Powering the clean energy transition in the EU

How private investors can support the European Union's vision for clean, affordable, and secure energy

Global Infrastructure Investor Association
Promoting Private Investment in Infrastructure

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1 About us

The Global Infrastructure Investor Association (GIIA) brings together the world's leading institutional investors. GIIA members have already invested over €1.3 trillion across six continents, in a wide range of infrastructure projects, from roads, railways and airports to energy, utilities, broadband, schools, and hospitals – all of which are helping communities and nations thrive. As the leading fund managers, public pension funds, insurers, sovereign wealth funds and other investors in the sector, many of our members also represent teachers, firemen, public-sector employees, and other individuals.

In the European Union, GIIA members are responsible for €335 billion of assets under management spread across 23 Member States. In the energy sector, this includes significant investments in power generation, distribution networks, and renewable energy infrastructure. Currently our members are invested in utilities with over 480,000km of gas pipelines, 1.27 million km of transmission cables, and almost 6,200MW of gas and electricity capacity. An ever-increasing focus of our members is on renewable energy sources. So far, this includes large-scale investments in energy generation capacity, covering 18,300 MW in wind power, 9,851 MW in solar power, and 1330 MW in hydro, biomass, and energy from waste.

Our members have long-standing expertise when it comes to investing in and managing infrastructure, coupled with more than €250bn ready for further investments, especially in the production, transmission, and distribution of renewable energy. This makes GIIA a valuable partner for EU institutions and Member States as they work to deliver collective envisaged climate ambitions.

GIIA's mission is to improve the understanding of the role played by private investors in building and operating efficient and effective infrastructure. Against this goal, GIIA advocates for a supportive, stable regulatory environment and an increased pipeline of well-developed projects that can leverage private investment and expertise.

In the EU, GIIA members are responsible for €335bn of assets under management, including singnifcant investments in renewable energy generation: over 18,000MW wind, almost 10,000MW solar, and over 1300MW in other renewable sources.

> Our members stand ready to invest significant funds into renewable energy infrastructure. As responsible investors they are keen to support the energy transition and contribute to net zero goals, but policymakers and regulators must put the right framework in place to ensure the EU is an attractive place to invest in the face of an increasingly competitive global market.
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> Jon Phillips, Acting CEO, GIIA

2 Executive summary

In this paper, the Global Infrastructure Investor Association (GIIA) supported by Freshfields Bruckhaus Deringer LLP provides an overview of relevant energy policies in the EU that require greater investment in existing and new infrastructure, whilst highlighting GIIA's policy recommendations to unlock private investments and ensure clean, affordable and secure energy for EU consumers and businesses in the long-term.

The production and use of energy accounts for over 75% of the EU's greenhouse gas emissions.

Powering the clean energy transition in the EU

According to the European Commission, the production and use of energy are the largest sources of greenhouse gas (GHG) emissions in the EU, contributing over 75% of its total GHG emissions. Consequently, making the clean energy transition in the EU a reality is a fundamental precondition for meeting the climate and environmental objectives set out in the European Green Deal.

The target of reducing EU GHG emissions by 55% until 2030 and reaching net-zero emissions by 2050 can only be met if the EU puts in place a modern energy system - one that is built on renewable energy infrastructure and is smart, fully integrated and interconnected, ensuring secure and affordable energy. Setting up the necessary conditions for the clean energy transition will require close cooperation between EU and national authorities, as well as stakeholders across the entire energy sector, including private investors.

To unlock the full potential of private investments and create the infrastructure that is needed, the EU needs to foster a regulatory environment that adequately addresses the needs of investors and market actors in the energy sector.

This should primarily include permit-granting procedures that facilitate energy infrastructure investments, especially when it comes to renewable energy projects. In addition, a stable and workable long-term rulebook, capable of delivering the energy transition while facilitating the engagement of private investments in the energy sector, will be critical. Furthermore, identifying a strong project pipeline for the large-scale rollout of energy infrastructure is needed, coupled with adequate public funding at EU and national level, administered through simplified and easily understandable funding instruments that enable private investors to maintain a prominent role. At a time of increasing competition for capital and resources, consideration should also be given to the attractiveness of the EU market for inbound investment and expertise to deliver on infrastructure goals.

As such, GIIA and its members stand ready to contribute to these efforts by supporting and mobilising significant volumes of private infrastructure investments. Against this background, GIIA has developed a number of key policy recommendations in line with four overarching themes explored further in this paper:

1. **Simple and fast permit-granting procedures:**

   The rollout of renewable energy projects at the scale and speed necessary to meet the EU's climate and energy priorities requires a fundamental rethinking of the administrative procedures for approving energy infrastructure projects. Simplified rules, with a high level of harmonisation across the EU allowing for fast implementation and

realisation of infrastructure projects, are essential to accelerate the rollout of renewable energy infrastructure.

2. **Clear and reliable energy regulations:**

   Energy infrastructure investors require clear EU policies for the clean energy transition, that ensure long-term regulatory stability and predictability. To unlock the necessary investments in energy infrastructure and to achieve both the EU's climate and energy policy objectives, it is essential for the EU to provide regulatory clarity, with rules that are easily understandable and implementable, and consistently applied.

3. **Strong project pipelines with streamlined public and private funding:**

   To be able to fully utilise EU funding sources and create the synergies between public and private investments which are necessary to build the required energy infrastructure, EU funding instruments need to be simplified and made more accessible. Closer cooperation between public and private investors can unlock massive funding opportunities and will benefit the planning and implementation of complex cross-border infrastructure projects.

