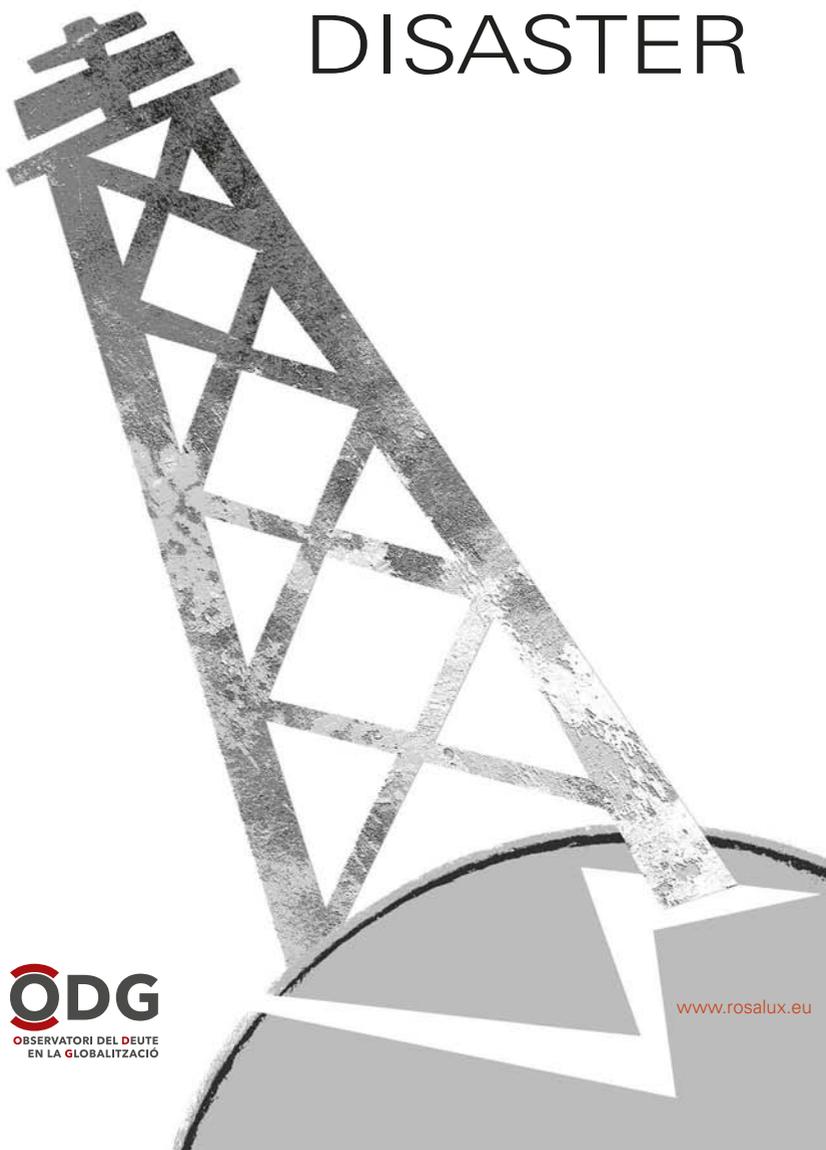


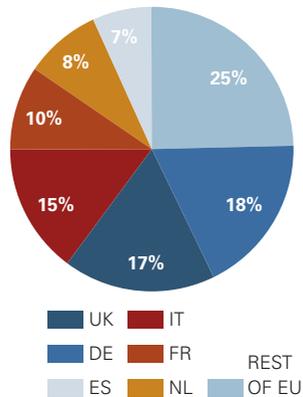
GLOBAL GAS LOCK-IN BRIDGE TO DISASTER



EUROPEAN GAS: SOURCE, DESTINATION AND IMPACTS

TOP 6 EU GAS CONSUMERS

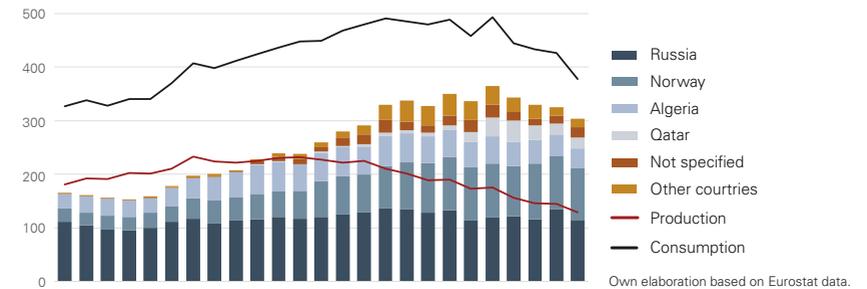
The EU is a key driver of worldwide gas exports. The main share (75%) is specifically imported and consumed by **six countries**: Germany, UK, Italy, France, Spain, and the Netherlands.



