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EU external energy engagement in a changing world

EN EN

1. Introduction

The European Union and the world are facing an energy crisis, aggravated by Russia's invasion of Ukraine, and a deepening climate emergency. Russia's actions have exacerbated the situation on the already tight global energy markets, creating security of supply risks and causing prices to surge to historical highs. At the same time, the first impacts of the climate change are already felt across the world.

The cascading effects of these crises on the global economy that is already battered by the COVID-19 pandemic are clearly visible. The EU needs to act both to ensure its own resilience as well as to support the countries most affected.

The European Union has been determined and united in its response to Russia's aggression, including imposing sanctions targeting its energy sector. We stand in full solidarity with Ukraine and continue supporting its energy system after the emergency synchronisation of electricity grids with the Continental Europe grid.

The invasion, involving one of the world's largest energy suppliers and the main gas transit country to Europe, has disrupted the global energy markets. It has profound implications for EU's energy policy and its energy relations with international partners, exposing the links between energy security and global stability. The war is disrupting supply chains and trade patterns, and inflating commodity prices, with developing partner countries taking the hardest hit.

Russian's military aggression against Ukraine has exposed the risks inherent in heavy dependence on imported fossil fuels. Despite the diversification measures taken since the 2009 gas crisis, Europe is still too dependent on a supplier who is willing to use energy as a weapon. To put an end to this vulnerability and strengthen our resilience, Europe must accelerate its clean energy transition and diversify its energy supplies.

The EU had already set course on ambitious policies to get to climate neutrality in 2050. With the implementation of the European Green deal and the Fit for 55 Package the EU will reduce its consumption of gas by 35% and the consumption of oil by 46% within the next 8 years. Building on this proposal, the European Commission presented a REPowerEU plan[1] on 8 March, providing a blueprint to put an end to the imports of fossil energy from Russia by 2027 and speed up the clean energy transition.

To achieve this strategic objective, the European Union will reorient its gas and oil imports to other existing or new supply partners, while accelerating the deployment of renewable sources of energy and the implementation of energy efficiency and demand reduction measures across the board. Higher fossil fuel prices and the new ambition under RePowerEU will accelerate the pace at which the EU moves away from fossil fuels in the next decade. It will strengthen EU's resilience and strategic autonomy, as well as energy security, sustainability and affordability.

[1] RePowerEU Communication, EUR-Lex - 52022DC0108 - EN - EUR-Lex (europa.eu)

The implementation of the REPowerEU takes place in the context of the transformation of the European and global energy system in response to the climate emergency and will accelerate or amplify some of its trends. A growing number of countries has announced at the COP 26 ambitious net zero objectives and decarbonisation strategies, covering 70% of global CO2 emissions. Similarly, investors, businesses, and industry are increasingly internalising the need for a green transition, and often leading the way.

These trends must speed up further, if the world is to avoid a climate crisis. The sixth Intergovernmental Panel on Climate Change report warns that global Greenhouse Gas emissions must peak by 2025 and be reduced by 43% in 2030 to remain on track for meeting the Paris Agreement.

As a result of these dynamics, accelerated by the broader geopolitical developments in this decade, new patterns of trade will be emerging, focused on technologies more than exchange of commodities. To develop the needed technologies, the trade of critical raw materials is due to increase and diversify. New opportunities for producing energy will arise for countries who were not endowed with fossil fuel resources and the need for new interconnections will appear. While trade in conventional energy commodities will progressively decline, new commodities such as renewable hydrogen and ammonia will begin to be traded internationally. New rules, standards and governance arrangements will be required.

The European Union must be ready to work in this new geopolitical environment. There will be new opportunities for Europe to build on its green technological leadership, and to promote a more equitable and sustainable development across the world, but also new challenges for its energy security and the resilience of its supply chains, in particular the critical raw materials.

All these elements require the European Union to reinforce its engagement with partners and strengthen its external energy policy in order to respond to the climate crisis and be fit for purpose in a new, complex and fast changing global context. While similarly, in the short term, redressing the risk of a disruption of the energy markets due to Russia's invasion of Ukraine. The EU must continue to be agile so as to be able to adapt swiftly and appropriately to changing circumstances. This Communication must be seen in that light.

The EU external energy policy will:

- **facilitate the diversification of fossil fuel imports and clean energy acceleration efforts required by REPowerEU, strengthening EU's resilience and strategic autonomy;**
- **support Ukraine and others directly affected by the Russian aggression, as well as mitigating the impact on partners across the world;**
- **lead and accelerate the global green and just energy transition;**
- **reinforce and develop long-term partnerships to ensure sustainable, secure and affordable energy for the EU and the world.**

In line with the mandate from the Foreign Affairs Council conclusions of January 2021 and following up the conclusions of the March 2022 European Council, this Communication

complements the REPowerEU plan. It presents the strategic direction, the priority actions and the new tools needed for a robust external energy policy in pursuit of sustainable, affordable and secure energy for Europe and its partners. The European Union will implement this Strategy in close coordination with Member States in a Team Europe approach: 'acting as one' to 'deliver as one'.

2. An EU external energy policy for RepowerEU

On 8 March, the Commission launched the REPowerEU strategy[2] to put an end to its dependency on Russian fossil fuels via diversification of supplies, accelerated use of renewables and greater energy efficiency and savings.

Europe's energy system is set to move to clean energy sources at a faster than expected before the war in Ukraine. Clean energy transition is at the heart of the EU's drive for energy independence. However, moving away from Russian fossil fuels will require replacing some of them with fossil fuels from other international suppliers, considering that EU's domestic oil and gas production is much diminished: we import 90% of our gas consumption, 97% of our oil and 70% of our coal needs. As the EU's gas demand will contract at a faster pace than earlier expected and in order to minimise the risk of stranded investments and assets, the EU will favour diversification strategies which encompass both gas and green hydrogen investments.

2.1. Diversifying EU's gas supply

Today, Russia is Europe's largest gas supplier. In 2021, more than 40% of the EU's overall gas consumption came from Russia: this equals around 155 billion cubic metres of which 15 bcm is in the form of LNG. The REPowerEU plan aims to reduce the dependence on Russian gas by 2/3 by the end of this year and end it by 2027. Most of this gas demand will be substituted with renewables, low carbon energy sources and by energy savings. A substantial part will also have to be replaced by diversifying suppliers and supply routes.

