JUST TRANSITION OR JUST TALK? 2020

EMBER
COAL TO CLEAN ENERGY POLICY

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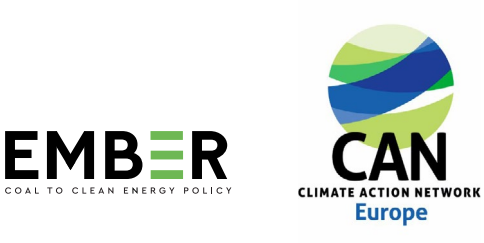
National Energy and Climate Plans reveal that the EU countries set to receive most of the Just Transition Fund plan to stick with coal - or swap it for fossil gas.



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Executive summary

As part of its European Green Deal, the European Commission has proposed a Just Transition Fund, worth up to €40billion[1], to support the EU regions most affected by the transition to a low carbon economy.

This report analyses the final National Energy and Climate Plans (NECPs) of 18 EU Member States that are still using coal for electricity generation. We assess whether the plans for coal are in line with the EU's climate commitments and whether the Just Transition Fund would therefore be used to support a real transition in these EU coal-countries. This report is the second part of a series and follows CAN Europe and Ember's 2019 assessment of the draft NECPs: *Just Transition or Just Talk?*.

To meet the EU's commitments under the Paris Agreement and limit global temperature rise to 1.5°C, all EU countries need to phase out coal by 2030, and transition directly to clean electricity without increasing the use of other fossil fuels such as fossil gas.

Key findings of the NECP analysis

The analysis of the NECPs shows that 11 out of 18 EU coal-countries do not have a Paris-compatible plan to phase-out coal.

- **No coal transition: 7 countries** do not plan to phase-out coal by 2030: Bulgaria, Croatia, Czechia, Germany, Poland, Romania & Slovenia. Total installed coal capacity across all 7 countries falls by just 42% in the next decade. 52GW of coal is expected to be operational after 2030, nearly all (~90%) of which is in Czechia, Germany and Poland.
- **Coal to gas transition: 4 countries** plan to phase-out coal by 2030 but with a significant increase in fossil gas: Greece, Hungary, Ireland & Italy.
- **Fossil-free transition: 7 countries** are on track to phase-out coal by 2030 - without a significant increase in fossil gas: Denmark, Finland, France, the Netherlands, Portugal, Slovakia & Spain.

1. The European Commission proposed a fund size of 40 billion Euros in May 2020, however, this risks a substantial cut - down to 17.5 billion Euros following the European Council's proposal on the coronavirus Recovery Instrument.

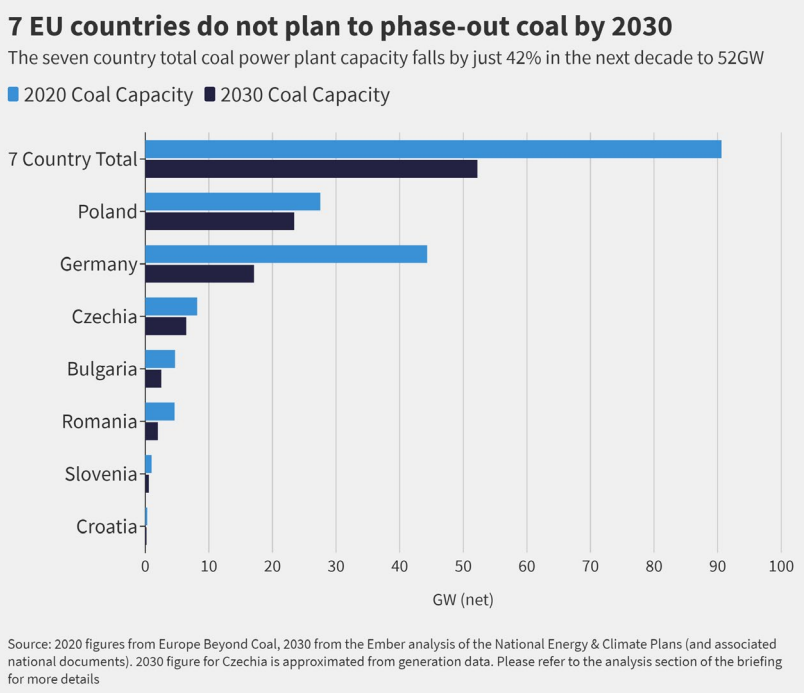
Implications for the Just Transition Fund

Our analysis demonstrates that without reform the Just Transition Fund risks rewarding climate laggards at the expense of countries with ambitious and Paris compatible plans for their coal regions. Under the existing allocation methodology:

- **Nearly two-thirds of the Fund will go to the 7 countries which do not plan to phase-out coal by 2030.** In the long term, 2 of these countries (Bulgaria & Poland) are also planning a significant expansion of fossil gas use.
- More than 10% of the Fund will go to the 4 countries which plan to phase-out coal by 2030 but with a significant increase in fossil gas use.

Without national governments setting a clear timeline to go beyond fossil fuels, it is unclear how the Just Transition Fund will effectively support coal regions and communities through the energy transition.

FIGURE A



Summary of key policy recommendations

The European Parliament, Council and Commission must ensure that:

- Support from the Just Transition Fund is conditional on ambitious coal phase-out commitments - by 2030 at the latest.
- All forms of fossil fuels - and gas in particular - are fully excluded from the scope of the Just Transition Fund.

Policy Recommendations

#1 Fossil Free

The European Parliament, Council and Commission must ensure that coal and all other fossil fuels, gas in particular, are fully excluded from the scope of the Just Transition Fund, and that no fossil fuel projects can be included in the Territorial Just Transition Plans. All loans and grants to be mobilised through all three pillars of the Just Transition Mechanism should comply with EU Taxonomy rules and principles. Coal regions need future-proof investments in the new economy - fossil gas is another dead-end.

#2 Conditional on Coal Phase-Out

The European Parliament, Council and Commission should render receiving support from the Just Transition Fund conditional on Member States' coal phase-out commitments, the setting of closure dates of coal related activities, and the speed of the transition away from fossil fuels. Climate laggards should not get a free pass.

#3 Underpinned by Quality NECPs

The European Commission must hold EU governments to account on the quality of their National Energy and Climate plans, and make recommendations that will ensure that Member States properly update their NECPs for the inevitable phase out of coal in a socially just and orderly manner. The next iteration of the NECPs should reflect concrete plans to leapfrog from coal to renewable energy sources, while applying the energy efficiency first principle[2], to achieve the Union's revised 2030 climate targets.

#4 Partnership Principle

The European Commission should set a clear, transparent and effective mechanism ensuring that the Territorial Just Transition Plans will be designed, implemented, and monitored with equal participation of all relevant stakeholders at local and regional levels - based on the partnership principle.

#5 Paris-Compatible Energy Transition

All EU Member States should commit to phase out coal by 2030 the latest, and move towards renewables based energy systems underpinned by the energy efficiency first principle. This should be combined with ambitious emission reduction targets to help put the EU back on-track to meet the commitments of the Paris Agreement, while bringing numerous health, economic, environmental benefits, on top of green and decent jobs.

#6 Deliver Real Impact In Coal Regions

In their Territorial Just Transition Plans, **coal regions** should prioritise projects that have the highest added value in terms of supporting decent, new and green jobs, and avoid those projects which will cause lock-in to other fossil fuels. They should set concrete milestones and timelines for achieving climate neutrality in the next decades.

#7 Integrated Approach

The **upcoming programming** of all Cohesion Policy Funds[3] must embrace the transition towards climate neutrality in an integrated manner. Member States should design their Territorial Just Transition Plans to ensure complementarity within all the various funding streams available.

2. Putting energy efficiency first is a key objective of the EU, as energy savings are the easiest way of saving money for consumers and to reduce greenhouse gas emissions. The EU has set binding targets of reducing energy consumption through improvements in energy efficiency by 2030 by at least 32.5%, relative to a 'business as usual' scenario. https://ec.europa.eu/info/news/energy-efficiency-first-accelerating-towards-2030-objective-2019-sep-25_en

3. National programming of all Cohesion Policy Funds means the development of spending plans for the European Fund for Regional Development, the Cohesion Fund, the European Social Fund and the Just Transition Fund.

Introduction

In January 2020, the European Commission proposed a Just Transition Mechanism as one of the key policies and tools needed to achieve the European Green Deal. The Just Transition Mechanism will help the most vulnerable regions and sectors deal with the social, economic and environmental impacts of the transition to climate neutrality.

