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Conference is held under the auspices of the Prime Minister of the Slovak Republic Eduard Heger and the Minister of Economy of the Slovak Republic Karel Hirman.

2022 CEEC Conference Report





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2022 CEEC Conference Report



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Central European
Energy Conference

CEEC 2022

**Rethinking energy security
in times of climate change
and war in Eastern Europe**

Bratislava, Slovakia
Sheraton Bratislava Hotel
21 November 2022



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Welcome and Introductory Remarks



Alexander Duleba, CEEC Director and Analyst at the Research Center of the Slovak Foreign Policy Association, talked about the history of the Conference and its energy policy agenda. He noted that the first conference was held after an analysis revealed the potential for a stoppage in Russian gas supplies 16 years ago. The unprecedented Russian invasion of Ukraine shows we have come full circle.

Unfortunately Prime Minister Eduard Heger was unable to attend the conference owing to urgent work duties. Duleba apologised on his behalf and delivered five crucial messages the Prime Minister had discussed with him.

His first point was that **freedom, democracy, rule of law and peace in Europe are not up for sale**. Duleba noted that in the biggest military crisis since the end of World War II Russia is using the energy crisis as a tool. Secondly, he pointed out that today's crisis is the **second major energy crisis with a geopolitical undertone**, after the oil shock of the 1970s. However, whereas cooperation with the Soviet Union was seen as the solution in the 1970s, today Russia is the main problem. Duleba's third point was that **a crisis is always an opportunity** that must be seized. Fourthly, he emphasised the **importance of regional cooperation and solidarity** for Slovakia and the EU as a whole. Finally, the CEEC Director stated that to achieve our energy goals requires a **Ukrainian victory over Russia**. Should the opposite occur, our state budgets will be militarised and subsequently less money will be available for social services and the green transition.

Panel I.

Enhancing energy security

Chair

Pavol Demeš, Member of the Board, Slovak Foreign Policy Association

Speakers

Karel Hirman, Minister of Economy of the Slovak Republic

Yaroslav Demchenkov, Deputy Minister of Energy of Ukraine

Alexander Duleba, CEEC Director, Slovak Foreign Policy Association

Pavol Demeš, Member of the Board of the Slovak Foreign Policy Association, opened the session, emphasising the importance of the Central European Energetic Conference. He additionally noted that the conference was taking place this year in unique circumstances: energy has become a vital concern with the Russian war against Ukraine.

Karel Hirman, Minister of Economy of the Slovak Republic, pointed out that the current energy crisis is a “crisis of a new era”. During the fossil fuel era, there were several global crises and two major wars, so it would



6 be naive to expect this one to be problem-free. Minister Hirman noted that the end of the fossil fuel era is not a technological issue but a challenge for the entire security system.

Minister Hirman gave an assessment of the current situation in Slovakia. Thanks to the management of the state-owned energy company, Slovakia has been able to **diversify its energy sources away from Russian sources**. Slovakia was almost entirely dependent on Russia for gas a year ago. Now nearly 70% of the gas it imports comes from elsewhere. According to the Minister, Slovakia is very well-prepared for the coming winter. Given the importance of Russian oil supplies for Slovak refineries, Slovakia received a special exemption. The Minister highlighted the importance of the Adria terminal, which has considerable capacity but faces logistical challenges.

Hirman noted that security of supply has an economic dimension and that the current situation presents a risk to households and industries that rely on electricity and gas. The markets have to be stabilised because of the “absolutely unacceptable” prices. There should be a fixed price of 61 euros per Mwh for the Slovak electric utility company, as that reflects their costs and a reasonable profit. Slovakia’s nuclear power plants are completely reliant on Russian sources and so **diversification of nuclear fuel will be a key challenge** too. The Minister emphasised the importance of nuclear components in the Slovak electricity mix. Combined with hydropower, nuclear contributes to more than 80 percent of Slovakia’s low carbon electricity.

Yaroslav Demchenkov, Deputy Minister of Energy of Ukraine, noted that the Russian invasion began at **a most vulnerable time for the Ukrainian energy system**: while it was synchronising with European operators. He suggested that a faster energy transition and not allowing Russia to dominate the market could have prevented the current crisis. The Deputy Minister added that cheap gas and oil, which the Kremlin has used as a political tool, only mean that the Kremlin will demand a higher price



8 in sovereignty and independence. Following gas problems with Russia in 2005, 2009 and 2014, Ukraine understood the severity of the issue. Despite its warnings, some foreign partners were unwilling to listen.

The Deputy Minister reminded the audience that Gazprom started building Nord Stream 1 in the wake of the Russian invasion of Georgia. After annexing Crimea and initiating the war in Eastern Ukraine, it launched the Nord Stream 2 project. Russia's aggression is rooted in the idea that Europe cannot give up its energy, so Russia can do anything it wants. However, Demchenkov noted that the **EU has shown unity** and has dramatically reduced its dependence on Russia. Ukraine is asking its European partners to ban Russian nuclear technologies and related commerce, to stop using Russian oil entirely, and introduce a price cap, as proposed by the G7 nations. Demchenkov also emphasised the importance of accelerating the green transition. Given its hydrogen potential and nuclear capacity, Ukraine believes it can replace Russia as the continent's energy supplier. Ultimately, **Europe will need to rethink its energy security.**

Alexander Duleba, CEEC Director and member of the Slovak Foreign Policy Association, discussed the current attitudes of Germany and the United States. He pointed out that Germany is undergoing a revolution at the moment. In past decades, German politicians used common trade to prevent war, but the situation has changed significantly. Meanwhile, **the United States is playing a crucial role** in the LNG market, and jointly with Qatar, may be the largest supplier.

The panellists also discussed the situation with the Visegrad Group. As Duleba noted, although the three countries have a clear position on the Russian invasion of Ukraine, they consider Hungary's approach to be a problem. Previously, when partners could not reach a consensus on an issue, they would skip it and move on. However, Duleba noted that the Visegrad Group cannot do that with the war as it so important. Minister Hirman pointed out that his **Hungarian colleagues have "very different views" on the war.** Nevertheless, Slovakia and Hungary

are more or less united on other issues, such as diversification and nuclear fuel.

In his final remarks Duleba expressed the hope that the next conference would focus on new technologies and innovations. But that will be **impossible without a Ukrainian victory on the battlefield.** Deputy Minister Demchenkov reiterated his thanks to European partners and stressed the ongoing needs of Ukraine, which is fighting for European values. Minister Hirman concluded by saying that he had met many talented and motivated Slovaks in the short time he has been in charge. He affirmed his support for Ukraine and wished his colleagues a lot of energy.

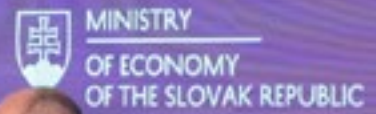
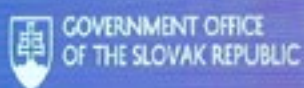
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21 November 2022 Bratislava

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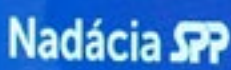


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sustainable energy



Panel II.