To ensure necessary gas supplies, the EU has to increase its gas imports from non-Russian sources: mostly from LNG (+50 bcm), but also pipeline gas (+10 bcm). This requires putting the relations with traditional suppliers on a new basis and extending trade to new reliable suppliers.

To this end, the EU has launched the EU Energy Platform – to pool demand, coordinate infrastructure use, negotiate with the international partners and prepare for joint gas and hydrogen purchases. This builds on the work done by the Commission since last autumn, reaching out to EU's main LNG and pipeline gas suppliers. These efforts have resulted in record LNG deliveries of 12.5 bcm in April 2022 alone and 42 bcm from January to April 2022. The Platform will integrate ongoing diversification efforts by EU Member States and take into

[2] RePowerEU Communication, EUR-Lex - 52022DC0108 - EN - EUR-Lex (europa.eu)

account the needs of Ukraine and Moldova, as well as the Western Balkans and Eastern Partnership countries.

With this background, in a joint Statement by Presidents von der Leyen and Biden on cooperation on energy security, the Commission has already reached an agreement with the US for the delivery of additional LNG to the EU (15 bcm in 2022 and approximately 50 bcm annually until 2030), through US exports but also cooperation with other international partners[3]. A similar approach was followed in the joint Statement by President von der Leyen and Canada's Prime Minister Trudeau, which notably establishes a dedicated working group to look at increasing LNG deliveries in the coming years.

The negotiations of a trilateral Memorandum of Understanding with Egypt and Israel on supplying Europe with LNG have started and a dedicated working group has been established with Canada to look at increasing gas deliveries in the coming years. Japan and Korea have already redirected a number of LNG cargoes to Europe and work continues to use this option in the future. Qatar stands ready to facilitate swaps with Asian countries. In terms of pipeline gas, Norway has already increased its deliveries to Europe and both Algeria and Azerbaijan have expressed their willingness to do so.

Countries in sub-Saharan Africa, and in particular in Western Africa like Nigeria, already supplying 15% of EU 2021 imports, Senegal, and Angola still offer untapped LNG potential. Forecasts suggest that production of gas from Africa as a whole could reach from about 260 bcm in 2022 up to 470 billion cubic metres by the late 2030s[4].

This need to increase supplies takes place against the backdrop of growing global demand and high prices of LNG, driven by COVID-19 recovery, China's increased assertiveness and the uncertainty caused by Russia's invasion of Ukraine. While the EU's actions to diversify its energy supply are wholly legitimate, it should have a keen eye for the interests of global partners. As the overall gas consumption in the EU will decrease, it is crucial to ensure that gas cooperation is linked to long-term energy cooperation on hydrogen and other clean energy sources.

In parallel to these efforts, the EU must work to ensure open, flexible, liquid and well-functioning global LNG markets, both with the major producer countries (US, Australia, Qatar, Nigeria, etc.) and consumer (China, Japan, Korea) countries. G7, G20, IEA and other international fora provide opportunities for that.

EU Energy Platform

The EU Energy Platform, established by the European Commission with the Member States in April is a voluntary mechanism that makes use of the collective political and market weight of the EU to facilitate common purchase of natural gas, LNG and hydrogen.

[3] Joint statement by President von der Leyen and President Biden on U.S.-EU cooperation on energy security, 28 January 2022

[4] Rystadt, Upstream Analytics "Can African gas ease Europe's supply crunch amid Russia's Ukraine invasion?", 11 March 2022

It ensures cooperation in the following areas:

- Demand pooling: working with Member State representatives to maximise leverage to attract new supplies from global markets at stable prices that reflect the predictability and the size of the common EU market. This system would not distort the existing market rules.
- Efficient use of infrastructure: coordinating actions to maximise LNG imports absorption, comply with gas storage obligations and ensure security of gas supply. It will also help identify additional infrastructure needs compatible with future hydrogen use.
- International outreach: coordinating and reinforcing EU's international outreach to gas partners and markets in some cases leading to legally binding agreements. This will include the main LNG exporting and importing countries with a view to define and agree on potential arrangements for diversification, including towards hydrogen.

In addition, the Platform would facilitate agreeing on a single EU approach to external gas supply threats, building on existing rules and structures.

Key actions

- **Ensuring the operationalisation of the EU Energy Platform;**
- **Fully implementing the Joint Statements by Presidents Biden and von der Leyen on energy security, and by President von der Leyen and Prime Minister Trudeau;**
- **Negotiating political agreements with gas suppliers like Egypt and Israel to increase LNG supplies to Europe;**
- **Supporting the doubling of the capacity of the Southern Gas Corridor to 20 bcm per year;**
- **Restarting the High-Level Energy Dialogue with Algeria in 2022;**
- **Stepping up cooperation with sub-Saharan African countries like Nigeria, Senegal and Angola to explore increasing LNG supply to Europe;**
- **Continuing to map and explore options for eligible future partnerships with a view to gas as a transition fuel and hydrogen/ammonia.**

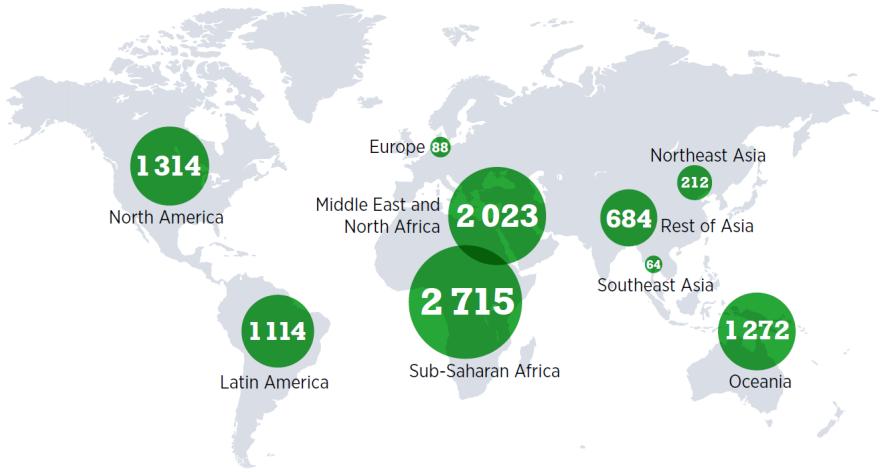
2.2. Preparing the EU for renewable hydrogen trade

REPowerEU sets out that an additional 15 million tonnes (mt) of renewable hydrogen – on top of the 5,6 mt already foreseen under the Fit for 55 – can replace 25-50 bcm of imported Russian gas by 2030. This includes 10 mt of imported hydrogen.

