



STOP CLIMATE CHANGE
PLAY YOUR PART

WHAT IS SHALE GAS?

In Europe, the exploration and extraction of shale gas has only very recently become a topical issue.

[Shale gas](#) is a form of unconventional gas, unconventional referring to the techniques used to extract the energy sources, not the sources themselves. Shale gas is made up of heavily compacted mud and clay, and is much less permeable than ordinary gas-containing rock formations. To extract the gas that is trapped in shale, horizontal drilling techniques and hydraulic fracturing (also known as '[fracking](#)') are required. In this process, a drill burrows into the ground before turning horizontally to drill into the gas-bearing shale rock. Millions of litres of water, sand and chemicals— known as fracking fluid – are then injected at high pressure to fracture the rock and release the gas. Once the hydraulic fracturing process is completed a large amount of the initial fracturing fluids are mixed with waste produced by the fracking. This rises to the surface where it is collected. The recovered fluid is known as 'flowback' or 'waste water'.

WHAT POTENTIAL IN EUROPE?

At the moment, the only country in the world exploiting this resource is the US. According to a study conducted by the EIA in 2011, European countries with the greatest potential for shale gas are Poland, France, Norway, Sweden, Ukraine, the UK, the Netherlands and Germany. In total, the amount of unconventional gas available in Europe is estimated at **35 trillion cubic meters**. Almost half of these unconventional gas reserves are shale gas.

Several oil and gas companies have started exploration for shale gas in several European countries in order to get a clearer picture of the potential. Some national governments have given them licenses for exploration, very often without consulting the local and/ or national community.

PRODUCTION OF SHALE GAS IN EUROPE

For a long time, 'natural' gas has been touted as an efficient, abundant and low-carbon energy resource. Many European Countries see shale gas as a new Eldorado, offering them new industrial and economic opportunities: the potential to become energy independent and net gas exporters. This argument is of particular importance in East European States, which depend heavily on Russia to cover their energy needs. The current Polish Government is now a strong supporter of the development of shale gas on its territory. It plans to introduce special regulations for shale gas production in Poland.

WHY SHALE GAS IS NOT THE SOLUTION TO OUR ENERGY NEEDS

Across Europe, the industry is also presenting shale gas as a '[bridge fuel](#)'. But looking at the full impact of shale gas development clearly shows that this energy source cannot serve as a bridge to a low carbon future. Shale gas is simply not the solution to the EU's energy, environment and climate challenges: It will only generate more problems than solutions in the long-term and risks accelerating climate change in the coming decades.

- **Shale gas extraction is a high-risk activity**

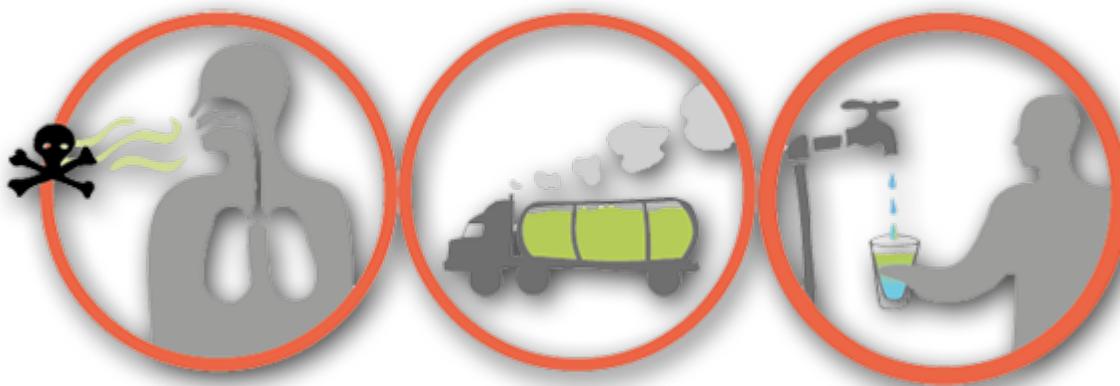
Hydraulic fracturing - or 'fracking' - involves high-risk activities that can have a devastating impact on health and the local environment. It involves drilling a hole to up to 4 kilometers underground into shale rock. A mix of water, sand and chemicals is then pumped in under high pressure. The shale rock is fractured and natural gas is discharged.

Water

Fracking requires an enormous amount of fresh water. Each fracking operation can use around [19 million liters of water throughout its life](#) (what do you mean by life?). That's enough to supply almost 1000 Europeans for a year.

Toxic waste fluid

Each frack [pumps 80-300 tons of toxic chemicals into the earth](#), including volatile organic compounds, plasticizers and petro-chemicals.



Radioactive elements and heavy metals

Radioactive elements and heavy metals are dislodged from deep underground, and carried to the surface by the fracking process. The result is toxic, radioactive waste fluid: a serious threat to people's health, especially local residents.

Then, what happens to it all? Some of the waste fluid is (intentionally) evaporated, creating airborne carcinogens. The remainder is then hauled 'away'... Most water treatment facilities are not equipped to deal with toxic mixture, heavy metals or radioactivity. And, even so, up to 80% of the toxic fluid injected underground is simply left there. Leaks, spills, faulty equipment and human error only add to the significant risk that the fracking process will contaminate our fresh water supplies. Clean water is our most vital resource.

- **European Citizens join forces against the development of shale gas**

More and more communities are expressing concern about fracking and shale gas. They fear for their [water](#), their health, their food, their landscape as well as for the environment. Until now the development of this energy source has taken place behind close doors, without consulting them. EU Governments have the responsibility to inform their citizens and protect them from any negative effect. They must ensure access of information to local communities for any shale gas project.

Furthermore, more and more experts warn that the development of shale gas industry in Europe is dangerously [undermining the EU's effort to fight against climate change](#). So do we really want to risk our health just to prolong (unsustainable) dependence on yet another - even dirtier- fossil fuel?

SHALE GAS IS NOT A SOLUTION FOR OUR ENERGY FUTURE

The [Greens/EFA group](#) in the European Parliament and the [European Green Party](#) have decided to join force with several European [NGOs](#) and local communities to warn all

European citizens and decision-makers about the real danger that the development of shale gas represents.

No to the development of yet another fossil fuel, yes to the promotion of renewable energy sources!

The numerous problems generated by the use of hydraulic fracking are too serious. Instead of encouraging this new high-carbon energy source and locking itself into a fossil fuel economy for decades, the EU must suspend all its existing financial or political support to shale gas projects and immediately [ban](#) shale gas across Europe. It must urgently push for the development, production and promotion of renewable energy production in order to attain its environmental, health and [climate](#) goals.

Together, let's ban fracking and shale gas before it's too late.

Help us spread the word and to inform all European Citizens about the threat the development of shale gas represents in Europe: read the NGOs' [joint statement](#) on shale gas and share [our video 'Let's ban fracking and shale gas'](#) the Greens have made in close collaboration with [Friends of the Earth Europe](#), [Food and Water Europe](#) and the [Health & Environment Alliance](#).



The Greens | European Free Alliance
in the European Parliament