Green Deal Watch

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Building energy resilience

8

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About the Green Deal Watch

The "Green Deal Watch" was launched in 2020 by the Istituto Affari Internazionali (IAI) with the support of Edison. The aim of the project is to follow the evolution of the ambitious and cross-cutting "European Green Deal" strategy towards climate neutrality launched by the Von der Leyen Commission in December 2019. The "Green Deal Watch" follows the "Energy Union Watch" that IAI has published from 2015 to 2019 to monitor the evolution of the energy and climate policies under the previous legislature. The multiple ramifications of the Green Deal will now be read along four dimensions – 'driving the green deal', 'greening industry', 'supporting the transformation', 'strengthening security and diplomacy'. IAI will cover the debate among national and European stakeholders and report the key dynamics in order to help the reader better navigate the challenges and opportunities of the implementation of the European Green Deal (EGD). The Watch is produced on a quarterly basis, collecting official documents, public information and open source data, which are processed and analysed by the IAI team.

About IAI

The Istituto Affari Internazionali (IAI) is a private, independent non-profit think tank, founded in 1965 on the initiative of Altiero Spinelli. IAI seeks to promote awareness of international politics and to contribute to the advancement of European integration and multilateral cooperation, focusing on topics such as European integration, security and defence, energy and climate policies, as well as key regions such as the Mediterranean, the Middle East, Asia, Eurasia, Africa and the Americas. The IAI publishes an English-language quarterly (The International Spectator), an online webzine (AffarInternazionali), two book series (Quaderni IAI and IAI Research Studies) and other paper series related to IAI research projects.

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ABOUT THIS REPORT

This is the eigth issue of the Green Deal Watch, a quarterly report produced by the Istituto Affari Internazionali (IAI) with the support of Edison. This publication aims at monitoring and analysing the initiatives launched by the European Commission and discussed by the EU institutions and Member States under the umbrella of the Green Deal.

This Green Deal Watch covers the new, greater range of topics anticipated by Commission President Ursula von der Leyen to achieve climate neutrality by 2050. We present a general analytical Foreword at the beginning of each publication, followed by the in-depth monitoring of Green Deal activities, divided according to a breakdown revolving around a set of four dimensions, designed to match the guidelines so far expressed by the von der Leyen Commission.

These are:

- **Driving the Green Deal,** which will look at the macro areas of Energy and Transport. It will analyse the technological and policy evolution for renewables, sustainable mobility, and green gases and hydrogen, with a strong focus on the energy market (both for gas and electricity) and energy efficiency.

- **Greening industry,** which will observe and discuss the reconversion of industry and of energy-intensive sectors in particular, with specific attention to the role of digitalisation, the upscaling of new technologies, R&I&D (Research, Innovation and Deployment) and circularity.
- **Supporting the transformation,** which will focus on energy governance, EU financing and funds, the Just Transition Mechanism and the repositioning of institutions such as the European Investment Bank (EIB).
- **Strengthening security and diplomacy,** which will tackle energy diplomacy aspects with specific attention to the Mediterranean, Africa, Russia, Asia and the US, as well as climate security and diplomacy and the role of the EU as a leader in the fight against global warming.

These four dimensions are followed by an in-depth section, where we will cover different kinds of content in each issue. This time we look at the opinion of Ditte Juul-Jørgensen, Director-General
DG ENER, European Commission, in an interview published after the analysis of the four dimensions. A Roadmap of initiatives envisaged under the European Green Deal concludes this report.

This Green Deal Watch aims at providing continuity to the analysis produced in the 16 issues of the Energy Union Watch (available here), the quarterly publication IAI dedicated to the Juncker Commission, which covered the whole five years of activities.

Foreword | Building energy resilience

The EU has progressively lost its main supplier of gas, Russia. Moscow has delivered around 60 bcm to the EU so far this year, but in these months exports have been halted via the Nord Stream 1 and Yamal-Europe pipelines, and recently Europe has only been served via the Sudzha entry-point on the border with Ukraine and the TurkStream pipeline. Amongst other factors, lower Russian supplies, sustained demand due to the need to fill storage capacity and the relative scarcity of alternatives in the power sector sent gas prices to all-time highs in late August, enhancing the pressure on European governments and increasing vulnerability among EU industries and citizens.

Despite this, the EU faces winter in a better position compared to what we thought just a few months ago. Indeed, diversification has played its role. Part of the Russian volumes were replaced by alternative liquefied natural gas (LNG), coupled with a reduction of demand (savings in energy use), substitution with other sources and stronger gas flows from non-Russian pipelines. Prices have come down sharply as storage sites across the EU were filled to full capacity. Another reason for this relatively good European position is that the bloc has benefited greatly from lower Chinese LNG imports as the country pursues its zero-covid policy.

Filling our storage was expensive. Europeans offered more money than other countries (Southern Asia in particular), contributing to push prices higher. The LNG market has been suffering due to underinvestment in Qatar and in the US. The market is extremely tight and many countries have competed for the same gas. On the other hand, a very general high demand across the EU was witnessed notwithstanding high prices – partly because of the need to fill storage. Other factors explaining the sustained demand can be related to the scarce and lagging communication on the side of governments, as well as energy subsidies across the bloc. However, data show different gas demand reactions across countries and different sectors that have been driving the demand path.

Climatic conditions affected the situation for the better and for the worse. Severe reductions in production from hydropower were due to this summer's drought across several countries. Also, some limitations in electricity import from France took place because of the extraordinary maintenance events on a large portion of nuclear capacity beyond the Alps. This augmented the pressure on gas due to its share in power generation. On the other side, gas prices (and then electricity prices) have been falling due to the unseasonably hot weather across Europe this autumn, helpfully

bringing some economic relief as the bloc approached the colder months. The TTF benchmark in these past weeks went from above 300 euros/MWh at the end of August to just above 100 – this represents a significant shift, but it is still more than five times the average during the 2016–20 period.

