

# Environmental impacts of shale gas and shale oil extraction activities

2011/2308(INI) - 21/11/2012 - Text adopted by Parliament, single reading

The European Parliament adopted by 562 votes to 86 with 43 abstentions a resolution on the environmental impacts of shale gas and shale oil extraction activities. Members note that recent technological advancements have already spurred a rapid, commercial-scale extraction of unconventional fossil fuels (UFF) in certain parts of the world, but there is no commercial-scale exploitation in the EU yet and the potential of reserves and possible impacts on the environment and public health have to be further scrutinized. At the same time, Parliament notes that the Energy Roadmap 2050 has identified that shale gas and other unconventional sources have become potentially important new sources of supply and substitution of coal and oil with gas in the short to medium term could help to reduce GHG emissions depending on their lifecycle.

In this context, Parliament makes the following recommendations:

**General framework regulation, implementation, monitoring and cooperation:** Members stresses that, notwithstanding the Member States exclusive prerogative to exploit their energy resources, any development of unconventional fossil fuels (UFF) should ensure a fair and level playing field across the Union, in full compliance with relevant EU safety and environmental protection laws.

They consider that a thorough analysis of the EU regulatory framework specifically regarding UFF exploration and exploitation is needed, and welcome the upcoming conclusion of a number of Commission studies on identification of risks. Parliament urges Member States to be cautious in going further with UFF until the completion of the ongoing regulatory analysis and to implement all existing regulations effectively as a crucial way of reducing risk in all gas extraction operations.

The Commission is called on, following the completion of its studies, to conduct a thorough assessment on the basis of the European regulatory framework for the protection of health and the environment and to propose, as soon as possible, appropriate measures, including legislative measures, if necessary

Noting that the Environmental Liability Directive does not oblige operators to take out adequate insurance considering the high costs associated with accidents in the extractive industries, and recognising that the industry bears primary responsibility for preventing and reacting effectively to accidents, Members call on the Commission to consider including operations related to hydraulic fracturing in Annex III of the Environmental Liability Directive and on the relevant authorities to require sufficient financial guarantees by operators for environmental and civil liability covering any accidents or unintended negative impacts caused by their own activities or those outsourced to others. They consider that the polluter-pays principle should apply in case of environmental pollution.

**Environmental aspects of hydraulic fracturing:** Members recall that the two main techniques deployed in unleashing the UFF potential of shale gas and coal bed methane, horizontal drilling and hydraulic fracturing (fracking), have been used in combination for just a decade. However, there is insufficient data on fracturing chemicals and environmental and health risks associated with hydraulic fracturing, and they reiterate that it is essential that the precautionary and the polluter-pays principles are applied to any future decisions about the development of fossil fuel resources in Europe.

Parliament calls for a blanket ban on hydrofracking in certain sensitive and particularly endangered areas, such as in and beneath drinking water protection areas and in coal mining areas. It also calls for strict implementation of existing waste water treatment standards and compulsory water management plans by operators, in cooperation with the drinking water companies and the competent authorities. Members stress, however, that existing treatment plants are ill-equipped to treat hydraulic fracturing waste water and may be discharging pollutants into rivers and streams. Accordingly a full assessment of all the relevant water treatment plants should be carried on by the competent authorities.

Parliament goes on to highlight the need for advance water provision plans based on local hydrology with consideration for local water resources, the needs of other local water users and capacities for wastewater treatment. It also calls for mandatory baseline analysis of groundwater and geological analysis of the deep and shallow geology of a prospective shale play prior to authorisation. Members stress the need for scientific studies regarding the long-term impact on human health of fracking-related air pollution and water contamination. They also note that shale gas exploitation projects are not generally subject to an environmental impact assessment despite the environmental risks of such projects.

The Commission is called on to:

- bring forward proposals to ensure that the provisions of the Environmental Impact Assessment Directive 2011/92/EU adequately cover the specificities of shale gas, shale oil, and coal bed methane exploration and extraction;
- bring forward proposals to explicitly include fracking fluids as hazardous waste under Annex III of the European Waste Directive (2008/98/EC);
- ensure that the relevant European environmental standards are met in full, particularly with regard to the water used in hydrofracking, and that breaches are appropriately penalised;
- issue guidance on the establishment of both the baseline water monitoring data necessary for an environmental impact assessment of shale gas exploration and extraction and the criteria to be used for assessing the impacts of hydraulic fracturing on groundwater reservoirs in different geological formations, including potential leakage and cumulative impacts;
- bring forward legislative proposals: i) to make the use of completion combustion devices (green completions) mandatory for all shale gas wells in the EU, ii) to limit flaring to cases where there are concerns about safety, and iii) to completely forbid venting of all shale gas wells, in an effort to reduce the fugitive methane emissions and volatile organic compounds linked to shale gas.

Members believe that many of the current controversies over UFF have partly resulted from an initial refusal by the industry to disclose the chemical content of fracturing fluids. They maintain that full transparency is required, with a mandatory obligation for all operators to fully disclose the chemical composition and concentration of fracturing fluids and to fully comply with existing EU legislation under the REACH

regulation.

Public participation and local conditions: recognising that drilling activities can worsen living conditions, Parliament calls on the industry to engage local communities and discuss shared solutions to minimise the impact of shale gas developments on traffic, road quality, and noise where development activities are being carried out.

Members call on Member States to ensure that local authorities are fully informed and involved, particularly when examining requests for sourcing and exploitation permits.

Public participation should be ensured through adequate public information and through public consultation before each stage of exploitation and exploration. They also call for greater transparency with regard to impacts and to chemicals and technologies used, as well as greater transparency of all inspections and control measures.

International aspects: Parliament considers that increased shale gas exploration and production worldwide will lead to a considerable increase in fugitive methane emissions and that the overall greenhouse warming potential (GWP) of shale gas has not been evaluated. It insists that lessons must be drawn from the USA on the exploitation of shale gas. They note with particular concern that shale gas extraction necessitates very large volumes of water, which may make it difficult to achieve the 7th target of the Millennium Development Goals (MDG) concerning access to clean water and food security, especially in poor countries that already face a severe scarcity of water.

They are also worried about potential investment by European companies in unconventional oil or gas resources in developing countries.

Parliament stresses that the EU's obligation to ensure policy coherence for development, enshrined in Article 208, Treaty on the Functioning of the European Union (TFEU), must be respected. It takes the view that, in hosting companies investing in extractive activities, the EU should influence their behaviour to encourage more sustainable practices, such as by strengthening corporate governance standards and regulations applied to the banks and funds that finance them.