4. **Innovation and competitiveness at the heart of policymaking**

   Meeting the challenges and realising the opportunities of the energy transition requires a substantial level of investment through a period of increased uncertainty and competition for capital investment. Adopting a policy framework that promotes innovation and retains the EU's position as an attractive market for private investors over the long-term promises to spur investment and put the EU on target to meet its short and long-term goals.

3 Europe's energy transition: challenges and opportunities

Climate change represents a historic and unprecedented global challenge. Politicians around the world have recognised the severity of the situation and the need to act now. By signing the Paris Agreement on Climate Change, countries have committed to take actions to limit the increase in global average temperature to 1.5°C compared to pre-industrial levels.

The EU is aiming to generate at least 40% of its energy from renewable sources by 2030.

The European Green Deal affirmed the importance of this target, placing the European Union at the forefront of global efforts to reorganise economies to build a more sustainable future. It sets an ambitious agenda for the decarbonisation of the EU, with the ultimate goal of turning the EU into a net-zero GHG emissions economy by 2050. For the energy sector, it specifically stresses the need to transition to renewable energy sources, accompanied by a rapid phase out of coal and the decarbonisation of gas. At the same time, the European Green Deal aims to ensure that the EU's energy supplies are secured and affordable for consumers and businesses, a goal brought into sharp focus by recent geopolitical developments. To make this ambition a reality, it is acknowledged that the energy market in the EU must become fully integrated, interconnected, and digital. The essential role of renewable energy is fully recognised, as is the importance of putting in place energy infrastructure that is in line with climate objectives.

- Challenges

We have witnessed major historic developments since the adoption of the European Green Deal in 2019. The COVID-19 pandemic has had significant transformative effects on the way people around the globe live and work. With the easing of COVID-19 restrictions, the restart of manufacturing and a strong surge in consumer demand, Europe started experiencing an increase in energy prices in late 2021. This has been significantly exacerbated since the start of Russia's invasion of Ukraine in February 2022, which has limited the import of Russian natural gas and oil into the EU and required immediate steps to diversify supplies, reduce demand and speed up the rollout of renewables, as set out in the REPowerEU Plan

The current geopolitical environment, with ongoing conflicts and rising trade tensions, coupled with difficult economic conditions has increased pressure on EU policymakers to act, especially when it comes to the objective of obtaining clean, affordable, and secure energy for EU Member States.

As a reaction to the current energy crisis, the EU has taken a series of emergency measures that have impacted the energy landscape in the EU in fundamental ways. While it is evident that certain interventions were needed to ensure security of supply and to protect vulnerable and at-risk energy consumers, it must be acknowledged that some measures have resulted in additional regulatory complexity and uncertainty, which have negatively affected investor sentiment.

Often, measures have been adopted in a very short time without significant assessment or consideration of their longer-term impact. While in some cases this is justified due to the urgency of the situation, with measures clearly defined

as being temporary interventions, certain initiatives, such as the upcoming redesign of the EU electricity market, will have implications that go far beyond the current crisis. Furthermore, despite the short-term nature of most of these measures, they create additional regulatory and administrative burdens for the private sector, introducing new obligations that have to be complied with, at very short notice.

For example, the revenue cap introduced in 2022 for inframarginal energy producers has already shaken investor confidence with regards to undertaking new renewable energy projects. These measures put into doubt the viability of new investments in much-needed additional renewable energy generation capacity, which is ultimately the only long-term viable solution to insulating the EU against the ongoing crisis. Added to this, uncertainty around forthcoming proposals on the electricity market redesign has placed many business cases for investments on hold as investors consider the commercial viability of individual projects. There is concern that the redesign may also fail to adequately take into account the high upfront capital costs of renewable energy generation, as well as the cost of borrowing to cover capital cost needs for such projects.

In addition to the short- and medium-term challenges facing the EU energy sector due to recent geopolitical and economic developments, in the longer-run several key issues have to be considered. The EU has set very ambitious targets for the clean energy transition, with the objective to significantly bring down GHG emissions related to energy. The objective to reach at least a 40% share of renewable energy by 2030, while clearly necessary and fully welcome, must be accompanied by adequate measures that will turn this political ambition into a reality. On top of this, the recently adopted REPowerEU initiative, aims to speed up the clean energy transition further, pushing this target even higher to 45% and reaching a renewable energy generation capacity of 1,236GW by 2030 (the previous target was 1,067GW). Taking solar as an example, by 2025 the target is to double solar photovoltaic (PV) energy to 320GW, and up to 600GW by 2030; a huge increase in ambition compared to the current capacity.

Whilst we fully support this level of ambition, the high targets and short time frame for achieving them raises serious concerns over the pace of reforms to the existing regulatory framework which are essential to project delivery. Current challenges include extremely long permitting times for renewable energy projects, which can reach up to nine years for wind power projects. Another issue is that restrictive, complex, and changing rules across the EU can significantly hamper the rollout of new renewable energy generation capacity.

Although the EU is committing increasing volumes of public funding for renewable energy projects, including, for example, new €20bn in grants recently agreed as part of REPowerEU, the EU's funding instruments remain difficult to understand and navigate. Furthermore, funding instruments are frequently changed, most recently as a reaction to the ongoing energy crisis, with new instruments being introduced, often overlapping with existing funds or relying on the same revenue sources.