The capacity to produce green hydrogen is much more evenly distributed across the world than oil and gas reserves. The technical potential exceeds the estimated global demand of 88 exajoules (EJ) of global hydrogen demand in 2050 by several orders of magnitude[5]. In order to facilitate the imports of 10 million tonnes of hydrogen into the EU, the Commission will

[5] IRENA hydrogen report, 2022

conclude Hydrogen Partnerships with partner countries and envisages to establish three major hydrogen import corridors from the North Sea region (Norway and UK), as soon as conditions allow from Ukraine and from North Africa.



IRENA: Technical potential for producing green hydrogen under USD 1.5/kg by 2050, in EJ

A region with a particularly strong potential for renewable hydrogen and geographic proximity is the Southern Mediterranean, with its vast space and solar and wind resources. To create a win-win opportunity for the region and the EU, the Commission is working on a Mediterranean Green Hydrogen Partnership between the EU and countries in the Southern Mediterranean, providing a first stepping stone for broader hydrogen cooperation between Europe, Africa and the Gulf. It would promote local production and consumption of renewable electricity and renewable hydrogen. The partnership will also promote the development of local green industry value chains in partner countries.

The Gulf region, in particular Saudi Arabia, is another area of sufficient proximity and abundant resources, as well as the necessary financial and technological capacity to produce hydrogen. By 2030, the Green Mediterranean Partnership could make possible the trade of 6 to 8 million tons of renewable hydrogen between Europe, Africa and the Gulf via repurposed and new pipelines and via ammonia transports by ships.

Work is also on-going on a strategic partnership with Ukraine on renewable gases, including hydrogen and biomethane, with a view to implementation on the ground starting once the conditions allow.

In terms of infrastructure, substantial investments will be necessary to establish additional power generation capacity and to modernise and strengthen existing electricity grid systems and interconnectors. For hydrogen transport, some of the existing gas pipelines might require retro-fitting to become hydrogen-ready. Port and storage facilities will be needed to facilitate imports from more remote locations where promising hydrogen production projects are being developed.

In our immediate neighbourhood, the EU stands ready to support network development through the reviewed Trans-European Networks for Energy Regulation (TEN-E)[6]. Projects with third countries that contribute significantly to the TEN-E objectives can get the status of Projects of Mutual Interest, a label that supports joint projects in electricity transmission, but also hydrogen transportation and CO2 networks and storage.

The nascent global hydrogen market will need to be based on common rules, in particular standards, certification and guarantees of origin. The European Hydrogen Strategy and the Fit for 55 package, together with taxonomy and state aid rules, create an EU regulatory framework for hydrogen that is the most advanced worldwide. Based on this experience, the EU should engage and lead efforts for developing a solid framework for a global rules-based and transparent hydrogen market.

To kick-start a global renewable hydrogen market, the EU will establish a Global European Hydrogen Facility. It will incentivise the production of renewable hydrogen in the EU and in third countries by covering the initial gap between production costs and sales prices and thereby support Members States' and private sector initiatives in third countries.

Key actions:

- **Concluding Hydrogen Partnerships to facilitate the import of 10 million tonnes of hydrogen by 2030. In that context:**
  - **Launching the Mediterranean Green Hydrogen Partnership in the framework of COP 27.**
  - **Deepening cooperation with the Gulf region on hydrogen.**
  - **Identifying other strategic partners for hydrogen trade.**
- **Promoting EU standards, the EU's regulatory framework, our certification and full cycle GHG emissions approach.**
- **Initiating the first trading hubs for clean hydrogen in Europe and establishing it as the benchmark for Euro denominated transactions in hydrogen with all third countries.**
- **Signing a Memorandum of Cooperation on Hydrogen with Japan by the end of 2022.**
- **Developing the Global European Hydrogen Facility by the end of 2022.**
- **Signing a Strategic Partnership with Ukraine on renewable hydrogen in 2022.**

[6] Trans-European Networks for Energy Regulation

2.3. Reducing dependency from Russian energy imports other than gas

Shipping 8 million barrels daily, Russia is the world's largest oil exporter. Its invasion of Ukraine has therefore created turmoil and uncertainty on the global oil market. Oil prices have fluctuated since then, occasionally coming close to all-time high of $150 per barrel.

The United States and Canada are banning imports of Russian oil while the United Kingdom has announced plans to do so by the end of the year. [placeholder for the latest in terms of EU sanctions]

As a result of Russia's invasion of Ukraine, volatility and tightness of the market is likely to continue and impacts not only the EU, but all oil consumers across the world, especially the most vulnerable. The risks are most acute in market segments where Russia is a major supplier, such as diesel.

The EU is working with its international partners to ensure that sufficient oil supplies are available globally and at affordable prices. The G7 Energy ministers called in March for oil-producing countries to look into increasing deliveries to the global market using to the full the available spare capacity.

At the same time, IEA members have unanimously agreed to draw on emergency stocks to release 120 million barrels, the largest stock release in IEA history. This has shown the importance of emergency stocks as a shock absorber. While the decisions on the release of stocks are a competence for Member States, the experience with the IEA collective process demonstrates the usefulness of an EU coordination role, should additional releases become necessary.

When it comes to coal, the EU has already decided to stop any import from Russia, as part of its fifth sanctions package. To cope with the crisis in the short term, this means replacing 44 to 56 million tonnes of coal largely from imports. In the longer term, coal will be phased out in the EU, in most countries by 2030. With the adoption of the EU embargo on Russian coal, prices in the EU increased only by 10% to 325 EUR/tonnes, remaining way below their early March maximum. This indicates that there is no shortage of coal on the global market and prices were driven up by uncertainty created by the Russian aggression.

