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Next Gen Energy 2035+ Conference

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Abstract

The NextGen Energy 2035+ conference focused on the key challenges facing the Czech energy sector in the context of its transformation toward a low-emission economy. Deputy Speaker of the Chamber of Deputies Karel Havlíček outlined the core principles of future energy policy: “We are all heading toward low-emission energy, and it should be built on two main pillars – nuclear energy and renewable sources.” Havlíček emphasized that this transformation must be guided by logic, physics, and economics, not by green ideology or modern-day messianism.

Key Topics

- Safe energy at a fair price
- Modernization and construction of nuclear power plants in the Czech Republic
- Integration of renewable energy sources into the Czech energy sector
- The road to a modern energy sector through innovation and digitalization

REPORT

Introduction

The main topic of the event was how to ensure energy security while maintaining affordability for both households and businesses. “Energy security is, first, about diversification; second, about availability; and third, about price—and we need to balance all three very smartly and effectively,” explained **Karel Havlíček**.

According to Havlíček, a key challenge lies in the regulated component of electricity prices, which currently accounts for approximately 50–60% of the total cost and represents around CZK 100 billion annually. “We need to reduce electricity prices by about 20 to 25%. That means we need to cut the regulated component roughly in half,” said the Deputy Speaker of the Chamber of Deputies.

He emphasized the need to rely on nuclear energy and renewables as the fundamental pillars of the future energy mix. At the same time, he cautioned against a hasty departure from coal before alternative sources like gas and renewables are sufficiently developed.

Panel 1: Safe energy at a fair price

The current transmission network has its limits, and potential technical issues were highlighted by **Václav Bartuška**, the Special Envoy for Energy Security at the Ministry of Foreign Affairs: “The Germans have already long been below the level that Spain was at during its blackout.” With this, he pointed to the increasing instability of the European transmission system, particularly west of the Czech border.

Panelists agreed on the urgent need for further investments to stabilize distribution networks in response to the growing energy demands of the 21st century.

Jiří Šimek from Innogy added that renewable sources must be properly managed to avoid risks to electricity supply. “Uncontrolled sources do not contribute to energy security; on the contrary, they can destabilize it. The key lies in managing flexibility, energy storage, and the ability to integrate these sources,” he explained.

The financing mechanism for the energy transition was clarified by **Jiří Koželouh** during the VIP talk: “When emission allowances are sold, the proceeds are then used to fund the modernization of the energy sector.”

Panel 2: Modernization and construction of nuclear power plants in the Czech Republic

The discussion on nuclear energy was shaped by a recent court decision to delay the final agreement on the construction of new units at the Dukovany nuclear power plant, as well as by the actions of French suppliers and their political allies. “EDF repeatedly claims in public that KHNP’s offer is ‘too good to be true.’ I won’t even dignify that statement with a response,” said **Alois Míka**, advisor to KHNP in the Czech Republic, defending the transparency of the tender process and the quality of the Korean bid.

The main topic was the construction of new energy sources and the ongoing proceedings concerning Dukovany. “Every month of delay is already having an impact. Instead of saying 2036, we should now start talking about the turn of 2036–2037,” warned **Petr Závodský**, CEO of Elektrárna Dukovany II, about the consequences of postponements.

“We are unfortunately marking 25 years since the planning of new nuclear power sources in the Czech Republic first began,” reminded **Daneš Burket** from the Czech Nuclear Society, underlining the economic consequences of prolonged delays on energy prices, which he believes could ultimately reduce the overall profitability of the project.

Panelist **Tomáš Kubín** highlighted the lack of independence EU member states have in defining their own energy mixes, stressing the need for a new strategy to assert national interests in Brussels. “If your parliament—or the next one—manages to push through something like that [tools to defend national interests; author’s note], it will be for the better. We are heading into very turbulent times,” he explained.

Panel 3: Integration of renewable energy sources into the Czech energy sector

The following panel focused on renewable energy sources, highlighting the complexity of integrating them into the Czech energy system. “Wind turbines and photovoltaics are two of the most effective ways to reduce emissions while maintaining competitiveness,” said **Martin Sedlák** from the Modern Energy Union. He also emphasized the potential of new technologies, especially in relation to reducing emissions.

Petr Holub from the Ministry of the Environment presented the Czech Republic’s strategic goals: “We need roughly 15% of our installed capacity in photovoltaics and wind to be matched with storage in MWh in order for the system to be manageable.”

Martina Krčová, a member of the Board of the Energy Regulatory Office, explained the infrastructural challenges the Czech Republic faces. According to her, substantial investment is urgently needed: “When it comes to infrastructure, we simply have to invest in the grid. Many regions are already ‘red zones,’ meaning they can no longer connect new renewable sources,” she explained.

According to **Jiří Šimek** from Innogy, the key to energy security lies in storage and the ability to control energy sources. “Uncontrolled sources do not ensure security; on the contrary, they increase the risk to the energy system,” he said. He warned that current policies neither address nor solve these issues and called for the need to manage decentralized sources through a centralized approach.

Panel 4: The path to modern energy through innovation and digitalization

The final panel focused on the role of digital technologies and artificial intelligence in the energy sector, particularly from the perspective of the economic impacts of the energy transition and the use of AI in supply and demand analytics. “Artificial intelligence enables better demand forecasting, transmission optimization, and modeling of new scenarios for grid management,” explained **Marek Miltner**, an AI researcher for sustainable energy at CTU and Stanford University.

Pavel Tomek from Sokolovská uhelná shared his hands-on experience: “The primary goal was to gradually test how new sources behave within the energy mix and how well they can operate together in a compatible way.”

Lukáš Kovanda, Chief Economist at Trinity Bank, spoke about the associated risks. “Digitalization brings with it the threat of cybercrime and attacks, and we must be prepared for that,” he warned, also pointing out the enormous economic challenges of the transition. According to him, investments of CZK 22 trillion will be needed for transmission networks across the European Union.

Jana Vránková from the Electricity Data Center emphasized the importance of security: “Cybersecurity is essential for grid stability. The volume of data we work with is increasing dramatically.”

Summary

Next Gen Energy 2035+ conference revealed the complexity of the challenges facing the Czech energy sector in the transition to a low-carbon economy. Four pillars of the transformation emerged as crucial:

1. **Energy security** requires diversification of sources and stable supply while maintaining affordability. Karel Havlicek articulated a key message: 'We cannot afford to shut down something that is not replaced by another source, only under political, environmental or other pressure.'
2. **Nuclear power** remains a strategic pillar, although the current delay in the construction of new units creates risks for energy security. As Danesh Burket noted, “As consumption grows and as we shut down coal plants, we will have no choice but to build three or four new units.”
3. **Renewables** are an essential part of the mix, but their integration requires significant investment in networks and control systems. Martin Sedlák summarized their importance: “Investments in renewables are investments in our future, both economic and climate.”
4. **Digitalization and innovation** are key to managing the complex energy system of the future, but they bring new cybersecurity risks and require new competences.

All participants agreed on the need for continuous dialogue between all actors - the state, industry, academia and the public - as the basis for a successful and sustainable energy transformation of the Czech Republic. Something that is currently not happening intensively.

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Karel Sál studied political science at the Institute of Political Studies, Faculty of Social Sciences, Charles University, where in 2016 he defended his dissertation entitled Democracy in the Crisis of Disinterest: the effects of the use of online elections in the electoral process of selected countries. His professional interests include e-Government, internet elections and information freedom. He is the author of several articles, speaks at international conferences and is the founder and editor of the think-tank e-politics.cz.

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