies that allows them to establish mutual relations and engagement in partially remote-working teams.
- Our engagement rate is above the level of the best employers in Poland (over 72%).
- Together with our employees we celebrate 5 years of an accident-free workplace.

This is how we see the future of PKP Energetyka and this is the company we are consistently building, responding to the upcoming challenges.

I am pleased that we are working on it together.

Wojciech Orzech
President of the Management Board

PKP Energetyka Management Team, from the left: Leszek Hołda, Robert Ryszkowski, Rafał Ciećwierz, Wojciech Orzech, Marek Kleszczewski, Beata Górniak, Marek Mazierski, Christopher Biedermann

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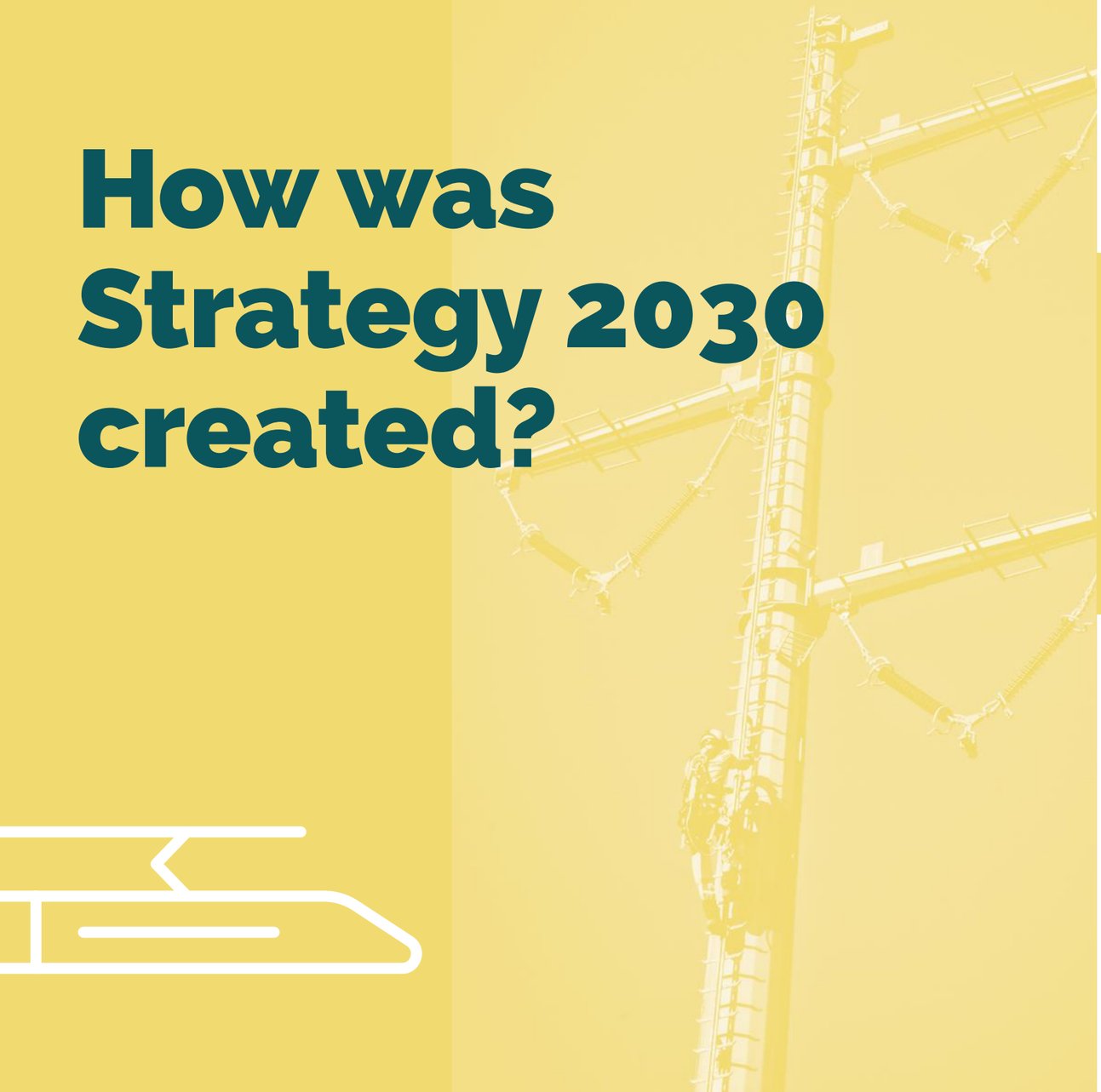
How was Strategy 2030 created?



How was Strategy 2030 created?

Over 200 employees and managers, 450 completed surveys, 78 workshops and webinars, almost 12 months of work.

