

Interview with

Vase Jovevski

Director of the transmission
grid operator

Women in the Energy Sector

Magdalena Sekulovska

Electro-engineer



***STABLE
NETWORK,
RELIABLE
ENERGY***

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20 YEARS MEP SO

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NEWS

14th INTERNATIONAL FORUM ON ENERGY FOR SUSTAINABLE DEVELOPMENT: IFESD-14

Lessons Learned and Vision for the Future of the Power System

In October, Skopje became a global hub for energy vision and sustainable development dialogue for three days. The 14th edition of the World Forum brought together more than 500 participants from 70 countries, featuring over 150 speakers who, through 35 thematic sessions and panels, shared ideas, solutions, and actual suggestions for the next steps in the global energy transition. The main message of the forum was clear: to move from global goals to concrete actions, with clearly defined measures to diversify energy sources, accelerate investments in renewables, and support regional cooperation.

At a time when energy stability is becoming an increasingly important factor for economic and technological development, the resilience of power systems is gaining particular significance. In this context, during the panel discussion "Energy Connectivity, Resilience and Security", the General Manager of AD MEP SO, Prof. Dr. Burim Latifi, emphasized that resilience, flexibility, and coordination are fundamental principles for the safe and reliable operation of the power system.



"The goal is not only to analyze challenges, but to learn what will strengthen the transmission network and make it more resistant to future risks. Dealing with high voltages and variable loads requires short-term preventive measures and robust long-term solutions. MEP SO's vision is clear — the development of an intelligent, integrated in different sectors, and climate-neutral infrastructure, ready for the new era of electrification," Latifi stated.



"Every euro invested today in energy efficiency and renewables is an investment in a healthier community, more competitive businesses, and strategic resilience for tomorrow. With aligned regulations, financing, and implementation, we are turning ambitions into projects that significantly reduce both costs and emissions," said Minister Bozhinovska.

As part of the forum, the *Skopje Declaration* was signed — a lasting record of the participating countries' commitment to a sustainable, secure, and inclusive energy future. The forum was organized by the Ministry of Energy, Mining and Mineral Resources, in cooperation with UNDP and the United Nations Regional Commissions (UNECE, UNESCAP, UNECLAC, UNECA, and ESCWA).

NEWS

MEPSO JOINS EU'S SINGLE ALLOCATION PLATFORM (SAP)

After several months of coordinated actions by MEPSO's Grid Management Department, the transmission system operators of Bulgaria and Serbia, and the European Union's Single Allocation Platform (SAP), the project to integrate cross-border capacity allocation between North Macedonia and those two neighboring countries is entering its final stage.

Starting January 1, 2026, long-term (annual and monthly) and short-term (daily) capacity allocations will be performed by the EU's Single Allocation Platform (SAP), operated by the Joint Allocation Office (JAO), located in Luxembourg, the only capacity allocation entity officially recognized by ENTSO-E.

JAO, functioning as the Single Allocation Platform for all European TSOs under EU regulation, operates Europe's central trading platform (e-CAT) for cross-border transmission capacity. It manages auctions for long-term and short-term transmission rights and conducts shadow auctions serving as a contingency mechanism for Single Day-Ahead Coupling (SDAC). Since October 2018, JAO has ensured full compliance with EU regulatory requirements and the efficient implementation of harmonized capacity allocation across all internal EU borders.

The preparation process for MEPSO's cross-border capacity allocation with the TSOs from neighboring Bulgaria and Serbia has been led by the TSOs' management and has lasted less than a year. The process began with phasing out the current capacity allocation manner based on mutual agreements and independent software solutions. Following this, MEPSO submitted an official request for access to

JAO's allocation services. Once cooperation was formalized, joint working groups from the three TSOs began harmonizing allocation rules and aligning their systems to enable secure, seamless data exchange with the JAO platform.

In September, MEPSO hosted technical meetings with experts from EMS and ESO to finalize contractual arrangements and prepare annexes to the Cross-Border Capacity Trading Agreements. A key condition for MEPSO's participation in JAO was the adoption of the Harmonized Allocation Rules (HAR), approved by ACER and subsequently endorsed by MEPSO, the Energy and Water Services Regulatory Commission, and the Ministry of Energy, Mining, and Mineral Resources. The



Shareholders



HAR framework is fully aligned with Commission Regulation (EU) 2016/1719 on Forward Capacity Allocation, which mandates that at least 70% of interconnection capacity be made available for market allocation through auctions.

Testing of data exchange between MEPSO's internal systems and the JAO platform has been completed. The final step is regulatory approval

from the ERC and the Ministry of Energy, expected by the end of November 2025. In parallel, market participants are required to register on the JAO allocation platform to participate in the upcoming annual auctions scheduled for December 8, 2025.



NEWS

GRANT SECURED TO MODERNIZE AND DIGITIZE THE TRANSMISSION NETWORK



AD MEP SO, the French Development Agency (AFD), and RTE International have signed a grant agreement providing technical assistance for the modernization and digitalization of the transmission network.

The pilot project for substation digitalization, featuring advanced protection, control, and monitoring systems, represents a concrete step toward transforming MEP SO into a more innovative and more efficient transmission system operator. The project aims to ensure a stable electricity supply, reduce technical losses, and enable greater integration of renewable energy sources.

The activities focus on conducting system adequacy studies using the market simulator ANTARES, dimensioning system reserves, establishing a methodology for calculating transmission losses, and preparing a conceptual design for substation digitalization.

SS DUBROVO RECEIVES NEW 400/110 kV TRANSFORMER



A new 400/110 kV transformer with a capacity of 300 MVA has been energized at SS Dubrovo. The project was carried out by the expert team under the TGO, in accordance with the planned schedule and all technical standards — from transportation and installation to testing and commissioning. This investment represents a significant step toward upgrading transmission infrastructure, especially amid increasing electricity demand and the integration of renewable energy sources (RES).

With the new transformer, SS Dubrovo gains enhanced reliability and security, prepared to meet future challenges and support the transition to green energy.

INTERVIEW WITH VASE JOVEVSKI, DIRECTOR OF THE TRANSMISSION GRID OPERATOR

A FUSION OF EXPERIENCE AND YOUTH: THE POWER BEHIND TGO'S PROGRESS



At a time when the energy sector is evolving rapidly and setting new standards for security, efficiency, and transparency, the role of the transmission system operator is gaining even greater importance. The TGO subsidiary within MEPSO is a key pillar, ensuring the stable management, supervision, and development of the transmission network. At its helm is Vase Jovevski, a director with profound professional experience and a clear vision for the network's future growth.

In this interview, we discuss the Transmission Grid Operator's strategic priorities, the challenges of managing the transmission system, the significance of modernization and digitalization, and the role of young professionals in the future transformation of the energy sector.

What main challenges do the TGO face when constructing, maintaining, and modernizing transmission lines, particularly in relation to ageing infrastructure?

- I confidently say that transmission lines are the backbone of the transmission network, playing a crucial role in ensuring a stable, reliable,

uninterrupted power system. Considering the global trend toward integrating and commissioning new renewable energy capacities, the TGO faces technical challenges in increasing transmission capacity and reinforcing the network in specific regions.

For this reason, our subsidiary is focused on projects that will significantly strengthen the transmission system and increase the transmission capacity through reconstruction work and the use of specialized equipment and advanced conductors. I am pleased to highlight several projects that, in the near future, will reinforce the network in the northern region such as the transmission lines connecting SS Kumanovo 1 – SS Kriva Reka (Kratovo) – SS Probishtip; the reconstruction and increase of the transmission capacity of the line connecting SS Shtip and SS Kochani; as well as the complete reconstruction of the 110 kV lines along the Gostivar–Bitola corridor. Naturally, the uninterrupted functioning of the transmission network also depends heavily on the maintenance of power facilities, which represent a substantial part of the subsidiary's overall operations.

Given that employees in the TGO subsidiary often work in difficult-to-access terrain, at significant heights, and under unpredictable weather conditions, how do you ensure safe, efficient fieldwork? What technical innovations or new practices are being implemented to enhance safety and efficiency during on-site interventions?

- I fully agree that the process of maintaining transmission lines is accompanied by many challenges, arising from the fact that work activities and operational processes often take place in remote mountainous areas, at height on transmission towers, in adverse weather conditions, and sometimes during night hours.

Bearing this in mind, we must provide safe and efficient working conditions that ensure the continuous integrity and stability of the transmission network. This requires not only strong dedication to the job but also the provision of specific working conditions tailored to the needs of overhead-line teams. By implementing modernized tools and equipment, as well as specialized training programs, we ensure that workers are thoroughly prepared and familiar with the challenges they may encounter.

