FOSSIL FREE EUROPE

HIDING IN PLAIN SIGHT

HOW THE EU'S GAS LOBBY IS AT THE HEART OF EU ENERGY POLICY MAKING

EXECUTIVE SUMMARY

The central role given to the gas industry in identifying Europe's gas infrastructure needs clearly skews the Project of Common Interest (PCI) process in favour of gas projects – at a time when the EU's climate commitments mean that EU countries should be moving away from gas.

The European Network of Transmission System Operators for Gas (ENTSOG), one of the key vehicles of the gas lobby, has a double conflict of interest in this process. Firstly, it is tasked to prepare decarbonisation of its energy systems while this is clearly not in the interest of its members. Consequently, ENTSOG keeps on exaggerating figures for projected gas demand and the need for new gas infrastructure. Secondly, it has a key role in giving gas projects access to billions of euros of financial support while its members are the main beneficiaries of these public subsidies. This deprives fossil free energy infrastructure of resources, and risks locking the EU into gas dependence for the decades to come.

The EU needs to move away from gas – and to urgently reform the PCI process so that projects that support a fossil-free future are given support.

Based on these observations, Friends of the Earth Europe recommends:

The European Commission should develop its own in-house system able to provide reliable and independent data regarding EU gas pipeline network capacity and gas demand forecasts;

The EU should amend the TEN-E regulation to remove the statutory role of ENTSOG in the process of deciding future infrastructure priorities;

The EU's planning models for the energy (for renewable, CO2 emissions and energy efficiency) and transport sectors, should be based on climate targets; the EU 2030 and 2050 climate objectives and the 1.5° targets;

Following its commitment to end fossil fuel subsidies by 2025,[1] and to avoid the risk of supporting new fossil fuel lock-in, the EU should immediately stop financing new fossil fuel infrastructure, including gas.

ENTSOG is a lobbying organisation representing the gas infrastructure industry instead of a public interest organisation and should be recognised and considered as such by European institutions.

The EU should end the privileged position of ENTSOG and no longer give it a role in decision making.

The world is on track to global warming in excess of 3˚C, yet the commitments made by political leaders fall far short of what is needed to protect vulnerable and poor people across the world. But it doesn't have to be this way.

Friends of the Earth Europe is working to create the much-needed, fair and urgent transition to a fossil fuel free Europe by 2030. This means dismantling the fossil fuel system and creating the just, clean energy future that people want and need.

Friends of the Earth Europe campaigns for sustainable and just societies and for the protection of the environment. We unite more than 30 national groups with thousands of local groups and are part of the world's largest grassroots environmental network, Friends of the Earth International.

Friends of the Earth Europe gratefully acknowledges financial assistance from the European Union. The contents of this document are the sole responsibility of Friends of the Earth Europe and cannot be regarded as reflecting the position of the European Union. The European Union cannot be held responsible for any use which may be made of the information this document contains.

INTRODUCTION

2016 was the warmest year on record – a remarkable 1.1°C above pre-industrial period temperatures.[2] In 2015 the European Union (EU) signed up to the Paris Agreement, committing to keep global warming "well below 2 degrees" and ideally within 1.5 degrees.[3] This requires a global shift from dirty fossil fuels to zero carbon. To implement the Paris Agreement, this zero carbon goal must be at the heart of energy policy in the EU, and must drive every investment decision.

The urgency of this shift cannot be over-stated. New research has shown there are just four years left before we reach the 1.5°C tipping point,[4] the point at which carbon dioxide concentrations in the atmosphere make a 1.5 degree temperature increase inescapable. The typical lifespan of fossil fuel infrastructure is 40-50 years.[5] That means that new public investments in the energy sector must be exclusively in fossil-free energy.

Within the EU, the direction of public investments in the energy sector is driven by a process under the Regulation on guidelines for trans-European energy infrastructure (the so-called 'TEN-E' Regulation[6]). Every two years, a list of priority trans-European energy projects is drawn up, known as Projects of Common Interest (PCI). This list sets the direction for the biggest energy investments in Europe, and provides access to billions of euros of public money.

Under the TEN-E Regulation, priority is given to projects which contribute to the integration of distributed renewable electricity sources, but gas and some oil projects are also considered. The most recent PCI list includes 195 projects, with 108 electricity, 77 gas, 7 oil and 3 smart-grid projects. A new PCI list is scheduled to be formally agreed in October 2017.

While the European Commission holds discussions with member states to design this list, it is primarily based on the Ten-Year Network Development Plans (TYNDPs) drawn up for the electricity and gas sectors by the European Network of Transmission System Operators for Electricity (ENTSOE) and European Network of Transmission System Operators for Gas (ENTSOG).[7]

These bodies play a central role in the process to develop the PCI list. Yet, while they deny using their position to lobby, ENTSOG essentially represents gas infrastructure companies, and the organisation has a vested interest in promoting gas infrastructure. Their constant grossly inflated predictions on future gas demand in Europe shows the risk of putting people or organisations whose business model is based on building new gas infrastructure in a central position to determine how much gas infrastructure should be built.

