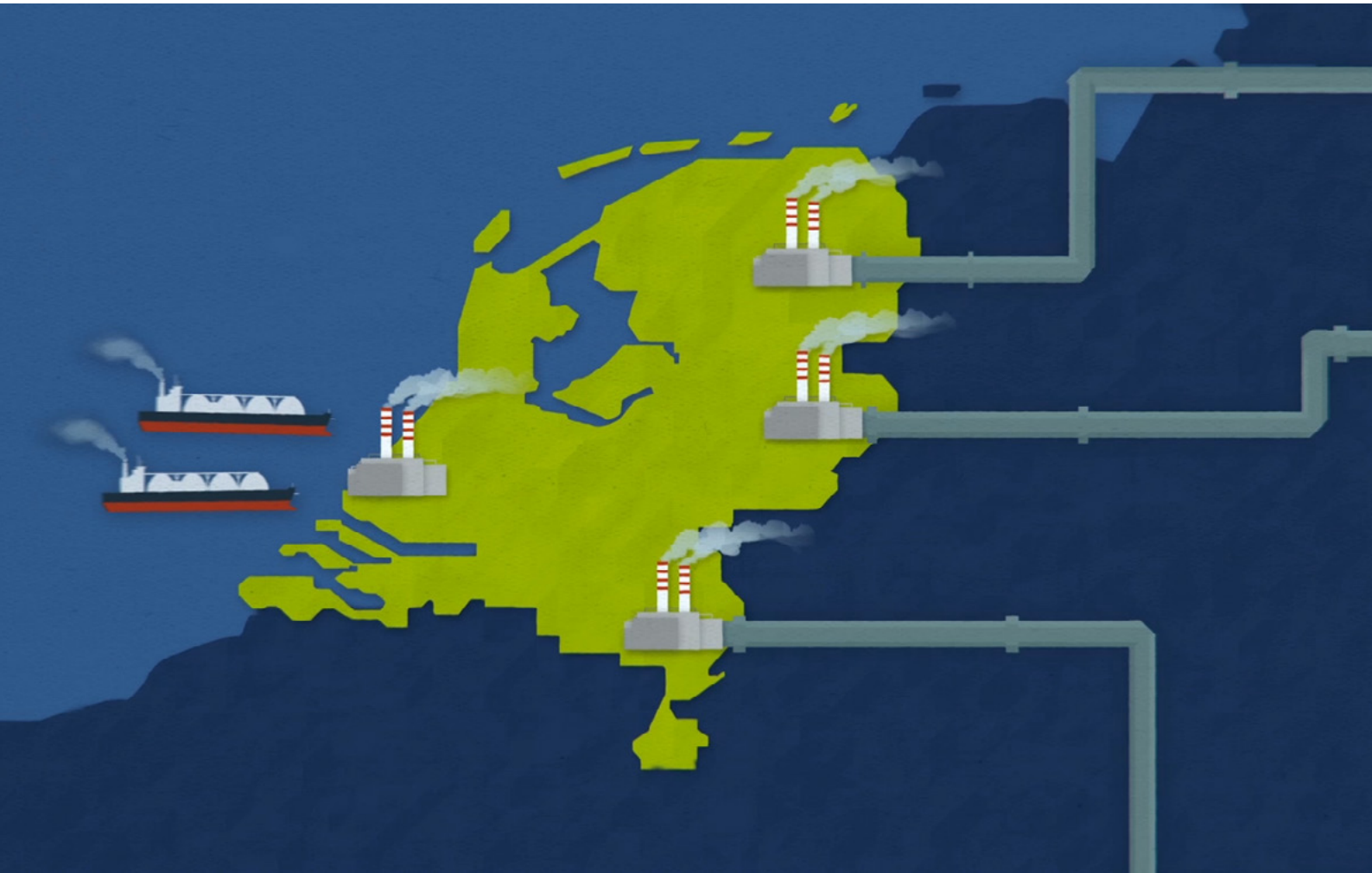


The Price of Gas for Europe




Both ENDS
Connecting people for change

Colophon

Both ENDS strives for a socially just and sustainable world. To this end we support organisations in developing countries that are active in the areas of poverty alleviation and environmental management. These local organisations have in depth knowledge of what the problems are and often come up with inspiring, sustainable solutions. We support them by providing information and mediation in funding, lobbying and networking.

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Both ENDS, 2014



Watch De Prijs van Gas animation (2 minutes) on
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Introduction

'Everyone cooks on natural gas' commented the Dutch minister for Business, Henk Kamp, on the earthquakes caused by the extraction of natural gas in the northern part of The Netherlands. Natural gas is an important source of energy for the whole of Europe and The Netherlands are an important supplier to other European countries. Natural gas is that important to Europe that in The Netherlands