However, it is too early to declare victory as 2023 is set to be a very difficult year. The International Energy Agency (IEA) has indeed warned that Europe could face a 30 bcm shortfall of gas next year. Reasons to be worried are several: first, storage does not cover the whole of the winter demand. Secondly, next year Europe won't be able to import and store Russian gas as member states have largely done until this summer. At the same time, there are uncertainties on when China will start reimporting LNG to normal levels. Indeed, in the past months China has been consuming 20 per cent less compared to the past year, which freed up around 13–15 bcm of gas for Europe, and this won't likely happen next winter. Another worrying element concerns the LNG market, which will remain extremely tight with no new significant supply projects expected to enter into operation before 2025. Overall, the IEA considers that global LNG supply is expected to increase by only 20 bcm in 2023 supported mainly by the ramp-up of the Calcasieu Pass LNG facility in the United States and the Coral South LNG facility in Mozambique, as well as the return of the Freeport LNG facility in the United States. This is still too little to fully make up for the decline in Russian gas imports.

What's more, EU gas exports to Ukraine are set to rise, as wisely warned by the IEA. Kiev started this year's heating season with very low storage levels and even assuming a strong reduction in the country's winter gas consumption, their storages sites are expected to be severely depleted by March 2023. The IEA considers that Ukraine could require at least 5 bcm of gas imports from the European Union during the summer of 2023 to replenish storage. Moreover, the energy component of Putin's war has now gained a new chapter, aiming to create a massive humanitarian crisis in Ukraine – the country is struggling to restore power after Putin's strikes.

This is why reducing European demand is essential, as well as rapidly defining a more efficient energy system. Reducing energy demand is a key measure, with evident benefits for both energy prices and climate change. Furthermore, a reduction in demand can anchor the expectations of operators and reduce sudden cost adjustments in case of a reduction of supply. However, this needs to be an orderly reduction, not creating more vulnerabilities on certain sectors that need gas and are exposed to international competition. Stronger guidance is needed from governments and institutions, warning how everyone can help lower demand, especially in the residential sector, also considering more creative options to incentivise the use of less energy, rather than the other way round. The IEA considers that variable demand trajectories, which can be influenced by policies, prices and weather, can translate into a variety of future scenarios for gas injection needs already in summer 2023, and that the EU should work on arriving prepared for the next critical junctures.

New measures meant to mitigate prices have been introduced, although a stalemate remains on gas price caps; in September the Council agreed to a voluntary overall reduction target of 10 per cent of gross electricity consumption and a mandatory reduction target of 5 per cent of the electricity consumption in peak hours. The Council agreed to cap the market revenues at 180 euros/MWh for electricity generators that use so-called inframarginal technologies to produce electricity (e.g., RES, nuclear and lignite).

The level of the cap is designed to preserve operator profitability and avoid dampening investments in renewable energies. Member states also agreed to set a mandatory temporary solidarity contribution on the profits of businesses active in the crude petroleum, natural gas, coal and refinery sectors to finance support measures for final consumers. Several European actors also discussed a possible extension of the Iberian price cap scheme, but there are several downfalls related to this measure such as high costs for member states, the potential distortion of intra-EU electricity trade and the increase in gas consumption that it entails.

Europe has been trying to act jointly. Kadri Simson herself has highlighted several times the importance of acting together on the global market; and the question of solidarity and unity among member states has been the subject of recent debates. At the political level, the discussion on caps has seen tensions within member states. In the past months around 15 member states had been pushing for the Commission to introduce a gas price cap in the hope of bringing prices down for consumers. Some other countries, in particular Germany, the Netherlands and Denmark, were sceptical about the safety of intervening in markets, arguing that lower prices would result in increased gas consumption and cause traders to send gas to third countries willing to pay market prices.

While the price caps saga remains unresolved, member states have agreed on joint purchasing rules. In October the Commission has proposed several measures to better navigate the crisis, such as a dynamic "price cap" for transactions, pending a new European gas price benchmark complementary to the TTF only for LNG volumes; a legal basis to start (and make mandatory) joint gas purchases by European companies; and new solidarity rules among member states in face of the risk of gas supply cuts. After the most recent "cap" proposal (i.e., market correction mechanism) and the Council meeting on 24 November, the EU gas price cap seems a very remote solution, while member states have agreed on rules that will make it possible for them and energy companies to purchase gas jointly on global markets.

In the meantime, the Fit for 55 package has been progressing, as analysed in dimension 1 of this Watch. Support to climate action has been evident, despite member states being worried about several energy security priorities. At the infrastructural level, an announcement that raised attention concerned the "green energy corridor", a new subsea pipeline that will connect Barcelona to Marseille and transport green hydrogen as well as gas during the transition – intended to better connect the Iberian Peninsula to continental Europe.

All in all, Europe is trying to reconcile its short-term energy security priorities with its Green Deal vision. Faced with the worst energy crisis in decades, European countries have made security of supply their top priority, paying a high economic and environmental price. COP27 was in this sense a very difficult one and the situation strongly contrasted with that in Glasgow one year ago, when the EIB and several member states pledged to cease financing fossil fuel projects abroad. However, EU diplomacy played an important role in a number of dossiers; and Europe and several member states at COP27 tried to clarify the temporary nature of these choices and their vision for green structural change in the wake of the Green Deal. The EU is already implementing its commitments through its domestic legislative work, while it certainly needs to accelerate on adaptation to climate change, both domestically and worldwide (partly addressed during the COP). With respect to the important

issue of loss and damage, Europe has been key in finding solutions to meet the needs faced by vulnerable countries facing the irreversible effects of climate change. Ursula von der Leyen has been also talking bilaterally with a number of countries to accelerate the implementation of their climate targets – in the case of Egypt, host of the COP, the EU has also taken a step forward by establishing a strategic partnership on renewable hydrogen and preparing the ground for a sounder transition in the country, notably reliant on its fossil fuel exports.

Dimension 1
Driving the Green Deal

Despite the focus of the Commission being still largely dedicated to security of supply, some of the key components of the Green Deal have advanced in the past months. Building on the growing success of offshore wind in the renewables industry, countries from both the Baltic and the North Sea agreed to boost the deployment of offshore renewables in the two regions, aiming also at reducing the still relevant energy dependence on Russia of many member states in Northern Europe. Following the launch of the 8th Environment Action Programme in May, the Commission also published a list of indicators designed to evaluate the progress of the EU in several key sectors and concerning fundamental enabling factors.
Member states have however struggled to reach an agreement on the energy performance target for buildings – a key element for the often unlucky energy efficiency policy of the Commission. Similarly, preparation for the COP27 witnessed a harsh debate among member states over a possible increase in the level of climate ambition for the EU – which, despite positive signs, has not been finalised before the conference.