Over 90% of imported gas comes from only four countries (**Russia, Norway, Algeria and Qatar**); other exporters are Trinidad and Tobago, Nigeria, Peru, Turkey and Oman. The lion's share is transported via gas pipelines, despite the large installed capacity for importing gas in a liquified way (Liquefied Natural Gas LNG).

With domestic gas production in decline (eg. in the Netherlands) and with a strong desire to be more independent from Russian gas, the EU is increasingly looking for new gas suppliers. From the USA to Azerbaijan, the EU has publicly stated a number of countries it hopes to work with in the close future (amongst others – but not exclusively – the “potential future suppliers to Europe” indicated on the map).

CONSUMPTION OF GAS IN THE EU-28 (IN KTOE³)



However, exporting the gas production away from the EU's sight does not reduce the **negative impacts** that are inherently linked with fossil fuel extraction.

Local communities worldwide have been impacted by gas extraction in their areas, as various extraction methods **pollute** groundwater and cause **earthquakes** impacting people's livelihoods and health. Sometimes people are forced to leave their homes. The gas industry is also responsible for many deaths (explosions, killings, etc).

A number of the potential new suppliers have political regimes based on **corruption, repression and dictatorship**. While the EU states it is diversifying away from Russian gas based on concerns of security of supply, it is unlikely it will find more security or ethics in the new supply chain it is considering.

While most of the EU has given up on fracking projects, it is happily importing fracked gas from other countries, such as Algeria and the USA, where local communities must bear the impacts that EU communities were able to refuse.

Besides the very clear climatic impacts of gas leaks (see next page), import of gas can thus also mean support to undemocratic governments, corruption, violation of human rights, and simply passing the burden onto “other” communities in order to sustain the EU's consumerism lifestyle.

THE EU'S PUSH FOR GAS

While the global climate is warming, and the decline of fossil fuel use can no longer wait, the large majority of Europe's energy use today still depends on fossil fuels. About 74% of energy consumed in Europe in 2015 came from coal (17%), oil (33%) and gas (23%). With 14% coming from nuclear plants, this leaves only 12% for renewable energy sources.

When coal and oil are commonly agreed to be fuels that need to be left behind, gas still remains a source of energy that is seen as acceptable and a "bridge to renewables". The consequences of gas are however just as impactful and urgent on our climate, the environment and local communities.

Despite its broad scale of risks, a push to build new mega gas infrastructure – mainly pipelines and LNG terminals – is happening within the European Union (EU). Through the EU's "Projects of Common Interest" scheme (PCIs), gas projects are subject to streamlined procedures and are eligible to apply for public financing. Other gas infrastructure projects are also being developed without the EU's assistance.

THIS PUSH FOR GAS IS HOWEVER NOT THE RESULT OF

- > a demand for gas – as demand in Europe has declined by 23% since 2010.
- > a real need for more capacity – the existing gas infrastructure in Europe is massively under-used. In 2015, usage of LNG plants was 19 %, and 69 % for gas pipelines.

SO WHY IS THE EU PUSHING FOR MORE GAS INFRASTRUCTURE?

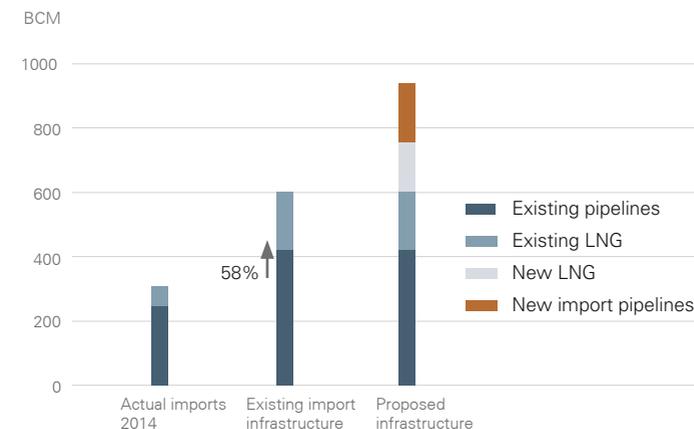
- > 42% of gas exported worldwide is imported into Europe¹
 - > many **interest groups** – both within and outside of Europe – are making sure business as usual can be continued
- > Europe is actively trying to reduce its dependency on Russian gas (currently responsible for 29% of EU's imports) under "energy security" concerns, and thus pushing to build infrastructure to import from elsewhere.

