Beyond pipes and pylons

NGO briefing on the revision of the Trans-European energy infrastructure regulation

July 2020

Summary

As Europe's energy system transitions, its infrastructure needs are also changing. The need to reflect higher climate and energy targets, to accelerate the phase out of all fossil fuels, and build out of renewable energy, the role of decentralised technologies and the need to support a more democratically-owned energy system are new features of the changing landscape. It is imperative that the trans-European energy infrastructure (TEN-E) regulation is revised to reflect these new realities and supports the European energy transition.

This briefing explains why the revised TEN-E regulation must exclude fossil gas projects while mentioning issues that are also relevant for electricity projects.

Key demands

- The future TEN-E regulation must fully cater for a future- and climate-proof energy system based on the energy efficiency first principle and 100% renewable energy, expanding its scope far beyond transmission infrastructure.
- The future TEN-E regulation must exclude any infrastructure projects directly or indirectly supporting or depending on fossil fuels and projects that are not in line with nature protection.
- The future TEN-E regulation and energy infrastructure planning must be transparent and fully free from any conflict of interest and be based on data, scenarios and assessments by an independent body.

Introduction

Time is running out for Europe to make the transition away from fossil fuels towards an efficient, flexible energy system, based entirely on renewable energy. The impacts of 1°C of global temperature rise are already being felt in Europe and around the world. Breaching the 1.5°C threshold would have devastating consequences for the lives and livelihoods of billions of people, particularly the poor and most vulnerable.

Almost 80% of Europe's greenhouse gas emissions come from its energy sector. It is vital that Europe accelerates its energy transition as part of its role in achieving the global 1.5°C objective. The revision of the TEN-E regulation is an important piece of the puzzle in helping this process.

The infrastructure built today will be operating for decades, well beyond 2050. Thus, EU support and public funding should only be channelled into energy infrastructure projects 100% aligned with the needs of a future-proof, decarbonised energy system.

1. Energy infrastructure fit for the Paris Agreement

Energy infrastructure plays an essential role in the decarbonisation of Europe's energy system. However, since the original TEN-E regulation was agreed in 2013, the EU climate, energy and biodiversity policy landscape has shifted significantly. These changes require a fresh look at what should qualify as top EU priority projects (so-called projects of common interest or PCIs).

The 2015 Paris climate agreement has led to calls for higher EU 2030 targets for greenhouse gas emission cuts, shares of renewables and stronger energy savings. These targets are currently being reviewed upwards again and should reach at least 65% cuts in greenhouse gas emissions, a 50% share of renewable energy and 45% energy savings. Energy infrastructure must support the achievement of and be consistent with these targets, not lock-in EU dependency on fossil fuels or create stranded assets.

Alongside climate breakdown, the parallel biodiversity crisis has deepened, making the protection and restoration of vulnerable habitats even more urgent. Improvement in protecting nature and environment while planning renewable energy infrastructure is therefore paramount. The European Commission has recently proposed to protect at least 30% of EU land and sea as part of the 2030 Biodiversity Strategy.

Infrastructure projects, including priority infrastructure, must also be assessed in line with the nature directives, strategic environmental assessment (SEA) and environmental impact assessment (EIA) directives. We should avoid that the fast-track procedure compromises the effective implementation of these obligations and should only focus on eliminating bureaucratic barriers. Attribution of priority status should be carefully examined for projects which might impact on sites or species which are protected for their biodiversity value.

The role of decentralised and digital technologies is now understood to be far more important than before, particularly in supporting the participation of citizens and communities through new EU energy democratisation rules. These investments should also be defined as energy infrastructure and allowed to qualify as priority projects. Finally, sectoral integration is presenting new opportunities on how to optimise our energy system and reduce the need to build new infrastructure.

The revised TEN-E regulation should:

- Be **fully aligned with the 1.5°C target,** the EU's revised 2050 and 2030 **climate and energy targets** and the 2030 Biodiversity Strategy.
- **Assess the overall climate, health and environmental impact of each project and for the TYNDP as a whole**. This should include mandatory sustainability criteria such as a full, absolute lifecycle analysis of the climate and biodiversity impacts.
- Carry out a **broad cost-benefit analysis** for each project and an energy system-wide analysis, which would include the above climate, social and environmental impacts.
- **Expand the scope of eligible projects** to renewable projects, aggregated community-owned and citizen energy projects, energy efficiency and demand-response projects, and distribution level projects that have a cross-border impact on infrastructure needs [1].
- For both scenarios and eligible projects, **prioritize energy savings, demand response, flexibility and other non-infrastructure solutions first**, including through sector integration. Priority must be given to projects that contribute to electrification with 100% renewable energy.