Working on climate ambition

Member states have been working to define the negotiating position for the EU at the COP27 in a meeting held among environment ministers on 24 October, following a significant debate over the general level of climate ambition for the EU. The discussion builds on the current 55 per cent target and on the set of measures proposed in the Fit for 55 package; the Russian invasion of Ukraine and the spike in energy prices have however led the Commission to propose an upward revision of both targets in order to reduce reliance on Russian fossil fuels. While according to the compromise reached among environment ministers the EU has not managed to formally increase the targets to this extent before the COP27, the Union did agree to finalise negotiations over key measures for the Fit for 55 package by the end of 2022, taking also a relatively stronger stance on the highly debated topic of coal phase-out.
This discussion took place while the Commission's proposal for an increased 45 per cent renewables target, contained in last summer's REPowerEU package, has gone forward: on 14 October, the EP approved the integration of some of the measures in the REDIII legislative process (which stands for the third proposal on the Renewable Energy Directive), thereby opening negotiations with the Council.

The ensuing debate will however be complicated, as many of the member states appear to be poised to scrap or reduce the Commission's proposal and ideally stick to the 40 per cent target which was already agreed in June by the Council. The REPowerEU RED revision not only involves a target increase, but also the definition of renewables as matter of "overriding public interest", thus easing the often-lengthy approval process for new projects across the EU – a thorny issues many member states have faced in the past decade, particularly Italy and France. This was also strengthened by Council approval of the Regulation "laying down a temporary framework to accelerate the permit-granting process and the deployment of renewable energy projects" on 24 November.

Meanwhile the Czech presidency of the EU Council managed to reach another difficult compromise on 25 October, with ministers agreeing on mandatory renovation of commercial buildings under energy class F by 2027 (and under class E by 2030). The agreement however waters down a much more ambitious proposal by the Commission, included in the revision of the Energy Performance of Buildings Directive and requiring also public buildings to respect minimum energy efficiency standards. The debate has been split between two groups – countries pushing for a higher level of ambition (such as France and Germany) and others demanding flexibility (Hungary, Italy, Slovakia and Croatia in particular). As negotiations will then move to trilogues between the Council, the Parliament and the Commission, the first group will likely try to push the EP to further increase the ambition of the revised directive.

Boosting the North Sea and the Baltic

Cooperation has also advanced in the North Sea and the Baltic, particularly concerning renewables. Energy ministers belonging to the North Seas Energy Cooperation (NSEC) agreed on the first, albeit non-binding, offshore renewable energy targets for the region on 12 September. The targets will cover the whole North Sea and involve nine countries, which aim at reaching a minimum of 260 GW of offshore wind by 2050 – accounting for an impressive 85 per cent of the overall EU target for this resource. The proposal follows falling costs for offshore wind energy and a growing interest in alternative marine resources, such as new tidal technologies. The NSEC, which already includes one non-EU member (Norway), in addition to eight member states and the European Commission, will likely welcome the UK as well in 2023.

In August, eight member states pushed towards a similar cooperation for the Baltic Sea, agreeing to boost offshore wind generation to 20 GW by 2030 (seven times the current capacity) on 20 August. The Marienboug declaration signed on the occasion of the meeting foresees a capacity of more than 90 GW by 2050 – which, according to some in the wind energy industry, may have been already an achievable target for the medium term.

Both the North Sea and Baltic agreements focus not only on the need for increased capacity, but also on easing permitting procedures, promoting cross-border projects and developing the fundamental enabling infrastructures (in particular concerning energy distribution and maintenance).

Boosting environmental action

Several elements of the Green Deal affecting the EU's overall environmental action have also advanced. The Commission laid out detailed rules to reach zero air and water pollution by 2050 on 26 October. The proposal focuses on tighter rule on pollutants and on the treatment of wastewater, to address levels of pollution which have reached critical levels in several areas in the EU, such as the Italian Po Valley, industrial areas in Poland and several cities across

the continent. The plan sets air quality standards and intermediate targets to 2030, to put the EU on a path for zero pollution by 2050. It will also open the possibility of compensation for people affected by levels of air pollution beyond EU standards. The Commission has also proposed new, more stringent rules for wastewater, also affecting smaller municipalities and the pharmaceutical sector (the latter responsible for the vast majority of toxic micro-pollutants). The proposal however includes a significant degree of flexibility, to let regions and member states adapt rules to reach the proposed targets more easily.

Finally, the Commission has advanced its work on the 8th Environment Action Programme, presenting a list of headline indicators in July, which aim at tracking progress on key environmental targets for the Union. The indicators will cover a wide range of issues, such as priority objectives to 2030 (climate mitigation, adaptation, circular economy, zero pollution and biodiversity) and the main transition processes the Union is currently involved in (energy, industry, mobility and food). They will also cover topics such as sustainable finance and the phase-out of "environmentally harmful subsidies" (likely focusing on fossil fuel subsidies). The indicators substantiate the increase in the level of ambition already revealed by the 8th Environment Action Programme. The proposed list of indicators will not only be useful to monitor the EU's environmental progress, but would also offer another key for understanding the EU's overall performance (in addition to the traditional indicators, such as GDP).

Dimension 2
Greening Industry

Advancement in the "Greening the industry" dimension concerned mostly the phase-out of diesel and petrol cars, decarbonised gases, and, to some extent, agriculture and the future of the Common Agricultural Policy (CAP). The most significant success has been the approval of the ban on combustion engine cars by 2035, the first Fit for 55 measures to be agreed upon and one of the most debated proposals in the package. The proposal is aimed at boosting zero-emissions mobility, particularly electric. The Commission also confirmed the launch of a "strategic vision" for carbon capture, usage and storage (CCUS) for 2023, touching on a technology often left aside by the Commission's decarbonisation plans. This adds to work done by the Commission on decarbonised gases in these months, particularly on biomethane. Meanwhile, member states still battle over agricultural issues; despite the positive approval of the first package of CAP strategic plans, other key targets to lead the Union towards sustainable farming are facing strong opposition, particularly concerning the reduction in the use of pesticides.

