

Expert Paper

Accelerating Decarbonisation

November 2022

Introduction

Fostering an accelerated energy transition towards a competitive, secure and decarbonised energy model plays a key role to tackle the additional challenges arising from the surging energy prices.

The current energy and climate crises stem largely from an over-dependence on volatile, imported fossil gas, oil, and coal. This dependency is jeopardising the EU's economic outlook and undermines the investment climate. For this reason, the EU needs to accelerate access to decarbonised and renewable energy, especially for hard-to-abate sectors, replace Russian fossil fuels and support new industrial opportunities to build sustainable competitive advantages.

A successful decarbonisation trajectory is not one in which the EU de-industrialises and which leads to the closure of companies but one in which the EU industry is enabled to lead the green transition under a solid economic performance. ERT, therefore, supports a higher emphasis on preserving industrial competitiveness during the implementation of the 'Fit for 55' and 'REPowerEU' packages.

Challenges

1. Energy supply needs

The supply of energy has to increase in the coming years as current levels are insufficient. The availability of enough efficient and clean electricity is really fundamental to an effective decarbonisation pathway and any measures to accelerate it.

2. Fragmentation in the EU energy market & risks for deindustrialisation

a) Current geopolitical and inflationary challenges and their impact on electricity markets across Europe

- A country-by-country approach in response to the rising energy prices risks EU cohesiveness and therefore the implementation of the EU Green Deal.
- The current energy market is subject to increasing constraints due to the high energy prices. It is key that any emergency measures and market design measures are aligned both at EU and national level. This is essential to generate advantages of scale when the industry across the EU invests in the decarbonisation process.

b) Permitting

- There are planning and permitting bottlenecks experienced by both onshore and offshore renewable energy developers, storage developers and grid operators. For example, 9-12 years is the typical time for permitting for an 110 kV line in Germany.
- Large delays in Projects of Common Interest (PCI) are largely due to permitting issues. Permitting for renewable projects, grid development and interconnections, together with agreements on cross-border cost allocation in the case of PCIs, constitute a major barrier.

c) Interconnector policy

- There is a real lack of really integrated cross-border infrastructure planification (power + gas + hydrogen) fully considering the energy efficiency first principle and the long-term decarbonisation goal when developing the cost-benefit analysis.

- There is a need for a strong signal to sort out internal congestion and to incorporate appropriately the dimension of national grids.

3. Policy gaps and obstacles

a) Power Purchase Agreements (PPAs)

- Support schemes for renewable energy sources (RES) are removing the incentive for RES generators to engage in long-term hedging / PPAs.
- Low counterparty risk quality acts as a barrier for some consumer categories to access the PPAs market.
- The availability or cost of Guarantees of Origin for RES in several Member States is challenging.

b) Decarbonised hydrogen (H₂)

- A key challenge for the decarbonisation roadmap is the massive amount of competitive renewable and low-carbon hydrogen volumes needed.¹ This needs to be solved with priority by speeding up new renewables & infrastructure development and agreeing on definitions to be applied in different contexts (e.g. for imports).
- In the meanwhile, the alternative fuel mainly used as a transition is gas, which is currently and for the foreseeable future too expensive in the EU and presents important security of supply risks.
- The progressive increase in Greenhouse Gas (GHG) savings requirements for renewable and low-carbon H₂ must be compatible with avoiding a carbon lock-in for the sake of the EU's long-term decarbonisation objective.

c) Energy efficiency

- The current high energy prices and the issue of energy security show the need for greater energy efficiency.
- The recent energy efficiency report of the International Energy Agency (IEA) also highlights the potential of energy efficiency: the world could be one-third more efficient by 2030. But efforts are still needed as data

¹ According to ArcelorMittal, for an average steel plant it equals the power of 3 new nuclear plants to face its H₂ demand.

show that the EU was not able to achieve the 20% energy efficiency target for 2020.

d) **Biofuels and biomethane**

- To support industrial investment plans, a clear and stable policy framework is necessary.
- Access to second generation and advanced feedstock is critical and this should be taken into consideration in the current policy discussions.

e) **More agile State aid mechanisms are needed**

- The European Commission has been holding up some national State aid notifications for 1,5 years; this means industry cannot deploy the investments at the needed pace and has to face high carbon costs unnecessarily. This should be speeded up since it jeopardises short-term decarbonisation investments.
- The ETS innovation fund is struggling with the full roll-out of decarbonisation investments; other state aid and incentive mechanisms should be strengthened.

analysed to address any failure of the market in crises, without harming the clear benefits that efficient markets can bring (i.e. adequate signals for efficiency and clarity for new investment).

- b) As the current regulatory framework is facing challenges to deliver sufficient production of RES at the speed that EU economy needs, clearer incentives and signals for investment in renewable assets, storage and networks are needed to deploy clean technologies at the speed required to achieve deep decarbonisation pathways aligned with the 1.5oC scenario.
- c) The availability of different products (PPAs, spot purchasing, financial hedges, etc) should allow all customers to best fit their needs and risk profile, leading to the international competitiveness of EU industry.
- d) In the current context of emergency interventions, a time horizon must be set and distortions in the process should be avoided. If generators are not allowed to realise the expected revenues of their investments, then incentives to invest are drastically reduced, thus hindering the energy transition and putting both security of supply and competitiveness at risk. An appropriate framework is essential.