While not yet final, the 2017 PCI list looks set to include a significant number of gas infrastructure projects which have been put forward by the gas industry, represented by ENTSOG, even though none of these new projects correspond to an increased demand: Gas consumption in EU-28 dropped by 14% since 2010. These projects risk distorting the European gas market, locking European countries into on-going dependence on dirty fossil fuels, and distancing the EU away from its crucial climate objectives.

THE GAS LOBBY IN DISGUISE

WHAT IS ENTSOG?

The European Network of Transmission System Operators for Gas (ENTSOG)[8] was established by the EU as part of its 2009 third energy package. It brings together gas distribution companies from across EU member countries to "promote the completion and functioning of the internal market in natural gas and cross-border trade and to ensure the optimal management, coordinated operation and sound technical evolution of the natural gas transmission network".[9]

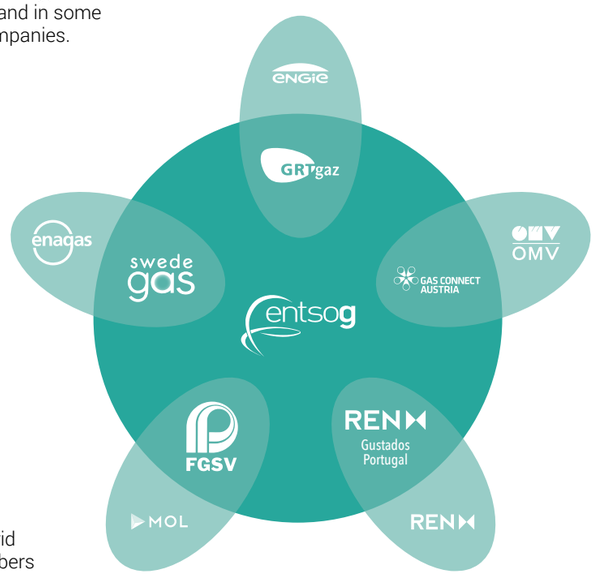
One of ENTSOG's key activities is putting together 'Ten-Year Network Development Plans' (TYNDPs). Produced every two years, these provide ENTSOG's vision of future EU gas infrastructure, including models of the integrated gas network based on a range of development scenarios for the following 20 years.

AN INSTITUTIONALISED FOSSIL FUEL LOBBY GROUP

ENTSOG is a hybrid body, established through EU legislation. But in reality it is an industry association, representing the interests of its 45 member companies, most of which run national gas distribution systems in EU member states.

Many of these members are international players in the energy sector, with a financial interest in expanding their operations – and in some cases, they belong to larger international oil and gas companies. For example, Hungarian member FGSZ is owned by the oil and gas multinational MOL Group, French member GRTGaz is 75% owned by Engie, Austrian member Gas Connect Austria is predominantly owned by the oil and gas company OMV and the Portugese member REN - Gasodutos, S.A. is entirely owned by private gas company REN - Redes Energéticas Nacionais. The private Spanish gas grid operator, Enagás, which floated on the Spanish stock market in 2002, also part owns the Swedish gas grid operator Swedegas and has activities in Mexico, Chile and Peru, Sweden, Italy, Greece and Albania.[10] The Dutch gas network operator Gasunie is now state-owned, but was founded in 1963 as a public-private partnership between Royal Dutch Shell (25%), ExxonMobil (25%) and the state of the Netherlands (50%) and still has strong relations with Shell via a number of important contracts.[11]

ENTSOG's activities are governed by a 12-strong board, drawn from its members and presided over by Stephan Kamphues, the chairman of member company OPEN Grid Europe (formerly E.ON Gastransport). Other board members include representatives from Enagás, Fluxys Belgium, the UK's National Grid Gas, French company GRTgaz, Romanian Transgaz and Hungarian FGSZ.[12]



INDIRECT ENTSOG MEMBERSHIP OF BIG OIL AND GAS COMPANIES

REPRESENTING GAS INDUSTRY INTERESTS

Though the members and staff of ENTSOG come from the EU gas industry, it still presents itself publicly as an independent entity without financial or private interests.

In the EU transparency register, while its electricity counterpart, ENTSOE, is registered as "In-house lobbyists and trade/business/professional associations",[13] ENTSOG is registered as a non-governmental organisation. According to the entry, they "consider that [they] do not do lobbying activities as such".[14]

Yet, ENTSOG's role in lobbying for its members certainly seems clear from the comments made by one former board member, Harald Stindl, the managing director of Gas Connect Austria and an ENTSOG board member from 2009 to 2013. He said:

> "We need to show the economic superiority of our product. Gas can transport much more energy than electricity. It is affordable, abundant and environmentally friendly. We have to convince consumers and policymakers of this. We have to show the way to new products and processes. We have to lead the way to a standardisation of the transportation of our product. That will improve its overall attractiveness. This is the basic job of ENTSOG."[15]

It is clear that ENTSOG sees its role as representing the interests of the industry, rather than the public interest, and is seeking to convince the EU institutions of the need for the gas supply industry. Its activities fit clearly into the EU's definition of lobbying as "influencing the formulation or implementation of policy and the decision-making processes of the EU institutions".