"The Tale of the Three Stonemasons"

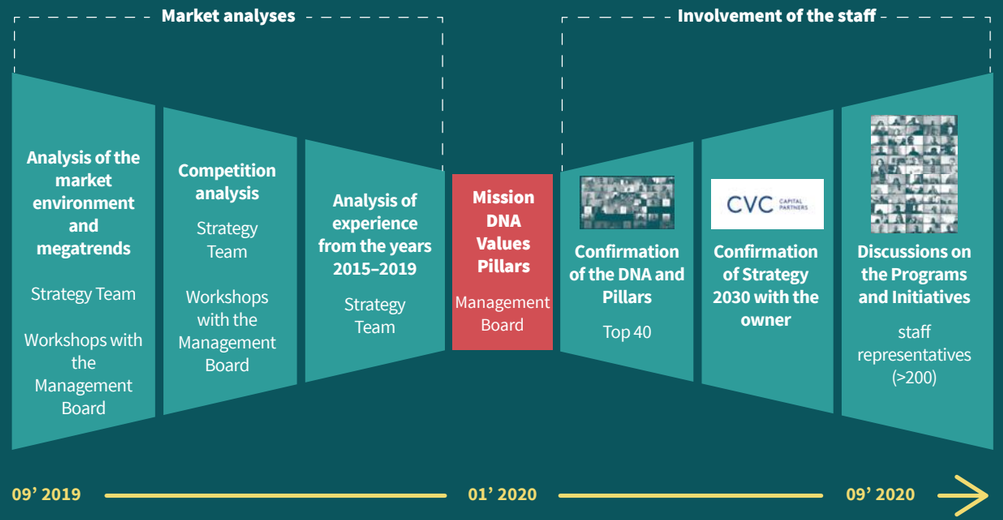
A wanderer meets a group of stonemasons in the heat doing their hard work. He asks three of them in turn what they are doing. The first one shrugs his shoulders and replies that he is just breaking stones. The second one says that he is producing building material. The third one, on the other hand, says with conviction that... HE IS BUILDING A CATHEDRAL.

The "cathedral" has not built itself. The preparation of the new PKP Energetyka strategy was carried out in multiple stages and at all levels of our organization, starting September 2019. In the first stage we thoroughly analyzed our market environment, megatrends and competitors in internal working groups. Subsequently, we carefully considered our experiences from the years 2015–2019. The next stage was the development by the Management Board, with the support of TOP40 managers, of the mission, values, company DNA and the Pillars of Strategy 2030.

In the period from May till June 2020 webinars and workshops were held engaging over 200 representatives of our staff. Foremen, electricians, specialists as well as managers and directors from all areas of the company took part in many hours of discussions with the Management Board. These meetings formed the basis for the development of programs and detailed strategic initiatives.

The result of our joint work is Strategy 2030, which takes into account the needs of our employees and partners and prepares us for the upcoming challenges related to the dynamically changing environment.

The Strategy 2030 development process



Selected statements of employees

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How do we assess the Strategy? – selected quotes of employees

For me, it is important in the Strategy to adopt solutions that will secure business continuity. What is important is the technology that will allow us to work and stay connected no matter where we are, that is – digitization and digitalization. This is what we need to emphasize and this is the direction of our development.

Strategy 2030 means that the company is growing. Importantly, we have control over this development and we have the opportunity to develop ourselves..

The Strategy is comprehensive. It includes something new that we don't currently have, while at the same time it protects our primary source of income – distribution. It does not forget about such important topics as safety and efficiency.

I wish us all good luck :)

The present time is a time of change. Entering with the Strategy at this point is a good step. Soon the world will look very different. The winner will be the one who knows what he wants to achieve and how to do it. And most importantly, he will have the resources to pursue his plans.

The company will not be the same. Many things will change, many things must change. This Strategy is an engine that responds to current demand. It is a "spark at the right moment".

The implementation of the assumptions of the Strategy will make us not have to worry about the future of the company. We will be proud to work for PKP Energetyka.

The comments are from the Strategy 2030 workshops held in several online working groups in May and June 2020.

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What was it like during the Strategy workshops? – selected statements of employees

"It turns out the director doesn't bite. Neither does the president. We're in the same boat. It's good when the "top" talks with those at the "bottom". A very practical form of meeting.

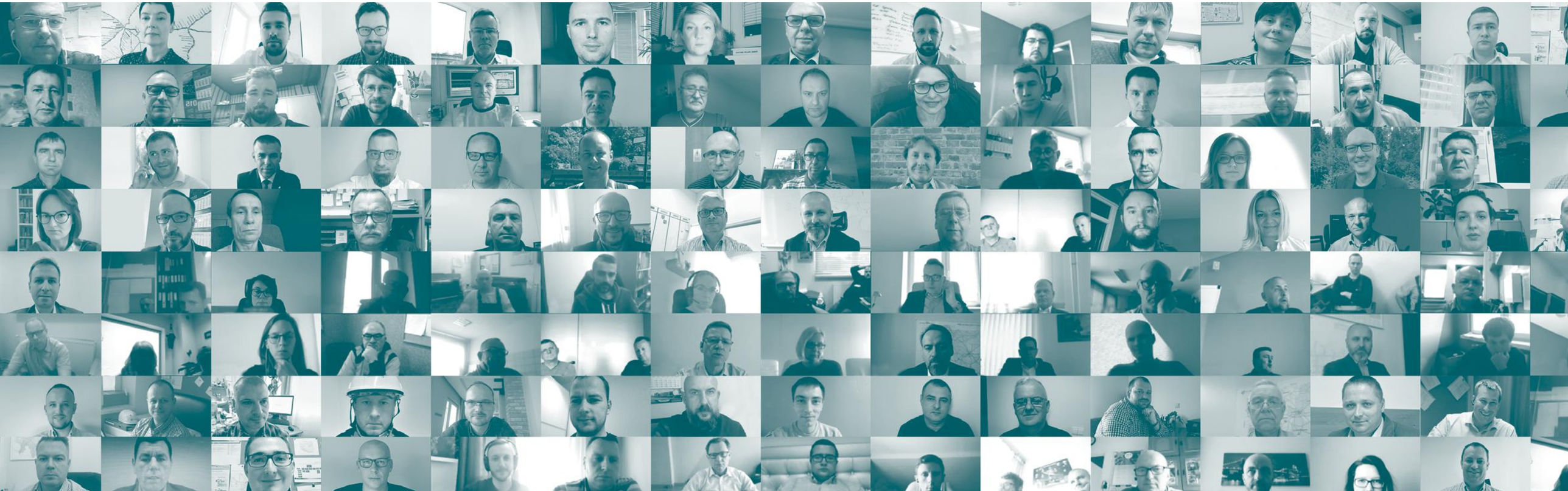
"Tremendous value from mixed teams, great power of this approach, diverse voices – the finished Strategy demonstrates the great results we have achieved.