Fostering sufficient demand for renewable energy in the EU is another key challenge that policymakers need to address in a coherent way, in addition to unlocking the necessary levels of private and public investment and putting in place a conducive regulatory framework for a significant increase in renewable energy generation capacity. Broadening and speeding up electrification across the EU and across sectors, especially in the highest emitting and most difficult to abate sectors will be one of several important actions needed to incentivise

and accelerate the deployment of renewables that is required to meet the objectives of the clean energy transition.

All this together, puts at risk our joint ability to mobilise the large volumes of investments needed for the clean energy transition.

- Opportunities

Despite the significant challenges facing the EU energy sector, caused on the one hand by the need to carry out the clean energy transition and on the other hand the difficulties of navigating the ongoing energy crisis, from the perspective of private infrastructure investors there are many opportunities to be grasped in the short and long-term within the EU.

EU policymakers have faced significant difficulties in their attempts to limit negative impacts of high gas prices and, consequently, high electricity prices on consumers and businesses, while at the same time ensuring security of energy supplies. However, so far, we have seen that these challenges have greatly strengthened the resolve in the EU to accelerate the green transition and boost energy infrastructure investments – a welcome step. This is especially the case for renewables, where EU legislators have taken bolder regulatory and financial steps to achieve truly clean, affordable, and secure energy. The EU's dependence on Russian fossil fuels has dropped significantly with a positive shift toward building out agreements with new and existing reliable partners for the delivery of fuels, including LNG and hydrogen, whilst significantly expanding the EU's own energy sources through new offshore wind projects and solar farms.

We greatly welcome this increased push to strengthen energy security and accelerate the clean energy transition in the EU by putting in place some of the necessary conditions to reach the ambitious renewable energy targets.

The ongoing energy crisis has clearly demonstrated that in the medium and long-term, large-scale domestic production of renewable energy is the right path to ensuring energy sovereignty, security of supply at affordable prices for consumers, and lastly, but certainly not least, for meeting the EU's climate targets. We therefore urge policymakers at EU and Member States' level to work with private infrastructure investors to seize the current momentum and jointly take major steps towards the clean energy transition.

4 Policy recommendations

Looking towards the next EU legislative mandate starting in 2024, we urge policymakers to focus on implementation and delivery. Whereas the focus of the current mandate was on setting the right level of climate ambitions and long-term targets, as well as putting in place major legislative measures to achieve these objectives, the focus of the next mandate should be on implementing these measures. This should include, in particular, close cooperation between the public and private sectors to build strong pipelines of energy infrastructure projects, working together to secure adequate funding, and implement these highly complex and capital-intensive projects. A key precondition to enable this will be a stable and predictable regulatory framework that is not subject to continuous and sudden changes. It will be also necessary to put in place in the next EU financial framework streamlined funding instruments that are more accessible and that envisage a strong role for private capital.

Infrastructure investors generally identify long and complex permit-granting procedures as one of the key obstacles for the rollout of renewable energy projects.

This section explores how EU policymakers and private investors can work closely together on funding the clean energy transition. To support the development of policy recommendations that would help deliver this goal if implemented, GIIA has engaged in a programme of exchanges with EU decisionmakers and major private infrastructure investors. These conversations have focused on the steps needed to unlock private investment in EU energy infrastructure and pave the way for clean, affordable, and secure energy in the EU. We welcome the ambitions demonstrated so far by the EU to significantly increase domestic renewable energy production, to modernise and expand the energy grid, to set up a conducive regulatory framework, and to provide adequate public funding. However, considering the monumental challenges, in particular the significant investment needs and the know-how for implementing and managing major energy infrastructure projects, a clear role must be set out for private investors to turn these political ambitions into reality.

GIIA therefore calls upon EU policymakers to consider four overarching recommendations set out below.

Simple and fast permit-granting procedures

With the REPowerEU Plan, the European Commission has recognised that permit-granting procedures are one of the major obstacles for the rollout of renewable energy projects. This is also one of the core issues highlighted by energy infrastructure investors, who identify long permitting processes as a major obstacle for investing in renewables.

Currently in the EU, it can take over four years to obtain the necessary permits for solar projects, and up to nine years for permits to be issued for wind power projects. These excessively long permitting procedures create delays and uncertainty that frequently discourage committing significant capital that is necessary for this type of investment. This is a major contributor to slowing down the increase in renewable energy generation capacity in the EU, putting into doubt the ability of the EU to deliver on its commitments to increase the share of renewable energy by as much as 45% until the end of this decade.

In addition to the long waiting times for permits, permitting requirements differ between Member States, and national administrations have varying capacity to process permit requests for complex and demanding infrastructure projects, which complicates the approach to projects even further, and acts as an

additional deterrent for investments, both public and private. Action now needs to follow political recognition that delivery of many of these projects deliver an overriding public good by delivering cleaner, more affordable energy to consumers across the EU.

Wind power generation in Northern Spain

In 2021, GIIA member Arjun Infrastructure Partners ("Arjun") acquired a co-controlling interest in one of Spain's largest wind platforms through its Infrastructure Alliance Europe I fund. The platform includes 12 onshore wind projects totalling 487MW of output capacity in the Aragón region of Northern Spain.

Benefits of the projects include the delivery of renewable energy to around 440,000 households in Spain as well as the avoidance of 320,000 tonnes of CO_2 emissions each year of their operation.