Banning petrol and diesel cars

Negotiations between the Parliament and the Council reached an agreement over low-carbon mobility on 28 October, finalising a ground-breaking deal which will allow the sale of only zero-emissions vehicles by 2035. This de facto forbids the sale of gasoline and diesel cars and vans (other vehicle categories are excluded) as of that year; the ban will be also preceded by an intermediate target of -55 per cent of emissions by 2030 compared to 2021 levels for cars (-50 per cent for vans). The proposal was met with strong opposition from some member states and the car industry, which lamented how the measure would restrict possibilities to diversify alternative mobility. The rule has however included an exception for vehicles running on "CO2 neutral fuels", which could be sold even after 2035; yet, it is not clear whether this will cover biofuels, upcoming technologies or only specific categories of vehicles (fleets for hospitals and other public services, for instance). The rule also included a so-called "Ferrari exception", i.e., weaker interim targets until 2036 for car makers producing less than 10,000 vehicles per year. Smaller car makers will however be required to reach zero emissions by that year.

Setting the framework for decarbonised gases

In October, the Commission tabled a communication on CCUS, to be launched in 2023, addressing the technology for the first time since the launch of the Green Deal. According to the declarations made by Commissioner Simson at the CCUS Forum in Oslo, the Commission has recognised that the technology is needed to reach the 1.5 degree target, focusing particularly on the hard-to-abate sectors, such as heavy industries and agriculture, which are likely to keep emitting despite technological advancements. The move was welcomed by the oil and gas industry, a supporter of CCUS, which called for an EU target for CO2 storage shortly after Simson's declaration. This renewed interest is also likely to open up new funding possibilities and new regulations, such as the establishment of a carbon removal certification scheme.

Action on decarbonised gases also touched on biomethane, through the launch of the Biomethane Industrial Partnership (BIP) on 28 September. The public-private initiative involves the European Commission and several industry leaders, and was part of the REPowerEU plan, which indeed included a Biomethane Action Plan. The BIP is one of the key elements to achieve the target of 35 billion cubic metres of biomethane production by 2030 proposed in the plan, aimed at further reducing dependence on Russian gas by using biogas as a substitute for natural gas.

Meanwhile, progress on hydrogen is still lagging behind, with many energy-intensive industries lamenting the slow advance, particularly affecting the supply side and occurring at a moment when hydrogen would be a much-welcomed substitute for natural gas. This is partly due to the intense debates surrounding the delayed publication of the upcoming Renewable Fuels of Non Biological Origin (RFNBOs) Delegated Acts from the 2018 Renewable Energy Directive, which should define the criteria to produce and certify renewable hydrogen. The versions of the Delegated Acts leaked months ago still contained criteria that were regarded as excessively restrictive by the industry. Yet, some progress has been made by member states from an infrastructural perspective; the MidCat gas interconnector between France and Spain has been abandoned, following years of discussions over a project that was not particularly loved by the French government. It will be replaced by BarMar, another interconnector which will be designed to transport green hydrogen (alongside natural gas). Yet, critics of the project suggest that the vagueness around the BarMar proposal casts a shadow on member states' actual commitment to the project, especially France. Perhaps the upcoming agreement among parties, to be signed on 8–9 December, will shed clarity on the project. Meanwhile, Egypt has announced ambitious plans for the development of green hydrogen on the occasion of the COP27; the country has signed nine agreements and energy deals worth around 83 billion euros. In particular, the Commission has signed an MoU for a strategic partnership on renewable energy; the European Bank for Reconstruction and Development (EBRD) was also involved, providing an 80 million euro loan to build Egypt's first green hydrogen facility, as well as 35 million euros in support of the country's Energy Wealth Initiative.

Debating agriculture

Despite its still limited role in the Green Deal's vision, agriculture remains a thorny issue for the Commission. After lengthy negotiations on the reform of the CAP, which ended in December 2021 with an agreement on a largely watered-down version of the original proposal, the Commission finally

approved the strategic plans of seven member states at the end of August. The plans aim at matching the needs of national farming sectors to the Green Deal objectives, and have been included in the reformed version of the CAP; however, presentation and approval of the plans have been subject to considerable delay – the original idea of the Commission was to have all plans approved by mid-2022, but more than a third of member states presented them with significant delay. The Commission also expects a harsh debate over the proposed reduction on poisonous chemicals for agriculture, particularly following the widespread dissatisfaction among EU farmers because of the extreme droughts that occurred this summer alongside the spike in fuel prices. The effort required is also significant for many member states: some had to cut the use of pesticides up to 62 per cent (Italy) and 55 or 54 per cent (Germany, France and Spain). The measure is however one of the key elements included in the Commission Farm-to-Fork strategy, which aims at slashing pesticide use by 50 per cent on EU average by 2030. National targets have been only unofficially proposed by the Commission (only the European target has been officially stated in June); considering the current opposition by member states even at this early stage, it is likely that approval of the measure will be delayed and won't happen before the instalment of the upcoming Swedish presidency.

Dimension 3
Supporting the Transformation

Despite some work done by the European Central Bank (ECB) and the Council on overall financial support to the Green Deal, most action done in the "Supporting the transformation" dimension has concerned the energy market. This is why, despite this section being usually devoted to measures supporting the Green Deal, in this issue the analysis also covers measures helping consumers and industries in such difficult times.
The Commission extensively worked on reducing electricity and gas prices which, despite a reduction in recent weeks, remain still significantly high. In September, it proposed an emergency market intervention aimed at the electricity market, focusing on reducing demand (particularly peak demand), proposing a temporary revenue cap on sources with low marginal costs (renewables, nuclear, lignite) and a temporary solidarity contribution from excess profits from sectors such as oil and gas. In July, member states also committed to cut down gas consumption by agreeing on voluntary reductions reaching 15 per cent in the winter; this was followed by more structured action by the Commission, which proposed a new Council Regulation on Coordinated Demand Reduction Measures for Gas and a European Gas Demand Reduction Plan to coordinate and speed up cuts in the EU gas demand.
Other relevant news are the approval of the 2021 data on climate finance expenditure by the Council in October, highlighting a remarkable 23 billion euros dedicated by the EU to climate finance in the past year – a result which gave additional leverage in the course of the COP27. Meanwhile the ECB has worked to further include climate change considerations into its monetary policy, particularly regarding corporate bond purchases and risk management.