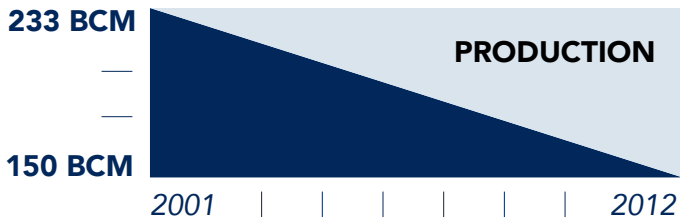
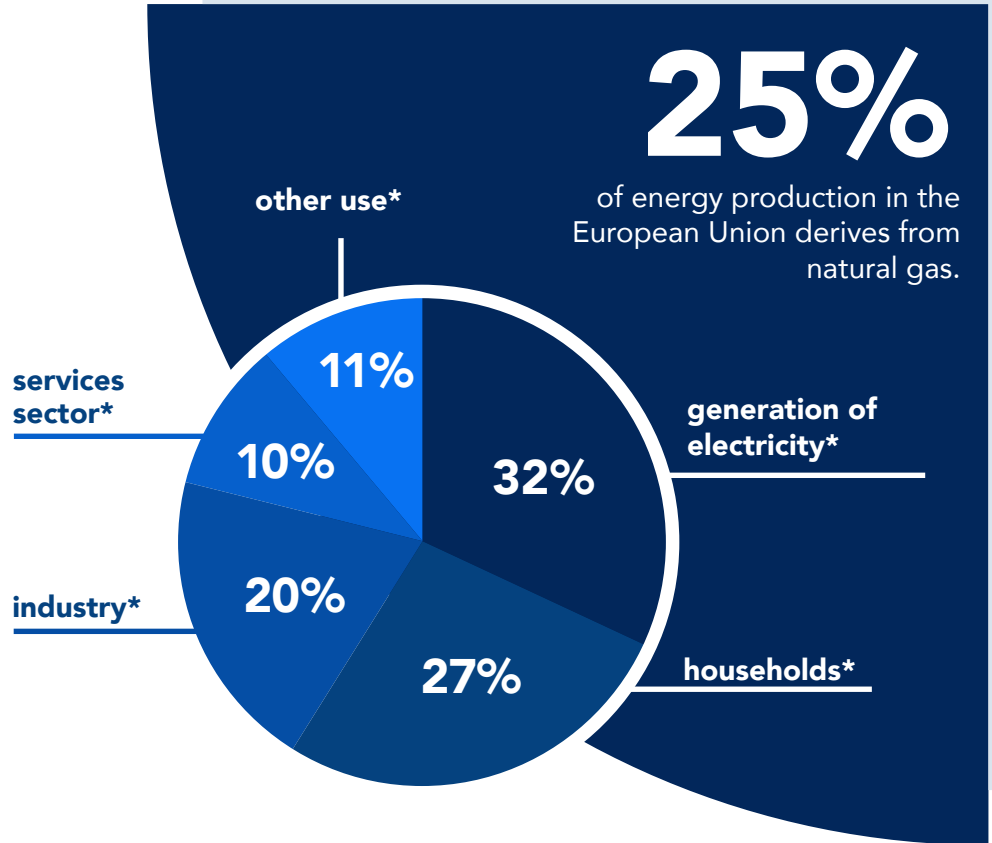


investments have been made in pipe lines, gas storage, and an LNG Terminal. Large investments have also been made in other European countries. These investments are partly funded by European governments and European public banks, like the European Investment Bank.

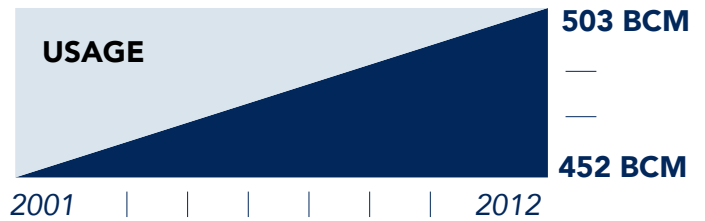
At the same time gas as a sustainable energy source has become increasingly under discussion. There are protests against the construction of infrastructure for natural gas and shale gas extraction in the whole of Europe. Natural gas is also running out. Europe is increasingly dependent on imports of natural gas from the Northern African region, and from countries like Azerbaijan and Russia. The impact of extraction on human rights and the environment over there are relevant for the pending discussion over here. It remains to be seen if that gas ultimately is a sustainable and socially responsible energy source.

Both ENDS writes in this report that the dependence on natural gas of The Netherlands and Europe increases as a result of investments in the gas infrastructure by European governments and institutions. The political choice for gas is being made at a time that gas is running out, has to be imported from elsewhere, and is expensive in comparison to other energy sources.

Highlights: Natural gas in the EU



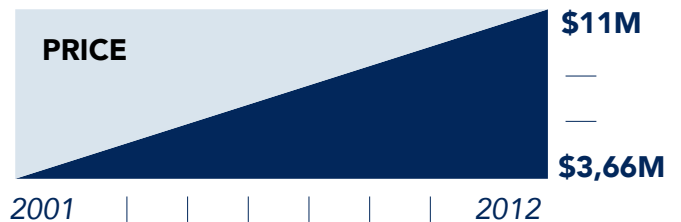
The EU production of natural gas fell from 233 BCM in 2001 to 150 BCM in 2012.** Expectations are that production will have fallen another 20-30 BCM by 2050.



Natural gas consumption in the EU increased from 452 BCM in 2001 to 503 BCM in 2010 and subsequently decreased to 444 BCM in 2012.**

2050: >150BCM?

In 2050 natural gas consumption has to be **below 150 BCM**, in order to **prevent** a further global warming of **2 degrees Celsius** (or more).***



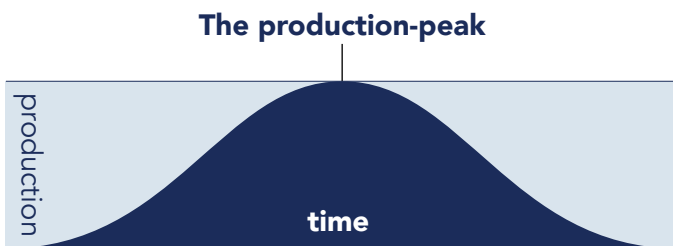
Natural gas prices in Germany increased from 3,66 \$/million BTU in 2001 to 11\$/million BTU in 2012.**

* 2010 figures Eurostat
 ** BP statistical review
 *** Vrije Universiteit Brussel

Gas in Europe: The Expectations

The European gas market is changing

Natural gas will dominate the energy debate in Europe for the coming years. This is largely due to the imminent huge shifts in the gas market. Europe will have to recalibrate its attitude towards this source of energy, which will bring about friction and political tension in many areas. Governments and public banks choose to invest in gas, but they will have to take into account the availability and market price of natural gas and the irrepressible rise of sustainable energy. We will list the main causes of the landslide shift occurring in the gas market for you here:



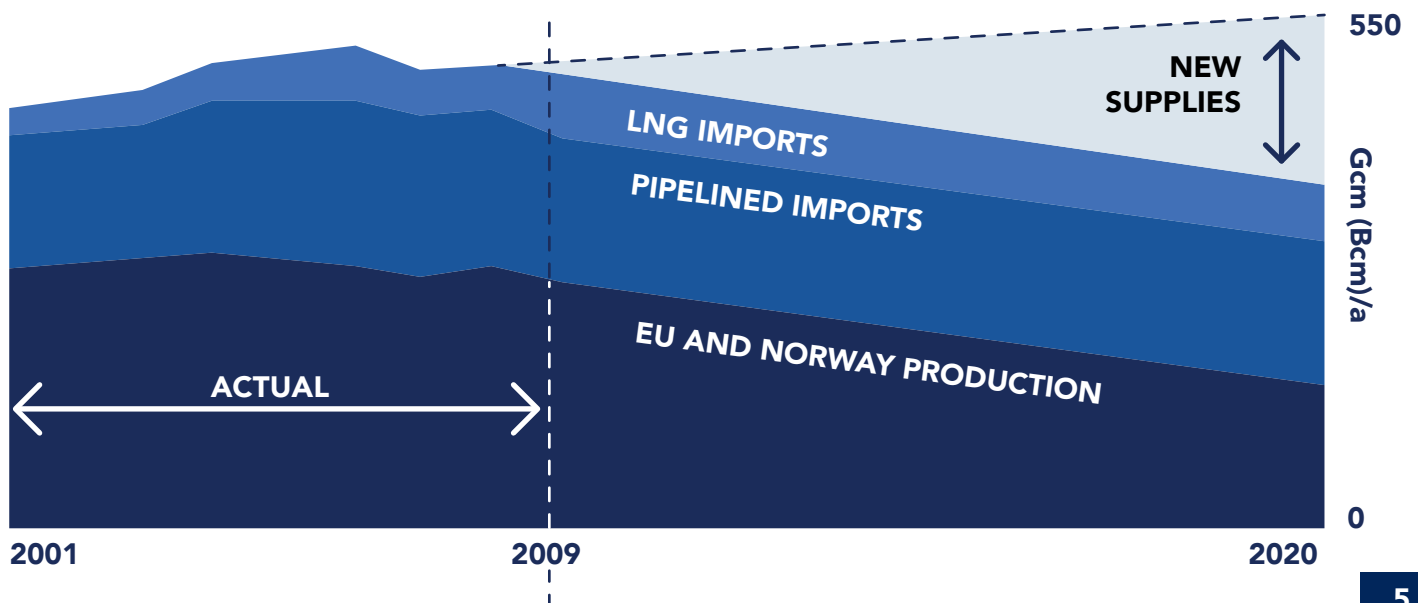
The 'bell-curve' of the production from a gas field

European natural gas is past its peak production

European natural gas mainly originates from the North Sea and from the province of Groningen in The Netherlands. Natural gas is a finite resource. Like oil fields, natural gas fields reach their peak sooner or later. They will not have run out, but will have reached their maximum production capacity. After which, the production will start declining further and faster all the time. The Groningen gas field is the largest gas field in Europe and was discovered in 1953, and it reached its peak around 1975. Gas production in the North Sea started in the seventies and peaked in 2000¹. Expectations are that The Netherlands, at the moment one of the biggest gas exporting countries in Europe, will no longer be able to produce enough gas to satisfy its own consumption by 2023². Again, the gas will not have run out then, we will keep pumping up gas till 2050. But the flow will be less and less. It is highly unlikely that European shale gas will stop this descent. If it will prove to be economically viable to be produced in Europe, shale gas will slow down the descent somewhat.