Acceleration of the diversification of fuel supplies for nuclear power plants, for those EU Member States still fully dependent on Russian nuclear fuel, will also be an important aspect of this policy in the short term. The EU will therefore assist nuclear utilities in expediting the licensing process of alternative fuel for the Russian design VVER reactors and work with international nuclear organisations such as IAEA and OECD/NEA to build up cooperation in the area of security of supply.

Key actions:

- **Working with G7, G20 and other international fora as well as bilaterally with relevant countries to ensure well supplied and well-functioning oil markets.**
- **Continuing dialogue with OPEC to ensure stability and affordability on the oil market, building on the High-Level EU-OPEC Dialogue held in April this year.**
- **Coordinating the EU response to the pressure on oil markets, including potential oil stock releases as part of IEA joint action or EU's reaction to supply disruptions.**
- **Accelerating the diversification of fuel supplies for nuclear power plants.**

2.4. Prioritising energy savings and efficiency

In addition to diversifying the energy supply and ramping up renewables, REPowerEU highlights the role of energy efficiency and energy savings. These are longstanding priorities for the EU's energy policy, as they simultaneously address economic, social and environmental concerns.

The importance of reducing the energy demand by energy efficiency and saving measures has become even more striking in the current environment of high prices and security of supply risks. In this context, the EU will work with other developed economies to make energy savings and efficiency a global priority, among other things building on the IEA 10 point plan to reduce oil demand.

Solutions for energy efficiency and savings are already today technically ready, cost-efficient and available for all sectors. The highest saving potentials can be realized in the heating and cooling of public and private buildings. Additional major energy savings can be gained from more efficient processes, but also from more efficient appliances, both in the residential sector (such as heat pumps) and in the tertiary and industrial sectors. The EU has developed regulatory, legislative, standard setting and labelling experience that can be a source of inspiration for many countries.

The case of stopping methane leakages shows that energy saving measures can also come at negative abatement costs. Methane is in the short to medium term 80-times more harmful as greenhouse gas than CO2 and the second-largest contributor to climate change. At the same time, up to 70% of methane emissions from oil, gas and coal sectors can be stopped using today's technology, and almost half of them at a profit or at no cost[7].

The European Commission has already adopted an EU Methane Strategy and a legislative proposal to tackle methane emissions that have a clear international dimension. Internationally, the EU established jointly with the US the Global Methane Pledge. Participant countries commit to reduce their collective methane emissions by at least 30% from 2020 levels by 2030. Over 110 countries have already joined this pledge, representing about half of global man-made methane emissions.

[7] The IEA estimates "that it is technically possible to avoid around three quarters of today's methane emissions from global oil and gas operations. Even more significantly, around 40% of current methane emissions could be avoided at no net cost".

The European Commission and the EEAS will also convene donor institutions such as the EIB, the EBRD and the World Bank to create incentives for the rapid collection of wasted fossil gases, including methane, bundling those losses into meaningful products that can be sold to international buyers.

As far as deliveries from new fossil oil and gas suppliers are concerned, the EU will request that they take responsible action to avoid intended and fugitive methane emissions, as well as flaring. Avoiding methane flaring and leaks can serve both energy security and the climate protection policy, as methane not emitted is gas that can be used. In the medium term, the EU will privilege those jurisdictions whose oil and gas suppliers have low emission profiles over suppliers from countries with higher jurisdictional methane emission profiles.

Key actions:

- **Working with partners, in particular advanced economies, to make energy savings and energy efficiency a global priority.**
- **Promoting the launch of an international pledge for building renovation and developing innovative financing schemes to mobilise private investments.**
- **Promoting the uptake of the EU's energy performance of buildings standards as gold standard in the Eastern Partnership countries.**
- **Promoting the availability of and the access to finance for energy efficiency and saving investments in cooperation with relevant stakeholders and international finance institutions.**
- **Implementing the Global Methane Pledge (GMP) with focus on North Africa and encouraging remaining methane emitting countries to join the GMP.**
- **Implementing the external dimension of the EU's Methane strategy.**

[Cab Timmermans asks to list here in a chapter what the EU is doing to help global partners in general (and UA in particular) make the necessary energy transition, what support, technical and otherwise, we are giving. This way we show that this is not merely about ourselves but also about engaging the rest of the world with a view to real mutually advantageous partnerships. **]**

3. Supporting Ukraine and others impacted by war

3.1. Building the energy system to power the future of Ukraine

Since the start of military aggression , helping Ukraine and others most directly impacted has been a central part of the EU energy policy. The EU shows solidarity by offering financial and technical assistance, ensuring the avialability of reverse gas flows and the recent emergency electricity grid synchronisation with Ukraine and Moldova. Opening the EU platform for common purchases of gas, LNG and hydrogen to Ukraine, Moldova and Georgia and the Western Balkans also gives a clear signal of support.

To help its neighbours becoming more resilient and less dependant on Russian energy imports in the longer term, the EU will work with Ukraine, Moldova, Georgia and the Western Balkans to support them reform their energy systems towards full EU energy market integration. This work is taking place largely in the framework of the Energy Community, that has also set up – with Commission support – a targeted Ukraine Energy Task Force and the Ukraine Emergency Fund for delivering specialised energy equipment and fuel.

Nuclear safety remains a major priority, in particular following Russia's reckless behaviour at the Ukrainian nuclear sites. The EU is fully aligned with the International Atomic Energy Agency's effort to ensure safety of Ukrainian nuclear facilities at all times.

The Russian aggression against Ukraine is a reminder that nuclear safety is also a hugely important energy security issue. The EU will play a leadership role in this area, promoting highest safety standards. It will therefore continue to cooperate closely with international organisations, such as the International Atomic Energy Agency (IAEA) and the OECD/Nuclear Energy Agency, on the continuous improvement of international nuclear safety standards and Conventions, and of their implementation. It will work in particular with the neighbouring countries that operate or plan to build nuclear power plants.

The EU also promotes safe nuclear technology and technological advances in this domain, for example through EU small modular reactors partnership.

