EUI FLORENCE SCHOOL OF REGULATION

ROBERT SCHUMAN CENTRE

POLICY BRIEF

Making TEN-E into a truly European project

Introduction

The report prepared by Mr Draghi, former President of the European Central Bank and former Prime Minister of Italy, to the European Commission entitled "EU competitiveness: Looking ahead" ("the Draghi report") draws attention to different aspects of European competitiveness. In particular, the Draghi report identifies as public goods e.g. defence procurement or cross border grids[1] that will be undersupplied without common action and possibly also common funding. Furthermore, the report underlines the role of energy grids as a critical component when marrying decarbonisation with competitiveness.

The Draghi report calls for a collective focus on grids through a new approach to planning, in particular as relates to too slow and diverging permitting processes, lack of sufficient funding at EU level to common objectives, and proposes to establish a 28th regime and permanent European Coordinator for permitting. In addition, the report calls for more EU level planning and better coordination of National Development Plans. In parallel, the EU should develop the governance needed for decisions and market functions of cross-border relevance to be taken centrally under the revived Energy Union.

The Draghi report rightly emphasises the key role of grids in delivering EU's decarbonisation objectives and improving competitiveness of EU industry. It also underlines the too small size of the Connecting Europe

1 Public goods are typically characterised by non-rivalry in consumption and non-excludability from consumption which may not apply to cross-border grids. However, these may be undersupplied because of lack of coordination and cooperation in planning.

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Facility[2] in comparison to the investment needs in cross-border grids[3]. At the same time, the report keeps silent on the EU's policy framework for grids which, however, provides a number of elements that can address many of the problems and proposals raised in the report already today.

This Policy Brief starts by presenting the EU's policy framework for energy grids, compares the elements therein to those proposed in the Draghi report and concludes by summarising the proposed improvements to the EU policy framework and raises a number of questions where more information or research would be useful to inform policy development.

What are trans-European networks?

European cross-border grids – the trans-European networks (TEN) in transport, telecommunications and energy infrastructures – are an important area of EU focus, with a dedicated policy. The three network sectors share a common Title[4] since the Treaty of Rome in 1957, separate from the sectoral policy articles[5] that sets the objectives for the TENs as follows:

- to enable citizens of the Union, economic operators and regional and local communities to derive full benefit from the setting-up of an area without internal frontiers; and
- action by the Union shall aim at promoting the interconnection and interoperability of national networks as well as access to such networks.

The implementation of the TEN policy has been developed through Guidelines in the form of Decisions of the European Parliament and Council. The first ones for energy were adopted in 1996, subsequently revised in 2003 and 2006, and then completely overhauled in 2013[6]. The main reason underpinning the 2013 revision stemmed from the third internal energy market package, adopted in July 2009, that introduced various new rules on infrastructure planning, coordination and investment. In addition to integration of markets and bringing the benefits of increased trade to consumers, the 2020 energy and climate policy framework and targets also required a more thorough look at trans-European grids. As part of the overhaul, the legal form of the Guidelines was upgraded into a Regulation of the European Parliament and Council. The 2013 Guidelines were revised in 2022. The TEN-E regulation was complemented by its dedicated financial instrument Connecting Europe Facility (CEF)[7].

EU's energy infrastructure policy – the TEN-E regulation

The 2013 TEN-E regulation put forward a radically new approach to plan and decide on the European grids. First, it is based on technical EU-wide assessment and cost benefit analysis, not on uncoordinated analysis per Member State which in the past led to politically motivated wish lists of projects. Second, by bringing all stakeholders together, it aims at building common understanding of needs and priorities at regional level that go beyond pure national interests.

- *Focus and prioritisation*. Identification of a limited number of **European priority corridors and areas** which must be implemented in the next decade to meet the longer-term energy and climate objectives and where European action is most required. Today these include electricity both onshore and, as a new focus area, also off-shore, CO2 transport and storage, hydrogen core network, smart electricity grids and as a new concept also smart gas grids. Fossil gas infrastructure was excluded from the priorities in the 2022 revision because the European gas network was deemed robust and resilient.

2 Connecting Europe Facility if the financing instrument for trans-European networks and the sole instrument dedicated to grids of cross-border relevance.

3 It is important to note that the EU grid policy framework covers both cross-border infrastructure as well as infrastructure located within one Member State but important for cross-border flows and trade.