Substituting Russian natural gas

Chair

Richard Kvasňovský, Executive Director, Slovak Gas and Oil Association

Speakers

Annamária Fehér, Head of CEO's cabinet, MVM CEEnergy

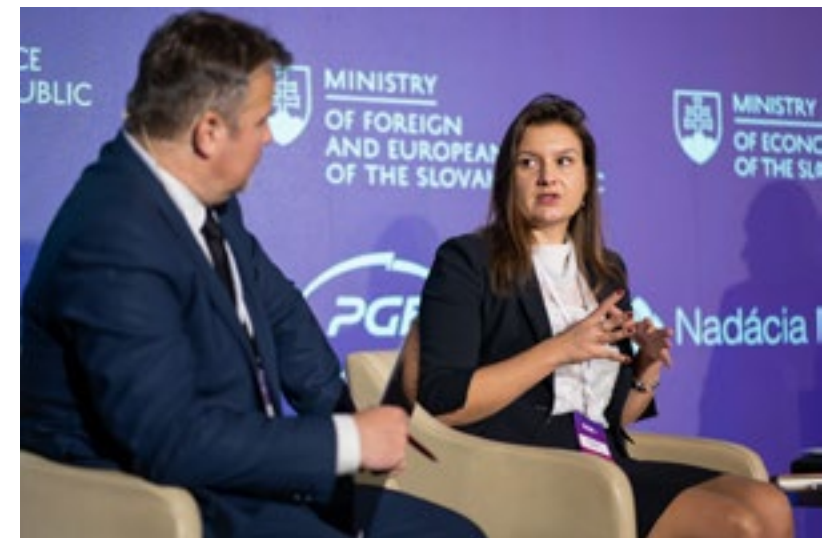
Miroslav Kulla, Chairman of the Board of Directors and Chief Executive Officer, SPP

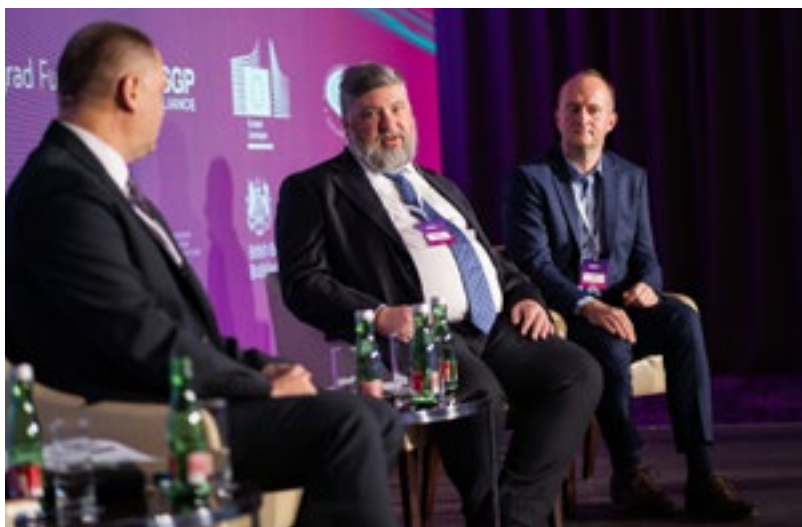
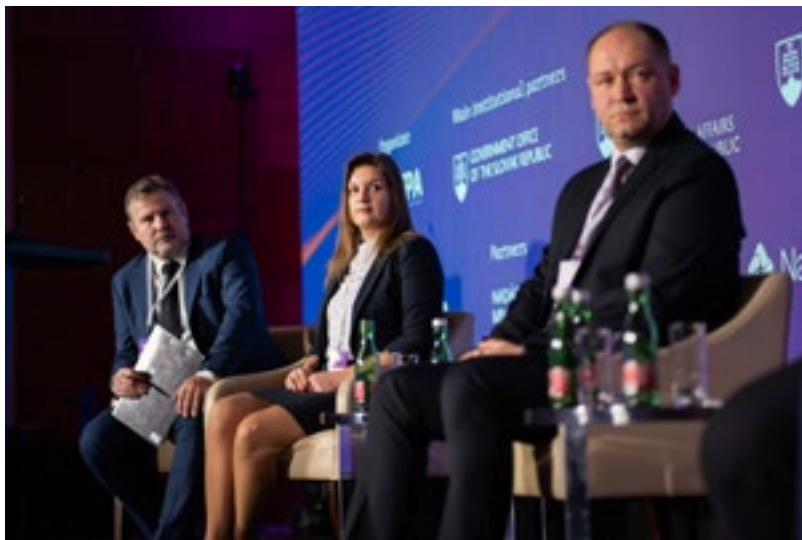
Rastislav Ňukovič, Director General, EUSTREAM and President, Slovak Gas and Oil Association

Sergii Pereloma, Chief Executive Officer, Ukrtransgaz

Richard Kvasňovský, Executive Director at Slovak Gas and Oil Association, outlined the panel discussion topics, including how the gas companies have coped with the energy crisis that followed the Russian invasion of Ukraine, the infrastructure and gas storage facilities affected by the Russian military forces in Ukraine, preparedness for this winter and European solutions for next winter.

Annamária Fehér, Head of the CEO's cabinet at MVM CEEnergy, said the energy crisis had had a significant effect on MVM CEEnergy last year, with disruptions being





solved through the **diversification of energy routes**. However, **next winter is likely to be a problem**, but consumption is expected to fall in response to high energy prices. There is also evidence of a change in consumer behaviour towards **renewable energy sources**.

Rastislav Ňukovič, Director General at eustream, stated that the crisis had had a negative impact on his company and highlighted the importance of **diversifying energy routes**. The new interconnector between Slovakia and Poland has been completed as part of multiple projects to revitalise the system through interconnectors with Austria, Ukraine, the Czech Republic and Hungary. As a result **Slovakia is now connected to all its neighbouring countries**, which is a key part of progress made since the gas crisis in 2009. The negative impact can also be seen in the statistics. The 7-year average for the annual **volume of transported** gas is 57bcm. This year the volume is unlikely to be more than **25bcm**.

Miroslav Kulla, Chairman of the Board of Directors and Chief Executive Officer at SPP, stated that the **situation had changed completely**. In the past Gazprom was Slovakia's sole gas supplier, typically on a 23-year contract with price provisions. Since the crisis, the question has been where to get the gas from. SPP has focused on diversifying routes, **and now two-thirds of this has been achieved**. There was also a **price shock**, but prices were fixed beforehand so customers have not felt the impact of high energy prices **this year**. Customer behaviour is changing, as consumption is being limited.

Sergii Pereloma, Chief Executive Officer at Ukrtransgaz, said that all Ukrainian infrastructure was under attack, but that in their capacity as storage system operators **they have not experienced significant problems** and have put all their efforts into security measures. Some branches and subsidiaries still have to be relocated.

On the question of preparedness for this winter, **Annamária Fehér**, said that in terms of volume gas storage was looking good for the moment, but the financial side will be key. The main concern for next year is **finding diversified partners**. **Rastislav Ňukovič**, said there were two issues: **security of supply and high energy prices**.

The EU has managed to access all LNG on the market and there has been a substantial decrease in gas consumption. In Slovakia it was 19%. Mild weather conditions in the autumn helped keep demand low. According to their analysis, the real problem could be the complete cessation of Russian gas. **Miroslav Kulla** and **Sergii Pereloma** reiterated that the gas storage situation is better this winter than last but underlined **the importance of solidarity within the EU, especially when preparing for next winter.**

Moreover, Ukraine has **the capacity to offer the EU at least 160 TWh of gas capacity**, as it has the third largest capacity in the world and accounts for around 14% of EU gas storage capacity, which would help in future winters. Total LNG capacity in 2023 will be about 107 TWh, which could be stored in Ukraine as part of solidarity in the EU.

