



# Powering up Central and Eastern Europe

How the EU should step up



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E3G is an independent climate change think tank with a global outlook. We work on the frontier of the climate landscape, tackling the barriers and advancing the solutions to a safe climate. Our goal is to translate climate politics, economics and policies into action.

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REPORT MAY 2024

**POWERING UP CENTRAL AND EASTERN  
EUROPE**  
HOW THE EU SHOULD STEP UP

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## SUMMARY

Countries in Central and Eastern Europe (CEE) have long been regarded as laggards in the EU clean energy transition. The EU's Green Deal, and its approach of combining a lift in climate ambition with new financial and other support instruments, has however started to change this picture. A new European Commission should now build on progress made and step up its support for the energy transition in CEE countries.

Phasing out fossil fuels from the EU's energy mix in favour of renewables is not only crucial to addressing climate change but will also improve Europe's energy security and competitiveness. In recognition of this, the EU has adopted plans that will see the share of renewables in the power mix rise to over 70% by 2030, reduce energy waste and reformed power markets in support of non-thermal flexibility.

The CEE region is particularly critical to the success of the EU's energy transition, as well as beyond that for European (cyber)-security and industrial competitiveness. This needs to be better reflected in the next phase of the European Green Deal especially as global powers like China and the US compete for influence in the region. This report, which analyses progress made in eight CEE countries (Bulgaria, Czechia, Estonia, Hungary, Latvia, Poland, Romania, Slovakia) over the last five years, aims to help do this.

Our analysis shows that a combination of regulatory and market-based instruments, together with financial and other support schemes, has led to significant progress being made across the region. "Prosumers", private households with wind and solar installations, in particular play a key role. Commitments and plans to phase out fossil fuels like coal were often helped by the EU's Recovery and Resilience Facility (RRF), a temporary new financing instrument based on joint borrowing from capital markets.



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## How the EU can build on progress to date

Following the European Parliament elections in June 2024 and ahead of two CEE Presidencies (Hungary and Poland), the EU should now seek to build on the progress made so far.

The EU should underline the importance of the energy transition for improving energy security and competitiveness. It should ensure that the next phase of the European Green Deal creates the conditions needed for accelerating the energy transition. This will need to cover a broad set of measures that would be particularly necessary to tackle the energy transition in Central and Eastern Europe, including:

- > Social measures to improve low-income households' access to fossil free alternatives and address labour shortages in clean industries.
- > Investments in grid expansions and modernisation.
- > Stronger local supply chains, in particular for the heat pump industry.
- > Stronger civil society participation.
- > More technical assistance.





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## INTRODUCTION

### The Green Deal and what comes next

The Green Deal is one of the greatest legacies of the von der Leyen Commission (2019–24). A firm priority introduced at the inception of the Commission's term with strong political leadership, it has been followed up with multiple strategies and pieces of legislation. It has given the EU a solid impetus to tackle important environmental challenges such as climate change or biodiversity loss.

The Commission's mandate comes to an end in 2024 with most climate policies adopted. While debate remains about the level of ambition that will eventually have been achieved, the time has come to implement the new standards to make sure the EU's 2030 climate objectives can be fulfilled.

It will be the task of the incoming Commission to ensure consistent implementation across Europe. Particular focus will need to be on those countries and regions where challenges are higher than elsewhere, due to a higher reliance on fossil fuels or a lack of political support to change.

### A focus on Central and Eastern European countries

That is the case in many Central and Eastern European (CEE) countries. The region is dependent on the EU to advance the climate agenda, with EU policies, funds and other tools instrumental in driving the transition. This has been the case in the last five years, with new initiatives pushing industry and stakeholders to adapt. Examples include a reformed EU Emissions Trading System (ETS), which is pushing hard coal and lignite out of the power mix by putting a price on carbon.

EU funds also help to drive policy change thanks to financial support for specific clean energy measures. The post-pandemic recovery fund helped to make some CEE countries commit to phasing out coal by a certain date while providing the funds needed for introducing renewables and improving energy efficiency.

More recent events, particularly the large-scale Russian invasion of Ukraine, also had a major impact on the latest developments in the CEE region, disrupting the energy system. Markets and governments have adapted by decreasing reliance



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on fossil gas and increasing support for renewables, in particular heat pumps and solar panels with prosumer initiatives continuing to blossom in the region. A growing awareness about the need to reduce fossil fuel dependence, driven by the current geopolitical situation, combined with much-needed EU support is changing the region.

## Challenges remain despite recent progress

However, important challenges remain to CEE countries embarking on a lasting energy transition:

- > Governments continue to plan for a high reliance on fossil gas.
- > Plans for new nuclear compete with a faster rollout of renewables and energy efficiency measures.
- > There are technical difficulties in integrating renewables into the grids.
- > Some governments are reluctant to fully embrace climate objectives, putting the transition in serious jeopardy.

Moreover, decisions on the policy changes needed are taken by central governments in limited dialogue with the public, despite EU standards of involving stakeholders and being transparent about processes. In response, local and regional administrations have at times taken a more progressive stance, with the help of EU instruments, in particular the Just Transition Fund (JTF).

Rolling out ambitious climate measures benefiting from EU support will require increased capacity building on the ground. Moreover, the lack of local supply chains to produce the required technology hinders development of the national economies. Social issues are also salient with a higher rate of energy poverty than in other regions of the EU.



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## A region critical to a successful EU energy transition

To overcome these challenges, Central and Eastern Europe needs to play a central role in the next phase of the European Green Deal that will be shaped by the next European Commission. A failure to do so would come with serious risk, as the strongest political opposition against the European Green Deal often comes from this region. A successful contribution of the region to Europe's energy transition is especially important given the central role it plays in other areas: first and foremost security – being on the front line of a hostile Russia – but also in terms of its contribution to the EU's economic competitiveness through key sectors such as IT.

The Commission will start its mandate and propose new priorities concurrently with two Council presidencies from the CEE area: Hungary in the second half of 2024, and Poland in the first part of 2025. These presidencies offer an occasion to put the spotlight on the region and make sure climate action is enabled to the fullest extent there.



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## CHAPTER 1

# POLITICAL CONTEXT

### The European Green Deal

Phasing out fossil fuels from the EU's energy mix in favour of renewables is not only crucial to addressing climate change but will also improve Europe's energy security and competitiveness. In recognition of this, **the EU has recently committed itself to a new level of ambition for its energy transition.**<sup>1</sup>

The European Green Deal sets EU-wide binding emission reduction targets for 2030 and 2050 as well as binding renewable energy and energy efficiency goals to be achieved by 2030. The EU has also made significant cuts in its dependence on fossil fuels in response to Russia's war against Ukraine. This new ambition for the energy transition now needs to be turned into reality at national level through implementation of the so-called Fit for 55 package.

### The situation in Central and Eastern Europe

The implementation of the EU's revamped energy policy in Central and Eastern Europe is of particular importance.<sup>2</sup> Twenty years after the first wave of EU enlargement to the East, there is still significant fragmentation between EU countries when it comes to decarbonising national energy systems. The energy transition in CEE countries has made progress; indeed, some CEE countries like Latvia and Romania are now front runners in renewable energy (RE) deployment.<sup>3</sup>

However, barriers to a net zero energy system in all CEE countries remain. Governments still do not consider the energy transition a priority, with long-term strategies and policy frameworks missing. A lack of fit-for-purpose infrastructure as well as constrained capacities at administrations risk creating delivery

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<sup>1</sup> European Commission, **Fit for 55: Delivering on the proposals** (webpage, accessed May 2024)

<sup>2</sup> The Central and Eastern Europe cover Bulgaria, Czechia, Estonia, Hungary, Latvia, Poland, Romania and Slovakia.

<sup>3</sup> European Environment Agency, March 2024, **Share of energy consumption from renewable sources in Europe**

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bottlenecks. CEE countries are far from exploiting their full potential for energy from wind and solar.<sup>4</sup>

**The CEE region has roughly 20% of the EU population and faster GDP growth than in other EU countries. It accounts for 17% of EU electricity demand and has significant potential for increased renewables and energy efficiency measures. This makes the region particularly critical to the success of the EU's energy transition, something that needs to be better reflected in the EU's energy debate.**

The EU's clean energy ambitions overall will be impossible to achieve, or indeed exceed, without phasing out fossil fuels, ramping up renewables and energy efficiency and expanding the grid in CEE countries. The analysis in this report aims to contribute to a nuanced view of the CEE region, paying greater attention to both challenges and emerging opportunities for clean energy there.

## Developing a European energy system

**CEE countries play a particularly central role in meeting the challenge of developing a European electricity grid that runs predominantly on renewable energy by 2035.** This is becoming even more relevant with prospects for further EU enlargement. Countries from the region are important for the integration of the EU's Western Balkan and other neighbours further east into the electricity grid, in particular Ukraine:

- > Hungary and Slovakia are central for power flows between Ukraine and the EU.
- > Bulgaria and Romania have high potential for interconnection capacity with Black Sea countries like Azerbaijan, Georgia or Turkey.

Moreover, additional North–South links are becoming more important, as Greece is developing into a regional hub for RE generation and transmission. The case for increased regional collaboration on renewables in the CEE region is now a compelling one.<sup>5</sup>

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<sup>4</sup> Ember, 2023, **In it together: the road to a cleaner, cheaper CEE power system**

<sup>5</sup> Ibid.