4 See Articles 170-172 in today's Treaty on the Functioning of the European Union.

5 For energy, see Article 194 in the Treaty on the Functioning of the European Union.

6 Trans-European Networks for Energy (europa.eu).

7 Connecting Europe Facility - European Commission (europa.eu).

- *A new inclusive way of working*. The approach put **regional cooperation** at the core of developing common understanding of regional specificities, bottlenecks and challenges and to build consensus on the most pressing problems, priorities and key projects of European relevance. The cooperation brings together all the relevant parties – transmission system operators (TSO), project promoters, national regulators, Member States' authorities, the Commission, ACER and ENTSOs[8], and stakeholders.

- *Top-down planning*. Selection of **concrete projects** necessary to implement these priorities – declared as projects of common interest (PCI) – every two years and building on the TYNDPs prepared by ENTSOs so as to respond to changing economic and market conditions and technology development. The projects are assessed, in the regional setting, against cost-benefit criteria including integration of national networks, reduction of consumer prices through market integration, integration of renewables into the market and ensuring security of supply at lowest cost.

- *A toolbox to ensure implementation*. **Regulatory and financing instruments** to support the implementation of the PCIs including improved permitting procedures, cross-border cost sharing, regulatory incentives to address risks, better information for decision making and innovative financial instruments. Regional groups monitor progress and take action to remove obstacles.

This regional cooperation culminates in the adoption by the Commission of a **Union list of projects of common interest (PCI List)**. The first PCI List was adopted in autumn 2013 and a new list has been adopted every two years since, the currently valid PCI List[9] is from 2023 and it includes 166 projects, of which electricity represents more than half (85), 65 are hydrogen and 14 CO2 projects[10].

What is missing?

The TEN-E regulation provides a robust and proven policy framework for European level planning, needs assessment and project identification.

Robust implementation of the TYNDP and PCI selection process should be ensured and strengthened in the future, based on agreed scenarios and solid technical assessment of the projects. As in the past[11], there is, however, a risk that more politics is brought into the scenario definition, assessment of infrastructure needs and project evaluation with the aim of getting more politically interesting projects on the PCI List. This risk is particularly relevant for hydrogen and CO2 networks where promoters may be attracted by CEF grants and Governments wanting to be among the frontrunners to attract new industries in their territory. This risk may already be present in the current PCI List where one would expect to see many more electricity projects than hydrogen and CO2.

The TYNDPs already look well into future, into 2030-2050 horizon, but focus on the most pressing bottlenecks in the next decade (hence the T in TYNDP). The TEN-E framework therefore already addresses the Draghi report's first recommendation of longer-term EU level planning. Instead of more coordination with Member States' national plans which inevitably reflect national priorities, the TEN-E framework with its EU wide TYNDPs and regional cooperation should be strengthened to ensure that it is applied from the European perspective as a truly top-down exercise.

Whilst the TSOs seem best placed to analyse and model the bottlenecks and development of the networks in their territory, it is important to ensure a truly European planning and top-down assessment of the trans-European grid, bottlenecks thereof and projects to remove the bottlenecks. This may suggest reinforcing the role and independence of the ENTSOs. At the same time, the contribution of ACER and the national regulators in the process could be more analytical and focussed e.g. on

8 This brief uses ENTSOs to refer to ENTSO-E for electricity, ENTSOG for gas and ENNOH for hydrogen networks, established under the internal energy market legislation.

9 Annex on the first Union list of Projects of Common and Mutual Interest - European Commission (europa.eu).

10 In addition to these, the colegislators added exceptionally two gas projects Eastmed and Malta-Italy for a limited period.

11 The political interest and attention have often been more focussed on gas than electricity despite the expected respectively decreasing vs growing demand.

future risks and uncertainty instead of verifying the correctness of the process.

The PCI selection process takes today almost two years from the preparation of the TYNDP, the evaluation and selection process in the regional groups to the final adoption of the PCI List. This is largely linked to the detailed requirements of the TEN-E regulation for the process, consultations, cost-benefit criteria and TYNDP modelling. There is room for considerable streamlining, shortening and simplification of the process. In particular, the tasks of the regional groups should be refocussed on true regional cooperation with the aim of building common understanding on the future bottlenecks instead of discussing complex methodological details with little concrete added value.