ENTSOG should be seen in that light, as a lobbying organisation for the gas supply industry.

CLOSE LINKS WITH THE GAS INDUSTRY – NATURALLY

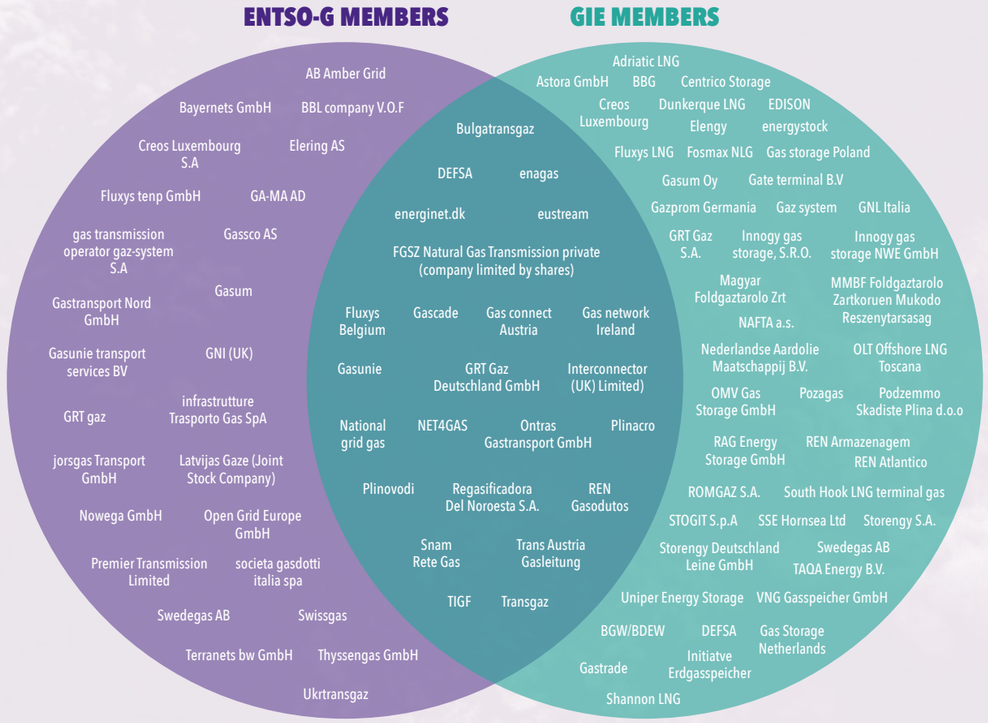
ENTSOG shares an address at 100 Avenue de Cortenbergh, Brussels, with gas industry lobby group, Gas Infrastructure Europe (GIE).[16] Like ENTSOG, GIE represents the interests of the natural gas infrastructure industry, with members including Transmission System Operators, Storage System Operators and LNG Terminal Operators. It has 69 members in 25 European countries.[17] About half of ENTSOG's members are also members of GIE".

GIE's transmission division, Gas Transmission Europe (GTE), is presided over by Stephan Kamphues of Open Grid Europe – who is also president of ENTSOG. Harald Stindl, former ENTSOG board member is now a board member of GTE.

Torben Brado, Senior vice-president at Energinet.dk and a current member of GIE's board was a member of both ENTSOG and GIE's board between 2013 and 2015.[18] Mr Brado was given a chance to give his perspective on the matter but did not answer any of our solicitations.

GIE is one of the six organisations behind the GasNaturally lobby campaign, which promotes the use of gas as a solution to climate change.[19] The other partners are Eurogas, the lobby group for the European gas wholesale, retail and distribution sectors; the European Gas Research Group (GERG); the International Association of Oil and Gas Producers (IOGP); the International Gas Union (IGU), which promotes gas "an integral part of a sustainable global energy system"; and Marcogaz, the representative group of the European Natural Gas Industry.[20]

ENTSO-G/GIE MEMBERS CROSSOVER



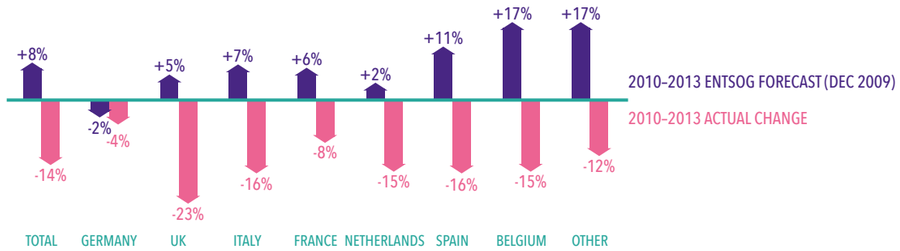
SHAPING A FOSSIL-FUELLED FUTURE

EXAGGERATING THE ROLE OF GAS

ENTSOG's Ten-Year Network Development Plans (TYNDPs) – See box – play a vital role in developing official projections for EU gas infrastructure needs and these are used as the main source of information by the European Commission in defining its policy priorities in the gas sector.