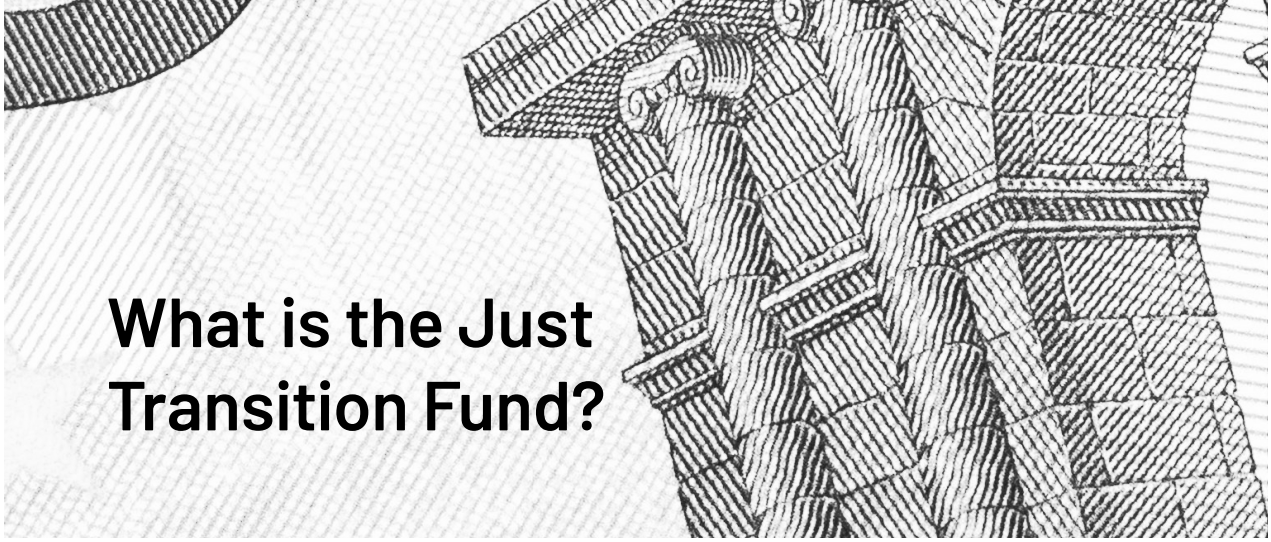
The Just Transition Fund is the first pillar of the Just Transition Mechanism and it is part of the *Cohesion Policy Funds*[4] in the EU's next long term budget 2021-2027 and the new coronavirus Recovery Instrument (Next Generation EU). It will support the transition of the most vulnerable carbon-intensive regions, primarily in the form of grants, to ensure that no one is left behind in the rapid transition to climate neutrality.

By the end of 2019, EU Member States needed to submit a final National Energy & Climate Plan (NECP) to the EU Commission. The NECPs are a key tool in the Governance Regulation where each Member State has to describe, in an integrated manner, its climate and energy objectives, targets, policies and measures for the period from 2021 to 2030, ensuring that the Union's 2030 targets for greenhouse gas emission reductions, renewable energy and energy savings will be met and in line with the EU climate commitments. In 2023, Member States will submit NECP progress reports with their updates on policies and measures, each country must then submit a progress report every two years. Many Member States were significantly delayed in submitting their final NECP with the full set only available from August 2020.

In this briefing, we examine the final NECPs of the 18 Member States that are still using coal for electricity generation. We assess whether their plans for coal are in line with the EU's climate commitments, and therefore whether the Just Transition Fund would be used for a real transition in the EU coal-countries - while leaving no one behind. We further identify Member States which are missing the opportunity to transition directly from coal to clean electricity by planning a significant and increased role for fossil gas. We also explain the current state of affairs regarding the Just Transition Fund Regulation, debates around its function and its distribution.

4. Cohesion Policy Funds include European Regional Development Fund (ERDF), Cohesion Fund (CF) and European Social Fund (ESF)

Based on the European Commission's proposal, the European Council decided its negotiating position on the Just Transition Fund Regulation in June 2020, and the European Parliament is expected to do so in its plenary session in September. Both in the Parliament's plenary and during the trilogue negotiations planned for the end of the year, the possible inclusion of fossil gas in the scope of the Fund, and the Fund's distribution will be two of the main issues on the agenda.



What is the Just Transition Fund?

The context and the objectives

Acknowledging climate change and environmental degradation as existential threats, the European Green Deal provides a roadmap [1] with actions to boost the efficient use of resources by moving to a clean, circular economy, and restore biodiversity and cut pollution. This requires raising the EU's climate ambition for 2030, as an intermediary step to achieve the climate neutrality target by 2050. Following the EU's commitments under the Paris Agreement, a process to increase the Union's current 2030 greenhouse gas emission reduction target is underway.

The Sustainable Europe Investment Plan (SEIP) is the financial arm of the European Green Deal, created for financing European economies' transition to zero-carbon emissions. The SEIP is expected to mobilise at least €1 trillion over the next decade[5]. A key element of the plan is the creation of a Just Transition Mechanism (JTM) aimed at supporting carbon intensive regions within EU Member States, to deal with the socio-economic impacts of the transition, where transitioning towards climate neutrality will be more complex [2].

In January 2020, the Commission proposed a €100 billion Just Transition Mechanism consisting of three pillars: **a Just Transition Fund** [3], a just transition scheme under InvestEU to boost private investments and a public sector loan facility with the involvement of the European Investment Bank (EIB), to be backed by the EU budget.

The Just Transition Fund will support the transition of the most vulnerable carbon intensive regions, primarily in the form of grants, to help economic diversification and transformation at local level. It aims to ensure no one is left behind in the rapid transition to climate neutrality. The Just Transition Fund is a part of the EU *Cohesion Policy Funds* that promote and support the development of all EU regions.

5. All legal and monetary provisions described in this briefing are subject to ongoing negotiations on the overall EU budget and the ordinary legislative procedure on the regulation for the Just Transition Fund.

In order to benefit from the Fund, Member States are expected to detail projects in Territorial Just Transition Plans [4], which are strategic plans for addressing the needs of the eligible regions *'most negatively affected based on the economic and social impacts resulting from the transition'*.

Under the European Commission's proposal, eligible projects may include activities such as *'productive investments in Small and Medium-sized Enterprises, creation of new firms, research and innovation, environmental rehabilitation, clean energy, up- and reskilling of workers, job-search assistance and active inclusion of jobseekers programmes, as well as the transformation of existing carbon-intensive installations when these investments lead to substantial emission cuts and job protection'*.

The Commission's proposal for the Just Transition Fund would make it a useful tool to support the European Green Deal's mid-century climate neutrality objective and its 2030 emission reduction targets. **The Commission's proposal excludes all fossil fuels from its scope** [5]. It also mentions timelines for *'ceasing (or scaling down) activities such as coal and lignite mining or coal fired electricity production'* to be put through as part of the Territorial Just Transition Plans [6].

The European Council, as part of its partial negotiating position, decided to keep the dedicated article of the Just Transition Fund Regulation proposal on the full exclusion of fossil fuels as the Commission suggested [7]. However, the Parliament's current position on the Just Transition Fund Regulation includes an exemption for the investments in fossil gas projects if they comply with certain rules [8].

The size of the Just Transition Fund

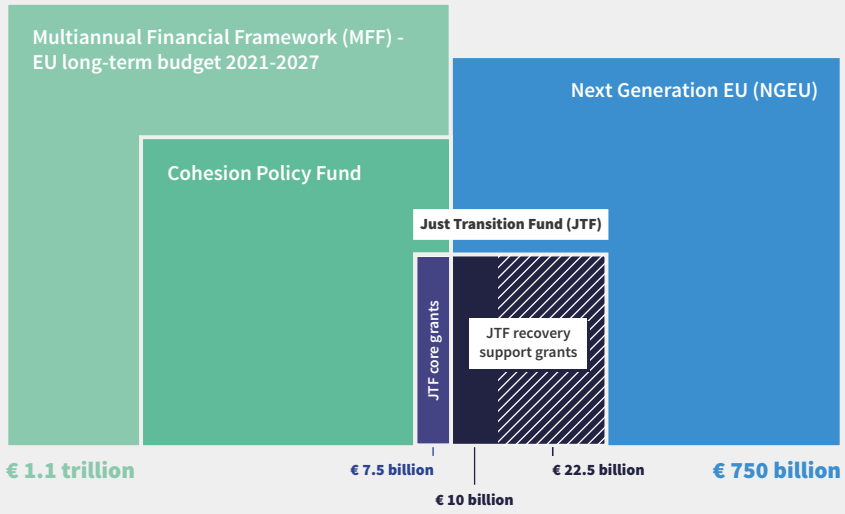
In light of the coronavirus crisis, the need to provide support to the most vulnerable regions has appeared as even more of a priority on top of the urgency for a sustainable, green recovery. Hence, in May 2020, the European Commission decided to reinforce the Just Transition Mechanism as part of both its Recovery Instrument (Next Generation EU) and in its new proposal for the next long-term EU budget 2021-2027 [9]. As a result, the proposed overall budget of the Just Transition Fund was increased from €7.5 billion to €40 billion, and it was decided to further reinforce the just transition scheme under InvestEU. However, the overall amount allocated to the Just Transition Fund now risks a substantial downgrade - to €17.5 billion - following the European Council's proposal on the Recovery Instrument [10] .