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## Geopolitical challenges

**The ongoing overhaul of the EU's energy system is especially critical to EU geopolitical ambition and security.** Although Russia's weaponisation of energy supply has backfired,<sup>6</sup> it continues to pose a security threat to the EU with CEE countries finding themselves in the frontline. At the same time China has become the largest investor in Hungary and is using ties to the government to exercise political influence in the EU.<sup>7</sup> China is also increasingly showing interest in investing in the EV supply chain in CEE countries.<sup>8</sup> This stands in contrast to other countries of the region who have developed a more critical stance towards Chinese engagement because of security concerns and growing realisation that the Belt and Road initiative or the cooperation format 16+1 have failed to deliver tangible results for them.

Russia and China are however not the only countries from outside of the region that are actively seeking to shape the future of the CEE energy system:

- > Bulgaria, Czechia, Poland and Romania all recently closed deals with US, South Korean or French companies on additional nuclear capacity while others like Latvia have expressed interest through a non-binding declaration.<sup>9</sup>
- > The Three Seas Initiative – the biggest cross-government partnership in the region, strongly shaped by US interests – still overwhelmingly supports gas investments.<sup>10</sup>

This strong foreign engagement in support of nuclear and fossil gas is not counterbalanced by an equal engagement in support of renewables as the international renewables lobby is largely absent from the region. Strong political support for nuclear in the CEE region has also contributed to making nuclear a bigger wedge issue at EU level and proved to be a barrier to a higher EU renewables target.

The new EU cycle, following on the European Parliament elections in June 2024, now presents an opportunity to engage with countries from the CEE region to

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<sup>6</sup> Foreign Policy, 7 October 2021, **Gazprom's declining fortunes spell trouble for Moscow**

<sup>7</sup> OSW Centre for Eastern Studies, April 2024, **China's European bridgehead. Hungary's dangerous relationship with Beijing**

<sup>8</sup> Choice, January 2024, **From zero to hero? Chinese investment in electric vehicle supply chains in the Visegrád four**

<sup>9</sup> European Council on Foreign Relations (ECFR) EU Energy Deals Tracker, <https://ecfr.eu/special/energy-deals-tracker/>, accessed March 2024

<sup>10</sup> Ember, March 2024, **Central and Eastern Europe beyond gas imports**

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put in place the support instruments needed to quickly roll out policies and investments in support of renewable energy, energy efficiency and the phase-out of fossil fuels.



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## CHAPTER 2

# HOW THE EU SUPPORTS THE ENERGY TRANSITION IN ITS MEMBER STATES

### Funding instruments

The EU has a range of financial instruments in place to support the transition to clean energy and help member states plan and implement it. These have been critical in ensuring the implementation of the clean energy transition in the CEE region. Not only do they provide the necessary financial support to deliver ambitious programmes to roll out renewables and implement energy efficiency measures, but they are also the driver for change that would not be possible otherwise.

The formal alignment of EU funds with EU climate objectives has helped to considerably increase the ambition of national programmes for deploying clean energy measures. Moreover, the funds are often conditional on crucial reforms being implemented. This is why the Bulgarian and Romanian National Resilience and Recovery Plans (NRRP) include commitments to phase out coal.

Under the EU budget, several funds are available to member states to increase investments for the energy transition. For CEE countries the EU's cohesion policy funds, such as the ERDF, the Cohesion Fund or the Just Transition Fund, are particularly important: with EUR 392bn for the period 2021–27, these funds play a key role in deploying measures for energy efficiency or decarbonising the power sector.

Some of the temporary Resilience and Recovery Facility (RRF) money announced in 2021 in response to the economic impact of the COVID-19 pandemic had to be used for the green transition: 37% of the total EUR 800bn across Europe. Climate conditionality catalysed important reforms in national recovery and resilience plans that help accelerate the energy transition, for example:

- > The acceleration of renewable energy development in Bulgaria and Estonia.
- > The Slovakian building renovation programme.





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The RRF has a different approach than traditional EU funds, with the achievement of milestones and targets a precondition to unlock further disbursement. This has allowed member states not only to commit to roll out investments but also to implement important reforms, some of which are instrumental in delivering the clean energy transition.

ETS revenues form a core backbone of funding for the energy transition. They finance the Modernisation Fund with a pot of around EUR 57bn for countries with a GDP lower than 60% of the EU average. This group is mainly made up of states from the CEE region. The fund has proved instrumental in providing support for schemes for renewable energy, energy efficiency and grid development. However, its untransparent functioning as well as its eligibility rules still allow member states to use this fund for controversial investments, such as the conversion of coal cogeneration units to gas ones, only deepening the reliance on imported fossil fuels.

The Social Climate Fund is also financed by revenues from auctioning ETS allowances. It will distribute around EUR 65bn over the period 2026–32 to support energy- and transport-poor households and microenterprises affected by the impact of the ETS for buildings and transport, also called ETS2.

EU funds already act as catalysts for policy change. However, there is still potential to use them better for improved qualitative measures, through making changes to their rules and implementation practices. For a full list of current EU funding instruments, see Annex 2.

## Non-financial support instruments available to member states

In addition to EU funding instruments, a number of broader governance mechanisms exist that help member states to better plan and anchor their policies in line with the 2030 climate targets. The national energy and climate plans (NECPs) will be updated by mid-2024 to detail national contributions to reaching EU climate goals. The former will feed into the long-term strategy of member states to achieve the 2050 target.

Both of these processes will be underpinned by the technical support instruments that provide tailor-made technical assistance to member states; this



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assistance will help design and implement reforms in a wide range of policy areas including climate action and the energy transition.

The European Semester is another relevant tool here although originally created to coordinate national macro-economic policies in response to the Euro crisis. The Country Specific Recommendations (CSR) that are developed under the Semester are now linked to the implementation of the National Recovery and Resilience Plans (NRRP). They also include recommendations on energy and climate policies.

Moreover, the European Commission is offering guidance and support that can help member states better implement EU policies. An example is the Technical Support Instrument (TSI) which helps national authorities improve their capacity to design and implement reforms at the institutional, administrative and structural levels.

All these tools stem from EU regulation and policies and are key processes to help shape national public policies and deliver on EU objectives. They can help national authorities better plan for the energy transition and are important tools to open discussion on pathways and engage with stakeholders.

However, they also have limitations as their efficiency largely depends on how member states make use of them, what capacity they are allocating and to what extent this is linked to concrete policy changes. For a full list of these processes, please see Annex 3.



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## CHAPTER 3

# COUNTRY ASSESSMENTS FROM THE CEE REGION

### High-level conclusions from the country profiles

EU policies, funds and instruments have had a significant impact on national policies for the energy transition in Central and Eastern Europe (Figure 1). The following assessment provides a deeper dive into national trajectories over the past four years, since the European Green Deal was first proposed. The assessment is based on:

- > An analysis of various strategic document, such as draft updated NECPs, national recovery and resilience plans, cohesion programmes, national energy strategies.
- > Market trends observed at national level.

#### **Building out renewable energy sources**

Across the CEE region, transposition of the Renewable Energy Directive (RED II) Directive has created an improved regulatory environment for renewable energy sources (RES) build-out, leading to sustained growth in installation figures. As with the rest of the EU, the power sector has seen the strongest growth in RES uptake since 2019.

All but one of the CEE countries profiled in this report saw increases in their share of RES in power (Figure 2):<sup>11</sup>

- > Hungary has increased its share of RES in power by over 85% to 26% of power sector generation and comes second just behind Greece and ahead of Spain in solar generation at 18%.
- > Poland has also seen a large relative increase in its RES share in generation from 15% in 2019 to 27% in 2023.
- > Latvia remains the leader of this pack, with over 75% RES in power generation in 2023.

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<sup>11</sup> Ember, February 2024, **European Electricity Review 2024**



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- > Czechia stands out as a laggard with a very modest growth rate from 11% generation in 2019 to 14% generation in 2023. Slovakia saw a slight fall in share of RES in power generation.