Yet, ENTSOG plans show that the organisation has consistently inflated gas demand, as shown by E3G's comparison between ENTSOG forecasts and actual gas demand between 2010 and 2013.[21]

ENTSO-G GAS DEMAND FORECASTS: FORECAST VERSUS ACTUALS 2010-2013



Source: ENTSOG, Eurostat and E3G (https://www.e3g.org/docs/E3G_Europes_Declining_Gas_Demand_10_6_2015.pdf)

This was however not an accident: In a January 2017 report commissioned by the German Federal ministry for Environment, the authors noted that while "all of the [past] TYNDP gas demand scenarios forecast a growing gas demand for the next 10 to 20 years, these forecasts have been lowered for each of the previous TYNDP in line with developments in EU gas markets." Even though EU gas demand fell from over 5,000 TWh to about 4,000 TWh between 2010 and 2014, "the past TYNDP forecasts for European gas demand in 2015 of 6,200 TWh (2010 edition), 5,660 TWh (2011 edition), 5,460 TWh and 5,560 TWh (2015 edition, "Green") resp. 4,600 TWh (2015 edition "Grey"), thereby overestimate todays demand by far. Even if gas demand from 2014 to 2015 has increased, the trend shows a declining gas demand in Europe with continuing energy efficiency and renewable deployment".[22]

These projections, by demonstrating future potential demand, shape the decisions about which projects are selected for the EU PCI list.[23] Considering the highly inflated nature of these forecasts, the risk to disconnect the decision-making process from the actual gas demand and its likely trend is high.

With a new PCI list scheduled for October 2017, ENTSOG has prepared a new TYNDP which updates their vision for gas in the EU. But rather than identifying opportunities to move beyond gas to meet the EU's climate commitments, the plan seeks to rebrand gas as a low carbon fuel.

THE TEN-YEAR NETWORK DEVELOPMENT PLAN (TYNDP)

ENTSOG is required to draw up a ten-year network development plan every two years under EU Gas Regulation (EC) 715/2009. The plan is supposed to look at the infrastructure needs from a pan-European perspective and signal gaps for future investment in the context of EU energy and climate policies and objectives. It provides ENTSOG's picture of European gas infrastructure and their vision for the next 20 years of future EU gas infrastructure, including models of the integrated gas network based on a range of development scenarios.

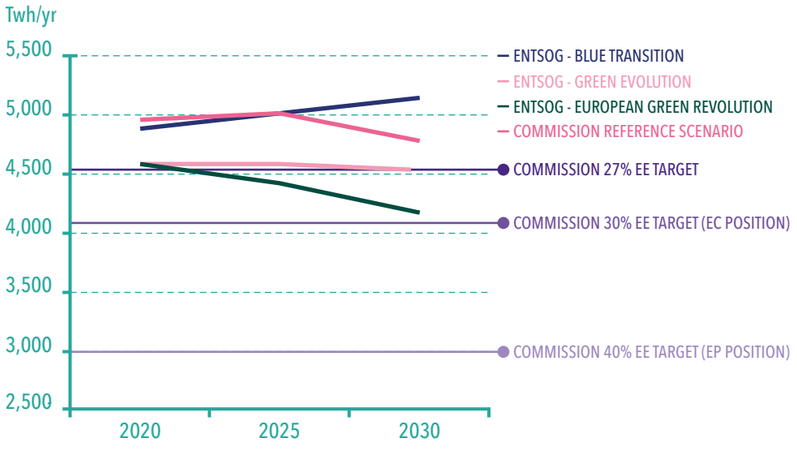
In this new TYNDP, first released in December 2016, ENTSOG claims that the EU can still meet its 2050 climate targets using gas, but provides no evidence as to how this can be achieved:

> "In a context where achieving the EU climate targets could result from either an increase or decrease of gas demand by 2030, this implies that European supply needs are foreseen to increase or at best stay stable." (TYNDP 2017)

This could not better illustrate ENTSOG's bias in how it foresees the future of energy in Europe for 2030. This is even worse for the 2050 perspective since ENTSOG's analysis only goes as far as 2035.

The four scenarios presented in the TYNDP 2017 provides the clearest illustration of ENTSOG's ambition for gas (see graph).[24] Of these, only the 'EU green revolution' references the Paris Agreement and the latest EU Climate Package and shows any significant reduction in EU dependence on gas by 2037. This scenario, it says, depends on both high growth and high levels of ambition from EU politicians.