Anamária Fehér later stated that **there was no “one fits all” EU solution for next winter.** There are numerous regulatory proposals – one potential solution is to have back-up storage to ensure security of supply. However, **there is a need for a different tool mix** on top of storage capacity, e.g. diversification of routes and an energy mix with a higher share of renewables. Moreover, we will face problems over the next two to three years without Russian gas, but LNG will play a crucial role.

Rastislav Ňukovič pointed out that the draft regulation on enhancing solidarity through certain actions remains rather general. Currently we have high energy prices and solutions tend to be focused on subsidising gas prices, but ultimately the solution is to **balance supply and demand.**

On the question of the gas purchasing platform initiative **Miroslav Kulla** said it could help, but we have switched from long-term purchasing contracts to spot markets and this mechanism works well in good times but not in bad times. The solution is to combine these, e.g. to have long-term contracts with reliable partners and short-term trade as well. **We have to rebalance price versus**

security. As there is a risk that we will be unable to fill the gas storage units in 2023 it is important that governments act quickly.

Rastislav Ňukovič pointed out that the high gas prices started in August 2021, before the war, when gas demand rose in Asia and Gazprom, limiting the supply. There are multiple projects that will improve the situation in the EU such as LNG terminals in Germany, but the focus should be on **liquefaction capacities which will be inadequate in the EU in 2023** rather than on the regasification of terminals **and long-term contracts.** Russian gas deliveries could still help until we have sufficient financial instruments. Two main investments that should be made after the Ukrainian victory are to restore and rebuild the destroyed energy infrastructure and invest in new energy sources in Ukraine, under the European Green Deal, especially biomethane and raw materials.



Panel IIIa.

Progress in the development of hydrogen infrastructure

Chair

Robert Jamrich, Head of International relations, EU affairs and Environment, Slovenské elektrárne

Video message

Christophe Grudler, Member of the European Parliament, Renew Europe Group

Speakers

Aleš Doucek, Chairman of the Board, HYTEP

Gábor Dudás, Head of Business Development, FGSZ

Tommy Isaac, Head of Hydrogen Research, Progressive Energy Limited

Ján Weiterschütz, Chairman, Slovak National Hydrogen Association

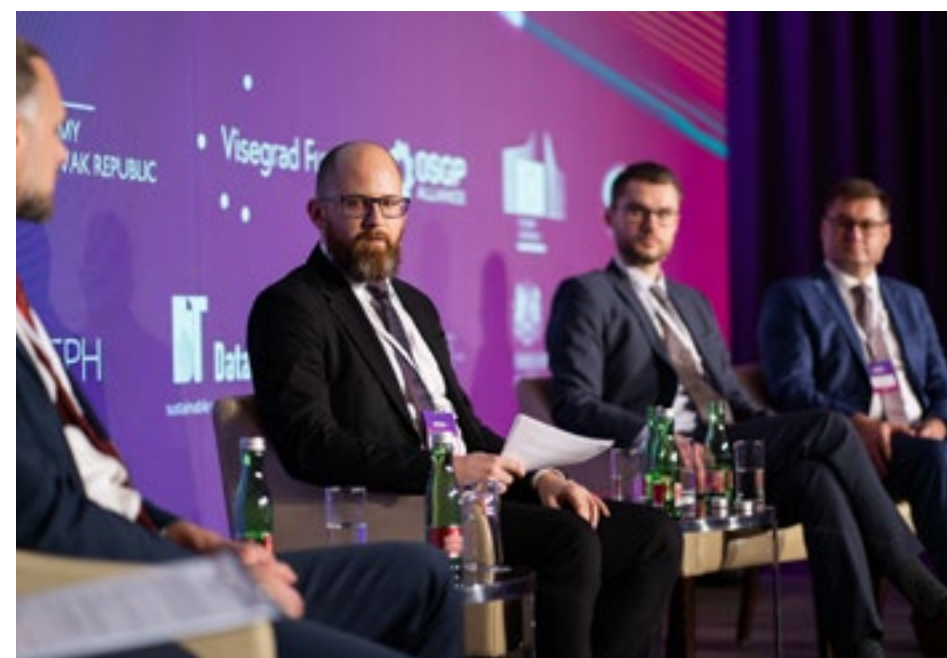
Robert Jamrich, head of International Relations, EU affairs and Environment at Slovenské elektrárne, opened the panel, saying that concerns over the energy transition and security have been **thrown into sharp relief by Russia's invasion of Ukraine**. Quoting the International Energy Agency, he stressed that hydrogen has a diverse range of applications, including in industry and transport.

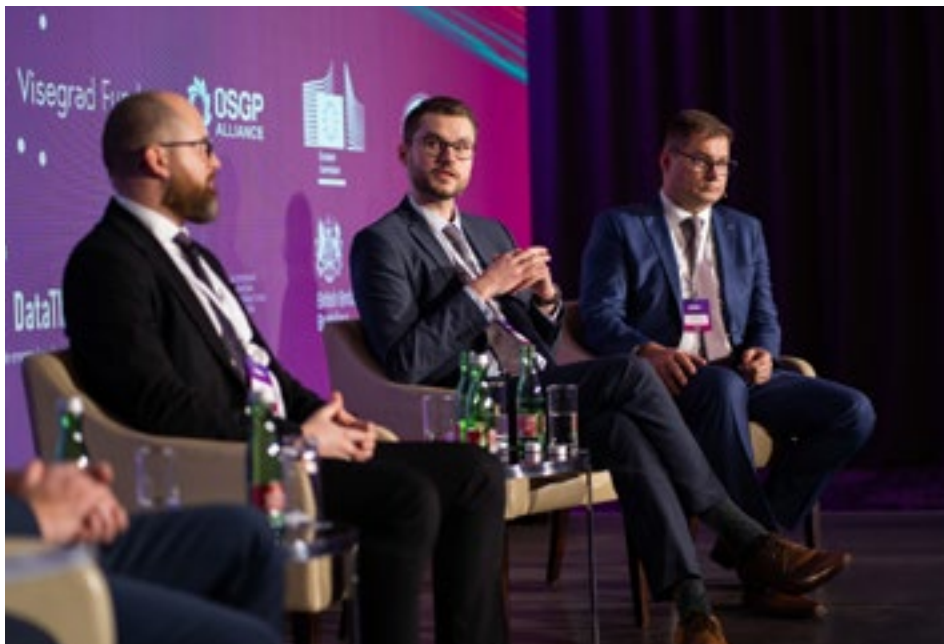


In a video message, **Christophe Grudler**, Member of the European Parliament in the Renew Europe Group, reiterated that the Union is facing an immensely challenging period. Amidst high inflation and the Russian aggression against Ukraine, there is also an opportunity to strengthen energy security through sustainable energy sources. According to Grudler, **clean hydrogen can play a significant role** in decarbonising the European energy system. The Union has focused on building hydrogen infrastructure. Furthermore, it is adopting a pact that specifies the conditions under which hydrogen would qualify as a renewable. For the first time, an important project of common European interest worth €5.4 billion of public money is focused on hydrogen storage, distribution and transportation projects. Grudler expressed the hope that it would include Central European projects too.