Research questions

How to ensure that the TYNDPs reflect a European top-down approach and not a collection of national priorities? Is it possible to strengthen the governance to make the ENTSOs more independent of the national TSOs? What role for ACER and national regulators?

Should the needs assessment be based on detailed modelling or would simple criteria be enough to identify where bottlenecks occur in the grid? Should the assessment be based on different scenarios of the future or forecasting with sensitivity tests? Is it for the ENTSOs to determine the future scenarios or could the Commission take that role and responsibility [12]? Or would another entity be better placed to determine the scenarios and get the buy-in of Member States? How to deal with the situation that EU renewables or energy efficiency targets may not be met? How to compare infrastructure projects (CAPEX) to smart technology projects (OPEX)? How to distinguish anticipatory investments from too uncertain project ideas?

Priorities within priorities

The governance of the TEN-E regional cooperation was further strengthened and formalised through the creation of High-Level Groups (HLG) where the more technical tasks were complemented with political steer, monitoring and oversight. The HLGs cover the Baltic Sea region (BEMIP HLG[13]), Central South Eastern Europe (CESEC HLG[14]), South Western HLG[15] and Northern Seas off-shore (NSOG HLG[16]).

The PCI List includes both mature projects that are expected to be commissioned within a few years but also projects that are still in conceptual phase and that require many studies to determine whether they are worthwhile to pursue. The first task of the HLGs was therefore to select from the PCI List a small number of projects that are critical for regional integration and security of supply in the short term. The list of such priority projects was accompanied with an action plan for each project and necessary regulatory measures to improve market functioning. Such important decisions were prepared by senior officials' level and decisions taken at Ministerial or in few cases at Heads of State/Government level.

Through close monitoring of progress and timely push at critical moments, the HLGs have played a crucial role in making a number of highly controversial and commercially risky projects move forward and implemented. These include e.g. Baltic synchronisation and interconnector Spain-France (Biscay Bay) in electricity and, as a response to the 2009 gas disruption, interconnector Greece-Bulgaria (IGB), Krk LNG terminal, several projects in the Baltic region (GIPL between Poland-Lithuania, Balticconnector between Estonia-Finland, BalticPipe between Denmark-Poland).

12 Earlier FSR work has made a similar suggestion in Schittekatte, T., Pototschnig, A., Meeus, L., Jamasb, T., Llorca, M., 2021. Making TEN-E Regulation Compatible with the Green Deal: Eligibility, Selection, and Cost Allocation for PCIs. Energy Policy, 156, 112426. https://hdl.handle.net/1814/67673.

13 Baltic Energy Market Interconnection Plan (europa.eu).

14 Central and South-Eastern Europe Energy Connectivity (europa.eu).

15 Interconnections for South-West Europe (europa.eu).

16 The North Seas Energy Cooperation (europa.eu).

What is missing?

The HLGs are a useful and essential complement to the TEN-E policy framework and have proven their added value and necessity for delivering projects relevant for cross-border flows and regional security of supply. Their role has been eroded recently by proposals and policies that put the focus on the national level, notably the National Energy and Climate Plans (NECP) or the Recovery and Resilience Plans (RRP). These Plans start from national analysis and needs and expect cross-border relevant projects to somehow emerge by pushing for more coordination with neighbouring Member States. By calling for a comprehensive strategy at the EU level, coordinated with Member States for strategic infrastructure development needs, the Draghi report seems to underscore the added value of the HLGs and TEN-E approach which is positive. However, it does not mention them explicitly, which is worrisome, as there may be lack of awareness of the achievements of the TEN-E policy and HLGs.

Research questions

How to ensure that the EU-wide policy framework, approach and results are better known and not overshadowed by national focus? How to make the HLGs more visible? Could they benefit from European Coordinators? What is the best form of governance for the HLGs? Should the current Memoranda of Understanding be upgraded and institutionalised under a dedicated cross-border governance regulation such as the TEN-E? How to best reflect the cross-border priorities and PCIs in the national plans? How to determine the optimal timing for the priority PCIs? How to identify the urgent ones and affecting many Member States from longer term ones or with a more national impact?

Toolbox for the PCIs

Permitting

The TEN-E regulation was the first time the EU legislated on permit granting which Member States had deemed subsidiarity until then. The TEN-E permitting provisions introduced for the PCIs in 2013 the concept of overriding public interest and established a one-stop-shop in each Member State, set maximum time limits for authorities for the statutory phase (1.5 years) and clarified on the application of transparency, public consultations and environmental assessment rules. The TEN-E permitting model has since been copied to many other policy areas such as TEN for transport, renewables or net-zero industries.

