Hooked on gas

Report on the status of national energy and climate plans in central and eastern Europe



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Introduction

National energy and climate plans (NECPs) are 10-year strategic documents detailing how EU Member States plan to reach the EU's 2030 energy and climate targets.¹ The plans were initially drafted by EU Member States and submitted to the European Commission in 2019. All Member States have since been required to submit updated drafts to the Commission. These drafts are currently being revised in bilateral consultations between the Commission and Member States. The final updated NECPs must be submitted to the Commission by 30 June 2024.

As the key strategic tool for establishing the national climate policies of Member States, NECPs should reflect the collective climate ambition of the EU. However, the Commission's EU-wide assessment of the draft NECPs, released in December 2023, projects that these efforts will fall short of the EU's green transition target of a 55 per cent reduction in greenhouse gas emissions by 2030. This shortfall is mainly due to the slow pace of phasing out fossil fuels and the lack of sufficient measures to support the transition.²

One of the key recommendations from the Commission's assessment is for Member States to provide a 'clear and credible' timeline for phasing out fossil fuel subsidies, a major barrier to achieving the EU's climate objectives. Yet, Member States are failing to articulate, even in theory, how they will achieve the emissions reductions needed by 2030. To reach this goal, the EU needs to accelerate its transition away from fossil fuels. Unfortunately, despite international agreements, commitments to climate neutrality, and the rapidly worsening impacts of climate change, Member States remain reluctant to commit to phasing out fossil fuels, especially fossil gas.

Amidst the climate crisis, many Member States are still investing in gas infrastructure, which will increase gas consumption and prolong the use of fossil gas, despite the availability of better alternatives. Indeed, the NECPs of some Member States explicitly state their intention to maintain or even increase fossil gas consumption. This sends the wrong message to the energy sector, encouraging long-term investments in fossil gas that undermine the EU's ambitions and set its energy transition up for failure.

This lack of clarity about gas phase-outs in the NECPs exposes inconsistencies within EU policy regarding net-zero goals and the declining role of fossil gas in future energy systems. In their recent assessment, the European Scientific Advisory Board on Climate Change highlights the existence of these disparities in the Trans-European Networks for Energy (TEN-E) Regulation, the Gas Directive and Regulation, State Aid rules, and the EU Taxonomy.³ All of these regulations contain loopholes that perpetuate the use of fossil gas, despite the EU Emissions Trading Scheme signalling the need to phase out fossil fuel use in the power and heat sectors.

Setting clear deadlines for the fossil gas phase-out, similar to those established for coal and oil shale by many Member States, would accelerate the implementation of policies aimed at transitioning away from

¹ European Parliament, Council of the European Union, <u>Regulation on the Governance of the Energy Union and Climate Action</u>, *EUR-Lex*, 21 December 2018.

² European Commission, <u>EU wide assessment of the draft updated National Energy and Climate Plans: An important step towards the more</u> <u>ambitious 2030 energy and climate objectives under the European Green Deal and REPowerEU</u>, *EUR-Lex*, 18 December 2023.

³ European Scientific Advisory Board on Climate Change, <u>Towards EU climate neutrality: Progress, policy gaps and opportunities</u>, *European Scientific* Advisory Board on Climate Change, January 2024.



fossil gas. Climate Action Network (CAN) Europe and climate think-tank E3G have also pointed out the absence of policies aimed at reducing gas consumption within the NECPs,^{4,5} a critical oversight that could have long-lasting impacts on citizens and the climate.

As Member States pursue their paths to climate neutrality, it is imperative that EU climate policy prioritises the permanent reduction of fossil gas consumption and develops a strategy for its rapid phase-out. However, the Commission has not yet formally requested Member States to incorporate such measures into their NECPs, leaving the door wide open for fossil gas. Failing to outline fossil gas reduction pathways raises the risk of short-sighted and misguided investments in fossil gas infrastructure and the prospect of fossil gas lock-in.

