PRI Principles for Responsible Investment

UN environment programme finance initiative | United Nations Global Compact

An investor initiative in partnership with UNEP Finance Inititaive and UN Global Compact

POLICY BRIEFING

RECONCILING ENERGY SECURITY WITH NET ZERO COMMITMENTS (EU)

June 2022

To inform this briefing, the following investor group has been consulted: PRI Global Policy Reference Group. This consultation is not an endorsement or acknowledgement of the views expressed in this briefing.

THE PRINCIPLES FOR RESPONSIBLE INVESTMENT

The Principles for Responsible Investment (PRI) works with its international network of signatories to put the six Principles for Responsible Investment into practice. Its goals are to understand the investment implications of environmental, social and governance (ESG) issues and to support signatories in integrating these issues into investment and ownership decisions. The PRI acts in the long-term interests of its signatories, of the financial markets and economies in which they operate and ultimately of the environment and society as a whole.

The six Principles for Responsible Investment are a voluntary and aspirational set of investment principles that offer a range of possible actions for incorporating ESG issues into investment practice. The Principles were developed by investors, for investors. In implementing them, signatories contribute to developing a more sustainable global financial system. More information: www.unpri.org

ABOUT THIS BRIEFING

As the Financial Stability Board has highlighted, the emergence of climate change-induced physical risks, the dangers of a disorderly transition, and the possible failure of the net-zero transition are causing irreversible damage to the socio-environmental sphere with destabilising effects on the financial system. The risk of capital misallocation at a systemic level can threaten financial stability, with the International Energy Agency identifying USD 26 trillion in capital re-allocation needed by 2040 to align with the Paris Agreement. A clear, consistent, and enabling policy framework is critical to the viability of the net-zero transition, and successful policy implementation helps minimise risks to the real economy, individual entities, and the financial system as a whole.

Following Russia's invasion of Ukraine, EU energy markets have been in turmoil. From immediate impacts on oil and gas prices to expected energy shortages in the months ahead, EU governments are working quickly to build a new energy security strategy to address disruption risks to customers and economies more broadly. On 18 May, the European Commission published the REPowerEU plan, which contains a suite of concrete measures to phase out Russian fossil fuels and boost the EU's renewable energy production and energy efficiency measures.

This briefing presents an analysis of the current situation in light of existing EU net-zero commitments by 2050. It proposes policy recommendations and options to address the energy crisis while accelerating climate action and leveraging investor commitments and support for the EU Green Deal and the Fit for 55 package.[1]

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[1] The policy briefing is anchored in PRI's priorities and builds on a body of existing work:
- PRI's ten-year Blueprint for Responsible Investment, published in 2017, identified championing climate action, including meeting the Paris Agreement targets and working with policymakers to remove barriers to the scale-up of clean energy investment, as an organisational priority.
- As part of the multiannual Inevitable Policy Response (IPR) project, the PRI commissioned an analysis from Vivid Economics to identify climate policy action levers at the sectoral level to align with the IPR scenario in five markets (EU, UK, US, Japan, and China).
- The first EU climate policy roadmap was published in October 2020. It followed two related publications on real economy policy, covering the EU Green Deal (April 2020) and the Next Generation EU fund (September 2020).

THE ENERGY POLICY CHALLENGE

The war in Ukraine has accentuated the EU's dependence on fossil fuel imports from Russia and further exacerbated the triple energy policy challenge – energy security, affordability, and addressing climate change – facing governments in Europe and across the globe.

In 2021, the EU imported more than 40% of its total gas consumption, 27% of oil imports, and 46% of coal imports from Russia.[2] Diversifying away from gas poses the largest challenge to the EU, both in terms of scale and scope, and is, therefore, the focus of this paper's analysis and recommendations.

Electricity and heat generation and its usage in buildings accounted for over two-thirds of European gas demand in 2020.[3] This demand is characterised by seasonal variation, which sees demand for gas more than double in winters, with a significant portion dedicated to heating.[4] Dependence on Russian gas varies considerably from country to country, with central and eastern European countries having a particularly high degree of reliance on this single supplier.

Energy prices, which were already rising and impacting the economy in 2021 due to an increase in production activity following COVID-19 pandemic lockdowns, have contributed to the worst affordability crises for businesses and consumers in 50 years. The supply shock also extends well beyond oil and gas; Russia and Ukraine account for 30% of global wheat production. Russia is also a leading producer of key raw materials such as nickel and palladium.

This crisis not only pertains to Europe, with global implications for energy, food, and key industrial materials, as well as the transition pathway to net zero. Consequently, countries worldwide are competing with Europe for alternatives to Russian gas supplies. However, many countries are not in a position where they can prudently pause their approach to addressing climate change. The recent IPCC Working Group III report concluded that immediate and deep emissions cuts across all sectors are needed to keep both 1.5°C *and* 2°C outcomes within reach.[5]

The response from policymakers in Europe and elsewhere to this triple challenge has far-reaching implications.

[2] European Commission (2022), In focus: Reducing the EU's dependence on imported fossil fuels.
[3] Bellona, Ember, RAP and E3G (2022), EU can stop Russian gas imports by 2025.
[4] Euractiv (2022), Europe needs a strategy for seasonal energy balancing.
[5] IPCC (2022), Working Group III contribution to the Sixth Assessment Report.