EU-28 GAS DEMAND PROJECTIONS 2020-2030 ENTSOG V CLIMATE TARGETS

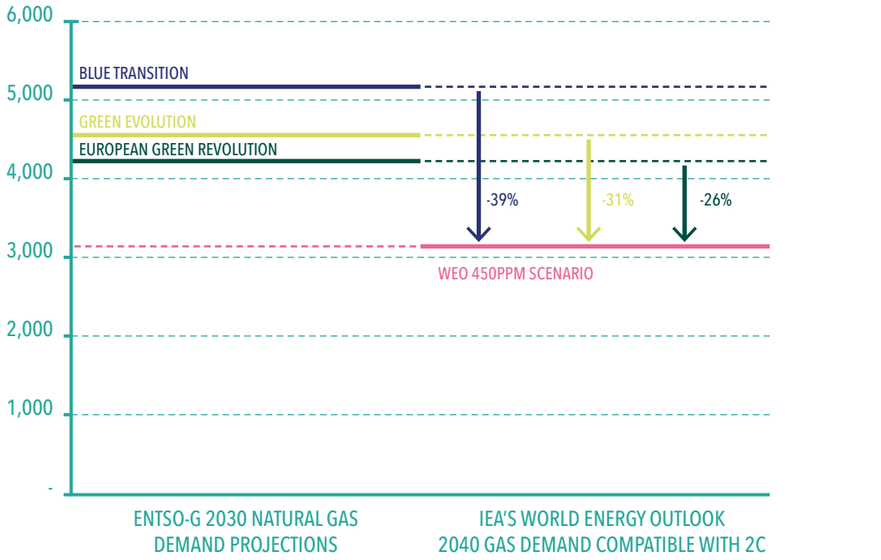


Notes: TWH for gross calorific value
Source: E3G, ENTSOG TYNDP 201, EU reference scenario 2016, Impact Assessment for EED revision
https://www.e3g.org/docs/E3G_PR__ENTSO-G_TYNDP2017__20171220.pdf

ENTSOG is keen to emphasise the potential for an alternative scenario, called 'Blue Transition' which it claims "has not been sufficiently explored or considered … but [which] offers a viable cost effective way of reducing emissions through using as much of the existing energy infrastructure."[25] Despite current trends showing that demand for gas is falling in Europe[26] and ignoring the implications that the EU's energy efficiency policy, renewable development and warmer winters will have on gas demand,[27] this scenario assumes demand for gas increasing beyond 2030.

Analysis by E3G found that none of the scenarios "fully meet the 30% energy efficiency target for 2030" recently proposed by the European Commission and described the 'Blue Transition' as a "gas company's Christmas wish".[28] With the Blue Transition scenario, E3G analysed that the EU would actually have to reduce its gas use by 39 per cent, between 2040 and 2050 to get back to a pathway compatible with its long term objectives of avoiding dangerous climate change. (See graph).

ENTSOG GAS DEMAND: PROJECTIONS V INTERNATIONAL CLIMATE TARGETS

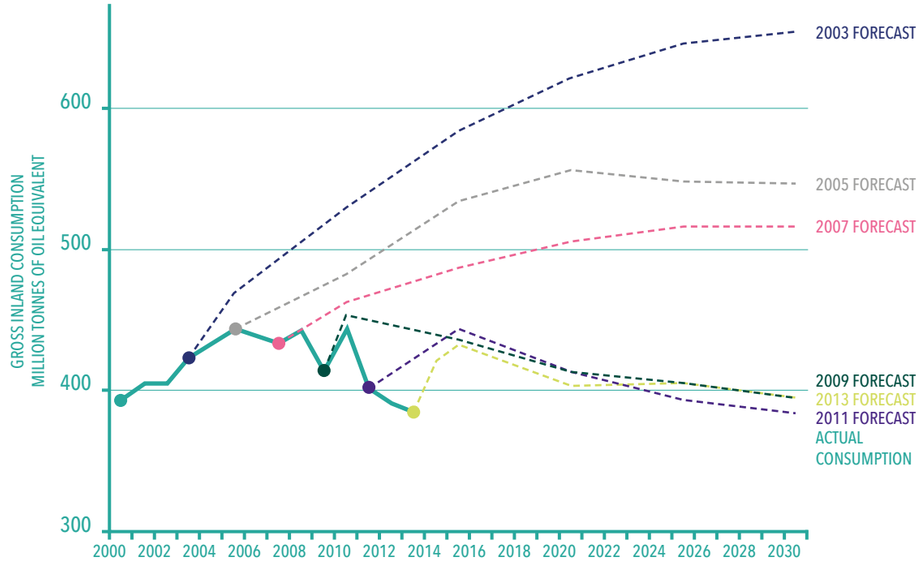


Source: ENTSOG, IEA and E3G

The level of demand predicted in the 'Blue Transition' scenario is 26% greater than the European Commission's own predictions for gas demand, under its 30% target for energy efficiency. The scenario does however closely echo the cross-industry lobby group, GasNaturally's vision for 2030 which puts gas "at the centre of the energy system."[29] However, it also expose Europe to a high carbon gas-fired energy future, or leaves the companies involved with stranded assets.[30]

Demand for gas in Europe peaked in 2010 and is today 14% below that level,[31] partly due to improvements in energy efficiency. While there is some uncertainty as to future demand, the European Commission has repeatedly had to lower its gas demand projections since 2003. At the end of 2015, the European Court of Auditors heavily criticised the European Commission for relying on gas demand forecasts provided by external sources and consistently over-estimating demand, while actual demand significantly fell – See graph.[32]

GAS CONSUMPTION IN EU-27 2000-2013 SHOWN ALONGSIDE THE COMMISSION FORECASTS



Source: European Commission, Eurostat and European Court of Auditors

PROJECTS OF COMMON INTEREST

The list of Projects of Common Interest (PCI) defines the key energy infrastructures that are necessary, according to the European Commission and Member States, to complete the European energy market and create a secure, resilient and sustainable Energy Union. The selection process and conditions of eligibility are defined in the TEN-E Regulation (n°347/2013).[33] The Regulation identifies 9 priority corridors (4 for electricity, 4 for gas and 1 for oil) and 3 thematic areas (smart grids, electricity highways and cross-border carbon dioxide networks) of trans-European energy infrastructure that require "urgent infrastructure development in order to connect EU countries currently isolated from European energy markets, strengthen existing cross-border interconnections, and help integrate renewable energy".

