# European Grids Package

Quick Guide

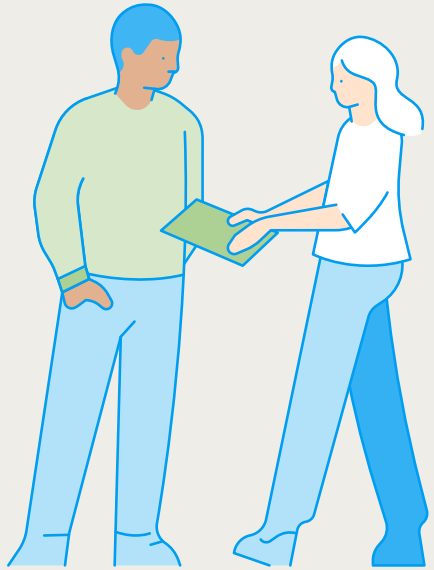
RAMBØLL

Bright ideas.
Sustainable change.

# What exactly is the **European Grids Package?**

The European Grids Package[1] is part of the European Commission's broader energy and industrial strategy. It builds on the 2023 Action Plan for Grids and aims to address structural bottlenecks in Europe's energy infrastructure and planning, which is critical for achieving climate neutrality and competitiveness goals. The package includes both legislative and non-legislative measures.

## The objectives of the European Grids Package



### Simplify the EU's TEN-E regulation

Ensure grids deliver on decarbonisation and competitiveness goals through enhancing EU-level oversight and regional cooperation.

### Ensure cross-border integrated planning

Facilitate integration of national grids into a truly European system to enhance security of supply and reduce costs.

### Streamline permitting

Accelerating permitting processes for grids, storage and renewables as well as streamlining environmental assessments.

### Boost digitalisation and innovation

Maximise the use of existing infrastructure before investing in new capacity and embrace the energy efficiency first principle.

### Enhance distribution grid planning

Enable relevant representation of distribution networks in European planning to activate higher renewable penetration and electrification.

### Increase visibility of manufacturing supply needs

Unlock financing for grid projects and support European manufacturing of critical grid components.

[1] European Commission (2025). Commission proposes upgrade of the EU's energy infrastructure to lower bills and boost independence.

The European Grids Package introduces measures that the European Commission assesses will **tackle structural bottlenecks and accelerate the modernisation of Europe's energy infrastructure.**

# What's new?

## Aim: Strengthening EU-wide infrastructure planning and optimising existing grids

- Establish a central EU scenario aligned with climate and energy targets.
- Require ENTSO-E, ENTSOG, and ENNOH to identify infrastructure needs under this scenario and a methodology framework.
- Introduce a gap-filling process for the Commission to invite for project proposals if needs remain unmet.
- Promote smart grids, digitalisation, and grid-enhancing technologies to maximise existing capacity
- Launch a Strategic Roadmap for Digitalisation and AI and provide guidance on efficient grid connections to manage queues and free up capacity.

## Aim: Accelerating delivery of projects and improving acceptance

- Streamline permitting procedures for grids, renewables, storage, and charging infrastructure, aiming for timelines of 2–3 years.
- Improve public participation and benefit-sharing to boost acceptance and reduce legal challenges through providing toolbox on public inclusion in Q1 2026.
- Facilitate cost-sharing discussions to avoid disproportionate burdens on local consumers and require benefit-sharing for renewable projects over 10 MW.
- Enhance coordination between national, regional, and EU planning, including transmission and distribution grids.

## Aim: Mobilise additional financing

- Mobilise investment through:
  - Bundling PCIs/PMIs for cost-sharing and financing.
  - Using congestion income for interconnector investments.
  - Leveraging EU funds (CEF, Cohesion Policy) and de-risking private investment via the upcoming Clean Energy Investment Strategy.
- For hydrogen, the Commission considers support of solutions for financing, such as contracts for difference or cross-border coordination.

## Aim: Ensuring security and resilience

- Integrate physical and cyber security into project planning from the start.
- Enhance transparency in ownership to avoid dependency on high-risk entities.
- Address supply chain bottlenecks and harmonise technical standards to scale up manufacturing capacity by harmonising standards and requirements as well as improving interoperability of HVDC systems.
- Make resilience upgrades eligible for EU funding and strengthen regional cooperation on security measures.