Eu gas production and consumption: Actual versus forecast

Based upon: BP statistical reviews 2002 - 2010
IEA WEO 2009. EIA IEO 2009

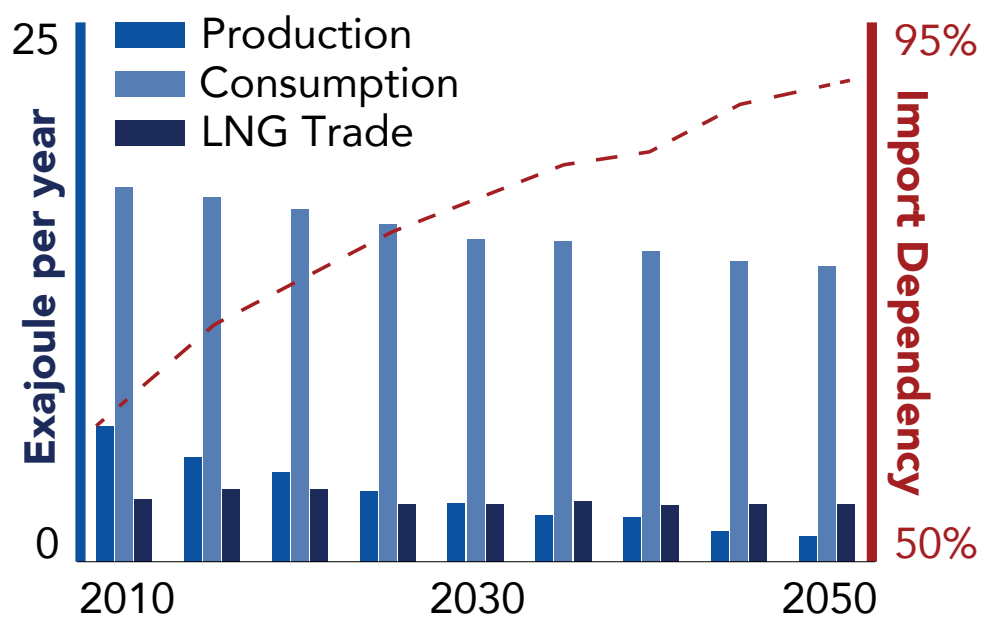


Europe uses ever less natural gas

The good news from a sustainability perspective is that Europe uses ever less natural gas³. This is partly due to the economic crisis and the stagnating economic growth ever since. However, a more important reason is the rise of sustainable energy, and a more efficient use of energy, for example in the isolation of buildings. On the electricity market natural gas is being squashed between cheap coal from the US and cheap wind and solar energy from Denmark and Germany. The energy production in more and more gas plants has been shut down, temporarily or permanently. To the major frustration of the big energy companies, who have invested billions in these large plants.

Europe becomes increasingly dependent on imports

The decline in gas consumption is moving slower than the decline in European gas production. More gas has to be obtained from abroad. For now Europe remains the chief consumer of natural gas from Russia and Northern Africa. Russia and Northern Africa will remain the chief suppliers in the future as well. The gas from these countries will be supplemented further with natural gas from Central Asia, with newly found gas deposits in the Eastern Mediterranean and with LNG. Though the LNG share in Europe will remain small, due to the higher cost price and the stiff competition with Asia. Currently LNG originates mainly from Nigeria, Qatar and Trinidad.



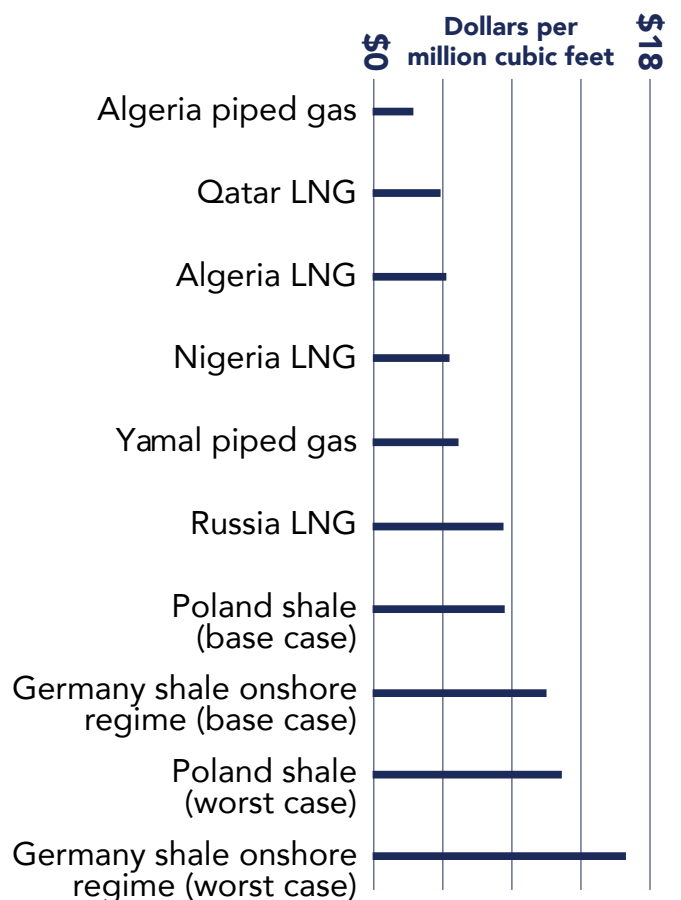
Source: The Role of Natural Gas in a Low-Carbon Europe: Infrastructure and Regional Supply Security in the Global Gas Model , DIW Berlin March 11, 2013

The shale gas revolution will pass by Europe

The shale gas revolution that rocked the energy market in the US has giving raise to many hopes that something similar could be possible in Europe. Though the chances of that happening are nil. An example is given by what happened in Poland before. Initially presented as the Mecca for shale gas in Europe a few years later, oil companies like ExxonMobil and ENI gave up their concessions, referring therefor to the disappointing results as reason. ⁴ There's simply not enough shale gas in European soil, and furthermore, the geology of Europe is more challenging, the oil industry less developed and laws more restrictive. This also ensures that the cost price of shale gas production in Europe will be above current market prices. Add to that a firm and broad resistance to shale gas, and a European shale gas revolution becomes unlikely. Shale gas production will remain a peripheral phenomenon, and will not reduce the price of natural gas. Even the export of shale gas from the US in the form of LNG will not be economical due to the enormous costs. Especially, considering the general expectations regarding the need for the natural gas price in the US to increase considerably, in order for shale gas production not to stagnate in the US itself.

Natural gas in Europe is expensive and will remain so

These developments ensure that natural gas in Europe remains expensive, and will slowly but surely price itself out of the market as an energy source. This will result, among other things, in an accelerated return on the isolation of buildings. This also means that the chemical industry will (partly) be moved to regions with a lower gas price, that more people in Europe won't be able to pay their gas bills, and that countries that are heavily dependent on gas imports will face permanent problems with their trade balance.



Bron: UK Parliament, Shalegas, gas market and prices, oktober 2012. <http://www.publications.parliament.uk/pa/cm201213/cmselect/cmenergy/writev/isg/m01.htm>



The Netherlands wants the EIB (European Investment Bank) to spend lots of public money in new gas transportation infrastructure and storage facilities.