Based on these priority corridors, the EU draws up a list of PCI, which represents specific energy infrastructure projects necessary to implement the corridors. The list is reviewed every two years and a third list is planned for end-2017. The current list is composed of 195 projects (108 electricity, 77 gas, 7 oil and 3 smart-grid projects).

Acquiring the PCI status allows projects to benefit from:

1. accelerated permit granting procedures;
2. faster environmental assessment; and
3. financial assistance under the Connecting Europe Facility (CEF) programme.

As well as contributing to the EU's climate and energy goals, PCI projects are supposed to:

- Have a significant impact on energy markets and market integration in at least two EU countries,
- boost competition,
- increase energy security through diversifying energy sources. [34]

Gas projects which wish to be considered for the PCI list must first be included in the sector's network development plan, according to the EU regulations.[35] The draft 2017 TYNDP provided by ENTSOG included proposals for 354 gas projects, including 306 new pipelines, 30 LNG terminals and gas storage facilities.[36]

PCI SELECTION: ENTSOG AGAIN IN A KEY POSITION TO INFLUENCE

Drafting the gas sector's TYNDP and planning the EU gas pipeline network is one of ENTSOG's main roles, but the group also plays a key role in driving the PCI selection process. This involves a series of regional stakeholder consultation meetings, facilitated by the European Commission, where ENTSOG is invited to present its vision and plans for the future of gas in Europe.

For the new 2017 list, five series of meetings have been held for the gas sector as part of the process to identify PCI gas projects. ENTSOG has been a key player at these meeting, presenting during 30mn to 1h their visions and scenarios at the beginning of each meeting - with their energy vision presented at the first meeting in May 2016,[37] infrastructure gaps identified in the TYNDP for each strategic region in November 2016,[38],[39] and identifying infrastructure needs in December 2016.[40]

In January, the European Commission launched its formal call for projects to be included in the next PCI list, based on the pre-selection made in the 2017 TYNDP. In total, 133 gas projects applied.[41] Out of these, at least 96 (75 per cent) have been put forward by ENTSOG members.[42]

The next step in the process requires a cost-benefit analysis (CBA) of the proposed projects to be carried out to determine the positive and negative impacts of different levels of infrastructure development and individual PCI applications. This is also done by ENTSOG, in coordination with the project promoters. The information will be submitted to national regulators.

Once approved, the list will go back to the regional stakeholders' groups (including representatives from ENTSOG), who evaluate the projects against needs, and adopt the regional list. The Agency for the Cooperation of Energy Regulators (ACER) checks these lists for regional consistency and the lists are then submitted to the European Commission for adoption.[43]

The CBA process puts once again ENTSOG in a clear conflict of interest situation as it needs to determine negative impacts of projects, three-quarters of which are promoted by their members.

ENTSOG AND THE PCI PROCESS - A CONFLICT OF INTERESTS

ENTSOG's role in determining the EU's future gas network needs creates a clear conflict of interests. Under the TEN-E Regulation, ENTSOG is supposed "to prepare [the EU's] infrastructure for further decarbonisation of its energy system in the longer term towards 2050".[44] But as an industry association, which acts in the interests of its members, ENTSOG has no long-term interest in taking gas out of the EU's energy mix. ENTSOG's members have a commercial interest in extending the EU's gas infrastructure, and in transporting more gas.

ENTSOG's members are invited to shape the TYNDP through workshops, joint working sessions, webinars and an open consultation organised by ENTSOG.[45] As part of the process, "project promoters" (ie gas network development companies) are then asked to submit details of proposed projects as part of the data collection for the plan. Under the TEN-E Regulation, projects must be submitted to the TYNDP to be considered for the PCI list,[46] creating a clear pathway for ENTSOG members to promote their interests.

Project developers have an obvious incentive to put forward projects for the list. PCI projects are eligible for EU financial assistance from the Connecting Europe Facility (CEF), the European Fund for Strategic Investment (EFSI) as well as potentially from the European Structural and Investment Funds (ESIF). The CEF programme has a budget of €5.85 billion available to support energy projects from 2014-2020, provided via annual or bi-annual grants and financial instruments.[47]

Not all of the projects listed in the TYNDP applied for PCI status in 2017 – but three quarters of the gas applications for the new list come from ENTSOG members.

This creates a second conflict of interests. ENTSOG recommends the projects put forward by its members, who are then eligible to benefit from significant public financial support and other benefits.