### Progress on energy transition in CEE countries

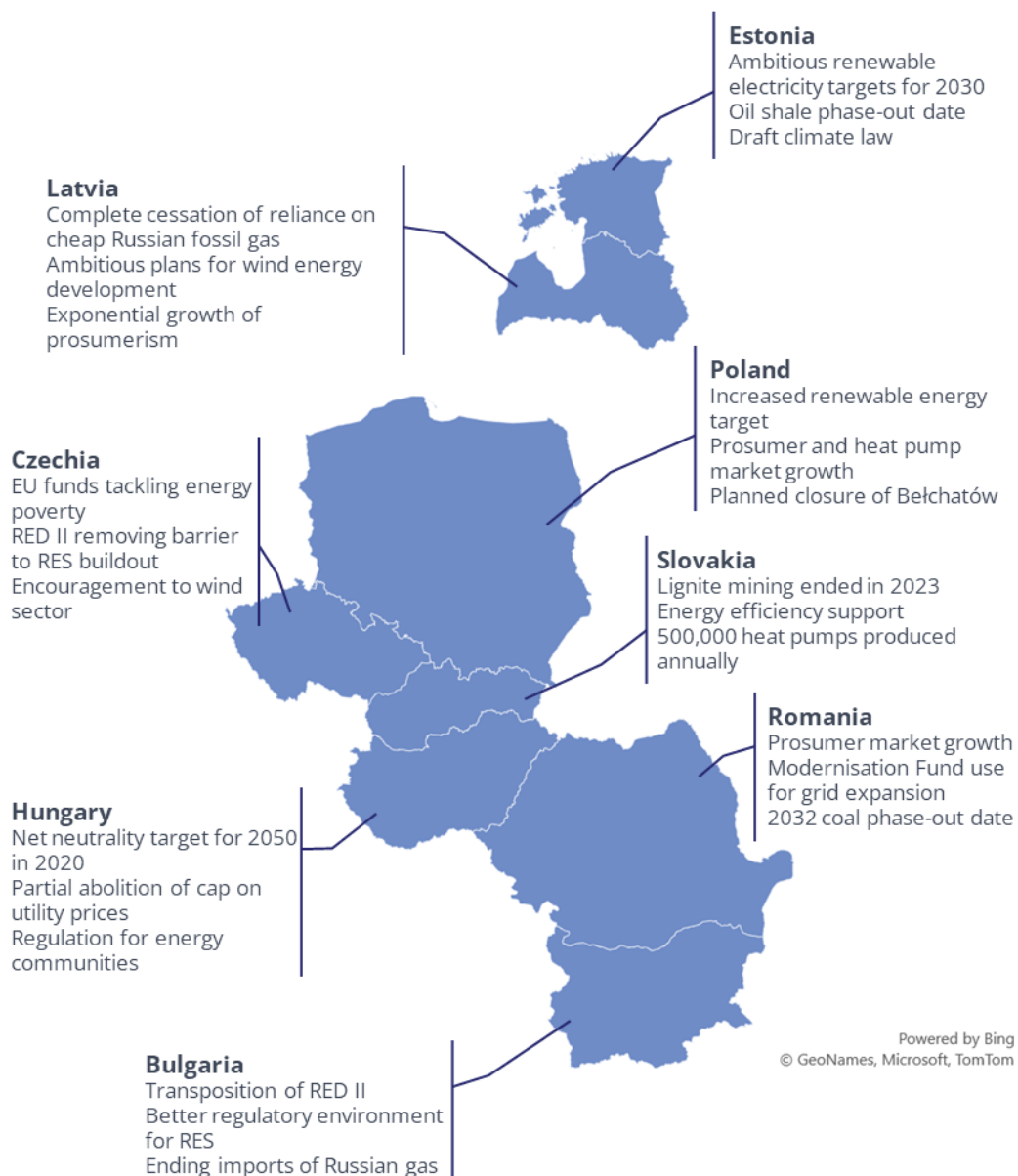
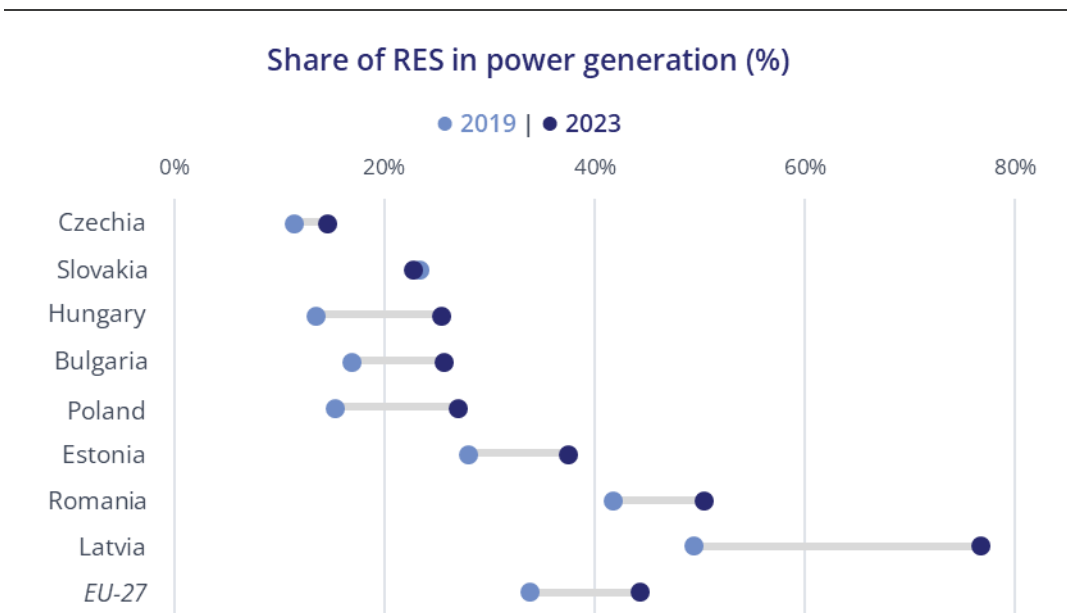


Figure 1: Overview of progress made under the European Green Deal in Bulgaria, Czechia, Estonia, Hungary, Latvia, Poland, Romania and Slovakia.



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Source: Ember, February 2024, European Electricity Review 2024

Figure 2: Most CEE countries have increased the share of renewable energy sources in power generation from 2019 to 2023. However, Slovakia saw a slight decrease, and there was little change in Czechia. Romania and Latvia continue to perform above the EU average.

While most CEE countries aside from Czechia and Slovakia have seen considerable increase in RES generation, the share of RES in all countries except Romania and Latvia remains below the EU average.

### Climate targets and laws

Setting climate neutrality targets at an EU level has had a positive effect on even the most hesitant CEE countries. Hungary, for instance, has now adopted a target to be net climate neutral by 2050. Estonia is currently drafting an ambitious climate law. Previously coal-dependent countries, like Czechia, Romania and Slovakia, have recently adopted ambitious coal phase-out targets consistent with emission reduction targets at the EU level, with Czechia and Slovakia having joined the global Powering Past Coal Alliance.<sup>12</sup>

Estonia has adopted an oil shale phase-out date of 2040, using EUR 354m of EU grants to do so. Oil shale makes up over 50% of Estonia’s greenhouse gas emissions. However, this phase-out has yet to be reflected in the NECP and the national climate law. Funds from the JTF will be used help the Ida-Virumaa

<sup>12</sup> Powering Past Coal Alliance (website), <https://poweringpastcoal.org>



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region to transition away from oil shale, by supporting investments in solar, wind and hydro power.

### **New prosumer markets including rooftop solar and heat pumps**

**The region has seen increased investments in RES build-out and a development of prosumer markets already in response to implementation of the EU's first renewable energy directives RED 1 and 2.** Prosumers are consumers who also act as producers with private wind and solar installations. In Poland and Hungary, the growth in the prosumer market has been significant in driving the general increase in renewables build-out that has been seen in both these countries since the start of the Von der Leyen Commission.

Hungary and Poland have seen particularly strong continued growth in rooftop solar. In Poland, the My Electricity policy, which subsidises part of the investment costs in rooftop solar, instigated this massive growth.<sup>13</sup> In Hungary more than one-quarter of residential properties of at least 100 square meters built after 2010 now have solar panels.<sup>14</sup> But there is also growth in solar in Romania and Bulgaria. Both utility and rooftop have started to pick up with Bulgaria tripling capacities between 2020 and 2023, and in Romania it went up by 308% to reach 2.85 GW installed capacity.<sup>15</sup>

Heat pump installations saw their strongest growth year yet in 2022 with over 3 million deployed across the EU (see Figure 3). For every heat pump Hungary installed in 2018, it installed 45 in 2022. Poland installed five times the number of heat pumps in 2022 as in 2018; its installation figure of 200,000 was the highest in Europe that year. Czechia and Slovakia more than doubled the number of installed heat pumps over that period. The increase in heat pump installations in the CEE region was on average more than twice that of the rest of the EU.

Part of the impetus for this massive growth was the target set by RePowerEU, an EU plan to make the EU independent from Russian fossil fuel imports; it was to install at least 10 million additional heat pumps by 2027. Recently adopted EU policies will also have a significant accelerator effect on heat pump installations, such as those requiring that new buildings should be zero emission from 2030 onwards and a phase-out of fossil fuel boilers in all buildings by 2040.

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<sup>13</sup> GlobalData, March 2021, **Poland's solar PV capacity grows threefold on back of 'My Electricity' program, says GlobalData**

<sup>14</sup> PV Magazine, January 2024, **Hungary's 2023 solar capacity additions hit 1.6 GW**

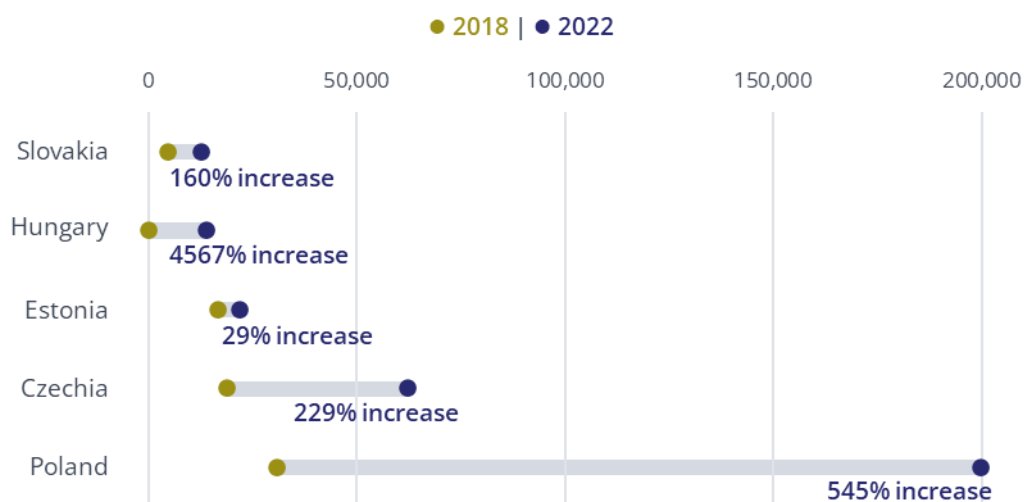
<sup>15</sup> Balkan Green Energy news, 12 December 2023, **EU adds 56 GW of new solar as Bulgaria, Romania join GW-scale club**

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Heat pump sales (number of heat pumps)



	2018	2022	% change
CEE total	72,300	311,546	331%
EU-21 (including UK and CH)	1,270,000	3,000,000	136%

Source: European Heat Pump Association

Figure 3: Heat pumps have seen significant growth between 2018 and 2022, across the EU and many CEE countries. Bulgaria, Latvia and Romania are not shown because of a lack of available data.