"When it comes to the organization and tools – it was great! Content-wise, I had concerns that we would be talking at a certain level of abstraction, but it worked out nicely and we managed to move the Pillars and programs to us locally. The added value is greater for us.

"I have a lot of optimism in me. I'm glad we can speak up, I see it as a huge gain. I managed to push something through.

"The meeting was important and the company needed it. We begin to feel why we do our daily tasks. Such meetings allow us to treat our work differently. It's not just digging a few feet of the pit, but we see the entire process.

"I have a sense of duty well done. I am happy to contribute something to the organization.



> The idea of creating the PKP Energetyka Strategy based on teamwork – ideas, innovation and experience of its employees – is right. Only joint action can produce the right result.

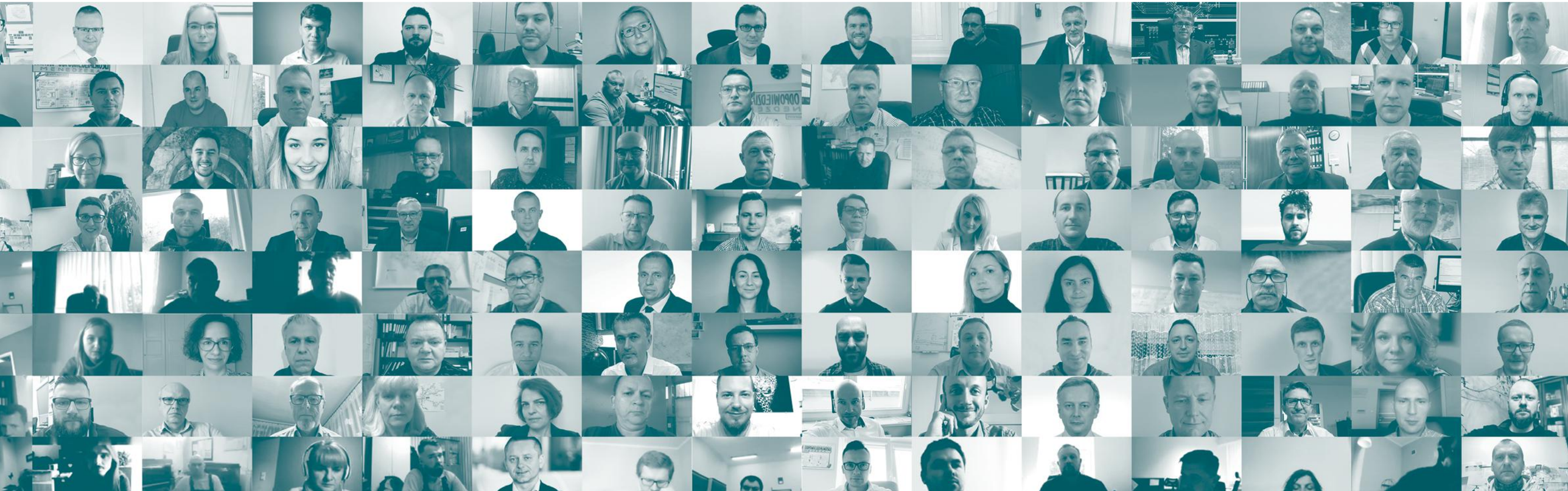
> We did a tremendous amount of work without leaving home. It was a very effective action. Interesting people, valuable discussions. The important thing now will be how our engagement will be used.

> It's nice that the team is interdisciplinary. We develop common solutions. It's nice to work in a team with people who have something to say. I'm glad we're not ashamed. I'm very impressed.

> We had the opportunity to ask questions. The answers provided by the Management Board were comprehensive, they really tried to give comprehensive explanations. A very cool thing to do, valuable direct contact.

> I am very pleased that we were involved in the development of the Strategy. It is a simple rule that works – if people build something themselves, it is easier for them to identify with it, and they understand the issues presented in the Strategy more quickly. This allows you to create more value for the Company and, by identifying with it, make its operations more effective.

> My impressions are positive. I'm glad the Management Board wants to talk with us, the employees. A lot of things are taken into consideration. The dialog between the Management Board and employees is important. It's nice that someone listens to us. Regular employees know the most. I am glad that our opinion is taken into consideration.



Experts on Strategy 2030, achievements and challenges

Innovation Committee – effective cooperation between science and business

The Innovation Committee is a project initiated by PKP Energetyka in 2018 and co-created with eight academic researchers from the best Polish universities and the Railway Research Institute (IK). They represent diverse fields – from power quality improvement and energy storage through automation and artificial intelligence to alternative power sources.

The experts advise and provide feedback on our activities, as well as assess changes and the latest trends taking place in our environment. The issues discussed involve mainly technologies and innovations at the interface between the power and railway industries. The Innovation Committee creates an added value for the projects carried out by PKP Energetyka, contributing to the improvement of the quality of work of the railway power industry – especially the reliability of the power supply for the Polish railway.