The Commission also presented its proposal for a public sector loan facility, to mobilise between €25 and €30 billion with the involvement of EIB [11]. In total, the Just Transition Mechanism is expected to mobilise around €150 billion of public and private investment [12].

FIGURE B

Just Transition Fund Resources (2018 prices)

Based on the European Commission's amended proposal (May, 2020) and European Council's proposal (July, 2020)



In July 2020, the Heads of the 27 EU Member States agreed to shift substantial amounts of funds in Next Generation EU, from grants to loans. As the Just Transition Fund aims to provide support primarily in grants, this shift in the overall budget has implications on the amount of the Fund. The 40 billion Euro fund, as proposed by the Commission in May, risks a substantial cut - down to 17.5 billion Euros.

Raising ambition beyond the NECPs

According to the draft legislation, Territorial Just Transition Plans should be consistent with the National Energy and Climate Plans (NECPs) and other national, regional transition plans. **However, the final NECPs are not in line with the Union's climate neutrality objective by 2050** [13], **and its intermediate step - the revised 2030 emission reduction targets**[6]. Let alone being consistent with the level of ambition needed for the EU to do its fair share under the Paris Agreement, which means climate neutrality by 2040[7].

6. UNEP's latest Emissions Gap Report calls for global annual emission reductions of 7.6% in order to reach the 1.5°C target. Applying this 7.6% reduction would require the EU to increase its 2030 target from at least 40% to at least 65% greenhouse gas emissions reductions compared to 1990

7. The IPCC's 1.5°C report made it clear that in order to have a decent chance to limit dangerous temperature rise, global carbon emissions will need to peak urgently in order to then be reduced by 45% by 2030 and reach net-zero emissions by 2050. All countries need to contribute to this global challenge, but rich countries such as the EU are expected to do more and go faster. In fact, both the United Nations Framework Convention on Climate Change and the Paris Agreement emphasise the need for countries to reduce their emissions based on their historical responsibility and their capacity to act. For CAN Europe, this means the EU needs to reduce its domestic greenhouse gas emissions to net zero by 2040. http://www.caneurope.org/docman/climate-energy-targets/3621-position-paper-can-europe-2030-energy-targets-final/file

The analysis section of this briefing shows that **many Member States with coal regions eligible for the Just Transition Fund do not have plans to phase out coal in the next decade (or even the subsequent decade)**. Furthermore, the NECPs indicate that a number of Member States are planning a significant and increased role for gas - another fossil fuel - in their electricity transitions. Fossil gas emits both abundant volumes of carbon dioxide when combusted (although less than coal), and contributes to methane emissions - a potent greenhouse gas - during extraction and transportation[8]. The absence of a phase-out plan for coal and the transition to fossil gas implies a lack of commitment to the EU's climate objectives, and shows that those Member States are not ready for a just transition.

Governments risk leaving their coal regions behind, lacking motives and pathways to effectively use the Just Transition Fund, without timely national plans demonstrating their commitment to transition to climate neutrality. The Just Transition Fund can be compatible with the fundamentals of the European Green Deal if the Member States have a solid commitment to a real transition at national level, and time-bound, detailed Territorial Just Transition Plans to end fossil fuel dependence in eligible regions.

Where the NECPs are unambitious, the Territorial Just Transition Plans must go further and should be in line with achieving climate neutrality by 2050 at the latest. Thus, they should include phase-out dates for coal by 2030 in coal regions, and a timeline for the phase-out of other fossil fuels in addition to the transformation of carbon intensive industries. This will also facilitate accurate territorial planning to steer the funds towards the real needs of the vulnerable communities and sectors.

In order to ensure that the dedicated funding fulfills the needs to cope with the transition at local and regional level, a bottom-up approach to the Territorial Just Transition Plans with an inclusive participation of all relevant stakeholders is a must. One of the main principles of the Cohesion Policy is the Partnership Principle [14]. This means that the Territorial Just Transition Plans should ensure close cooperation with relevant stakeholders such as local and regional authorities, local communities and Civil Society Organizations. An effective mechanism should be set to provide good governance and inclusiveness in order to leave no one behind and avoid repeating mistakes.

8. As part of the Green Deal, the EU is currently developing a strategy to reduce methane emissions in the energy, agriculture and waste sectors: https://ec.europa.eu/energy/topics/oil-gas-and-coal/methane-gas-emissions_en

Analysis of NECP Commitments by the Member States with Coal Regions

Nine EU countries are already coal-free. The remaining eighteen EU countries still use coal for electricity generation. We have analysed the National Energy & Climate Plans (NECPs) and the associated national planning documents of each of the eighteen countries and collected all relevant data and statements regarding the proposals for coal-fired and gas-fired electricity generation. The analysis was completed in August 2020 through a combination of desk-based research and direct contact with the national government departments responsible for the NECPs. The results were cross-checked with our network of local partner organisations working on the electricity transition.

While real life events such as the coronavirus pandemic, global energy prices or new technologies can quickly make assumptions (and data) in the NECPs look outdated, the NECPs remain the most consistent dataset we have available when assessing what EU Member States are planning for their energy system in the next decade (and beyond).

Coal

Of the eighteen EU countries still using coal for electricity, only nine (Denmark, Finland, France, Greece, Hungary, Ireland, Italy, Netherlands, Portugal) have explicit commitments to end coal-fired electricity generation by 2030. The commitments cover just 26.1GW (21%) out of an existing active EU fleet of 122GW (net) [15]. Further detail, including the planned coal phase-out dates, is provided in Table 1.

TABLE 1

EU-27 coal-countries with a clear commitment in their National Energy & Climate Plans (NECPs) to phase-out coal by 2030

Country	NECP stated plan to phase out coal by 2030?	NECP Phase-Out Year	2020 Installed Coal Capacity [net GW]*	NECP 2030 Installed Coal Capacity [net GW]**
France	Yes	2022	3.0	0.0
Portugal	Yes	2023**	1.9	0.0
Ireland	Yes	2025	0.9	0.0
Italy	Yes	2025	8.0	0.0
Greece	Yes	2028	3.4	0.0
Finland	Yes	2029	1.6	0.0
Netherlands	Yes	2029	4.2	0.0
Hungary	Yes	2030	1.0	0.0
Denmark	Yes	2030	2.1	0.0

* A gross to net capacity conversion has been applied to the raw data. 2020 installed capacity includes plants which are marked as "open" in the database but sub-categorised as on standby, under retrofit or deactivated.

** The coal phase-out has been accelerated to 2021 since the publication of the NECP. EDP has announced the early closure of Sines - the only coal plant expected to be operational in the NECP beyond 2021.

Source: Europe Beyond Coal Database. Ember analysis of National Energy & Climate Plans (or the associated national documents). Further detail is provided in the "Coal Capacity Methodology" box.

A further two coal-countries (Spain and Slovakia) indicate that coal capacity will be zero by 2030, however, this is not stated as an explicit policy objective in the NECP. Notably, in Slovakia, the announcement (in a joint statement from newly inaugurated president Caputova and then prime minister Pellegrini) that the country would stop burning coal to produce electricity by the end of 2023 is not reflected in the NECP.

The remaining seven coal-countries (Bulgaria, Croatia, Czechia, Germany, Poland, Romania, Slovenia) do not plan to phase-out coal-fired electricity generation by 2030. ***In fact, total installed coal capacity across all seven countries falls by only 42% in the next decade*** (see Table 2 for details).