However, the continent will need an additional 500,000 installers by 2030;<sup>16</sup> so more policy incentives are needed for member states in CEE countries to increase the number of heat pump installers and installation training programmes. And sales figures for 2023, recently released by the European Heat Pump Association, covering 14 EU countries,<sup>17</sup> tell a more recent and more worrying story with several countries, including Poland, suffering from a very significant drop in sales compared to 2022.

<sup>16</sup> EHPA, January 2023, **Wanted: half a million heat pump workers**

<sup>17</sup> EHPA, February 2024, **Heat pump sales fall by 5% while EU delays action**



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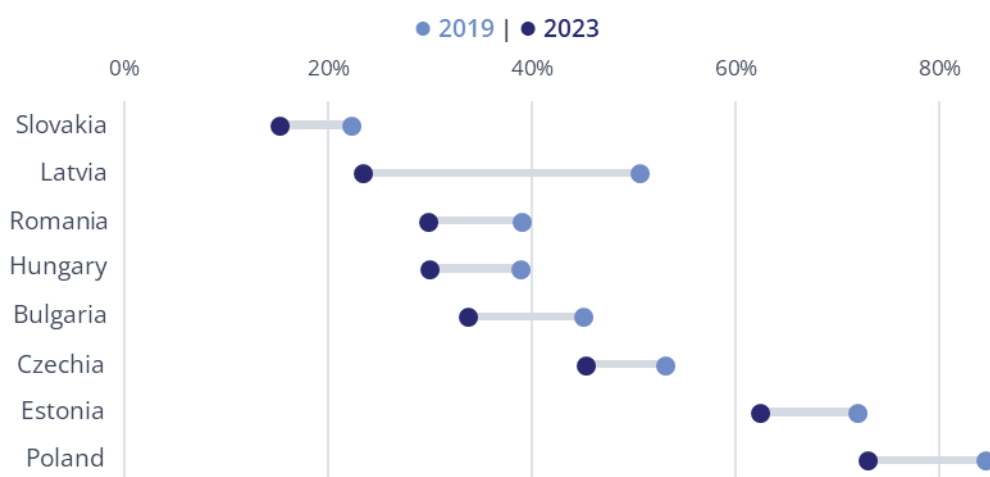
Phasing out fossil fuels

Significant progress has been made over the last five years in the CEE region, and five out of the eight countries profiled generated less than 40% of their electricity from fossil fuels in 2023 (see Figure ).<sup>18</sup> Latvia in particular has more than halved the share of fossil fuels in power generation since 2019. Poland and Estonia still have high reliance on fossil fuels, however.

The greatest progress in phasing out fossil fuels in the region has been with coal. Since 2018 almost all countries still relying on coal have adopted a phase-out target (see Table 1). Hungary has the earliest phase-out date of 2025 although uncertainty remains whether it may be postponed.

Poland is still heavily reliant on coal for its power and heating sectors and has been eyeing a “phase-out date” for its coal mines of 2049; however, it never adopted formal plans, let alone received European Commission approval that would secure the finance for the continuous subsidised use of coal mines that such a late date would necessitate. In recent months, the newly elected Polish government under Donald Tusk has made statements indicating that there are plans to consider a more realistic approach as the country looks to rely more on new nuclear and renewables installations.

Share of fossil fuels in power generation (%)



Source: Ember, February 2024, European Electricity Review 2024

Figure 4: The share of fossil fuels in overall power generation dropped for all CEE countries between 2019 and 2023.

<sup>18</sup> Ember, February 2024, European Electricity Review 2024





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Table 1: The latest commitments on phasing out coal including year of proposed phase-out for the eight CEE countries covered in this report.

CEE country	Year of latest commitment	Year of coal phase-out
Bulgaria	2021	2038–40*
Czechia	2022	2033
Estonia		Coal free
Hungary	2019	2025
Latvia		Coal free
Poland		No formal date
Romania	2022	2032
Slovakia	2019	2024 (2030)†

\* Although these are the formal dates Bulgaria communicates, under its plans to spend JTF, coal use is planned to be reduced very significantly up to 2030, with only 1 GW remaining between 2030 and 2035 as a strategic reserve.

† There is a target for a gradual coal phase-out by 2030, but the major power plants stopped combusting coal by March 2024.

The Just Transition Mechanism has been instrumental in supporting many of these decisions to transition away from coal. The instrument started in 2021 and will run until 2027 to stimulate around EUR 55bn in transition investments.

**Renewables targets**

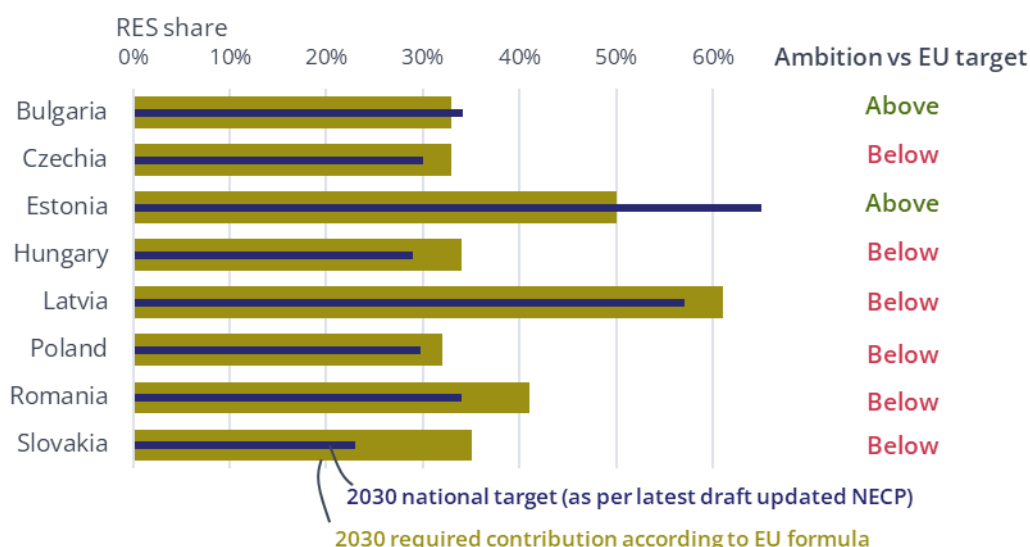
The NECPs and their updates drafted to date by CEE countries have lacked ambition when it comes to achieving the newly agreed REPowerEU renewable targets (see Figure 5). This is despite the NECP guidance explicitly asking member states to align with RePowerEU targets. Moreover, countries are far too reliant on gas and nuclear to achieve energy transition targets.

Czechia, for instance, has a renewables target of 30% share of primary energy use by 2030. This target would need to be raised to 34% to be in line with the European Commission target of 42.5% across the EU. It also plans four new nuclear reactors to replace fossil gas and coal power. Slovakia’s NECP is reliant on increasing fossil gas share (in district heating and transport) to achieve its very unambitious target of 23% renewable energy by 2030.



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### National contributions and ambition gaps towards the Union target of at least 42.5% of renewable energy consumption by 2030



Source: Compiled using the most recent NECP updates available, and European Commission assessments of the NECPs.

Figure 5: Overview of national contributions and ambition gaps towards the European Union target of at least 42.5% of energy consumption being from renewables by 2030.

Estonia is a positive outlier in the region with updated targets of 100% renewable electricity and 65% renewable energy by 2030. Bulgaria’s latest target is also in line with the EU’s guidance. It should further be noted that most countries ended up exceeding their 2020 targets, suggesting that tactical considerations are a factor when deciding on ambition.

The combination of a heavy reliance on new nuclear facilities in several CEE countries and unrealistic dates for their completion mean there is a risk that the energy transition may slow down in those cases.

**There are examples of ambition at a local level outpacing what is happening at a national one.** In Poland, the coal region of Wielkopolska published a 2040 net neutrality plan, whilst the climate sceptical PiS government was still in power. In Bulgaria, municipalities Pernik and Gabrovo have bucked the country’s national trend and presented ambitious climate strategies for their regions. Other local and regional authorities are embracing higher ambitions and more stringent targets than at the national level, seizing the opportunity provided by the EU’s Just Transition Mechanism; these include Hunedoara County in Romania or the Upper Nitra region in Slovakia.



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### **Accountability for spending EU funds and civil society**

**Across the CEE region more technical assistance is needed, as is sharing of best practice to aid with the energy transition.** Countries like Poland are facing bottlenecks and financing problems when tackling large grid modernisation projects. Similarly, a lack of accountability in spending EU funds has led to misallocation of funds in projects that do not serve a wider energy transition agenda. In particular, the eligibility of fossil gas under EU funds, combined with the lack of systemic transparency of funding plans, is regularly leading to allocating EU money for fossil gas projects in the region. Recent examples include the expansion of the Krk LNG terminal in Croatia or the development of a new pipeline in Poland, both in the framework of the REPowerEU chapters under the national recovery plans.<sup>19</sup>

This links to another problem, that of little effective participation by civil society organisations (CSOs) in monitoring committees for EU funds.<sup>20</sup> CSOs' participation here would help improve public acceptance, add legitimacy and much-needed expertise to the decision making process for transition strategies; it might also potentially help increase their ambition. Bulgaria created multistakeholder dialogue around phasing out coal; examples like this could be replicated elsewhere in the region to bring in a variety of actors into this space.