2. No room for fossil fuel infrastructure

With less and less time to avoid dangerous climate tipping points, Europe must make the right energy system choices today to avoid time-consuming and costly false solutions which are ultimately not in line with keeping global temperatures to 1.5°C or even 2°C degrees of warming. Research by several organisations has shown that even using up existing fossil fuel reserves, including fossil gas, would result in us overshooting our climate goals [2] [3] [4].

Since 2013, the EU has invested nearly €4.7 billion of public money in the build out of EU fossil gas infrastructure. Recent research has shown that Europe's fossil gas infrastructure is shock resilient to potential security of supply disruptions [5]. Yet Member States are planning even more investments, including €29 billion worth of fossil gas projects of common interest (PCIs) alone under the 4th PCI list. These projects are unnecessary from an energy security perspective and will create fossil gas lock-in if they proceed. Despite the presence of these gas projects on the 4th PCI list, it is crucial that CEF funding is only allocated to projects that are truly compatible with climate neutrality and the Paris Agreement, by excluding all fossil fuel projects.

Energy infrastructure to carry gases which originate from fossil fuels or rely on unproven techniques to capture emissions are a dangerous distraction on the path towards a genuinely future-proof energy system. This includes all fossil fuel-based forms of hydrogen, and technologies that use carbon capture. Retrofitting gas infrastructure to enable higher blending rates for hydrogen with fossil gas should, by definition, be excluded because it supports the continued use of fossil gas.

[1] Such an approach is consistent with the legal basis for the TEN-E regulation. Article 170 TFEU provides for the interconnectivity and interoperability of national energy networks at local and regional level enabling citizens, local and regional communities to benefit from the internal energy market.

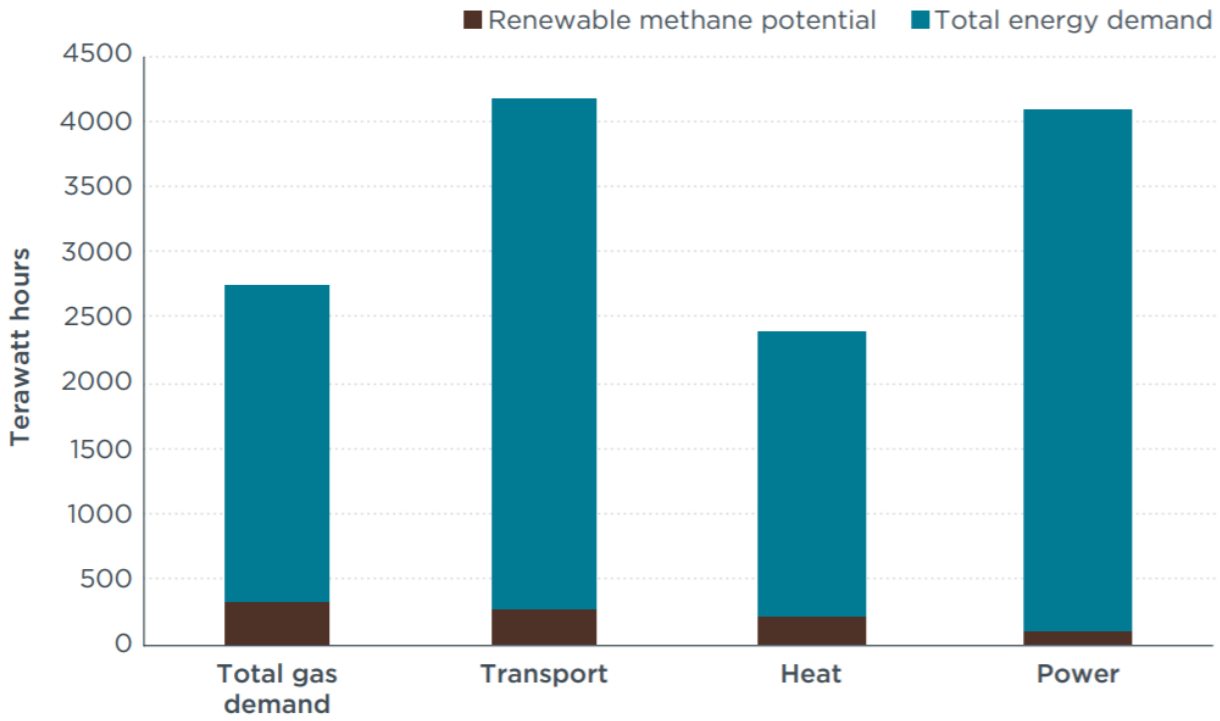
[2] Anderson, K. and Broderick, J. (2017) Natural gas and climate change, University of Manchester.