Regarding equipment and technical innovations, I am pleased to highlight that the Transmission lines Department, as part of its maintenance activities, specifically for inspecting certain line sections, uses specialized aircraft, such as drones, as well as specialized 4x4 ATV vehicles for navigating mountainous terrain. This enables maximum accessibility to every tower and every part of the transmission route, significantly improving efficiency and ensuring the safe execution of work tasks.

Additionally, cutting-edge equipment is used to test and measure electrical parameters and to locate irregularities or defects in line components, including clearance measurements, IR thermographic inspections, grounding resistance measurements, and more.

I want to emphasize that, for specific ongoing tasks and interventions, maintenance teams use advanced protective equipment, fall-protection systems, and equipment for fast, safe evacuation.

To what extent have new technologies and digital tools been incorporated into the daily maintenance and monitoring of the transmission network?

- The TGO subsidiary follows global trends and modern methods for the modernization and digitalization of maintenance processes, as well as the uninterrupted operation of transmission lines and substations. Therefore, we implement advanced, innovative technologies, such as an Asset Management System, which will enable the complete digitalization of procedures and maintenance workflows, as well as the operation of equipment, DLR technologies, and more.

Additionally, we are focused on digitalization projects and online systems to be installed on selected transmission lines, enabling optimal equipment utilization, increased reliability, reduced fault-remediation time, and similar benefits.



At the core of the subsidiary's priorities are advanced technologies, tools, and equipment; specialized software solutions; advanced online technologies; and applied artificial intelligence. These innovations will enable comprehensive modernization and online monitoring, as well as more effective management of the transmission network—fully aligned with the developmental trends of transmission system operators across the region and Europe. This is further supported by the planned pilot projects that the TGO subsidiary intends to implement in the very near future.

How does cooperation with neighbouring transmission operators unfold, particularly in emergencies, but also in terms of joint project planning, exchange of experience, training of personnel, and other areas?

- Cooperation with neighbouring transmission operators is ongoing and grounded in a spirit of partnership, as we share the same overarching goal: ensuring a stable, secure, and reliable power system. This collaboration is further reinforced by the fact that MEPSO, like the neighbouring operators, is part of the ENTSO-E network. In crises, clear channels of communication and coordination are already established, enabling swift information exchange and effective resolution of issues and challenges. Experience-

sharing occurs through joint meetings of working groups, where operators exchange knowledge on implementing new diagnostic and maintenance technologies, human resources, and future challenges related to climate change.



A recent example of such cooperation was MEPSO's participation in the regional conference of transmission operators held in October in Belgrade, organized by EMS. The event gathered operators from Montenegro, Croatia, Bosnia and Herzegovina, Slovenia, and, of course, the host country, Serbia. During the conference, a comparative overview was made of MEPSO's current position relative to other operators in terms of maintenance practices, diagnostics, introduction of new technologies, upcoming projects, and the shortage of qualified professional staff. The event also reaffirmed the broader understanding of how a modern transmission operator should function, an aspiration that MEPSO steadily strives to fulfil.

Regional connectivity is becoming an increasingly important priority. Which interconnection projects with neighboring countries directly affect the Transmission Grid Operator, and how does your team contribute to their planning, coordination, and delivery?

- In projects, the natural scope of work for the TGO includes transmission lines and substations. Consequently, all projects directly concern our subsidiary. Significant to us as a subsidiary and to the country are projects aimed at strengthening connections with neighboring transmission operators, including the maintenance of existing interconnection lines and the construction of new substations.

The participation of our employees in working groups is crucial. We can confidently say that the TGO is the driving force—an irreplaceable and essential link in the chain of development, modernization, and stability of the Macedonian transmission system.

In the context of European energy policies, digitalization, and the integration of renewable energy sources, what is the role of the TGO in the transition to a more sustainable energy system?

- Within the framework of European policies and decarbonization objectives, the TGO provides solutions for a modern, secure, and above all, flexible energy infrastructure capable of accommodating the increasing share of renewable energy sources.

In practice, this means that for every request to connect a renewable energy producer to the transmission network, the unit, through its relevant departments, conducts a technical analysis and assesses the feasibility of the connection. It issues technical conditions and connection solutions, supervises the construction of overhead lines, substations, transmission lines, protection and control systems, and oversees all commissioning tests through the connection point, ensuring that the complete infrastructure is fully operational. The maintenance of this connection infrastructure subsequently remains the responsibility of MEPSO, specifically of the grid operator.

Given the growing number of connection requests, the unit's workload continues to increase. To sum up, the grid operator plays an integral, indispensable role in integrating renewable energy sources into the transmission network.

The shortage of technical personnel is a challenge across the region. Where do you locate the cause of what could be called a lack of interest among young people in working, for example, as fitters or in other technical professions? Is it the working conditions, the salary, the risk, or something else? What concrete measures is MEPSO taking to attract and retain these profiles? Is there room to introduce new technical roles that meet the modern requirements of the grid? Is there potential for career advancement in this field, or is it still perceived as "hard" and male-dominated work?

- In a labor market where demand dictates change and imbalance—specifically when there is increased demand for qualified technical personnel against a reduced supply—access to profiles such as engineers, fitters, electricians, locksmiths, and welders, and IT experts is challenging for all companies in Macedonia, and MEPSO is no exception.

The causes of this, which I call an already chronic shortage of skilled personnel, are numerous and depend on multiple factors. They can be analyzed from various perspectives: from reduced interest in vocational education and energy-focused university programs to misalignment of educational curricula with labor-market needs, and even to an unhealthy working environment and atmosphere. All of this reduces motivation for work and contributes to the outflow of trained and skilled personnel abroad in search of better working conditions.



"My goal as the head of the TGO subsidiary is to maintain a sincere and collegial approach toward all employees, appreciating above all the past work and contributions of the more experienced staff, while at the same time providing strong support to younger employees through various trainings and their involvement in as many projects as possible. These projects not only contribute to the development of MEPSO and Macedonia but also foster individual growth and skill-building for each participant."

Exclusively, I would like to announce here that in the Public Procurement plan for 2026, we will dedicate unprecedented attention to employee training, as well as the acquisition of the most advanced professional literature from world-renowned authors in the fields of transformers, relay protection, overhead lines, project management, and many other areas, for which a detailed analysis will be conducted in the coming period.

In this context, I want to emphasize in particular the type of training that cannot be obtained from any formal course: the transfer of knowledge from senior to junior staff. This process continues to operate flawlessly within the TGO, and we are incredibly proud of it.

Regarding the latter part of the question, I would like to stress that the unit is open to all those who have the desire to work on real and practical challenges, to be part of the team that ensures the system always functions flawlessly, and to be on the front lines when conditions are most demanding, when minutes and seconds can be

critical, and knowledge can be worth millions. In short, every employee can feel part of the TGO mosaic, where everyone can find their place, take pride in their contributions, and be productive.

Hence, the phrase you used in the question—"male and tough work"—is entirely accurate, but it is not just about physical effort. It also refers to correct anticipation, proper switching on and off, accurate readings and transmission of information, correct assistance, precise drafting, adequate record-keeping, well-organized scheduling, clear instructions, a good morning in the hallway, a shared coffee, and many other small but essential acts that together make the work effective and meaningful.

Where do you see the Transmission Grid Operator in the next 5 to 10 years—both technically and organizationally? What are the key steps needed to achieve this development?

Before addressing the future of the TGO, both readers and MEPSO employees need to understand its history, as this unit is the very foundation upon which MEPSO was built. While some senior colleagues are already familiar with this legacy, I would like younger staff to appreciate key milestones that justify the subsidiary's reputation as the principal organizational entity within MEPSO.

Until 2005, the grid operator operated within the former "Elektrostopanstvo na Makedonija", encompassing the departments responsible for overhead lines, substations, relay protection, measurements, and engineering. The same departments continue to function within the TGO today, except for the Engineering Department, which has operated as the Development and Investment Department since 2017.

The separation in 2005, involving approximately 280 employees and around 20 staff from the then Control Center, marked the creation of MEPSO. This underscores that the TGO, as the direct successor of the former Transmission Subsidiary, is

the cornerstone of MEPSO as the sole transmission system operator in Macedonia.

With a rich history spanning more than six decades and countless achievements—ranging from the construction of new overhead lines, the establishment and expansion of substations, and the modernization of high-voltage primary and secondary equipment across multiple technological eras, to managing critical situations and repairing faults—the future of the TGO lies in continuing this legacy. It must remain the driving force behind the development of the transmission system, a guarantor of stability and reliability, and a source of innovation, creativity, and the integration of new technologies appropriate to the demands of our era.

„ A new generation of professionals is already emerging, a generation with the opportunity to innovate thought and practice, fostering teamwork and mutual respect. By leveraging the experience of senior colleagues while remaining committed to the core values that have always defined the TGO, we honor the legacy of those who came before us.“



I want to take this opportunity to express my gratitude to everyone who has left a lasting mark on the Transmission Grid Operator, and to encourage younger employees to embrace responsibility and invest in their professional growth. I can personally pledge that my goal is to strategically and structurally position the TGO where it has always belonged—as the leading organizational entity within MEPSO.