THE AIM OF THIS MAP

Global Gas Lock-in: Bridge to Disaster is to give an overview of the (existing and planned) gas infrastructure within Europe. It focuses specifically on the PCI gas projects and puts a light on where gas is being imported from.

The new gas supply route that is being developed reinforces the neocolonial structure where minority and vulnerable groups bear the costs of extraction. If built, this infrastructure will last for decades and will lock us into a continued fossil fuel dependency. These infrastructures are inconsistent with the EU's strategy on climate change and energy and need to be stopped before they are built.

LACK OF DEMAND FOR PROPOSED NEW INFRASTRUCTURE²



1. 2015 data <http://globalmotion.pageflow.io/walkingtheline#37823>

2. E3G, Bruegel, ENTSOG, European Commission: <https://www.e3g.org/library/more-security-lower-cost-a-smarter-approach-to-gas-infrastructure-in-europe>

MEGAPROJECTS

Dozens of gas projects are being developed in Europe. Some are supported by the EU politically and financially by being on the PCI list. Others, such as Nord Stream II, are being developed without the EU's support and through private commercial funds. Their costs vary from hundreds of thousands US\$ for smaller projects up to 45 billion US\$ for the biggest project.

A SELECTION OF PCI PROJECTS TO KEEP AN EYE ON:

> SOUTHERN GAS CORRIDOR (SGC) –TRANS ADRIATIC PIPELINE (TAP)

A gas pipeline intended to bring gas from Azerbaijan and Turkmenistan to Italy; it is the most ambitious energy infrastructure to be undertaken by the European Union to date. This means EU support for the corrupt and repressive regime of the Aliyev family, which rules Azerbaijan. All sections are considered to be PCIs. The pipeline project would span 3.500 km across countries as Turkey, Greece and Albania and carry an amount of climate destructing gas to Europe which is unproportionately small (10bcm) compared to the mega project's cost of 45 billion US\$. Furthermore, the impact this will have on the countries it passes through has not been taken into consideration. For example, at the farthest end of Italy, the organisation No TAP is against the project because of the damage it will cause to local ecosystems and also in Greece and Albania there are concerns about farmland and tourism.

> MIDCAT

This pipeline would connect the gas network of the Iberian Peninsula with France via Catalonia. The first section has already been built but, although it is a PCI, the project has come to a standstill. Numerous social and ecological organisations have complained about bad planning and the environmental impact caused by construction. The Spanish people would not profit from the project and this unneeded project risks leading to stranded assets and taxpayers paying the bills for overinvestment. This is a key pipeline to facilitate the flow of Algerian gas to reach Europe.

> BALTIC PIPELINE

A 200–290 km pipeline connecting Poland and Denmark through the Baltic Sea. The pipeline has already received public financial support of 400.000 Euros for feasibility studies.

> EASTRING PIPELINE

A huge project starting in Slovakia and ending at the Bulgarian/Turkish border. It crosses Bulgaria, Romania and the north-western part of Hungary. The project comprises four new pipelines, reaching a length of around 1000 km.

> GALSI PIPELINE

The project is divided in three sections: an offshore pipeline between Algeria and South Sardinia, an onshore pipeline from South to North Sardinia, and an offshore pipeline between South Sardinia and Tuscany. In total, the pipeline will be 851 km long and the deepest gas pipeline ever built.

> KRK TERMINAL

LNG terminal in Croatia, on the Island of Krk. Discussions of building instead a Floating terminal off the island have begun. The terminal would provide a source of gas to the Baltic and Balkan states Moldova, Romania, Bulgaria, Austria, Greece, Turkey, and Ukraine.

> BULGARIA-ROMANIA PIPELINE

This huge pipeline crosses Hungary, Romania and Bulgaria, eventually connecting the borders of Turkey on one side and Austria on the other. The pipeline connects the northern ring of the Bulgarian gas transmission system with the Romanian pipeline (Podisor-Horia) and extends the capacity of the Romanian-Hungary pipeline (Hurezani-Horia-Csanadpalota).