Debate participants – members of the Innovation Committee

prof. dr hab.
Witold Abramowicz
Poznań University of Economics and Business

prof. dr hab. inż.
Grzegorz Benysek
University of Zielona Góra

prof. dr hab. inż.
Janusz Dyduch
University of Technology and Humanities in Radom

prof. dr hab. inż.
Zbigniew Hanzelka
AGH University of Science and Technology in Kraków

prof. dr hab. inż.
Marek Pawełczyk
Silesian University of Technology

dr hab. inż.
Krzysztof Perlicki
Warsaw University of Technology

prof. dr hab. inż.
Adam Szeląg
Warsaw University of Technology

dr inż. Artur Rojek (substituting dr inż. Andrzej Żurkowski) Railway Research Institute (IK)

PKP Energetyka's actions as seen by experts – records of the discussion panel with the participation of the members of the Innovation Committee

What actions undertaken by PKP Energetyka in the last five years do you consider the most valuable?

Improvement of effectiveness in all areas of activity as a success of the entire team of PKP Energetyka

Witold Abramowicz (W.A.)
I consider the company's increased efficiency in nine areas of the business to be an undoubted success, as demonstrated by an independent audit carried out to examine the company's changes between 2015 and 2019 [see page 14]. This stems from the fact that the staff understands the company very well in the key business areas such as operational efficiency, sales and electricity trading or IT systems. Only such a team could achieve such a good result in a short time.

Marek Pawełczyk (M.P.)
I would add to this the inclusion of all employees in the implementation of the strategy and generally taking care of the company's staff. At PKP Energetyka, there are a number of opportunities for development, career building, a system of incentives and the possibility to present one's own innovative ideas, which the company listens to. It's a modern way of managing a company and, as you can see, it is extremely effective.

Janusz Dyduch (J.D.)
Innovation is the key word, because the most important is the company's openness to new solutions. On the other hand, not all the projects that have been started are successfully completed. One of our projects – the idea of an innovative platform for storing information about inventoried infrastructure – has been rendered impossible. It was all about costs. In this area, I particularly appreciate the opportunity to confront my academic perspective with business. Perhaps, after some fine-tuning, we can return to this idea.

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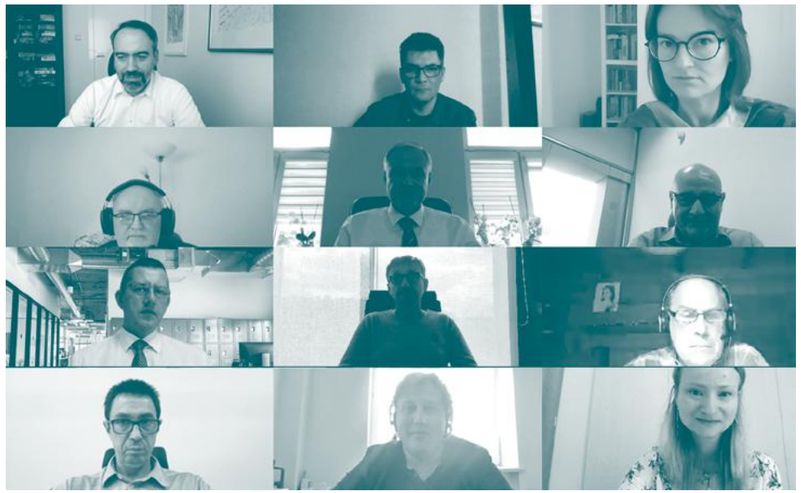

Adam Szeląg (A.S.)
A great success of this hard teamwork we are talking about is also a clear change of the image of PKP Energetyka. The company has reached a higher level and now its benchmark is not only the railway companies but also the power companies. Transformation was important, i.e. the company adapting to the evolving market and customer needs.

Krzysztof Perlicki (K.P.)
I would like to come back to the issue of efficiency raised by prof. Abramowicz who singled out two areas in particular: modernization of the entire company, from operational efficiency, IT, logistics, project management and human resources to communication, and operation of the Railway Energy Efficiency Center with initiatives concerning recuperation, eco-driving and RES systems.

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Zbigniew Hanzelka (Z.H.)
I fully agree with the previous speaker that all the measures that deal with efficiency deserve to be highlighted. There were a few such projects in PKP Energetyka, and the most interesting among them was, in my opinion, the Energy Storage Tank – innovative (being a storage), technically difficult to implement and expensive. I'm definitely putting this project first.

Artur Rojek (A.R.)
I would also like to draw your attention to a subject that is important from the point of view of my professional interests – standardization of the requirements of devices used in substations and the procedures for putting them into service. We have waited many years to see standards that greatly facilitate the study of these devices, their further development and introduction of new solutions.

What are the strengths of Strategy 2030 and what are the challenges and risks associated with it?

Ambitious goals in a rapidly changing and complex environment

A.S.
We should start by saying that the strategy is very ambitious. I would even say visionary in some areas.

W.A.
Yes. The green energy project is definitely ambitious and difficult. If the 85% of green energy requirement is to be met, then a very mature tool for RES supply management must be developed. The problem is complex, because new interesting sources of green energy may appear in the time horizon. Other important elements include, among others, prediction tools held on both sides: energy demand and supply, as well as proper use of a very large amount of financial resources allocated to the development of the railway in the coming years. The big challenge facing the company is to be a winner in the battles for these funds.

J.D.
The strategy is certainly comprehensive – it includes both continuation of activities undertaken by the company and new, ambitious projects in which technological development plays an important role.