2030 CLIMATE GOALS (FIT FOR 55 PACKAGE)

Prior to Russia's invasion, the EU adopted into law its ambition to become climate neutral by 2050 and reduce its greenhouse gas emissions by 55% by 2030 compared to 1990 levels.[6] To achieve this goal, the European Commission also presented in July 2021 a raft of additional legislative proposals known as the Fit for 55 package.[7] These files target emissions reductions in specific sectors, including:

- Proposals for increased 2030 targets – notably to reduce final energy consumption by 9% (currently: 4%) compared to a reference scenario (REF2020) and to increase the share of renewable energy in the overall energy mix to 40% (currently: 32%). Following the Russian invasion, proposals have been tabled that would further expand these to 13% energy savings and 45% renewables.
- Policy mechanisms covering (amongst others) energy efficiency (e.g. review of the Energy Efficiency Directive and the Energy Performance of Buildings Directive), renewable energy (e.g. review of the Renewable Energy Directive), transport (e.g. review of the regulation that sets CO_2 emissions standards for cars and vans), and carbon pricing (e.g. review of the EU Emissions Trading System (EU ETS) and the establishment of a Carbon Border Adjustment Mechanism (CBAM)).

The presentation of the Fit for 55 package by the European Commission was the first step in the legislative process, and the legislative proposals are now in the hands of the European Parliament and the European Council. Once an agreement has been reached among all three institutions, the legislative proposals will be published in the Official Journal – at which point they will enter into force. It is expected that most if not all of these pieces of legislation will be finalised by the end of 2022.[8]

IMPACT ASSESSMENT OF THE EU FIT FOR 55 PACKAGE

The European Commission's impact assessment on stepping up Europe's 2030 climate ambition, which formed the basis of the Fit for 55 package, found that '*a balanced, realistic, and prudent pathway to climate neutrality by 2050 requires an emissions reduction target of 55% by 2030*'.[9] It also highlighted that:

- Energy-related investments need to increase. In 2021–2030, the EU will need to invest €350 billion more annually than it did in 2011–2020.
- More than half of EU energy needs are covered by imports. Renewable energy generated in the EU reduces this exposure, thereby increasing the security of its supply. Net energy imports are projected to decrease by more than one quarter from 2015–2030. Increasing the greenhouse gas reduction target to 55% and achieving climate neutrality by 2050 would save €100 billion in the EU's import bill from 2021–2030 and up to €3 trillion by 2050.
- By 2030, the share of EU renewable electricity production is set to at least double from today's levels of 32% of renewable electricity to around 65% or more. Renewables in heating and cooling would achieve around 40% penetration in 2030.

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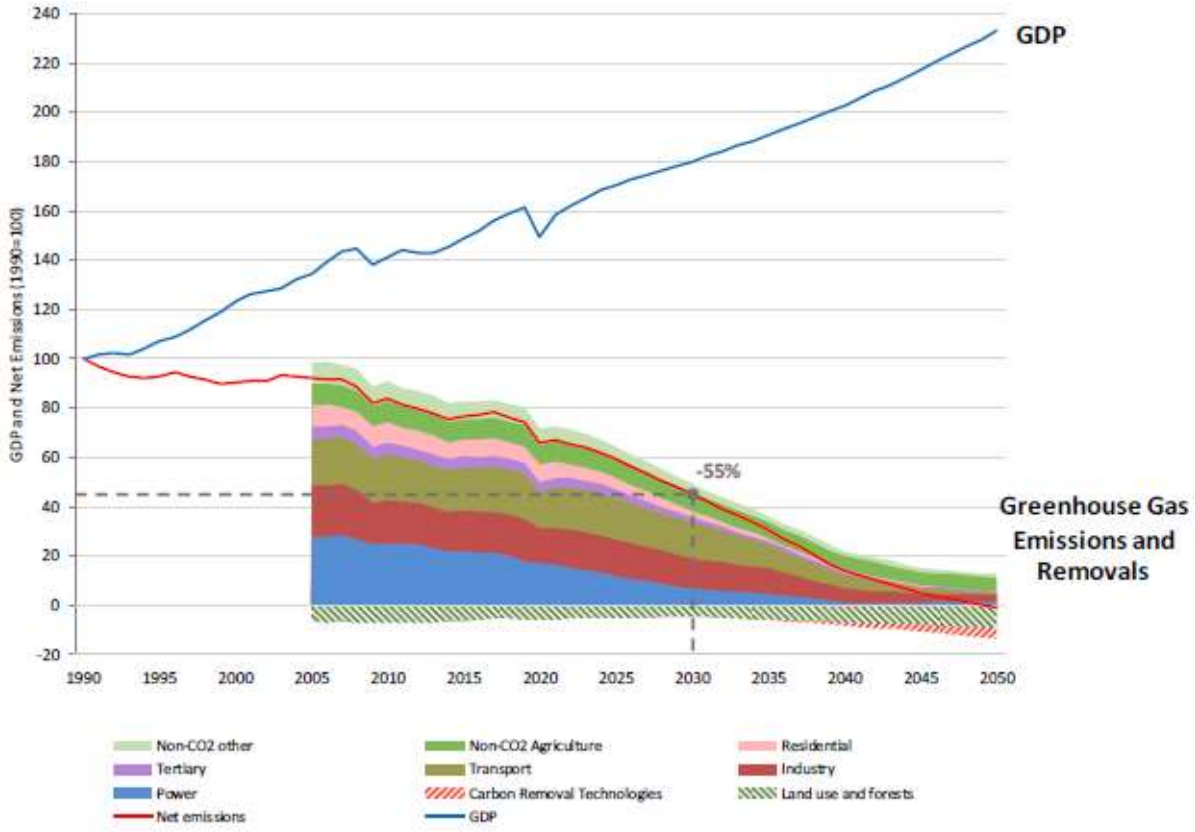
[6] European Commission (2021), European Climate Law.
[7] European Commission (2021), European Green Deal: Commission proposes transformation of EU economy and society to meet climate ambitions.
[8] Each legislative proposal under the Fit for 55 package follows a distinct timeline. None of the pieces of legislation mentioned in this briefing have been adopted, but some files (e.g. ETS/CBAM, review of the Renewable Energy Directive) have advanced further than others (e.g. Energy Efficiency Directive, Energy Performance of Buildings Directive, review of the regulation that sets CO_2 emissions standards for cars and vans). The final adoption of any of this legislation can be sped up or delayed due to political dynamics.
[9] European Commission (2020), Stepping up Europe's 2030 climate ambition - Investing in a climate-neutral future for the benefit of our people.