## Aim: Develop key energy highways

- Eight priority cross-border projects to address urgent infrastructure gaps.
- Fast-track implementation through enhanced political coordination, dedicated EU support, and streamlined permitting.
- Targeted short-term actions (e.g. joint declarations, cost-sharing agreements, regulatory alignment).
- Mobilise funding through CEF grants and explore special purpose vehicles for bundled financing.
- Focus on electricity interconnections, offshore hubs, and hydrogen corridors to integrate renewables and improve security.

# Aim: Strengthening EU-wide infrastructure planning and optimising existing grids

## The challenges

- Domestic energy supply and level of interconnectivity across Member States have not yet reached a satisfactory level.
- EU planning is not aligned across borders and the TYNDP has not aligned with climate targets
- Energy bills and electricity prices remain high if underinvestment and insufficient integration continue.
- Competitiveness, decarbonisation, energy independence and energy security are critical but rely on reliable energy infrastructure planning and implementation

| | Stronger steer from EU level | Stronger regional cooperation | Maximisation of existing infrastructure |
|---|---|---|---|
| **Measures in the Grids Package** | • Central EU scenario development consistent with EU energy and climate targets.<br>• Binding needs identification methodology by ACER and gap filling mechanism to address cross-border capacity needs that need addressing.<br>• Stronger coordination of distribution and transmission grid planning. | • Support to foster enhanced cooperation with EEA neighbouring parties.<br>• Voluntary bundling of cross-border projects to enable cost-sharing and allow for discussions across border and with third countries. | • Broadened scope of PCIs to cover non-wire solutions and acknowledge role of internal lines.<br>• Anchoring smart grids and grid enhancing technology in network planning through framework methodologies.<br>• Announcement of Strategic Roadmap for Digitalisation and AI to enable smart solutions.<br>• Guidance on efficient grid connections. |
| **The Commission anticipates...** | • Reduced administrative cost and burden for businesses.<br>• Alignment between identified cross-border needs and project proposals to create better matches and stabilise system cost and improve interconnectivity. | • Interconnectivity as a measure to reduce electricity prices.<br>• Cost sharing frameworks to accelerate implementation of projects.<br>• Cooperation to enable integration of systems across borders, which enables price convergence and stability in a connected European electricity system. | • Non-wire solutions to have a positive impact on grid cost and allowing to avoid extensive grid expansion.<br>• Wider consideration and focus on smart and innovative technology to keep grid tariffs and electricity at affordable and competitive levels. |

# Aim: Accelerating delivery of projects and improving acceptance

## The challenges

- Slow permitting is a significant barrier to timely deployment of energy infrastructure: 26% electricity PCIs delayed by an average of 12 months in 2023. Permitting accounts for half of total implementation timeline of electricity infrastructure.
- Average permitting timeline 5 years for transmission grids and 4.3 years for PCIs.
- Recent efforts to speed up permitting need to be expanded.

| | EU-level permitting framework | Simplified processes | Consistency across energy |
|---|---|---|---|
| **Measures in the Grids Package** | • For all grid infrastructure, renewable energy projects, storage projects and recharging stations – PCI/PMI but also non-TEN-E projects.<br>• Renewable energy projects over 10MW redistribute benefits to the local population (beyond energy communities) to reduce later judicial processes. | • Targeted flexibility in application of environmental legislation while maintaining local safeguards where impacts limited.<br>• One-stop-shop: single competent authorities for grid permitting; better coordination when multiple permits required in parallel or sequence.<br>• Increased digitalisation for submissions & processing. | • Energy grid permitting rules aligned with hydrogen under Gas Market Directive; RE permitting under RED, TEN-E rules for PCI/PMI.<br>• Hydrogen permitting rules to be amended to ensure coherence with electricity grids. |
| **The Commission anticipates...** | • Clear maximum timelines for new grid projects, grid refurbishment/modernisation/extensions to integrate RE.<br>• Reduced timelines compared to current processes. | • Faster permitting for new projects.<br>• Special treatment for refurbishment & modernisation with lighter and faster permitting, shorter timelines. | • Reduced uncertainty for cross-sector and hybrid projects. |

# Aim: Mobilise additional financing

## The challenges

- Significant financing scale-up required. Electricity alone requires approx. EUR 1.2 trillion by 2040.
- Over-reliance on potentially volatile tariff-based financing with tension between cost-recovery, consumer protection and investment acceleration.
- Growing challenges attracting institutional investors, managing supply chain and other risks that weaken bankability.
- In hydrogen, high upfront investment costs combined with uncertain demand/offtake, as well as lack of mature price signals and long-term contracts.