TABLE 2

EU-27 coal-countries with NO clear commitment in their National Energy & Climate Plans (NECPs) to phase-out coal by 2030

Country	NECP stated plan to phase out coal by 2030?	NECP Phase-Out Year	2020 Installed Coal Capacity [net GW]*	NECP 2030 Installed Coal Capacity [net GW]
Spain	X	N/A	4.8	0.0
Slovakia	X	N/A	0.6	0.0
Croatia	X	N/A	0.3	0.2
Slovenia	X	N/A	1.0	0.6
Romania	X	N/A	4.6	2.0
Bulgaria	X	N/A	4.7	2.5
Czechia	X	N/A	8.2	6.4**
Germany	X	2038	44.3	17.1
Poland	X	N/A	27.5	23.4***

* A gross to net capacity conversion has been applied to the raw data. Installed capacity includes plants which are marked as "open" in the database but sub-categorised as on standby, under retrofit or deactivated.

** Capacity figures are not available in the NECP, this figure is an estimate from the TWh figures provided.

*** This figure does not include any of the NECP projected 1.8GW industrial CHP, some of which is likely to be coal.

Source: Europe Beyond Coal Database. Ember analysis of National Energy & Climate Plans (or the associated national documents). Further detail is provided in the "Coal Capacity Methodology" box.

Coal Capacity Methodology

2020 installed capacity is sourced from the latest (17.07.20) version of the Europe Beyond Coal database - https://beyond-coal.eu/data/.

Installed capacity is the sum of all units marked as "open" under the category "unit status (gross)", this includes plants which are marked as open in the database but sub-categorised as on standby, under retrofit or deactivated (BG - 0.5GW, CZ - 0.4GW, DE - 5.4GW, DK - 0.9GW, ES - 0.3GW, GR - 0.6GW, IT - 0.6 GW, HR - 0.1 GW, HU - 0.2GW, PL - 0.8GW, RO - 0.7GW).

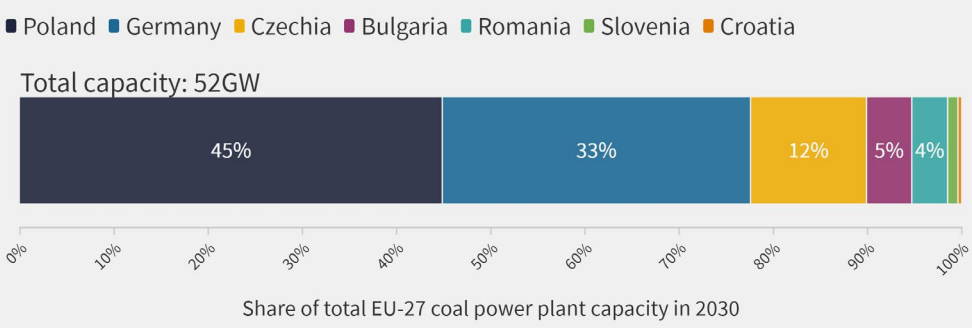
The figures in the Europe Beyond Coal public database are provided as gross MW, a gross to net conversion factor of 92% is applied for units that commenced operation pre-1980, 94% for all other units.

When the NECP provides projections for both existing policy measures (WEM) and with additional policy measures (WAM), the 2030 figures are preferentially sourced from the WAM projections.

The 2030 coal capacity figures are not available for Czechia in the NECP, however the NECP contains projections for net electricity generation from coal (TWh) in 2030 and 2020. We have used the ratio of 2030 to 2020 electricity generation from coal and applied this to the current (17.07.20) installed coal capacity to forecast installed coal capacity in 2030. (N.b this assumes load factor across the remaining fleet remains constant).

52GW of coal is expected to be operational after 2030, nearly all (~90%) of which is in Poland, Germany and Czechia (see Figure C). Only one third (the 17.1GW in Germany to be phased-out by 2038) is covered by a national coal phase-out plan at a later date. ***There are no policy commitments for the remaining 35GW.***

FIGURE C



Source: Ember analysis of National Energy & Climate Plans (or the associated national documents)

Coal-to-gas

For the EU to achieve the climate goals set out in the Paris Agreement, it is essential that the use of fossil fuels in electricity supply is phased-out as quickly as possible. Replacing electricity generation from coal with electricity generation from gas - another fossil fuel - is therefore incompatible with the EU's climate commitments. Fossil gas emits both abundant volumes of carbon dioxide when combusted (although less than coal), and contributes to methane emissions - a potent greenhouse gas - during extraction and transportation.

Similarly, transitioning coal jobs and communities to livelihoods derived from the fossil gas industry - another dead end - is not consistent with the principles of a just transition. An expansion of fossil gas projects would prolong fossil-fuel dependency in the coal regions and risk leaving the same communities behind again as climate action accelerates in the next decades. Coal regions need future-proof investments in the new economy, therefore:

Coal countries must go one step further and transition directly from coal to clean electricity.

In the subsequent section, we identify which of the coal-countries expected to phase-out coal by 2030 are planning a significant and increased role for gas-fired electricity over the next decade - and therefore can be said to be planning a significant coal-to-gas transition.

Definition: Significant coal-to-gas transition

In this analysis, a country is assessed as planning a *significant* coal-to-gas transition if the following conditions are met:

1. The NECP (or the associated national documents) indicates that greater than one third (33%) of the declines in electricity generation from coal vs. the baseline are offset by increased electricity generation from gas for a period of time greater than or equal to 5 years. The baseline is the average coal and gas generation across 2016-2018.
2. New, unabated gas power stations intended to be operated at high load factors (e.g. combined cycle gas turbines - CCGTs) are proposed (either in the NECP or in corporate plans) or already under construction to meet the additional electricity generation requirements.

N.B. when a *significant* coal-to-gas transition is identified, this does not guarantee a direct causal link between coal phase-out and increased gas generation (e.g. via coal-to-gas power station conversions) but simply identifies countries where expected emissions reductions caused by falling coal generation are at least partially offset by increased emissions from gas-fired electricity generation. Non-coal changes to electricity mix (e.g. rising demand, falling nuclear output etc.) could also be contributing to rising gas generation.

Coal-to-gas in countries expected to phase-out coal by 2030

Of the eleven countries expected to phase-out coal by 2030 (the countries in table 1 plus Slovakia and Spain), our analysis indicates that four countries (**Greece, Hungary, Ireland & Italy**) are planning a significant coal-to-gas transition.

Italy sees the largest increase in gas burn of the four countries identified and in the following text we provide further details on Italy's coal-to-gas transition as a case study. The supporting data and charts for Greece, Hungary & Ireland can be found in annex 1.

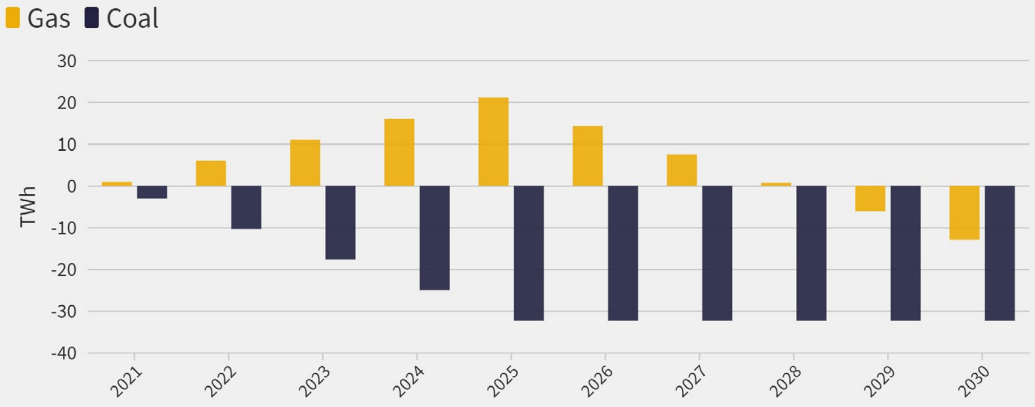
Case study: Italy

According to current Italian Government plans, the coal phase-out is expected to be primarily achieved by increasing electricity generation from gas. Gas burn is expected to increase vs. recent levels for the majority of the NECP period (2021-2030), with gas burn not expected to fall below the baseline (average 2016-2018) until the end of the 2020s, see Figure D.