- By 2030, coal consumption would be reduced by more than 70% compared to 2015, and oil and gas by more than 30% and 25%, respectively.

Meeting these objectives requires staying within a very limited greenhouse gas emissions budget. The IEA net-zero by 2050 scenario finds that globally '*there is no need for investment in new fossil fuel supply*' and that '*beyond projects already committed as of 2021, there are no new oil and gas fields approved for development*'. It also states that '*advanced economies should reach overall net-zero emissions electricity by 2035'*.[10]

Fig. 1 Greenhouse gas emissions reductions per sector according to the European Commission impact assessment



Source: European Commission

[10] IEA (2021), Net Zero by 2050 - A Roadmap for the Global Energy Sector.

THE IMPLICATIONS OF THE WAR IN UKRAINE ON EU CLIMATE ACTION (REPowerEU)

The war in Ukraine has led the EU to enforce a ban on Russian coal imports and adopt a partial ban on oil imports by the end of the year. This event has further increased the imperative for the EU to increase its independence from Russian fossil fuels overall, provided new impetus for climate policy, and showcased the resilience of the EU Green Deal.

In the Versailles Declaration of 11 March 2022, the European Council adopted conclusions that outline how to decrease dependence on Russia through diversifying supply routes, developing a hydrogen market, increasing renewable energy, improving the interconnection of gas and electricity networks, reinforcing EU contingency planning for the security of supply, and improving energy efficiency.[11] Member States invited the European Commission to propose a REPowerEU plan by the end of May 2022.

On 18 May 2022, the European Commission adopted said REPowerEU plan.[12] It consists of a significant energy package of legislative and non-legislative measures to phase out the EU's dependency on Russian fossil fuels by 2027.[13] The overall strategy is centred around four strands:

- Save energy
- Diversify supplies
- Substitute fossil fuels and accelerate the clean energy transition
- Smartly combine investments and reforms

It should be noted that while the REPowerEU plan is significant in terms of the geopolitical context in which it fits, and although it puts forward several initiatives, it does not propose many new measures. It aims instead to increase the ambition and speed of implementation of ongoing negotiations under the Fit for 55 package, optimise existing funding instruments, and encourage Member States to take additional actions. The sections below provide further analysis and recommendations related to the specific proposals of the REPowerEU plan.

[11] European Council (2022), Versailles Declaration.
[12] European Commission (2022), REPowerEU: A plan to rapidly reduce dependence on Russian fossil fuels and fast forward the green transition.
[13] The package consists of the following documents: REPowerEU action plan, an amendment to the Renewable Energy Directive, delegated acts defining and setting rules on production of green hydrogen, a communication on energy market interventions and the electricity market, a solar energy strategy, amendments to the Energy Efficiency Directive and the Energy Performance of Buildings Directive, an External Energy Strategy, a communication on strategic partnership with the Gulf countries, a recommendation on speeding up permit-granting procedures for renewable energy projects and facilitating Power Purchase Agreements, a Biomethane Action Plan, and an EU Save Energy communication.

RECOMMENDATIONS

Now is a critical time for climate and energy policy. We are one-quarter of the way through the 'decade of delivery' for realising the goals of the Paris Agreement, yet households and the economy more broadly are facing the worst spike in energy prices in recent memory. However, as the IEA has noted, policymakers do not need to choose between addressing the present energy crisis and tackling climate change. They can do both.

What the EU does will have implications for energy affordability and the net-zero transition internationally and within European Member States. In this context, PRI commends and strongly supports the ambition of the European Commission to make '*fast forwarding the clean transition*' a central objective of the REPowerEU plan.