The wind projects are making a meaningful contribution to the EU's green transition efforts and the growth of Spain's renewable energy generation capacity, with onshore wind and solar projected to make up 70% of installed generation by 2050.

Looking ahead, Arjun holds over €350 million in available deployment capacity ready to mobilise across mandates including European renewables which form a core component of the fund. Further fundraising is expected to increase the amount available. Arjun also further expects wind power to remain an important element within its investment outlook moving forward.

Despite the many existing administrative obstacles, our members have so far made significant investments in renewable energy generation across the EU, building up over 18,300Mw in wind power, 9,851MW in solar power, and 1330MW in hydro, biomass, and energy from waste generating capacity. In line with the EU Solar Energy Strategy, the goal is to double solar PV generation by 2025 to 320GW, and up to 600GW by 20230. According to the European Commission, an additional €210bn in investments will be needed until 2027 just to implement the measures proposed under the REPowerEU Plan. This includes around €86bn of investment needs in solar and wind power.

Hydrogen is another major sector which GIIA members are increasingly investing in, given the important role it can play in the clean energy transition, but also in securing the EU's future energy needs by functioning as a strategic reserve alternative to natural gas. Globally, GIIA members own and manage hydrogen infrastructure assets with a value of €3.5bn, including in EU-based infrastructure. GIIA members also manage over 480,000km of gas pipelines which have the potential to be converted to transport hydrogen. The REPowerEU plan identifies the need for €27bn in further direct investments in domestic electrolysers and hydrogen distribution infrastructure in the EU, without taking into account additional investments in wind and solar electricity generation that will be needed to produce green hydrogen.

The aim is to domestically produce around 10mn tonnes of renewable hydrogen by 2030. The EU is also making available €200mn of new financing through Horizon Europe to support renewable hydrogen projects. The European Commission estimates that around 500TWh of additional renewable energy generation will be required by 2030 to support the increased ambitions for

renewable hydrogen, requiring €200-300bn for new renewable energy production.

Furthermore, around €37bn will be needed to rollout biomethane, as another key renewable gas and important leg of the EU's fuel diversification plans. This should lead to 35bcm of biomethane produced by 2030 and co-financed through the Common Agricultural Policy (CAP), the Connecting Europe Facility (CEF), Cohesion Policy, and the Recovery and Resilience Facility (RRF).

Considering the need to significantly expedite the approval of energy infrastructure projects in the EU, we welcome the proposal made by the European Commission as part of the REPowerEU package to amend the proposed revision of the Renewable Energy Directive, with a particular focus on simplifying and accelerating permitting procedures. The shortening of deadlines for the granting of permits as well as applying the principle of overriding public interest to renewable energy projects are steps in the right direction. To ensure comprehensive support for all relevant aspects of the clean energy transition, these rules should also be extended to cover infrastructure related to energy storage, transmission, and distribution.

The recently proposed emergency regulation to speed up permitting for renewable energy projects, that builds on the long-term proposal made under REPowerEU, will be a useful tool to accelerate projects in the short term as they are urgently needed to support the EU's exit from the current energy price and security of supply crisis. However, to mobilise private investments for such projects and to keep them sustainable in the long run, it will be important that EU lawmakers ensure consistency between the temporary stopgap measures and the permanent measures which are still being negotiated. This will reaffirm investor confidence and simplify long-term planning and implementation of projects.

Whilst we generally welcome the designation of 'go-to' areas that are particularly well suited for the development of renewable energy generation capacity and that can therefore benefit from lighter permitting requirements, it is essential to ensure that this approach does not lead to unwanted consequences. It is especially important to avoid an outcome where areas that are not designated as 'go-to' areas are deprioritised, both in terms of policy focus, administrative capacity, and funding allocation, and consequently turned into de factor 'no-go' areas as regards energy infrastructure. Besides risking an uneven development of renewable energy infrastructure between different regions in the EU, potentially leaving some regions behind in the clean energy transition, this could also reduce the pipeline of viable renewable energy projects for public and private investors.

In this regard, we welcome the European Commission's recommendation on speeding up permit-granting procedures for renewable energy projects and facilitating Power Purchase Agreements (PPAs). We especially support the call from the EU to Member States to put in place shorter procedures; streamline coordination between different levels of government; allocate sufficient administrative capacity and implement long-term grid planning. We also reiterate the importance of declaring 'exclusion zones' for renewable energy projects only in exceptional cases. In order to ensure that we can meet the European Green Deal and the REPowerEU targets, it is essential that Member States implement these recommendations urgently and thoroughly. A high level of harmonisation of administrative procedures across Member States can be a major contributor to boosting the rollout of renewable energy projects in the EU.

The swift approval of hydrogen projects within the Important Projects of Common European Interest (IPCEI) framework, that facilitates the use of State aid for such projects, is a good example of how faster and simpler administrative procedures can be applied at all levels to support the accelerated rollout of essential renewable energy infrastructure. The same approach should be extended to other types of energy infrastructure projects, including wind and solar energy.

To simplify and speed up permit-granting procedures for energy infrastructure projects, GIIA urges EU policymakers to:

- **Quickly adopt clear, harmonised, and stable rules for the rollout of renewable energy projects, with a particular focus on shortening permit-granting processes.**
- **Ensure that procedural rules create an administrative level playing field across all EU Member States, building up permitting capacity, simplifying permitting procedures and reducing the administrative burden to facilitate investments.**
- **Avoid that any new rules on permitting lead to the creation of 'no-go' areas across the EU, that would cut off certain regions from the clean energy transition and limit availability of viable renewable energy projects.**

Clear and reliable energy regulations

One of the primary challenges brought up by energy infrastructure investors is the need for a stable regulatory environment, supported by a clear long-term policy framework, that works to incentivise investments rather than discourage them at such an important time in the energy transition.

