

Unconventional fossil fuels (e.g. shale gas) in Europe

Your profile	
Whom do you represent? -single choice reply- (compulsory)	I am answering on behalf of a company or organisation
Please enter the name of your company or organisation -open reply-(compulsory)	Friends of the Earth Europe
Please enter your e-mail address -open reply- (compulsory)	info@foeeurope.org
Are you answering on behalf of an EU-wide organisation? -single choice reply-(compulsory)	Yes
Please select the option which best describes your organisation -single choice reply-(compulsory)	Environmental or social non-governmental organisation
Unless you specify otherwise, your contribution will be published on the Commission's website. Please indicate here if you wish your contribution to be anonymous. -single choice reply- (compulsory)	You can publish this contribution as it is.
Overall perception of unconventional fossil fuels (e.g. shale gas)	
Which of the following statements reflects your overall opinion about unconventional fossil fuels (e.g.shale gas) best? -single choice reply- (compulsory)	I believe unconventional fossil fuels extraction (e.g. shale gas) should not be developed in Europe at all
Main potential opportunities and challenges	
It could help diversify the EU energy mix -single choice reply-(compulsory)	No benefit
It could avoid increasing the EU's energy import dependency (e.g. imports of oil and gas from outside Europe) -single choice reply-(compulsory)	No benefit
It could strengthen the negotiation position of EU operators towards external energy suppliers -single choice reply-(compulsory)	No benefit
It could make energy cheaper for consumers -single choice reply-(compulsory)	No benefit
It could enhance the competitiveness of Europe's industry -single choice reply-(compulsory)	No benefit
It could attract investment -single choice reply- (compulsory)	No benefit
It could create employment -single choice reply- (compulsory)	No benefit
It could generate revenues for public authorities	No benefit

(e.g. taxes or income benefits) -single choice reply-(compulsory)	
It could lead to technological innovations -single choice reply-(compulsory)	No benefit
It could lead to a substitution of coal to the benefit of the climate -single choice reply-(compulsory)	No benefit
It could help balancing the EU electrical grid -single choice reply-(compulsory)	No benefit
It could have other benefits (please specify and indicate the level of benefits you expect: major/significant/modest benefit) -open reply-(optional)	Shale gas brings only modest benefits to the local areas with drilling, as a drilling boom will be short-lived. Studies also show that shale gas, even on a large scale, will not lower gas prices. Natural gas operations are capital-intensive and generate few jobs, compared to renewables and energy efficiency. Finally, unconventional gas remove the transition towards a truly zero-carbon energy strategy. Investments in shale risk making natural gas a destination rather than a transition fuel.
It could lead to new problems related to the quantity of used water -single choice reply-(compulsory)	Major challenge
It could lead to new problems related to water quality -single choice reply-(compulsory)	Major challenge
It could lead to new problems related to air quality -single choice reply-(compulsory)	Major challenge
It could lead to new problems related to soil -single choice reply-(compulsory)	Major challenge
It could lead to new problems related to land take -single choice reply-(compulsory)	Major challenge
It could lead to new problems related to nature and biodiversity (e.g. forests, vegetation, wildlife) -single choice reply-(compulsory)	Significant challenge
It could lead to new problems related to community disruption (e.g. noise, increased traffic) -single choice reply-(compulsory)	Major challenge
It could lead to new problems related to seismic activity -single choice reply-(compulsory)	Significant challenge
It could give rise to long term geological risks (i.e. after the cessation of the operations) -single choice reply-(compulsory)	Major challenge
It could increase risks to the climate (e.g. methane emissions) -single choice reply-(compulsory)	Major challenge
It could divert resources away from other energy options (e.g. renewable energy sources, energy efficiency) -single choice reply-(compulsory)	Major challenge
It could lead to health and safety risks for workers at the exploration and extraction sites	Major challenge

-single choice reply-(compulsory)	
It could be bad for local image, tourism, and the value of properties -single choice reply-(compulsory)	Major challenge
Lack of transparency and public information (<i>e.g on the foreseen licences and permits, on the operations (such as chemical additives used), their potential benefits and risks</i>) -single choice reply-(compulsory)	Major challenge
Inadequate legislation applicable to these projects (<i>e.g insufficient level of protection of human health and the environment</i>) -single choice reply-(compulsory)	Major challenge
Lack of level playing field for operators in Europe due to different national approaches -single choice reply-(compulsory)	Significant challenge
Lack of capacity of public authorities to supervise a large number of facilities -single choice reply-(compulsory)	Major challenge
Lack of public acceptance -single choice reply-(compulsory)	Major challenge
It could lead to other challenges (<i>please specify and indicate the level of challenges you expect: major/significant/modest challenge</i>) -open reply-(optional)	Managing the cumulative impacts of large-scale shale gas development will be a major challenge: To make a significant contribution to Europe's energy mix and achieve a similar 'game-changer' status as in the United States, thousands of wells will need to be drilled to ramp up production, with enormous environmental, health, and climate risks. Afterwards, drilling operations will have to continue incessantly due to the rapid production decline of unconventional gas wells in the first 2 years.