PRI has formulated the following recommendations and policy options for European policymakers to ensure that the EU's measures reach their full potential:

- **Swiftly finalise the Fit for 55 package in an ambitious manner**; including:
  - Redoubling efforts on **energy demand reduction.**
  - Speeding up the deployment of **renewable energy.**
  - Ensuring industry innovation through a **carbon price**.
- **Avoid further gas infrastructure lock-in** by assessing any new energy supply investments against the Paris climate goals and the EU climate and energy targets for 2030 and 2050.
- **Coordinate finance** across the EU towards energy infrastructure that is aligned with the Paris climate goals both through existing funding instruments and by considering additional Europe-wide capital raising.

SWIFTLY FINALISE AN AMBITIOUS FIT FOR 55 PACKAGE

In the Versailles Declaration, Member State leaders confirmed their commitment to the EU's objective to reach climate neutrality by 2050. In addition, 11 European Member States have, in a joint statement, called for the swift finalisation of an ambitious Fit for 55 package.[14] Indeed, implementing the package will lead to a reduction of the EU's total gas consumption by over 30% and contribute to full independence from Russian fossil fuels.[15]

European policymakers should:

- **Swiftly finalise discussions on key legislative files** under the Fit for 55 package, such as the Energy Efficiency Directive (EED), Energy Performance of Buildings Directive (EPBD), Renewable Energy Directive (REDIII), the regulation on CO_2 emissions standards for cars and vans, the EU ETS, and the Carbon Border Adjustment Mechanism.

- Once the new legislative texts are agreed upon and adopted, ensure that **all EU Member States implement the new rules and targets consistently and as quickly as possible**.

[14] Joint statement by Austria, Germany, Denmark, Spain, Finland, Ireland, Luxembourg, Latvia, the Netherlands, Sweden, and Slovenia (2022), Ambitious Fit for 55 and EU energy independence – the smart, necessary and desirable crisis response.
[15] European Commission (2020), Stepping up Europe's 2030 climate ambition - Investing in a climate-neutral future for the benefit of our people.

Redouble efforts on energy demand reduction

EU policymakers have embraced the energy efficiency first principle. It has also been touted as a key lever to reduce dependence on Russian fossil fuels, most recently in a joint report from the IEA and the European Commission.[16]

The REPowerEU plan puts a large onus on energy efficiency. The European Commission has:

- Proposed an increase from 9% to 13% of the binding target in the Energy Efficiency Directive (EED), based on an assessment of the impact of higher energy prices on energy savings potential.[17]
- Presented an amendment to the Energy Performance for Buildings Directive that places new solar panel deployment obligations on Member States.[18]
- Published an EU Save Energy Communication with a two-pronged approach: strengthening structural change with mid- to long-term energy efficiency measures and achieving immediate energy savings through behavioural changes.[19]

The proposal by the European Commission to increase the energy savings target is a welcome development. However, Member States have consistently missed their energy savings targets in the past.[20] Member States are also asking for more flexibility under the EED: many feel the annual energy saving obligations on Member States (1.5%) are too high and that the target for public bodies (1.7%) needs to be more flexible. The European Parliament, on the other hand, is considering increasing these respective targets to 2%.

European policymakers should:

- **Increase the annual energy savings targets for Member States and public bodies under the EED to align with the ambition to increase the headline 2030 energy savings targets from 9 to 13%, as recommended by the European Commission**. Without such accompanying targets, it is likely that Member States will not meet their headline energy savings goals.

- **Rapidly scale-up measures by Member States** to incentivise the insulation of buildings and engage in an accelerated roll-out of heat pumps, district heating, and other clean energy solutions for replacing gas use in buildings.

[16] European Commission and IEA (2022), Playing my part.
[17] European Commission (2022), Proposal for amendments to Renewable Energy, Energy Performance of Buildings and Energy Efficiency Directives. Note that Fraunhofer research indicates that implementing all cost-effective measures under scenarios where wholesale energy prices remain high would lead to a significant increase in energy savings compared to the proposed target under the Fit for 55 package. The economic potential could even reach 23% if wholesale energy prices are double in 2030 compared to the EU's estimate before Russia invaded Ukraine.
[18] European Commission (2021), Proposal for a recast of energy efficiency directive. European Commission (2022), Proposal for amendments to Renewable Energy, Energy Performance of Buildings and Energy Efficiency Directives.
[19] European Commission (2022), EU Save Energy Communication.
[20] Eurostat (2020), Energy consumption in 2018 - Primary and final energy consumption still 5% and 3% away from 2020 targets.

Speed up the deployment of renewable energy

The Renewable Energy Directive was opened for review by the European Commission as part of the Fit for 55 package,[21] and further amendments to the Directive were proposed under the REPowerEU plan.[22] The European Commission has proposed – amongst others:

- To increase the overall renewable energy target for 2030 to 45%.
- To define sectoral targets for transport, heating and cooling, and industry.
- To operationalise the principle of renewable energy as an overriding public interest by introducing renewable go-to areas, which would shorten and simplify the permit process.
- To review and extend sustainability criteria for biofuels, bioliquids, and biomass. The aim is to prohibit the sourcing of biomass for energy production from primary forests and consistently apply the 'cascading principle' for the use of woody biomass. No forest biomass for electricity-only installations will be eligible for renewable energy sources (RES) support from 2026.

