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PCI/PMI List: Europe's cross-border decarbonisation path

POLICY BRIEF
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On the December 1st, 2025, the European Commission adopted a new Union list of energy **Projects of Common Interest (PCIs) and Projects of Mutual Interest (PMIs)**, granting priority status under the revised TEN-E Regulation to 113 electricity, offshore and smart electricity grid projects, 100 hydrogen and electrolyser projects, 17 CO_2 transport infrastructure projects, 3 smart gas grids projects and 2 gas projects linked to island Member States (Malta and Cyprus).[1]

1. CONTEXT

Following the Regulation for Trans-European Networks for Energy (**TEN-E**)[2], the PCI/PMI list sets EU-level priority projects for cross-border energy infrastructure in different categories such as electricity grids, smart grids, hydrogen, or CO_2 networks. PCI/PMI status offers several benefits to projects, notably accelerated permitting and eligibility for Connecting Europe Facility (CEF) funding.

The aim of the promotion of PCI/PMIs is **improving interconnection**, thereby strengthening the resilience, security and affordability of the European energy system. While PCIs are primarily about completing and modernising the internal energy market, PMIs are also seen by the Commission as tools to strengthen interconnectivity with neighbours and underpin the external dimension of EU energy and climate policy.

PCIs and PMIs have to meet certain **criteria in terms of energy policy, but also climate**. A project has to be necessary for at least one of the priority corridors, have significant cross-border impact, and show that its overall socio-economic benefits at Union level outweigh its costs. The PCI/PMI list is proposed every two years following stakeholder consultation, and projects are only eligible for PCI/PMI status if they are first included in the Ten-Year Network Development Plan (TYNDP)[3]. All projects are also screened against a mandatory sustainability criterion and must be consistent with the Union's 2030 and 2050 climate-neutrality objectives. There are also specific criteria for each technology category.[4]

2. THE 2025 LIST

The list of 2025 is the second to be published under the revised TEN-E Regulation. The new list covers both PCIs, which are intra-EU projects, and 25 PMIs with key partner countries including UK, Switzerland, Serbia, Montenegro, Tunisia, and Algeria. Compared to the previous list, which was published in 2023, there has been an increase in the number of projects included, particularly in the electricity and hydrogen network categories.

1 European Commission (2025), Commission boosts energy interconnectivity across Europe and beyond, url: Commission boosts energy interconnectivity across Europe and beyond

2 Regulation (EU) 2022/869.

3 The TYNDP is intended to provide an updated and comprehensive overview of the EU's energy infrastructure and to identify future system needs.

4 More details on assessment criteria for PCI/PMIs in Art. 4 TEN-E Regulation.

Categories	2023 list	2025 list
Electricity interconnections, storage, offshore grid and smart electricity grids	85	113
Hydrogen and electrolysers	65	100
Carbon transport infrastructure	14	17
Smart gas grids	0	3
Fossil gas	2	2

Table 1: Evolution of Project Numbers Across Categories Between the 2023 and 2025 Lists[5]
Author: Bellona Europa

2.1 Electricity

The **electricity** chapter of the new Union list includes **113 projects**, covering transmission grid reinforcements and interconnectors, offshore hybrid and meshed projects, storage facilities and smart electricity grids.

This new list includes a **greater proportion of electricity projects**, reflecting the central role of electricity grids in integrating renewable energy sources and supporting decarbonisation. Many projects increase interconnection capacity in bottleneck regions, **easing congestion** and **supporting renewable** integration. Others strengthen internal transmission corridors that are necessary to unlock existing and planned renewable generation, electrified industry and new flexible loads, as well as to make full use of existing interconnectors.

Given the growing political and media backlash against interconnectors in some countries, it is essential to make system-wide benefits visible and understandable to both policymakers and the wider public.

5 This comparison is indicative, given that projects may be split or merged across various versions of the PCI/PMI list. Furthermore, inclusion in the list does not guarantee funding for studies or works.

NARRATIVES AGAINST CROSS-BORDER ENERGY EXCHANGES

Across Europe, some political and media debates are turning against interconnectors:

- Interconnectors are portrayed as having the only impact of exporting cheap domestic power to neighbouring countries, resulting in higher local prices.
- Limiting cross-border flows is presented as a way to shield households and industry from price volatility.
- Most of the economic upside from cables is said to go to producers, the TSO and financial actors, while households and energy-intensive industry pay the bill.

Norway is an example of this: interconnectors such as Nord Link and North Sea Link have been blamed by some[6] for higher domestic prices. Even the 2026 renewal of the Skagerrak 1 and 2 interconnectors with Denmark is opposed by the Labour party and multiple parties in its government coalition on price grounds[7]. Another example is Sweden, where the Swedish Government turned down an application for subsea power connection alleging potential price contagion from Germany[8].