| | CfDs | CEF | Future-proofing network charges |
|---|---|---|---|
| **Measures in the Grids Package** | • Two-way CfDs for new renewable and nuclear generation.<br>• Designed to provide stable predictable revenue streams by fixing strike price for power over long-period. | • Draft MFF foresees CEF budget increasing from EUR 5.8 bn during 2021-27 to EUR 29.9 bn during 2028-34.<br>• Crowd in private capital by reducing costs. | • With EUR 1.2 trillion in grid infrastructure by 2040, more cost-recovery fees will be required.<br>• Charges to reflect peak usage/congestion.<br>• At the same time, mitigate impact on consumers by bundling products (CEF, EIB, ...) to reduce cost pass-through to consumers. |
| **The Commission anticipates...** | • CfDs usually backed by public sector, reducing counterparty risk and default risk.<br>• CfDs to reduce curtailment risks.<br>• Reduced investor risk to translate into lower WACC.<br>• Reduced uncertainty of future offtake and demand in hydrogen and compensation for lack of historical price signals. (1w-CfDs can be used for hydrogen.) | • CEF as a catalytic and de-risking instrument.<br>• CEF to be used for security and resilience upgrades. | • Improved cost-benefit allocation; fairer cross-border cost-sharing arrangements; reduced reliance on national tariffs to recover costs that deliver EU-wide benefits.<br>• Network charges having to avoid discouraging flexibility solutions (e.g. storage, demand response, smart/ bi-directional charging). |

# Aim: Ensuring security and resilience

## The challenges

- Geopolitical risks stemming from excessive reliance on unreliable partners or over-concentration of suppliers for the provision of energy, notably Russia.
- Significant risks stemming from cyber attacks against key energy infrastructure, as well as potential physical attacks.
- Significant risks stemming from climate shocks.
- These risks can impact consumer and business prices as well as the provision of energy.

| | Supply chains | Cyber security | Competitiveness & domestic supply |
|---|---|---|---|
| **Measures in the Grids Package** | • Together with EU DSO creating a platform for EU distribution network planning for visibility on future needs for the 2026 Energy Infrastructure forum.<br>• Harmonising common technology specifications and technical requirements.<br>• Improving interoperability of HVDC systems. | • Integrate physical and cyber security into project planning from the start.<br>• Make resilience upgrades eligible for Connecting Europe Facility (CEF) funding.<br>• Continue work through applying the Cable Security Toolbox. | • Enhance transparency in ownership to avoid dependency on high-risk entities. |
| **The Commission anticipates...** | • Reduced supply chain bottlenecks and harmonised technical standards.<br>• More diversified and reliable supply chain.<br>• Increased regional cooperation on security measures. | • Improved cyber security across MS and European networks.<br>• Promote resilience by design.<br>• Reduce vulnerabilities of cross-border assets. | • Increased domestic manufacturing capacity for key energy components (e.g. inverters).<br>• Scaled-up capacity to keep pace with expansion and modernisation. |

# Aim: Develop key energy highways

## The challenges

**Large-scale international networks required to transport energy throughout Europe are required to:**

- Better integrate intermittent renewables in the grid and reduce reliance on fossil fuels
- Promote electrification
- Reduce electricity prices and price peaks
- Phase out Russian fossil fuel imports

### Measures in the Grids Package

#### Fast-track energy highways

- Eight international hydrogen, electricity and gas 'highways' prioritised through enhanced political coordination.
- Interconnector priority project focused on including simplified permitting.