Regulatory clarity for investors is essential, considering the capital intensity of energy infrastructure, long timespans for investments, and the associated risks. Therefore, it must be a number one priority for the EU to put in place rules that are easily understandable and implementable and reduce the administrative burden and associated costs.

Infrastructure investors require regulatory stability and predictability, with a regulatory environment that is not subject to constant change, and that provides, in those cases where adjustments are needed, clear timelines and reasoning for planned rule changes.

Infrastructure investors require regulatory stability and predictability, with a regulatory environment that is not subject to constant change.

In that regard the EU Taxonomy is a useful tool for guiding investors, who need a long-term roadmap. To unleash the full potential of private investments, the EU regulatory framework must be technology neutral, supporting investments in the widest range of technologies and projects that can contribute to the clean energy transition.

With the European Green Deal, the EU has set an unprecedented level of ambition for its energy sector with the aim to bring into effect the clean energy transition. As part of the Fit-for-55 package and other actions to implement the European Green Deal, many needed and welcome initiatives have been proposed. This includes, *inter alia*: increasing the share of renewable energy in power generation through a revision of the Renewable Energy Directive; improving energy efficiency with an updated Energy Efficiency Directive; strengthening energy system integration with a new strategy; updating the trans-European networks for energy to upgrade, integrating and modernising energy infrastructure across the EU; and boosting the use of offshore wind, hydrogen, and methane with dedicated strategies.

Many of the ambitions first proposed under the European Green Deal have been further reinforced with the REPowerEU Plan, that increases the targets for renewable energy to 45%, doubling solar PV power by 2025 and almost quadrupling it by the end of the decade, doubling the deployment of heat pumps, and targeting 10 million tonnes of domestic hydrogen and 35bcm of biomethane production by 2030.

We are pleased that the European Parliament, the Council of the EU, and the European Commission have jointly reaffirmed among their key legislative priorities for 2023 and 2024 energy-related initiatives that are already on the table. This includes accelerating the green transition as an important part of solving the energy price crisis, enhancing ambitions for renewable energy, kick-starting the EU hydrogen market, and accelerating the rollout of renewables.

While we welcome the strong policy focus on energy infrastructure and the intention to make the EU a climate-neutral economy by 2050, these intense regulatory activities have also brought significant new regulatory burdens for Member States and for the private sector as they implement the new measures. Considering the significant volume of new rules, with many still subject to legislative negotiations, it is important to ensure a high level of legislative and regulatory stability in the coming period.

Looking ahead to the next mandates for the European Parliament and the European Commission, the focus should be on implementing the new ruleset and ensuring that the new measures are properly applied across the EU.

Future regulatory changes should be targeted and focused on addressing any potential remaining structural issues in the EU energy sector or to reinforce positive developments. In all cases, such measures should be conceived in close cooperation with all relevant stakeholders, subject to thorough analysis and impact assessments. Consistency with existing measures should be a primary consideration for EU policymakers.

A technology-neutral approach that will allow the broadest choice of market-based decisions on the most appropriate energy infrastructure investments within the broader policy framework for the clean energy transition should be at the core of all regulatory actions also. Any EU-led initiatives need to take this into account and avoid the risk of stranded assets due to future policy choices.

Considering the significant volume of new regulations, it is important to ensure a high level of legislative and regulatory stability in the coming period.

Società Gasdotti Italia

In 2020, GIIA member Ontario Teachers' Pension Plan (OTPP) invested alongside another GIIA member in Società Gasdotti Italia ("SGI"), an independent and regulated gas Transport System Operator (TSO) with a network of 1,800km high pressure integrated pipelines, located in central and southern Italy.

OTPP has invested around €500 million to improve the network, strengthening Italy's energy security and independence in the process. OTPP's investment also allows SGI to contribute to Italy's long-term plan of becoming a hub for the transit and exchange of gas from North Africa, Central Asia and the Middle East to the rest of Europe. SGI is strategically positioned to take advantage of the opportunities that arise from the energy transition by enabling the shift from gas to low-and-zero carbon, such as the transit of green hydrogen, which will be integral to Italy and Europe's decarbonisation efforts.

Investing in improving Italy's network infrastructure also supports the safe and reliable flow of energy to consumers and communities across Italy. This includes gas delivery in Sardinia through Enura, ahead of the 2025 phase-out of coal electricity generation on the island and exploring additional steps to deliver the just transition of energy in Italy.

Another important aspect to be considered when devising energy policies is the capability of all involved stakeholders in the EU to deliver on the high ambition levels. While, for example, the major boost in wind energy capacity is a policy that we strongly support, we must signal already that similar projects are experiencing supply chain issues and difficulties in accessing raw materials.

In that regard, relevant future initiatives, such as the forthcoming Critical Raw Materials Act need to take into account of how availability of core commodities and value-added assets - that require additional skill, specialised equipment, and production methods - for the clean energy transition can be ensured.

Most recently, we have witnessed how temporary and short-term measures, even when they are well-intended, can have destabilising effects. This has been evident with a number of measures that were adopted or proposed to address the ongoing energy price crisis in the EU, triggered by unusually high gas prices.