PROJECTS

**DIGITALIZATION OF 110 kV SUBSTATION KRIVA REKA – MILESTONE
IN DIGITAL TRANSFORMATION**

Prepared by: Mr. Branka Vasič, MBA engineer responsible for strategic planning



The dynamic energy industry demands modernization and digitalization of power infrastructure. MEPSO will take an important step with the realization of the project for the digitalization and reconstruction of the Kriva Reka Substation, which is one of the oldest but very significant substations in eastern Macedonia.

The project is a turning point for MEPSO, because we are introducing modern digital technologies to increase transmission system efficiency, reliability, and safety.

Small, but Strategically Important Substation

Substation Kriva Reka is a switchyard with voltage levels on 110/35/10 kV located in the north-east part of the country, near Kratovo. Built a few

decades ago, currently operated by EVN Macedonia. Although it is small, its role is crucial, providing a connection and a stable electricity supply in the broader region between Kumanovo, Probishtip, and Kriva Palanka.

Aware of its importance and the need for renewal, MEPSO selected Kriva Reka as a pilot project for introducing a digital substation—a concept that integrates protection, control, and measurement systems with advanced communication technologies. The project will not only enable the replacement of outdated high-voltage equipment but will also transform the substation into a modern, digitally manipulated, and remotely controlled facility, in accordance with European “smart grid” standards.



Scope of Modernization

Modernization includes the complete replacement and reconstruction of the primary equipment, as well as the implementation of new protection and management systems. The existing 110 kV equipment will be dismantled and replaced with advanced equipment in accordance with all technical and safety standards.

Additionally, two new 110/35 kV power transformers with a capacity of 20 MVA each will be installed, boosting the substation's capacity and flexibility. A 50 kVA auxiliary voltage transformer will also be added, along with proper protection and a busbar disconnecter.

A key part of the project is the introduction of a new digital protection and control system, which will include six digital control cabinets, protective cabinets, and integration into the local SCADA system for remote monitoring and control. This setup will enable real-time monitoring, automated processes, and faster fault detection — all major perks of digital substations.

The main goal of the project is not merely to replace equipment, but to transform the way substations are managed in the country. Upon completion of the reconstruction, the SS Kriva Reka will be entirely operated remotely by MEPSO, without the need for constant on-site operator presence.

According to RTE International's recommendations, dual (redundant) protection and control systems will be implemented. The central system (A) will be located in the existing control building,

while the backup system (B) will be located in a separate container, isolated from the main one. This approach ensures higher reliability and operational continuity, even in the event of a failure of one of the systems.

Such an architecture is standard for modern digital substations — it provides increased resilience to cyber and physical threats, easier maintenance, and scalability for future expansion. The new digital systems will use optical fibers instead of traditional copper conductors, thereby reducing complexity and improving data transmission precision.



Pilot Project: Smart Energy Future of Macedonia

The digitalization of the Kriva Reka substation is a pioneering initiative that will serve as a model for future upgrades of substations nationwide. By combining the reconstruction of primary equipment with the introduction of advanced digital technologies, MEPSO is setting the foundation for a modern, reliable, and stable transmission system.

As the first digital substation in the country, Kriva Reka will symbolize the transition toward a more modern, sustainable, and secure way of managing energy infrastructure. Once completed, it will strengthen supply reliability, improve grid management, and facilitate the integration of renewable energy sources. Through careful planning, innovative engineering, and international collaboration, Kriva Reka will stand as a landmark example of digital transformation in the energy sector — bridging tradition with the technology of the future.

PROJECTS

RECONSTRUCTION OF 110 kV TRANSMISSION LINE

SS SHTIP – SS KOCHANI

The 110 kV transmission line SS Shtip – SS Kochani represents one of the most significant energy facilities in the eastern part of the country, providing a reliable and secure electricity supply to the cities of Kochani, Makedonska Kamenica, Berovo, Delchevo, and the surrounding region. This transmission line was constructed back in 1968 and has served for more than five decades as an essential part of MEPSO's transmission network.

With a total length of 27.8 kilometers, the line is built with 96 steel lattice towers and uses ACSR 150/25 mm² conductors. Although it has been regularly maintained over the years, the age of the structure and the effects of weather conditions have necessitated a complete reconstruction to extend its service life and ensure a more efficient and reliable electricity supply.

To enhance the reliability, stability, and security of the transmission network in the eastern region, MEPSO's investment program foresees a comprehensive reconstruction of this transmission line during 2026 and 2027. The reconstruction will include replacing part of the existing towers and installing new conductors, such as AAAC or HTLS conductors with a carbon core, enabling nearly double the line's transmission capacity.

The implementation of this project will significantly reduce the risk of supply interruptions, enhance the system's reliability, and improve the quality of electricity delivered to consumers. Additionally, the reconstruction will reduce technical losses, representing progress towards more efficient and sustainable management of the transmission network.



This investment is part of a broader strategy to modernize and digitalize MEPSO's transmission network, aimed at creating a more reliable and energy-efficient system capable of meeting the requirements for integrating new renewable energy sources.

The reconstruction of the 110 kV Stip–Kochani line will provide a long-term, stable electricity supply across the entire eastern region, thereby creating the conditions for further economic and industrial development in this part of the country.

PROJECSTS

SUCCESSFUL COOPERATION WITH PHOTOVOLTAIC POWER PLANTS CONNECTED TO THE TRANSMISSION NETWORK

Prepared by: Elena Achkovska, TSO



One of the measures implemented by MEP SO in the past period to mitigate elevated nighttime voltage levels involved close cooperation with large photovoltaic power plants connected to the transmission network. The purpose was to test their capability to absorb reactive power from the transmission system.

The objective was to adjust the nighttime operating mode of the inverters — specifically, to enable the Q Night Mode — in order to assess its impact on voltage variation at the point of connection to the transmission network.

Voltage and reactive power control are among the key responsibilities that MEP SO must ensure under normal operating conditions, with continuous efforts to maintain stable, within-prescribed limits voltage at the transmission connection point:

- Voltage level 400 kV: between 360 kV and 420 kV
- Voltage level 110 kV: between 99 kV and 123 kV

PVPP Oslomej 3A and 3B

The Oslomej 3A PV plant (OSM Solar DOOEL Skopje) and Oslomej 3B PV plant (Fortis Energetika i Gradezhnishtvo DOOEL Skopje) each have an installed capacity of 50 MW. Both plants are connected to the SS Oslomej via 110 kV cable lines, each approximately 3 km in length. Before the nighttime testing, when the power plants are not generating electricity, an inflow of reactive power from the connection point was recorded (see Figure 1 and Figure 2). The green color indicates reactive power delivered to the transmission network.

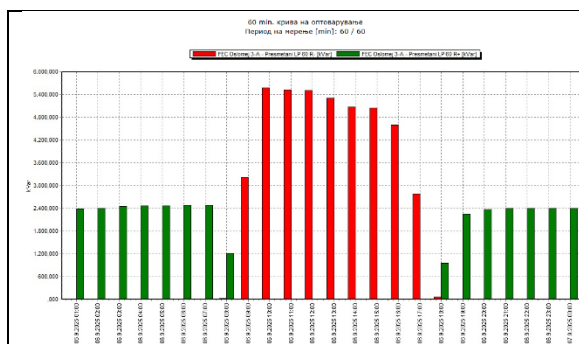


Figure 1.
Reactive power before testing, PVPP
Oslomej 3A

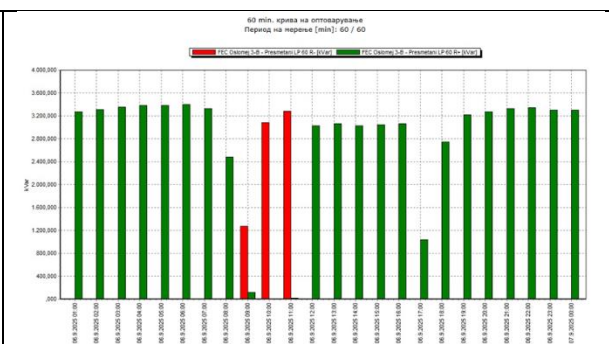


Figure 2.
Reactive power before testing, PVPP Oslomej
3B

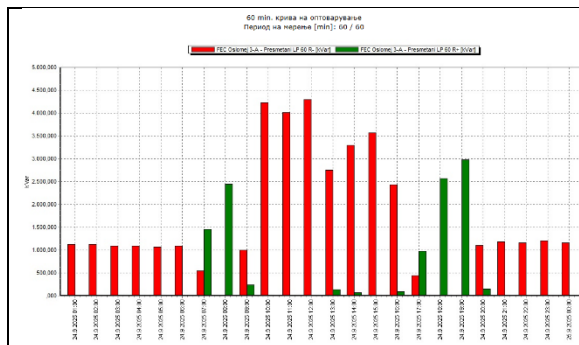


Figure 3.