This publication highlights the need for gas phase-out pathways and identifies shortcomings in the current draft NECPs of eight central and eastern European Member States – Czech Republic, Estonia, Hungary, Latvia, Romania, Slovakia, Bulgaria, and Poland. It provides a summary of each country's NECP, detailing gas consumption projections for 2030 under 'with additional measures' (WAM) scenarios along with gas infrastructure plans. The briefing concludes with a list of recommendations, including that the Commission require Member States to add clear fossil gas phase-out dates and pathways with actionable milestones to their NECPs.

⁴ Charlotte Liebrecht, Raphael Hanoteaux, <u>Charting the course for EU gas sector transformation: Assessing National Energy and Climate Plans</u>, *E3G*, March 2024.

⁵ Climate Action Network Europe, <u>Time to step up national climate action: An assessment of the draft National Energy and Climate Plans updates</u>, *Climate Action Network Europe*, October 2023.

Why gas phase-out pathways in NECPs are needed

NECPs were introduced as part of EU legislation governing climate action in support of the Paris agreement's commitment 'to limit the [global] temperature increase to 1.5 °C above pre-industrial levels'.⁶ The Regulation on the Governance of the Energy Union and Climate Action states that 'the Union should aim to achieve a balance between anthropogenic greenhouse gas (GHG) emissions by sources and removals by sinks as early as possible', while the EU Climate Law stipulates that carbon neutrality must be by 2050 at the latest.⁷

However, many of the emissions reductions scenarios outlined by the Inter-Governmental Panel on Climate Change rely on large-scale carbon dioxide removal (CDR),⁸ which is not currently commercially feasible and its future feasibility remains highly uncertain.⁹ Therefore, the EU's climate policy cannot rely on the unrealistic deployment of CDR.¹⁰ Instead, maximum effort must be directed at slashing fossil fuel use. Even considering expected improvements in CDR, global gas consumption needs to decrease by 84 per cent by 2050 compared to 2020 levels.¹¹

Fossil gas is a polluting fossil fuel consisting mainly of methane, an extremely potent greenhouse gas. Over a 20-year period, methane warms the climate 86 times more intensely than carbon dioxide. Lifecycle emissions of fossil gas have been drastically underestimated, with some research showing higher emissions than even coal due to high methane leakage rates.¹² Emissions are even higher for liquefied fossil gas (commonly called liquefied 'natural' gas or LNG), which accounts for almost half of the EU's gas imports.¹³

Therefore, fossil gas represents a major obstacle to achieving the climate goals of the EU. To truly align with the Paris agreement's climate goals, European climate policy must once and for all acknowledge fossil gas for what it is – a highly dangerous fossil fuel. Given that the EU heavily relies on imports to meet its gas needs, reducing dependency on fossil gas, before phasing it out completely, would strengthen energy security in the region. However, the draft NECPs of the eight central and eastern European countries analysed in this briefing place far too much importance on diversifying gas supply as their main strategy for

⁶ European Parliament, Council of the European Union, <u>Regulation on the Governance of the Energy Union and Climate Action</u>, *EUR-Lex*, 21 December 2018.

⁷ Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law'), Official Journal L 243, 9 July 2021.

⁸ Dr Ploy Achakulwisut et al., <u>Global fossil fuel reduction pathways under different climate mitigation strategies and ambitions</u>, *Nature Communications* volume 14, 13 September 2023, summarised in Dr Ploy Achakulwisut et al., <u>Guest post: Why all fossil fuels must decline rapidly to stay below 1.5C</u>, *Carbon Brief*, 26 October 2023.

⁹ Neil Grant et al., <u>The policy implications of an uncertain carbon dioxide removal potential</u>, *Joule*, Volume 5, Issue 10, 20 October 2021, 2593-2605.

¹⁰ CEE Bankwatch Network, <u>Paris alignment: why there is no more space for European public money to finance fossil fuels</u>, *CEE Bankwatch Network*, 14 December 2023.