The TEN-E framework does not cover distribution grids given their local nature and subsidiarity principle. Yet, today, the large majority of new production capacities is connected at the local level to distribution grids, contrary to the situation just a few years ago. As a consequence, such local bottlenecks, many already visible, may hamper the achievement of EU's decarbonisation targets. This is rightly highlighted in the Draghi report that calls for extending permitting streamlining to such grid projects.

What is missing?

The Draghi report is right to raise permitting as an important bottleneck and delaying factor for grid projects. Despite the TEN-E provisions, the permitting process typically takes much longer than what the TEN-E regulation requires. The proposals to establish a 28th regime and European Coordinator for monitoring are promising.

A European Coordinator for permitting can and should be appointed without delay in line with the possibility offered by the TEN-E regulation, to support PCI promoters, permitting authorities and Member States to speed up the procedures. As to the 28th regime, whilst an interesting idea, it requires further assessment to ensure that it would be the effective answer to the permitting delays.

Research questions

Would Member States be ready to cede decision making power in permitting to the EU level? Could regional permitting authority be an alternative? How could public consultations be organised at local level by a central entity? Should other types of projects, such as distribution grids or renewable projects, be included?

The preparation of the 28th regime would require a thorough analysis of Member States' practices and lessons learnt. It would also be important to study the reasons underlying delays. Are these caused by lack of a European regime or is permitting delayed for other reasons? Are the delays caused by non-optimal procedural steps at EU or national

level? Or lack of staffing in the permitting authority? Are the environmental assessment requirements the reason for delays? Is this because of lack of guidance? What is the role of complaints and judicial processes? Can these be streamlined and speeded up? Under what legal basis? Can the number of complaints be limited e.g. to one during the planning phase?

Financing and cost sharing

Financing of the PCIs is based on both user-pays principle (regulated grid tariffs) and beneficiary-pays principle (cross-border cost allocation). Very few projects are nowadays developed on a private merchant basis[17] even in the gas sector where this was the main model some years back.

In addition, PCIs may receive grants under the CEF if the user- and beneficiary pays principles would lead to too high increases in grid tariffs and if these are not compensated by lower consumer prices after project's completion (principle of solidarity). Such situations typically occur for projects that enhance security of supply (capacity beyond market need) or are highly innovative (first of a kind risk or a technology risk).

The Draghi report recommends strengthening this framework. Whilst the CEF budget (ca. 5.8bn€ over the period 2021-27) has been sufficient until now, it is far too low for the future challenges given the need to considerably step up and accelerate investments in TEN-E. As to the design, CEF should broadly remain as it isas the only dedicated instrument to finance cross-border relevant infrastructure projects and especially because it has proven its worth. Its budget should be considerably increased and allocated as priority to electricity grids, digitalisation and storage.

It would also be important for the EIB to develop financial instruments tailored to the specific risks of grids. These include i.a. demand risk related to anticipatory investments or technological risk of major off-shore and hybrid projects. Alternatively or in addition, CEF could also take part of the risk and provide investment support so as to mitigate the necessary increases in grid tariffs when needed for speeding up the investments, provided that the next CEF budget is sufficiently large and that the PCI selection process remains based on a robust methodology (see above).

Whilst cross-border cost allocation (CBCA) has been in place since 2013, its use has been limited to projects applying for CEF grants and it has rarely been applied beyond the constructing countries. It has also been suggested that the CBCA process comes too late whilst non-constructing countries should be involved in assessing the benefits at early stages of project development. To address the challenges of project level CBCA, FSR policy brief[18] recommends applying cost sharing to a portfolio of projects of regional importance. European Commission's recent notice[19] on cost benefit sharing also goes in this direction in particular for off-shore developments. The first application of these principles is expected in the Northern Seas region where some Member States have raised the idea of a regional fund that would pool Member State and EU funds to support the investments in both renewable production and grids.

What is missing?

Local distribution grids are not covered by an EU policy framework but they can be financially supported by the Cohesion policy instruments. These instruments are hardly known by the sector; and there is no obligation for Member States to allocate funds to local grids. Given the very high investment needs and the already visible bottlenecks in many cities, it would be essential to earmark a considerable amount of the national envelopes to ensure uptake of distributed renewables and incentivise consumers to take a more active role in the energy market. However, it is important to note that financial support alone is not enough but it should be complemented by robust governance and monitoring to ensure implementation.