This includes the recently introduced levies on market revenues for energy producers using renewable sources and retrospective action by individual member states on feed-in tariffs. This is of great concern as it strongly puts into question the economic viability of investments in renewable energy production, consequently disincentivising future investments in this area. GIIA's Q4 2022 Infrastructure Pulse shows the energy crisis as the top macro-economic trend impacting investors current asset portfolios in Europe, higher than concerns around inflation, supply chain issues and other issues.

While action should be taken to help address urgent affordability concerns, it remains equally as important to ensure the right balance between keeping consumer bills at an affordable level, ensuring security of supply, and continuing to preserve investor confidence. Transformational levels of investment are required across the energy sector, to ensure we remain aligned closely with the demands of the clean energy transition. Appropriate care must therefore be taken to limit disruption imposed on both existing and prospective investors, at this critical moment which will ultimately define whether the EU succeeds or fails in meeting its climate and energy objectives.

The upcoming revision of the EU electricity market design is another initiative that will have fundamental impacts on future investments in the energy sector. This initiative is being prepared in exceptionally short time and without proper stakeholder consultations or impact assessment. Considering its importance and the potential severity of this regulatory intervention in the functioning of the electricity market, investors have significant concerns.

Although details about the European Commission's plans for the revision are scarce at the moment, the intention appears to be to limit the impact that high gas prices can have on the formation of electricity prices in the EU. Whilst such considerations are understandable when reflecting on the current temporary crisis, it remains important to keep the long-term perspective in mind when undertaking regulatory interventions that can greatly impact the future of the EU energy sector. Policymakers must address the prospect of unintended consequences as a result of introducing major market changes, as well as any signalling that would occur through the upcoming publication of proposals which are being monitored closely by a broad range of investors.

The overall view in the investor community is that the existing design of the EU electricity market is sound. Similar views have been expressed in the European Parliament, by the EU Agency for the Cooperation of Energy Regulators (ACER), as well as, until recently, the European Commission. Any changes at this point should not be based on short-term policy considerations guided by temporary concerns caused due to the current crisis. Instead, they should aim to provide solid long-term regulations that emphasise the current positive characteristics of the market. To the extent that regulatory intervention may be needed, it should focus primarily on gas markets which exhibit anomalous behaviour.

One of the options that has been discussed so far are contracts for difference (CfDs), which would allow the locking in of energy prices over longer periods, up to 15 years. There are certain benefits that CfDs can bring, in particular with regards to new power generating capacity, including renewable energy sources where long-run marginal costs need to be taken into account. The CfD model is regarded by investors as a key mechanism that helps to boost confidence by providing them with longer-term certainty on pricing. CfDs are longstanding, widely used mechanisms across a breadth of sectors and are both understood and trusted by the investor community. GIIA is in general supportive of CfDs and continues to be an advocate for the benefits they bring for both investors and consumers alike. Similarly, consideration should be given to making CfDs available to operational projects that reach the end of the initial period, bringing further certainty to investors as they consider future improvements and expansions of projects.

It is important to note, however, that CfDs may not necessarily have a major impact on solving the current issues in gas markets, and they should not impact existing energy supply contracts to maintain the proper functioning of the market and market participants' confidence. Amidst the ongoing attempt to limit the impact of gas prices on the electricity market, it requires recalling that natural gas remains a key energy source for electricity generation in the EU for the foreseeable future, and policies and investments need to build on the acknowledgment of that fact.

Another important tool that EU policymakers should consider expanding and improving are power purchase agreements (PPAs). Corporate PPAs have become a major driver of energy investments and uptake of renewable energy in

some markets. However, in the EU there is a lack of straightforward and harmonised rules that currently restricts the use of corporate PPAs. There are some positive trends as regards the uptake of PPAs, with demand increasing in some Member States. Policymakers should take action to facilitate the use of corporate PPAs by ensuring a high level of harmonisation through appropriate measures at EU level.

It is important that EU policymakers put in place the right regulatory incentives to facilitate and support investments across the energy sector. This includes policies targeting the entire energy system, from energy production to the grid, transmission, and distribution infrastructure, as well as energy storage solutions. Energy stakeholders, including investors, consistently identify high-capacity, integrated and modern cross-border energy infrastructure as a key precondition for the clean energy transition, but also for the EU's ability to ensure security of supply over the long run.

To facilitate the clean energy transition by putting in place a conducive regulatory environment, GIIA calls upon EU policymakers to:

- **Commit to a stable and clear long-term regulatory framework for the clean energy transition, that will facilitate large-scale public and private investments in renewables, while securing adequate supply of all energy sources needed for the proper functioning of the EU economy.**
- **Remain technology neutral to support the development of a wide range of innovations that can contribute to the EU's energy transition.**
- **Take into account the important role of private investments for funding the clean energy transition, in particular when considering policies that impact the economic viability of capital-intensive energy infrastructure projects.**
- **Avoid introducing uncertainty and putting at risk long-term investments by intervening in EU energy markets (e.g. in ways that undermine the open and competitive functioning of the market) only as an exceptional emergency measure of last resort, without going beyond what is strictly necessary to alleviate severe adverse impacts on the EU economy and consumers, such as ensuring continuous supply of electricity.**

Strong project pipelines with streamlined public and private funding

The funding needs for the clean energy transition are immense, both as regards renewable energy generation capacity and grid infrastructure. The European Commission acknowledges that to implement the objectives set out in REPowerEU alone will require additional investments of €210bn every year until 2027, including a significant proportion of private capital within this share. This would include €29bn investments in the power grid, €86bn for renewables and €27bn for key hydrogen infrastructure, but also €10bn to ensure sufficient LNG and pipeline gas imports and up to €2bn for security of oil supply.