Reactive power after activating
Q Night Mode, PVPP Oslomej 3A

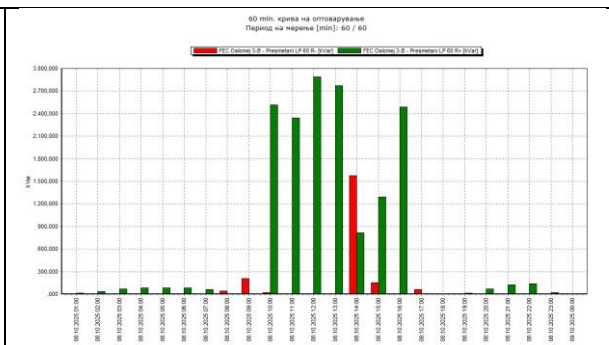


Figure 4.

Reactive power after activating
Q Night Mode, PVPP Oslomej 3B

During the nighttime hours, the inverters were inactive, and since the cable connections were unloaded or under low load, they generated reactive power. Activating the Q Night Mode keeps the inverters active at night and absorbs reactive power (Figures 3 and 4, where the red bars indicate the reactive energy absorbed from the network). Hence, the voltage is stabilized, and its variations are reduced—a factor of

particular importance for maintaining system stability. Figure 5 shows the difference in the daily voltage profile at SS Oslomej before and after the testing (on September 6, 2025, and October 8, 2025), and it can be concluded that the new operating mode has a positive impact on the voltage profile, resulting in a voltage reduction of about 3 kV during nighttime hours.

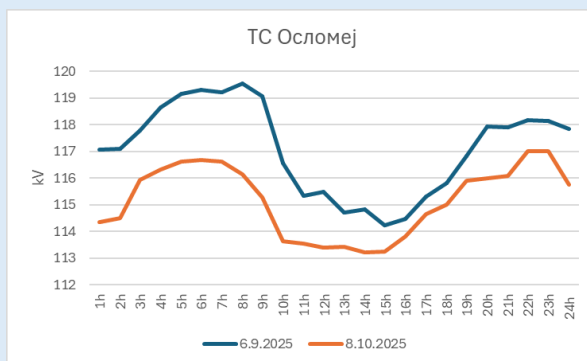


Figure 5.

Daily voltage profile in SS Oslomej
(6.9.2025 and 8.10.2025)

PVPP Novaci

The Novaci PV plant (MEJ Group DOO Skopje) has an installed capacity of 50 MW and is connected to the 110 kV SS Bitola 2 via a 3.5 km cable line. The TPP Bitola, specifically Power Unit 1 (225 MW), is also connected to the 110 kV busbar at SS Bitola

2. During the nighttime hours, a reactive power inflow of approximately 4 MVar from the connection point of the Novaci PV plant to the transmission network was recorded (see Figure 6).

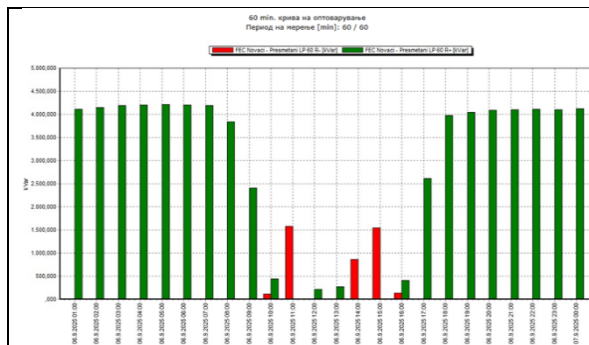


Figure 6.
Reactive power before testing, PV Novaci

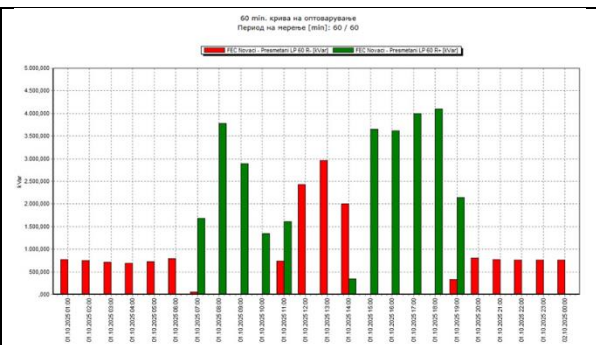


Figure 7.
Reactive power after testing,
PV Novaci

After activating the *Q Night Mode*, the inverters not only compensated for the reactive power generated by the connection cable but also actively absorbed reactive power from the transmission network (see Figure 7). To

more clearly demonstrate the impact of this operational change on voltage levels, a day when Power Unit 1 was not in operation was selected, as the effects are more pronounced under such conditions (see Figure 8).

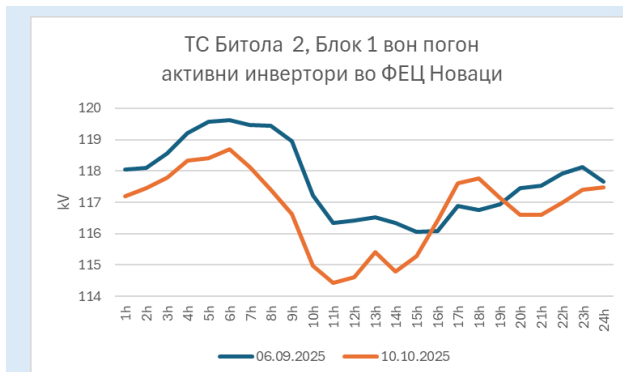


Figure 8.

Figure 8. Daily profile of the voltage in SS Bitola 2 2 (6.9.2025 u 10.10.2025), Power Unit 1 in no operational mode

On October 10, when Power Unit 1 was out of operation, the inverters at the Novaci PV plant operated under the newly implemented control mode. During this

period, a noticeable reduction in nighttime voltage levels was recorded, confirming the positive impact of the new inverter operating strategy on voltage regulation.

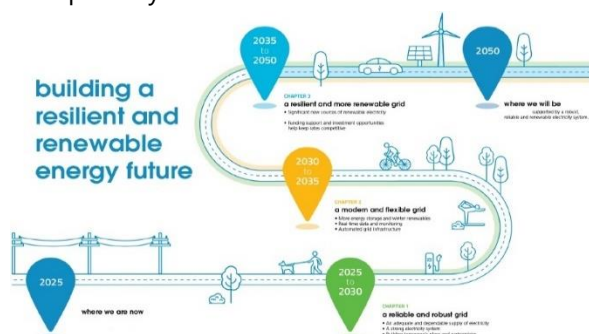
Conclusion

The test results indicate that activating the *Q Night Mode* significantly improves voltage stabilization in the transmission network, demonstrating that photovoltaic power plants can actively participate in voltage control and maintain overall system stability. These findings confirm the strategic direction toward integrating renewable energy sources, where solar power plants are not merely energy producers but also active participants in network regulation.

PROJECTS

PUBLIC CONSULTATION ON THE GRID MASTER PLAN FOR THE TRANSMISSION NETWORK

AD MEP SO has launched a public discussion on the Study for the Planning and Development of Smart Infrastructure of the Transmission Network – Grid Master Plan, emphasizing increased transparency and active stakeholder involvement.



This document serves as a strategic foundation for the long-term development, modernization, and digitalization of the Republic of North Macedonia's power system. It defines possible development directions and necessary investments for a safe and sustainable electricity supply in the decades ahead.

Purpose of The Public Consultation

The purpose of the public consultation is to provide an open and transparent framework for dialogue in which institutions, market participants, investors, and the wider public may review and comment on the planning data and scenarios that underpin the study. This process is fully aligned with Article 17 of the Grid Code, which requires MEP SO to harmonize its development plans with system users and other interested stakeholders.

Evaluation of the Development Scenarios

As part of the Master Plan, several potential scenarios for the development of the transmission network are being evaluated, with the primary

objective of ensuring its reliability, flexibility, and readiness to support the ongoing energy transition.

1. Reference Scenario

This scenario reflects the continuation of current trends and existing policies. It serves as a base to which more ambitious development options are compared.

2. Moderate Modernization Scenario

This scenario envisions a gradual strengthening and digitalization of the transmission network, enabling the integration of a moderate share of renewable energy sources, and improving operational efficiency, and enhancing regional interconnectivity.

3. Advanced Scenario – Smart Grid

This scenario entails accelerated modernization of the transmission infrastructure, large-scale integration of renewable energy sources, deployment of energy storage systems, and implementation of advanced digital tools for real-time network operation and management.