REPowerEU adds initiatives to increase renewable energy production **beyond the review of the Renewable Energy Directive**, most notably:

- A solar energy strategy targeted to install over 320 GW of solar photovoltaic by 2025.[23]
- A new 'Hydrogen Accelerator' that sets a target of 10 million tonnes of domestic renewable hydrogen production and 10 million tonnes of renewable hydrogen imports by 2030 across EU Member States. This action is accompanied by an International Energy Strategy that sets out how the EU will facilitate three major hydrogen import corridors via the Mediterranean, North Sea, and Ukraine (if conditions allow) to achieve the 10 million tonnes import target.[24]
- Delegated acts to the Renewable Energy Directive that define rules for producing renewable fuels of non-biological origin (RFNBOs), mainly hydrogen, and a minimum threshold for the greenhouse gas (GHG) emissions savings of such fuels.
- A biomethane action plan to boost production to 35bcm by 2030 across the EU.

Recent discussions in the European Parliament and European Council have indicated growing support for increasing the headline renewable energy target to 45% by 2030, and this target will likely be adopted. However, some important questions remain on the sustainability of the proposed solutions:

- Addressing barriers to reducing the time needed to obtain permits for the development of new renewable energy projects occurs primarily at the Member State level. As such, effective national-level implementation will be crucial to achieving the targets in the REPowerEU plan.
- Flexibility on sectoral renewable energy targets and the sustainability criteria for biomass has been requested by some Member States and industries.
- Arguments to include 'low-carbon' or 'virtuous' fuels into the definition of RFNBOs have emerged, especially within some political groups in the European Parliament and some Member States. Hydrogen produced from non-renewable sources could be counted towards the sectoral renewable energy target, posing a problem. This type of change would particularly threaten the high ambition of the European Commission regarding green hydrogen production.

[21] European Commission (2021), Proposal for recast of renewable energy directive.
[22] European Commission (2022), Proposal for amendments to Renewable Energy, Energy Performance of Buildings and Energy Efficiency Directives.
[23] European Commission (2022), EU solar energy strategy.
[24] European Commission (2022), EU external energy engagement in a changing world.

European policymakers should:

- **Maintain strict definitions of what constitutes a renewable energy source** (RES) in the EU, using science-based standards. This process should include strict sustainability standards for biofuels and biomass under the review of the Renewable Energy Directive and only allow for hydrogen produced from sustainable renewable energy sources within the Renewable Energy Directive and its dedicated delegated acts. The question of 'low-carbon fuels' needs to be addressed in separate legislation, such as the gas package.[25]

- **Increase the ambition level of sectoral renewable energy targets** for transport, heating and cooling, and industry under the review of the Renewable Energy Directive to ensure their alignment with the increased ambition of the REPowerEU plan to reach 45% renewables by 2030. Low-carbon fuels should not count toward sectoral renewable energy targets.

- **Define adequate safeguards to ensure that the development of renewables in designated go-to areas does not harm biodiversity.** The technical screening criteria defined in the climate delegated act of the EU taxonomy for renewable energy activities can serve as a guideline for such safeguards.[26]

[25] European Commission (2021), Proposal for a directive on common rules for the internal markets in renewable and natural gases and in hydrogen.
[26] European Commission (2021), Climate delegated act. The criteria can also be consulted in an accessible format using the EU taxonomy compass.

Incentivise industry innovation through a carbon price

Two files under the Fit for 55 package will be instrumental in incentivising industry innovation through a carbon price.

The **revision of the EU Emissions Trading System (EU ETS) regulation** includes provisions to increase the ambition level for 2030 (61% reduction compared to 2005) and the related annual emissions reduction factor (from 2.2% to 4.2%). Other important reviews relate to:

- The extension of EU ETS to the building and transport sector (ETS2) and the establishment of a Social Climate Fund that would be provided by ETS revenues and support a just transition in said sectors.
- The speed at which free allowances for certain industry sectors should be phased out and how this relates to the EU Proposal for a Carbon Border Adjustment Mechanism (CBAM).

The **REPowerEU plan** proposes, independently from the review of the EU ETS regulation, to raise €20 billion from the EU ETS's Market Stability Reserve mechanism. While the European Commission's proposals under REPowerEU will need to be financed, this proposed intervention risks undermining market confidence, as it signals that policy makers could change the amount of CO_2 permits availability in unpredictable ways and establishes a precedent that could be used again in the future.

The EU Proposal for a **Carbon Border Adjustment Mechanism (CBAM)** aims to put a price on carbon for imports of certain goods imported from outside the EU to prevent the transfer of production to countries that are less stringent regarding GHG emissions:

- Under CBAM, the import of electricity, cement, iron, steel, aluminium, and fertilisers into the EU will be subject to a levy reflecting the GHG footprint of these so-called CBAM goods.
- CBAM complements the EU ETS by adopting an equivalent regime on imports into the EU (purchasing and surrendering CBAM certificates) and by aligning the price of CBAM certificates to EU ETS prices.
- The new mechanism is provisionally planned for release in 2023, with a transitional period until 2025 and full implementation by 2026. A main sticking point of the negotiations is whether EU exporting companies should be better protected from international competitors and be given a longer period of free allowances in the ETS.
- CBAM must comply with WTO rules and thus not favour domestically produced goods. As such, the phase-out of free allocations in the EU ETS will need to be carefully coordinated with a phase-in of CBAM certificates.