However, recent geopolitical and economic conditions are impacting the development of the infrastructure project pipeline. Demand is certainly increasing for the implementation of renewable energy projects, including the expansion of hydrogen, solar PV, and wind power infrastructure. Supply chain issues and the scarcity of key commodities and raw materials can, however, make it difficult to ensure conditions for the realisation of large-scale infrastructure projects.

Despite existing challenges, private investors have already made significant investments in the EU towards this goal and are showing an increasing willingness to invest even more in energy infrastructure.

To fully utilise EU funding sources and increase synergies between public and private investments, it is necessary to simplify EU funding structures.

Finerge

At the end of 2015, GIIA member Igneo acquired Finerge, a 642MW portfolio of windfarms in Portugal. Since then, Igneo has transitioned the business from a collection of assets to an independent power producer present throughout the renewable energy value chain. The platform nearly tripled operational capacity to 1.6GW of energy produced through both regulated wind and solar power. Finerge is now the largest wind energy producer in Portugal and has also expanded into Spain.

Finerge contributes to Portugal's decarbonisation efforts with a reduction of carbon emissions by 1,246kt in 2021 alone. In addition, a wide range of biodiversity protection initiatives have been put in place since acquisition including forest management actions and livestock grazing. Finerge is also a key contributor to local communities with 2.5% of annual turnover set aside to deliver local projects across municipalities where they operate.

Going forward, the growth trajectory is set to continue as the company is expected to double in size through debt-financed organic growth over the next 3 years. The company's M&A and development team also has a multi-gigawatt long-term development pipeline. The pipeline both leverages existing assets and relies on future auction processes on the back of 2022 wins. Finerge is also focused on innovation with additional potential growth in battery storage, green hydrogen and offshore wind sectors, all areas at the heart of the EU's energy transition.

To capture the opportunity of increasing investments, EU policies should focus on promoting a sufficient volume of relevant projects that can enable investments at scale. The use of existing tools that facilitate the implementation of higher volumes and large-scale projects, such as Important Projects of Common European Interest (IPCEI) and Projects of Common Interest (PCI), should be reinforced in the energy sector.

Closer cooperation between the European Commission, Member States and private investors would also benefit the planning and implementation of complex cross-border infrastructure projects. Opportunities for all stakeholders to work together on identifying investment needs and developing investment opportunities could be strengthened, for example by building on the concept of industrial alliances. The formation of the new European Solar PV Industry Alliance is a welcome step in this direction and will contribute to making the 2030 target of 600GW capacity more realistic. Similarly, the European Clean Hydrogen Alliance, European Battery Alliance and the European Raw Materials Alliance will be important fora for cooperation between the public and private sectors. Through such dialogues, private investors can help meet policy

objectives and support the development and deployment of essential new technologies and the accompanying energy infrastructure to facilitate the clean energy transition in the EU.

GIIA members are supportive of existing EU funding facilities aimed at incentivising energy infrastructure investments, including through the CEF, the RRF, InvestEU, and the Cohesion Fund.

We welcome the agreement reached by EU lawmakers on the REPowerEU initiative, which will unlock significant new public and private funding for renewable energy projects. The inclusion of REPowerEU chapters in national recovery plans under the RRF should help mobilise more investments in energy infrastructure, stimulated through €20bn in new grants in addition to the already available €225bn in RRF loans. The commitment of the European Investment Bank (EIB) to support REPowerEU by making available additional €30bn in loans and equity financing can help mobilise overall €115bn investments in renewables, energy efficiency, grid infrastructure, and energy storage until 2027.

GIIA especially supports the obligation for Member States to consult relevant stakeholders in the preparation of REPowerEU chapters, which should contribute to closer cooperation between public authorities and private investors when it comes to the identification of investment priorities and opportunities.

We urge EU policymakers to cooperate directly with private stakeholders in the development of the new funding initiatives announced for 2023, including the European Hydrogen Bank and the European Sovereignty Fund.

GIIA supports the creation of EU funding instruments which envisage close involvement of private investors and avoid increasing the complexity of the already hard-to-navigate EU funding landscape. Eligibility rules, funding criteria, and application procedures greatly differ between funding instruments, creating major obstacles and adding complexity. To fully utilise EU funding sources and increase synergies between public and private investments, it is necessary to simplify EU funding structures**,** with a clear distinction between the different funding instruments, both as regards their objectives and conditions. Rules for accessing funds should be streamlined to allow for easier applications and participation of private investors.

Investors would strongly welcome different types of funding models, that include a clear set of options for revenue models associated with different types of infrastructure projects. Future EU funding instruments should be designed with a strong role for private investments in mind, focusing on boosting public-private partnerships (PPPs) and utilising synergies.

PPPs have demonstrated over the years significant advantages compared to other cooperation models. They generally ensure timely execution of infrastructure projects within the allocated budget through the application of superior risk management and delivery by the private sector. This is a particularly valuable quality in times of great geopolitical uncertainty, supply chain disruptions, and multiple overlapping crises. PPPs are also proven at delivering higher value-for-money and unlocking efficiency and innovation gains.