MEP SO regards the public consultation process not merely as a legal requirement, but as an opportunity to foster open dialogue on the future development of the national power system. Upon completion of the consultation, MEP SO, in cooperation with the consulting team, will carefully review and analyze all received comments and subsequently prepare the final version of the Master Plan. Through this process, MEP SO reaffirms its commitment to transparent planning, regional cooperation, and the sustainable development of the energy sector in the Republic of North Macedonia.

PROJECTS

SHUNT REACTOR IN SS DUBROVO FOR A MORE STABLE AND EFFICIENT POWER SYSTEM

As part of modernization and improvement efforts to enhance the stability and reliability of the transmission network, a significant project is currently underway at SS Dubrovo. It involves the installation of a new shunt reactor, a device that plays a key role in controlling and maintaining the optimal voltage level in the power system throughout the day.



What is Shunt Reactor and Why is Needed?

Shunt reactors are critical components of the transmission network. They are devices connected in parallel with the transmission lines and are intended for shunt connection in the network to compensate for capacitive current. Therefore, it stabilizes the voltage and prevents overvoltage that can damage the insulation of the substations, cables, HV equipment, especially during low loads and long transmission lines. Although they are rarely mentioned in public, shunt reactors are considered the silent heroes of the energy industry because they enable uninterrupted system operation, stable load, lower loss rates, and a reliable electricity supply.

The need for the procurement and installation of a shunt reactor at this substation arises from years of voltage fluctuations in the transmission system, which can cause overvoltage or voltage unbalance. For this purpose, the 400 kV switchyard at SS Dubrovo will be expanded with a new bay, where a 150 MVar shunt reactor will be installed. In coordination with transmission system

operators from neighboring countries, this project will help mitigate the effects of high-voltage conditions, reduce the risk of outages, and ensure greater stability and efficiency of the transmission system, as well as a reliable electricity supply to consumers.

Benefits for the Transmission Network and Citizens

The installation of the shunt reactor will bring multiple benefits.

Regarding the network: lower electricity loss rate, increased efficiency, and more stable switchyards that last longer. The reactor will facilitate the more straightforward implementation of renewable energy sources (wind and solar), which require more precise voltage control.

For consumers: this means higher-quality and more reliable supply, potentially lower costs, and greater protection for household and industrial electrical equipment.

These activities are part of the company's broader strategy for modernization and digitalization of the transmission infrastructure, which, in addition to the installation of the shunt reactor, also includes modernization of the SCADA system and integration with the European balancing platforms (PICASSO and MARI).

In this manner, the transmission system is being prepared for a future dominated by renewable energy sources, where flexibility and digitalization will be key factors for a secure and stable power supply.

The project for shunt reactor procurement began in mid-2024, and its commissioning is planned for early 2027.

PRESENTATION OF SUBSTATIONS

**SHTIP SUBSTATION – STRATEGICALLY
IMPORTANT ENERGY NODE**

Prepared by: Irina Daskalovska Kjosevska



The Shtip substation is one of the most important energy nodes of the transmission system in North Macedonia and a genuine source of pride for AD MEPSO. Its geostrategic position and technological excellence ensure a stable power supply in the eastern and southeastern parts of the country, connecting our national power system with those of Serbia and Bulgaria.

**Connection with the Region and Historic
Development**

The Štip substation serves as a vital energy hub linking North Macedonia with neighboring countries. It is interconnected via two major

transmission lines — to the north with the Vranje 4 substation in Serbia and to the east with the Crvena Mogila substation in Bulgaria. In addition, a 400 kV transmission line connects it to the Dubrovo substation, providing a reliable and stable flow of electricity throughout the national network.

Officially commissioned in 2010, it represents a modern upgrade of the existing Shtip 1 substation, which has been in operation since 1959. This continues Shtip's long-standing tradition as an energy hub of the eastern region.

The First Substation with Fully Integrated Microprocessor Protection

The Shtip substation is the first in the country to feature a fully integrated microprocessor-based protection and control system with optical fiber communication.

This technological advancement enables faster, more efficient communication between devices, continuous monitoring of system conditions, and timely responses to changes, faults, or risks. As a result, the likelihood of human error is significantly reduced, making the system more stable and secure.

"This substation is an example of how technology and human expertise create a stable system. Every component has been installed with the idea to achieve reliability, efficiency, and long-term durability," says Pavle Velinov, Head of the Shtip substation.



Backup Control Center – Backup Heart for the National System

The importance of the Shtip substation is further reinforced by the fact that it also houses MEPSO's Auxiliary Control Center (DC). This center plays a crucial role in the event of natural disasters, security threats, or interruptions in the operation of the National Control Center in Skopje. In such situations, the Shtip DC can fully assume its functions.

The substation's control building also accommodates crash servers that store all current and archived operational data of MEPSO's system. This digital infrastructure makes the Shtip substation not only an operational hub but also a strategic security center of national importance.

Regional Center with a Broad Operational Scope

Within the Shtip substation is the Shtip Regional Center, which encompasses nine substations: SS Shtip 2, SS Ovche Pole, SS Bogoslovec, SS Kochani, SS Makedonska Kamenica, SS Delchevo, SS Berovo, SS Neokazi, and SS Kriva Palanka — two of which are owned by EVN.

This broad operational coverage means that the Shtip team coordinates daily activities across a vast territory, ensuring the reliability and stability of the entire eastern transmission system.



The Team – Driving Force of Stability

The head of the substation, Pavle Velinov, an electrical engineer with 32 years of experience at AD MEPSO, together with 18 experienced, highly trained employees, maintains uninterrupted system operation.

"Working in such a strategic facility requires maximum focus and dedication. There's no fixed schedule — when a problem or emergency occurs, we respond immediately, regardless of the hour. None of this would be possible without collegiality, trust, and strong teamwork," says Velinov



The team includes switch operators, electricians, technicians, operators, and maintenance staff who work in complete coordination to ensure 24-hour operation. The substation also hosts a transmission line crew, a security service, and a command unit.

Safety and Continuous Training – the Backbone for Reliable Power System

At the Shtip substation, safety and knowledge are the foundation of every activity. Each employee

regularly attends training on high-voltage operation, fire protection, and crisis management. Periodic equipment testing, protection system audits, and fault simulations are carried out to assess the system's readiness.



"Continuous training helps us stay one step ahead of potential risks. When working with this level of voltage and technology, there's no room for improvisation, only knowledge and precision," highlights Velinov.

The station is equipped with the most modern high-voltage devices, while advanced monitoring systems enable remote control and timely intervention. An automated fire protection system has been implemented within the facility, featuring an intelligent control unit, a hydrant network, and fire extinguishers adapted to various types of risks.



WOMEN IN THE ENERGY SECTOR

WHERE I BELONG: IN THE ENERGY SECTOR, AMONG CHALLENGES AND SOLUTIONS

Interview with Magdalena Sekulovska, electro-engineer



Within the dynamic world of the energy sector, where innovative and complex technological systems meet, individuals like Magdalena Sekulovska take the key role in shaping the industry. Magdalena works in the Revitalization Department under TGO. She holds a Bachelor of Science in Electrical Engineering and has been building a successful career in the energy sector for 13 years.

Magdalena, what attracted you to electrical engineering? Was it the right choice and what is your career experience?

I never imagined myself as an electrical engineer until I enrolled in the faculty. However, during my studies, my interest in energy awakened the desire to continue to grow in this sector. The first introduction to the energy sector and management with energy facilities was the turning point; it simply entered my life, and since then, I have felt I am on the right track.

My career began at the Revitalization Department, while today, after more than one decade of work experience in AD MEPSO, I have the responsibility to be Head of Electrical Installation Works Unit. I have been facing challenges since day one, but I was gaining new skills and experiences, and precisely those

efforts, persistence, and dedication brought me to today's position. I can confidently say that choosing to become an electrical engineer was the right decision..



Often the energy sector is seen as “male-dominated” profession. If true, how can women increase their contribution to the energy transition?

Indeed, the energy industry is often perceived as male-dominated, but that doesn't really reflect reality — especially today, when things are changing rapidly and gender roles are becoming more balanced. I believe women bring a different perspective and have a unique approach to work, especially in organizations, teamwork, and collaboration. These are qualities that are extremely valuable in the energy sector, especially in the context of the ongoing energy transition.

To strengthen their contribution, women must believe in themselves, invest in their education, and remain dedicated and professional. Support from colleagues certainly matters, but real success comes from self-confidence and perseverance.

What professional challenges have helped you advance in your career? Can you share an example of a complex project?

Yes, we learn the most from professional challenges. For me, one of the most significant

projects was the Rehabilitation Project at SS Skopje 4. It involved a complete replacement of both primary and secondary equipment — a very complex project that required careful coordination among multiple teams and precise planning of all activities to ensure the stability of the power system was not affected.