Advancements by the ECB

Action has been taken by the ECB to extend its climate considerations to its monetary policy. Following a decision by its Governing Council and according to its climate plan, the ECB introduced a series of dedicated measures: it first introduced climate-related disclosure requirements for collateral, accepting assets only from players complying with the Corporate Sustainability Reporting Directive (CSRD), which was recently approved by the Council and will soon enter into force. The ECB will also start the decarbonisation of its corporate

bond holdings, preferring those with better climate performance. It will then limit the use of assets from high carbon footprint players as collateral, aiming at decreasing climate-related financial risks. These will also receive greater consideration in a number of ECB activities, particularly those focused on risk assessment and risk management.

Working on electricity prices

Following the publication of the price toolbox in the first half of 2022, the Commission further advanced its action on energy prices. Concerning electricity, in September 2022 it proposed "exceptional electricity demand reduction measures", starting with tools aimed at reducing demand: the Commission has proposed an obligation for a 5 per cent demand decrease in peak times, to diminish pressure on gas generation, aiming at a 10 per cent general reduction by member states as of March 2023. The Commission has also proposed a cap on revenues for producers using sources with low marginal costs (so called "inframarginal"), which have benefitted from exceptional profits in the past few months. Producers using nuclear, renewables or lignite would see the energy price capped at 180 EUR/MWh: the extra revenue will be collected by member states and then redistributed to citizens to soften the impact of high energy prices. Similarly, the Commission has also proposed a solidarity contribution required for oil, gas and coal producers whose 2022 profits are at least 20 per cent greater than the average of the past three years. Finally, the Commission has included in the proposal a flexibility tool, allowing below-cost regulated electricity prices and the expansion of regulated prices also to small and medium enterprises. A long-term reform of market design was also proposed (see below, at the end of the next paragraph).

Reducing gas demand

Gas prices have also been central to the Commission's action. The Commission proposed a legislative package in July, "Save Gas for a Safe Winter", consisting of two tools: it introduced a European Gas Demand Reduction Plan, indicating best practices to coordinate demand reduction, as well as principles and specific measures – fuel substitution, reduced heating and cooling, and increase in efficiency, for instance. The Commission also proposed a new Council Regulation on Coordinated Demand Reduction Measures for Gas, which member states promptly agreed to. The Regulation envisages a voluntary gas demand reduction of 15 per cent by the winter, to face possible disruptions of Russian supply. The agreement also included a series of exceptions, particularly related to member states which are not connected to other countries' gas networks, and an empowerment of the role of the Commission and the Council in triggering a "Union alert" in case of exceptionally high demand or severe gas shortages – situations in which the reduction will instead become mandatory.

In October, the Commission worked again on energy prices and security of supply through the proposal of another emergency regulation which instead focuses on gas markets: "Enhancing solidarity through better coordination of gas purchases, exchanges of gas across borders and reliable price benchmarks". This has been divided into four main elements: joint European purchases of gas volumes, principles to develop a dynamic price cap, a mandate to develop a new LNG price benchmark, and new and wider solidarity measures between member states.
Joint purchases have been on the table since the first months of the invasion of Ukraine, but this is the first time the Commission is proposing legal tools. A political agreement on

the regulation was reached by the Council on 24 November, but it was not formally adopted. Formal adoption is expected in mid-December and will depend on the ongoing discussions on the gas price cap proposal (i.e., market correction mechanism) tabled by the Commission on 22 November. The political agreement on joint purchasing envisages the creation of "aggregate European demand" which, through service providers contracted by the Commission, will be matched by the best market offers. According to the Regulation, at least 15 per cent of gas storage needs will have to be covered by this aggregated demand.

The dynamic price cap was until recently the latest proposal by the Commission on capping gas prices, following a heated debate on this issue among member states and European institutions since the end of the summer. The idea of a full cap on Russian gas prices was indeed scrapped in September. The emergency regulation proposed in October brought the measure again to the table, yet in a rather vague version: the "dynamic price limit" would have imposed a temporary ceiling, which would change according to the situation and be designed to avoid exceptional price spikes as a result of speculation. This system was however only temporary and meant to be replaced by a new price index, which would complement the Title Transfer Facility (TTF) gas hub in the Netherlands, now the dominant benchmark, and better reflect current market conditions (particularly the new role of LNG). However, despite general agreement over joint purchases, the price cap was still largely a divisive issue among member states which, at the end of October, were still split even on this new Commission proposal. When a more detailed proposal for what was now termed "Market Correction Mechanisms" was published in November, many analysts heavily criticised it for being a "non-cap", that in practice will have little to no effect on energy markets.

The third element, solidarity measures, was similarly agreed by the Council on 24 November. The Regulation defines default rules for mandatory sharing of gas in case of consolidated emergencies, to be effective should individual agreement not be in place. The document also extends the obligation of solidarity also to countries with LNG facilities (additionally providing rules to guarantee that such capacity is used at its fullest).

In addition to this, in October the Commission circulated a non-paper on "Policy Options to Mitigate the Impact of Natural Gas on Electricity Bills", divided into two parts. The first comments on the potential risks of gas price capping following the model currently applied to Spain and Portugal – a proposal advanced by several member states, but which the Commission believes could lead to an increase in gas consumption and an excessive level of subsidies. The second part, "Lasting Ways to Mitigate the Impact of High Energy Prices on Electricity Bills", instead lays out early details of the Commission's vision for reform of the electricity market, which should be presented in the first quarter of 2023. While many details are missing, the core of the proposal is a dual system where renewables and other inframarginal technologies will be remunerated through long-term contracts such as PPAs and Contracts for Difference (CFDs), regardless of marginal prices, so as to reflect actual production costs and unlink electricity prices from gas prices. The second (and short-term) portion of the market will instead remunerate dispatchable power plants according to the marginal pricing system.