European policymakers should:

- **Prioritise the swift implementation of CBAM coupled with a phase-out of free allowances to industry**: this will increase incentives for industrial sectors to decarbonise while being protected from the risk of carbon leakage. Both processes will need to be ambitious but, at the same time, leave industries with enough time to make the transition.

- **Extend the EU ETS to the transport and buildings sector** on the condition that a Social Climate Fund is established to ensure a just transition. In parallel, the review of complementary regulations that define standards for the transport (e.g. Regulation on CO_2 emissions standards for cars and vans) and buildings (e.g. Energy Performance of Buildings Directive) sectors need to be swiftly finalised in an ambitious manner.

- **Reconsider the proposed sale of permits from the EU ETS Market Stability Reserve Mechanism to raise €20 billion to fund the REPowerEU plans**. The EU should explore alternative options such as increasing the percentage of auction revenue spent on climate and energy policies or reducing the free allocation of permits to industry.

AVOID GAS INFRASTRUCTURE LOCK-IN

PRI's policy briefing on sustainable infrastructure outlines that national and subnational infrastructure strategies must align with *'key government sustainability commitments, such as the achievement of the SDGs by 2030 and a net-zero and climate resilient economy by 2050*'.[27]

The above implies that policymakers should think holistically of infrastructure systems rather than focusing on individual infrastructure projects. Further, decision-makers in the EU should assess any potential investments in infrastructure against available evidence:

- The IEA net-zero by 2050 scenario finds that globally '*there is no need for investment in new fossil fuel supply*' and that '*beyond projects already committed as of 2021, there are no new oil and gas fields approved for development'*. It also states that '*advanced economies should reach overall net-zero emissions electricity by 2035*'.[28]
- The European Commission's impact assessment for its 2030 climate target finds that in Europe '*by 2030, coal consumption would be reduced by more than 70% compared to 2015, and oil and gas by more than 30% and 25%, respectively'*.[29]

The current EU response to the energy crisis encompasses some risks in that respect, particularly related to infrastructure development for liquefied natural gas (LNG) and hydrogen supply.

Liquefied natural gas (LNG)

- The EU has put significant onus on LNG in its diversification efforts:
  - The Versailles Declaration mentions '*diversifying our supplies and routes including through the use of LNG and the development of biogas*' and '*channelling coordinated investment in energy systems, including providing LNG infrastructure'*.[30]
  - The EU also signed a joint statement with the United States by which *'the European Commission will work with EU Member States toward ensuring stable demand for additional US LNG until at least 2030 of approximately 50bcm/annum*'.[31] The IEA has assessed, however, that the short-term diversification potential is limited to 30bcm.[32]
  - The REPowerEU plan finds that '*to import sufficient LNG and pipeline gas from other suppliers, investments estimated at €10 billion by 2030 will be required for a sufficient level of gas infrastructure, including LNG import terminals, pipelines to connect underutilised LNG import terminals and the EU network, and reverse flow capacities*'. These investments would complement existing projects of common interest and primarily be centred in Germany and the Baltic states (see Figure 2).
- In the short term, the EU needs to diversify its supply chains. While this will involve increasing its LNG supply, it may not require the construction of additional gas infrastructure.
  - According to an E3G analysis, '*the amount of additional LNG demand is unlikely to significantly exceed the 50bcm/year [foreseen in the joint EU-USA statement] between now and 2030. Thereafter, the EU's clean energy plans are likely to successively erode this short-term boost to global LNG demand*'.[33]

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[27] PRI (2022), Policy briefing: sustainable infrastructure.
[28] IEA (2021), Net Zero by 2050 - A Roadmap for the Global Energy Sector.
[29] European Commission (2020), Stepping up Europe's 2030 climate ambition - Investing in a climate-neutral future for the benefit of our people.
[30] European Council (2022), Versailles Declaration.
[31] European Commission (2022), Joint Statement between the European Commission and the United States on European Energy Security.
[32] IEA (2022), A 10-Point Plan to Reduce the European Union's Reliance on Russian Natural Gas.
[33] E3G (2022), Future of EU gas demand: Implications for the US LNG export sector.

- New regasification LNG terminals take at least 2–3 years[34] to build and, as such, do not offer a solution to the immediate energy challenges facing the EU. Instead, the EU can seek to meet the supply shortfall through contractual arrangements in the LNG market and by working with international partner countries to utilise gas that is currently flared, estimated by the IEA to be as much as 50bcm.
- Research by Bellona Europe, Ember, RAP, and E3G suggests that additional renewable energy measures in the buildings (electrification and heat pumps) and power sectors can also save 56bcm of gas imports by 2025, on top of the 32bcm of savings that can be garnered through the existing Fit for 55 package.[35]

