

# The Missing Links

The upcoming COP26 in Glasgow is the real starting point for the Race to zero. Actors across all sectors, countries, and horizons, we will now have to shift to a positive fast-forward “to-do mode”, with clear regulatory frameworks, tangible routes to net-zero and attractive business models for renewable energy production. In the Fit for 55 package that the European Commission delivered last July, several key REEF recommendations were met. However, some missing links must be addressed immediately, to ensure a true renewables revolution. These are: The barriers to offshore wind production and meshed grids; Better system integration to increase flexibility, reliability, and digital solutions; And improved interconnections to EU's neighbourhood to double the renewable energy capacity by 2030.

## 1 BARRIERS TO A SUCCESSFUL OFFSHORE REVOLUTION

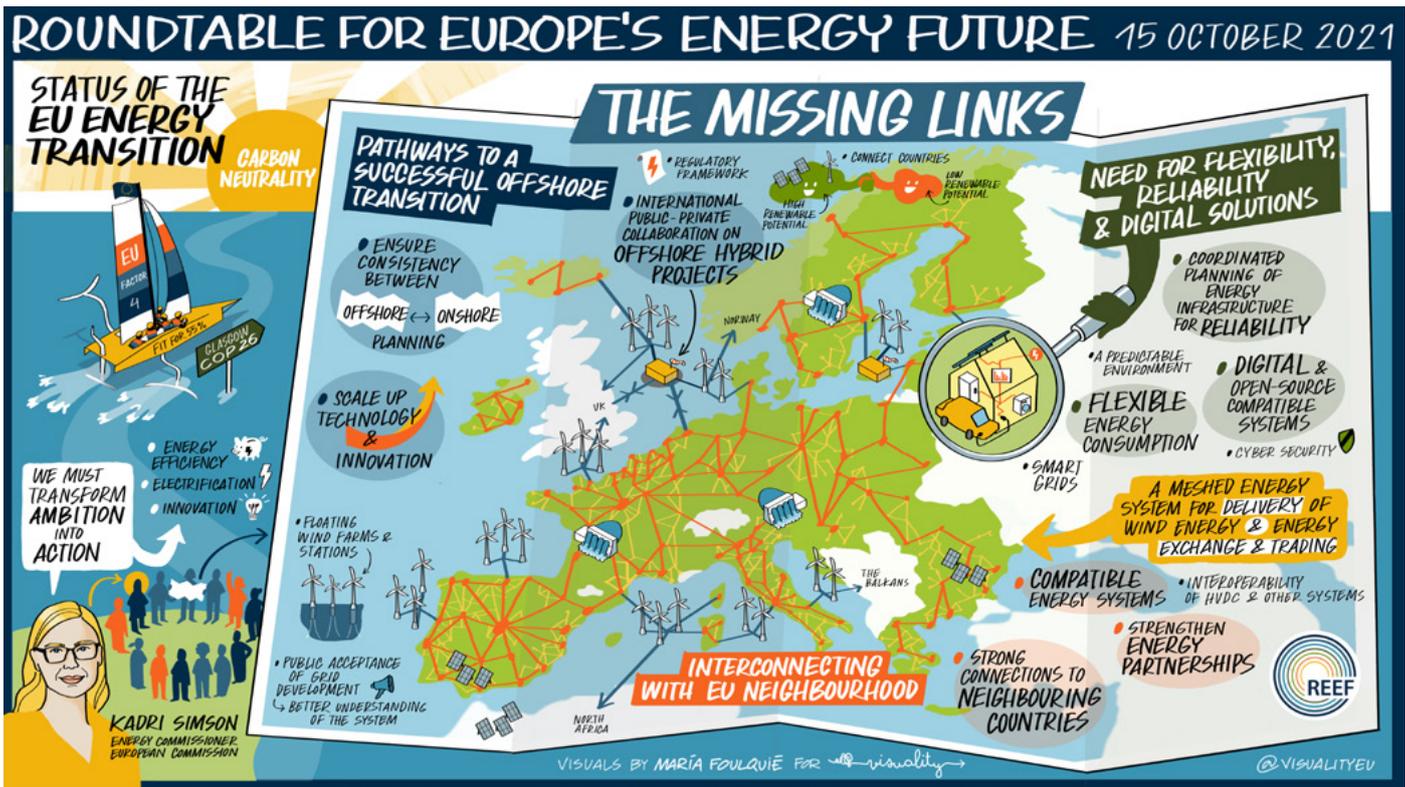
- a. To make Europe Fit for 55 by 2030, a large amount of variable renewable energy must be integrated through increased offshore wind production and off- and onshore grids. This requires a holistic vision for a common European energy system in 2050 which will **ensure consistency between offshore and onshore planning** and should be based on the involvement of the relevant stakeholders, applied across all sectors, and include cross-sector optimisation.
- b. **Collaboration** must be strengthened to enable exchange of renewables and investments **between countries with high renewables potential and those with lower potential**.
- c. To achieve this, the **public and private sectors** need to rapidly establish a regulatory **framework that provides a long-term market environment** where sustainable business models for offshore **hybrid projects** can be developed.
- c. **A European Union fit for 55 needs for technologies and innovations to be scaled up**, e.g., interoperability of HVDC and other systems, floating offshore wind power and floating offshore stations, as well as high voltage subsea cables. Reinforced R&D programs and projects in these fields will unlock industrialisation and trigger new European industrial sectors and competitiveness.