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Grzegorz Benysek (G.B.)
In turn, I find it impressive that PKP Energetyka does not limit itself to buying ready-made solutions from abroad, as others often do. The company creates new solutions, e.g. in the area of process innovation, but also in the area of creating mechanisms of business relations at the interface with science, which result in new, good solutions. This is also very much visible in Strategy 2030.

Z.H.
I appreciate the courage of PKP Energetyka tied to its plans to implement hydrogen-related projects. This decision is commendable.

What is the Committee's main advice for PKP Energetyka for the future?

New areas, innovation and investment in new energy sources

K.P.
Above all, creative initiative, working on solutions that enable the full use of the company's position on the market, i.e. the interface between the rail transport and power sectors. These works involve the smart grid and applying ICT wherever possible. But also directing the intellectual capabilities of the company and its partners to topics related to the acquisition of new energy sources, such as fuel cells, biomass, algae. In addition, the creation of energy storage facilities.

G.B.
Following the thought of Dr. Perlicki and earlier of Zbigniew Hanzelka, I am in favor of implementing hydrogen technologies – hydrogen production, e.g. on the basis of our own plants, and perhaps hydrogen distribution.

Z.H.
I would also point out the challenges of diversification, which I believe are necessary in the face of possible increased competition from other distributors. PKP Energetyka is considering whether to enter distributed generation as an investor and contractor. It seems to me that this strategic option should be strongly considered.

A.S.
I also agree that the company should look more broadly. Projects such as an energy storage tank that reduces peak power could simultaneously accept energy from recuperation. This should be developed. It would also be worthwhile for the company to deal with the 25 kV system – to work out the standards and perhaps come out with an offer that reaches beyond Poland, e.g. to the Baltic States or Ukraine.

A.R.
I think that “Polish 25 kV” is a very good direction. PKP Energetyka should be the core of development of this system in Poland, not only in the area of use, but also – in connection with the Polish industry – in the area of searching for new solutions, concepts, mechanisms. The second important area, in my opinion, is green energy – not only on the railways. Because the company has a nationwide network, it can be a very good distributor of green energy – including to non-traction or individual consumers.

W.A.
In addition to the aforementioned innovations and the company's search for alternative markets, I would also draw attention to the continued attention to occupational safety and the motivation of employees to pedantic compliance with the standards in this area. In PKP Energetyka people work dispersed in the field, therefore it is difficult to directly control every nuance of occupational safety. Therefore, it is right for the company to make it a part of every employee's DNA to take care of their own health and the health of others. We will support the company in its efforts to reduce the accident rate.

A first-class strategy

Prof. Jeroen De Flander
TIAS School for Business and Society

A world expert in creating and executing effective strategies. Speaker, book author, lecturer at the London Business School. He has helped develop the competencies of some 40,000 managers in nearly 50 countries. He has advised over 75 companies worldwide, including AXA, Bridgestone, Credit Suisse, Nike and Sony. He founded and runs The Performance Factory, a strategy implementation consulting and training firm.

The world around us is changing faster than ever before. To thrive in these challenging times, it is crucial to develop a sound strategy and focus relentlessly on strategy execution. PKP Energetyka is leading the way, showing how this is done. Here are seven highlights:

1. **A solid sustainability approach.** I do not have to tell you that we are depleting our natural resources at a pace never seen before. The public option is changing, and many companies take advantage of this change to promote 'green on paper' without real life impact. Some organizations take it one level up and reduce the harm on the environment they cause. The best in class strive for a positive symbiosis with their environment and create a real win – win. PKPE takes a bold position in a country where combating climate change is not a priority yet. By leading by example, integrating clear sustainability ambitions into the new strategy, the company can be a real catalysator for the country's approach to safeguard our natural resources.

2. **Efficiency as a way of life.** Kaizen, the well-known continues improvement philosophy requires brutal honesty to evaluate your own performance and a relentless focus on improvement, one step at a time. By embracing the Kaizen methodology, PKPE's has translated one of its four values into 'a way of working' adopted by everyone in the organization.

3. **Four underlying values driving everything.** There are times when executing strategy becomes extremely hard. Times when it is easier to give up and come up with a new strategy than to hang in there and keep focus on that finish line you defined. Having a value system helps you to get through these difficult moments. PKPE selected four crucial values – quality, safety, engagement and efficiency – and use them systematically to keep their eye on what needs to be done to succeed.

4. **Evolution versus revolution.** The first strategy created 5 years ago was a game changer for the company. It required a lot from all stake holders involved. But it also delivered strong results that were game changing as well. In all core areas, massive improvement jumps were realized. 80 percent of the road has been covered. The last 20 percent is most difficult. Many organizations would select a different path to avoid this last stretch. PKPE does not and remains loyal to the chosen path 5 years ago. It is a natural evolution building on the previous choices. This gives a strong message to all stakeholders involved.

5. **Everyone got involved.** PKPE leadership consulted a large group of people while designed the new strategy. It was not an 'ivory tower' exercise with the happy few but a wide approach with employee participation at every stage of the strategy creation. And yes, it made the process longer than what strategy books would recommend, but from a strategy execution perspective you gain crucial time as you have buy-in at the start of the strategy execution journey.

6. **Keep it simple.** One of the most difficult things to do when developing a strategy is to avoid complexity. It is so easy to get carried away with fancy models and techniques you read in books. And while these models might help you at the start, you often get in trouble when you have to communicate the strategy to a larger group. PKPE does not fall into this trap. The strategy is wrapped in a simple core message with an inspiring visual that people can easily remember and repeat.