Looking to the future, the EU will work with Ukraine to prepare the **REPowerUkraine initiative**, to 'rebuild better' the Ukrainian energy system, ensuring Ukraine's energy independence and putting the focus on energy efficiency, renewables, green hydorogen, biomethane and future-proof infrastructure. The EU will support this process both financially and technically. As one work-stream of this process, the Commission is already working on launching a Strategic Partnership on Renewable Gas with the Ukrainian authorities.

Key actions:

- **Supporting the repair and reconstruction energy infrastructure in Ukraine.**
- **Following the emergency synchronisation of Ukraine and Moldova, increase cross-border capacity and make electricity trading possible.**
- **Facilitating the reverse flow of gas to Ukraine via the Slovak Republic, Hungary and Poland and to Moldova and Ukraine via Romania (Trans Balkan pipeline).**
- **Offering to Western Balkan countries, as well as to Ukraine, Moldova and Georgia the possibility to participate in the EU's voluntary gas purchasing.**
- **Conducting nuclear stress tests and peer reviews in the EU's neighbourhood and candidate countries under accession (e.g. in Turkey) to increase nuclear safety and offer interested countries observership in ENSREG.**
- **Using the Energy Community framework to encourage ambitious energy and climate targets and market reforms, as well as to boost renewables and energy efficiency.**

- **Launching the REPowerUkraine for rebuilding the Ukrainian energy sector after the war.**

3.2. Addressing the impact of the Russian aggression against Ukraine on global partners

The Russian military aggression in all its dimensions is producing alarming cascading effects to the global economy which is already battered by the COVID-19 pandemic and climate change, with particularly dramatic impacts on developing countries[8].

The recent projections by UNCTAD[9] estimate that the global economy will be a full percentage point of GDP growth lower than expected due to Russia's invasion of Ukraine which is severely disrupting already tight food, energy and financial markets.[10]

Russia and Ukraine are among the world's breadbaskets providing around 30 percent of wheat and barley and over half of its sunflower oil. Russia is the world's largest natural gas exporter, and second largest oil exporter. Belarus and Russia together export around a fifth of the world's fertilizers. As a result of Russia's invasion of Ukraine, commodity prices are reaching record highs. Crude oil prices have increased by around 60%, gas and fertilizers have more than doubled, and food prices are 34% higher than this time last year.

Energy poverty is set to rise, affecting the most vulnerable populations in developing countries that are particularly exposed to these price swings as they dedicate the larger share of their income to food and energy. As a result, the global economy, having entered 2022 on a "two-speed" recovery path, will not only shift down a gear in terms of growth, but will also see many developing countries lose ground to advanced countries, while their vulnerability to shocks is heightened by rising geopolitical tensions and deepening economic uncertainty.

According to the preliminary assessments of the United Nations Task Team for the Global Crisis Response Group, 1.7 billion people in the world live in 107 economies that are severely exposed to rising energy prices, food prices and tightening financial conditions. This crisis risks leading to socioeconomic distress, leaving deep and long-lasting scars.

In the face of these unprecedented crises, the European Union will make use of all existing instruments to continue supporting developing economies, particularly in Africa, to recover from the COVID-19 pandemic and achieve an inclusive and sustainable growth, while building economic resilience that is necessary to address these shocks and the climate change crisis.

Key actions:

[8] United Nations - Global impact of war in Ukraine on food, energy and finance systems, April 2022

[9] United Nations Conference on Trade and Development (2022) Trade and Development Report 2021, March update

[10] United Nations - Global impact of war in Ukraine on food, energy and finance systems, April 2022

- **Strengthening analysis by making best use of EU Delegations and foresight capacity.**
- **Addressing the impact of the Russian aggression to Ukraine on European and world partners.**

4. Leading and acclerating the global green and just energy transition

The EU has a responsibility to lead and speed up the global green transition and supporting its international partners in the process. This includes working together on renewable energy, energy efficiency and savings, green growth, critical raw materials, clean technologies and future-proof infrastructure.

The European Commission and the EU High Representative have set out the **Global Gateway**, a new European strategy to boost smart, clean and secure links in digital, energy and transport sectors and to strengthen health, education and research systems across the world.

The Global Gateway will be delivered through a **Team Europe** approach, which brings together the EU and EU Member States with their financial and development institutions, including the European Investment Bank (EIB), and the European Bank for Reconstruction and Development (EBRD) in order to leverage up to EUR 300 billion of investments.

The green transition is necessary for the planet and an economic and social opportunity. In shorter term, however, some people, regions and industries will face negative impacts. Especially in the context of slow recovery, economic turbulence and the global consequences of Russian aggression against Ukraine, the social aspects of reshaping the energy systems must be central to the transition. Unless the transition is just, it will not succeed.

The EU has developed the 'Just Transition' concept to mitigate the impact of its own coal phase-out. It helps Member States to retrain affected workers, to diversify local economies, and to invest in clean energy and energy efficiency measures. While coal is not the only fossil fuel, it is the most polluting one and responsible for 40% of the world's greenhouse gas emissions. Phasing it out has considerable consequences for workers and the socio-economic fabric of entire communities in the coal regions, as well as for energy-intensive industry.

In its bilateral cooperation to support the just transition, the EU focuses on the main producers in the world, as well as on our close neighbourhood. China and India are responsible for two thirds of the world's coal consumption. South Africa is both an important producer and consumer of coal.

In follow-up to COP26, the EU, together with its Member States France and Germany as well as its international partners, the US and the UK, is implementing a Just Transition Partnership with South Africa with a budget of 8.5 billion dollars to accelerate the decarbonisation of the economy with emphasis on the coal phase-out and to minimise the country's social adaptation costs. The EU is exploring the possibility to conclude Just Transition Partnerships with further partners in future, e.g. Vietnam, Indonesia and India.

In line with China's stated ambitions to reduce its dependence on coal and make progress towards its carbon neutrality goal by 2060, the EU-China Energy Cooperation Platform (ECECP) and the annual high-level EU-China Energy Dialogue focuses on energy systems, renewables, energy efficiency and business cooperation. The EU provides support to phasing-out of coal in the Western Balkans and Ukraine via its 'Coal Regions in Transition' initiative.