¹¹ Ploy Achakulwisut et al., <u>Global fossil fuel reduction pathways under different climate mitigation strategies and ambitions</u>, *Nature Communications*, 13 September 2023. See also: Ploy Achakulwisut et al., <u>'Guest post: Why all fossil fuels must decline rapidly to stay below 1.5C'</u>, *Carbon Brief*, 26 October 2023.

¹² Robert W. Howarth, <u>A bridge to nowhere: methane emissions and the greenhouse gas footprint of natural gas.</u> *Energy Science & Engineering*, 15 May 2014.

¹³ European Commission, Liquefied natural gas, European Commission, accessed 18 May 2024.



strengthening energy security. This is a deeply flawed approach, since fossil gas is an imported energy source vulnerable to price fluctuations and geopolitical conflicts.

The Commission regulation governing NECPs outlines three dimensions of energy security. Yet, central and eastern European countries disproportionately focus on just one – supply diversification.¹⁴ Other key dimensions – reducing energy import dependency from third countries and increasing the flexibility of national energy systems, particularly the use of domestic energy sources, demand response, and energy storage – are not given sufficient attention.

The Commission's assessment highlights this lack of focus, noting the inadequate consideration of flexibility, demand response, and energy storage in the electricity sector as well as a general lack of planning for the decline in oil use.¹⁵ Yet, despite its findings, the Commission does not call out these countries for failing to prioritise a reduction in overall energy import dependency beyond reducing reliance on Russia. Just as Member States have a responsibility to reduce their reliance on energy imports to improve energy security, the Commission is equally obliged to hold them accountable for their neglect of this crucial dimension.

The Commission's REPowerEU plan, published in May 2022, highlights the importance of NECPs in driving a reduction in the use of fossil fuels:

Stepped up implementation and ambitious updating of National Energy and Climate Plans (NECPs) are key in delivering the REPowerEU objectives. NECPs have a crucial role in enhancing investor confidence and investment predictability. They provide a good framework for planning and encouraging the reduction of use of fossil fuels.¹⁶

Regrettably, the current draft NECPs do not meet the required level of ambition and fail to outline measures that will adequately decrease the use of fossil fuels. According to a scenario developed by CAN Europe and the European Environmental Bureau, aligning with the Paris Agreement's goal of limiting warming to 1.5 degrees Celsius requires the EU to phase out gas by 2035.¹⁷

However, none of the Member States have set this goal in their draft NECPs. The closest target is Portugal's phase-out date of 2040,¹⁸ which is insufficient and potentially disingenuous given the country's plans to expand LNG infrastructure, with an average lifespan that could continue well into the 2050s. This is just one example of the many contradictions between the emissions reduction scenarios outlined in the NECPs and the actual actions and investments of Member States.

¹⁴ European Parliament, Council of the European Union, <u>Regulation on the Governance of the Energy Union and Climate Action</u>, *EUR-Lex*, 21 December 2018.

¹⁵ European Commission, <u>EU wide assessment of the draft updated National Energy and Climate Plans: An important step towards the more</u> <u>ambitious 2030 energy and climate objectives under the European Green Deal and REPowerEU</u>, *EUR-Lex*, 18 December 2023.

¹⁶ European Commission, <u>REPowerEU Plan</u>, *EUR-Lex*, 18 May 2022.

¹⁷ Climate Action Network Europe, European Environmental Bureau, <u>Building a Paris Agreement Compatible (PAC) energy scenario: CAN Europe/EEB</u> technical summary of key elements, June 2020.

¹⁸ Climate Action Network Europe, <u>Time to step up national climate action: An assessment of the draft National Energy and Climate Plans updates</u>, *Climate Action Network Europe*, October 2023.

Setting a firm phase-out date for fossil gas, along with a clear pathway of related actions, would increase investment clarity in the energy sector. This decisive move would also deprive the gas industry of its easy fallback option – promising to gradually decarbonise gas infrastructure without providing any concrete details. Not only that, it would compel the energy sector to make the necessary changes and prepare for decommissioning, as only a fraction of fossil gas can be replaced by other gaseous fuels compatible with existing infrastructure.