Aleš Doucek, Chairman of the Board of HYTEP, noted that the Czech hydrogen platform has existed for 17 years. He pointed out **hydrogen's versatility as an energy carrier** with a crucial role in connecting different parts of the economy. Hydrogen can be used in various sectors, such as glassmaking and steelmaking, and to lower natural gas emissions. Doucek explained that the Czech Republic has created a national hydrogen strategy and an action plan. Under the strategy, the Czech government plans to provide **subsidies for clean hydrogen production**. Subsidies are already available for the construction of hydrogen refilling stations, and several new projects are already underway.

Gábor Dudás, Head of Business Development at FGSZ, said his role as transmission system operator was to fulfil his partners' expectations. The main question is how to coordinate the high volume of demand along with the enabling infrastructure, extended regional cooperation, a stable regulatory framework and financial incentives. Dudás noted that Hungary is part of the European hydrogen backbone initiative, which is to achieve a low-carbon hydrogen market. Plans include **the creation of five hydrogen corridors in Europe by 2030**. Dudás noted that Hungary had signed a memorandum with its Slovak, Polish and Romanian partners on decarbonisation and the transportation of green gases.





Tommy Isaac, Head of Hydrogen Research at Progressive Energy Limited, discussed how hydrogen fits into the British energy system. In previous years the United Kingdom's natural gas per capita consumption was approximately 40 higher than in EU countries. According to Isaac, **the British population is generally very "gas-dependent"**. The United Kingdom wants to focus on industrial space first, then discuss using hydrogen for domestic heating. Isaac noted the use of simultaneous green and blue hydrogen financing, which provides a framework for the market to decide the cheapest low-carbon option. The UK's 2020 net zero hydrogen fund was worth up to £ 240 million, compared to the three billion invested by the EU. **The EU therefore has a much greater funding position**, but the UK believes it is ahead in the policy details.

Ján Weiterschütz, Chairman of the Slovak National Hydrogen Association, said that the Slovak hydrogen strategy emerged two years ago. Nevertheless, the measures and tools required to translate general goals into practical outcomes have yet to be approved. They are currently the subject of consultation between government departments working on improving the upcoming action plan. Weiterschütz says that despite the great potential for blue hydrogen, Slovakia is focusing on green hydrogen generation and consumption for now. Once the action plan has been approved, Slovakia believes hydrogen could be immensely beneficial in greening industrial production. For example, the Košice company U.S. Steel is considering how it can move away from coal and use hydrogen as an alternative.

Doucek added that he hoped the governmental subsidies would contribute to decarbonising the Czech energy mix. For the Czech Republic, the most important thing is coordinating all the activities taking place now thanks to the Ministry of Trade. Finally, Doucek stated that in Moravia-Silesia Region and Ústí nad Labem Region hydrogen can be used in the transition from coal to a low emissions environment.

Slovaks face very similar problems to the Czechs, according to **Weiterschütz**. A major issue for Slovakia is the **lack of an official work group** to coordinate the

Panel IIIb.

The Changing
Role of the
Smart Grid:
Effective new
approach to
grid management,
making full use
of smart grids
and smart grid
technologies

Chair

Mark Osse1, Member of the Board, OSGP Alliance, Member of the European Commission Coordination Group – Smart Electricity Grid

Speakers

Peter Dovhun, General Director, SEPS

Peter Simko, Founder and CEO, PowereX Energy

Ruslan Slobodian, State Inspectorate of the Energy Supervision

Mark Osse1, Member of the Board, OSGP Alliance, Member of the European Commission Coordination Group – Smart Electricity Grid, presented the work of OSGP Alliance and opened the panel discussion on sophistication of grids and the associated problems of capacity planning, financing and the situation regarding Ukrainian grids. He also talked about the changes in electrification, the electricity regulation and directive along with the smart grid and smart city requirements.





Peter Dovhun, General Director at SEPS, said that as his company is responsible for the transmission of electricity and balancing the grid, they focus **on building partnerships between all participants**. One such example is Danube Ingrid, a joint project between SEPS and the DSOs in Slovakia and Hungary. It involves building physical fibre cables and **providing data insights** and AI to help maintain stable transmission and electricity distribution, and to provide **grid insights on where to invest, rather than pushing investments into capacity**.

Peter Simko, Founder and CEO at PowereX Energy, said the obvious challenge is the need for **more capacity, but that will take time and investment** to resolve. There is a lot of hidden flexibility in the grid which had not previously been utilised as the old model relied on regulation, but the situation has changed. The EU winter package is a major shift in both the legislation and mindset in enabling solutions. Other players will be able to utilise the existing grid flexibility and **provide it to DSOs and TSOs to maintain grid stability**. This is a step in the right direction and the war has put pressure on the **speed of implementation**.

Ruslan Slobodian from the State Inspectorate of Energy Supervision said the grids in Ukraine had been built in the Soviet Era and were unreliable. In some regions the grids have been completely destroyed and Ukraine faces blackouts. The challenge will be to **rebuild the grids**, which could take many years if Ukraine has to do it by itself, but with the help of the EU and the US it could take a maximum of two years. Regarding the DSOs, half of Ukraine has stable grids and this year the Ukrainian government has approved the concept of smart grid development in Ukraine by 2035 which will enable power plants and TSOs to implement smart grid technologies.

Mark Ossel asked a follow-up question **about the balance between investors and beneficiaries**, where one party does the investments such as the DSO, but the benefits may be lie with the service providers or retailers. **Peter Dovhun** answered that the importance lies **in the level of investment and the justification for the investment** in whether it benefits the ecosystem. They

look at investments from three angles: security of supply, affordability and sustainability. Their role is to ensure that by 2026 the grids are ready to accommodate all projects to ensure sufficient energy supply and that tariffs are not boosted.

With regards to what the regulator's role should be, **Peter Dovhun** answered that he thought it was mainly **responsible for building and maintaining a transparent framework for all players** but also had a role as **guardian or watchdog** in the event of a problem or an investment substantially increasing costs for customers. **Peter Simko** agreed that **the regulator role was vital** and that active regulators push key stakeholders towards more efficient utilisation of the system. This has multiple positive impacts such as less unnecessary investment that may result in higher energy bills for the customer. **That leads to smarter grid solutions and reduces inefficiency.** The hard infrastructure is still needed for new developments since capacity is not always sufficient, but the CAPEX allocation will be more information driven and efficient. The business benefits will be CAPEX savings and better utilisation of existing infrastructure. These benefits could be better distributed to stakeholders. Energy prices are high due to the market structure, which raises questions about whether customers could be more self-sufficient. The situation has changed in the last few years as we have more options to choose from.

Mark Osse1 asked whether consumers and communities are prepared for the European Commission regulations. **Peter Simko** answered that recently there has been push-back from market incumbents regarding the technological solutions but that is understandable since they are responsible for ensuring a stable energy supply. Commercial industrial customers represent a large proportion of demand but do not have regulated tariffs so are worst hit by price hikes. We are seeing a lot of local development such as rooftop solar panels which creates portfolios of local energy generations, which means there is a **lot of potential in energy communities.** But there is a **lack of knowledge and local municipalities would be a good starting point.**

Mark Osse1 answered further questions on the functionalities smart meters should provide, given recent trends in providing information on the status updates and cyberattacks on infrastructure. **Ruslan Slobodian** said the smart meters in Ukraine were obsolete as they provide remote reading only, but they can provide information about power quality and parameters. **Effective maintenance and grid operation is needed.** There have been attacks on TSOs and power plants but the system remains resilient. Most attacks affect power grids and operational equipment resulting in local or total blackouts. **Power plants cannot be targeted** through cyberattacks. Smart metering systems are poorly protected but attacks can't cause significant damage. **Peter Dovhun** says cyber security is not considered a budget issue and **Peter Simko** said it was a critical component. Moreover, customers interested in grid connections want to make sure the hardware they invest in does not come from China.