[3] Hainsch, K et al. (2020) Make the European Green Deal Real – Combining Climate Neutrality and Economic Recovery: DIW Berlin and TU Berlin.

[4] Stockman, L et al. (2019) Burning the gas 'bridge fuel' myth: Oil Change International.

[5] Artelys (2019) An updated analysis on gas supply security in the EU energy transition.

Our most fundamental concern with non-fossil gases is the scale and speed at which they will be able to deliver. The potential of on-fossil gases such as hydrogen produced from renewable electricity, sustainable biomethane and synthetic methane is limited (see graph below on renewable methane). Hydrogen and synthetic methane are linked to huge inefficiencies and high costs compared to direct electrification. Expanding biomethane production could lead to negative environmental impacts. Renewable hydrogen or biogas/biomethane infrastructure projects should therefore only be considered when linked to sectors which cannot be decarbonised through efficiency or electrification, such as some heavy industry processes or shipping and aviation.



Maximum potential for sustainable renewable methane to displace total gas demand, or transport energy demand, or energy demand for heating, or energy demand for power in 2050.

Source: ICCT (2018): What is the role for renewable methane in European decarbonization?

A consistent exclusion of direct or indirect fossil fuel-based gases has a clear impact on infrastructure choices. Before infrastructure projects for non-fossil gases receive support, a holistic assessment of the realistic availability, long-term viability, volumes and specific requirements of the project must be carried out to avoid infrastructure ultimately supporting fossil energy.

The revised TEN-E regulation should:

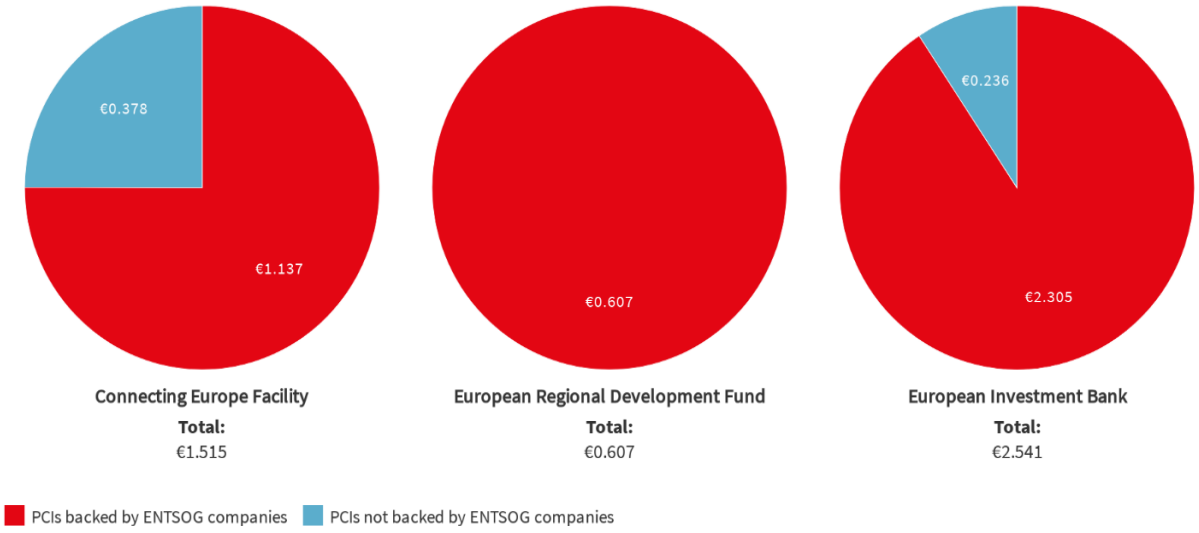
- **Exclude all direct or indirect support to fossil fuel infrastructure** (including fossil gas and hydrogen produced from fossil fuels), oil, **carbon capture and storage** or use.
- Ensure **robust, concrete biomethane sustainability criteria** are applied to all energy scenarios to ensure realistic projections for infrastructure needs. These sustainability criteria should apply to the project selection process from the start.
- Put assessments and rules in place to ensure that hydrogen infrastructure, including repurposed gas infrastructure, is aligned with the objective of a **full transition to hydrogen from renewable electricity** by 2035.