Despite the fact that the EU and its Member States are providing significant amounts of public infrastructure funding, substantial funding gaps still remain. Private infrastructure investors are therefore vital to meeting infrastructure

targets and future ambitions, especially at a time where demands are rising on government funds. Instruments focusing specifically on facilitating private investments, such as InvestEU, are a welcome means of attracting private capital. GIIA would encourage EU policymakers to further develop such funding models and expand their use in both the existing and future EU multi-annual financial framework (MFF).

The innovative EU fundraising model applied for the RRF, should also be strengthened, and maintained as a permanent mechanism for the financing of future large-scale policy priorities. The transformation of the EU into a zero-emission economy represents a generational endeavour that will require pulling all public policy levers and taking innovative policy steps to ensure its successful implementation.

These considerations should be applied to existing funding instruments to the extent possible, and they should form the cornerstone for the design of the future post-2027 MFF and the next generation of EU funds.

To help develop a strong pipeline of projects that will help deliver energy transition goals, GIIA invites EU policymakers to:

- **Work closely with private infrastructure investors, including through industry alliances and other fora, to identify energy infrastructure funding needs and develop strong project pipelines that can deliver on the high ambitions of the European Green Deal and REPowerEU.**
- **Ensure a prominent role for private investors in the design of future EU funding instruments, with a strong focus on public-private partnerships, blending instruments, and similar innovative funding models that fully unlock the potential of private investments.**
- **Take into consideration all relevant investment needs for the EU energy sector when taking policy decisions, including the need for a major boost in renewable energy generation, expanding and upgrading the electricity network, especially as regards grid capacity and transmission infrastructure, and putting in place adequate energy storage solutions.**

Putting innovation and competitiveness at the heart of policymaking

Global competition for capital, resources, project experience and expertise able to find innovative solutions to pressing issues in the energy sector is high. With a view to meeting the ambitions of the 2030 goals, we call for the development of clear policy and regulatory measures aimed at boosting the EU's competitiveness as an attractive destination for infrastructure investment and sector experts.

By placing innovation and competitiveness within energy policymaking decisions, the EU would be providing a clear signal to the market that it is placing an infrastructure first approach. This approach would recognise that the rollout of new and upgraded infrastructure and promotion of technological innovation holds the key to resolving shorter term issues in the energy market.

We therefore support President Von Der Leyen's call at the 2023 World Economic Forum to "keep investing… [to] make Europe more investment and innovation friendly" whilst at the same time aspiring for mutually reinforcing

investment incentives across markets. This approach is central to the world's transition to net zero.

Recently launched initiatives, such as Clean Tech Europe, and upcoming regulatory measures, including the announced Clean Tech Act, could be useful in strengthening EU competitiveness and supporting investments in innovation and clean technologies. Such measures should be utilised to support electrification of EU industry, boost the uptake of renewables, accelerate innovation, including in the areas of energy storage, smart grids, hydrogen, and energy efficiency, and facilitate investments in clean energy infrastructure. It is, however, important that these initiatives do not distort the level playing field within the EU internal market or favour certain sectors or solutions to the detriment of others. Any measures that are put in place to increase competitiveness should be developed in close cooperation with industry stakeholders, allowing for the broadest level of support across the EU and across sectors, while remaining technology neutral to allow the full utilisation of all available solutions to meet the EU's policy priorities.

In contrast, measures that reduce the EU's competitiveness in relation to its international peers or disincentivise investments in innovative solutions that can hold the key to a broader rollout of hydrogen infrastructure, for example, would lead to a reduced level of investment in renewable energy infrastructure – below what is needed for energy goals to be met.

We encourage the EU to continue and open new dialogues examining the competitiveness of the current policy landscape, including through forums such as the Investors Dialogue on Energy, which can provide a useful barometer for the direction of travel in relation to future private sector investment. GIIA also stands ready to contribute to this discussion, sharing the views of our members and any sentiment or impact analysis that can be collated from the sector. Strengthening the global competitiveness of EU industry, including the energy sector, and accelerating innovation of sustainable solutions should be at the core of EU policymaking in the long-term.

As outlined in previous sections, there are many opportunities already being realised by investors in the EU, as well as positive policy and regulatory developments that make the EU an attractive destination for infrastructure investment. But sentiment and investment levels do not currently meet the level of ambition of EU targets, with a gap forming that places longer-term goals at risk.

Resolving many of the issues covered in this paper will go some way in closing the gap. At the same time, the EU should continue to realise the potential benefits of accelerating and expanding initiatives aimed at strengthening the EU's energy market. This includes completion of the internal market for energy, advanced through TEN-E and supporting PCIs which help to de-risk investments in cross-border energy infrastructure projects.

To retain competitiveness as a destination for inward investment, GIIA suggests EU policymakers:

- **Utilise current initiatives to support the electrification of EU industry, boost the uptake of renewables and accelerate innovation in areas such as hydrogen and energy storage.**
- **Compare and consider the impact of EU policies and regulations on the long-term competitiveness of the EU to retain and attract inward investment in the energy sector.**

- **Maintain a neutral approach towards the development of energy use within sector-specific markets, encouraging innovation within the process.**

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We strongly believe that the recommendations set out in this paper can help bridge the projected infrastructure funding gap and contribute to making the EU's ambitious vision for clean, affordable, and secure energy reality. We look forward to working with EU institutions, Member States, and energy stakeholders to implement these aspects in future policies and to help set the EU energy sector on the path to a clean energy transition.

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