GET INFORMATION ON ONGOING CAMPAIGNS:

Southern Gas Corridor, Europe & Asia – Fighting gas pipeline and public financing:
<http://www.counter-balance.org/new-documentary-walking-the-line/>

Trans Adriatic Pipeline, Italy – No TAP: Fighting planned gas pipeline and corruption:
<https://ejatlas.org/conflict/trans-adriatic-pipeline-in-puglia-italy>

MidCat, Spain – Plataforma Resposta al MidCat – Fighting planned gas infrastructure:
<https://gasoducte.blogspot.com/> & <https://ejatlas.org/conflict/midcat-gas-pipeline>

Fos-Dunkirk pipeline, France: www.nonaugazoduc.org

Gothenburg LNG terminal, Sweden: <http://www.fossilgasfallan.se>

Project Castor, Catalunya: www.odg.cat/es/juicio-castor

Groningen gas fields, Netherlands Phasing out fossil gas production:
<http://www.groenfront.nl/campagnes/groningen-gas>

Fracking struggle, UK: <https://reclaimthepower.org.uk/> & <http://frack-off.org.uk/>

WHY GAS IS NOT A BRIDGE FUEL

When gas is burnt, it generates less CO₂ than other fossil fuels. This is why it has been labelled as a “clean fossil fuel.” However, a crucial element needs to be taken into consideration: along the supply chain, from extraction to transport, gas leaks occur.

This so-called “natural” gas consist of about 90% **methane**, which has a global warming capacity 86 times greater than CO₂ the first 20 years after its release into the atmosphere. Methane leaks can reach 10.1 % (unconventional gas)⁴ and 5.96 % (conventional gas) during the extraction process and transport. Once on the methane tanker, losses can account for 0.25 % per day of transit.

A series of studies⁵ have shown that the amount of full life cycle emissions of methane do not compensate for the CO₂ that would be avoided when switching from coal- to gas-fired electricity generation. These numbers show a switch to gas would not be beneficial to the climate, nor would we reach the internationally agreed goal to remain below a 2°C increase in global temperature.

Moreover, as gas demand is falling, there is a high risk for new gas infrastructure to become **stranded assets**. As the EU supports projects like these through public-private partnerships (PPP), assuming the risk, it is the public sector (and thus the taxpayer) that pays the bill if the project turns out not to be profitable.

Altogether, **gas is not a bridge fuel**. By allowing new gas infrastructure to be built, the EU is forcing its citizens into another couple of decades of unnecessary fossil fuel dependence, and to invest in risky assets diverting money away from a cleaner future.

4. Schneising et al, 2014 <http://onlinelibrary.wiley.com/doi/10.1002/2014EF000265/abstract>

5. Miller et al, 2013 <http://www.pnas.org/content/early/2013/11/20/1314392110.abstract>, Brandt et al, 2014 <http://www.sciencemag.org/content/343/6172/733>, Howarth, 2015 (http://www.eeb.cornell.edu/howarth/publications/f_EECT-61539-perspectives-on-air-emissions-of-methane-and-climatic-warmin_100815_27470.pdf)

GLOBAL GAS LOCK-IN: BRIDGE TO DISASTER

This map gives an overview of the existing and planned gas infrastructure within Europe, focusing on LNG terminals and pipelines supported by the EU. It shows where gas in Europe is coming from and might come from in the future, indicating Europe’s neocolonialist way of extracting resources in third countries for proper consumption. The negative consequences of gas extraction and transport are for local communities to bear, whilst others happily collect the profit they have prioritized before people and climate. Gas leaks occurring along the supply chain are allowing methane – gas’ main component – to be released into the atmosphere, very rapidly accelerating global warming as we speak. In short: gas is a fossil fuel and needs to be left in the ground. Period.

HOW TO GET INVOLVED IN THE FIGHT AGAINST GAS?

Find out about (planned) gas projects in your area:

<http://ejatlas.org/featured/global-gas-lock-in-map>

http://ec.europa.eu/energy/infrastructure/transparency_platform/map-viewer/main.html

Find out if a local group is organizing around a specific conflict:

<http://odg.cat/MCA/GasEU/> – <http://www.gastivists.org>

More information?