FIGURE D

Italy: Change in Electricity Generation from Coal and Gas vs. the Baseline

The baseline = average generation across 2016-2018. Baseline coal = 32TWh. Baseline gas = 132TWh



Source: Ember analysis of the National Energy & Climate Plans (and the associated national documents). Data for 2020, 2025 & 2030 is provided in the source documents. Linear interpolations in between. Baseline figures from Eurostat.

Furthermore, the Italian NECP commits to building new gas capacity and explicitly ties its need to coal phase-out, for example stating:

> *"New gas capacity for around 3GW [will be launched in the period 2020-2025], of which around 50% is substantially linked to the phase-out [of coal], in line with regional planning and regulations…"*

Source: Italian Integrated National Energy & Climate Plan - December 2019

Accordingly, approximately 6GW [16] of new CCGT capacity is proposed[9] in Italy, the majority of which (4.2GW) are direct coal-to-gas power station conversions by Enel. Two projects by Edison make up the remaining proposed capacity. The new gas capacity will be eligible for public subsidy via Italy's capacity mechanism.

Electricity generation from gas only begins to fall vs. the baseline towards the end of the 2020s as a result of the planned expansion of renewable electricity (especially solar). However, the Italian Government does not yet have the policies in place to deliver on its renewables ambitions[10]. If a large volume of new CCGT capacity is built in the early 2020s (along with the supporting pipeline infrastructure) - as is currently envisaged, the gas industry will have a strong incentive to frustrate the required renewable policy development and secure an extended role for gas in the Italian electricity system, risking further additional GHG emissions.

A combination of low gas prices and robust carbon prices has already accelerated the coal-to-gas transition vs. what was expected in the NECP. In 2019 electricity generation had switched from coal to gas in volumes not originally foreseen until 2022 [17].

Coal-to-gas in countries not expected to phase out coal by 2030

For the seven countries not expected to phase-out coal by 2030, with the notable exception of Germany, the declines in electricity generation from coal outlined in the NECPs are very limited over the next decade and so the scope for coal-to-gas is also limited. That said, even where declines in coal do take place, a significant proportion are offset by increased gas burn:

Across Bulgaria, Croatia, Czechia, Poland, Romania & Slovenia, using data from the NECPs, we estimate that nearly half[11] of all expected declines in coal generation by 2030 vs. the baseline (average 2016-2018) levels will be offset by increased gas-fired electricity generation.

9. Under *Global Energy Monitor's* definitions, "proposed" projects have appeared in corporate or government plans in either pre-permit or permitted stages.
10. For example, WindEurope highlights that the Italian NECP is missing policies for two out of the three key elements required to deliver on the high level targets for wind deployment. https://windeurope.org/2030plans/
11. 43%. Coal declines of 36.4TWh vs. the reference period (average of 2016-2018) offset by a 15.5TWh gas increase vs. the reference period.

In Germany, while the current coal phase-out trajectory is not compatible with the obligations of the Paris Agreement [18], significant reductions in coal generation and coal capacity are expected by 2030. The NECP indicates that higher gas burn is envisaged vs. recent levels right through to 2040, however, the volumes are relatively small vs. the overall reductions in electricity generation from coal and it is difficult to disentangle these increases in gas from the impact of Germany's nuclear phase-out.

To meet the obligations of the Paris Agreement, all seven countries will need to accelerate their coal phase-outs vs. what is indicated in the current NECPs. Unless this is paired with a large step up in clean electricity deployment and efficiency measures, further increases in gas-fired electricity generation are possible. **This risk is especially acute in Germany and Poland, given the high levels of coal generation expected in 2030 which needs to be replaced.**

Coal-to-gas beyond 2030

While according to the NECPs the scope for coal-to-gas in Bulgaria, Croatia, Czechia, Poland, Romania & Slovenia is limited over the next decade due to limited reductions in coal, the NECPs indicate that over the longer-term (beyond 2030) gas is planned to play a significant role in the electricity transition for both Bulgaria and Poland. Further details are provided in the case studies below:

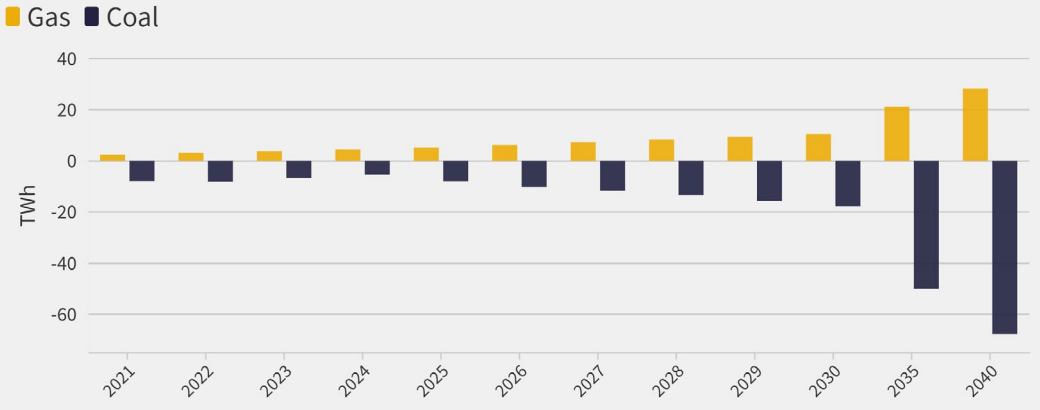
Case study: Poland

On current Polish Government plans, electricity generation from gas is expected to rise to almost four times the baseline (average 2016-2018) by 2040. Nearly half (42%) of the expected reductions in electricity generation from coal by 2040 will be offset by increased gas burn.

FIGURE E

Poland: Change in Electricity Generation from Coal and Gas vs. the Baseline

The baseline = average generation across 2016-2018. Baseline coal = 131TWh. Baseline gas = 10TWh



Source: Ember analysis of the National Energy & Climate Plans (and the associated national documents). Data for 2020, 2025 2030, 2035 & 2040 is provided in the source documents. Linear interpolations in between. Baseline figures from Eurostat.

Furthermore, the Polish NECP envisages the addition of ~ 6GW of new gas capacity between 2020-2040 with only a small amount (0.35GW[12]) reserved for meeting peak loads. Accordingly, approximately 4.6GW[13] [16] of new CCGT capacity is either proposed or already under construction in Poland, PGE (a state-owned public power company) is currently the largest developer with over 2.2GW of proposed gas capacity. While the pipeline of gas projects continues to grow (and recent projects have been awarded generous 17 year capacity payments contracts[14]), at the same time the country has fallen off track on its 2020 renewable energy target and will not reach it in time. A controversial law that in practice blocks onshore wind farm development has been maintained and there is still no legislation enabling offshore wind farm development.

The increasing role for gas in the Polish electricity system (and other parts of the energy system) and the need to diversify supplies of gas results in major planned investments in gas supply and transmission infrastructure:

> *"[Diversification of energy supplies] will be achieved through investments in the Baltic Pipe, increasing the capacity of the LNG terminal in Świnoujście, building a floating terminal in the Gulf of Gdańsk, and building / expanding [gas] connections with Slovakia and Lithuania. Investments in the [gas] connections with the Czech Republic and Ukraine are also possible. "*

Source: Annex 2. Polish National Energy & Climate Plan (pg.144)

Case study: Bulgaria

According to current Bulgarian Government plans, the limited reduction in electricity generation from coal to 2030 will be more than offset by increased electricity generation from gas.

By 2035, nearly half (46%) of all coal declines vs. the baseline (average of 2016-2018) are expected to be offset by increased gas use. The NECP foresees a reduction in gas burn between 2035 and 2040, however, this is primarily achieved by the construction of a new 2GW nuclear power plant.