Research questions

There are many sources to finance the necessary cross-border projects, ranging from grid tariffs, congestion rents, cross-border cost sharing to

17 The reasons for this may be many, including higher uncertainty of the future, but interaction with TSOs and regulator has also been raised as problematic by merchant promoters.

18 Meeus, L., Conti, I., de Almeida, L., Glachant, J.M., Hancher, L. Münchmeyer, M., Piebalgs, A., Pototschnig, A., 2023. Energy policy ideas for the next European Commission: from targets to investments https://hdl.handle.net/1814/75989.

19 C_2022_9284_F1_OTHER_AUTONOMOUS_ACT_EN_V2_P1_2356829.PDF (europa.eu).

grants and financing instruments. Each seems to have been developed on its own merits without looking at the whole, how they fit together and how well they incentivise investments in cross-border grids. It would be timely to do so as soon as possible.

How much are the tariffs expected to increase to meet the investment needs? How will this impact competitiveness? Or different regions in the EU? Or acceptance of the investments and, in the end, of decarbonisation? Should the current frameworks of cross-border cost sharing for PCIs and cost sharing for off-shore development plans be brought together? Should congestion rents be made a compulsory part of grid financing? What should be the role of inter-TSO compensation mechanism? How could CEF contribute in the best way to financing grids? Should all these be brought together into a European Fund for cross-border projects? What is the best role for private sector and institutional investors? EIB? How to design tailor-made financial instruments to address specific risks?

What governance, planning and financial support would be best for local distribution grids? What criteria to identify investment priorities? To earmark EU funding to such projects? Where to focus given the very many DSOs? Would the role of the EU DSO Entity need to be upgraded?

Conclusion

The Draghi report offers highly valuable suggestions for making EU's policy on grids fit for the upcoming challenges. This Policy Brief provides an assessment of these suggestions, compares them in the context of the TEN-E policy framework and proposes a way forward both for a research agenda and for policy in view of the upcoming new Commission.

The first conclusion of this Brief is that there is no need to develop an EU approach to grids because the existing TEN-E policy and HLGs form a robust framework that has delivered concrete results. Priority should be put on strengthening and proper implementation of the framework, in particular as regards true regional cooperation and robust application of TYNDP and cost-benefit analysis.

But there are areas for improvement. These include streamlining of the PCI selection process as to simplifying the needs assessment and clarifying the approach to scenarios. In addition, it is important to look at how to speed up project implementation, be it in terms of faster permitting or financing, both at transmission and distribution levels, or governance of the HLGs.

The Draghi report puts forward a number of useful recommendations. Some of them can and should be implemented without delay; e.g. appointing a European Coordinator for permitting can be done under the TEN-E framework for the PCI List projects. Other recommendations require amending or proposing legislation, including e.g. the creation of a 28th permitting regime, looking at how to finance grids or the need to increase EU financing to grids.

This Brief highlights the number of issues and questions that should be urgently explored so as to determine whether changes are indeed needed and what the best way forward would be:

- How to improve visibility and efficiency of the TEN-E and HLG policy frameworks? What governance? How to simplify whilst staying robust?
- What is the best way to develop scenarios of European relevance? Who participates and decides? What kind of scenarios?
- Would creating the 28th permitting regime deliver speed? Should an EU level one-stop shop, permitting agency, be created?
- Is the current framework for financing of cross-border projects adequate? Would it benefit from a complete review? What role for CEF? Would a regional fund to pool EU and national financial resources be the answer?
- How to improve planning and financing of local distribution level projects? What role for the EU? Or for the HLGs? How to best finance local grids from EU budget?

In conclusion, this Policy Brief underlines the importance to put focus on implementation as priority before proposing amendments to the TEN-E policy framework and thorough analysis on a number of questions before determining which adjustments add value and help speed up implementation of grids.

The Florence School of Regulation

The Florence School of Regulation (FSR) was founded in 2004 as a partnership between the Council of the European Energy Regulators (CEER) and the European University Institute (EUI), and it works closely with the European Commission. The Florence School of Regulation, dealing with the main network industries, has developed a strong core of general regulatory topics and concepts as well as inter-sectoral discussion of regulatory practices and policies.
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