Fossil gas represents a costly distraction for the energy transition, as every investment in gas infrastructure incurs an opportunity cost for developing future renewable energy systems. As long as the NECPs remain vague on the future role of gas, there will be continued public funding for gas investments, potentially locking countries into fossil gas for decades to come. Such a scenario comes with serious consequences.

By the time of the next NECP update in 2033, additional funds would likely be required to undo the investments allocated to fossil gas in the current NECPs.

But these situations can be avoided. Setting clear deadlines for phasing out fossil gas and proactively planning for an energy system without fossil gas would not only provide much-needed clarity on solutions that should be prioritised for investment, but also prevent the creation of more potential stranded assets.



Summary of findings

Country	Coal phase-out date	Fossil fuel subsidies phase-out date	Gas phase- out date	Gas consumption projection (WAM 2030)	Plans for new gas infrastructure	Public funds enabling fossil gas consumption
Bulgaria	2038	No	No	Increase	Domestic gasification, gas extraction, gas transmission infrastructure	Yes
Czech Republic	2033	No	No	Increase	Yes	Yes
Estonia	2035 (oil shale)*	No	No	Same	Maybe, power plants	Maybe
Hungary	2030**	No	No	Decrease	Power plants, interconnection, fossil gas extraction (including shale gas), hydrogen blending	Yes
Latvia	N/A	No	No	Same	Biomethane blending	Yes
Romania	2032	No	No	Same	Gas extraction, power plants, CHPs, pipelines, LNG terminal	Yes
Poland	2049	No	WAM scenario not available	WAM scenario not available	Gas transmission infrastructure, extraction, power plants, LNG terminal, gas storage	Yes
Slovakia	2030	No	No	Increase	CHPs, hydrogen blending, transport investments, LNG terminal	Yes

*The Estonian NECP does not include the date for phasing out oil shale from electricity generation stated in the country's territorial just transition plan.

**The phase-out of lignite-based electricity generation in Hungary is contingent on a major combined cycle gas power plant (CCGT) becoming operational. The plant is expected to launch in 2027 at the earliest.



None of the eight countries have set a date for phasing out fossil gas or devised a plan to phase out fossil fuel subsidies. In fact, most of the countries project maintaining or even increasing fossil gas consumption by 2030, in addition to investing in new gas infrastructure. None of the countries forecast a considerable decrease in fossil gas consumption. While Hungary's WAM scenario projects a slight drop in fossil gas consumption, the country's extensive plans for new fossil gas infrastructure across the entire supply chain raise serious doubts about the credibility of such a forecast.

In the Czech Republic, the timeline for phasing out fossil gas remains unclear. While the country aims to achieve an energy mix free of fossil fuels by 2050, all current energy mix scenarios project the continued use of fossil gas up to that point.

Similar inconsistencies are also present in Romania's NECP, with scenarios forecasting stable consumption of fossil gas. However, these projections directly contradict government statements. Moreover, recent national investments in fossil gas infrastructure and domestic gas production make it very difficult to reconcile the NECP's WAM scenario with the country's actual actions.

Across the region, most countries are already investing or plan to invest in various gas infrastructure projects. In almost all of the countries, public funds are being used to finance these investments, which will involve:

- expanding gas transmission and distribution systems, as well as gas extraction and exploration of new gas deposits (Bulgaria, Hungary, Poland, Romania);
- building gas power plants (Hungary, Poland, Romania, possibly Estonia);
- constructing LNG terminals (Poland, Romania);
- developing fossil gas storage facilities (Poland);
- implementing gas-blending initiatives (Latvia, Slovakia); and
- promoting domestic gasification (Bulgaria).

Policy recommendations

NECPs must serve their purpose in guiding Member States through the energy transition. To achieve the emissions reductions required for climate neutrality, Member States must commit to a consistent and permanent reduction in fossil gas consumption.