7. **PKPE says no.** Steve Jobs, the co-founder of Apple, one of the most successful companies of all times once said: "I'm as proud on the thing we do as on the things we don't." You cannot be everything to everyone. If you go North, you cannot go South at the same time. It sounds like a simple logic to follow but reality unfortunately shows us a different picture. Most organizations say yes too often. PKPE did a solid opportunity analysis and clearly said no to several options to allow relentless focus on the remaining core.

8. **Embrace people engagement.** Without engagement, nothing will get done. PKPE recognizes this important strategy execution must and selected it not only as one of their values but embraced an objective measuring and open communication to turn PKPE into one of the best places to work in the country.

As a strategy and strategy execution professor, I see a lot of strategies developed. I believe PKPE's strategy approach is top tier and makes them ready to for the future.

Implementation of Strategy 2030 will strengthen PKP Energetyka

Prof. Bent Flyvbjerg
Saïd Business School,
University of Oxford

One of the world's foremost experts in megaproject management (infrastructure, sports, urban and other investment projects over $1 billion) and behavioral economics. Author of many books and publications. Commentator for the Wall Street Journal, Financial Times and The Economist, among others. Respected advisor to companies and governments in the UK, Denmark, the Netherlands and elsewhere on infrastructure policies. He has consulted on e.g. the construction of the HS2 line in the UK and high-speed rail in California.

The last 5 years have been of tremendous change for PKP Energetyka. Amidst considered transformations, such as company privatisation and modernisation of the digital tool kit, there have been equally powerful change catalysts imposed on PKPE by external forces.

Looking back at the last ten years, at where the firm was in 2015 versus where it is today, is a useful reminder of some simple truths: Change is inevitable and often unpredictable. It is, therefore, paramount that companies strengthen their core competencies while building in the flexibility required to ably and agilely navigate whatever the next ten years may bring.

We at Oxford Global Projects applaud PKPE's efforts to look forward to 2030; in particular, the decision to employ an inclusive, bottom-up methodology that created PKPE's strategy.

This letter outlines my observations with respect to PKPE's strategic alignment with global megatrends, focussing on energy distributors and infrastructure providers.

The strategic pillars build on PKPE's strengths: the firm's commitment to customer centricity, digitisation, and green energy.

Customer centricity can be achieved in many ways. Commonly, firms realise value for customers through internal efficiencies, understanding the strategic journey of your customer, their pain and gain points, and co-delivering solutions. PKPE is following this trend, particularly as it relates to finding efficiencies through the focus on operational excellence. In addition, the customer centricity will allow PKPE to be a partner for clients now and in the future. It will unite tomorrow's efforts and orient PKPE's initiatives in a shared understanding of PKPE's most important stakeholders.

Digitisation, likewise, is an area of strength for PKPE. That said, digital transformation is a continuing journey. One that is highly complex, highly disruptive, and can be destabilising for many firms. As PKPE's strategy recognizes that the digital journey continues and more needs to be done and can be done in the coming years.

PKPE's outlook is also bright relative to its Green Railway strategy. Its country-leading sustainability initiatives will help PKPE become known as a standard bearer, a leader that others can follow. We are particularly excited about PKPE's stewardship approach where wins are communicated externally and education is provided to other firms, including PKP companies.

A clear opportunity exists to expand this approach. Branding PKPE as a leading organisation in digital transformation, in sustainability, in responsibility/safety, and in operational excellence will help the firm build credibility across a wide variety of stakeholders. It can even help PKPE to unlock new efficiencies across its value chain as external customers and suppliers adopt standards set by PKPE.

Doors will continue to open for firms viewed as national (even international) thought leaders. PKPE will find a "seat at the table" for strategic dialogues, including CPK discussions, that meaningfully impact the future of the firm.

> Branding PKPE as a leading organisation in digital transformation, in sustainability, in responsibility/safety, and in operational excellence will help the firm build credibility across a wide variety of stakeholders.

Leading firms can position themselves favourably as they seek new funding sources and new suppliers. Strategic flexibility will enable PKPE to execute and finetune its strategy over the next ten years. PKPE's achievements so far are testimony to its ability to deal with disruptions and changes.

In my view, this strategy will mean that PKPE becomes more than an electricity provider to the Polish Railways. I expect to see a growing company both in terms of business but also in terms of reputation and standing domestically and internationally.

I am satisfied with the strategy laid out thus far. Whether working towards the articulated goals for green rail, digital transformation, being a responsible company, or otherwise, OGP stands ready to partner with PKPE as the firm navigates the transformational changes of the decade ahead.

Strategy 2030 equips the company with tools necessary for further growth

Prof. Dieter Helm
CBE

Economist, energy transition expert, author of many books on the subject (including "Net Zero"). Professor of Economic Policy at the Oxford University and Lecturer in Economics at the New College, Oxford. Chairman of the independent Natural Capital Committee. Editor of the Oxford Review of Economic Policy and Director of Aurora Energy Research, a company at the forefront of energy modeling. He advises European governments (including the UK) and the EU. He assisted the European Commission in preparing the roadmap for the "Energy Roadmap 2030".

wyjaśnienia pojęć po kliknięciu

As the electricity industry enters the new decade, it faces the great changes presented by the combination of the imperative to play its part in decarbonising and unprecedented technical change. The path to Net Zero by 2050 will dominate PKP Energetykas the coming 30 years, and the new digital technologies will drive the growth of electricity as the dominant way energy is used.

This bigger market will be one in what the old assumptions of passive demand and no storage in electricity are being replaced by their exact opposites, supported by big data and artificial intelligence. It is a great structural break with the past.

