Visegrad Fund

REGULATION OF UTILITY SERVICES IN CZECHIA (REVIEW OF IMPORTANT INITIATIVES)

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1. Liberalization of the Energy Market

The Czech Republic's energy sector underwent a significant transformation with the liberalization of its electricity and gas markets, introduced by the Czech Energy Act (Act No. 458/2000 Coll.). A fundamental innovation was the division of energy pricing for the end customer into regulated and market-based components.

The determination of the number of regulated components for transmission, distribution, and renewable energy sources is fully within the competence of the Energy Regulatory Office of the Czech Republic (ERO), which was established by this law in 2001. In this field, ERO optimizes the number of regulated fees to fulfil its two basic goals - maintaining the sustainability of fees for the customer while covering the costs necessary for developing the transmission and distribution system. The share of the regulated component of the electricity price has been approximately 50% of the final price, excluding tax, in recent years.

Liberalization of the electricity market went hand-in-hand with the opening of the power electricity market to competition. ERO is responsible for licensing electricity traders who are authorized to sell electricity to customers who purchase it on the energy exchange. Under the supervision of ERO and OTE (Czech Nominated Electricity Market Operator NEMO), electricity has been traded in the Czech Republic on the PXE (originally Prague Energy Exchange, now part of Deutsche Börse Group) since 2007, integrating the Czech market into the European one. This framework ensures that energy prices are shaped by market dynamics rather than centralized control, promoting competition and consumer benefits by simplifying supplier switching.

Recently, ERO launched an online comparison platform in 2020, which facilitates consumers to compare electricity and gas suppliers in real-time based on pricing, service quality, and contract flexibility. This system links consumer pricing plans to real-time market conditions, reflecting supply-demand fluctuations and renewable energy availability. The platform also supports the EU's Renewable Energy Directive (2009/28/EC), allowing users to find green energy options that align with their preferences. For example, during periods of high solar or wind power generation, electricity costs drop, encouraging users to shift consumption to greener and off-peak times.

This market-based framework also promotes efficiency by driving suppliers to optimize operations and innovate. It marks a departure from fixed tariffs of the past, rewarding companies offering competitive rates and enhancing renewable energy's role in the grid. Ultimately, market-based pricing aligns with the long-term energy policy goals, including sustainability, adequacy and grid reliability.

2. Investment in Renewable Energy

The Czech Republic has set ambitious targets for green energy generation as part of its commitment to reducing carbon emissions and increasing renewable energy sources. This is in line with the EU Renewable Energy Directive (2009/28/EC) and the Czech Energy Act (Act No. 458/2000 Coll.), both of which promote the transition to low-carbon, sustainable energy systems.

The Czech Republic has long been committed to fostering renewable energy production, with one of the key tools being the Feed-in Tariff (FiT) system, which has been introduced in legislation for small hydropower plants and wind turbines since the 1990s. A notable example of a FiT program is the support for small-scale biogas installations with a particular focus placed on agricultural businesses. These facilities receive financial incentives to convert organic waste, like agricultural residues, into biogas, which is then used to generate

electricity. This not only supports renewable energy generation but also addresses waste management challenges, creating a circular economy for agricultural by-products.

FiTs in the Czech Republic are governed by the Energy Regulatory Office (ERO), which manages the allocation of tariffs for various renewable energy sources. These tariffs are designed to guarantee long-term stability for renewable energy producers, thus reducing the financial risks and making investments in green technologies more attractive, ensuring that producers receive a fixed price for the electricity they generate and feed into the national grid. The success of FiTs in the Czech Republic is evident in the increase in private sector investments in green energy technologies. By offering guaranteed prices for renewable electricity, the system has effectively reduced the perceived risks of renewable energy investments, allowing it to grow into a competitive segment of the country's energy market. Fit system is financed by RES fee paid as electricity price component by consumer and costs several billion CZK per year.