See publication “Global Gas Lock-in: Bridge to disaster”;

<http://www.rosalux.eu/publications/global-gas-lock-in-bridge-to-disaster/>

ORGANIZATIONS, NETWORKS AND LOCAL GROUPS:

350.org | Attac France | CEE Bankwatch Network | Climate jobs campaign, Portugal | Climáximo, Portugal | Corporate Europe Observatory | Counter Balance | Ecologistas en Acción, Spain | Food & Water Europe | Fossilgasfällan, Sweden | Friends of the Earth Europe, France, Netherlands, Spain | Gastivist-Network | Leave it in the Ground Initiative (LINGO) | Observatori del Deute en la Globalització (ODG), Catalunya | Plataforma Resposta al Midcat, Catalonia | Platform London, UK | PowerShift e.V. Berlin, Germany | Re:Common, Italy | Reclaim the Power, UK | Rosa-Luxemburg-Stiftung Brussels, Belgium

Content: Raül Sánchez, Noëlie Audi-Dor, Marijke Vermander, Marlis Gensler – August, 2017

Design: Mélanie Heddrich – Production: HDMH sprl

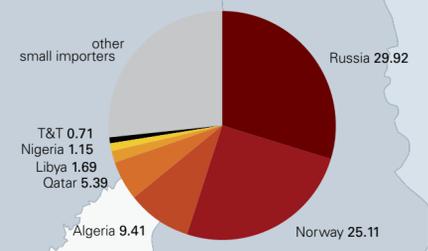