Panel IV.

Presentation of the World Energy Outlook

Chair

Ingrid Brocková, State Secretary, Ministry of Foreign and European Affairs of the Slovak Republic

Speakers

Tim Gould, Chief Energy Economist, International Energy Agency

Commentary

Jan Osička, Associate professor, Masaryk University,

Ingrid Brocková, State Secretary of the Ministry of Foreign and European Affairs of the Slovak Republic, noted the long-running tradition of presenting the International Energy Agency's flagship World Energy Outlook Report. This annual report provides insights into trends in energy supply and demand. She considers the Russian invasion to be a game-changer that has exposed the vulnerability of Central Europe.

Tim Gould, Chief Energy Economist of the International Energy Agency, presented the key findings of the new outlook. In his introduction, he compared the current



situation to the oil shock of the 1970s. The number of countries facing high inflation would suggest that today's crisis is similar. However, it is vital to note **that the current disruptions are far more widespread** since Russia is not just the main oil and gas exporter. The repercussions of its actions have been felt throughout the world. For example, there has been a rise in people with no access to electricity.

Gould noted that after the 2015 Paris agreement a very flat amount of money went on the energy transition. However, that **changed significantly in 2021**. If states continue at the projected pace, their transition investments will have reached two trillion dollars by 2030, compared to the one trillion they invested previously. Moreover, the amount of low-emission energy will have surpassed the number of fossil fuels. Gould acknowledged the possibility of an even faster transformation, especially for businesses. Yet he emphasised **the historical significance of the current era**: policy settings are leading to a distinct peak in fossil fuel demand.

Emissions have been rising every decade since the beginning of the Industrial Revolution, and that is about to change. As a result, **continued growth will no longer rely on fossil fuels but on clean technologies** and they will become increasingly important. Gould noted that while Russia has long been the world's top gas exporter, **its position has been shrinking**. He predicts that Russian gas exports to Europe will have shrunk by half by the next decade. As many anticipate that Russia will turn to China, Gould warns that its level of demand will not increase as much as it did in the past. Russia is losing its dominant market and faces a much-diminished role in the international energy market.

Gould stressed that "we are not putting enough money into the energy sector". We invest approximately \$1.50 in clean energy for every dollar invested in fossil fuels. However, to meet our climate goals, we would have to invest nine dollars for every dollar in fossil fuels. Lastly, he **warned us not to swap one security vulnerability for another**. He stressed that several elements of clean energy are geographically concentrated in a few regions, which he believes is one of the biggest challenges.



Jan Osička, Associate professor at Masaryk University, elaborated on this idea. He emphasised the importance of more competent government. According to Osička, the traditional “trilemma” is a concept we can abandon: **energy security, sustainability and affordability are no longer mutually exclusive goals**. Renewable energy is the answer to all of these problems. There are new emerging topics, such as resilience, political economy and justice and equity.

As he explained, the current energy issues, such as not expanding fossil fuels, are not technical but political. To achieve the 1.5-degree goal, we must take all sorts of measures, including efficiency ones. We need energy efficiency measures to push forward to a greater extent and it is questionable why it is not happening. Osička also mentioned the importance of the personal level: he cautioned us not to be oblivious. For example, it would be ridiculous to forbid travel but it is also absurd that we have made the most destructive transportation system the most convenient. He repeatedly urged the audience to take a closer look at what governments are doing and to allocate more resources and people to them. There are enough technological advancements, but we have to **make sure politicians deliver on their promises**.



Parallel Panel Va.

Industry on the
road between
free allowances
and the
carbon border
adjustment
mechanism

Chair

Zsolt Gál, Department of Political Science, School of Arts, Comenius University

Speakers

Kateřina Davidová, Analyst, Europeum Institute for European Policy

Radovan Ďurana, Analyst, Institute of Economic and Social Studies

Tomáš Jungwirth Březovský, Head of the Climate Team, Association for International Affairs

Michal Pintér, Director of Governmental and EU affairs, U. S. Steel Košice

Daniel Urban, Chairman of the Board, Steel Union

Zsolt Gál, assistant professor at the Department of Political Science at Comenius University, reminded the audience that the European Commission has proposed the Carbon Border Adjustment Mechanism (CBAM). Its main goal is to **prevent the risk of carbon leakage** and support the EU's higher aims on climate mitigation, whilst maintaining competitiveness.

Kateřina Davidová, an analyst at the Europeum Institute for European Policy, noted that according to several analysts the EU ETS is an efficient scheme that has succeeded in reducing greenhouse gas emissions cost-effectively. However, she pointed out that there is "a snag". If we look at the periods **when emissions decreased, it is clear the energy sector played a key role**, with the covid era providing a good example. According to Davidová, this is because of the free allowances that the EU allowed industrial companies to use. She claims that they undermine the entire emission trading system: they do not reduce emissions as desired, and they are not adhered to. This is a problem for several reasons, including the fact that **the end customer pays the final price**. Therefore, the EU and its members are losing an income source they could use to support decarbonisation.

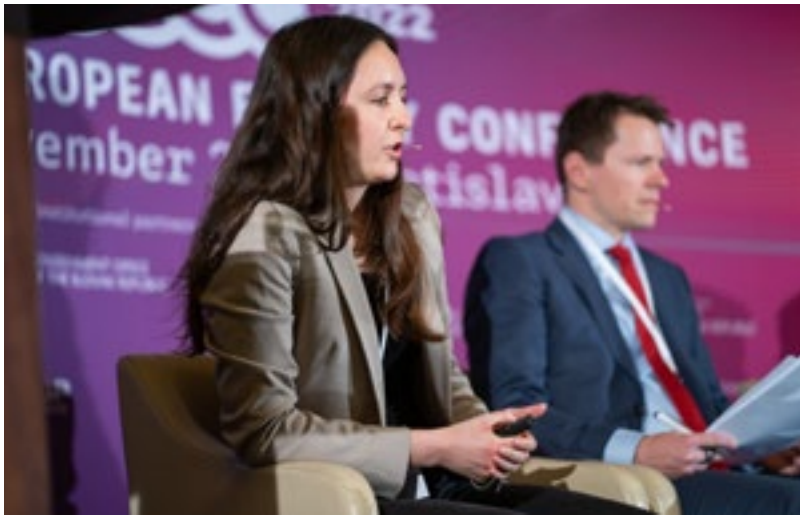


Radovan Ďurana, an analyst at the Institute of Economic and Social Studies, repeated that the trading allowance has a long history. In his opinion, **a global tax with a flat rate would be a better solution**. However, he acknowledged that this is not possible. Allowances, unlike taxes, allow the regulator to reduce the set amount of emissions. Nonetheless, Ďurana stressed that the auctioning of manufacturing does generate the motivation to produce carbon. Although it may not previously have been clear, the reason is the low price of the allowances. When the allowance price rose from \$ 20 to \$80, we could see what was going on. As energy prices rise, the production of aluminium or zinc is restricted in Slovakia.