### **Embedding the energy transition in a supportive broader context**

**Another challenge is that in some cases where renewables projects do proceed, they do so in a way that overrides biodiversity considerations as a result of poor planning practices.** In Romania for instance, hydropower projects are overriding biodiversity legislation so as to aid transition away from coal power. Safeguards need to be strengthened, such as a meaningful enforcement of environmental legislation and a better application of the “Do no significant harm” principle, to prevent such practices.

**There is a lack of local supply chains to develop renewable capacities and examples of countries that are hugely underutilising vast resource reserves; this could prove costly for the entire EU27.** For instance, in Czechia, more could be done to exploit its lithium deposits, which are the largest in Europe, while ensuring environmental impacts are addressed. And more could be done to

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<sup>19</sup> CEE Bankwatch Network, Counter Balance, March 2024, **Beyond profit: How to reshape the European Green Deal for people's well-being**

<sup>20</sup> CEE Bankwatch Network, December 2023, **Monitoring cohesion policy funds in central and eastern Europe**

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support local supply chains along the lines of the Inflation Reduction Act in the US.

**For the energy transition to succeed and bring benefits for poorer households, a stronger focus on measures to address energy poverty is needed.** This would mean prioritising energy poverty in investment decisions for a more holistic approach to energy transition. Czechia has led the way on this in recent years. In 2022, EU funds were used to tackle energy poverty among vulnerable households during the energy crisis.

Also in 2022, the Czech New Green Savings Light Programme was launched, targeting single family homes, pensioners or those on housing benefit. It provided financial support for household energy efficiency improvements and solar water heating systems, with up to 100% upfront subsidies. EUR 240m was allocated to the fund in 2023, with support from the EU Modernisation Fund, leading to support being given to more than 40,000 households.



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## CHAPTER 4

# RECOMMENDATIONS FOR EU ENERGY POLICY FROM 2024

The next EU legislative cycle, following the European Parliament elections and coming into office of a new commission, will coincide with a critical phase of the EU energy transition. As a result of EU policies already adopted, coal in the power sector is expected to be largely phased out by 2030 and more than 70% of power in the EU will come from renewables. This makes it even more important that the progress made the last five years in CEE countries in the energy transition is now accelerated over the next five years.

Drawing on the analysis in this report we believe the following priority initiatives would usefully be part of the next Commission's energy policy agenda to make this happen. We suggest specific recommendations under five key headings that look set to make a real difference across the EU and will particularly benefit the countries in the CEE region whose contribution to the energy transition is so important, as set out in our introduction.

### Strategic considerations – across the EU

- > Underline the importance of the energy transition to improving energy security and competitiveness, by integrating it across political priorities such as climate change, economic governance and security.
- > Underline the multiple benefits of the energy transition, using success stories from the CEE region when encouraging member states to take an ambitious approach to transposing and implementing recently agreed EU policies, in particular the RED III Directive.



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## Enable action at regional and local level

- > Adopt EU and national industrial policies to create stronger incentives for developing and strengthening resilient local supply chains at a level to match subsidies received by US competitors.
- > Support local and regional leaders in the energy transition and strengthen their capacities as well as participation in all relevant decision-making processes.
- > Provide more technical assistance from the EU level to local administrations for project selection and energy transition design, including topics such as strategy and financing mechanisms for grid modernisation and exchange of best practice.
- > Facilitate more energy transition dialogues that include CSO partners who participate in oversight, expertise and policy guidance. The creation of a multi-stakeholder commission for instance can be a way to foster dialogue between interests from across the societal spectrum, create a clear mandate for a climate policy, engage with CSOs and formulate a timeline that is more likely to be kept to.

## Develop existing EU initiatives

- > Ensure that the next phase of the European Green Deal creates the conditions needed to accelerate the energy transition.
- > Strengthen the social dimension of the energy transition by enlarging the scope of the Just Transition Mechanism to sectors other than energy.
- > Ensure that energy system integration is a fundamental system of energy planning by promoting the 2020 EU Strategy for Energy System Integration and provide an oversight of its implementation.
- > Introduce a thematic initiative for district heating, with the release of the EU Heat Pump Action Plan being of particular urgency.



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## Strengthen EU financial instruments

- > Ensure an ambitious implementation of the Social Climate Fund and help improve access to fossil free alternatives for low-income households.
- > Make available more funding in the next Multiannual Financial Framework (MFF) and attach clearer conditions in relation to reforms needed, to enforcement of the partnership principle and a strengthening of the “Do no significant harm” principle.
- > More immediately, continue funding after the Recovery and Resilience Facility (RRF) ends in late 2026.

## Offer targeted support for the CEE region

- > Support cross-border energy projects between CEE countries, in particular electricity interconnections as part of the further development of the EU’s ten-year network development plan and the Project of Common Interest (PCI) listing.
- > Favour initiatives that contribute to strengthen cooperation between CEE region and other parts of the EU. Governments from the CEE region should seek a stronger presence in existing structures that seek to promote an ambitious EU energy transition, for example through the newly created Friends of Renewables group.



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## ANNEX 1

# COUNTRY PROFILES

Based on recent national trends and governmental declarations, analysis of strategic national documents, and a review of a set of indicators (listed above), our experts have made the following observations in the eight Central and Eastern European countries.

### Bulgaria

Bulgaria relied on fossil fuels for 33.7% of its power supply in 2023, a 34% decrease in fossil fuel share relative to 2019.<sup>21</sup> Bulgaria's share of renewables increased by 51% over the same time period.

Bulgaria's coal phase-out date is a distant 2038, making it the second latest phase-out date after Poland (2049). However, the pledge under the Territorial Just Transition Plans (TJTP) is that Bulgaria is to shrink the use of coal by two-thirds by 2030 (compared to the previous decade) and leave just 1 GW of strategic reserve in coal between 2030 and 2035; this would mean that the likely de facto end date of coal will be much sooner than the official coal exit year.

Despite the improved RES ambition in the revised NECP, our optimism with regard to Bulgaria is cautious. The country has faced big challenges in rolling out policies that will aid its energy transition.

- > The main challenges lie in political buy-in and involvement in pushing the reforms needed, as Bulgarian politicians in general lack climate ambition and progressive initiatives. Multiple consecutive elections in the last years have deepened the instability, and a political culture that favours populist narratives around the energy transition is still not outgrown and suffers from ill-structured public debate. Far right politicians talk of coal as "our national pride" and adopt antagonistic positions to transitioning away from fossil fuel.
- > In general, there is a lack of desire to change the status quo in the energy system. Information levels on the energy transition among the public are low

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<sup>21</sup> Ember, February 2024, [European Electricity Review 2024](#)

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due to political instability and the lack of information sources on the benefits of clean energy. This has led to little buy-in among the general population.

- > Low targets that are set only in order to fulfil the bare minimum EU requirements have thus been the norm; and there is a lack of momentum from the public pushing for a successful transition.

However, on a local level some champions of the energy transition have emerged. Pernik municipality, led by an ambitious team, are worth mentioning as champions in accelerating a just transition in Bulgaria. A supportive energy transition narrative is also emerging from the Gabrovo municipality, which established the first energy community initiated by a municipality in January 2024. This has been aided in part by a changed new media environment – like Bloomberg TV’s Clean Energy – creating positive narratives around the energy transition.

The trade unions in coal regions have one of the strongest voices in civil society; they have been broadly against transition measures and have often shown unwillingness to work with their own members to promote a just transition. This is surprising, given that they are the group benefiting the most from retraining and upskilling programmes. Indeed, they have had the greatest success in fighting for more funding in various ministerial groups and are now they are set to be beneficiaries of the JTF, responsible for mapping the skills needed for rolling out a requalification programme for the coal regions.

The creation of a multistakeholder dialogue around coal phase-out, called the Commission for Energy Transition, was a first for Bulgaria. Enshrined in the National recovery and resilience plan, this commission was instrumental in discussing a roadmap to end coal by 2038; this draft map was submitted to the Ministry of Energy and was due to pass through the parliament in January 2024 – a process currently on hold.

Bulgaria has been slow to adopt European Commission Green Deal legislation; when it has done so it has chosen to adopt the lowest ambition level possible. It submitted its draft revised NECP to the European Commission only in February 2024, having shared only an incomplete version without subtargets and modelling with the public in December 2023. Further legislative progress has been put on halt by the failure of the government and the country facing another round of general elections in June 2024, as well as the decision of the outgoing parliament to postpone key reforms such as the liberalisation of the energy



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market. All this puts billions of EU funds from the RRF and JTF designated for Bulgaria at risk.

The Renewable Energy Directive II (RED II), due for transposition no later than June 2021, illustrates the slow pace with which key pieces of EU energy transition legislation are introduced. It was only finally transposed into Bulgarian law in October 2023. It is a literal transposition of the directive, just enough to satisfy the Commission requirements; however, it has not been thought through in a way to benefit consumers and remove the administrative barriers for individual users to create a real incentive to transition to renewables. Still, the transposition of the RED II directive means renewables are afforded more support under law. For instance, a definition for energy communities now exists and the first non-profit energy community has been set up in Gabrovo.

Another issue has been the lack of sufficient finance to support massive long-term building renovation projects. Households are unwilling to invest in energy efficiency measures and renewables themselves, relying instead on the largely failed model of 100% grant funding. Participation in renovation programmes with 20% co-financing is very low to non-existent. There is no support for the development and operation of One-Stop-Shops (OSS) in Bulgaria, although several municipalities are showing ambition and testing local OSS.

The JTF has been helpful in stimulating energy transition at regional level. It will have to continue after 2026 to maintain momentum, as the just transition regions will need further investment as they are still behind in the transition. Additionally, more support is needed for other carbon intensive regions than the coal regions discussed here.