Addressing the challenges

Plan ahead of developments (<i>e.g expected number of wells; space between wells; distance to residential areas, aquifers, protected areas</i>) -single choice reply-(compulsory)	Very important
Assess the risks of the underground (geological) formation before deciding whether to proceed with drilling and hydraulic fracturing -single choice reply-(compulsory)	Very important
Characterise operational risks before, during and after operations, including through the use of specific models -single choice reply-(compulsory)	Very important
Make sure the well is properly constructed, isolated and does not leak -single choice reply-(compulsory)	Very important
Monitor the quality of water, air and seismicity aspects before, during and after operations -single choice reply-(compulsory)	Very important

Disclose operational data (<i>e.g volumes of water used; chemical additives used; waste characteristics; incidents</i>) -single choice reply- (compulsory)	Very important
Minimise the use of fracturing fluids, and substitute hasardous ones with safer alternatives -single choice reply-(compulsory)	Very important
Minimise the use of water -single choice reply-(compulsory)	Very important
Manage fracturing fluids and waste appropriately -single choice reply-(compulsory)	Very important
Control releases to air, including of greenhouse gases such as methane -single choice reply-(compulsory)	Very important
Limit noise -single choice reply-(compulsory)	Very important
Minimise transportation needs -single choice reply-(compulsory)	Very important
Ensure clear and robust liability regimes, including for the post-closure phase -single choice reply-(compulsory)	Very important
Ensure that operators or permit holders have appropriate financial security in place (<i>e.g to cover possible accidents or post-closure requirements</i>) -single choice reply-(compulsory)	Very important
Provide for inspection of the wells and surveyance of the operations in the wider area -single choice reply-(compulsory)	Very important
Provide for independent evaluation and verification of the projects -single choice reply-(compulsory)	Very important
Ensure adequate responses in case of emergency -single choice reply-(compulsory)	Very important
I have further recommendations (<i>if so, please specify and indicate for each recommendation how important you consider it is to avoid or minimise environmental, climate and health risks of unconventional fossil fuels (e.g shale gas): very important/important/somewhat important</i>) -open reply-(optional)	A mandatory Environmental Impact Assessment will be very important in gathering baseline data to assess the negative environmental impacts of fracking (notably withor groundwater quality data taken before any drilling activity). Monitoring the long-term impacts in the decades after well abandonment is also very important, e.g. the longer-term migration of methane up the wellbore. Companies must assume liability for long-term environmental damages.
If the above measures were implemented according to your ranking, would this change your overall opinion about unconventional fossil fuels (e.g. shale gas)? (as indicated in section 2) -single choice reply-(compulsory)	No

Do nothing, the current framework is appropriate -single choice reply-(<i>compulsory</i>)	No
Develop information exchange, guidance on best practices and encourage voluntary approaches by the industry -single choice reply-(<i>compulsory</i>)	No
Clarify existing EU legislation through guidelines -single choice reply-(<i>compulsory</i>)	Maybe
Adapt individual pieces of existing EU legislation -single choice reply-(<i>compulsory</i>)	Yes
Develop a comprehensive and specific EU piece of legislation for unconventional fossil fuels (e.g. shale gas) -single choice reply-(<i>compulsory</i>)	Yes
I have further suggestions or details on the above options -open reply-(<i>optional</i>)	The highest possible standards must be in place before the shale gas industry is allowed to establish itself in Europe given the negative impacts of the shale gas boom in the United States, However, even updated regulations will not be sufficient to avoid or even reasonably limit the major cumulative environmental and health risks inherent in the drilling activities. I firmly believe that only a ban on hydraulic fracturing would ensure such thing.
Planned developments (<i>e.g number of wells and localisation</i>) -single choice reply-(<i>compulsory</i>)	Very important
Information about operators involved in unconventional fossil fuels (e.g. shale gas) activities, their licences and permits -single choice reply-(<i>compulsory</i>)	Very important
Baseline data (<i>e.g. data on water and air quality prior to operations</i>) -single choice reply-(<i>compulsory</i>)	Very important
Operational data (<i>e.g. volumes of water used; chemical additives used</i>) -single choice reply-(<i>compulsory</i>)	Very important
Information on incidents associated with unconventional fossil fuels (e.g shale gas) exploration and extraction -single choice reply-(<i>compulsory</i>)	Very important
Information on potential risks associated with unconventional fossil fuels (e.g shale gas) exploration and extraction -single choice reply-(<i>compulsory</i>)	Very important
Information on potential benefits (<i>e.g. employment and tax revenues</i>) -single choice reply-(<i>compulsory</i>)	I don't know
Thinking about the next 40 years, do you consider that the development of unconventional fossil fuels (e.g. shale gas) fits	No

within the EU objectives towards a resource-efficient and low carbon economy?
-single choice reply-(**compulsory**)

Are you satisfied with this survey? -single choice reply-(**optional**)

I am satisfied

If you have further comments or suggestions, please write them in the box below. -open reply-(**optional**)

Friends of the Earth is firmly convinced that relying on unconventional gas to pursue the dual objective of guaranteeing energy security and speeding up a transition to a zero-carbon energy mix constitutes a high-risk strategy. Large-scale use of fracking carries many inherent cumulative environmental and health risks, which are impossible to mitigate. This is why we believe that no further shale gas, shale oil and coal bed methane activities should proceed. We would recommend that all Member States should suspend all ongoing activities, abrogate permits, and place a ban on any new projects, whether exploration or exploitation. In order to limit global warming below 1,5 degrees Celsius, and thereby prevent dangerous climate change, fossil fuels must be phased out as quickly as possible. We believe renewable energy and energy savings provide the only viable path to a significant reduction of CO2 emissions. Exploiting unconventional fossil fuels will increase total greenhouse gas emissions since further development of these fuels will increase the world's dependency on fossil fuels and consequently slow down the large-scale deployment of clean energy. In the absence of a ban on fracking, we believe that Member States should only allow unconventional gas operations, after a broad-based public debate about its risks, leading to the highest possible standards for this industry.