Recently, a key initiative in supporting these goals is **the New Green Savings Programme** (NZU – *Nová zelená úsporám*), following the Green Saving Programme (2009–2012), introduced by the Ministry of the Environment and administered by The State Environmental Fund of the Czech Republic. NZU is recently one of the most effective programmes in the Czech Republic focused on energy savings in family houses and apartment buildings. Phase I of NZU was launched in 2014 and ran through 2021. The programme provided subsidies for households and businesses to install solar panels and adopt other renewable energy technologies. The programme focuses on reducing the energy consumption of residential buildings (through insulation), construction or purchase of houses with very low energy consumption, environmentally friendly heating methods, renewable energy sources, and currently also adaptation and mitigation measures in response to ongoing climate change. During the 2014-2021 programming period, 77,000 beneficiaries benefited from its support and were paid a total of 11 billion CZK. The New Green Savings Programme was funded by revenues from the sale of EUA (European Union Allowance) and EUAA (European Union Aviation Allowance) units. The new programming period (Phase II of NZU) started in 2021. The source of funding is The Next Generation EU Fund, through the National Recovery Plan. The EU's Recovery and Resilience Facility (RRF) is a temporary instrument that is the centrepiece of NextGenerationEU—the EU's plan to emerge stronger and more resilient from the current crisis. Through the Facility, the Commission raises funds by borrowing on the capital markets (issuing bonds on behalf of the EU). These are then available to its Member States, to implement ambitious reforms and investments. In total, over the course of this program, 287,000 projects were supported with overall allocation of 57 billion CZK, resulting in the average investment support of about 200,000 CZK per project (www.https://novazelenausporam.cz). Participants who install renewable energy systems can also feed excess electricity back into the grid, contributing to the national energy supply. This supports the country's renewable energy targets and plays a significant role in reducing reliance on traditional fossil fuels.

3. Energy Efficiency

The Czech Republic's progress in energy efficiency is driven by national legislative frameworks, which have laid the groundwork for innovative programs aimed at reducing energy consumption and costs. Key among these is the Energy Management Act (Act No. 406/2000 Coll.). Unlike earlier policies, which concentrated heavily on industrial energy reduction, these regulations prioritize the construction sector—a key contributor to energy consumption and greenhouse gas emissions. This law mandates stringent energy standards for new construction and incentivizes retrofitting older buildings to modern efficiency levels. This approach recognizes

that buildings account for a significant share of national energy use and that addressing this sector is essential for achieving the Czech Republic's climate and energy goals.

The New Green Savings Programme (see Point 2) aligns with the Clean Energy for All Europeans Package by incentivizing energy-efficient building renovations and renewable energy installations. Subsidies cover improvements such as modern insulation, energy-efficient windows, and advanced heating systems.

A landmark measure introduced in 2016 requires all new public and residential buildings to achieve nearly zero-energy building (nZEB) standards. These rules, codified under the Building Energy Performance Act and supported by the State Energy Policy, ensure that new developments incorporate advanced insulation, efficient lighting, and renewable energy technologies, such as solar panels and heat pumps. Public buildings, in particular, are required to serve as role models in sustainability by integrating renewable energy systems as part of their design.

A small smart grid system is another area that has been receiving a support. It involves setting up a more tailored framework that assists in managing electricity generation, consumption, and distribution efficiently in a smaller, localized grid. The support system in a small smart grid can help balancing supply and demand in real-time, managing demand response, integrating of energy storage systems (e.g., batteries), responding to outages or grid faults. This framework helps contribute to self-sufficiency for small businesses, residential areas, or even local microgrids.

By fostering a culture of sustainability through targeted legal measures and consumer-focused programs, the Czech Republic is reducing energy consumption, cutting costs, and decreasing reliance on fossil fuels. These efforts are vital steps toward achieving the nation's 2030 energy and climate targets while benefiting consumers and the environment alike.

4. Emission Trading and Market Dynamics in the Czech Republic

The Czech Republic is a part of the EU Emissions Trading System (EU ETS), which has been designed to cap and reduce carbon emissions in the power sector since 2005. Under this system, power plants and large industrial facilities must hold allowances for every ton of CO2 emitted, with the overall emissions cap gradually decreasing over time. Through the Energy Management Act Act No. 406/2000 Coll and Air Protection Act Act No. 201/2012 Coll, the Czech government ensures compliance and allocates allowances while monitoring emissions.