Bulgaria has a limited local supply chain for materials needed in building renovation and low carbon heating and cooling technologies. More could be done to support the national government to prioritise new manufacturers of “green” materials and technology, as well as service companies.

Bulgaria has achieved progress since 2019. Ending imports of Russian fossil gas and lowering gas usage has been an important step forward for energy security; it has also helped reduce the proportion of fossil gas in the energy supply.



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## Czechia

Czechia's progress in its energy transition has been less marked than for some of the other countries profiled. The share of renewables in its power mix increased by 27% between 2019 and 2023, but from a low base of 11.7% to 14.9% in 2023 – the lowest share among the eight countries profiled. Its use of fossil fuels in the overall power mix has declined by 17.2% over the same period, but still represents a high proportion of power at just over 45%.<sup>22</sup> Czechia is not yet on course to achieve an energy transition in line with the REPowerEU ambition to speed it up.

Czechia adopted a 2033 phase-out date for coal and joined the Powering Past Coal Alliance at COP28, aligning itself with global leaders committed to phasing out coal. Two fossil gas pipeline projects – the TAL+ pipeline and STORK 2 – are in a preparatory phase and attempts (ultimately unsuccessful) were even made to have these funded by REPowerEU loans.

Politically, Czechia has gone through a sea change in terms of accepting the energy transition since Russia's invasion of Ukraine. Reducing reliance on Russian fossil gas was communicated as a priority by the government; informed conversations around renewables resulted in greater public acceptance of the energy transition and policies related to it. However, pushback within government persists, mainly from the Ministry of Industry and Trade, which has strong connections to the Confederation of Industry and the Association for District Heating.

The reaction to the Russian invasion of Ukraine has not been to significantly lessen the reliance on gas in general, but instead to diversify supply and lean more into a nuclear dependent future. The Czech government plans to continue, and indeed to grow, its reliance on nuclear in the power mix with four new nuclear reactors in the pipeline. However, commissioning and construction dates for these plants are unrealistic,<sup>23</sup> creating a risk that Czechia may remain dependent on fossil gas for longer than planned.

Another result of this policy has been lower ambition for renewables and demand side flexibility. The current objective is to reach 30% of renewables in its final energy consumption by 2030. However, a higher target of 33% would be

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<sup>22</sup> Ember, February 2024, [European Electricity Review 2024](#)

<sup>23</sup> Climate Action Network Europe, October 2023, [Time to step up national climate action – An assessment of the draft National Energy and Climate Plans updates](#)



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required to be consistent with the overall EU target of 42.5% as indicated by the Commission's assessment of the Czech NECP.<sup>24</sup>

Plenty of funds available are for the green transition in Czechia, but they are not always used effectively. In the previous programming period 2014–2020, several projects received funding which have almost no impact on the climate, despite being tagged as such.<sup>25</sup> Doubts also remain about the actual contribution its NRRP will make to help achieve the target for climate spending, which according to a study is lower than the 37% threshold.<sup>26</sup>

The Modernisation Fund has primarily been used to convert coal heating systems to fossil gas. It should be noted that at the beginning of 2024 the government approved a revision of the programme document for the Modernisation Fund. This provides for an increase in the allocation of support for community energy, and coal-to-gas conversion is now included in the section on other supported investments, rather than in the section on priority investments.

But Czechia also has some good examples of how to boost the energy transition through well-funded policies. It uses EU funds to tackle energy poverty in vulnerable households. In 2022 the New Green Savings Light Programme was launched, targeting single family homes and pensioners or those in receipt of housing benefit. It provided financial support for household energy efficiency improvements.

Renewables deployment has also seen a boost due to removing administrative barriers and fully transposing the RED II into legislation. Hope remains that it will also kickstart currently stagnant wind deployment.

Much more could be done to exploit Czechia's vast lithium deposits, which are the largest in Europe in a sustainable way. This metal is vital to the transition; with the support of the European Commission, it could provide the EU with resource security, lessening dependence on imports.

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<sup>24</sup> European Commission, February 2024, **Highlights of the Commission's assessment of Czechia's draft updated National Energy and Climate Plan**

<sup>25</sup> Centre for Transport and Energy (CDE), 2022, **Revision of Climate Budget Tagging of EU Funds in the Czech Republic**

<sup>26</sup> Green Recovery Tracker, June 2021 (last updated), **Czech Republic country report**

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## Estonia

Since the start of the von der Leyen Commission, Estonia has seen progress building out its renewables portfolio. The share of renewables in the power mix increased by 34% from 2019 to 2023.<sup>27</sup> The share of fossil fuels in its power generation remains very high though, at 62.4% in 2022.

Estonia has also updated its targets for domestic renewable electricity (100%) and renewable energy production (65%) by 2030, supported by positive REPowerEU investments (grid improvements and biogas production in addition to renewable energy acceleration).

The approval of an improved TJTP, with an oil shale phase-out date and ongoing drafting of a climate law, further demonstrates positive momentum. Oil shale has been a major source of fossil energy for Estonia, especially in power generation and heating. Phase-out dates for oil shale are 2035 for electricity production and 2040 overall; they illustrate Estonia's progress in the energy transition and were endorsed by the European Commission but need to be reflected in the country's final NECP. Currently, the draft NECP nor the draft climate law do not incorporate oil shale phase-out dates.

Enabling factors, particularly EU funds, have positively impacted Estonia's clean energy goals with increased investments in renewables, energy efficiency and grids. Yet there is a lack of support for energy decentralisation, prioritisation of vulnerable groups, and nature restoration, which is crucial considering the impacts of energy production and big infrastructure projects on nature. The European Commission should consider sending out a clear signal that just and green transformation must be a priority in the next MFF to keep up a positive momentum and ensure that public funding is allocated to areas that need it most, while alleviating the impacts on the environment.

Politically, concern has heightened since Russia's invasion of Ukraine, prompting accelerated RES permitting procedures. However, challenges persist with the government maintaining a narrative of intermittent RES, justifying the need for non-renewable sources like SMR nuclear or fossil gas, potentially decarbonised in the future with biomethane. Moreover, Estonia heavily relies on imported clean energy technologies, lacking a local supply chain.

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<sup>27</sup> Ember, February 2024, [European Electricity Review 2024](#)



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And more challenges persist, with Estonia's NECP insufficient, jeopardising adherence to the 1.5 °C trajectory of the Paris Agreement. A robust nuclear lobby pushing for an SMR plant<sup>28</sup> and construction of a new shale oil plant in Ida-Virumaa pose additional hurdles, and the elimination of oil shale subsidies has not been agreed upon in any of the strategic documents.

Blockers identified in Estonia include the far right, certain industries (oil shale, chemical, forestry, peat, cars), the nuclear small modular reactor (SMR) lobby, certain business-as-usual-oriented academic actors and trade unions that are only intermittently supportive.

Conversely, there is a progressive government coalition with a Ministry of Climate, RES associations, progressive academics, environmental groups and CSOs driving the energy transition forward.

## Hungary

Progress achieved between 2019 and 2022 includes Hungary enshrining climate neutrality by 2050 in 2020, a partial abolition of the general cap on utility prices in 2022 and the ongoing development of a regulatory framework for energy communities.

Hungary's political ambition for the energy transition is underscored by a goal of achieving climate neutrality by 2050, enshrined in a 2020 Act. However, its NECP presents weak interim targets, prioritising gas and nuclear power. Political decisions, such as the construction of combined cycle gas turbine plants and reliance on Russian fossil gas imports, hinder a robust energy transition.

Fossil fuels made up 29.9% of Hungary's power mix in 2023, which is relatively low for the region (Figure 4).<sup>29</sup> This share decreased by almost 30% since 2019. The share of RES has increased by 87% over the same period, though it is still at the lower end of the countries profiled at 25.7% (Figure 2).<sup>30</sup>

Hungary is at risk of relying too heavily on fossil gas and nuclear rather than building out its renewables capacities. Fossil fuel lobbies, including the national oil company MOL Group and stakeholders in the Matra Power Plant, whose

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<sup>28</sup> CEE Bankwatch Network, April 2023, [Nuclear ambitions risk hindering Estonia's energy transition](#)

<sup>29</sup> Ember, February 2024, [European Electricity Review 2024](#)

<sup>30</sup> Eurostat Data Browser, [Share of energy from renewable sources](#)

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closure the government has postponed and conditioned on the installation of a CCGT plant, impede the early phase-out of fossil fuels. On the other hand, many of those same stakeholders, such as MOL, are also engaged in renewable energy projects and waste management for a “circular economy”.

Hungary’s NECP talks about strengthening energy sovereignty and security, yet energy security concerns arise nonetheless. Its dependence on fossil gas imports, primarily from Russia, remains high, with potential geopolitical risks.

Hungary relies on EU funds to roll out its energy transition. However, the government’s uncooperative attitude to the EU, including its rule of law conditionality mechanism, is putting these funds into jeopardy, impacting crucial energy transition initiatives.

Clean energy technologies are impacted by unstable market dynamics driven by the energy crisis. A surge in interest in solar panels is tempered by unexpected government regulations,<sup>31</sup> creating uncertainty. Emphasis on the development of battery manufacturing and of hydrogen for energy and mobility, and the centralisation of waste management via a long-term exclusive concession to the national oil company MOL, raise concerns among environmental groups.

Reindustrialisation, particularly the establishment of battery-related factories, contributes to increased energy demand. Focusing industrial development on one single industrial branch (batteries) also makes the country’s economy vulnerable. Opportunities and incentives for local supply chains, as well as for any initiative supporting energy communities, are scarce.