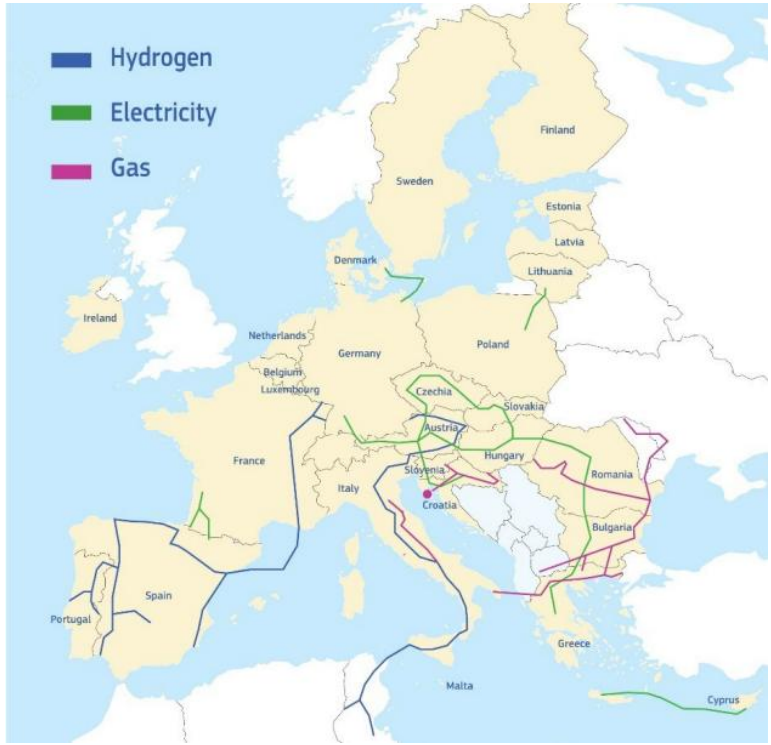
#### European Key European project labels

- Projects labelled as:
  - Important Projects of Common European Interest: IPCEIs bring additional funding and coordination benefits.
  - Competitiveness Coordination Tool pilots.

### The Commission anticipates...

- Improved coordination for identified highways.
- Improved permitting and access to interconnectors for highways.

- Improved access to financing and coordination.



# How can Ramboll help you navigate within the European Grids Package?

The European Grids Package describes measures to address structural bottlenecks in the EU's energy infrastructure and planning. While some measures reshape the governance structure or await detailed actions through upcoming initiatives, some remains structured the same way and requires adaptation to new procedures or details.

Ramboll offers "one-stop solutions" including planning, permitting, financing, design, environmental and socio-economic impact analysis, procurement, and more.

## Funding application strategy and submission support

Ramboll achieves excellence in infrastructure projects and European policy and regulation. We have a successful track record of guiding clients through the complex requirements of being designated a PCI/PMI, and applications to key European financial support including CEF and Innovation Fund – including cost-benefit analysis and business models. We assist in interpreting the terms and conditions, structuring the bid to meet all qualification criteria, and preparing the necessary documentation. Our team ensures that your submission is complete, competitive, and aligned with environmental and financial objectives.

## Environmental studies

Ramboll has a track record of supporting clients understand and take action to ensure they obtain all relevant environmental permits for energy projects. We keep up-to-date with all new permitting requirements including changes resulting from the European Grids Package. We monitor the package as it proceeds through parliamentary approval and understand how European law is implemented at the level of each member states.

## Socio-economic analysis

Ramboll has an experienced team that conducts socio-economic studies on the impacts of both projects and policies. This includes using required standardised cost-benefit models for obtaining financing as well as considering scenarios that could improve the cost-benefit ratio of projects to increase chances of success.

## Engineering support

With expertise in infrastructure modernisation, Ramboll can assist in upgrading the Trans-European Networks for Energy (TEN-E), focusing on projects like electricity, storage, hydrogen, and $CO_2$ networks. Ramboll can assist clients in their projects all the way from grid planning, through project maturation, detailed design and project execution, as well as through operation of the assets. Additionally, Ramboll's support in regional cooperation can help TSOs and DSOs achieve the 15% electricity interconnection target by 2030.

## Navigating and implementing new processes

We work together with sector clients and the public sector to support implementation of new processes and guidelines. Ramboll closely monitors the package as it proceeds to support implementation of the upcoming changes and help smooth adaptation. We develop and assess the impact of potential implementations as well as evaluate the performance of past policies. We stand ready to support the public sector in the implementation of the European Grids Package at national and European levels.

# Who we are

Ramboll employs

18,000

people globally, delivering bright ideas for sustainable change

We are present in 35 countries and combine local experience with a global knowledge-base, constantly striving to achieve inspiring and exacting solutions that make a genuine difference to our clients, end-users, and society at large.

We work across the following markets: Energy, Buildings, Transport, Water, Environment & Health, Architecture & Landscape, and Management Consulting.

We are strategic and technical advisors to the energy sector.

We are policy and regulatory advisors for the European Commission.

## To know more about what services Ramboll offers regarding the European Grids Package

### Contact

Alexandra Lüth
axdl@ramboll.com

Simon Davies
snda@ramboll.com

# Bright ideas. Sustainable change.

RAMBØLL