In previous years, ENTSOG members have benefited extensively from CEF funding, with gas projects receiving more than €1,117 million in total over three years. Of this, €1,060 million went to ENTSOG members, compared to just €531 million for all electricity projects.[48] [49]

LOCK-IN EFFECT AND MARKET DISTORTION

LOCKING THE EU INTO DECADES OF FOSSIL FUEL USE

While ENTSOG is keen to emphasise the potential for gas, the infrastructure being proposed may not even be completed until 2030. Gas infrastructure has on average a lifespan of between 40 and 50 years. This means that this infrastructure could be supporting increased reliance on gas well beyond the moment when the EU is supposed to have decarbonised its economy to be in line with the Paris Agreement.

An alternative risk is that public subsidies will in effect be wasted on infrastructure that is not used. The EU already has enough infrastructures to import twice as much gas as is currently used,[50] and, since 2011, existing LNG infrastructure has been continuously used at less than 25% of its capacity.[51] The PCI projects could end up as little more than stranded assets.

This is of particular concern given that public money is being directed towards these projects through CEF and the European Fund for Strategic Investment – money that could potentially be directed at developing fossil free energy supplies.

TIME TO GO FOSSIL-FREE

The Paris Agreement commits EU member states to reduce greenhouse gas emissions to keep global warming "well below 2°C". Analysis has shown that globally, by 2017 the world will have built enough electricity generating infrastructure to give a 50 per cent chance of reaching 2°C of warming. After that date, all new generation infrastructure must be zero carbon.[52]

Burning gas may generate fewer carbon dioxide emissions than burning coal and oil, but gas still emits significant volumes of carbon dioxide (CO2) and is a massive source of methane emissions, a powerful greenhouse gas with a global warming potential 86 times higher than CO2 on a 20-year timescale.[53]

It is time to rethink the role of gas within the TEN-E Regulation. Rather than assuming an on-going need for new gas infrastructure to bring down prices and provide security of supply, and allowing the gas industry to dictate its needs, the EU needs to develop a new long-term carbon-free perspective.

To fulfil its international commitments under the Paris Agreement, and to meet the ambition set out in the EU energy roadmap, the EU needs to urgently start the shift from gas. Efforts to improve energy efficiency are a step in the right direction, but energy efficiency alone will not deliver a fossil free future. That means seeing declining indigenous production as an opportunity to diversify away from gas – rather than investing in alternative supplies to keep the gas fires burning.

RECOMMENDATIONS

The EU needs to move away from gas – and to urgently reform the PCI process so that projects that support a fossil-free future are given support. This is why, based on observations presented in this document, Friends of the Earth Europe recommends:

1. The European Commission should develop its own in-house system able to provide reliable and independent data regarding EU gas pipeline network capacity and gas demand forecasts;
2. The EU should amend the TEN-E regulation to remove the statutory role of ENTSOG in the process of deciding future infrastructure priorities;
3. The EU's planning models for the energy (for renewable, CO2 emissions and energy efficiency) and transport sectors, should be based on climate targets; the EU 2030 and 2050 climate objectives and the 1.5° targets;
4. Following its commitment to end fossil fuel subsidies by 2025,[54] and to avoid the risk of supporting new fossil fuel lock-in, the EU should immediately stop financing new fossil fuel infrastructure, including gas.
5. ENTSOG is a lobbying organisation representing the gas infrastructure industry instead of a public interest organisation and should be recognised and considered as such by European institutions.
6. The EU should end the privileged position of ENTSOG and no longer give it a role in decision making.