Challenges in Hungary’s energy transition landscape include the dominant influence of major industrial actors shaping government policies, hindering the move towards a carbon-neutral and decentralised energy economy. Limited freedom of information and government control over media further impede meaningful public discourse on the energy and climate crisis. The government’s use of a “state of war emergency”<sup>32</sup> raises concerns about curtailed environmental safeguards, public participation rights and compliance with EU rules.

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<sup>31</sup> Wolf Theiss, December 2022, **Hungary: Further tightening of grid connection rules – existing grid connection rights could also be at risk**; BNE Intellinews, September 2023, **Hungarian government backs down from solar energy regime changes**

<sup>32</sup> About Hungary, 11 April 2024, **Government extends state of emergency in connection with Ukraine war until November 19**

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## Latvia

Clear progress has been made in Latvia's energy transition over the duration of the current European Commission. Latvia's fossil fuel share in power has more than halved from 2019 to 2023, to 23.4%.<sup>33</sup> This brings it below the EU average, and to the second lowest fossil fuel share among the countries profiled after Slovakia (Figure 4). The share of renewables in power generation increased by 55% over the same period, and is the highest among the countries profiled at 76.6% (Figure 2).<sup>34</sup>

Three significant examples of progress from 2019 to 2022 include:

1. The complete cessation of reliance on cheap Russian fossil gas.
2. Ambitious plans for wind energy development.
3. The exponential growth of "prosumerism" (being both a consumer and producer), particularly solar panel installations.

Politically, Latvia aims to increase its greenhouse gas (GHG) reduction target from 6% to 17% by 2030 compared to 2005, as required by the Effort-sharing Regulation and stated in the draft NECP. The country aspires to transform from a net energy importer to an exporter, primarily through wind farm development. However, it remains reluctant to set specific targets for fossil gas phase-out and fossil fuel use remains very high, making up over 71% of final energy being consumed.

Latvia faces a complex landscape in its energy transition. For example, there is a disparity between the electricity and heating sectors, with strong political support for forest biomass in heating despite sustainability concerns. Notably, energy efficiency and sufficiency are overlooked in political discourse, focusing more on energy production than savings.

EU funds play a crucial role in Latvia's energy transition, supporting renewable energy, energy efficiency, building renovation and infrastructure projects. However, challenges persist, as the funds may fall short of financing the required transformations, especially in building renovation and transport decarbonisation. The market for clean energy technologies in Latvia generally meets demand, but obtaining certain technologies can involve delays.

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<sup>33</sup> Ember, February 2024, [European Electricity Review 2024](#)

<sup>34</sup> Eurostat Data Browser, [Share of energy from renewable sources](#)

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While there are no actors outright blocking the transition, certain players, such as biogas producers and the gas distribution system operator Gaso, have successfully lobbied for plans that could potentially delay the complete phase-out of fossil gas. The forestry industry has also influenced policies, exploiting the growing demand for biomass as a heat production source.

On the positive side, political parties like Progresivie, the wind developers' associations and the main district heating companies strongly support the energy transition. Riga, the capital, has emerged as a progressive actor with ambitious goals, although political shifts may impact these ambitions.

Challenges looming over Latvia's energy targets and potential delays include the intensive use of forest biomass in heating, slow progress and resistance in society to wind park development, reluctance to set a phase out date for fossil gas use in both power and heating sectors and a strong nuclear lobby pushing for reactor development. There is also lack of political will to prioritize building renovation, which at current speed is far from implementation of renovation wave.

## Poland

Poland has the highest share of fossil fuels in its power mix, mainly coal and lignite, out of the eight countries profiled at 72.9% of its electricity mix in 2023.<sup>35</sup> However, some progress has been made even under very difficult circumstances with the conservative populist PiS government signalling severe unwillingness to engage in any dialogue regarding the phase-out of coal before 2049.

Renewables increased in their share of power generation by 74% between 2019 and 2023,<sup>36</sup> and there is hope that the new Polish government will set much more ambitious energy transition targets. The country's new Secretary of State for Climate Urszula Zielińska said in January 2024 that the new government plans to set an end date for coal.

The previous eight years of a PiS government saw a pushback against energy transition measures. The conservative populist government, particularly the Sovereign Poland party led by Justice Minister Zbigniew Ziobro, opposed the transition, framing it as an attack on national sovereignty and economic

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<sup>35</sup> Ember, February 2024, [European Electricity Review 2024](#)

<sup>36</sup> Ibid.



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interests. The Ministries of Climate and Environment and State Assets, representing fossil fuel interests, further hindered progress. State-owned energy companies, trade unions linked to the mining industry and some local communities in coal regions also opposed changes.

Conversely, the new Polish government headed by Donald Tusk has signalled a different attitude towards the energy transition. Already before the October 2023 elections, others emerged as energy transition champions. Local administrations and individual citizens actively sought opportunities to reduce energy bills by investing in renewables and building retrofit. Civil society, major NGOs and enterprises have also been supportive, with a focus on green technologies with both economic and environmental benefits.

Poland's political ambition for the energy transition, as reflected in its revised NECP, is described as not ambitious enough by the Commission.<sup>37</sup> The original NECP of 2019 lacked robust targets, with modest goals for emissions reduction, renewable energy share and energy efficiency. However, following the Russian invasion of Ukraine in 2022, Poland adjusted its priorities, with amendments to the Energy Policy of Poland until 2040 (EPP2040). This anticipates a 50% contribution from renewable energy sources by 2040. The policy emphasises energy efficiency in buildings and industries, evaluates fossil gas capacities and outlines the gradual replacement of coal with fossil gas as a transitional fuel.

Enabling conditions for Poland's energy transition include EU funds, making up about 25% of public investment.<sup>38</sup> However, the impact of these funds is constrained by poor national strategies. The My Electricity programme, supported by EU funds, has enabled over 1.3 million people to become prosumers with 10.2 GW of installed photovoltaic capacity in 2023 compared to 16,000 prosumers and 102 MW capacity in 2016.<sup>39</sup>

Clean energy technologies are developing, with a growing local supply chain for wind energy and photovoltaics. But due to a lack of policy coordination and updated strategies, modernisation of distribution grids is delayed and an

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<sup>37</sup> European Commission, April 2024, Commission Recommendation, Assessment (SWD) and Factsheet of the draft updated National Energy and Climate Plan of Poland

<sup>38</sup> Ministry of Development Funds and Regional Policy, 2022, **Raport – Inwestycje w Polsce; Okres: I kw. 2020 r. – IV kw. 2021 r.**

<sup>39</sup> Eurostat Data Browser, **Share of energy from renewable sources**

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increasing number of prosumers face problems with connection to the grid or risks of curtailment once connected.<sup>40</sup>

Three notable examples of progress achieved include:

1. Increased renewable energy targets in the draft amendments of the NECP and EPP2040 revision.
2. The growth of prosumers and use of heat pumps.
3. The planned closure of Bełchatów, Poland's largest lignite power plant and open-pit mine.

Despite these advancements, Poland faces four main challenges:

1. It is still heavily dependent on fossil fuels, with 70% of electricity produced from coal and lignite in 2022.
2. Delays in modernising the energy sector, in particular electricity grids, hinder renewables deployment.
3. The lack of a comprehensive and ambitious energy transformation strategy leads to inconsistent sectoral approaches and impedes effective EU fund utilisation.
4. The renovation of building stock, responsible for 38% of GHG emissions, is progressing slowly, which creates risk of negative social impacts once the carbon pricing for buildings (ETS2) starts impacting energy bills.

## Romania

Romania saw use of fossil fuels in the power sector fall by 31% from 2019 to 2023, corresponding to a 20% increase in the share of renewables.<sup>41</sup> Its share of renewables in power generation in 2023 was 50.4%, the second highest among the countries profiled after Latvia, and above the EU-27 average.

Politically, Romania grapples with outdated climate and energy targets. There is progress in developing the Long-Term Strategy for reducing GHG emissions, but challenges persist. Romania clearly faces major challenges in achieving European Commission targets for the energy transition.

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<sup>40</sup> Agnieszka Zielińska, 21 July 2023, *Tysiące odmów przyłączeń do sieci. A będzie jeszcze więcej?*, Money.pl

<sup>41</sup> Ember, February 2024, **European Electricity Review 2024**

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- > Delays in crucial investments, especially in the decarbonisation plan of the company Oltenia Energy Complex, have stalled progress.
- > Difficult negotiations leading to the delay of renewable projects may postpone the coal phase-out date and highlight a reluctance to adhere to decarbonisation timelines.
- > There is a lag in grid expansion to support increased renewable capacity.
- > The reliance on fossil gas and nuclear as transition fuels without a comprehensive assessment poses a risk.
- > Moreover, attempts to revive hydropower projects face legal and environmental challenges, potentially impacting biodiversity.
- > The response to energy security concerns, particularly in the aftermath of the Russian invasion of Ukraine, involves short-term measures like capping electricity prices and agreements for fossil gas supply.

Enabling conditions present both opportunities and challenges. Over EUR 5bn of EU funds are available, but the main hurdle lies in insufficient administrative capacity to disburse these funds effectively. This is both at local and national levels, impeding the acceleration of energy transformation projects. The lack of a local clean energy technology market or supply chain further complicates matters. Moreover, the lack of coherence and integrated measures in strategic documents, like Romania's NECP, adds complexity to the transition. The weakening of environmental protection legislation, particularly concerning hydropower projects, poses a significant threat to biodiversity.

Despite challenges, there have been notable examples of progress in Romania. The prosumer sector emerges as a champion, experiencing significant growth since 2019, with approximately 77,000 prosumers by July 2023, contributing over 900 MW of renewable energy. The prosumer sector's growth, securing funds from the Modernisation Fund for grid expansion and the commitment to phase-out coal by 2032 are positive developments.



