

# Fracking: A delicate balancing act

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Fracking is a contentious issue. If this process of accessing shale gas is implemented in South Africa, it must be responsible and sustainable. Therefore, decision makers face a delicate environmental, social and economic balancing act to ensure that it proceeds in line with a risk averse and cautious approach.



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## Fracking policy

The April 2011 moratorium on fracking was lifted in September 2012 following the publication of a task team report in July 2012. While that report acknowledged that the true extent of shale gas resources in South Africa is currently unknown, it confirmed that viable reserves could have positive implications for the country's energy security and diversification.

It recommended a robust regulatory framework designed to mitigate the risks and impacts associated with fracking while using existing regulatory mechanisms. Similar conclusions were reached following a Department of Trade and Industry (DTI) study on South Africa's technical readiness to support the shale gas industry. The 2012 National Development Plan (NDP) also confirms support for investigating shale and coal bed methane reserves as an energy diversification measure and recommends that where there are sustainable reserves and the environmental impacts can be mitigated, development in this space should be fast tracked. While there appears to be a political support for fracking, neither the NDP's prerequisites for fracking, nor the task team's recommendations have been achieved.

## If there is political support for fracking, why is it not yet happening?

A recent report indicated that the Karoo shale gas reserves, though still economically viable, are smaller than initially estimated. The real benefits, including the true reserves and alternative energy sources are not yet properly understood. Nor are the consequences of fracking.

A much-disputed study commissioned by one of the leading fracking applicants in South Africa has suggested that fracking could generate R20bn annually and create up to 700,000 jobs. Natural gas is considered a desirable energy source, particularly given South Africa's reliance on coal. Gas can be applied to most sectors, is easily transported provided the infrastructure is in place, generates less carbon dioxide when burnt than coal and is regarded as having "high operational flexibility".

However, the environmental consequences of exploiting this gas may be equally significant. Groundwater contamination is an obvious implication though there may be multiple potential negative impacts which must be balanced against the potential economic benefits. For example, the water intensive nature of shale gas exploration against the limitations of South Africa's fresh water supplies.

The NDP appears to contemplate that finding domestic gas feedstock, including in the form of commercial shale gas (if viable) will also reduce carbon emissions. While some argue that it will assist South Africa in reducing its already high carbon contribution, environmental commentators do not agree this is true in the absence of further research. Some say that natural gas will only reduce emissions if it offsets coal as a source of energy as the impact of shale gas exploitation and use has an equivalent greenhouse gas contribution to coal on an overall life cycle assessment.

## **The regulatory landscape: environmental authorisations for exploration**

Notwithstanding the above contradictions, environmental authorisation has been granted to various applicants to undertake exploratory investigations. As at October 2014, applications for exploration rights relating to shale gas in the Karoo area had been made by the operators Shell, Bundu and Falcon. The area subject to these applications includes 27 local municipalities and covers an area of 171,811 km<sup>2</sup>.

Though most controversy has centred around the Karoo applications, there have been applications in other areas.

Recently, environmental authorisations required in terms of the Environmental Impact Assessment Regulations published in terms of the National Environmental Management Act (Nema) were granted by the DMR to Rhino Oil and Gas Exploration and Motuoane Energy. The geographical area covered by these authorisations extends to the North West, KwaZulu-Natal and Free State provinces.

Environmental authorisations were required since, as a minimum, activity 18 of Listing Notice 2 requires authorisation for any "any activity including the operation of that activity which requires an exploration right ... including associated infrastructure, structures and earthworks."

Though they are required, no exploration rights required in terms of the Mineral and Petroleum Resources Development Act, 2002 have been granted to these entities.

Led by the Department of Environmental Affairs, which was supported by various other departments and recognised expert organisations, a strategic environmental assessment (SEA) was conducted in relation to the affected areas in the Karoo. Its intention was to "provide an integrated assessment and decision-making framework to enable South Africa to establish effective policy, legislation and sustainability conditions under which shale gas development could occur", if it were to occur. No similar SEA has been done in respect of the North West, Free State and KwaZulu-Natal areas.

The final phase of the Karoo SEA resulted in a June 2017 [Decision Support Tools Report](#). It recommends certain minimum information requirements. Although some of this information will be useful for similar applications elsewhere in

South Africa, the report recognises that “other types of unconventional gas reserves may exist in regions of the South African onshore and offshore territory, and would need separate consideration if their development was considered”.

There have been no regulatory or other developments to address these findings or to initiate similar assessments. Apart from the controlled activity published in terms of the National Water Act, 1998, the only regulation specifically regulating fracking activities, being the Regulations for Petroleum Exploration and Production, 2015, were dealt a blow in the Grahamstown High Court in October 2017 in *Stern NO and Others versus Department of Mineral Resources*. The court set aside the regulations on the basis that their development fell outside of the mandate of the DMR.

With the above in mind, from a legal perspective, the burning question is: if exploration reveals viable shale and other natural gas deposits, is the South African regulatory framework is equipped to ensure that the multiple competing considerations, advantages and impacts are properly considered and balanced?

Moreover, is there the necessary cooperative governance and jurisdictional respect between the multiple government role players to manage an unconventional gas industry in South Africa?

The effective and sustainable regulation of fracking in South Africa requires a multidisciplinary, multi-faceted and multi-stakeholder approach with inter and intra-governmental cooperation between various ministries and at all tiers. This may well require regulatory amendments in multiple broad ranging policies, statutes, regulations and, even at local bylaw level. Regulatory protection aside, South Africa will need to ensure that decision makers and those executing activities of this nature are equipped with both the necessary skills, capacity and supporting infrastructure as well as a legal framework which enables decisions which serve present and future generations. Ultimately, the environment needs to be right for the sake of the environment.

## ABOUT THE AUTHOR

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