There are few industries and companies like PKP Energetyka - with such great and exciting opportunities – a bigger market, a central public purpose of security of supply and low carbon, and a plethora of new ways of meeting these demands.

A successful strategy requires an unflinching focus on the customers, which is strongly embedded in PKP Energetyka approach. For it, amongst the biggest is the railways. It is not enough to decarbonise electricity. Net Zero means transport too. The Green Railway, pioneered by PKP Energetyka, is a necessity, both because the railways must decarbonise, but also because the railways must play a key role in taking up the challenge for freight and because it is easier to decarbonise railways than vehicles, and especially over the coming decade.

For PKP Energetyka the opportunity is a significant one. It means growing the business in harmony with its customers. It means developing the decentralised networks, building in renewables close to its networks, and linking these directly to its customers. It is a system challenge and it requires a system response.

In addition to helping PKP Energetyka's customers with green electricity, the future is all about helping the customers to use that green electricity effectively. This is all about energy efficiency, energy use, and building green electricity into the core of the customers own expansion investments. All of these are well structured in the company strategy.

Transforming PKP Energetyka into a company fit for the new world of Net Zero and taking up the opportunities of the new technologies goes hand in hand with the modern idea of a utility and a predictable investment programme in core assets. The traditional utility model is protected and enhanced through change, not through resistance to that change.

> Transforming PKP Energetyka into a company fit for the new world of Net Zero and taking up the opportunities of the new technologies goes hand in hand with the modern idea of a utility and a predictable investment programme in core assets.

As the coming decade unfolds the electricity industry will expand and transform. The old barriers between generation, supply and distribution will break down. Storage and active demand will become the new normal, and there will be multiple opportunities to provide the backbone for the electrification of transport, and beyond the railways into EVs. Although the railway is the most effective and eco conveying mean, transport is the big carbon polluter, and as it decarbonises the electricity and transport industries will have to develop very close relationships.

Strategy is about understanding and acting upon these future trends, but it is also about physical resilience and the flexibility to respond to shocks which cannot easily be foreseen. Who in 2019 would have guessed that 2020 would see lockdowns and major economic dislocation in all the major developed countries in the world? What companies like PKP Energetyka have shown is that they absorbed the coronavirus shock. There will no doubt be more shocks to come, and PKP Energetyka's strategy involves the tools to ensure that it is in good shape to not only exploit the wonderful cornucopia of opportunities in front of it, but to absorb the shocks too. It is the combination of PKP Energetyka's adaptation to technical and policy changes and the resilience to shocks which represent the sort of risk management stakeholders rely upon from electricity companies.

Glossary of key terms

AMI (Advanced Metering Infrastructure) – meters and necessary infrastructure for metering data collection and remote metering control. Thanks to the implementation of AMI, service visits at the customer's premises are reduced to a minimum, and information about the energy consumed is available online. A key aspect in AMI is to maintain a high level of security to protect the data transmitted against third party access.

AOM (Automatic On-Message Warning) – system supporting the reduction of incidents in railway traffic by focusing drivers' attention on information that is particularly important for safe driving, e.g. semaphore signals. The system is based on a learning neural network and a system of sensitive cameras deployed on and in the train that provide valuable real-time guidance and data to the driver. The solution was designed by PKP Energetyka specialists in cooperation with SSK Rail.

Carbon footprint – calculation of total greenhouse gas emissions caused directly or indirectly by a company; expressed in CO_2 (carbon dioxide) equivalent.

Catenary – a set of devices that enable the supply of electricity to vehicles driven by electric motors, e.g. trains.

CEEK (Center for Railway Energy Efficiency) – a joint energy saving initiative of the rail industry; www.ceek.pl.

Central control room – a room with devices used to carry out the process of remote control of power equipment.

Dispatching room – a room where a dispatcher works together with a dispatcher's post or posts. The work place of dispatchers who exercise close supervision over and operational management of the equipment operating in the distribution network and catenary in the designated area of operation.

Distribution network – high, medium and low voltage power network; the Distribution System Operator (DSO) is responsible for its network traffic; it comprises mainly lines and 110 kV (high voltage network), medium voltage and low voltage substations.

Distribution of electricity – the transport of electricity through distribution networks for the purpose of its delivery to consumers, excluding the sale of energy.

DSO (Distribution System Operator) – an energy company dealing with the distribution of electricity, responsible for: network traffic in the electrical power distribution system, current and long-term security of operation of this system, operation, maintenance, repairs and necessary development of the distribution system, including connections with other electrical power systems. A Distribution System Operator is, among others, PKP Energetyka.

EBH manual (Occupational Safety and Health Manual) – Manual for the organization of safe work on electrical power equipment at PKP Energetyka.

ELESTER-PKP – a company which develops modern and innovative solutions in the field

of automation and remote control in the railway sector; it is a member of the PKP Energetyka Capital Group.

Energy mix – the structure of energy production and consumption by energy carriers or methods of energy production.

ESG – integrating into corporate strategy or investment decision-making by financial institutions taking into account three non-financial macro-factors: environmental (E), social (S) and governance (G), which form the acronym ESG.

European Green Deal – a comprehensive strategy to transform the European Union into a modern, resource-efficient and competitive economy, achieving zero net greenhouse gas emissions by 2050 and decoupling economic growth from resource use.

GIS (Geographic Information System) – digital mapping of infrastructure. An information system used to input, collect, process network data and visualize energy facilities on a map; supports network development planning and load forecasting.