Michal Pintér, the Director of Governmental and EU Affairs of U.S. Steel Košice, repeated that the emissions are not “European” but global. He stressed that the industry sticks to the agreements it has committed to even if it does not necessarily consider them reasonable. Pintér pointed out that the CBAM could be an optimum complementary mechanism that might protect European industry. However, he argued that **it should only be introduced after it has been thoroughly tried and tested**. He added that the objective “should not be to destroy” industry but rather to decarbonise it as soon as possible.

Daniel Urban, the Chairman of the Board of the Steel Union, noted that the CBAM is an example of how regulation breeds even more convoluted regulation. He is of the view that **the EU is risking the competitiveness of its companies**. In addition, he responded to previous speakers who had said that industrial companies refused to pay for allowances: he claimed that CBAM member companies pay up to 25 percent in allowances.

On third countries, Urban stated that no country has such high carbon pricing as the EU. He gave China as an example, where the price is about € 5 per ton of carbon dioxide. According to the Chairman of the Board of the Steel Union, the proposed policy will not lead to a level-playing field “by any means”. Furthermore, he said that **price rises in the EU were inevitable**. Given how energy prices have gone up, Urban expects the carbon costs will follow.



Đurana suggested that the introduction of a carbon tax would negatively affect developing countries. In other words, **foreign investors in rich countries like the US will have a competitive advantage** over companies in countries such as Mozambique that cannot afford green production. He concluded that he was concerned about “an uncontrolled shift to the fast reduction of emissions without having a global macro view”.

Davidová stressed that the CBAM should protect European industry against carbon leakage. She said the potential situation of a company deciding to move its production from the Union to a more lenient country is a genuine concern. However, the research hasn't shown that it is happening yet. It is important to point out that other regions are also trying to decarbonise using market mechanisms, not just the EU.

In addition, **Tomáš Jungwirth Březovský**, the Head of the Climate Team at the Association for International Affairs, pointed out that the discussion about **duties cannot be separated from the social price of carbon**. He noted that the EU had spent a long time discussing a fair price for emission trading. Despite the record-breaking allowance price this year, it did not exceed 20 percent per kilowatt hour per customer. The impact is therefore not significant enough to overcome all the other impacts, including geopolitical ones. Březovský emphasised that the CBAM is not a new idea: it was **originally proposed by former French President Jacques Chirac**. Consequently, it is no surprise that Emmanuel Macron considers it to be one of his top priorities. Březovský also touched upon the importance of solidarity with less developed countries. However, he emphasised that the **CBAM is a pilot project** and from the point of view of the current model should not have a major impact on today's balance.

Parallel Panel Vb.

Towards cleaner and more efficient heating systems?

Chair

Martin Hájek, Director, Association for the District Heating of the Czech Republic

Speakers

Wanda Buk, Vice-President of the Management Board for Regulatory Affairs, PGE Polska Grupa Energetyczna S.A.

Biljana Grbić, Consultant, Energy Community

Eva Hoos, Policy Officer, Renewables and Energy System Integration Policy, DG ENER, European Commission

Martin Hájek introduced the idea that clean and efficient heating systems is an issue that is often neglected in policymaking. In Central Europe, it is an important largely fossil-fuel based energy source but this sector has to move towards **greener solutions**.

Wanda Buk, Vice-President of the Management Board for Regulatory Affairs at PGE Polska Grupa Energetyczna S.A., started the presentation by saying that in Poland **they are switching is from coal to gas and not to renewables yet as in other EU countries**. PGE currently owns 25% of the district heating system and around 6 million households are connected to the central heating system and the company plans to phase-out coal by 2030. This is because the buildings have not been modernised and the heating systems are not designed for **lower temperatures and renewables**.

There has been a substantial increase in households with heat pumps or alternative heating solutions, but district heating systems lag behind to some degree. Gas will therefore remain part of the solution, although not using Russian gas is important. **The main question is not whether district heating systems will make the transition but how it can be done in the current circumstances and high prices.**

Eva Hoos, Policy Officer, Renewables and Energy System Integration Policy, DG ENER at the European Commission, stated that heating and cooling systems are coming to the



forefront especially since they account for 50% of energy consumption in the EU and are key to achieving the Fit for 55 targets. There is a need to ramp up non-combustion technologies that **do not require high temperature heating systems**. Now is the time to accelerate the phase-out of fossil fuels given the war and unavailability of Russian gas. In REDII the European Commission proposed a target for the building sector of a **49% renewables energy share along with higher indicative targets for the district heating sector**, and for heat pumps amounting to 30 million newly installed heat pumps in the next five years. However, biomass accounts for one third of renewable energy which is undesirable.

The future of the heating system lies in **new and different sources of renewable energy, such as geothermal or renewable hydrogen**. District heating systems should be accelerated by the more extensive deployment of large scale heat pumps, solar thermal, geothermal energy and clean communal heating. The new legislation will speed up the increase in the share of renewables, to a 45% renewables target by 2030 as part of REPowerEU.

Biljana Grbić, Consultant at the Energy Community, said the main aim of the Energy Community is to support EU candidate countries (currently Albania, Bosnia and Herzegovina, Kosovo, North Macedonia, Montenegro, Serbia, Georgia, Moldova and Ukraine) in aligning their national legislations with the EU energy legislation, including on the heating sector. It was noted that Ukraine has the largest district heating system and so the Energy Community will play a significant role in repairing the district heating sector. In addition to decarbonising district heating systems, candidate countries face the problem of having **fossil-fuel based district heating systems**.

However, there are already projects ongoing to convert to renewables. Another issue mentioned was the problem of governance, particularly management and governance. There is a lack of investment as the tariff model used does not incentivise investment. It is important to keep prices low and make sure customers are happy. **Social and political problems remain the main problem regarding decarbonisation**. It was also underlined that

heating systems cannot be reliant on a single source and that network flexibility is dependent on mixed sources.

Wanda Buk said when talking about decarbonising district heating, we need to consider not only the heat source, but also other aspects such as the **thermal upgrading of buildings**. At the moment **large-scale heat pumps are impossible because of the lack of technologies**. This aspect should not be forgotten despite the current geopolitical situation and the associated energy crisis. Regarding the reputation of biomass, **Eva Hoos** said that there has been a good compromise on the heating and cooling articles but **reaching a compromise on including biomass under renewable energy would be hard**.

Phasing-out fossil fuels in heating systems would become possible when large scale heat pumps can be fitted, said **Wanda Buk**, and **Biljana Grbić** stressed that it is impossible to say when fossil fuels can be phased-out. **Martin Hájek** added that the transition to gas buys time to renovate the building stock, which is the main challenge, as old buildings with high temperature systems will have to be refurbished before being retrofitted for lower temperatures.

Eva Hoos explained that fitting heat pumps on a mass scale under current energy prices would in fact encourage the large-scale use of heat pumps as it makes it more profitable. On the question of paying for the transformation, **Biljana Grbić** said that the national authorities should provide support schemes, although consumers will pay for part of it. However, **Wanda Buk** stated that she would welcome it if policy makers introduced e.g. a subsidy system so customers would not have to pay for it.

Biljana Grbić said that in places such as small villages or cities where there is no district heating network, **individual solutions are a good option**. The future of the heating sector lies in good government governance, **Biljana Grbić** concluded, and **Eva Hoos** added that heat networks are a central solution, but companies have to start investing in renewable production capacities and upgrading their networks. That **requires more coordination between building and heating solutions**.



Panel VI.