However, these narratives are not reflective of the reality:

1. In terms of prices, interconnectors do affect price spreads in the short term, but over time they reduce extremes and overall system costs by pooling resources. In the preparation of the TYNDP 2024 it was estimated that every euro invested in expanding cross-border transmission capacity will reduce total generation system costs by more than two euros by 2040.[9]

2. Interconnectors contribute to security of supply. They are a safety mechanism when countries go through dry, cold or windless periods and a way to export surplus renewables. Recent crises have shown that being linked to neighbours is an asset in terms of security of supply, not a liability.

3. Benefits can be distributed. It is true that congestion revenues and export profits accrue to producers, TSOs and the public sector. However, the problem is how these gains are redistributed, not interconnectors themselves.

4. The role of decarbonisation enabler of interconnectors is also missed. Without strong cross-border capacity, the EU cannot integrate large volumes of wind and solar, electrify industry and transport, or make full use of flexible resources such as hydro.

If policymakers follow these false narratives and limit interconnector deployment or use, they risk underinvesting in exactly the infrastructure that EU law assumes will exist to deliver security, decarbonisation and long-term affordability.

6 Jensen & Ruud (2024), Kjerkol – It is not fair that Norwegian Citizens have to pay the price for German Energy policy, url: Kjerkol: – Ikke rimelig at norske innbyggere skal betale prisen for tysk energipolitikk - Altinget

7 Fosse & Skrovland (2024), The Labour Party scraps new power cables to Denmark, url: Arbeiderpartiet, Strømkabler | Ap-forslag: Vil skrote nye strømkabler til Danmark

8 Reuters (2024), Swedish Government says no to new power cable to Germany, url: Swedish government says no to new power cable to Germany | Reuters

9 ENTSO-E, (2025), TYNDP 2024 Infrastructure Gaps Report, Opportunities for a more efficient European power system by 2050, Apr. 2025.

Still, the PCI/PMI list exposes **several persistent weaknesses in energy planning** that the forthcoming European Grids Package and future PCI/PMI cycles will need to address. Because eligibility to PCI/PMI status is tied to the TYNDP process, the list remains largely **TSO-driven and top-down**. Distribution-level needs, flexibility resources and demand-side solutions are less reflected, the very limited number of smart grid PCIs illustrates this gap.

The list is over reliant on traditional "**more copper" solutions**. A non-wire alternative such as storage is only represented with 23 projects. This is despite the emphasis in the Action Plan for Affordable Energy and the upcoming European Grids Package on better use of existing assets and the Commission's recent push for anticipatory investment in grids.[10]

2.2 Hydrogen

The new list confirms hydrogen as a major focus of the TEN-E framework: 100 hydrogen and electrolyser PCIs/PMIs are included (up from 65 in 2023), which include transmission pipelines alongside storage sites, import terminals and large electrolysers. According to the Commission's Q&A, these projects are intended to "*enable the production, import, storage and transport of the hydrogen needed to decarbonise hard-to-abate sectors*"[11]. However, offtake is not a central element in the requirements or project assessment criteria to obtain for PCI/PMI status.

It is increasingly clear that the evolution of the hydrogen is slower than initially forecasted. ACER's 2025 Hydrogen Market Monitoring Report[12] shows that installed electrolyser capacity in Europe reached only 308 MW in 2024, falling short of the 6 GW target for that year, and well behind the 40 GW target for 2030. ACER notes that renewable hydrogen remains roughly three to four times more expensive than fossil-based hydrogen[13].

When it comes to infrastructure, ACER warns that hydrogen network development plans are still largely built around aspirational demand rather than concrete market needs, and that oversized or prematurely built networks risk underutilisation and stranded assets. It recommends incremental, demand-driven infrastructure development, careful decisions on repurposing gas networks and much stronger integrated planning with the electricity system. In its conclusions, ACER notes that hydrogen network development should be aligned with market realities.[14]

In this context, the way hydrogen PCIs and PMIs are selected matters. ACER's opinion on the draft 2025 lists notes several improvements compared with the previous cycle, including stricter scrutiny of eligibility and better clustering of pipeline projects. At the same time, it highlights that system needs methodologies rely on divergent national and ENTSOG scenario data and that many NRAs still lack a clear legal mandate to scrutinise hydrogen projects. [15]

10 European Commission (2025), Commission Notice on a guidance on anticipatory investments for developing forward-looking electricity networks, C/2025/3291, Jun. 2025, url: Commission Notice on a guidance on anticipatory investments for developing forward-looking electricity networks - Energy

11 European Commission (2025), Questions and answers on the second list of EU energy Projects of Common and Mutual Interest, url: Questions and answers on the second list of EU energy Projects of Common and Mutual Interest

