

CSR SECTOR POLICY - Shale gas

1. Scope of the Policy

The present Policy (the Policy) applies to all financings and investments activities and more broadly involvements of the Bank relating to the sector of shale gas extraction. Are covered financings, advisory mandates and investments activities that are directly linked to a shale gas project. Are also concerned financial assistance or advisory mandates to companies for which shale gas constitutes the main business.

The Policy applies from the date it is published. Are excluded pre-existing activities in this sector, including commitments already made or business opportunities which are already at an advanced stage of negotiation.

The Policy will be updated from time to time.

2. Sector issues and et objectives of the Policy

Natural gas is a generally favoured fossil fuel due to its lower impact on climate than other fossil fuels. Excluding fugitive greenhouse gas emissions (release of methane in the atmosphere), shale gas doesn't look significantly different from this perspective¹. It is why many countries are currently considering developing non conventional sources of natural gas including shale gas. However, some scientists² question the estimation of fugitive emissions and believe that natural gas, and shale gas in particular, would not differ fundamentally from other fossil fuels in terms of carbon footprint. The answer to be given and the potential ability to limit or capture fugitive emissions will necessarily influence the development of shale gas as a potential transitional energy source in the forthcoming years.

Shale gas is being extracted for many years in the United States which appears as the current reference country for this activity³. Extraction of shale gas differs from natural gas mainly in level of recourse to hydraulic fracturing that is more significant. Acquired experience confirms that the extraction of shale gas results notably in environmental impacts or risks similar in nature or magnitude to impacts and risks inherent to the oil industry. Chemical additives injected when fracturing and pressure needed for fracturing⁴ may aggravate such risks and impacts. It is therefore key that this activity is conducted under best practice by experienced companies. Also, strict regulation obviously appears as a necessary condition⁵.

On the other hand, satisfactory development of the extraction of shale gas comes up against a lack of experience from potential operators and local administrations in other parts of the world. And due notably to the toxicity of chemical additives used for hydraulic fracturing, potential mistakes may have severe environmental consequences: induced pollution of the water, the land or the air that may result, in case of a major accident, into social or biodiversity impacts. Therefore, potential impact on groundwater is a legitimate concern for local populations in particular in areas where experience is missing. The tight mesh size of wells may also be regarded as incompatible with highly populated lands or significant natural or cultural heritage sites.

This Policy comes as a supplement to the rules regarding energy policies from Countries and the investment policies from the clients of the Bank and is not intended to supplant them. It seeks to state the CSR⁶ analysis criteria and requirements of the Bank in the oil & gas sector according to the

¹ Cf. Shale gas : a provisional assessment of climate change and environmental impacts by the Tyndall Centre for Climate Change Research

² Cf. Methane and the Greenhouse-Gas Footprint of Natural Gas from Shale Formations. Cornell University.

³ US Production of non conventional gas is greater than the production of conventional natural gas.

⁴ Fracturing the rock may be described as creating a micro-seism

⁵ Report on shale gas and oil. June 2011. French National Assembly.

⁶ Corporate Social Responsibility

identified societal issues. It supplements the implementation of the Equator Principles for project finance transactions.

3. Reference frame

In appraising shale gas financings and investments opportunities, the bank will be guided by the standards resulting from the following conventions, initiatives or sources of reference:

- National and European regulations, and international or regional conventions relating to greenhouse gas emissions in countries listed under Annex 1 of the Kyoto Protocol
- National strategies and regulations that will be adopted by States regarding the extraction of shale gas
- The United Nations Framework Convention on Climate Change and the related protocols and agreements
- The IFC Performance Standards and Environment Health and Safety Guidelines underlying the Equator Principles
- The International Energy Agency

4. Analysis criteria

The issues relating to the sector lead Crédit Agricole CIB to adopt a cautious stand and restrict its involvement to transactions that have at a minimum the following characteristics:

- The client or its contractors should be an experienced oil and gas operator, should have a good environmental track record and should preferably have experience in the similar area/geology, and should be experienced in hydraulic fracturing. It may consist into internal experience or external experience through reliance on an experienced sub-contractor.
- A regulation consistent with the reference frame should exist in the country where the operation is located, country referred to as the host country, (or, if missing, the client should commit to voluntarily meet the regulation of a reference country in terms of shale gas)
- Confidence should be demonstrated that a sufficient distance exists between where hydraulic fracturing occurs and water tables in order to avoid any contamination of groundwater by migration of chemical additives
- The primary source of water used should be known to the client and, independently of the respect of local regulations and of their monitoring, the client should commit that waste water will be treated according to a plan acceptable for the Bank, and more broadly to adhere to best industry practices (as defined in reference countries for shale gas) to minimise environmental risks.
- This activity should be consistent with the location of the project including but not limited to conditions imposed under UNESCO and Ramsar conventions.