Dimension 4
Strengthening Security and Diplomacy

Given the continuation of the invasion of Ukraine and the continuous fluctuations of energy prices, a large part of the Commission's efforts have again been dedicated to strengthening security of supply and addressing prices (as analysed in the previous dimension). Member states and European institutions worked hard to reach high levels of storage, which the EU achieved well in advance by surpassing in September the 80 per cent target it had set for 1 November and actually reaching around 95 per cent in mid-November. This despite Russian supplies being now cut from almost all routes since the summer, after having played a key role in filling storage in previous months, and the sabotage of the Nord Stream pipelines in September – an event which also exposed the vulnerability of the EU's energy infrastructures. As diversification efforts continue, EU Council President Charles Michel called for greater ambition in the EU's energy policy, proposing a "genuine energy union" boosting solidarity among member states.
Energy diplomacy action also advanced, thanks to agreement on the 8th package of sanctions in October, which contained an oil price cap on Russian imports. The Commission also pledged a 500 million euro energy support package for the Western Balkans, focusing particularly on countries currently applying for EU membership (North Macedonia and Albania). Finally, in the past few months many member states have expressed their intention of leaving the Energy Charter Treaty (Germany, Slovenia, France, Spain and the Netherlands in particular), leading to an EP resolution calling for an EU exit from the Treaty. The agreement is accused of protecting investments in fossil fuels and slowing down the energy transition, by offering companies the possibility to sue governments if the regulatory changes they propose endanger returns on their energy investments.

Diversification and storage efforts

Targets set in the previous months to achieve sufficient levels of storage have been successful, with some key member states surpassing the 80 per cent level more than two months in advance – a success which was then consolidated by low levels of consumption in September and October thanks to a mild autumn.

The achievement was however made possible by relatively low consumption in Asia and China in particular, and contributed to increased gas prices during the summer – meaning that replicating this in 2023, with possibly no Russian supplies available, will be likely a much greater challenge. Diversification of supplies was also boosted by completion of the Baltic pipeline at the end of September; the infrastructure will carry gas from Norway and Denmark to Poland and was supported through the Trans-European Network for Energy programme.

The landmark agreement between Lebanon and Israel over disputed marine areas holding significant gas reserves cast a positive light on advances in the exploitation of resources in the Eastern Mediterranean. Meanwhile, imports from Russia have almost completely dropped across Europe, particularly to Germany and Poland, following a steady decline that started in March 2022. This has not only involved pipelines crossing through Ukraine, but also infrastructures outside the country's territory, such as the Yamal-Europe pipeline (not booked by Gazprom since July) and the Nord Stream pipelines. Deliveries through the latter were discontinued already in August citing technical problems related to the late delivery of a repaired turbine from Canada, an event which was however not likely to trigger a full stop in the functioning of the pipelines. Nord Stream was then sabotaged in September – those responsible being still unknown – leading to a likely final shut down of the infrastructure, at least for the short term. The event worried many member states and the Commission, which decided to run a stress test on critical infrastructures. This would likely involve military cooperation, but its details have not been disclosed.

Solidarity, climate and the energy union

In an opinion article published on 10 October, EU Council President Charles Michel has highlighted the need for a "genuine energy union" to address the weaponisation of energy by Russia and to increase EU solidarity. Despite citing the homonymous Juncker initiative, the proposal contained in Michel's article has a much smaller security of supply focus, while instead concentrating on four largely domestic points: "reducing energy consumption", "ensuring security supply and energy diversification", in which he included renewables, "reforming the EU's electricity market to bring prices down" and "reinforcing the EU's single market to prevent imbalances". The message had a clear reference to Germany, whose 200 billion energy shield was at the centre of Council discussions in October. The measure is a gigantic aid programme financed by debt aimed at subsidising some 80 per cent of the overall energy consumption of the country; it was largely criticised by several member states during an informal meeting among EU leaders in Prague on 7 October, mostly because of the possible imbalances it may create with countries which could not afford such measures (and which instead push for EU-wide tools).

Finally, the EU struggled hard to reach some kind of compromise during the unsatisfactory negotiations at COP27. After threatening to walk out of the conference, the Union managed to reach an agreement on the much debated loss and damage fund – i.e., compensation to poorer countries for irreversible climate change effects. However, calls for a stronger wording on the energy transition were largely unheard, resulting in a final agreement that left many unsatisfied.

IN DEPTH

Interview Ditte Juul-Jørgensen

Director-General
DG ENER, European Commission

****This interview was carried out before the 24 November Extraordinary Energy Council, at which EU Energy Ministers are expected to advance the Commission proposals of 18 October and 9 November, and possibly discover other relevant files related to the current crisis agenda.*****

The many measures, targets and strategies at EU level to support decarbonisation (reinforced in the context of the current crisis) will result into an increased demand for equipment and critical minerals for the transition. How to avoid developing new security risks and dependencies – from China in particular? Is this moment of deep energy crisis considered by the Commission as one to evaluate all of our energy vulnerabilities, beyond our sadly evident dependency on Russian gas?

For many years the EU was heavily reliant on Russian imports, covering more than 40% of its gas consumption last year, most of it supplied by pipeline. This situation changed with the Russian invasion of Ukraine and its weaponisation of energy resources aimed at destabilising our internal market. Russia unilaterally disrupted supplies to the EU. Our response to this disruption by Russia was the REPOWER EU plan – a three-pronged plan to reduce our dependence on energy imports from Russia, centring on accelerating investment in renewables, improving energy efficiency, and finding alternative suppliers.

In the space of a few months, our gas imports from Russia have fallen to less than 10%. From the Commission side, we are working intensively to diversify our gas supply by reaching out to other suppliers - reliable partners. We have seen increasing imports from countries such as the USA and Azerbaijan. Algeria and Norway have both become more important sources of gas than Russia. There has also been a considerable shift towards more Liquefied Natural Gas (LNG), resulting from the disruption of pipeline supplies.