The overhaul of the gas trade

For decennia the trade in natural gas has been dominated by long-term contracts and long-term price agreements. This is a logical consequence of the dependency of the gas sector on pipe lines, with big suppliers on the one side and big buyers on the other, mutually dependent on each other. The price of natural gas was usually coupled to that of fuel, the direct competitor of natural gas. This classic European price model has come under pressure. The increasing liberalisation of the energy market has caused the American model of the 'spot market' to gain a foothold in Europe, too. This change is supported by important market players like the Gasunie, and the British and Dutch governments. In a spot market the daily rate determines the price, and a spot market offers extensive opportunities to 'financialize' the trade in gas through speculation, hedging and derivatives. To facilitate this market model expansion of the gas transport infrastructure between European countries, LNG terminals and more storage capacity are needed. This enlarges the range of choice between gas supply from different sources.^{6,7}

EU gas infrastructure plans and climate

Natural gas is regarded as a transition fuel by the EU. It can span the period between the current era of fossil fuel dominance, and the future era of sustainable technology, which as yet has not been developed sufficiently. Natural gas offers the possibility to replace coal and oil, specifically in the production of electricity and heat, at an accelerated pace. Subsequently, the use of gas itself can be phased out in favour of more sustainable forms of energy. Theoretically, these changes could provide cheap and quick CO₂ benefits. At first glance it's what makes the plans of the EU sustainable, and also sensible and logical in view of the climate.

This switch to gas would, therefore, need to be accompanied by the phasing out of coal and oil. And there is no policy to facilitate this, neither in the member states nor in the EU. At the moment the share of natural gas in the energy mix is even decreasing, because gas is losing the competition to cheap coal. The energy sector shuts down gas plants in order to fully take advantage of the capacity of its coal plants. Some gas plants are even being demolished, for example the Eneco gas plant in Rotterdam.⁸ In 2011 natural gas consumption dropped by 10%, in 2012 by another 2%. In the same period coal consumption increased. The drop in demand is caused by the economic crisis, the rise of sustainable energy, the imports of cheap coal from the US and Colombia and warmer winters. It is expected that all these factors will keep the consumption of gas in the EU low in coming years.⁹

As a transition fuel natural gas consumption will also have to be reduced at an accelerated rate. It might be the cleanest of the fossil fuels, it's still a fossil fuel. If we want to keep below 2 degrees of global warming, we need to reduce our natural gas consumption from 450 BCM now to 150 BCM in 2050.¹⁰ Investments in gas infrastructure will have to take this into account. There's a real danger of investment in overcapacity that will no longer be viable. At the same time, as long as it has not been written off, this infrastructure causes a lock-in effect in gas consumption.

Illustrative examples are the current plans for the construction of extra gas pipe lines and gas storage facilities to enable gas imports. Though the EU in other areas calculates a further decline in natural gas consumption of -0.6 %, regarding investments in additional infrastructure it assumes a continuing rise of gas consumption of 1.1%. Scientists at the University of Brussels (WUB)¹¹ calculated that Europe will need between 0 and 150 BCM in 2050 for an energy transition scenario that takes into account the determined limit of a maximum increase in temperature of 2 degrees Celsius. The EU itself assumes an amount of 200 to 320 BCM in 2050. Only 20 to 30 BCM of which will be produced in Europe itself, assuming that shale gas extraction will not reach a substantial size. For the WUB scenario infrastructure will need to be built for imports of maximum 120 to 130 BCM, for the EU scenario for 300 BCM. Please note, this is infrastructure that lasts another 50 years.

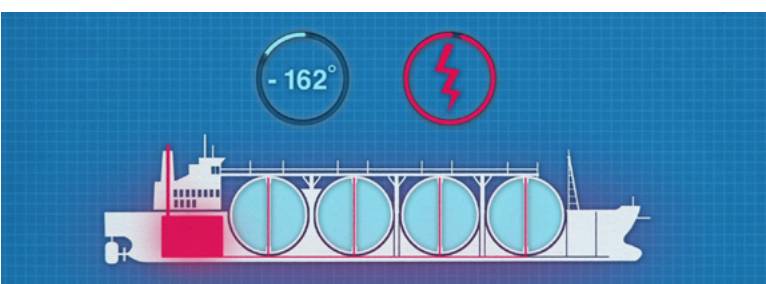
In 2011 311 BCM natural gas was imported through pipe lines. The total capacity of pipe lines to Europe for importing gas amounted to 440 BCM. The current capacity is already more than sufficient to meet demand till 2050. On top of the current capacity, moreover, another 55 BCM was added with the addition of the new Nord stream pipe line between Russia and Germany and 274 BCM with LNG terminals. This includes both existing ones and terminals under construction. Together with other expansion plans the import capacity appears to grow to a size of 825 BCM in 2020. Even in a 'Business as Usual' scenario we are creating

overcapacity¹². Even if Russia were to shut down the pipe lines through Belarus and Ukraine, with a joint capacity of 180 BCM, for political reasons, on which more later, there's still a surplus of capacity.¹³

A higher dependency on natural gas imports will also entail an increase in Europe's CO2 footprint for one cubic meter of natural gas. Firstly, simply because of the fact that long distance transport of natural gas costs energy. The natural gas in a pipeline needs to be pressurized. On top of which, leakages during transport are almost inevitable. Furthermore, local production circumstances in the different countries of origin can make a lot of difference. While natural gas production in Europe and Northern Africa is relatively clean, the Russian oil and gas sector are infamous for their outdated, leaking infrastructure. A situation made worse by the soil becoming unstable in defrosting permafrost areas. So, one cubic meter of Russian natural gas has a very different CO2 intensity than a cubic meter of gas from Groningen. A high CO2 intensity applies all the more for LNG. The freezing of natural gas in order to liquefy it, and then defrosting it again increases the CO2 intensity of natural gas from 22 to 75 kg CO2/boe.¹⁴ With an increase in the share of LNG and imported gas in the European natural gas mix, the CO2 intensity of natural gas deteriorates, and thus diminishes the contribution this energy source could provide to the energy transition.