IVALUA platform – a procurement platform that allows to automate and simplify the process of acquiring goods and services; a communication tool between suppliers and buyers.

Kaizen – the concept of continuous improvement, step by step; as a business strategy it involves all employees, regardless of level, in the continuous improvement of all areas of the organization.

Key performance indicators (KPIs) – a tool used in organization management to measure and achieve the objectives of the company.

Maintenance Agreement – an agreement concluded between PKP Energetyka and PKP PLK in 2015 and extended in May 2019 for another 4 years. It applies to the railway catenary and includes, among others: 24/7 emergency service 365 days a year, maintenance, visual inspections, controls, inspection runs, current maintenance and other specialist services.

Maintenance part – see > "Maintenance Agreement".

MBO system (Management By Objectives) – a system of defining and achieving objectives by the employees of an organization, which helps to clearly define responsibility for individual tasks and supervise their execution.

MUZa – Power System Modernization Program; the largest investment project of PKP Energetyka implemented since 2001; it includes the construction of new and the modernization of existing traction substations and section cabins to prepare the power system for the needs of trains moving at higher speeds.

National Railway Programme (KPK) – a multi-annual investment program worth PLN 76 billion covering investments on railway lines, co-financed by the competent minister of transport; it implements assumptions adopted by the Council of Ministers, including the "National Development Strategy 2020" and the "Transport Development Strategy to 2020 with an outlook to 2030".

NCBiR (National Centre for Research and Development) – an institution whose main task is to manage and implement strategic research and development programs, which directly translate to increased innovation.

Net zero – a term related to the European Union's goal of achieving climate neutrality by 2050; it refers to the balance between the amount of greenhouse gases (GHG) produced and the amount removed from the atmosphere. In practice, this means that emissions from transport, agriculture, industry and also from homes are to be completely eliminated or offset.

NPS (Net Promoter Score) – a tool for assessing the quality of the services provided. It is based on asking the customer how likely they are to recommend a given service or company to their friends or family.

Passporting – collecting and storing information about technical infrastructure; proper network inventory ensures accuracy of analyses conducted and supports the process of network operation management, e.g. balancing energy consumption of consumers in such a way as to optimize the load of individual stations.

Photovoltaic panels (solar panels, PV panels) – are used to produce direct current, convert the energy of solar radiation into electricity.

PKP PLK – PKP Polskie Linie Kolejowe S.A. – the manager of the Polish railway network.

PLANER – a modern IT system used to coordinate the work of brigades in the field, supporting work planning and management of other resources (e.g. trains, competences, licenses, equipment).

Polish Power Exchange (Towarowa Giełda Energii S.A., POLPX) – the only licensed power exchange in Poland, the participants of which make transactions to buy and sell bulk amounts of energy or certificates. Its members include companies trading in energy, gas, property rights and commodity brokerage houses.

Power Supply Modernization Program – see > "MUZa"

RES – renewable energy sources, i.e. sources using in the heat generation process the wind energy, solar radiation energy, geothermal energy, energy from sea waves, currents and tides, energy from river water falling and energy obtained from biomass and biogas.

SAIDI (System Average Interruption Duration Index) – an index of the average system duration of a long and very long interruption expressed in minutes per customer per year; it is the sum of the product of its duration and the number of customers exposed to the interruption during the year divided by the total number of customers served.

SCADA system (Supervisory Control And Data Acquisition) – an IT system supervising the course of the technological or production process; in the case of PKP Energetyka it is the supervision of the process of energy flow in the power grid and its delivery to customers; SCADA includes a multifunctional map of the entire power grid in Poland designed to ensure uninterrupted railway traffic.

Shared Services Centre (SSC) – an organizationally separate, internal unit that provides specific services (e.g. HR, procurement) to other units of a company. In PKP Energetyka, the HR and payroll area is the responsibility of the Shared Services Centre in Łódź.

SLA (Service Level Agreement) – an agreement on guaranteed level of service and contingency plans. The SLA usually regulates the scope for maintenance and systematic improvement of the agreed level of service quality, and includes provisions on mutual obligations and procedures to be followed in emergency and crisis situations.

SRK (Railway Traffic Control) – a process implemented to ensure safe and efficient movement of railway vehicles on specified track sections.

TCO (Total Cost of Ownership) – the sum of all costs of a given IT solution, from its purchase to its use and decommissioning, including the costs of purchase of hardware and licenses, expenses incurred for training, implementation, administration, troubleshooting and decommissioning.

Traction substation – a substation supplied from the national power system, whose primary task is to supply the catenary on a specific section of the line of vehicles with electric traction, such as railways, trams, subways or trolleybuses.

Training ground – a development center in Słotwiny near Łódź operated by PKP Energetyka experts; the only such place in Poland that trains railway workers, especially electrical fitters responsible for catenary maintenance.

TRAKO Fair – International Railway Fair; Poland's largest and most prestigious and the second largest in Europe rail transport industry meeting.

Transformer – an electrical machine used to transfer alternating current electricity by induction from one electrical circuit to another while maintaining the original frequency.

Zero-carbon – using energy from renewable sources (see > “RES”); a term related to the concept of climate neutrality, i.e. aiming for net zero greenhouse gas emissions (see > “Net zero”).

ZMS (Network Asset Management) – a system containing a complete database of all devices, substations and power lines that enables permanent monitoring of the entire network, data update on an ongoing basis and the possibility to react quickly to emergent threats, e.g. failures; it allows for quickly obtain information about the technical condition of devices and the history of their operation, as well as comprehensive operating costs.

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