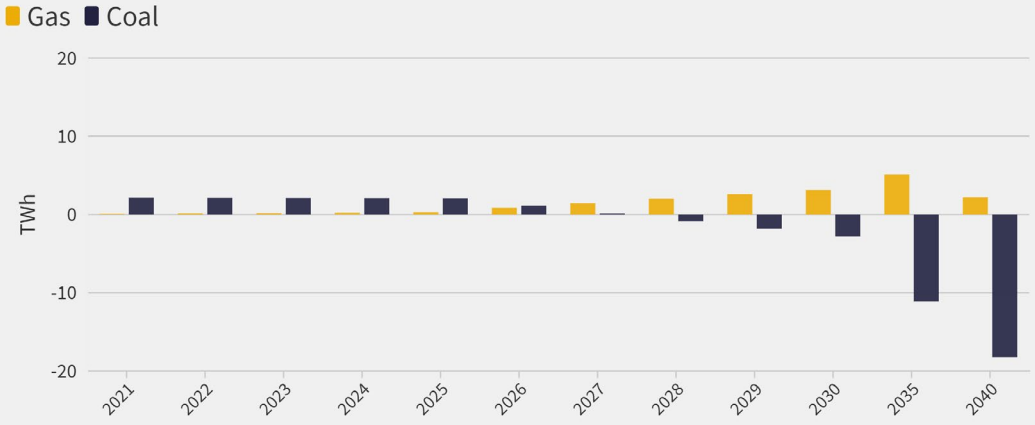
12. Gas turbines (turbiny gazowe), Table 65, pg.73, Annex 2.
13. The G*lobal Energy Monitor* figures for proposed or under construction CCGT (4.35GW) have been adjusted as follows: Ostrołęka C (assuming only 0.7GW is built) is added, Stalowa Wola (0.45GW) which has entered operation is removed.
14. E.g in 2019 PGE was awarded a 17-year capacity contract (1335 MW) for two CCGT units in Dolna Odra at above 60 EUR/kW.

With the well documented delays and cost overruns to new nuclear power plants in the EU - for both European[15] and Russian[16] reactor designs - there is a considerable risk that this new nuclear power plant fails to materialise on time (if at all). The resulting supply gap would likely be filled by gas - further extending its role in the electricity system vs. current plans.

FIGURE F

Bulgaria: Change in Electricity Generation from Coal and Gas vs. the Baseline

The baseline = average generation across 2016-2018. Baseline coal = 20TWh. Baseline gas = 2TWh



Source: Ember analysis of the National Energy & Climate Plans (and the associated national documents). Baseline figures from Eurostat.

Even if the new nuclear plant is built, electricity generation from gas is still expected to be higher in 2040 than it was in 2018.

The Bulgarian NECP expects the construction of ~ 1GW of additional CCGT capacity by 2040. The new capacity starts to be added in the second half of this decade and therefore there are no major projects currently in development [16].

Furthermore, the NECP includes a long list of planned gas infrastructure[17] including the Balkan Gas Hub - which specifically aims to facilitate increased gas consumption in Bulgaria's neighbours via a trading platform and new transmission infrastructure.

15. E.g. Flamanville (FR) or Hinkley Point C (UK)
16. E.g. Olkiluoto 3 (FI)
17. The gas interconnector Greece-Bulgaria (IGB), the construction of a gas interconnector between Bulgaria and Serbia (IBS), a 20% share of a new LNG terminal in Greece, The Balkan Gas Hub, expanding the capacity of Chiren Underground Gas Storage (UGS) Facility and the rehabilitation, upgrade and expansion of the Bulgarian gas transmission. More details can be found on pg. 28 of the english translation of the NECP.

Although not explicitly mentioned in the NECPs - nor in any public consultations - the Bulgarian gas transmission system operator has also signed a €1.1 billion contract [19] for the construction of a gas pipeline which will connect the country's existing gas transmission system with Serbia and carry gas from TurkStream[18]. The proximity of the pipeline to the major coal-fired electricity complex at Maritsa, and the size of the investment, will likely be used as further justification for a coal-to-gas transition in the electricity sector.

Further data availability

All electricity transition data from the NECPs (including the coal and gas figures from the countries assessed as ***not*** undergoing a significant coal-to-gas transition) will be made available on the Ember website as part of a forthcoming publication due later this year (2020).

18. A Gas pipeline stretching from Russia to Turkey across the Black Sea. The first string of the pipeline is intended for Turkish consumers, while the second string will deliver gas to southern and south-eastern Europe.

Implications for the Just Transition Fund

Who gets what?

The European Commission launched an initiative called Coal Regions in Transition Platform, in 2017, to assist Member States and regions in their preparations to deal with the structural and technological transition in coal regions[19].

In July 2020, the Just Transition Platform was launched by the Commission, as part of the Just Transition Mechanism, to build on and expand the work of the Coal Regions in Transition Platform initiative [20]. This new Platform aims to coordinate technical assistance to coal and other carbon intensive regions to help with their Territorial Just Transition Plans to access the Just Transition Fund. It also promises to ensure accurate governance and stakeholder participation to these processes at regional level.

While all 27 Member States of the European Union have the right to access the Just Transition Fund, only the regions that meet the Commission's current criteria based on carbon-intensive jobs, fossil fuel industrial activity and GDP per capita, will be eligible. In February 2020, the European Commission published its country reporting under the European Semester [21]. The country reports identify the regions eligible for the Just Transition Fund, the main challenges to their transition, investment guidance for the Just Transition, and other financial resources to be used for the transformation of coal regions such as EU-ETS revenues.

In July 2020, the Heads of States struck a deal on the EU's next long term budget 2021-2027 and Next Generation EU, during a special summit of the European Council [22]. The leaders agreed to shift substantial amounts of funds in the Union's recovery instrument, based on the Commission's budget proposal, from grants to loans. As the Just Transition Fund aims to provide support primarily in grants, this shift in the overall budget has implications on the amount of the Fund.

19. Under the *Coal Regions in Transition Platform,* 20 coal regions in 9 Member States (Poland, Germany, Czechia, Romania, Greece, Slovakia, Spain, Slovenia, Ireland) have been receiving support and tailor-made assistance to use existing EU funds for priority projects, measures and investments for their transition. https://ec.europa.eu/info/news/no-region-left-behind-launch-platform-coal-regions-transition-2017-dec-08_en

The 40 billion Euro Fund, as proposed by the Commission in May, risks a substantial cut - down to 17.5 billion Euros. The debate around the amount of the Just Transition Fund is in tandem with the ongoing negotiations around the EU's long term budget and Next Generation EU.

With a more limited amount now on the table, both the allocation and the scope of the Just Transition Fund emerge as the two main issues still to be negotiated by the Parliament and the Member States.

The allocation criteria of the funds laid down in the Commission's legislative proposal[20] is based on carbon intensity, employment in coal and lignite mining, employment in high carbon industry and production of peat and oil shale. While the Just Transition Fund is supposed to accelerate the transition towards climate neutrality in the coal and other carbon intensive regions, the current allocation methodology does not take into account the speed of Member States' planned energy transition. Nor does it sufficiently account for the climate compatibility of the transition.

The existing allocation methodology will offer almost two thirds of the Just Transition Fund to just seven Member States [23] (Bulgaria, Croatia, Czechia, Germany, Poland, Romania, Slovenia). Our analysis of the NECPs demonstrates that six of these countries do not have a plan to phase out coal by 2030 - or even a plan to substantially reduce coal capacity by then - and Germany has set a phase out date beyond 2030. Furthermore, our analysis identified that two of these countries (Bulgaria & Poland) are planning a significant increase in the role for gas in the electricity system over the longer term.

Four Member States [23] (Greece, Hungary, Ireland & Italy) that plan to phase-out coal by 2030 but with a significant increase in fossil gas, are also set to receive more than 10% of the Fund.

A credible energy transition requires a plan for coal. To meet EU climate commitments, all Member States must transition away from coal power by 2030, and without increasing the use of other fossil fuels such as fossil gas. However, the planned energy transitions of 11 out of 18 EU coal-countries - eligible for nearly three quarters of the Just Transition Fund - fail to meet this criteria.

20. *Greenhouse gas emissions of industrial facilities in NUTS2 regions where the carbon intensity of those emissions exceeds the EU average (weighting 49%); employment in the mining of coal and lignite (weighting 25%); employment in industry in the NUTS2 regions referred to in the first criterion (weighting 25%); production of peat (weighting 0,95%);* production of oil shale (weighting 0,05%).See the allocation methodology in the Annex 1 of the Commission's amendment issued in May: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1591096808754&uri=CELEX:52020PC0460

Without the introduction of additional allocation criteria on Member States' transition speed and climate compatibility, the Fund risks rewarding climate laggards at the expense of the Member States with ambitious, Paris-compatible coal phase-out plans.

In fact, the European Court of Auditors has identified a weak link between Member States' climate performance and funding, and stated that *'the proposed allocation method provides weak incentives for the deep, significant, structural change needed to achieve the EU's climate objectives'*, in their opinion report on the Commission's proposal for the Just Transition Fund Regulation [24].