Hydrogen

- The Versailles Declaration highlights the need for '*further developing a hydrogen market for Europe*'. Accordingly, REPowerEU has set a target of 10 million tonnes of domestic renewable hydrogen production and 10 million tonnes of renewable hydrogen imports by 2030 across EU Member States. Total investment needs for key hydrogen infrastructure categories are estimated to range between €28–38 billion for EU-internal pipelines and €6–11 billion for storage.
- The EU's ambition for green hydrogen must be assessed against its actual potential for development and use in order to ensure that infrastructure investments are well-directed:
  - Agora Energiewende finds that, in light of the expected decrease in gas consumption modelled by the European Commission, '*gas distribution grids will have a hard time attracting new investment, particularly over the next two decades'*.[36]
  - According to E3G, the '*EU Hydrogen Strategy foresees the installation of 40 GW of electrolysers by 2030, which would be able to produce around 333 TWh of renewable hydrogen per year. If fulfilled, this number would be barely enough to decarbonise existing industrial hydrogen use, where an estimated 300 TWh of hydrogen are required to eliminate emissions*'.[37]
  - In light of the above, hydrogen use is best prioritised for industrial sectors (industry, shipping, aviation) where other climate-neutral solutions such as direct electrification and energy or material efficiency are not yet available. Hydrogen infrastructure investments must also be carefully considered and target areas where there will be industry demand.

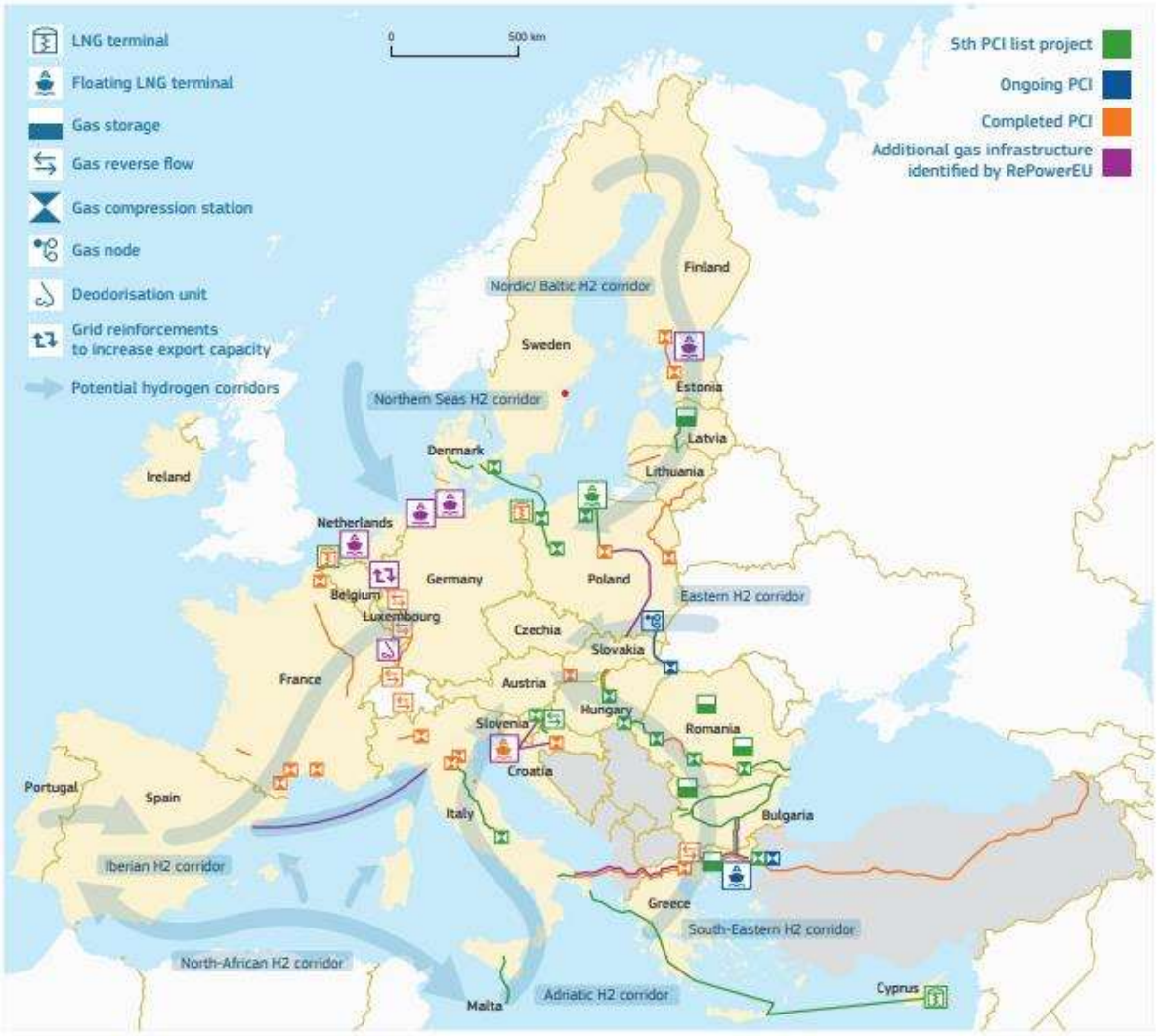
In all their future relevant communications (be they binding or non-binding), European policymakers should assess any energy infrastructure investments against the Paris climate goals and the EU climate and energy targets for 2030 and 2050. This process notably implies:

- Confirming that **investments in energy savings and renewable energy will be prioritised** and taking steps to quickly reduce market barriers for their roll-out (e.g. by easing the permit process, facilitating the use of state aid, and tax measures such as lowering the VAT).
- Recognising that, while the diversification of supply sources has a short-term role, **no new investments in fossil fuel supply infrastructure are needed in the mid-term.**
- Confirming that gas consumption must decrease by over 30% by 2030 to meet the EU's climate and energy targets, and that **existing gas infrastructure will need to be decommissioned or repurposed over time**. The EU gas package must enable the scaling

[34] Reuters (2022), Analysis: As Germany joins LNG import race, a long and crowded track awaits.
[35] Bellona, Ember, RAP and E3G (2022), EU can stop Russian gas imports by 2025.
[36] Agora Energiewende (2021), 12 Insights on Hydrogen.
[37] E3G (2021), Phasing down gas use in Europe.

down of gas use in the market while using renewable hydrogen only for the most strategic applications. Additionally, policy instruments must be put into place to ensure that renewable hydrogen development and infrastructure are targeted to uses where there is no alternative (e.g. industry, shipping, aviation).

Fig 2. European gas infrastructure map – projects for common interest (PCIs) and additional projects identified through REPowerEU, including hydrogen corridors



Source: European Commission

COORDINATE FINANCE ACROSS THE EU TOWARD PARIS AGREEMENT-ALIGNED INFRASTRUCTURE

Utilise existing funds to help deliver the policy response

The energy transition will require an increase in energy-related investments:

- The European Commission has assessed that in order to reach the EU's climate target for 2030 under the Fit for 55 package, the EU will need to annually invest €350 billion more in the period 2021–2030 than it did in the period 2011–2020.
- The REPowerEU measures will entail additional investments of €300 billion between now and 2030 on top of what is needed to realise the objectives of the Fit for 55 proposals.

The urgency and scale of the challenge facing policymakers underline the importance of maximising the use of existing policy mechanisms and financial resources:

- The Recovery and Resilience Facility (RRF) was initially devised to respond to the COVID-19 pandemic. It makes available €723.8 billion (in current prices) in loans (€385.8 billion) and grants (€338 billion) and includes a requirement to spend at least 37% for climate purposes. To benefit from the support of the RRF, Member States must submit their recovery and resilience plans to the European Commission. Almost all Member States have submitted such plans, which are now in the implementation phase. The RRF will be operational until 2026, and the REPowerEU plan proposes a requirement in the relevant regulation for Member States to add a dedicated chapter to their national plans.[38]
- The Multi-Annual Financial Framework (MFF) consists of several funds (Cohesion Fund, European Regional Development Fund, European Social Fund, Just Transition Fund) that will be disbursed between now and 2027. Member States are currently drafting and negotiating their operational plans with the European Commission. These facilities should be fully utilised to better enable the EU policy response to reduce dependence on imported gas and accelerate the net-zero transition. The REPowerEU plan clarifies the ambition of the European Commission to present a delegated act to speed up the design and reimbursement of energy efficiency and renewable energy projects under the Cohesion Fund, as well as allowing for the transfer of some cohesion funds to finance Member States' recovery and resilience plans.

European policymakers should:

- **Prioritise investments in energy efficiency and renewable energy within Member States' recovery and resilience plans**, reducing their dependence on fossil fuels at a quicker pace. The proposal by the European Commission to add REPowerEU chapters to the recovery and resilience plans should be agreed upon and implemented swiftly with the aim to incentivise the insulation of buildings and an accelerated roll-out of heat pumps, district heating, and other clean energy solutions for replacing gas use in buildings.
- **Prioritise rolling out investments in energy savings and renewable energy as part of Member States' operational plans under the Multi-Annual Financial Framework**.

[38] European Commission (2022), Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) 2021/241 as regards REPowerEU chapters in recovery and resilience plans and amending Regulation 2021/1060, 2021/2115, 2003/87/EC and Decision 2015/1814.

Consider additional Europe-wide capital raising

Centralised EU funding, in addition to what can be provided through existing instruments, may need to be made available to accelerate the clean energy transition further. Agora Energiewende has estimated that '*bolstering the existing Recovery and Resilience Facility by €100 billion would appear sufficient to deliver on the REPowerEU plan and regain Europe's energy sovereignty by 2027*'.[39]

Various options exist for increasing EU centralised funds:

- The REPowerEU plan proposes to increase the RRF financial envelope with €20 billion in grants from the sale of EU ETS allowances currently held in the Market Stability Reserve. However, this could lead to a lower carbon price, which in turn would disincentivise emissions reductions from industry and reduce ETS revenues for Member States.
- Some Member States (e.g. France and Italy) have voiced support for additional common debt issuance. This measure would allow for a similar approach to the one used for the Recovery and Resilience Fund.
- The Multi-Annual Financial Framework could be increased. However, to do so would require re-opening the budget, and negotiations would be challenging considering tight national budgets and the need to reach unanimity amongst Member States.[40]

European decision-makers should consider options to raise further capital for the energy transition required by the Fit for 55 package and REPowerEU. For that purpose, they can review the best available options with members of the private sector.

[39] Agora Energiewende (2022), Delivering REPowerEU: A solidarity-based proposal for financing additional green investment needs.
[40] *Financial Times* (2022), EU states braced for extra cash demands from Brussels.