Recommendations

Measures tackling the current crisis should be oriented to prevent the ongoing deindustrialisation. Measure should tackle effectively competitiveness challenges (due to surging prices and costs) and accelerate the energy transition, especially the development of alternatives to fossil fuels (such as renewables). Besides the emergency measures to address the high energy prices, ERT encourages EU policymakers to work on an EU-wide solution to tackle successfully current challenges and orient ambitious climate objectives towards accelerating EU renewables development and promoting competitiveness and industrial leadership in clean technologies.

1. **Set adequate principles for improving the functioning of markets**, both short and long-term. Market mechanisms should be suitable for diverse price scenarios and provide legal certainty, which is crucial to avoid security of supply concerns.

- a) Any change to the current model of marginal pricing / pay-as-clear model must be carefully

2. **Accelerate permitting**: the issue needs to be resolved by actions and not just 'words'. The notion of 'overriding public interest' should be effectively used in the EU Member States to rapidly reduce waiting times. In this regard, clarity is needed regarding what the Commission expects this to mean when it comes to implementation in Member States.
3. **PPAs**: remove barriers to the development of PPAs and enable longer-term contracts by providing visibility on the policy framework for 10-15 years and by developing measures regarding the low counterparty risk quality barrier. Additionally it would be important to address current barriers to guarantees of origin for RES projects.
4. **Address supply chain issues and competitiveness** that limit the availability of materials and manufacturers needed in the energy transition in Europe. The purpose is notably to accelerate renewable deployment and advance energy efficiency gains. Support local deployment of such industry, through incentives and regulation.

5. Decarbonised fuels (hydrogen, biofuels, biomethane and RDF):

- a) The definitions of renewable and low-carbon hydrogen must be consistent with the objectives of 'Fit for 55' and, especially, those of 'REPowerEU', which aims to reduce swiftly the dependence on fossil fuels, in particular gas from Russia.
- b) Biofuels and biomethane could also play a significant role as a reliable solution in the context of a cost-efficient transition, as they are readily-available solutions for decarbonisation. Biofuels, especially those which can be used in purity, are a reliable solution to reduce emissions of the transport sector in the short- and medium-term, ensuring at the same time the use of the existing fleet and infrastructure. Furthermore, in the maritime and aviation sectors, biofuels are important decarbonisation options.
- c) Support non-recyclable residual waste fraction ("Refuse Derived Fuel" - RDF)² as an alternative indigenous fuel in industrial sectors (e.g. co-processing for cement and heat boilers for chemicals). RDF is domestically produced and contributes to circularity, helping to secure EU's energy independence. It contributes also to climate change mitigation by avoiding methane emissions from landfill and by saving CO₂ emissions through fossil fuel substitution. RDF should therefore be fully supported in the Taxonomy and in legislation.

6. Energy efficiency:

- a) Efforts should be stepped up for the electrification of end-uses, wherever possible, especially of transport, buildings and industrial processes. Currently, only approximately 22% of energy consumption in the transport, industry and buildings sectors are electrified. In this context, it will be crucial to support the digitisation of electricity grids, as an enabler for integrating new generation and distributed energy resources, while operating the grid in the most efficient, reliable, and safe way.
- b) The introduction of the 'energy efficiency first' principle in the recast of the Energy Efficiency Directive (EED) must be implemented along the entire value chain in energy generation,

transmission and distribution, and in end-use sectors, buildings, transport, and industry.

- c) For example, fostering energy efficiency of buildings, in the residential and non-residential sector, by improving equipment, insulation and deployment of smart technologies, will reduce future investment needs to decarbonise the energy system, and will mitigate energy poverty, reducing the impact of the energy crisis on the most vulnerable citizens of the EU. Street lighting, for example, could be a great opportunity to reduce consumptions and cities' expenses.

7. Demand side measures:

- a) **Low carbon product policies to promote a swift development of lead markets:** mandatory clean public procurement in the Member States; low carbon product labelling for basic materials.
- b) **Industry mandates on RFNBO consumption** in industry, subject to availability and competitiveness.
- c) **Strengthened EU ETS and demand-side Carbon Contracts for Difference (CCfD)** at EU level, preserving EU industrial competitiveness.
- d) **Support industrial co-production of hydrogen** as a measure to relieve the pressure on individual companies to source renewable energy supplies.
- e) **Incentivise the deployment of digital solutions** (such as grid software solutions) that can support the integration of new generation and loads, and a facilitates the necessary acceleration of the energy transition to support EU's security of supply and EU's climate targets for 2030.
- f) **Develop demand-side flexibility:** demand-side flexibility is a cost-effective and climate-friendly solution that can be activated quickly, to adjust power generation and consumption according to the needs of the grid. A large part of the requirements set out in the Electricity Market Design, which are essential for demand-side flexibility, are still far from being fully implemented by the Member States.³

² Commissioner Sinkevičius referred to RDF in 2021 (https://www.europarl.europa.eu/doceo/document/E-9-2020-006700-ASW_EN.html#def1)

³ Report of Smart Energy Europe on the implementation of the electricity market design, March 2022 (https://smarten.eu/wp-content/uploads/2022/03/The_implementation_of_the_Electricity_Market_Design_2022_DIGITAL.pdf)



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This Expert Paper has been prepared by the Energy Transition & Climate Change Working Group

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