In parallel, we are implementing considerable savings in energy consumption and increasing significantly the renewables capacity within the EU. High

*energy prices are driving investment in renewables, highlighting the benefits of renewables not only in terms of sustainability, but also in ensuring our energy security and independence and making energy more affordable. At current prices, many projects are likely to break even earlier than foreseen. The same is true of energy savings and energy efficiency. Following the regulation on reducing gas demand outlined in the '**Safe gas for a safe winter**' package in July, we have recorded a fall of an average of 15% gas consumption in August and September - and further investment is foreseen to that end. As part of the EU programme for post-pandemic economic recovery, the Commission is encouraging Member States to invest in new green technologies – for example in the renovation sector.*

*Moving to the second part of your question, the transition to renewable energy technologies will indeed require critical raw materials. We expect our demand for rare earth minerals to increase fivefold by 2030, exceeding the global supply of rare earths and lithium. At the moment, our supply of raw materials is dependent on third countries. As you point out, China holds a dominant position in the global supply chain, processing about 90% of raw minerals. This is an issue we need to address. To that end, the President of the Commission announced last month the launch of a European strategy on critical raw materials (i.e. the **Critical Raw Material Act**). The plan is to build a more resilient supply chain by financing projects of European interest that respect our social and environmental norms. Additionally, the President announced the pursuit of supply diversification through Free Trade Agreements and new partnerships with liked-minded partners and resource-rich countries.*

Intra-EU coordination in this crisis is key, and we are encouragingly seeing steps forward towards joint EU initiatives - in the direction of aggregating demand to secure gas volumes for example. A stronger collaboration and intra EU-solidarity however can and should be achieved; yet, the actions of some Member States have triggered tensions across the Union in the past weeks. In a time when gas is scarce and the economies do suffer, what form(s) should "solidarity" take – in terms of prices, fiscal rules, coordination in reducing demand? How can the Commission work to avoid the fragmentation of the single market?

*I think the EU has shown a remarkable degree of unity and solidarity – and remarkable speed in introducing the measures necessary to take us through this crisis, especially the emergency measures using Article 122 of the Treaty. For example, our proposals in July to cut back on gas demand was agreed by Ministers within a week of being published. Solidarity is a central element of the **package of energy emergency measures** released on October 18. This package aims to further ensure the lowering of gas prices, security of supply and above all, solidarity between Member States. The measures, when adopted, will strengthen a set of actions already in force that have reduced gas demand and diversified supply. In the proposal, the Commission is proposing to pool resources to jointly purchase gas at*

European level, ensuring a level playing field between Member States and trying to ease the burden of high gas prices on consumers and businesses. Additionally, we suggest bilateral solidarity agreements for Member State facing gas shortages, based on a common set of rules that can be set into motion swiftly.

At the same time, the current energy crisis is a reminder that we need to further accelerate the integration of our internal energy market and promote interconnections between Member States to ensure solidarity in time of gas shortages. Within the REPowerEU plan, one objective is to identify the most urgent infrastructure for security of supply. The higher level of interconnection within the single market, the more resilient we become in time of energy crisis. We also need to complete our ongoing work in the electricity sector to implement rules for the best use of the existing electricity infrastructure and free flow of energy across the EU.

Beyond reducing the overall energy consumption (i.e., the EU guidance and measures on energy savings) energy efficiency can be a key tool to achieve both sustainability and security and overcome several challenges the EU is currently facing. However, promoting efficiency has always been complicated for the Union despite the "energy efficiency first" principle; how can the EU fast-track the implementation of the energy efficiency pillar in a time when an efficient use of energy is much needed?

At the Commission, we have been promoting the "energy efficiency first" approach since the start of the energy transition. The cheapest and cleanest form of energy is the one that we don't consume. And this has been reinforced by current events. Indeed, the crisis made energy savings and energy efficiency indispensable. As already mentioned, in addition to our ongoing work for energy efficiency and savings, we put forward a proposal in July to reduce gas demand by 15%. The proposal agreed and adopted by EU Member States within just a week, and Member States are on target. This shows just how fast we were able to act on demand reduction. It looks as if the combination of high prices and mild temperatures have also enabled us to reduce consumption still further in October, relative to recent years. These short-term gains appear to be primarily through energy savings, such as setting a lower heating temperature in offices and homes. And we hope this will provide further help in the coming months to get us safely through this winter.

Energy efficiency investment is also increasing. Energy efficiency is a key element of the European Green Deal and the REPowerEU initiative. That is why we proposed in RePowerEU to increase the 2030 targets for energy efficiency from 9% to 13% savings relative to the forecast level of consumption. We aim to implement a flexible framework, allowing Member States to decide where and how energy savings can be made. This is part of the Energy Efficiency Directive that is currently being negotiated by the

European institutions. Additionally, we are making progress on the revision of the Energy Performance of Building Directive, which aims to boost the renovation rate of the EU's housing stock and buildings to the long-term benefit of consumers suffering from the energy crisis. With about 75% of buildings being energy inefficient, a large amount of investment is required to undertake large scale renovations, which are channelled through Member States Recovery and Resilience Plan. The Council recently agreed its negotiating position on this dossier. And I am optimistic that we can agree on this new framework in the first half of 2023.

Looking at the external energy and climate reach of the EU: how do we make sure that a focus on emergency responses and domestic priorities does not thwart EU's global ambitions on energy transition?

Our response to the current energy crisis is aligned with our climate ambition to decarbonise our energy system and our economy. In fact, it looks like the crisis is accelerating the clean energy transition. Our REPowerEU strategy seeks to strengthen our energy security and resilience by accelerating the green energy transition. By diversifying our energy supply, we aim to build long-term partnerships for alternative, low emission sources of energy (i.e. hydrogen, biomethane and renewables). We plan to increase our use of renewable hydrogen by 15 million tonnes – that is on top of the planned 5.6 mt – with the potential of replacing 27 bcm of imported Russian gas by 2030. This target includes about 10 mt of imported hydrogen, boosting the worldwide demand for renewable hydrogen. However, the market for hydrogen has yet to be developed and this requires significant upscaling of renewable production and availability of water. It is important that projects are "hydrogen-ready". Cooperation on hydrogen was a key EU priority at COP27 in Sharm El Skeikh this month, as the EU strengthens its cooperation with reliable partners and works to define common rules around trade of renewable and low carbon fuels.