The following key actions should be taken to ensure the NECPs effectively address the issue of fossil gas:

- Member States should set a timeline to phase out fossil fuel subsidies in their NECPs.
- Member States should establish a fossil gas phase-out date and pathway with actionable milestones in their NECPs.
- The European Commission should require Member States to include a fossil gas phase-out date in their NECPs.
- The European Commission should require Member States to focus on other dimensions of energy security aside from diversification to reduce dependency on fossil gas and support the development of more decentralised and renewables-based energy systems.



Annex

Country overviews

The following section examines the role of fossil gas in the draft NECPs of Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Poland, Romania and Slovakia. It particularly focuses on the gas consumption projections and plans for gas infrastructure outlined in the NECPs.

Bulgaria

Bulgaria's draft NECP ¹⁹ erroneously frames fossil gas as a transition fuel, promoting increased gas consumption in Bulgaria by 2030 and beyond. This emphasis on gas is mainly evident in the Energy Security sections of the plan, where the key measures focus on diversifying natural gas supply sources and routes, including investments in the gas transmission network.

The NECP outlines activities that will significantly increase gas consumption, such as developing gas transmission infrastructure, promoting local gas extraction, and expanding domestic gasification. In fact, the NECP is blatantly explicit about its fossil gas ambitions: 'Given the trends to promote decarbonisation and the use of low-carbon fuels, natural gas has the potential for significant and sustainable growth in industry, energy and domestic consumption'.

The plan's emphasis on household gasification, based on a measure from the Third National Action Plan on Climate Change (2013-2020),²⁰ newly extended to 2030, is particularly concerning. This initiative could expose an increasing number of households to price volatility, supply uncertainty, and energy poverty due to the unstable and high price of gas.

Currently, only about 4 per cent of Bulgarian households use gas, putting it in a highly favourable position to phase out gas from individual households altogether. However, failure to do so will result in the installation of more gas boilers in the coming years, and require more households to switch and re-invest in their heating systems to comply with the EU's ban on fossil fuel boilers in homes by 2040, imposing an additional financial burden.

The gas extraction plans proposed in Bulgaria's NECP are fundamentally incompatible with reaching netzero emissions by 2050 and will only serve to further increase domestic gas consumption. They would also be massively detrimental to the environment and pose immense climate, economic, and social risks.

These fossil gas plans not only delay Bulgaria's energy transition but also divert crucial funds that could be used to accelerate decarbonisation throughout the country. In its current state, the plan risks locking Bulgaria into fossil fuel dependency for decades to come, jeopardising its ability to reach net zero emissions by 2050.

¹⁹ Ministry of Energy of Bulgaria, Ministry of Environment and Water of Bulgaria, <u>Integrated Plan in the Field of Energy and Climate – The Republic</u> <u>Of Bulgaria (Updated 2024)</u>, *European Commission*, 21 February 2024.

²⁰ Ministry of Environment and Water of Bulgaria, <u>Third National Action Plan on Climate Change for the Period 2013-2020</u>, *Ministry of Environment and Water of Bulgaria*, May 2012.



Czech Republic

Although a phase-out date for fossil gas is not explicitly stated in the Czech Republic's draft NECP,²¹ its eventual phase-out is implied by the plan's target of a fossil fuel-free energy system by 2050.²² However, this target lacks support in the form of clear and actionable measures.

At any rate, the 2050 target is contradicted by the numerous mentions of new gas infrastructure in the NECP, along with the projected continued use of gas in different sectors. Additionally, all emissions scenarios outlined in the NECP include gas as part of the national energy mix until 2050, further highlighting the inconsistency between the stated target and the proposed energy pathway.

Estonia

The draft NECP²³ for Estonia does not set a phase-out date for fossil gas. Although the emissions scenarios predict that the current gas consumption level will be maintained until 2030, with a gradual decrease expected from 2030 to 2050, there is no concrete plan for achieving this decline.