## 2 THE NEED FOR FLEXIBILITY, RELIABILITY, AND DIGITAL SOLUTIONS

- a. **Unlocking flexibility sources** at the right time and at the required large scale to cope with the integration of high shares of renewable energy is **a major challenge for the European electricity system**. Robust long-term price signals will stimulate flexibility and provide a wide offering of consumer-oriented services. Storage solutions should also be encouraged, especially to integrate an increasing share of RES. Smart electricity grids can contribute further to this flexibility challenge.
- b. **Reliability**: Contributing to the stability of the electricity grid is a challenge for all actors in the energy system. A consistent and coherent set of scenarios for the future evolution of the energy sector should be developed through **coordinated planning of energy infrastructure**. These scenarios will be used to assess infrastructure needs separately in any given sector (e.g., electricity, gas, hydrogen), limiting cross-sectoral project evaluation to projects that have an impact in different sectors (e.g., electrolyzers).
- c. **New digital solutions based on open-source and compatible systems** are necessary throughout the energy value chain. They provide necessary flexibility services for consumers and producers and enable flexible electricity consumption. Enhanced digital solutions will also strengthen the necessary cyber security throughout the energy system. And digitalisation will contribute to cost-efficient energy systems and stimulate innovative services. Regulations should define a framework for OPEX remuneration with particular support to open-source collaboration in the energy sector.

### 3 INTERCONNECTING WITH THE EU NEIGHBOURHOOD

- a. **Strong connections** to neighbouring countries in the North, South, East, and West is needed to double our collective renewable capacity. This is **a vital component in the Race to Zero** to reach the Paris energy and climate targets. **Projects of Mutual Interests (PMIs)** as proposed in the TEN-E revision must play a bigger role to facilitate renewable energy projects in the EU's neighbourhood ring.
- b. **Compatibility of sustainable energy systems** between Member States and neighbouring countries will facilitate the integration of energy systems. This will ensure better utilization of renewable resources and contribute to cost-efficiency.
- c. **Europe must strengthen international energy partnerships** with those regions in the world which have highly competitive renewable energy production. This will enable the exchange of renewable energy to CO2 intensive regions like the EU. There is a strong need for knowledge exchange and technology sharing on this in a global context.



**ROUND TABLE FOR EUROPE'S ENERGY FUTURE 15 OCTOBER 2021**

**STATUS OF THE EU ENERGY TRANSITION** CARBON NEUTRALITY

**EU FACTOR 4** FIT FOR 55% CLAYSON COP 26

**WE MUST TRANSFORM AMBITION INTO ACTION**

- ENERGY EFFICIENCY
- ELECTRIFICATION
- INNOVATION

**PATHWAYS TO A SUCCESSFUL OFFSHORE TRANSITION**

- ENSURE CONSISTENCY BETWEEN OFFSHORE & ONSHORE PLANNING
- SCALE UP TECHNOLOGY & INNOVATION
- FLLOATING WIND FARMS & STATIONS
- PUBLIC ACCEPTANCE OF GRID DEVELOPMENT → BETTER UNDERSTANDING OF THE SYSTEM

**THE MISSING LINKS**

- REGULATORY FRAMEWORK
- CONNECT COUNTRIES
- INTERNATIONAL PUBLIC-PRIVATE COLLABORATION ON OFFSHORE HYBRID PROJECTS
- NEED FOR FLEXIBILITY, RELIABILITY & DIGITAL SOLUTIONS
- COORDINATED PLANNING OF ENERGY INFRASTRUCTURE FOR RELIABILITY
- A PREDICTABLE ENVIRONMENT
- DIGITAL & OPEN-SOURCE COMPATIBLE SYSTEMS
- CYBER SECURITY
- SMART GRIDS
- FLEXIBLE ENERGY CONSUMPTION
- A MESHED ENERGY SYSTEM FOR DELIVERY OF WIND ENERGY & ENERGY EXCHANGE & TRADING
- COMPATIBLE ENERGY SYSTEMS
- INTEROPERABILITY OF HVDC & OTHER SYSTEMS
- STRENGTHEN ENERGY PARTNERSHIPS

**INTERCONNECTING WITH EU NEIGHBOURHOOD**

- STRONG CONNECTIONS TO NEIGHBOURING COUNTRIES

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