Regarding the scope, whether to allocate money for fossil gas projects from the Just Transition Fund should not even be a matter of debate - especially now with a smaller amount of grants available. Coal regions need future-proof investments in the new economy, not further entrenchment of fossil-fuel dependency. The possibility of including fossil gas projects in Territorial Just Transition Plans contradicts the spirit of the Just Transition Fund, and is against the objectives of the European Green Deal.

It is therefore essential that in the September plenary, the European Parliament ensures that all forms of fossil fuels, gas in particular, are completely excluded from the scope of the Just Transition Fund, and that no fossil fuel projects are justified to be a part of the Territorial Just Transition Plans.

Territorial Just Transition Plans as a catalyst to unleash other EU funds.

Another issue raised in the European Court of Auditors opinion report is the importance of Territorial Just Transition Plans to address the *'coordination and complementarity of various sources of funding'* [24].

The Just Transition Fund is a part of the *Cohesion Policy Funds* of the next EU budget. According to the ongoing negotiations for the next EU long-term budget 2021-2027 and the Recovery Instrument, *the Cohesion Policy Funds*, together with the Recovery and Resilience Facility constitute the largest portion of the overall revamped budget. This large portion of the new budget *'aims to reduce economic and social disparities and to promote sustainable development'* in the Member States. Therefore, the Commission encourages Member States to match and complement the Just Transition Fund with funding from the other Cohesion Policy instruments[21].

21. One of the five policy objectives of the Cohesion Policy is "a greener, low-carbon Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaptation and risk prevention and management", and 30% of the ERDF is expected to contribute to climate objectives. https://www.europarl.europa.eu/legislative-train/theme-regional-development-regi/file-mff-erdf-and-cohesion-fund

All of the coal regions that are eligible for the Just Transition Fund have already been receiving funding from *the Cohesion Policy Funds*. However, there is no comprehensive documentation showing the achievements of these dedicated funds in terms of clean energy transition in those regions. In particular countries in Central and Eastern Europe [25] have a bad track record for putting EU funds into the clean energy transition. And in fact, recent analysis on the Member States' spendings of the current EU long-term budget (2014-2020) shows that *'EU Member States allocate only 9.7% of their European Regional Development Fund (ERDF) and Cohesion Fund (CF) to energy efficiency, renewable energy and related infrastructure, and research and innovation for climate action'* [26]. Member States should learn from this lesson and steer all available EU Financial Instruments to support the just transition efforts in their carbon-intensive regions.

The transition towards *'a green, carbon-free Europe'* is an explicit objective for all Regional Development Funding under the new generation of Cohesion Policy [27]. Territorial Just Transition Plans can be complemented by these different pockets of EU public funding, by prioritizing the Just Transition and climate neutrality objectives in the new Operational Programmes under the next EU long-term budget 2021-2027.

If the Member States are serious about their commitment to a just transition, they can seize the opportunity by planning their Territorial Just Transition Plans in synergy with all other available EU funding streams.

Conclusion

In this briefing, we have shown that the NECPs of the seven Member States (Bulgaria, Croatia, Czechia, Germany, Poland, Romania, Slovenia) who are in line to receive the lion's share from the Just Transition Fund do not have plans to phase-out coal in the next decade. The NECPs show that a number of them are also planning a significant and increased role for fossil gas in their electricity transitions. Moreover, of the eleven countries expected to phase-out coal by 2030, our analysis indicates that four (Greece, Hungary, Ireland & Italy) are planning a significant coal-to-gas transition.

The EU must achieve climate neutrality by 2040 in order to do its fair share under the Paris Agreement, to limit the global temperature increase to 1.5C. This means all Member States should phase out coal by 2030 [28], and all fossil fuels by 2040 at the latest. Recent energy scenarios for the EU demonstrate that these targets are achievable if ambitious climate and energy policies are prioritized [29].

National Energy and Climate Plans (NECPs) demonstrate that many Member States are not even in line with the European Green Deal's 2050 climate neutrality objective, and its new emission reduction targets by 2030. Let alone compatible with the EU's fair share under the Paris Agreement.

The Just Transition Fund can be an important instrument to help mitigate the social, economic and environmental impacts of this rapid energy transition in the regions that are most vulnerable. It is created as a tool to specifically support the European Green Deal's mid-century climate neutrality objective, and 2030 emission reduction targets, without leaving anyone behind.

According to the International Trade Union Confederation (ITUC), *"A Just Transition is an economy-wide process that produces the plans, policies and investments that lead to a future where all jobs are green and decent, emissions are at net zero, poverty is eradicated, and communities are thriving and resilient"* [30]. As the first piece of legislation in the European Green Deal, the Just Transition Fund should reflect the objectives of just transition, and set the example for the other legislative processes.

However, without improvements to its design - as recommended in this briefing - the Fund risks rewarding climate laggards at the expense of real climate leaders.

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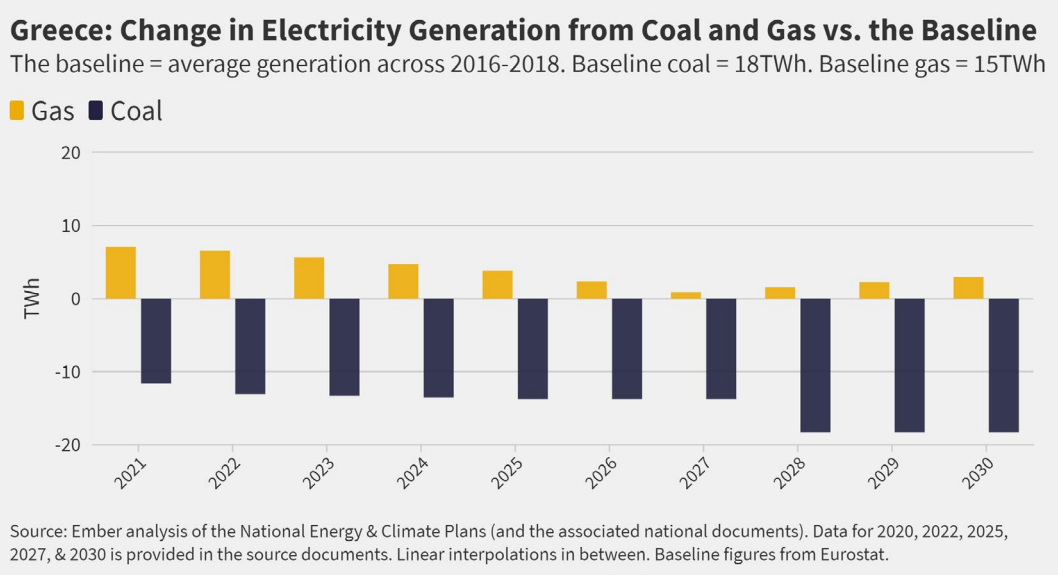
Annex 1:

Coal-to-Gas Data for Hungary, Greece & Ireland

Greece

FIGURE G



The Greek NECP envisages an additional 1.7GW of gas capacity will be installed between 2020 and 2030, however, there is no split provided between CCGT and other gas capacity. *The Europe Gas Tracker* identifies 3.5GW of proposed CCGT capacity [16].

> *There is also a significant increase in the share of natural gas in the energy mix, as new plants are to replace part of the output of lignite-fired plants and provide the system with the flexibility required by the increased share of uncontrollable RES plants.*

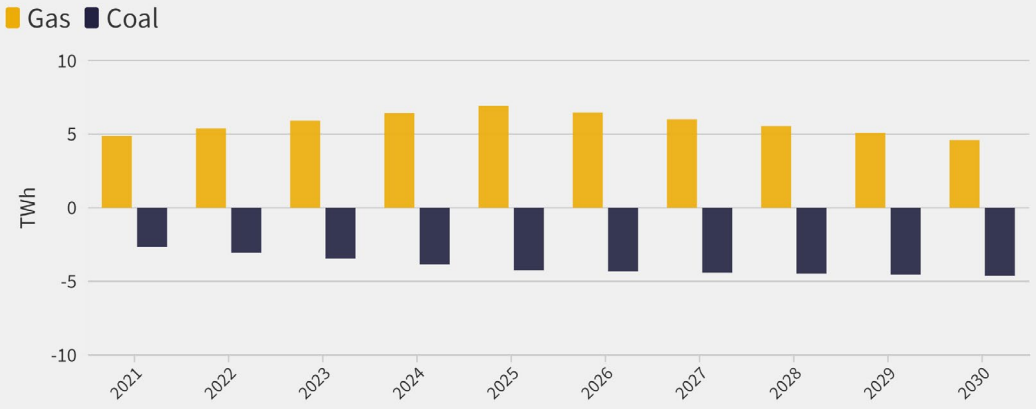
Source: Greek National Energy & Climate Plan - December 2019

Hungary

FIGURE H

Hungary: Change in Electricity Generation from Coal and Gas vs. the Baseline

The baseline = average generation across 2016-2018. Baseline coal = 5TWh. Baseline gas = 7TWh



Source: Ember analysis of the National Energy & Climate Plans (and the associated national documents). Data for 2020, 2025 & 2030 is provided in the source documents. Linear interpolations in between. Baseline figures from Eurostat.