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## Slovakia

Slovakia has reduced the share of fossil fuels in the power mix by 46% between 2019 and 2023.<sup>42</sup> However, this achievement is made possible by nuclear and heavy use of gas for heating – both putting Slovakia in a severe lock-in situation. Over the same time period, the share of renewables decreased slightly, by 3%, to 22.9% of the power mix.<sup>43</sup>

As a share of final energy consumption, renewables rose by 49% from 2018<sup>44</sup> to 2022,<sup>45</sup> but this is largely the result of including local data with high shares of domestic heating with biomass, which affects air quality. In addition, Slovakia is the worst-performing of all EU countries in solar and wind power.

The country has a coal phase-out date of 2030. The phase-out of coal power plants, Nováky in December 2023 and Vojany announced for 2024, will significantly contribute to a decrease in GHG emissions. On the other hand, Slovakia plans to increase share of fossil gas cogeneration within the district heating systems by 2030 which is worrying.

While there is a commitment to phase out coal, fossil gas lobby influence remains strong, with plans to almost double fossil gas share in cogeneration in Slovakia's draft NECP. The country is also hesitant to adopt provisional EU targets, raising concerns about Slovakia's commitment to the ambitious REPowerEU targets.

In response to energy security concerns, Slovakia aims to diversify fossil gas supplies, emphasising the importance of fossil gas in transitioning to a low carbon economy. Nonetheless, there is a commitment to increasing energy efficiency and savings, along with efforts to strengthen cross-border interconnections.

Unfortunately, even this limited progress may well slow down in the coming years. Entities like SPP – Distribution, owner and operator of the fossil gas distribution network, have hindered progress, promoting fossil gas over renewables. The coalition parties have shown resistance to energy transition

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<sup>42</sup> Ember, February 2024, [European Electricity Review 2024](#)

<sup>43</sup> Ibid.

<sup>44</sup> Eurostat Data Browser, [Share of energy from renewable sources](#)

<sup>45</sup> European Environment Agency, March 2024, [Share of energy consumption from renewable sources in Europe](#)

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efforts, scoring poorly in pre-election assessments. Opposition parties have outperformed them in a pre-election climate survey, indicating a shifting landscape in terms of political support.

However, amid these challenges, there are noteworthy champions of the energy transition. Buildings for the Future, representing over 150 companies, leads discussions on energy efficiency and a healthy indoor environment. The Slovak Innovation and Energy Agency (SIEA) administers schemes supporting RES, and the Slovak Environment Agency promotes innovative support schemes for building renovation with over EUR 500m allocated. The Slovak Association of the Photovoltaic Industry and RES (SAPI) actively supports sustainable renewable energy development.

Other emerging champions in the energy transition include heat pump companies experiencing significant growth, with Slovakia producing over half a million heat pumps annually. Ironically, the country with one of the highest heat pump production rates per capita in the EU has the least ambitious target in utilising them.

EU funds play a crucial role in Slovakia's energy transition, with allocations supporting energy efficiency measures, regional and local energy capacities, and RES-support schemes. However, challenges persist, such as administrative delays in finalising the investment strategy for the Modernisation Fund.

Positive examples of progress in Slovakia include the phase-out of lignite mining, support schemes like Renovate House,<sup>46</sup> which support energy savings, RES, adaptation and other measures for households. There are also emerging schemes for tackling energy poverty in the Recovery and Resilience Plan/REPowerEU chapter and a national Green Households project<sup>47</sup> financed from Programme Slovakia (ESIF).

Yet challenges remain prominent. The conservative nature of the heating sector, a strong fossil gas lobby and potential impediments from nuclear supporters pose threats. The wind energy sector has been blocked for 19 years, raising questions about the quality of national energy planning and permitting, as well as about sustainability criteria and business strength.

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<sup>46</sup> Slovak Environment Agency, <https://obnovdom.sk/> (webpage)

<sup>47</sup> Zelená domácnostiam (the Green Households project), <https://zelenadomacnostiam.sk/> (webpage)

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## ANNEX 2

# EU FUNDING INSTRUMENTS

Overall EU funding mechanism	Specific EU funds	Amount and aims	Relevance to the energy transition	Administrative and other key points
Multiannual Financial Framework 2021–2027	European Structural and Investment Funds (ESIF), also known as Cohesion Policy Funds (incl. European Regional Development Fund, Cohesion Fund )	EUR 378bn for strengthening EU cohesion and investing in the social and economic development of all EU regions and cities	Climate conditionality: at least 30% (for ERDF), 37% (for CF) to support climate investment  One out of the 5 priority objectives of cohesion policy (Green Europe) focuses on renewables and energy efficiency, decarbonisation of heating and building sectors	Decentralised management (national and regional operational programmes) gives regions greater decision making powers  Clear rules for public participation (partnership principle, with involvement of stakeholders via monitoring committees)  Eligibility of fossil fuels investments (gas boilers, district heating, transmission and distribution networks) under certain conditions until end 2025
	Just Transition Fund (JTF)	EUR 19.2bn to support the transition of territories affected highly dependent on fossil fuels and carbon intensive industries	100% climate investments  Fossil fuels excluded	Member states not committing to EU 2050 climate neutrality goal will be able to only access 50% of funds



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Overall EU funding mechanism	Specific EU funds	Amount and aims	Relevance to the energy transition	Administrative and other key points
	Connecting Europe Facility (CEF)	EUR 5.84bn for energy infrastructures on the PCI list	Key tool to increase interconnection between countries	<p>Commission-managed instrument</p> <p>Support for gas infrastructures is possible</p> <p>Lack of specific encouragement and support for CEE countries to apply</p>
NextGenerationEU	Recovery and Resilience Facility (RRF) (2020–2026)	EUR 800bn to recover from the COVID-19 pandemic and invest in the necessary policies for more resilient societies, allocated through NRRPs	<p>At least 37% dedicated to the green transition</p> <p>Climate conditionality catalyses important reforms in NRRPs that help accelerate the energy transition (e.g. Romanian coal phase-out, Slovak renovation programme)</p> <p>Introduction of the Do no significant harm principle for each measure funded by the RRF</p>	<p>Climate conditionality catalysed important reforms in national recovery and resilience plans that help accelerate the energy transition</p> <p>Centrally managed by member states, with little involvement of stakeholders leading to limited acceptance and transparency</p> <p>Limited fossil-based investments eligible thanks to the introduction of the “Do no significant harm” principle (this principle is exempted for selected fossil fuels investments under REPowerEU chapters)</p>





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Overall EU funding mechanism	Specific EU funds	Amount and aims	Relevance to the energy transition	Administrative and other key points
Funds stemming from ETS revenues for decarbonisation initiatives	Modernisation Fund (2020–2030)	Approx. EUR 57bn (assuming a carbon price of EUR 75/tCO <sub>2</sub> )  Support for countries with a GDP lower than 60% of the EU average  Mainly for CEE countries	Key instrument to support schemes for renewable energies, energy efficiency, electricity grid modernisation	Allocated at national level, with the involvement of the European Commission and European Investment Bank (EIB), with decisions made by a committee representing member states  Possible to support gas infrastructures
	Innovation Fund (2020–2030)	EUR 40bn until 2030  Support for developing innovative low carbon technologies	Support for a wide range of technologies such as renewables, greening energy-intensive industries, storage, Carbon Capture and Storage and Carbon Capture and Utilisation	Centrally managed by the European Commission  Options to ensure more even spread of funding between EU countries are not fully used by the commission, leading to low application rate by CEE businesses
	Social Climate Fund (2026–2032)	EUR 65bn over the period 2026–32  Support to energy- and transport-poor households and micro-enterprises affected by the impact of EST2	Green investment (reducing energy consumption of target groups) and temporary direct income support, as well as supporting action (e.g. technical assistance, information and advisory service)	Similar to NRRP: plans to be designed by member states, specifying milestones and targets



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## ANNEX 3

# TOOLS STEMMING FROM EU REGULATION AND POLICIES

Tool	Description	Experience in CEE region and recommendations
NECP (introduced in 2018–19, updates undertaken until June 2024)	Part of the governance of the Energy Union, and a key tool to show national contributions to reach the climate and energy targets. They are reviewed by the European Commission, and the member states must submit regular progress reports.	<p>A hook for non-state actors in CEE countries to engage with their governments and shape climate and energy priorities</p> <p>Delays in updating their plans with little or close to no consultation, so a ticking the box exercise and insufficiently ambitious</p> <p>Little influence on concrete policy changes</p>
National Long-Term Strategies	Strategies to ensure member states have a plan for the climate neutrality 2050 target Also part of the regulation on the Governance of the Energy Union, must be consistent with NECP	<p>No iterative review process (with European Commission recommendations to be taken into account)</p> <p>Note: Poland did not submit one</p>
Technical Support Instrument	Provides tailor-made technical expertise to EU member states to design and implement reforms in a wide range of policy areas, including climate action and the energy transition. An example: Support for the Hungarian Ministry for Innovation and Technology to scale up investments for energy efficiency in buildings	<p>Initiative used on ad-hoc basis by countries but there is a need to ensure it is picked up more widely by countries lacking administrative capacities such as CEE member states</p> <p>Used by the CEE region for modelling and putting in place strategies and instruments related to EU policies</p>
European Semester	Macroeconomic coordination and governance, with country-specific recommendations that include concrete policy suggestions on the topics of energy and climate	Country-specific recommendations released yearly by the European Commission are now embedded in the RRF as milestones



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Tool	Description	Experience in CEE region and recommendations
		“European Semester fact-finding missions”: a practice to be continued and developed by the next European Commission to connect with civil society