Throughout the implementation, I was actively involved in every stage, and with the support of expert teams, I gained a comprehensive understanding of project planning, organization, and successful execution.

This project not only helped me grow professionally but also showed me the true importance of teamwork, responsibility, and the ability to make quick decisions under pressure.



You emphasize teamwork as a key factor for completing a task, but what are your specific responsibilities?

As an electrical engineer with many years of experience, I am responsible for a range of technical and project-related tasks that require a high level of expertise, precision, and a responsible approach. My work includes preparing and analyzing technical documentation, designing secondary currents during the replacement of circuit breakers and disconnectors, and preparing tender documentation in accordance with technical specifications and regulations.

I am also actively involved in supervising and coordinating activities during the replacement of primary and secondary equipment, especially when external contractors perform the work. It is essential to ensure strict compliance with technical standards and maintain system stability.

As a woman-electrical engineer, I make a special effort to demonstrate that professionalism, expertise, and results have no gender — they are the outcome of knowledge, dedication, diligence, and a genuine willingness to share experience.



What message would you send to young people considering a career in engineering?

To all young people who may be thinking about engineering — and especially about electrical engineering — I would say: don't be afraid of challenges. If you're curious, interested in technical sciences, and have a desire to solve actual problems, don't hesitate. Follow the profession that inspires you.

Engineering is neither a "man's" nor a "woman's" profession — it's a profession for brave, determined, and dedicated people who want to make an impact. It's a path that requires hard work, but it brings stability, dynamism, and most importantly, the opportunity to create practical solutions that change the world.

„You should not wait for someone to invite you or tell you that you can do it. Believe in yourself and start. Engineering is for those who don't just want to talk about the future, but want to build it.“



A DAY WITH THE RELAY PROTECTION AND SECONDARY CONNECTIONS DEPARTMENT

SECURITY IS **NOT** A COINCIDENCE

Prepared by: Irina Daskalovska Kjosevska

In every part of the power system, there are people whose work often goes unnoticed, yet whose efforts are crucial to the stability and reliability of the entire network. They may not be in the spotlight, but their contribution is felt every time electricity is uninterruptedly supplied to every home and industrial facility. Such is the role of the team from the Department of Relay Protection and Secondary Connections at AD MEPSO, led by Stefche Stefanovski, an engineer with 20 years of experience and exceptional dedication to precision and system reliability.



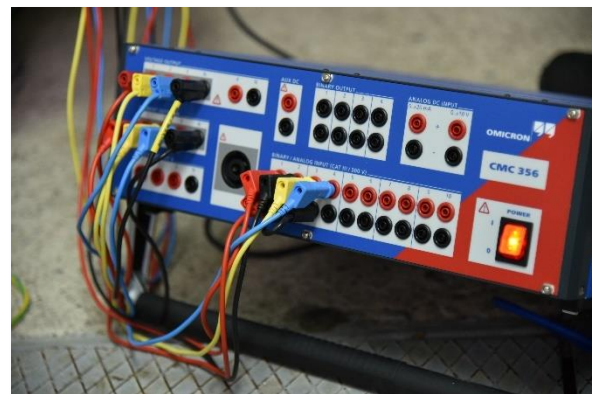
„Our work is not visible every day, but it is felt each second. When the system is stable that means that the protection has done its job,” says Stefche Stefanovski, Head of Relay Protection and Secondary Connection.

The team’s workday starts early with checks of alarms, reports, and the condition of protection devices in the system. Every occurrence from the previous day is carefully analyzed: whether relays were triggered, whether any anomaly was recorded, and whether the system operated without interruption. Then follows planning the

day’s activities, including routine testing, field inspections, calculations, and the preparation of technical documentation.

„We begin every day with system analyses. It’s the first step to prevent more serious defects,” explains Stefanovski.

The department he leads consists of a testing unit, a maintenance unit, and an analysis and relay protection calculations unit. Their shared mission is simple in definition but highly complex to execute, i.e., to ensure the stability and reliability of the entire transmission system. This involves regular device testing, configuration and activation of newly installed equipment, fault analysis, measurements, and preparation of technical reports.



The relay protection is the “invisible guardian” of the system, comprised of devices and algorithms that continuously monitor the network and automatically isolate the damaged section in the event of a defect.

„It is the final defense line. Without it we will have hazards, damaged equipment and serious supply power outages,” says Stefanovski.



Stefche Stefanovski, head of Relay Protection and Secondary Connection

The engineers work daily with advanced equipment, including digital relays from leading manufacturers Siemens, ABB, GE, and SEL; testing instruments from OMICRON, Megger, and SVERKER; and specialized CAPE software for analysis and calculations.

„Digitalization,” emphasizes Stefanovski, “has significantly changed our profession. Today, everything is interconnected through communication systems. We can remotely access a device, analyze its behavior, and even perform fine adjustments without being physically present.”



Goran Dimitrievski, technician

The team consists of six engineers and two technicians, organized into three field teams and two engineers focused on analysis and design. In

more complex interventions, the work is team-based and strictly coordinated.

„Every fault tells a different story. Sometimes we work under pressure and in unpredictable conditions, but the knowledge and trust among colleagues are our greatest strengths,” says Stefanovski.



Aleksandar Atanasovski, technician

One of the most complex cases the protection team faced was a fault on a 400/110 kV transformer, for which the cause of the protection activation was determined through detailed analysis of oscillograms.

„Such moments demand technical precision and patience, but they bring the greatest professional satisfaction,” explains Stefanovski.

Safety is an absolute priority. Every step in the field is carried out with the power supply completely disconnected, using protective equipment and double-checking each procedure.

„We work with high voltages, and there’s no room for improvisation. We must follow procedures to keep everyone safe,” adds Stefanovski.

According to him, the motivation for this profession lies in the sense of responsibility and the awareness that their everyday work contributes to the stability of the entire system.

„Our greatest satisfaction comes when the network operates flawlessly, with no faults. That means we’ve done everything right. The feeling of safeguarding the security of an entire country is priceless,” concludes Stefanovski.

CONFERENCES, FORUMS

MEPSO PART OF ADRIA FORUM 2025

MEPSO representatives, Ivan Ivanov and Enis Drndar, participated in Adria Forum 2025, a prestigious regional event under the motto *"Empowering the Digital Future"*, focused on digital transformation, cloud-based technologies, and cybersecurity.

The event brought together experts and companies from the ICT sector implementing innovative solutions and IT integrations across various industries, including the energy sector. The forum provided a platform for exchanging experiences, ideas, and best practices in managing modern IT infrastructures and security systems.



MEPSO's participation offered valuable insights into the latest technological trends and facilitated the establishment of new contacts with companies and partners providing advanced IT solutions for the energy sector.

MAKO CIGRE 2025

The panel discussion *"Challenges of Modern Power Systems"* was one of the key sessions at this year's MAKO CIGRÉ conference.

In a professional and constructive atmosphere, participants explored the current challenges faced by power system operators, with particular focus on the energy transition process, the integration of renewable energy sources, and the growing need for system flexibility and security.

This year, the conference welcomed over 40 MEPSO employees, who presented 20 scientific and technical papers.



DECLARATION SKOPJE – NEW ROADMAP TOWARD A SUSTAINABLE AND JUST ENERGY FUTURE

At a time when the world is facing severe climate, economic, and energy challenges, the *Skopje Declaration* sends a strong regional and global message that the transition toward clean, secure, and just energy is an opportunity—not an obstacle—to development. The document was signed within the framework of the *14th International Forum on Energy and Sustainable Development*, positioning Skopje as a symbol of a new phase in regional energy cooperation and as a place from which a new impulse of solidarity, vision, and innovation emerges.

Precise Roadmap, not just a Political Declaration

The *Declaration Skopje* serves as a practical guide for countries in the region and beyond on how to accelerate the green transition jointly. It connects the need for energy security with the vision of sustainable development, demonstrating that modernizing energy systems can simultaneously drive economic growth, technological progress, and social equality.