Towards green(er) buildings

Chair

Katarína Nikodemová, Director, Buildings for the Future

Speakers

Justyna Glusman, Managing Director, Fala Renowacji

András Reith, CEO, Advanced Building and Urban Design

Lubica Šimkovicová, President of Passive House Institute Slovakia, Manifest2020

Lívia Vašáková, Director General of the Recovery Plan Department, Government Office of the Slovak Republic

Lenka Vaněk, Head of the Innovation and Decarbonisation, ČEZ ESCO

The panel concentrated on the role of the building sector in achieving the clean energy transition, as the Russian aggression has meant that more countries are trying to shift resources. **Katarína Nikodemová** asked the panellists questions about the state of renovations in their countries, and what they thought were the main challenges of the transition towards greener buildings, sustainable financing of complex renovations or the dilemma of deep versus rapid renovations.

Lívia Vašáková, Director General of the Recovery Plan Department at the Government Office of the Slovak Republic, said that **energy efficiency is becoming a priority** not just in the EU but in Slovakia as well. The recovery and resilience plan contains provisions on building renovations and recycling the waste produced. **More centralised facility management** should be a key target for Slovakia in order to achieve financial savings and improve energy efficiency.

Justyna Glusman, Managing Director at Fala Renowacji, drew attention to the situation in Poland, where the building stock is old and 70% of buildings require renovations. Poland has a plan but it has not been translated into an operational program. Since the majority of buildings are privately owned, it is difficult to get



them to switch away from fossil fuels given the war in Ukraine and the economic situation. **As a result these plans are becoming obsolete and need updating.** There have been developments, but Poland needs to revise the plans to make renovations more affordable **so citizens can shift away from solid fuel sources.**

András Reith, CEO, Advanced Building and Urban Design, explained that his company deals with green certificates for buildings, research and development and consultancy for municipalities. The most important message is that an **interdisciplinary and cross-sector approach to cooperation** in this sector is crucial, especially with social scientists.

Ľubica Šimkovicová said that passive house standards are not obligatory under the Slovak legislation, which is unfortunate because **these standards are a key means of influencing energy efficiency but are a basis for EU legislation.** There are five criteria which need to be fulfilled besides the methodology and calculation (e.g. good insulation and air tightness). Buildings can be both aesthetic and functional, while meeting the energy efficiency standards of the passive house standard. **Interest in passive houses has been growing but should be incentivised by government support.** Moving from passive houses to zero energy buildings requires just a small step.

Lenka Vaněk, Head of Innovation and Decarbonisation, ČEZ ESCO, stated that EPC (**energy performance contracting**) projects have been implemented in municipalities in the Czech Republic with good results. Calculations are used to find the best solutions for achieving the largest possible savings in buildings, but these work better in the Czech Republic than in Slovakia. **This is because of the lack of trust between companies, the public sector and the government in Slovakia.** The initiative is difficult to implement and the Czech Republic struggled at the beginning, but now the EPCs are very effective.

Katarína Nikodemová asked a follow-up question about how buildings can become leaders in energy efficiency. **Justyna Glusman** said **we need common standards that set**



a minimal level of energy efficiency. However, it will be very difficult to find the political will to adjust to stricter levels. Poland should be supporting this goal, whilst also **countering energy poverty and transitioning away from fossil fuels.**

Ľubica Šimkovicová stated that the legislation is ineffective in motivating institutions to renovate to improve energy efficiency. **Thus, there is a need for strict legislation.** **Lívia Vašáková** continued by saying that we need to start renovating as soon as possible to reach the benchmark. Moreover there is no central facility management for public buildings. For example, primary school renovations are the responsibility of the head of the school. **We need to centralise management and start robust renovations without raising benchmarks.**

Justyna Glusman added that in the public sector **we need to motivate the authorities to be more active and to build efficient buildings.** **András Reith** said property development was not the core business of the private sector and the authorities lack knowledge of property management so they are failing to stick to budget. **The public sector could set a good example of how to build an energy-efficient building** within a budget and make that obligatory for the private sector.

Katarína Nikodemová asked a follow-up question on whether there is a dilemma between quick but poor quality solutions and slow but robust good quality ones. **András Reith** replied that every project is different. There are three steps in a project: looking at how to reduce demand, how to improve efficiency and how to cover what remains. There is no need to concentrate on the end result, on high-hanging fruit that cannot be reached. It is best to start with the easily performable steps.

Lívia Vašáková emphasized that we need a central coordinating institution to gather data in Slovakia for public buildings. **Ľubica Šimkovicová** said that public buildings should motivate others and demonstrate how it is done. Money should be spent on public buildings to motivate investment.

Panel VII.

Making use of waste and secondary materials in cities

Chair

Diana Motúzová, Editor, Energie-portal.sk

Speakers

Tamás Jászay, Power Plant Director, Metropolitan Waste to Energy Plant – Budapest Utilities (BKM)

Miloš Kužvart, Executive Director, Czech Association of Circular Economy

Ivana Maleš, Institute of Circular Economy

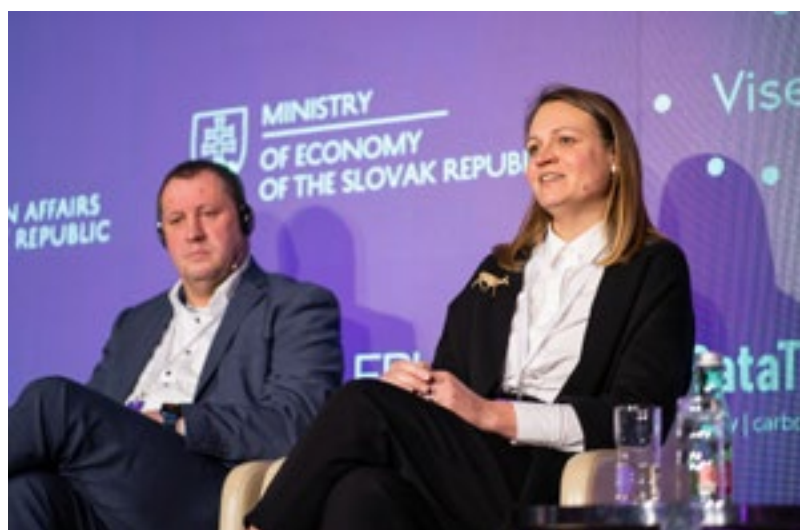
Miroslav Mravec, Technical Director, Veolia Energia Slovensko

Michal Struk, Sustainability and Circularity Institute

Diana Motúzová, editor of Energie-portal.sk, opened the panel by emphasising that the case for a rapid clean energy transition has never been stronger. She suggested that the deployment of renewables is crucial, but **that waste usage also plays an important role.**

Tamás Jászay, Power Plant Director of the Metropolitan Waste to Energy Plant of Budapest Utilities, talked about the specific nature of the fuel used in power plants. He said that **his work lies somewhere between waste management and energy generation.** Jászay noted that Budapest uses municipal solid waste, which has a heating value of around nine gigajoules per ton. It is similar to the value of low-quality lignite. Approximately two-thirds of the 600,000 tons of waste goes to energy plants and the rest to landfill sites. Roughly 8% of Budapest's district heating comes from its energy plant, while the rest is gas-fired. **They can therefore replace the imported Russian gas by increasing capacity.**

Miloš Kužvart, the Executive Director of the Czech Association of the Circular Economy, stated that **the EU needs to be aware of the differences in the economies of its member states.** It should take into consideration the readiness of its members when it comes to the Green Deal but also the circular economy. Kužvart **called for**



unified standards and reiterated that waste can contribute to energy security. He also mentioned that biomass can be used in biogas plants and that this could become more important in big cities in the future. According to the Executive Director of the Czech Association of the Circular Economy, not only do they produce biomethane but the by-product can be used in areas with sensitive water resources. He therefore considers them to be a “win-win-win” strategy.