From an operational standpoint, the following aspects will be taken into consideration when assessing a client or a transaction:

- regulation applying to greenhouse gas emissions in the host country including regulation to be enforced in a reasonable future (trading of emission certificates, carbon capture, offset,...)
- whether a regulation framework exists in the host country with respect to the shale gas activity that is consistent with the reference frame including with respect to the rules in place in reference countries
- potential impacts from wells including risks of polluting the groundwater (quality of cementing of wells)
- potential impacts specific to hydraulic fracturing including in relation to the use of chemical additives
- whether an environmental impact assessment exists where underground aquifers are less than 300 meters from the hydrocarbon-producing zone or less than any greater distance deemed appropriate according to the geology
- whether the primary source of water is known to the client and the scope and quality of the monitoring by the appropriate regulatory authorities
- treatment of waste water
- nuisances to the public and landscape impacts
- potential impact on critical natural habitats (including on protected areas and on wetlands of international importance covered by the Ramsar Convention)
- potential impact on significant cultural site (in particular sites listed on the UNESCO World Heritage list)
- forced physical or economical displacement of population due to the lost of goods or access to lands
- environmental legacy from past operations

5. Exclusion criteria

The Bank will not participate to financing of projects if aware of the following characteristics:

- non-compliance to national laws and/or international or regional conventions or instruments relating to greenhouse gas emissions in a country listed under the Annex 1 of the Kyoto Protocol or to the relevant national strategy, if any, in another country
- lack, in the host country, of a regulation that is consistent with the reference frame including with respect to the rules in place in reference countries (except if, when missing, the client commits at the satisfaction of the Bank to voluntarily meet the regulation of a reference country in terms of shale gas)
- critical impact on a protected area or on wetlands of international importance covered by the Ramsar Convention
- the project is located within a site listed on the UNESCO World Heritage list
- non-compliance to the IFC Performance Standards (or to similar standards when a export credit agency or a multilateral institution is involved in the financing) or the Environment, Health and Safety Guidelines, in particular with respect to forced displacement of population or impact on critical natural habitats⁷
- lack of local regulatory procedures for controlling the well tightness or for well abandonment as appropriate (except if, when missing, the client commits at the satisfaction of the Bank to voluntarily meet the regulation of a reference country in terms of shale gas)
- lack of disclosure of the chemical additives used for hydraulic fracturing or use of an additive prohibited in reference countries
- distance deemed as insufficient between underground aquifers and hydrocarbon-producing zones
- lack of water supply survey or water supply plan deemed inappropriate by the relevant regulatory authorities
- treatment of waste water deemed inappropriate
- lack of public consultation in the context of a major local protest against the project

6. Implementation

Where the transaction is directly linked to a particular shale gas project, the project will be assessed against all the criteria above.

Where the transaction is not directly linked to such a project but where the client is significantly involved in this business, the present Policy will be passed on to the client. The above analysis criteria will be taken into account when assessing the positioning of the Bank vis-à-vis the client. Past developments and to the potential plans for improvement could be taken into account. The exclusions criteria will be assessed against the current project of the client within the frame of the usual exchange of information with the client. The regular reviews of the relationship with the client will address an update of the compliance of the client with the principles of the present Policy.

Whatever the case is, the Bank will not participate to the envisaged financing or investment when an exclusion criterion has been identified or when the outcome of the general assessment is negative. Any potential exceptional situations will be handled in accordance to section 7 below.

Where the transaction is an advisory mandate, the Bank will seek to promote the principles included in this Policy. The Bank will not enter into an advisory mandate when aware at the date of the mandate that the envisaged project definitely exhibits an exclusion criterion. When considering financing a project for which the Bank has acted as financial advisor, it shall only do so in compliance with the present Policy, including in respect of the exclusion criteria.

7. Exceptions

Transactions that present uncertainty with respect to compliance with the Policy shall be referred to the CERES committee for recommendation. If the committee considers that the transaction does not conform to the Policy, such transaction will be subject to a final arbitration by the General management of Crédit Agricole CIB.

⁷ Compliance to the Standards and Guidelines is assumed in OCDE high income countries

8. References and glossary

Reference countries: to date, the United-States are considered as reference country.

Wetlands of international importance covered by the Ramsar Convention: cf. http://www.ramsar.org/cda/en/ramsar-documents-list/main/ramsar/1-31-218_4000_0

Site listed on the UNESCO World Heritage list:
cf. <http://whc.unesco.org/en/list/>