At its core, the Declaration is a call for collective action, emphasizing the following priorities:

Energy Planning and System Integration

Digitalization and Innovation

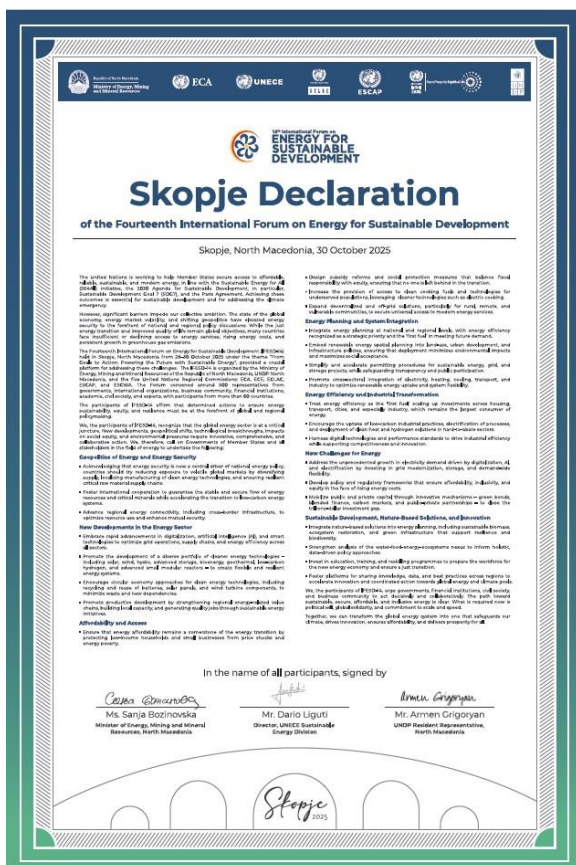
Just and Inclusive Transition

Nature-Based Solutions

Through these directions, the Declaration links global goals, such as the 2030 Agenda, Sustainable Development Goal 7, and the Paris Agreement, with concrete regional steps designed to produce visible results.

Energy Security and Regional Cooperation

Energy security is placed at the center of national and regional policies. Countries are called to diversify energy sources, develop local production of clean technologies, and build resilient supply chains. The Declaration also calls for enhanced international and regional



connectivity and cooperation to ensure a secure, low-carbon power supply.

New Developments in the Energy Sector случувања во енергетскиот сектор

The rapid advancement of digitalization, artificial intelligence, and smart technologies should be leveraged to improve energy efficiency and create new green jobs. Special attention is given to the development of solar, wind, hydro, geothermal, and hydrogen energy, as well as to energy storage solutions that will provide flexible, resilient systems.

Just Transition and Social Equality

The Declaration emphasizes that the just transition must include everyone. It proposes measures to protect low-income households, reform subsidies, and improve access to clean fuels and decentralized solutions, particularly in rural areas. According to the document, the energy transition is not merely a technological process but a social transformation.

Energy Planning and Integration

Energy efficiency should be treated as a primary fuel. National and regional strategies must enable the integration of renewable energy sources into urban planning and infrastructure, with simplified permit processes and greater transparency. Industry is encouraged to adopt low-carbon technologies, electrification, and hydrogen-based solutions, using digital tools to enhance competitiveness and innovation.

New challenges for Energy

Growing electricity demand driven by digitalization and electrification calls for modernized grids, advanced storage systems, and greater flexibility. Policies are needed to ensure fairness and accessibility, along with new financial mechanisms such as green bonds, public-private partnerships, and innovative financing models.

Sustainable Development, Nature-based Solutions, and Innovations

The Declaration recognizes the importance of nature-based solutions, such as sustainable biomass and ecosystem restoration. It places special emphasis on education, training, and reskilling to prepare the workforce for the new energy era. International cooperation, data exchange, and the sharing of best practices are key to accelerating progress toward global energy and climate goals.

By signing the *Skopje Declaration*, the Forum's participants called on the public, governments, businesses, and academia to act together toward a system that protects the climate, fosters innovation, and ensures prosperity for all.



The Declaration was signed by the Minister of Energy, Sanja Bozhinovska, the UNDP Resident Representative, Armen Grigoryan, and the Director of the UNECE Sustainable Energy Division, Dario Liguti

EMPLOYEES AND MEP SO



MSc. **Robe Robeski** holds a master's degree in electrical engineering and has extensive experience in the energy industry. He began his career at the company "Mikron" – Prilep - and later worked at ESM – REK Oslomej and ESM – Development and Investments, both in Skopje. After the restructuring of ESM in 2005, he continued his career in ESM Distribucija and EVN Macedonia. At AD MEP SO, he has held several managerial positions, including Head of the Substations Department, Chief Engineer at the TGO Subsidiary(2010–2017), Head of the Overhead Lines Department, and Head of the AC/DC Systems Unit. Since 2024, he has served as Coordinator for Overhead Line Projects in the Office of the Director of TGO. Throughout his career, he has actively

participated in the preparation, design, and implementation of engineering projects for electricity generation, transmission, and distribution. He has been particularly distinguished in implementing investment projects to develop and modernize the power system. Among the significant projects he has led are the construction and reconstruction of 400 kV and 110 kV substations and transmission lines, which have enhanced the reliability, security, and stability of the transmission network. His success is attributed to teamwork and close cooperation with experts and technical departments within AD MEP SO.

Biljana Prodanovikj holds a bachelor's degree in mathematics and has more than 23 years of experience at ESM Makedonija and AD MEP SO, where she has worked since its establishment. As head of the AMR/MDM Unit, she successfully manages the IDSpacto System, which comprises AMR (*Automatic Meter Reading*) and MDM (*Meter Data Management*), with an archive of more than 10 years. Her main activity is the management of the IDSpacto system, for which Biljana has several trainings: IDSpacto Basic and DSpacto Administrator, with licenses issued by the producer, and, later, an advanced training for Management Administrator. The system has numerous functions, but its foundation is high-level data accessibility with strong security and reliability for all users. Through its daily web information, AD MEP SO provides a detailed overview of the power system's condition by segment: generation, direct consumers, distribution networks, input and output, system losses, deviations, and others.



Nikolaj Janev is a civil engineering technician in the General Director's office Cabinet. He began his professional career in 1994 at the HPP "Kozjak" under the former AD ESM. He further continued his professional experience in the Directorate of ESM, within the Transmission and Distribution Subsidiary, and in the Department for Development and Investments, focusing on the construction of high-voltage networks. With the establishment of AD MEP SO in 2005, he joined the Engineering Department under the TGO. Throughout his three-decade career, Janev has been involved in the construction of all major interconnections, including the 400 kV transmission lines Dubrovo–Shtip, Shtip–Macedonian Bulgarian border, Bitola – Greek border, and Shtip–Macedonian Serbian border. He has also

participated in the construction and rehabilitation of nearly all of Macedonia's 110 kV transmission lines. With his knowledge and experience, Nikolaj has left a lasting mark on the development of Macedonia's energy infrastructure.

Vladimir Veljanoski is the Head of the International Project Financing Unit within the Financial Affairs Department at AD MEPSO. He holds a degree in Economics with a specialization in Financial Management. Vladimir began his professional career in 2005 in the banking sector, where he gained substantial experience in lending. Since 2011, he has been part of the AD MEPSO team, where he has successfully built his expertise in international finance and project management. He holds several certificates from professional training programs and seminars in finance, which contribute to his expertise and ongoing professional development. As part of his current responsibilities, Vladimir oversees the monitoring and financial implementation of international projects financed by the European Bank for Reconstruction and Development (EBRD) and the World Bank. Among the most significant projects he has been involved in are the strategic energy interconnection project between North Macedonia and Albania, the project to revitalize the power network and reconstruct substations, and the project to strengthen the transmission network in the southeastern region of the country.



Sonja Paunovska – with over ten years of experience as a licensed lawyer, I am part of the Expropriation Service team within the Property-Legal Affairs Department at AD MEPSO. Our service plays a key role in the implementation of strategic energy projects by providing legal support and conducting expropriation procedures, always in compliance with the law and with respect for individual rights.

Land is the base for building the transmission network and requires clearly defined ownership relationships. Our role is to ensure a fair, transparent, and just process that protects private property with complete legal protection. Our work is a constant balance between public interest and private ownership, aiming to develop infrastructure that will support the future growth of the energy system. Through our service, we actively contribute to fulfilling AD MEPSO's mission of sustainable development, stable electricity transmission, and social responsibility.

Janko Rusevski holds a Bachelor of Science in Computer Engineering and serves as the Head of the Cyber Security Unit within the IT-TC Sector at AD MEPSO. With over 19 years of professional experience, he is fully dedicated to ensuring a high level of security, confidentiality, and data availability in the areas of network security, cyber protection, and information systems management. Previously, he worked as a System Administrator with authorizations in Active Directory, Microsoft 365, Autodesk, VMware, and other platforms. As the head of the IT security team, his responsibilities include detecting and defending against cyber threats, developing and implementing security policies, monitoring network traffic, analyzing potential incidents, and managing and updating systems to ensure comprehensive oversight of the VDI infrastructure used by company employees.



In addition to his technical expertise, Rusevski possesses in-depth knowledge of the company's hardware infrastructure and collaborates effectively with other sectors and departments to ensure the smooth operation of AD MEPSO's complex IT systems.

WORLD NEWS

BULGARIA HAS GASOLINE SUPPLIES UNTIL THE END OF THE YEAR, WHAT AFTER?