12 ACER (2025), European Hydrogen Market Monitoring Report, url: ACER 2025 European hydrogen markets - Monitoring Report

13 Ibid., p. 5

14 Ibid., p. 59

15 ACER (2025), Opinion No 10/2025 on the 2025 draft regional lists of proposed electricity and hydrogen projects of common interest and projects of mutual interest in trans-European energy infrastructure, url: ACER Opinion 10-2025 on the 2025 draft regional lists of proposed electricity and hydrogen projects of common interest and projects of mutual interest in trans-European energy infrastructure

Hydrogen infrastructure that receives PCI/PMI status should clearly reflect a "no-regret hydrogen" approach. Direct electrification should remain the default decarbonisation option wherever feasible, and hydrogen infrastructure should be sized and laid out to serve hard-to-abate industrial uses, not as a general purpose substitute for electrification or for power generation. This has implications for PCI/PMIs: network routes should be guided by realistic industrial demand and renewable energy supply rather than simply replicating today's gas grid, and all projects should be stress tested against limited renewable electricity, realistic hydrogen cost trajectories and the risk of locking in fossil-based production.

2.3 Co_2 Transport

This year's PCI/PMI list shows a modest expansion of Europe's cross-border CO_2 network, retaining most projects from the previous cycle while adding a small number of new transport and storage initiatives. As we highlighted in our consultation response, a geographically balanced rollout of CO_2 infrastructure is essential to prevent uneven industrial decarbonisation and higher abatement costs in regions without ready access to storage. While the renewed PCIs continue to strengthen well-established ecosystems in Northwestern Europe, such as the interconnected Aramis, CO_2TransPorts, Delta Rhine Corridor, and Nautilus projects we noted in our consultation response as mutually reinforcing, the newly added PMIs largely deepen the North Sea–centred network rather than extending storage access to underserved regions. These additions are welcome and necessary for scaling permanent geological storage, yet they do little to improve the broader geographical balance of CO_2 infrastructure deployment that Bellona has repeatedly stressed as critical for ensuring equitable decarbonisation across the EU.

The inclusion of BaltiCO_2Net as a new PCI is therefore a particularly positive development, signalling progress toward expanding CO_2 infrastructure beyond traditional hubs. As noted before, it remains crucial that public support prioritises high climate value infrastructure, ensures permanent CO_2 storage, and upholds strong transparency and MRV standards, especially where projects interface with fossil operations or include utilisation components. Together, the updated PCI/PMI list moves Europe incrementally toward a more integrated CO_2 network, but further action is needed to ensure truly continent-wide access to cost-effective storage.

POLICY RECOMMENDATIONS

In the context of the revision of the framework for setting future list of PCIs/PMIs as part of the Grids Package, we present the following recommendations:

1. STRENGHTEN CLIMATE ALIGNED PLANNING

The current approach to planning risks underestimating future demand and the pace of electrification required for industrial transformation. In response to ACER's call for stronger alignment between national and EU-level planning, the EU should **ensure consistency across National Energy and Climate Plans (NECPs), national development plans, and the Ten-Year Network Development Plan (TYNDP)**. This would enhance the strategic selection of future PCI and PMI projects, ensuring that they reflect decarbonisation and efficiency priorities. Moreover, mature and aligned PCIs should maintain their status without undergoing a full reapplication, provided they meet the updated climate and system value criteria.

2. IMPROVE CROSS-BORDER COST ALLOCATION

Strengthen the cross-border cost allocation (CBCA) procedure to ensure the fair, transparent and timely sharing of costs and benefits among Member States, in line with decarbonisation objectives.

3. ENSURE HYDROGEN INFRASTRUCTURE IS "NO REGRET"

Hydrogen should be channelled to hard-to-abate industrial sectors. Future PCI/PMI assessment methodologies should more clearly account for the system benefits of directing hydrogen to no-regret uses, ensuring that only genuinely strategic, future-proof projects are selected.

4. PROMOTE EFFICIENCY, STORAGE, AND FLEXIBILITY

Expand the cost-benefit analysis (CBA) to include energy efficiency impacts and fully operationalise the energy efficiency first principle in PCI/PMI selection. Prioritise electricity projects that unlock renewables, flexibility, storage and system value, rather than only focusing on grid expansion, reducing overreliance on grid-only solutions.

5. PRIORITISE GEOGRAPHICALLY BALANCED, STORAGE-LED NETWORK DEVELOPMENT

Europe's CO_2 infrastructure remains heavily concentrated around the North Sea, leaving industries in Central, Southern and Eastern Member States with limited access to opportunities for cost-effective industrial decarbonisation. PCI/PMI selection should therefore go beyond existing hubs, strengthening criteria that reward geographical diversification and early-stage development of underrepresented regions will help prevent regional inequalities and ensure harder-to-abate industrial emitters across Europe can transition at pace based on a level playing field.

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