As we move away from imports of Russian fossil fuel, the EU also plans to increase its energy efficiency targets and renewable uptakes. First, we aim to work together with our international partners to make both energy savings and efficiency measures a global priority. The EU already has many tools at its disposal to make energy systems more efficient, including standard-setting and labelling instruments, which can be a source of inspiration for many countries. Secondly, we aim to accelerate the roll-out of energy efficiency across the world, by strengthening our trade partnerships and increasing global support for investment in renewable projects. In other words, our response to the crisis is to do more towards meeting our climate objectives as the long-term solution to our energy security. Finally, let me conclude by recalling that the Commission published our ***external energy engagement strategy*** *earlier this year highlighting how we can extend our international cooperation in all energy fields.*

APPENDIX

TIMELINE

This timeline highlights the main elements proposed by the Commission under the umbrella of the Green Deal since its first presentation in December 2019. The list is not exhaustive, but aims to provide an overview of the Commission's work during these years. The list is an expanded version of the Commission's own timeline, available here:

https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

24 November 2022
During the extraordinary Council for Energy, EU energy ministers agreed on a Council Regulation "enhancing solidarity through better coordination of gas purchases, exchanges of gas across borders and reliable price benchmarks", as well as on a Regulation speeding up permits to deploy renewable energies.

27 October 2022
The Council and the European Parliament reach a provisional political agreement on stricter CO2 emission performance standards for new cars and vans.

26 October 2022
Commission proposes stronger rules for cleaner air and water, including PFAs, several pesticides, bisphenol A and some pharmaceuticals.

15 September 2022
Commission proposes for an emergency market intervention to reduce energy bills for Europeans, through reduced demand and a revenue cap on some producers (among other measures).

20 July 2022
Commission proposes a "Save gas for a safe winter" plan to reduce gas consumption until the following spring.

22 June 2022
Commission launches a Nature protection package, focusing on restoring ecosystems and halving pesticide use by 2030.

18 May 2022
Commission launches the REPowerEU plan, a set of measures triggered by the invasion of Ukraine and focusing on energy saving, supply diversification and the promotion of renewables.

5 April 2022
Commission proposes two Regulations to phase down fluorinated greenhouse gases and ozone depleting substances.

5 April 2022
Commission proposes an update to the Industrial Emissions Directive, to modernise EU industrial emissions rules to steer large industry in long-term green transition.

30 March 2022
Commission launches Proposals to make sustainable products the norm in the EU, boost circular business models and empower consumers for the green transition, as part of the Circular Economy Action Plan.

23 March 2022
Following the REPowerEU Communication, Commission publishes options to mitigate high energy prices through common gas purchases and minimum gas storage obligations.

8 March 2022
As a direct response to the invasion of Ukraine by Russia, the Commission publishes the REPowerEU Communication, focused on energy prices, storage and diversification.

15 December 2021
Commission publishes a set of proposals for a new EU framework to decarbonise gas markets, promote hydrogen and reduce methane emissions, namely a Directive and a Regulation.

15 December 2021
Commission publishes a Communication on Sustainable Carbon Cycles, to remove, recycle and sustainably store carbon, which will be followed by a proposal for a regulatory framework by the end of 2022.

14 December 2021
Commission launches a new transport proposal targeting greater efficiency and more sustainable travel, focusing also on the TEN-T network.

17 November 2021
Commission proposes two Regulations and a Strategy to stop deforestation, innovate sustainable waste management and make soils healthy.

15 September 2021
Commission publishes a Communication launching the project New European Bauhaus, focusing on initiatives and funding dedicated to energy efficiency in buildings.

14 July 2021
Commission adopts a large package of proposals to achieve a 55 per cent emissions reduction by 2030. The comprehensive package deals with revision of the EU Emission Trading System (ETS), the Effort Sharing Regulation, the Renewable Energy Directive, the Energy Efficiency Directive, a ReFuelEU Aviation Initiative (on air transport), a Regulation on Land Use, Forestry and Agriculture, a proposal for a Carbon Border Adjustment Mechanism (CBAM) and a revision of the Energy Taxation Directive.

17 May 2021
Commission proposes a Communication on a new approach for a sustainable blue economy in the EU.

12 May 2021
Commission adopts a Zero Pollution Action Plan for Air, Water and Soil, to improve quality standards for all three, and reduce the impact on health, among other goals.

25 March 2021
Commission publishes an Organic Action Plan as part of its Farm-to-Fork strategy.

24 February 2021
Commission adopts a new EU strategy on adaptation to climate change.

18 January 2021
Commission first launches the design of the New European Bauhaus initiative, dedicated to energy efficiency in building.

10 December 2020
Commission proposes an upgrade on the legislation on batteries, also trying to boost the European Battery Alliance, launched in 2017.

9 December 2020
Commission launches a European Climate Pact, to spread awareness and increase the involvement of citizens.

19 November 2020
Commission presents an Offshore Renewable Energy strategy, aimed at increasing the current 12 GW capacity to a minimum of 60 GW by 2030 and 300 GW by 2050.

14 October 2020
Commission publishes three significant elements for the Green Deal: a Renovation Wave initiative on energy efficiency for building, a Methane Strategy focused on decarbonised gases, and a Chemicals Strategy

for Sustainability to strengthen legislation on hazardous chemicals.

17 September 2020
Commission presents its 2030 Climate Target Plan, raising its ambition to reach a 55 per cent emissions reduction by 2030.

8 July 2020
Commission adopts EU strategies for energy system integration and hydrogen to pave the way towards a fully decarbonised, more efficient and interconnected energy sector.

20 May 2020
Commission presents two key strategies: its EU Biodiversity Strategy for 2030, and its Farm-to-Fork Strategy to make food systems more sustainable.

11 March 2020
Commission proposes a Circular Economy Action Plan, to expand and integrate previous work on circularity into the Green Deal.

4 March 2020
Commission proposes a European climate law, aimed at reaching climate neutrality by 2050.

14 January 2020
Commission presents two founding elements of the Green Deal: the European Green Deal Investment Plan and the Just Transition Mechanism.

11 December 2019
Commission presents the European Green Deal.

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