On the electricity market natural gas and sustainable energy can complement each other perfectly. Natural gas powered plants can quickly adapt to the fluctuations now still occurring with sustainable energy sources, like wind and solar. Gas is also cleaner than nuclear or coal. Nevertheless, natural gas is at the same time competing with sustainable energy on the liberal energy market and a competitor for public investments in sustainable energy. Every euro put towards expanding the gas infrastructure won't be spent on investments in 'smart grids', power points at sea for windmill parks or on subsidies for the further development of clean technology.

This raises the question if the EU, national member states and public banks are investing in the right places. If the current investments in extra gas infrastructure are to be profitable, it can't be combined with a climate policy aimed at phasing out the use of fossil fuels. While aiming to achieve a scenario in which the use of natural gas is decreased, Europe is investing in making natural gas more CO2 intensive, and investing billions in the construction of gas infrastructure that will be obsolete fairly soon.



Liquefied Natural Gas is natural gas cooled to approximately -162 C. LNG Shipping is energy costly.

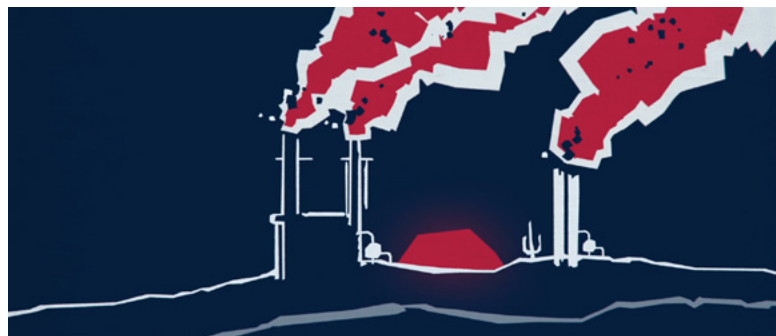
The consequences of natural gas imports for people and environment in countries outside Europe

Europe's dependency on gas imports is growing. These imports have a price. A price in the shape of euros flowing out of Europe, but also a price in the sense of geopolitical dependency, and often also a price in the shape of human rights violations and environmental impact at the locations where the gas is extracted. The EU's energy policy is often at odds with her other ambitions in international policy concerning poverty reduction, human rights and conflict prevention.

Natural gas for the European market will come mainly from the immediate surroundings. Transporting natural gas is, in fact, expensive. The bulk of the imports will be through pipe lines, mainly from Russia and Northern Africa. A growing share of the imports is made up of LNG, liquefied natural gas that is imported into Europe using tankers.

Europe is trying to spread its sources of natural gas, so as to be less dependent on Russia, mostly. The options for this are limited. For the short term the focus is mostly on importing more LNG and gas from the Caspian Sea region. For the longer term policy commitment is aimed at the newly discovered natural gas deposits off the coast of Cyprus, Lebanon and Israel, and the possibility of unlocking a natural gas route towards Iran and Iraq. By now, it has become apparent that the options for shale gas extraction and coal gas are limited. Several oil companies and investment banks estimate that it could replace at highest 6% of the actual gas production.^{15 16}

Importing LNG broadens the choices for land of origin. In real terms Qatar, Nigeria, Algeria, Egypt and Trinidad deliver more than 90% of LNG imports. Though expectations are that the LNG share will rise, LNG imports have decreased significantly in recent years, 31% less in 2012 than in 2011.¹⁷ This is mostly due to firm competition from Asia and the price difference with the cheaper gas that enters Europe through the pipe lines.



The external human and environmental costs of gas extraction are high.

The Caspian Sea

The European Union is entangled in a shady little game with Russia about control of pipe line routes towards Europe. This entails exercising strong diplomatic, economic and political pressure on the transit countries, through whose territories the pipe lines run. Nowhere is this clearer than with what has become known as the Southern gas corridor. The corridor covers the area between the Caspian Sea and Europe, and is destined to be the connection between the natural gas fields in Azerbaijan and Turkmenistan and the European natural gas network. Europe wants to obtain its gas from a non-Russian source via a non-Russian controlled pipe line. The EU have an action pending against Gazprom about the monopoly they might claim on access to the South Stream pipe line. According to the European Commission this is a violation of regulation about the liberalization of the gas market.¹⁸

At the same time South Stream, a Russian pipe line of 63 BCM per year, will be connecting Russia with its Southern European buyers. The construction has commenced this year. The previously EU supported Nabucco pipe line has lost out to South Stream. A mixture of Russian diplomatic and economic pressure on transit countries and a wavering EU melted away support for the pipe line. The current alternative for the Russian South Stream is the Trans Adriatic Pipe Line (TAP), which connects Turkey and Greece with Italy and can supply 10 BCM of natural gas per year. The TAP will be connected to the TANAP, a gas pipe line through Turkey and Georgia with a capacity of 16 BCM per year, which in its turn is connected to the Shah Deniz gas field in Azerbaijan. In the future this connection might be extended towards Turkmenistan. The construction is planned for the period of 2015-2019.

The negotiations about access to Shah Deniz show perfectly which social costs are being paid for the importing of natural gas in the shape of human rights violations and local environmental impact.