The NECP forecasts a decrease in the consumption of fossil gas across the buildings, industry, and transportation sectors. However, it also envisions that fossil gas will still be used to cover peak electricity demand and provide reserve capacity. Ominously, it also warns that gas consumption may increase if additional gas power plants are built.

Although fossil gas consumption should decrease gradually by 2050, the NECP does not exclude building new fossil gas power plants, as the government claims they may be necessary to cover peak load and balance the renewables-based electricity system. In theory, these power plants are initially expected to blend fossil gas with biomethane to reduce emissions, and eventually run fully on biomethane. However, this raises cost and sustainability concerns and very likely will never happen.

The NECP also promotes exploring the possibilities of blending hydrogen into the existing fossil gas infrastructure without critically questioning the inefficiency of hydrogen blending, the limited potential availability of renewable hydrogen, and its prohibitive cost for end users. Wherever possible, electrification should be used instead of hydrogen. But even where electrification is not possible and renewable hydrogen is available, when blended with fossil gas, it is less effective in mitigating carbon emissions compared to using clean hydrogen directly in specific industry applications.²⁴

²¹ Ministry of Industry and Trade of the Czech Republic, Ministry of Environment of the Czech Republic, <u>Update of the Czech National Plan of the</u> <u>Republics in the field of energy and climate</u>, *European Commission*, October 2023.

²² CEE Bankwatch Network, <u>Updating national energy and climate plans: signs of reluctance to phase out fossil fuels</u>, *CEE Bankwatch Network*, 14 December 2023.

²³ Ministry of Climate of Estonia, <u>Draft update of Estonia's National Energy and Climate Plan for 2030</u>, *European Commission*, 10 August 2023.

²⁴ Jochen Bard et al., <u>The limitations of hydrogen blending in the European gas grid</u>, *Fraunhofer Institute for Energy Economics and Energy System Technology*, January 2022.



Finally, the overall approach of the NECP is inconsistent with Estonia's climate goals. Building new fossil fuel infrastructure directly contradicts the country's aspirations for achieving climate neutrality, undermining the NECP's credibility as a roadmap towards a clean energy future.

Hungary

Hungary's updated draft NECP,²⁵ submitted to the Commission in August 2023, does not set a date for phasing out fossil gas. The WAM scenario projects a gradual and significant reduction in final and primary fossil gas consumption by 2050, but this does not seem to match the envisaged measures.

This anticipated overall reduction, primarily linked to the residential sector, is consistent with sectoral targets outlined in the 2020–2050 National Clean Development Strategy, which projects that fossil gas use in the district heating sector will be halved by 2030. Efficiency measures, along with alternative heating options, are expected to eliminate up to a quarter of all gas imports, which translates to roughly 2 billion cubic metres per year.

In contrast, the NECP projects that industrial gas consumption will increase due to economic growth and demand from the battery industry. Instead of focusing on reducing overall fossil gas demand, the NECP prioritises energy security through the diversification of imports and increased domestic gas production.

Concerningly, the NECP outlines new gas infrastructure projects, most notably three new CCGT power plants with a total capacity of 1,500 megawatts (MW). However, it fails to explain how the construction of these plants, which would inevitably increase demand for imported fossil gas, aligns with the decreasing gas consumption projected in the WAM scenario.

These investments also make it highly unlikely that the target of generating 90 per cent of Hungary's electricity from carbon-neutral sources by 2030 outlined in the initial NECP²⁶ would be achieved. Indeed, there is no mention of this target in the updated NECP draft, indicating a clear reduction in ambition.

Further fossil fuel infrastructure projects include the Hungary–Slovenia gas pipeline, planned as part of the integrated gas market. The NECP also mentions exploring the feasibility of converting gas storage to hydrogen storage, including new hydrogen-compatible pipelines and underground storage facilities. Additionally, it forecasts an increase in the extraction of domestic gas, including non-conventional gas.