Key actions:

- **Engaging with countries heavily reliant on coal-fired power in order to give effect to the phase out of unabated coal power generation and fossil fuel subsidies.**
- **Aligning and accelerating global initiatives to end fossil fuel subsidies and set milestones for their phase-out.**
- **Mainstreaming 'just transition'/coal phase out in the EU's cooperation programmes with partner countries (e.g. co-finance a training programme in South Africa; fund the development of a transition strategy for a coal region in Indonesia).**
- **Implementing the Joint Energy Transition Partnership with South Africa and explore the possibility of further partnerships along this model globally ahead of COP27 and beyond.**
- **Working with IEA's to create a multilateral work stream on 'just transition' globally, as a way to keep political momentum and keep track of progress.**

4.1. Promoting the deployment and uptake of renewable technologies in partner countries

Renewables-based electricity is now the cheapest power option in most regions of the world. In a 1.5 degree world, renewables will represent 90% of the global energy production by 2050.

Global markets will be worth an estimated EUR 24 trillion for renewable energy and EUR 33 trillion for energy efficiency up to 2050[11]. This represents a major opportunity for the world's economy. Following the 1.5 degree scenario would mean 2.3% more GDP growth until 2030 than with business-as-usual and 85 million new energy-transition related jobs.

The rise of renewables will change the dynamics of the global energy system. While hydrocarbon resources were concentrated in a few countries, because of favourable geological conditions, every country has the potential to develop renewables and participates in energy trade. Today, around 80% of world population live in countries that are net energy importers. This is set to change and new trade patterns and power dynamics will emerge.

The EU, which represents only 9% of global emissions, has a strong interest in prompting the uptake of renewable energy across the world.

[11] IRENA, Global energy transformation: a roadmap to 2050, 2019

The efficient deployment of renewable energy sources requires a wider 'system approach' where production, transmission and consumption of electricity is considered as a whole. In addition, the discussion of introducing and technical support carbon pricing and emission trade systems in other countries becomes more pertinent. The establishment of renewable energy capacities is most effective if they are integrated into open and flexible regional markets. The EU has been a first mover in creating a large integrated energy market and our experience can help international partners to accelerate their transition.

Several third countries like India have already set themselves ambitious targets for renewables deployment. An intense technical cooperation on clean energy, including facilitation of business-to-business interactions, is already being implemented and will be further strengthened, including on solar and hydrogen under the EU-India Clean Energy and Climate Partnership.

Similar work is ongoing in our partnership with China (e.g. ETS on the basis of the EU system). Cooperation with big polluting countries remains essential to substantially cutting CO2 emissions.

Energy cooperation with Africa is an important priority, both to ensure energy access to 570 million people currently without electricity in sub-Saharan Africa, but also to support investments in sustainable energy systems and hydrogen trade. By 2030 the African Green Energy Initiative aims to support the deployment of at least 50 GW of renewable electricity, providing at least 100 million people with electricity access. In order to achieve this goal, leveraging private sector investments will be key.

The acceleration of renewables worldwide also presents an opportunity for intensifying trade relations. For most world countries to develop their home-grown renewables potential, it is key to have access to innovative technologies, knowledge and capital and the EU green tech industry is well positioned to be a partner in those efforts.

Half of the world's wind power comes from turbines fabricated in Europe. EU companies are leaders in important segments of the photovoltaic and heat pump industries. Thanks to the European Battery Alliance, EU companies are finally also catching up with Asia on battery technologies.

In order to thrive and to grow further, the green tech industry needs to be able to rely on a stable regulatory framework, fair competition, sufficient investments, and fiscal level playing field in major future green tech growth markets. The external energy policy must work hand in hand with the EU industrial and trade policy.

The European Commission is closely cooperating with the US in the context of the Trade and Technology Council (TTC) to advance on the green transformation of the steel and cement industries and is also considering joining the First Movers Coalition for zero-carbon technology.

This requires a constant attention to promote business to business relations and engage in dialogue to address market barriers on EU companies in third country markets in the context of the economic and energy diplomacy. The experience of the Business to Business networking events organised under the EU and US energy Council, most recently on offshore wind, is a model to be replicated. Across Asia, specific working groups with the Republic of Korea and Taiwan, were set up to offer new business opportunities to EU green tech companies.

De-risking and credit export instruments are also key to support business penetration into new markets. EU clean tech companies are increasingly competing with foreign competitors that obtain direct financial support from their governments. The Commission will develop an EU strategy for export credits for green tech companies to ensure a better level playing field for EU businesses in third country markets. Through amendments to the OECD rules, the Commission is also seeking to further incentivise export credit support for climate-friendly technologies.

Key actions:

- **Implementing the African Green Energy Initiative, with the estimated budget to reach around EUR 1.7 billion for the period 2021-2024 and 2.4 billion for the whole 2021-2027 period.**
- **Accelerating the integration of renewables in electricity grids in the Western Balkans with the help of the Energy Community as well as in other regions of the world, such as Africa and the Indo-Pacific.**
- **Increasing the roll-out of renewable energy in cities and rural municipalities, e.g. with the help of the Global Covenant of Mayors.**
- **Accelerating the gradual phase-out of fossil fuel subsidies in the EU and globally in the context of the G7 and G20, OECD and WTO frameworks.**
- **Modernising the Energy and Raw Materials chapters in future Free Trade Agreements to strengthen the link to European Green Deal objectives.**
- **Aligning EIB and EBRD green tech lending practices in third countries still more firmly with EU and WTO rules and principles (e.g. with regard to local content requirements).**
- **Assessing options for an EU credit strategy to increase business opportunities for European green tech companies on third country energy markets and to support the European Union's Green Deal objectives, which may include an export credit facility and the enhanced coordination of EU financial tools.**

4.2. Cooperating on Research and Technology

Many of the technologies necessary to achieve full decarbonisation of the global economy are not yet mature. International cooperation is essential to increase the speed of clean energy innovation and deployment, while lowering their cost base, in particular for renewables and renewable hydrogen. Other key research areas include the development of smart, cyber secure and flexible power grids based on renewables, long-term energy storage and sustainable fuels for industry and transport.