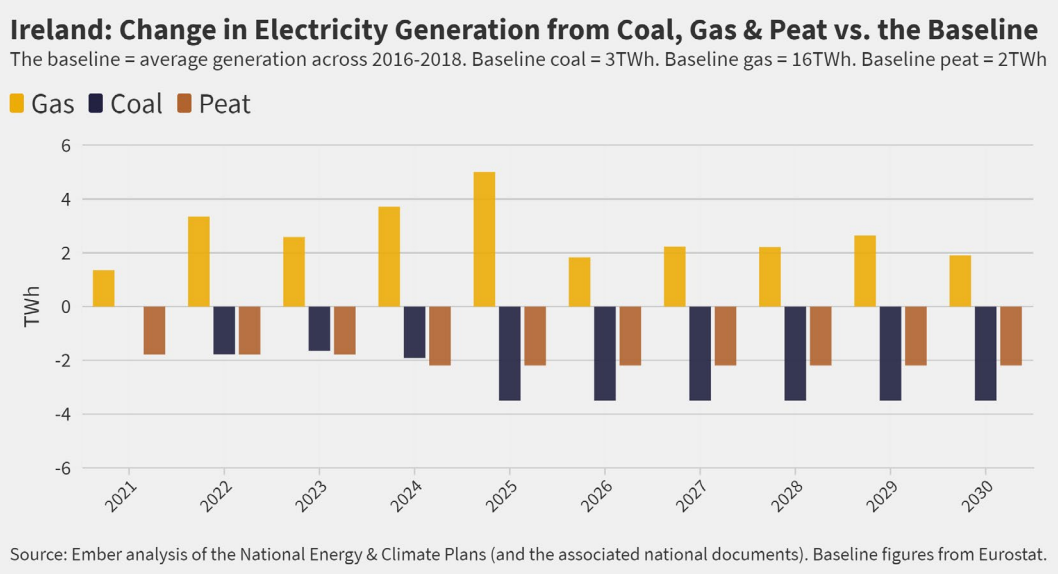
The Hungarian NECP envisages that net gas capacity will increase by ~ 0.3GW between 2020 and 2025, however, overall net installed gas capacity will actually decline between 2020 and 2030 (by ~ 0.3GW) with retirements outpacing new capacity in the second half of the 2020s, no split is provided between CCGT and other gas capacity. *The Europe Gas Tracker* identifies 0.9GW of proposed CCGT capacity [16].

Ireland

It is expected that both coal and peat will be phased-out from the Irish electricity system by 2025. Peat is the first step in the formation of coal and it is even more damaging for the climate when combusted[22]. As production of peat is a metric in the allocation criteria for the Just Transition Fund, for completeness we include peat in the analysis below.

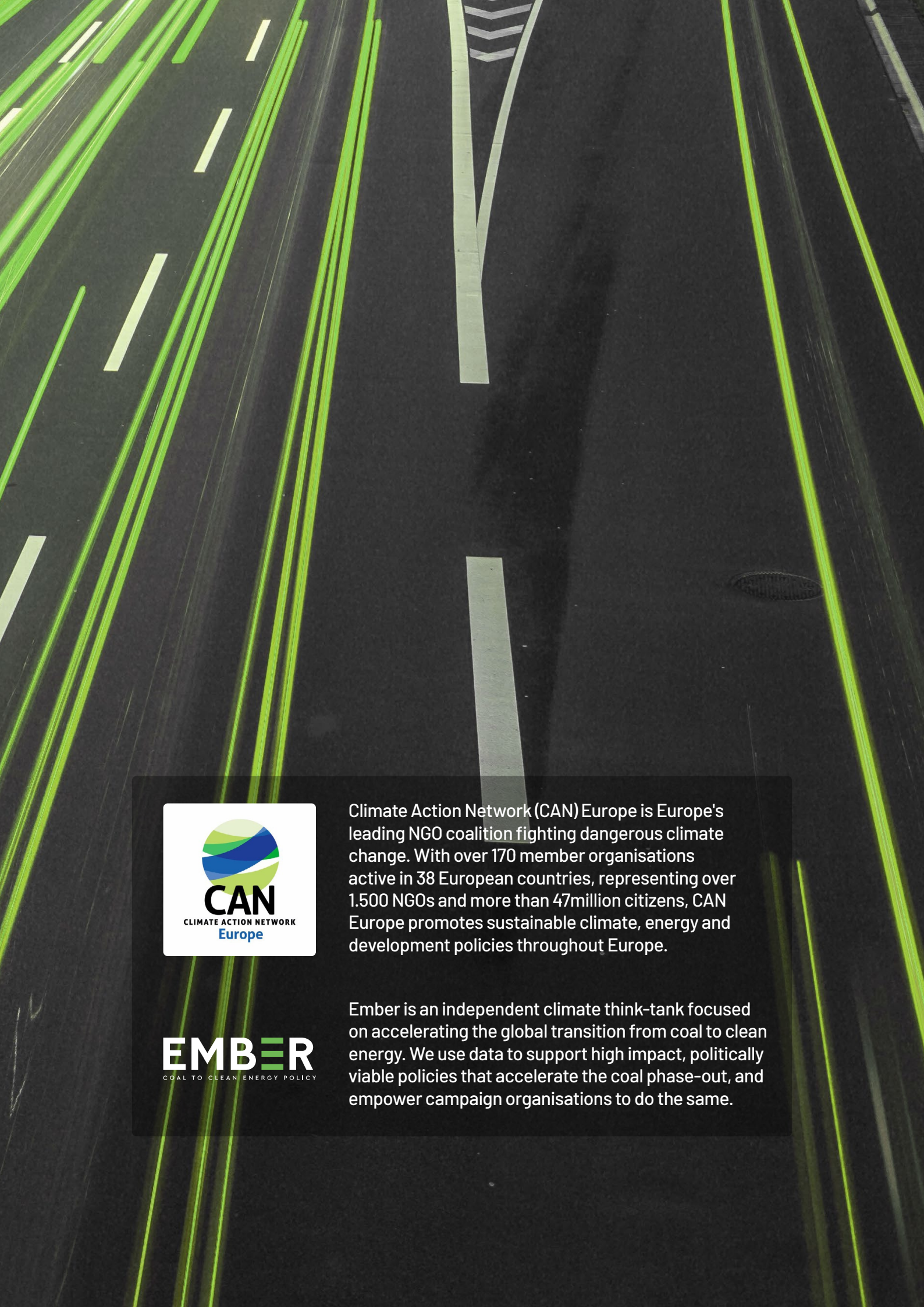
22. Both from direct emissions - the emissions intensity per unit of electricity produced is greater than that of coal due to the high moisture content in the fuel, and from indirect emissions - natural peatland is an important carbon sink, draining the peatland for harvesting releases this carbon into the atmosphere.

FIGURE I



The Irish NECP envisages that net gas capacity will increase by ~ 0.5GW between 2020 & 2030, with a further net capacity increase of ~2.4GW in the 2030s, no split is provided between CCGT and other gas capacity. As the capacity additions in the 2020s are expected towards the end of the decade, the *Europe Gas Tracker* does not currently identify any proposed CCGT capacity [16].

> *It is expected that peat and coal will no longer be part of Ireland's electricity generation mix by 2025. While this will have a positive impact [..], it will lead to an increased reliance on natural gas….*
>
> **Source:** Irish National Energy & Climate Plan - July 2020



Climate Action Network (CAN) Europe is Europe's leading NGO coalition fighting dangerous climate change. With over 170 member organisations active in 38 European countries, representing over 1.500 NGOs and more than 47million citizens, CAN Europe promotes sustainable climate, energy and development policies throughout Europe.

Ember is an independent climate think-tank focused on accelerating the global transition from coal to clean energy. We use data to support high impact, politically viable policies that accelerate the coal phase-out, and empower campaign organisations to do the same.