ENDNOTES

1 https://www.theguardian.com/environment/2016/may/27/g7-nations-pledge-to-end-fossil-fuel-subsidies-by-2025
2 https://public.wmo.int/en/media/press-release/climate-breaks-multiple-records-2016-global-impacts
3 https://unfccc.int/resource/docs/2015/cop21/eng/l09.pdf
4 https://www.carbonbrief.org/analysis-four-years-left-one-point-five-carbon-budget
5 Access to document requests obtained from DG Energyhttps://www.asktheeu.org/en/request/3156/response/11289/attach/2/LNG%20and%20gas%20storage%20strategy%20report%20of%20meeting%20with%20GIE%20yesterday.txt
6 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=O-J:L:2013:115:0039:0075:en:PDF
7 "for all subsequent Union lists adopted, proposed gas infrastructure projects falling under the categories set out in Annex II.2 shall be part of the latest available 10-year network development plan for gas, developed by the ENTSO for Gas" (http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1446822144539&uri=CELEX:32013R0347#d1e93-65-1)
8 http://www.entsog.eu/
9 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=O-J:L:2009:211:0036:0054:en:PDF
10 http://www.enagas.es/portal/site/enagas
11 https://www.gasunie.nl/nieuws/gasunie-en-vopak-tekenen-overeenkomst-met-shell-als-launching-cus?page=3
12 http://www.entsog.eu/entsog-board
13 http://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=25805148045-87
14 http://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=565032821273-72
15 http://energypost.eu/entsogs-big-plan-for-the-european-gas-market/
16 http://ec.europa.eu/transparencyregister/public/consultation/displaylobbyist.do?id=76130992074-15
17 http://www.gie.eu/
18 https://www.linkedin.com/in/torben-brabo-965b554/
19 http://www.gasnaturally.eu/about-gasnaturally/why-the-gn-campaign
20 http://www.gasnaturally.eu/about-gasnaturally/who-are-we
21 https://www.e3g.org/docs/E3G_Europes_Declining_Gas_Demand_10_6_2015.pdf
22 https://www.prognos.com/uploads/tx_atwpubdb/20170407_Prognos_Report_Low_Carbon_options_2016_19.1.17.pdf
23 Who criteria are set out by the TEN-E Regulation (http://eur-lex.europa.eu/legal-content/FR/TXT/?uri=celex%3A32013R0347)
24 https://cloud.foeeurope.org/index.php/s/lS2rjs5v121NWND/download
25 http://www.entsog.eu/public/uploads/files/publications/TYNDP/2016/entsog_tyndp_2017_main_report_web.pdf (p38)
26 https://www.e3g.org/news/media-room/europes-declining-gas-demand
27 "every additional 1% in energy savings cuts gas imports by 2.6%" - Energy Efficiency Communication [COM(2014)520] - https://ec.europa.eu/energy/sites/ener/files/documents/2014_eec_communication_adopted_0.pdf
28 https://www.e3g.org/docs/E3G_PR__ENTSO-G_TYNDP2017__20171220.pdf
29 http://www.gasnaturally.eu/gas-at-the-centre-of-the-energy-system-in-2030
30 https://www.e3g.org/news/media-room/european-gas-network-plans-based-on-industry-fantasy
31 http://www.naturalgasworld.com/overview-of-the-2016-eu-consumption-and-production-36573
32 http://www.eca.europa.eu/Lists/ECADocuments/SR15_16/SR_ENERGY_SECURITY-EN.pdf (p.37)
33 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=O-J:L:2013:115:0039:0075:en:PDF
34 https://ec.europa.eu/energy/en/topics/infrastructure/projects-common-interest
35 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=O-J:L:2013:115:0039:0075:en:PDF
36 http://www.entsog.eu/publications/tyndp#ENTSOG-TEN-YEAR-NETWORK-DEVELOPMENT-PLAN-2017
37 https://circabc.europa.eu/sd/a/5a1b1e22-ab7a-4f42-9a12-4969509dc899/13_Heidrecheid_ENTSOG.pdf
38 https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp?FormPrincipal:_idcl=FormPrincipal:_id1&FormPrincipal_SUBMIT=1&id=32d31284-4390-44a6-a369-2bc83bd7754d&javax.faces.ViewState=tU%2BF2ZcK%2Fu%2BD6XVA%2F%2FedjhRK02kZyLvzjBGUoSiHGGzuPmxJhUbD8SUOKXlJvid3jEPkUcOpjvsmCo%2BIDH%2FH3AtFmE5CnjRhoSUAWjDdnM8VX9sZIvN5TWzcL93A7gIOReCOgarK6Bc187r5yrCxyexWvsk%3D
39 https://circabc.europa.eu/sd/a/96438cd7-f3cd-4dd6-a8a6-399f79372f34/161212_ENTSOG_PCI%20Call%20%20Project_grouping.pdf
40 https://circabc.europa.eu/sd/a/c9e896c0-183d-4243-ba24-f1ef-9b434fee/161212_ENTSOG%20-%20Needs%20identification%20-%20TYNDP%20supporting%20data.pdf
41 https://cloud.foeeurope.org/index.php/s/2Cx8xXr98Ir3QtP, https://cloud.foeeurope.org/index.php/s/CWVIa6RZ4iSCJ8Y, https://cloud.foeeurope.org/index.php/s/r640WfCypdifSjY, https://cloud.foeeurope.org/index.php/s/AIh4DjpZQ6SaXtH
42 https://cloud.foeeurope.org/index.php/s/fn8mmu9mXL1vBGn
43 https://circabc.europa.eu/sd/a/22d638d1-2630-4a38-8528-4cfca61d59fb/3_introslides_Catharina_SikowMagny.pdf
44 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=O-J:L:2013:115:0039:0075:en:PDF
45 http://www.entsog.eu/events
46 Regulation (EU) 347/2013
47 https://ec.europa.eu/energy/sites/ener/files/documents/7_2%20PCI%20CSWD.pdf
48 http://ec.europa.eu/energy/en/topics/infrastructure/projects-common-interest
49 http://www.foeeurope.org/commission-billionth-euro-fossil-fuel-subsidies-170216
50 https://www.e3g.org/library/more-security-lower-cost-a-smarter-approach-to-gas-infrastructure-in-europe
51 http://www.europarl.europa.eu/RegData/etudes/BRIE/2015/571314/EPRS_BRI(2015)571314_EN.pdf
52 http://www.sciencedirect.com/science/article/pii/S0306261916302495
53 https://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter08_FINAL.pdf
54 https://www.theguardian.com/environment/2016/may/27/g7-nations-pledge-to-end-fossil-fuel-subsidies-by-2025


FOSSIL
FREE
EUROPE