



# Grid Integration of Wind and Solar PV in Europe: networks, interconnections and investments

**OFATE-DFBEW Conference, Paris, 15 May 2023**

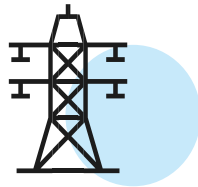


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# Challenges facing the roll-out of renewables' integration in Europe

- Electricity consumption to **increase by around 60%** from now to 2030;
- **Further 64 GW** of cross-border transmission is needed by 2030
- Massive transformation of distribution grids (decentralisation./digitalization);
- Access to finance to close the 'investment gap' (public/private) ;
- High Cost of CAPEX; delays linked to material availability, permitting and skilled workforce



40% of Europe's distribution grids are over 40 years old



In this decade alone, **€584 billion in investments** are necessary for the electricity grids,



European  
Commission

# Stepping-up the acceleration of RES capacity and integration

## Revised by TEN- E (2022/ 869)

Revised EU cross-border planning rules, increased monitoring and sustainability of PCI/PMIs

## EU Solar Energy Strategy (2023)

3 initiatives accelerate the deployment of solar technologies

## RED III and REPowerEU (2023)

Faster permitting and greater financing.

## Grid Action Plan ( Nov 2023)

Address the main challenges of EU electricity transmission and distribution grids

## Wind Power Action Plan Package (Oct 2023)

Maintain a healthy and competitive wind energy supply chain

## Revision of internal market for electricity Directive (2023/1162)

Resilience against the short-term market price and non-fossil flexibility solution

# RED III (2023/2413)



- Increased Renewable Energy Targets: for a minimum of **42.5%** renewable energy, with an additional indicative target of 2.5%
- Simplified Rules for “**Renewables Acceleration Areas**”: to streamline legal requirements and shortening permitting processes.
- Prolongation of emergency measure to speed-up permitting until June 2025

## REPowerEU

- Through the **REPowerEU chapters** in the recovery plans, a further **€60 billion** in RRF funds will be dedicated to the green transition, including RES generation and energy infrastructure
- Disbursements may be linked to Regulatory reforms to accelerate the integration of RES in the grid

# EU Solar Energy Strategy

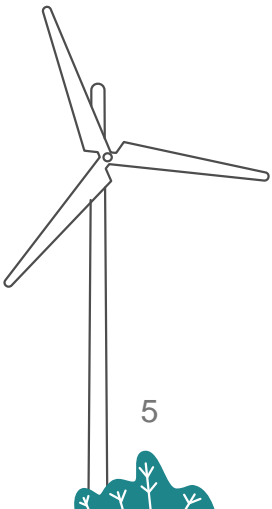


## 3 Initiatives

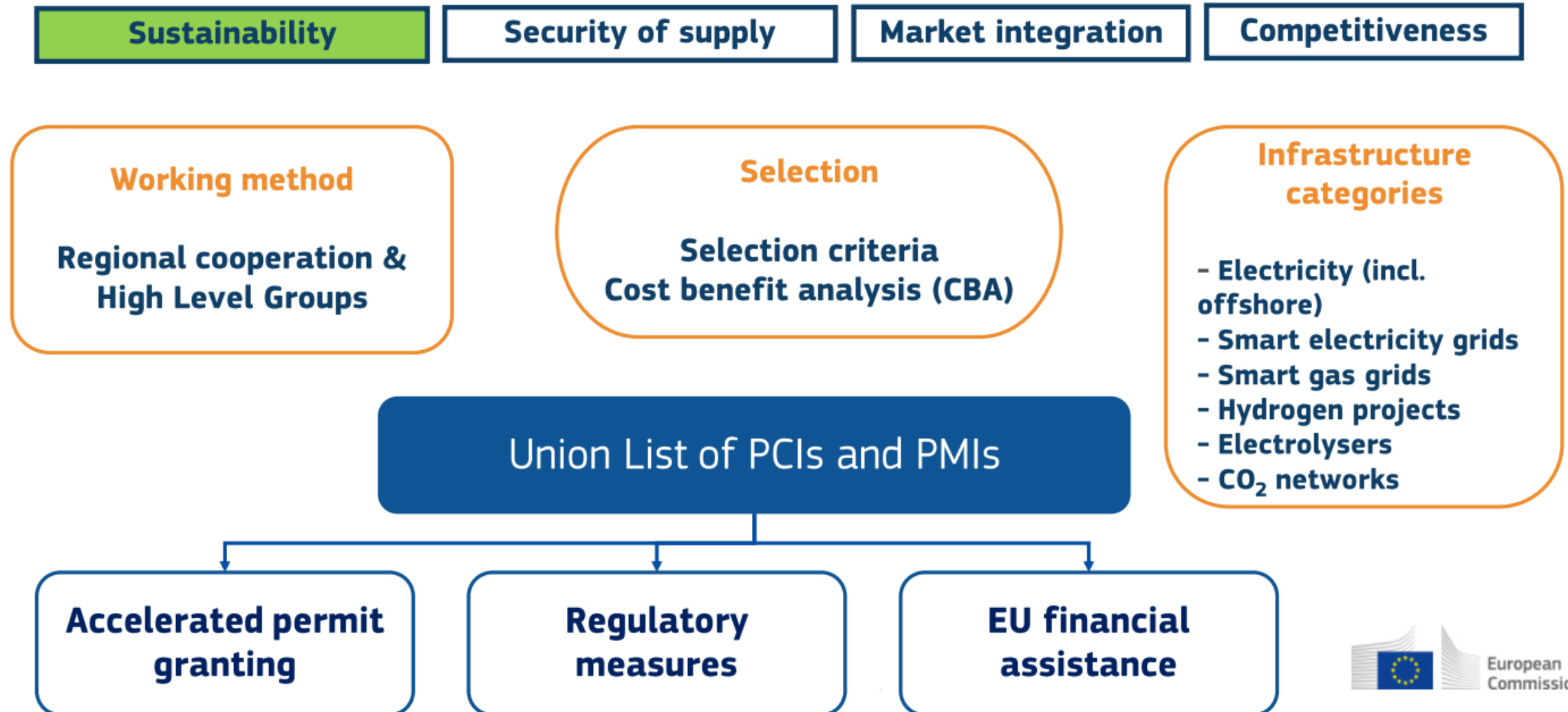
- European Solar rooftop initiative
- EU large scale skills partnership
- EU Solar industry PV alliance