- Only consider non-fossil gas infrastructure in light of clear criteria which confirm that the gas carried by that infrastructure will come from sustainable sources, and will have a clear and necessary use that **cannot be met by direct electrification or negated by energy efficiency and demand-side measures**.
- **Exclude** any projects related to the **decommissioning of fossil fuel infrastructure, including control of methane leakage from public funding**. The costs of decommissioning should be borne by the fossil fuel industry in line with the polluter pays principle.
- In addition to immediately ceasing all public support for fossil gas infrastructure via the TEN-E regulation, the EU and Member States develop **a roadmap for decommissioning and adapting existing fossil gas installations** and related infrastructure to achieve the 2035 phase-out date[6].

3. End the conflict of interest at the heart of project selection and assessment

The new political and technical landscape requires reconsideration of the governance structure underpinning the selection of PCIs. Under the current system, the European Networks for Transmission System Operators for Gas and Electricity (ENTSO-G and ENTSO-E), comprising European gas and electricity transmission system operators and therefore the interests of the gas and electricity transport industry, have significant influence over the process to define gas and electricity infrastructure priorities. This is particularly problematic in the case of ENTSO-G.

The ENTSOs together develop a Ten-Year Network Development Plan every two years, which identifies the projects to be included in the list of PCIs. The ENTSO's plans, however, are based on their own, non-Paris Agreement compatible scenarios which inflate gas demand and underestimate renewables. In addition, ENTSO-G advises and supports the European Commission during all regional meetings to define PCIs and drafts the methodology for a cost-benefit analysis for candidate projects. The current influence of an organisation whose members receive nearly 90 percent of EU subsidies for gas projects given PCI status represents an unacceptable conflict of interest [7] (see graph below).



Source: Global Witness (2020): Pipedown: how gas companies influence EU policy and have pocketed €4 billion of taxpayers' money

[6] CAN Europe's position is that Europe must stop using fossil gas by 2035 at the latest.
[7] Global Witness (2020) Pipedown: how gas companies influence EU policy and have pocketed €4 billion of taxpayers' money.

Tasking the electricity and the gas transport industry, respectively, with defining the infrastructure needs of the future, as is currently the case, makes it impossible to create the holistic, interconnected energy system we need to decarbonise our economy and tackle the challenges ahead. It is essential that the revised TEN-E regulation set up an independent body responsible to map out the latest, best view of technology costs and deployment potential of the supply and demand energy solutions.

This independent body will need to take a fresh approach to assessing the need for many large-scale infrastructure projects in order to avoid unnecessary costs, the creation of stranded assets and mitigate environmental impacts. The ENTSOs must be much more transparent in sharing all relevant data with the independent body and all relevant stakeholders to support as recommended by ACER [8].

The revised TEN-E regulation should:

- **Establish an objective, independent body** to determine coherent assumptions and energy system scenarios, conduct cost-benefit analysis (including an updated methodology), and create the network plans used to identify European infrastructure priorities.
- Ensure the ENTSOs **provides all necessary data in a full, transparent and timely manner** to the independent body and relevant stakeholders.
- Give **increased power of scrutiny to ACER** with a binding effect [9].
- Give the **European Parliament a greater role** in project selection and approval, including partial approval or project by project approval.
- Strengthen **EU-wide and regional energy system planning** in order to assess necessary grid capacity in line with ecological limits.
- Ensure **early and fully transparent stakeholder engagement** in line with the Aarhus Convention with all environmental monitoring data, reports and maps for each proposed project made available immediately also to potentially affected citizens. This should include access to remedies throughout the whole process.
- European and national institutions must provide relevant information and several opportunities for interested parties to comment and allow **national environmental authorities a greater role**, including an early opportunity to comment.
- Regional Groups must have **dedicated meetings with concerned stakeholders** for any project, especially for controversial projects.
- If ever the final PCI lists contradict the inputs of participatory processes, **clear justification** for this contradiction must be provided and published.
- The European Commission should address any conflict of interest if a gas TSO is allowed to own hydrogen networks, as technically these should compete.

[8] ACER (2019) Opinion on the draft regional lists of proposed gas projects of common interest 2019.
[9] ACER (2020) Position on Revision of the Trans-European Energy Networks Regulation (TEN-E) and Infrastructure Governance.

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