Lastly, the NECP refers to potential funding for gas storage efficiency measures through an REPowerEU loan as part of Hungary's recovery and resilience plan. However, this specific allocation was removed from the final plan adopted by the Commission in December 2023. Of course, this does not preclude Hungary from pursuing these measures using taxpayer funds or other financial instruments.

²⁵ Ministry of Innovation and Technology of Hungary, National Energy and Climate Plan, European Commission, 4 September 2023.

²⁶ Ministry of Innovation and Technology of Hungary, <u>National Energy and Climate Plan</u>, *Ministry of Innovation and Technology of Hungary*, January 2020.



Latvia

Despite having committed to climate neutrality by 2050, Latvia's draft NECP does not model future gas demand or provide any details about its gas phase-out strategy. There is also no fossil gas phase-out plan for the power sector, which aims to run on 70 per cent renewables by 2030.

The NECP provides details on only two projected gas investments. The first involves the installation of compressed fossil gas transport stations along main highway routes, with the disclaimer that they eventually transition to using biogas. The second is the modernisation of the Incukalns underground gas storage facility, with a focus on realising its hydrogen storage potential. The total budget for the project is EUR 88 million, with half of the funding provided by the EU.²⁷

The planned investments to incorporate biomethane into the gas grid will most likely prolong the domestic use of fossil gas, allowing it to remain part of Latvia's overall energy mix. According to a 2021 European Commission analysis,²⁸ only 15 per cent of Latvia's gas consumption can be replaced by biogas. Therefore, it is crucial that biogas is prioritised for use in applications where it is capable of fully replacing fossil gas, and only where it can be obtained from locally available residues, not competing with food crop production.

Poland

In March 2024, Poland submitted a partial update of its NECP²⁹ to the Commission. The document only includes a baseline 'with existing measures' (WEM) scenario. However, this does not meet the EU's climate targets. A more comprehensive WAM scenario is expected to be published in June 2024.

Diversifying gas supplies remains the main objective of Polish gas policy. Maintaining independence from a single source (or direction) during the energy transition is considered a key factor for national energy security. This includes plans for the significant expansion of gas infrastructure, including the construction of a floating storage regasification unit in the Gulf of Gdańsk and increasing the capacity of the fossil gas storage system. The NECP also anticipates the development and modernisation of the transmission and distribution system, aligning with development plans adopted for the 2024–2033 period and any subsequent updates.

The NECP mischaracterises fossil gas as cleaner and less carbon-intensive than coal. Promoting fossil gas as a necessary 'bridge fuel', the NECP envisions it will replace decommissioned coal-fired units and ensure the stability of the energy system during the 'initial period' of the Polish energy transformation, expected to last between 10 and 15 years. By 2025, 2 gigawatts of new gas capacity is supposed to be added, and by 2030, the figure is expected to reach roughly 4.4 gigawatts due to existing 17-year capacity contracts.

Maintaining the current level of fossil gas extraction within Poland remains a priority, with exploration of new deposits planned. The WEM scenario does not include data on projected gas demand or a pathway for

²⁷ Conexus Baltic Grid, <u>'Modernisation of several gas compressor units at Inčukalna UGS to be completed this year</u>, *Conexus Baltic Grid*, accessed 12 June 2024.

²⁸ European Commission, Biomethane fiche – Latvia (2021): Biomethane production, potential and pathways, European Commission, 2021.

²⁹ Ministry of Climate and Environment of Poland, National Plan in the field of Energy and Climate by 2030, European Commission, 5 March 2024.



reducing this demand. It simply assumes that demand will not drop by 2030, when it is expected to peak. Of course, this increase in demand is linked to the planned expansion of gas capacity in the energy sector. Notably, the plan contains no information on the phasing out of fossil gas.

Romania

Romania's NECP³⁰ projects similar fossil gas consumption in 2030 compared to 2021, along with a similar level of domestic gas production. However, this forecast is wholly unrealistic given that Romania plans to build over 3,000 MW of gas power plants, expand the gas distribution system, and commission a large offshore gas exploitation project.