## Wind Power Action Plan

- Improving permitting and giving better visibility to future Deployment of wind in Europe
- “Accele-RES” initiative
- Updating guidance on speeding up permitting for renewables



# TEN-E is the tool to plan and develop cross-border energy networks across Europe



# 1<sup>st</sup> PCI/PMI list ( Delegated Regulation 2024/1041)

- Projects of Mutual Interest (PMIs) with third countries
- New PCI/PMI list includes 166 projects of which **85 electricity projects**, including 12 related to storage, 5 smart grids projects and 12 offshore infrastructure projects

Projects on the list are eligible for CEF Energy Funding totalling a budget of 5.8 BEUR until 2027 (€850 Million for 2024)

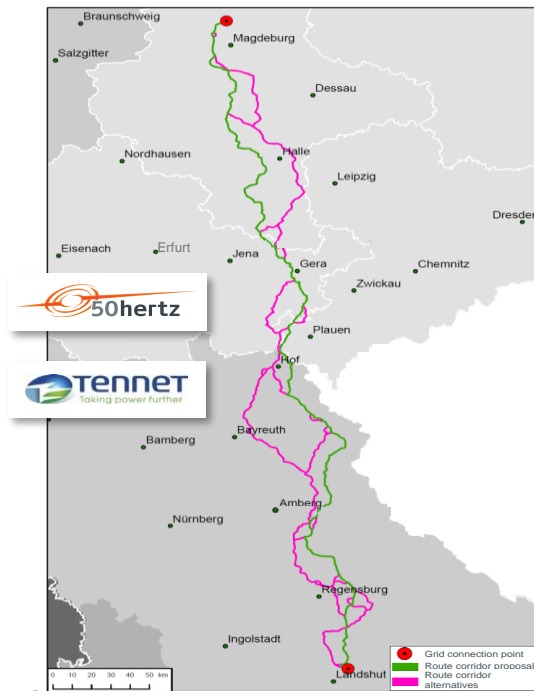


# CEF supports electricity PCs

in France and Germany



Developing the SuedOstLink (DE)  
(70 MEUR contribution)



Developing the Suedlink (DE)  
(39 MEUR contribution)



Source: PLATTS, GISCO, European Commission

Biscay Gulf electricity interconnection  
(FR-ES)  
(383 MEUR contribution)



Source: PLATTS, GISCO, European Commission





# EU Action Plan for Grids

Cross-border energy infrastructure projects can decrease generation costs by **€9 billion annually until 2040.**



**Accelerating PCI implementation** and developing new projects



**Improving long-term planning** for a higher share of renewables and increased electrification



**Anticipatory investments** and new effective ways of sharing the costs, particularly for offshore grids



**Improving access to finance** by increasing visibility on EU funding programmes

# New CEF window for cross-border projects in the field of renewable energy (CB RES)

Indicative Budget of 875m€

Joint planning, development & cost effective exploitation of renewables and EU target achievement



Facilitate RES integration through energy storage and conversion facilities



Contribute to strategic uptake of innovative renewables technologies



Contribute to the EU's Long Term Decarbonisation Strategy



[TP Link](#)



# Relevant resources



*General information:*  
**Connecting Europe  
Facility** [Link](#)



*Portal:*  
**Funding & tender  
opportunities** [Link](#)



*New PCI/PMI list :*  
**Transparency  
Platform** [Link](#)



# Thank you

## Keep in touch with CINEA



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