In the Czech Republic, companies must buy emission allowances (EUAs) to cover their CO2 emissions under the EU Emissions Trading System (EU ETS). The Czech Power Exchange (PXE) plays a key role in this market by facilitating the buying and selling of allowances, helping companies meet their carbon obligations efficiently and in a competitive environment. The cost of carbon, reflected in the price of allowances, provides an incentive for companies to adopt cleaner technologies. For instance, major energy producers like ČEZ are motivated to invest in renewable energy and energy efficiency, as reducing emissions not only helps meet regulatory requirements but also creates a revenue stream by selling excess allowances. Companies with lower emissions can profit from selling surplus allowances, while those with higher emissions may need to buy more to comply with their limits.

The Energy Regulatory Office (ERO) plays a key role in enforcing regulations and overseeing the allocation of emission allowances. To encourage further reductions, the country is shifting from free allowance allocation to auctioning, which better aligns with market-based mechanisms for reducing emissions. This system is

crucial to meeting the EU's climate targets, including a goal to reduce greenhouse gas emissions by 55% by 2030.

5. National Energy and Climate Plan – Evidence-based and consultations process

The European Climate Law (Regulation (EU)2021/1119) has introduced the European Union's commitment to become climate neutral by 2050 and to reduce GHG emissions by at least 55% in 2030 relative to 1990, as the European contribution to the achievement of the Paris Agreement goals. During 2024, The Commission recommended reducing the EU's net greenhouse gas emissions by 90% by 2040 relative to 1990. In EU's 2040 target communication, the Commission breaks down the 90% emission reduction target into less than 850 MtCO2 remaining emissions by 2040 with a maximum of 400 MtCO2 removed through industrial and land-based solutions. Whilst the Communication does not impose any legally binding obligations on the EU, it will serve as the basis for a forthcoming Commission proposal to amend the European Climate Law as part of the post-2030 climate policy agenda. The proposal is expected to be adopted by the Commission in the first quarter of 2025. Once approved, the 2040 target will serve as the basis for the EU's updated Nationally Determined Contributions under the Paris Agreement, to be submitted ahead of COP30, in November 2025.

The National Energy and Climate Plans (NECPs) were introduced by the Regulation on the Governance of the Energy Union and Climate Action (EU)2018/1999, agreed as part of the Clean Energy for All Europeans package, which was adopted in 2019. The NECPs are the key input to preparing the EU's NDC. Based on the final NECPs, as prepared by each EU Member State (by the end of 2019), the Commission published a detailed EU-wide assessment of the final NECPs (September 2020). By the end of June 2023, Member States were due to submit their draft updated NECPs in line with Article 14 of the Governance Regulation. On 24 October 2023, the Commission published its technical assessment of the NECP progress reports towards meeting the EU's energy and climate objectives and on 18 December 2023, the Commission published its EU-wide assessment of the draft updated NECPs, together with individual assessments and country-specific recommendations for the 21 Member States (that submitted their draft plans in time). Member States were due to submit their final updated NECPs by 30 June 2024, but even now (November 2024), several EU MBs have not yet submitted the final updated NECP, including the Czech Republic.

The Czech Republic submitted a draft of the updated NECP in October 2023, while a final updated NECP has been widely discussed since then. The Czech Republic belongs to a few EU Member States, which have not submitted the final updated NECP yet (November 2024).

Still, there are several examples of good practice. At first, a draft of the updated NECP, together with the updated State Energy Policy and Climate Protection Plan, was prepared in close collaboration between the Ministry of Industry and Trade and the Ministry of the Environment. A NECP platform has been established (coordinated by the Ministry of Industry and Trade) that includes representatives from other ministries, business associations, trade unions and NGOs. Third, the preparation of all of these three documents is based on evidence coming from independent research; specifically, the results from modelling the scenarios of energy transition become one of the key inputs. Charles University built and applied a couple of impact assessment models, including the energy system TIMES model, the macro-econometric global E3ME model, and a micro-simulation model, whilst the results from the energy system optimisation were validated by the Czech TSO (ČEPS) using a dispatch unit-commitment model PLEXOS.