In 2005 the BTC oil pipe line was being built along the same route. The construction was hailed by oil company BP, and public backers like the World Bank and the European Bank for Reconstruction and Development (EBRD), as an economic and social empowerment of the citizens of transit countries like Azerbaijan, Georgia and Turkey. The construction of the pipe line would boost economic development and generate jobs. In the end the pipe line only delivered a handful of jobs, mostly underpaid, in security and cleaning. The profits of the project have strengthened the position of the non-democratic Azeri regime of dictator Aliyev. The construction also brought about much damage. All along the route stories can be heard about people whose houses were damaged. Many people lost their land, which they were barely compensated for. Whoever tried to criticize was met with tough repression. In Georgia the construction caused a rise in the number of landslides and endangered the economically vital sector of mineral water. In Turkey the pipe line robbed 200 fishermen of their fishing grounds. They are now working as toilet cleaners on a military base in Iraq.^{19 20}

Turkmenistan is known as the North Korea of Central Asia and human rights are not respected there, and generally the same can be said for Azerbaijan. The EU's wish to procure more gas from these countries seems to contravene international policy aimed at improving the human rights situation for the peoples in these countries. Arms trade between the EU and both countries has increased significantly.^{21 22}

Trade agreements have been signed and during the preceding diplomatic talks not a single mention was made about the human rights situation whatsoever.²³



Russia

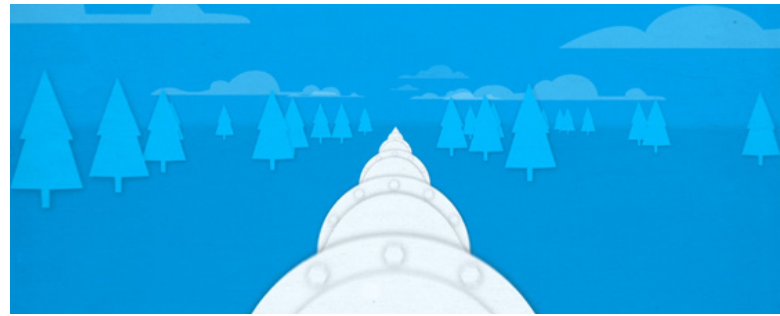
No less than 34% of all EU natural gas imports come from Russia.²⁴ A share that is only expected to rise. All this natural gas comes in through an old existing network of pipe lines that pass through Ukraine and Belarus. Russia is hoping to break the dependency with these transit countries by constructing three new pipe lines, Nord (North) Stream between St. Petersburg and Germany, Blue Stream through the Black Sea to Turkey and South Stream via the Black Sea to Bulgaria and the Balkan.

The extraction of natural gas in Russia mostly takes place in the vast expanse of North Western Siberia. The three largest Russian gas fields, Yamburg, Urengoy and Medvezhye, all have experienced a decrease in their production. New production areas are being developed on the Yamal peninsula and the arctic Shtokman. The social and ecological impact of oil and gas extraction in the area is considerable. The Russian oil industry is characterised by completely ignoring any environmental issues. Digging waste is buried on the spot, oil and gas leakages are common place, the vulnerable tundra in the older production areas has been affected for at least 50% by the construction of roads, pipe lines and the dragging of heavy materials outside of the roads. Its flaring of gas is not matched anywhere in the world. The environmental pollution has a notable negative effect on both the health of the indigenous people and of the migrants who have moved there for the oil industry. Though Gazprom has invested in environmental matters and living conditions in recent years, the expectations are that the situation in the area will deteriorate further, because of a combination of aging pipe lines and the accelerated defrosting of the permafrost due to climate change.²⁵

The indigenous nomadic people in the area are paying the highest price. They are dependent on their reindeer herds and witness their habitat being destroyed. Due to recent law amendments they have been sidelined politically as well now and they are losing the battle in the barely functioning local democracy against the enormous influx of Russians who are employed by the oil industry. They feel like second rate citizens in their own country.

The slow resurrection of Russia's economy since the fall of the Soviet Union is mostly due to the exports of oil and gas. Under Putin the Kremlin's hold on the oil and gas industry has intensified.

At the same time Russia's democracy is under threat. Many critical media have been bought by Gazprom and been silenced on the issues of environmental and human rights.²⁶ The repression against environmental activists and other outspoken critics of the authorities has toughened even further. In this case the EU also appears to have softened its criticism of the human rights situation in favour of its natural gas interests.



The impact of gas projects in the EU

Somewhat similar social dynamics have appeared during the construction of gas infrastructure in Europe itself. Local communities in Turkey, Greece, the Balkan and Italy are confronted with pipe lines, terminals and gas storage. In Greece the opposition against the TAP pipe line views Greek governmental support for the construction as bowing down to foreign interests. Opposition points to the lack of transparency surrounding transport tariffs, and to the expropriations, the possible contribution of the Greek state, procedural details that are crucial to the functioning of the line and the role of the Turkish state-owned company TPAO. They expect the pipe line won't benefit the average Greek, and won't get the country a low price for gas.

Local groups in Italy point out the risks that are attached to the construction of a pipe line in an area prone to earthquakes. Criticism of the government's strategy towards becoming a gas transporting country is rising within the country. Apart from the TAP pipe line, this entails the construction of other lines, LNG terminals and gas storage facilities in Italy.

Gas storage

All over Europe facilities are being built for gas storage. Gas is stored in order to be used during high peaks in gas demand, for trade and for own energy security. The Spanish Castor project shows us a glimpse of the possible risks of gas storage.

Just off the coast of Valencia an old gas field has been prepared for new gas storage. The storage capacity is sufficient to supply Spain with an amount of gas that equals 30% of the daily gas consumption. In September 2013 the Spanish government decided to put a stop to the project. This was done because the project had already caused 220 earthquakes. The Spanish government is now attempting to scratch an article in Spanish law, which obligates the government to pay 1.7 billion euros in compensation to the project owners ACS from Spain and Dundee Energy from Canada, if the project is shut down.

The large scale size of the EU's approach to the construction of its energy infrastructure is nicely illustrated by EU commissioner for energy Gunther Ottinger's list of projects. The list of 'projects of communal interest' (PCI) consists of 248 infrastructural projects, which require 5.8 billion in EU financing for the coming seven years.