Bulgaria has sufficient fuel reserves to cover its needs until the end of the year, the Bulgarian government announced, after U.S. sanctions against Russian companies Lukoil and Rosneft drew attention to the country's fuel supply situation. Despite this, experts emphasize that in the long term, it is crucial to strengthen competitiveness and transparency in the fuel

trade sector. The ownership issue over the refinery near Burgas and Lukoil's historical monopoly leave the market vulnerable. The U.S. sanctions restrict companies' financing, and anyone who cooperates with them may face secondary sanctions.

"We have reserves until the end of the year, and we can make a more resilient and more efficient sector with careful planning and reforms," said analyst Georgi Kiryakov.

The government and companies are already taking measures to diversify supply, creating a foundation for a stable market and energy security in the coming year.

[\(Bugarska ima goriva do Nove godine – a posle? - Energija Balkana\)](#)

HYBRID PARK WITH SOLAR AND WIND POWER IN SWEEDEN

European Energy a Danish company specializing in renewable energy, has inaugurated its first hybrid power plant in the Swedish region of Kronoberg. The new park combines a wind capacity of 49.6 MW (eight turbines) with a solar park of 39.3 MWp, producing about 126 GWh annually, enough to power more than 25,000 households.

"Combining sun and wind enables a more balanced production: the sun shines most during the day and in summer, while the wind blows more at night and in winter," says Peter Braun, Country Manager for European Energy in Sweden.

The project was built with care for nature: water surfaces have been preserved, wildlife habitats

have been created, and plants beneficial to bees and other pollinators have been sown.

Skåramåla is the first of three planned hybrid parks in Sweden by European Energy. The next project is Grevekulla, which is already under construction.

<https://europeanenergy.com/2025/09/26/european-energy-inaugurates-its-first-hybrid-park-with-solar-and-wind-power/>



ENERGY EFFICIENCY:

SMART ENERGY FOR BETTER LIFE

Imagine a world where lights turn on without losses, electricity bills are lower, and new jobs appear as if by magic. Energy efficiency offers this as reality. Two-thirds of the world's energy is wasted, but with the right investments, every dollar invested in energy efficiency can return three to five dollars, generating economic growth, new jobs, and a better standard of living.



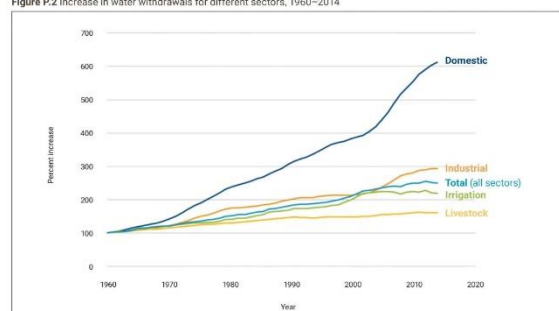
The World Bank warns that to completely unlock this potential, urgent and coordinated action is needed. Governments, benefactors, and the private sector must make energy efficiency a priority and provide technical and financial support for national programs. Turkey is an successful example: hundreds of public buildings—from schools to hospitals—have been renovated, resulting in significant energy savings, improved working conditions, and new opportunities for training and employment. Energy efficiency is not just an economic concept; it is an opportunity for lower energy costs, more jobs, and a better life for billions of people around the world.

(<https://www.worldbank.org/en/news/feature/2025/07/11/energy-efficiency-fast-tracking-affordable-energy-and-jobs>)

INTEGRATED ENERGY AND WATER MANAGEMENT WILL BOOST SAVINGS IN INDUSTRY

The world is facing a serious water problem, and industry can be part of the solution. Half of the global population experiences water scarcity at some point in the year, while industry is the second-largest user of freshwater and the single largest consumer of energy. Although water and energy are often managed separately, an integrated approach can reduce losses and costs, create jobs, and cut greenhouse gas emissions. Reducing energy consumption also means saving water, and using water more efficiently reduces the energy needed for production and transport. Companies can use process water or treated wastewater, thereby reducing their use of fresh water and lowering energy costs. Governments and energy agencies are urged to adopt integrated policies, provide training, and conduct audits to identify the

Figure P.2 Increase in water withdrawals for different sectors, 1960–2014



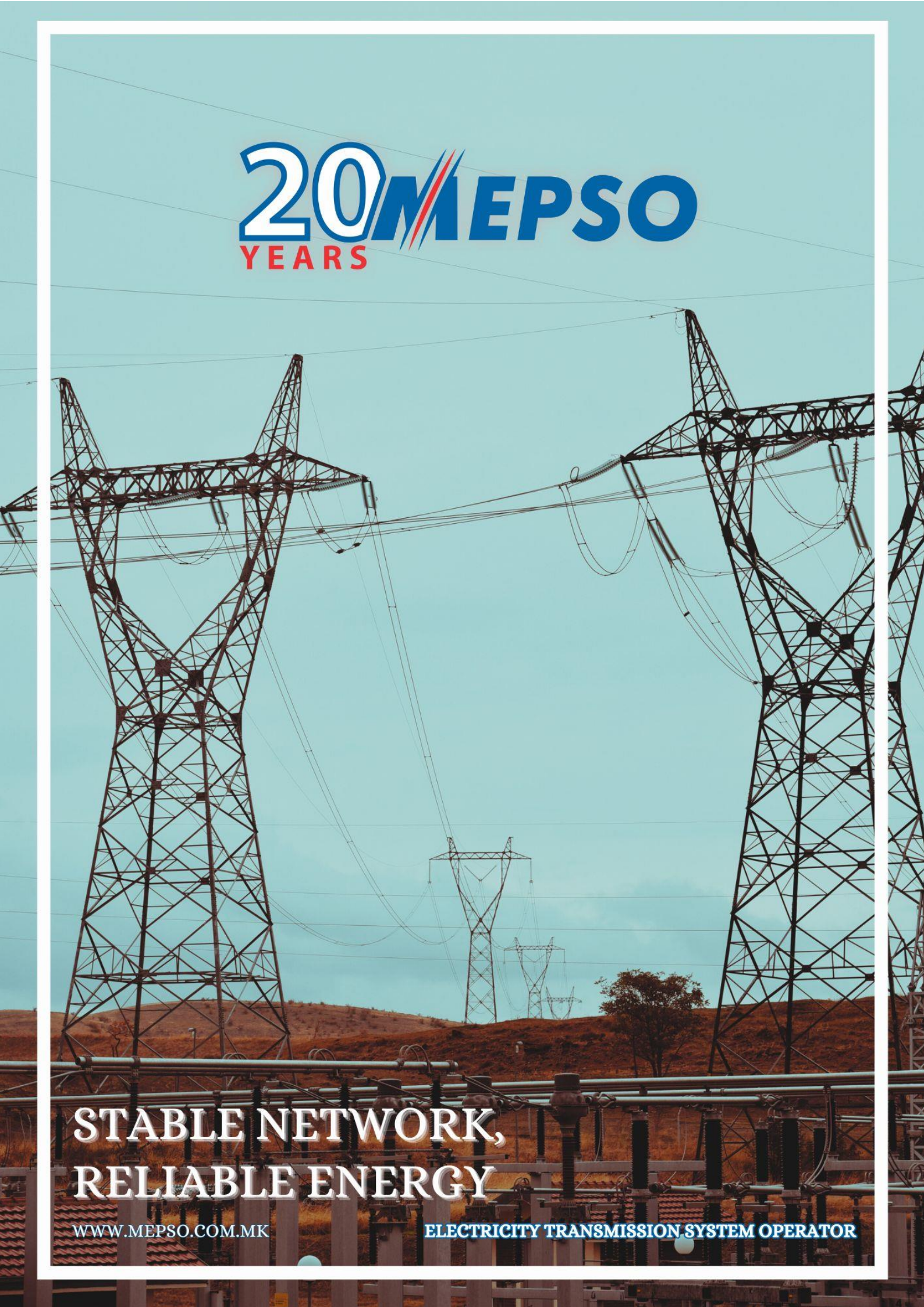
Source: Otto and Schliefer (2020)

benefits of energy–water efficiency and promote sustainable industrial operations.

(<https://www.iea.org/commentaries/integrated-energy-and-water-management-will-boost-savings-in-industry>)



20 **MEPSO**
YEARS

The logo features the number '20' in a large, white, sans-serif font with a blue outline. To its right is the word 'MEPSO' in a bold, blue, sans-serif font. A red diagonal line cuts through the 'M'. Below the '20' is the word 'YEARS' in a smaller, red, sans-serif font.

**STABLE NETWORK,
RELIABLE ENERGY**

The background of the entire page is a photograph of high-voltage power lines and pylons. The pylons are large, steel lattice structures. The power lines are multiple parallel wires stretching across the frame. The background shows a hilly landscape under a clear sky.

WWW.MEPSO.COM.MK

ELECTRICITY TRANSMISSION SYSTEM OPERATOR