There are also a number of discrepancies between the NECP and other national documents. For instance, the approved development strategy of Transgaz, the national gas transmission system operator, predicts a significant increase in gas consumption starting in 2027.

The NECP does not specify a phase-out date for fossil gas. However, it does expect that all gas power plants will convert to run entirely on renewable hydrogen by 2036 – a scenario which seems unrealistic in terms of cost, efficiency and availability. In the WAM scenario, primary gas consumption is expected to reach 10.4 million tonnes of oil equivalent (Mtoe) in 2030 before dropping to 4.4 Mtoe in 2040 and 2.3 Mtoe in 2050.

The NECP outlines significant investments in new gas infrastructure, including the development of new CCGT plants (with a projected capacity of 2,615 MW by 2030), the promotion of gas cogeneration (aiming for at least an additional 1,102 MW of installed capacity by 2030), gas transportation pipelines, and an LNG terminal. These projects, most of which have already secured EU public financing, will result in increased fossil gas consumption in Romania.

Slovakia

Nuclear power plays an overly dominant role in Slovakia's overall energy mix, accounting for 25 per cent of the total energy supply in 2022.³¹ Fossil fuels follow closely behind, with oil (24 per cent), fossil gas (23 per cent), and coal (14 per cent) collectively contributing to a significant share of the total energy supply in 2022.³²

On the one hand, the NECP presents the use of fossil gas as a measure for achieving environmental sustainability. But on the other hand, it acknowledges the new geopolitical situation, and proposes a further reduction in gas consumption by utilising waste heat from nuclear power plants for heating purposes. The plan also outlines a general vision for replacing gas with biomass, wind, and solar energy by 2030 across all decarbonisation scenarios, but does not truly prioritise energy efficiency and sustainable renewable energy measures.³³

³⁰ Ministry of Energy of Romania, Integrated National Energy and Climate Plan, European Commission, 3 November 2023.

³¹ International Energy Agency, <u>Energy mix – Slovak Republic</u>, *International Energy Agency*, accessed 26 April 2024.

³² Ibid.

³³ Ministry of Economy of the Slovak Republic, Ministry of Environment of the Slovak Republic, <u>Draft update of the Integrated National Energy and</u> <u>Climate Plan for 2021-2030</u>, August 2023.

The plan promotes gas infrastructure development, with a token amount of biomethane blending to make it seem more acceptable. But such a move would undoubtedly result in stranded assets, given that the network would remain heavily reliant on the supply of fossil gas, accounting for between 87 and 95 per cent of the energy mix. To add to the confusion, the NECP also refers to an outdated plan for new north–south gas interconnectors.

The NECP presents a similarly confusing picture for the district heating sector. On the one hand, the separate heat and power generation from fossil gas will decrease from 29 per cent to between 22 and 26 per cent by 2030, depending on whether the low or high combined heat and power (CHP) scenario is followed. On the other hand, the share of CHP generation from gas is expected to double, increasing from 17 per cent in 2019 to between 32 and 35, or even 36 per cent, by 2030, again depending on the scenario. Despite this increase, absolute consumption is not expected to rise significantly due to energy efficiency measures in buildings and district heating networks.

Ideally, the WAM scenario should prioritise energy efficiency measures and the use of heat pumps, waste heat, geothermal energy, and solar energy in district heating systems.

The NECP projects an extreme increase in fossil gas consumption across the transport sector by 2040. By 2030, fossil gas use in mobility will quadruple to 1,080 terajoules (TJ) compared to 232 TJ in 2017.³⁴ The 2040 estimate of 1,638 TJ is seven times higher than the 2017 figure. Both of these WAM projections completely contradict the objectives of the new EU Emissions Trading System (ETS2), which will become fully operational in 2027.



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³⁴ Note that the 2017 figures are based on actual data from the Slovak Hydrometeorological Institute. Values for 2020 and beyond are projections.