Natural gas and The Netherlands

Ever since the discovery of the Groningen natural gas field near Slochteren in 1959, the Dutch economy has been propelled by natural gas. The Groningen field is a supergiant, and Europe's largest gas field. Its discovery transformed the Dutch economy and was a serious boost for state revenue. Currently, the natural gas revenues contribute 12 billion euros a year to the treasury. The Netherlands are the tenth biggest producer of gas in the world. 42% of energy produced in the Netherlands is natural gas, 98% of all households are connected to the gas grid. Cheap natural gas is an important factor in the location for both energy intensive industries and horticulture.

It can hardly be overstated how important natural gas is to The Netherlands. If it wasn't for the Groningen gas field, the country would look completely different. Much of the infrastructure was built with natural gas revenues. The way people heat their houses and cook would be different. The Netherlands would most likely have less horticulture and harbour less energy-intensive industries. Both its taxes and its share of sustainable energy would be considerably higher.
>>



Natural gas and The Netherlands *(continuation)*

>> The role of natural gas in The Netherlands will change considerably in the next 10 to 20 years. Dutch natural gas production will decrease sharply in the coming years and will drop under the level that's determined for our own energy needs in 2023. Which means that exports and therefore the natural gas revenues will dry up. From an exporting country we shall become an importing country. With the earthquakes in Groningen The Netherlands was also jolted into the realization that its gas resources aren't infinite. Finally, the problem was put on the political agenda, though it still lacks any clear vision of scaling down our dependency on natural gas.

Because natural gas production will dry up in the whole of Europe, we will become more dependent on natural gas imports from outside of Europe. At the moment Russia (32%), Norway (29%) and Algeria (13%) supply more than half of all natural gas imports into Europe.²⁷ Dependency on gas from these countries will augment, and will be supplemented with natural gas from the Caspian Sea region. New pipe lines between these regions and Europe will have to facilitate that. The share of LNG will increase and improve access to natural gas from Africa, Latin America and the gulf region. In the more distant future recent natural gas discoveries in the Eastern Mediterranean will most likely be connected to the European gas grid.

At the same time the share of natural gas in the energy mix will decline. Natural gas is mainly used for electricity and heat. In both areas it will increasingly be replaced by sustainable sources, but also by cheaper coal and biomass. Another firm competitor is energy savings. Isolation, using residual heat and more energy efficient electronics are cutting natural gas consumption ever more. Only a clear policy choice to phase out coal and switch to natural gas could change anything about this. The same goes for the hesitant support for natural gas as a transporter fuel in freight traffic and inland shipping.

The spectacular rise of shale gas in the US has raised hopes in some for a repeat of this revolution in Europe. The chances of this happening are thought to be nil. The geological circumstances as well as those above ground are not favourable. There is relatively few shale gas to be expected, it's located deeper in the soil and the European laws

are much stricter than in the US. This all results in a higher price for shale gas than the current gas price. It also renders the chances of permanently high gas prices in Europe very likely. Supported by the higher cost price of imports, LNG and possibly shale gas.

The Dutch reaction to these developments is investing in the expansion of gas infrastructure by means of the natural gas roundabout. Like Italy, Spain and Belgium, The Netherlands is trying to become a hub for natural gas. This stems from the idea that existing knowledge and infrastructure can be permanently used to import natural gas and sell it on. Which is why we built an LNG terminal in Rotterdam, a natural gas storage facility in Bergen, an export pipe line to England, and why the Gasunie has taken shares in the North(Nord) Stream pipe line and in a German pipe line that connects the North(Nord) Stream to the Dutch grid.

These projects are partly funded with public money. De Rekenkamer (the National Audit Office) calculated that the state owned EBN and Gasunie have invested 8.1 billion euros in the above-mentioned projects. De Rekenkamer further established that another 7.2 billion had already been spent, even before a study into the usefulness had been carried out.²⁸ Not enough thought has gone into the fact if this investment serves Dutch public interests. The fact that the infrastructure runs through Dutch soil, does not provide any certainty about imported gas being available to buyers in The Netherlands.

The new LNG terminal in Rotterdam has had a bad year in 2012. The LNG transfer fell from 205,000 tons to 62,000 tons.²⁹ Though expectations are that the supply of LNG will probably grow this year, competition with Asia is still considerable and several market analysts have said that a large share of the global available LNG will be destined for Asia.

It will remain to be seen if The Netherlands will be doing much more than just funnelling Russian gas to England. And if it might not have been better to invest some billions into seriously reducing the demand for gas in The Netherlands.

There's a surplus of gas fuelled energy plants in The Netherlands. This will remain so, even if the deal in the energy agreement to shut down 5 coal plants is upheld. There's enough surplus of gas fuelled plants to replace all 10 coal plants in The Netherlands.

It's just not very likely that the share of coal will decrease by much under the current agreements.



Conclusion


Both ENDS writes in this report that the dependence on natural gas of The Netherlands and Europe increases as a result of investments in the gas infrastructure by European governments and institutions. The political choice for gas is being taken at a time that gas is running out, has to be imported from elsewhere, and is expensive in comparison to other energy sources. At the same time the extraction of gas outside of Europe often goes hand in hand with human rights violations and causes environmental damage.

In the end gas is not the desired sustainable energy source that could replace oil, coal and nuclear. The EU and a public bank like the EIB should completely withdraw from financing infrastructure for gas. A bank like the EIB is in a position to apply itself completely to investments and innovations in renewable energy and to work on an energy transition that takes into account the limits of economic growth.

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Both ENDS is an independent non-governmental organisation (NGO) that works towards a sustainable future for our planet. We do so by identifying and strengthening civil society organisations (CSOs), mostly in developing countries, that come up with sustainable solutions for environmental and poverty-related issues.

In this report Both ENDS presents information on the Dutch and European investments in gas infrastructure in and outside the European Union. We argue that these are investments in excess capacity and do not adequately address the issue of sustainable energy security.