Since renewables and hydrogen will not be able to substitute all fossil fuels in the energy mix, there is also a strong need for carbon removals. The EU will bring innovative zero- consumption energy efficiency solutions, as well as concepts like carbon-capture utilisation and storage (CCUS) to global markets. In order to maximise the potential of CCS and CCU, the EU will co-operate with neighbouring and other countries on the development of CO2 transport, general infrastructure standards and storage infrastructure to ensure that the technologies comply with the EU's strict environmental standards. Wider co-operation on CCS and CCU would make particular sense with oil and gas producing countries and with countries with significant presence of industry, like Norway.

The EU will continue supporting principled international cooperation and multilateral initiatives in line with its Global approach to research and innovation.[12] The Commission will provide resources for international cooperation from Horizon Europe, the EU's public financing programme for research and innovation. Engagement will be further intensified in major international initiatives, like Mission Innovation (MI) and the Clean Energy Ministerial (CEM) with the aim to develop together the green energy solutions of the future.

Key actions:

- **Co-leading the implementation of the Clean Hydrogen mission and Urban Transitions mission under Mission Innovation.**
- **Co-leading the implementation of the Hydrogen Initiative and the Empowering People, Skills & Inclusivity for Just Transitions initiative under the Clean Energy Ministerial.**
- **Supporting the Long-Term Joint EU-African Union Research and Innovation Partnership on Renewable Energy (LEAP-RE) collaborative action.**
- **Developing CO2 sequestration techniques to market maturity, e.g. in cooperation with Norway, including infrastructure planning, regulation and standards.**
- **Promoting the ratification of the London Protocol by contracting parties to allow for the timely creation of the international CO2 transport and storage market.**

4.3. Ensuring access to critical raw materials

While dependencies on fossil fuels will decrease over time, new dependencies in relation to rare earths and metals are likely to arise in the course of the energy transition. According to the Critical Raw Materials in Technologies and Sectors foresight study, the demand for critical raw materials needed in the low-carbon energy sector and their costs will increase significantly by 2050. The EU depends primarily on rare earths, magnesium, niobium, germanium, borates and scandium, some of which cannot be procured domestically.[13]

To continue advancing on its energy transition, the EU will need to procure these materials in tight commodity markets or substitute them in the longer term through new industrial processes.

[12] Communication on the Global Approach to Research and Innovation | European Commission
[13] Critical Raw Materials in Technologies and Sectors foresight, 2020

Possible remedies to minimise the EU's future dependence in this strategic area include, inter alia, diversifying global supply chains more, prioritising energy efficiency measures, incentivising long-term investments in new mining and refining activities inside the EU, boosting recycling and innovating the complete value chain, including through research.

The EU already established **Sustainable Raw Material Value Chain Partnerships** with Canada and Ukraine. To diversify its supply chains further, the European Commission is working towards establishing additional raw material value chain partnerships in **Africa, Latin America** and with **Australia,** e.g. via trade agreements or Memoranda of Understanding.

Key actions:

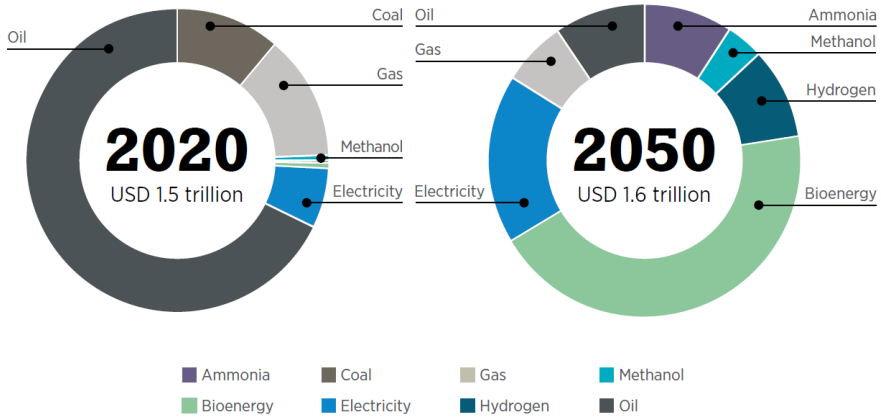
- **Expanding existing dialogues to new relevant areas like critical raw materials, for instance in China and Latin America, either at bilateral or regional level (OLADE).**
- **In line with the EU action plan on critical raw materials[14], reinforcing the use of EU trade policy tools in view of establishing strategic partnerships on sustainable raw materials value chains with resource-rich countries including in sub-Saharan African countries.**
- **Working with international organisations such as the OECD and the IEA on transparent and secure supply chains for critical raw materials used in the energy transition.**

5. Laying the foundations of the new energy world

5.1. Strengthening established alliances, building new partnerships

The new global energy system will not be a copy-paste of today's, with renewables simply replacing fossil fuels. It will be a fundamentally and structurally different system where collaboration and partnerships a central.

[14] COM (2020) 474



IRENA: Shifts in the value of trade in energy commodities, 2020 to 2050

The imperative to fight climate change and build a global green energy system is bound to strengthen the alliances with partners with whom we share a strong basis of common values. Currently, the interests and priorities of the EU and the US are aligned across the full energy policy spectrum and working in tandem, we have the gravitas to affect positive change globally. The energy relationship with Canada is equally strong and expressed in an active High-Level Energy Dialogue. The EU will continue to work with countries like Norway, Japan, Australia, United Kingdom and others to further the energy transition and work on mutually relevant priorities.

Both Eastern and Southern Neighbourhood will continue to be crucial for the EU. Ukraine, Moldova, Georgia and the Western Balkans are of particular importance as Russia's military aggression has direct impact on their energy systems that are closely integrated with EU's energy system. The energy relations with Eastern Partnership countries will need to be reinforced and reviewed, while remaining focused on sustainable energy security and the clean energy transition, following the commitments at the 6th Eastern Partnership Summit in December 2021.

For the Southern Neighbourhood, a common Mediterranean energy policy should be agreed based on the Union for the Mediterranean Ministerial Declaration adopted in June 2021. Its aim should be to massively deploy renewable energy in those countries and lay down the foundation for domestic use and a clean energy export industry, including renewable hydrogen and its derivatives.