GIS content: Raül Sánchez

Rosa-Luxemburg-Stiftung, Brussels Office

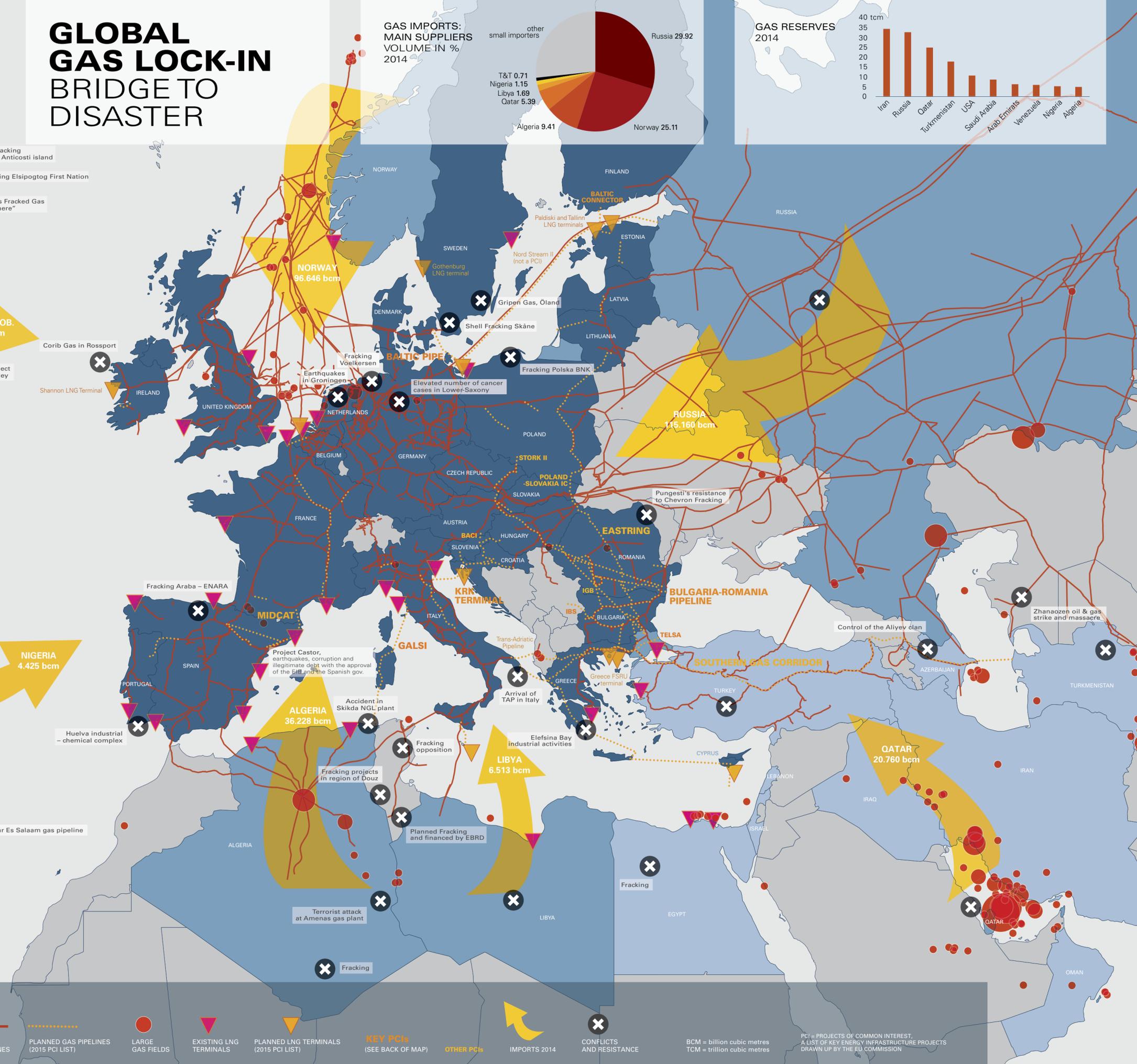
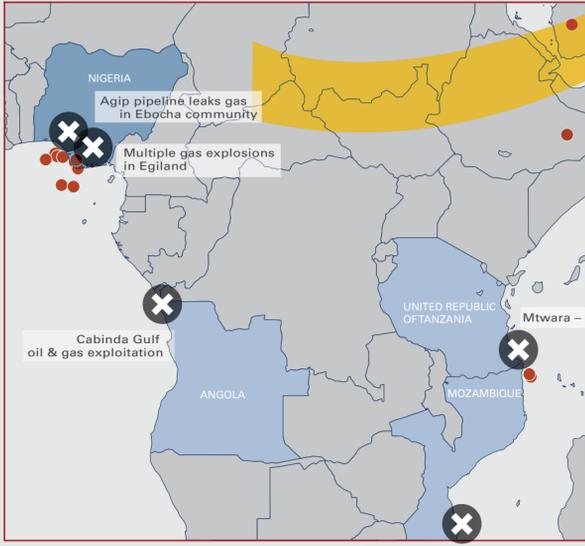
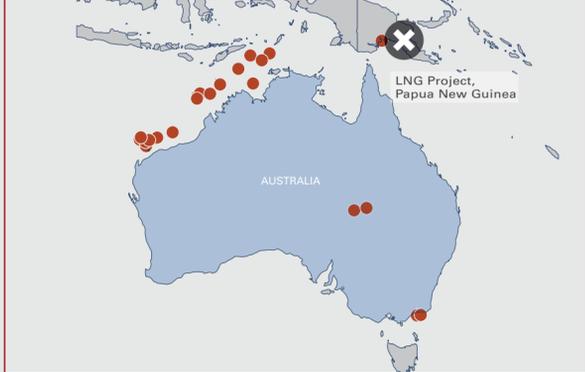
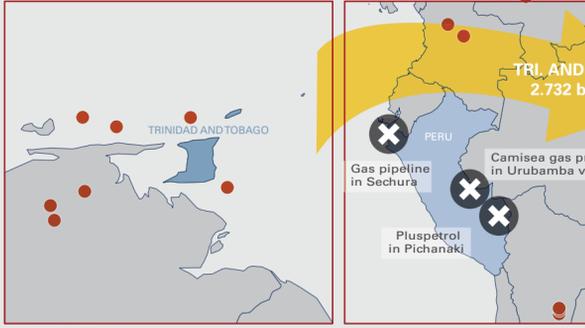
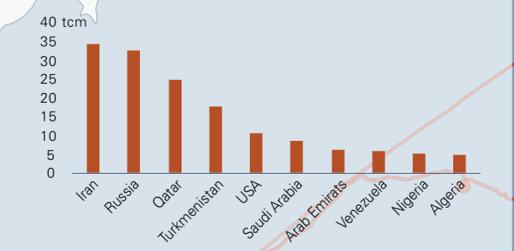
Rue Saint-Ghislain 62, 1000 Brussels, Belgium, contact: marlis.gensler@rosalux.org

GLOBAL GAS LOCK-IN BRIDGE TO DISASTER

GAS IMPORTS: MAIN SUPPLIERS VOLUME IN % 2014



GAS RESERVES 2014



LEGEND

- EU COUNTRIES
- MAIN SUPPLIER COUNTRIES
- POTENTIAL FUTURE SUPPLIERS TO EUROPE
- EXISTING GAS PIPELINES
- PLANNED GAS PIPELINES (2015 PCI LIST)
- LARGE GAS FIELDS
- EXISTING LNG TERMINALS
- PLANNED LNG TERMINALS (2015 PCI LIST)
- KEY PCIs (SEE BACK OF MAP)
- OTHER PCIs
- IMPORTS 2014
- CONFLICTS AND RESISTANCE

BCM = billion cubic metres
TCM = trillion cubic metres

PCI = PROJECTS OF COMMON INTEREST. A LIST OF KEY ENERGY INFRASTRUCTURE PROJECTS DRAWN UP BY THE EU COMMISSION