Ivana Maleš of the Institute of the Circular Economy started by comparing the circular economy to the linear economy. In the linear economy, we extract natural resources, turn them into products, distribute them, consume them for a short period, and then they become waste. By contrast, **the circular economy is about getting us to use materials for longer.** It is based on the assumption that local means more sustainable. Maleš noted that the aim in the circular economy is to reduce the amount of residual waste. **Its primary goal is waste prevention,** followed by recycling, energy recovery and landfill disposal. In other words, the circular economy is not about waste but about reducing the amount of materials used. She added that while the average global circularity level is above 8%, Slovakia’s is approximately 6%.

Miroslav Mravec, Technical Director of Veolia Energia Slovensko, talked about the production of low-carbon gases in Žiar nad Hronom. He emphasized that Žiar nad Hronom took an approach inspired by Budapest: rather than burning resources, it decided to gasify them. Mravec said that they aim to produce synthetic gas which can be used for heat production as well as to extract green methane and green hydrogen. The impact on the region would be significant: Mravec believes **it could supply energy to the whole city of 7,000 households.** He also highlighted the importance of waste plant logistics considering the Slovak level of gasification.

Michal Struk, from the Sustainability and Circularity Institute, discussed the technical side of the circular economy. He showed the audience a picture depicting the three parts of the waste process: waste generation, waste collection and subsequent treatment. Struk

stressed that the last two parts have improved significantly. The problem is the very first part of the process, which is often omitted from the discussion. We can save a great amount of money by collecting waste properly. Struk reiterated that **creating energy from waste should not be our primary goal** but the by-product. He believes it is vital to set the right goals.

Nonetheless, **Struk** recognises that in the circular economy there is also a small arrow that represents the residual material. Landfills should be considered a **minority solution**, but they **cannot be fully eliminated** because they serve as a reserve capacity in case of emergencies.

Later in the discussion, the speakers discussed the broader issue of reducing emissions. **Mravec** mentioned that Slovakia has been using hydrogen for further development: for example, in Blatná na Ostrave hydrogen has been blended with natural gas for a pivotal experiment. **Kužvart** emphasised the importance of the upcoming second delegated act on the environmental objectives of the EU Taxonomy. He also said that sorting facilities should be considered part of critical infrastructure by the EU, but also Hungary, the Czech Republic, Poland and Slovakia.

In response to audience questions, **Jászay** said waste incineration plants are more of a solution than a problem, as his group is now generating energy at the lowest price for district heating in Budapest. **Maleš** added that it is important to consider how we should plan for the amount of waste Central Europe will have. She concluded that it should be our ambition to avoid ending up like countries such as Denmark which import waste from other nations.



Concluding Remarks

Veronika Oravcová, Executive Director of the Conference and Analyst at the Slovak Foreign Policy Association, thanked all the partners, speakers and the organising team. She reiterated that the Russian invasion had been a shock to European security and that the war highlighted our vulnerability in the energy sector, and she stressed the need for the green transition to be part of Ukraine's reconstruction process. There are three takeaways from the conference. In the first place, **energy security can easily be reconciled with decarbonisation** and energy security. Rather than being mutually exclusive, they support one another. Secondly, the conference emphasised **the importance of regional cooperation** which Ukraine is taking further. Finally, **decarbonisation has many facets** as the panels on hydrogen, grid management and waste showed and we need to redirect the political will to focus on solving these issues.



Roundtable discussion I:

Regional cooperation and solidarity in the natural gas sector ahead of next winter

Chair

Martin Jirušek, Assistant Professor, Masaryk University

The roundtable discussion focused on lessons learned from the energy crisis and what the Central European Region offers in terms of the solidarity principle in the EU. The first point mentioned was that solidarity has changed and has now become more a means of survival. During the discussion, **the use of Ukrainian gas storage** in the transition towards renewable sources of energy was highlighted as a substitution for Russian gas. To share the challenges of diversification, gas storage in Ukraine could be used through a burden sharing agreement.





A lesson learnt on solidarity, which was highlighted by several participants, is that **demand has to be targeted, not just supply, as has been the case until now**. That cannot be achieved through lower prices for customers as it only incentivises greater demand. We should focus more on demand and energy efficiency.

Overall, we need a change of market design as the gas market **is not liquid and that was part of the reason for the crisis**. The role of **regulators** is most important, since they control the share of Russian gas on market. They should be **given more power to make companies and customers play by the rules**. Moreover, market coupling and liberalisation are good things in the EU but we should also look at how the state intervenes.

There was also a remark about individualistic thinking among EU member states and that the **EU should have a joint approach** to achieve a positive outcome. There was also agreement among participants that **Russian gas will not feature** in the energy mix of EU member states after the invasion of Ukraine.

Regarding achieving solidarity, we have strong tools, e.g. financial ones for building the needed infrastructure and there are different takes on common gas purchases. Key infrastructure will be interesting for investors and now is the time to act on district heating solutions. It was concluded that in the **end the market will decide which solutions** will achieve solidarity but **we have to enforce that**.

Roundtable discussion II:

Decarbonisation through the V4 experience. What have we learned?

Chair

Michal Hrubý, Research Fellow, EUROPEUM Institute for European Policy

Speakers

Dóra Csernus, Senior Climate and Environmental Policy Expert, Equilibrium Institute

Alžbeta Gavalcová, Junior Researcher, Slovak Foreign Policy Association

Tatiana Mindeková, Junior Researcher, EUROPEUM Institute for European Policy

Wojciech Szymalski, Director, Institute for Sustainable Development Foundation

The roundtable discussion was centred around a EUROPEUM analytical publication in partnership with the SFPA, INE-ISD and the Equilibrium Institute about the V4's experiences of decarbonisation and the decommissioning of coal power plants. The aim of the publication was **to summarise the coal phase-outs in the V4 countries**, focusing on the involvement of civil society organisations.





Based on the analysis of the V4 experience and the lessons learned, recommendations were formulated for Serbia and Western Balkans. The V4 countries differed slightly in coal share of the energy mix, with Poland having the largest and the Czech Republic the second largest, followed by Hungary and Slovakia. Commitments to phase-out coal also had different deadlines, with Poland coming latest in 2049, followed by the Czech Republic in 2033, and Slovakia and Hungary being the earliest in 2023 and 2025 respectively.

Their approaches to decarbonisation share similarities and differences and thus provide a range of beneficial experiences and “experiences-to-avoid”. One positive example that came up during the discussion was **miners in Horná Nitra, Slovakia, growing tomatoes, mushrooms and breeding catfish**. In Hungary and Slovakia, “**green plates**” promote green transportation. Negative examples included the **lack of cooperation between civil and local society and the government**. In Poland, there were **regional differences** in the phase-out, with some regions having different strategies from others. It was concluded that local **participation remains key to the transition and that reskilling programs are needed for a just transition**. Participants also asked about the potential for further **developments in geothermal energy**, which could be a solution for Serbia, as well as for Slovakia, since they share similar geological conditions.