Energy transition will continue to change the geopolitical landscape, offering, thus, important opportunities for regional cooperation between coastal states notably in the Eastern and Southern Mediterranean region. The region has a big untapped potential for renewable energy, which can support EU's strategic resilience. The EU will support regional cooperation between

the interested actors, also with the purpose of promoting confidence building, green growth, prosperity and sustainable development in the region.

Africa is a key partner for the EU. In addition to the EU's development policy objectives, stronger trade and investment engagement with African countries is expected as they are increasingly becoming fast growing markets for clean energy technologies. Sub-Saharan African countries also contribute to the EU's energy security, today with oil and LNG supplies, and in future through green hydrogen and derivative fuels as well as through raw materials critical to the green energy transition.

The EU must also continue to closely engage counties that are key for making the energy transition possible. As part of the EU-India Clean Energy and Climate Partnership, the EU will intensify its energy cooperation with India further in support of accelerating the local roll-out of renewables and the rapid decarbonisation of its industry. India plans to develop 500 GW of non-fossil energy capacity by 2030. The EU will support joint activities in the areas of offshore wind and solar energy and their integration through smart grids.

Similarly, the EU is continuing to further work with China on power market reform and to render the energy system more effective and efficient. Cooperation will focus on electricity systems, grid-modelling, financing of energy efficiency and business cooperation.

As laid out in the Joint Communication on the Gulf[15], the EU will also step up its cooperation with Gulf countries on climate action and clean energy transition by facilitating exchanges and partnerships on renewable energy (including renewable hydrogen), energy efficiency, carbon capture utilisation and storage, carbon pricing and carbon markets, climate change adaptation, disaster risk reduction and resilience. In order to better structure its cooperation with the Gulf, the Commission proposed to hold annual ministerial meetings on the green transition complemented by related private sector initiatives.

In the current geopolitical landscape, Central Asia is a key region rich in resources. Building upon the region's potential in solar, wind and hydroelectric energy, the EU will encourage Central Asia's reforms of the energy sector and transition to a low-carbon economy, as well as cooperation on critical raw materials with countries like Kazakhstan.

It is crucial that as the EU strives to make the green transition a reality, we reach out, collaborate and listen to the entire world.

5.2. Geopolitics and Global Energy Architecture

Russia's invasion of Ukraine is a stark reminder that the world is marked by major geopolitical and economic power rivalries. Relations between major powers could become increasingly confrontational and unilateralist as the consequences of the invasion become more evident, leading to competing visions and agendas.

[15] Joint Communication to the European Parliament and the Council on a Strategic Partnership with the Gulf, COM (2022) XXX final, 18.5.2022.

In this multipolar landscape, the energy transition can support the EU achieving its broader geopolitical objectives to reinforce resilience and strategic autonomy. The European Commission and the High Representative will promote EU's energy and resource security as strategic objectives by reinforcing the role of energy diplomacy in the foreign and security policy. This will require strengthening monitoring mechanisms, foresight and assessment of the strategic implications of the global energy transition on partner countries.

While addressing effectively the formidable challenges of the global energy transition require trust and cooperation within the international community, this happens at a moment in which the pressure towards regionalisation and fragmentation is increasing at global level.

The EU will pursue concerted global action, including in the multilateral arena to respond to the global crises of climate change, energy security and energy prices.

On 17 February 2021, the European Commission and the High Representative put forward a strategy to strengthen the EU's contribution to rules-based multilateralism, laying out the EU's expectations of and ambitions for the multilateral system. The principles outlined in the Joint Communication apply also in the multilateral energy landscape.

The growing global energy related challenges call for more multilateral governance and rules-based international cooperation on energy. The strategy to strengthen the EU's contribution to rules-based multilateralism[16] lays out the principles that will underpin the EU's actions. Multilateral energy organisations and forums such as the International Renewable Energy Agency (IRENA), the International Energy Agency (IEA), the Energy Community, the International Solar Alliance, the Clean Energy Ministerial and Mission Innovation, the Global Covenant of Mayors for Climate and Energy, G7, G20, and others have a key responsibility in promoting the energy transition globally.

Some organisations, such as the Energy Charter, are in urgent need of deep modernisation in order to align them with the 2050 goals, and the EU is actively addressing this.

In 2014, the G20 Leaders agreed to make international energy institutions more representative and inclusive of emerging and developing economies. Organisations such as the IEA have been acting on this commitment through the open door policy, and the EU will continue to be supportive of this.

The EU together with its Member States as part of the Team Europe approach will increasingly contribute to leadership and inclusive decision shaping through greater participation in governing bodies of relevant organisations. The EU should also weigh up the benefits of upgrading its collective presence to a full membership in the energy forums considered key and strategic for advancing the European Green Deal Agenda.

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Furthermore, the EU will reinforce cooperation within multilateral and regional organisations, and seek closer cooperation with other regional and multinational groupings competent in energy, such as the African Union and its agencies and African regions power pools linking the continental vision of the African Single Electricity Market and the individual countries energy systems, the Latin American Energy Organisation (OLADE), or the Association of South-East Asian Nations to address common challenges and work together at the international level.

6. Conclusion

This is a critical time for the global energy policy. If we do not accelerate the fight against climate change, the targets agreed in Paris will be out of reach and with that, the possibility to avoid a full-blown climate crisis with devastating consequences for the people and the environment across the globe.

At the same time, Russia's invasion of Ukraine has triggered a new era of energy scarcity and price volatility, impacting not only its immediate neighbourhood, but the entire world. This requires a response that addresses both the short-term needs and the long-term implications of the EU and its partners. With the Fit-for-55 and REPowerEU measures combined, the EU hopes to save €80 bn on gas, €12 bn on oil and €1.7 bn on coal import expenditures per year.

The clean energy transition is the only way to simultaneously ensure sustainable, secure and affordable energy worldwide. To be successful, that transition has to be just and fair, leaving no-one behind. It means not only phasing out fossil fuels and outdated practices, but phasing in green energy, less waste, innovative technologies and better markets. It also requires tackling already now the potential future risks and dependencies.

The transition means an opportunity for the EU and its partners to build together a new energy world that is more sustainable, more equal and more collaborative. This Communication lays out the EU's strategy for reaching that goal.