

# Gas extraction poses serious risk to environment, society

*Fracking would threaten country's precious 'water factories,' harm communities*

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IN TEPSA (Total) and Rhino Oil and Gas Exploration SA's recent applications for prospecting rights, gas reserves are being touted as the potential new energy source to provide "clean", "reliable" and "cheap" electricity while mitigating greenhouse gas emissions relative to the coal sector.

The Department of Mineral Resources and Energy's Emergency Power Procurement Plan is inviting an additional 2 000MW, mainly from gas-to-power projects such as Karpowerships and Richard's Bay Gas-to-Power, referring to gas as being clean and transitional to renewables.

This false marketing and promotion of gas by corporates and Energy ministries is inviting an array of deadly risk to countries of the south, who will ultimately pay the price of contamination from extraction, depletion of precious water systems and loss of biodiversity while bearing the brunt of climate change impacts due to the increase in greenhouse gas emissions.

These impacts will be borne by the most vulnerable in our society.

Gas extraction, processing and distribution is by no means clean, cheap or reliable. Methane gas, a powerful, hazardous greenhouse gas, is a non-renewable fossil fuel or upstream petroleum source. According to the Climate and Clean Air Coalition, methane's global warming potential is 84 times that of carbon dioxide over a 20-year time frame, and is responsible for at least 25% of global heating.

Methane leaks contribute up to 65% of total oil- and gas-related methane emissions and occur at various stages in the supply chain from extraction, processing and distribution. Surges in methane emissions have been linked with increased fracking activity in the US as a result of false claims of it being a "cleaner" fuel than coal for use as a "bridging" or "transitional" fuel.



A VOLUNTEER shovels oil spilled from the bulk carrier MV Wakashio in Mauritius. The spill has highlighted risks associated with the oil and gas industry, the writer says. | Reuters

Accidents in the oil and gas sector can release large amounts of methane in short periods of time, and accidents are often under-reported.

Studies indicate that oil and gas companies have had a far worse climate impact, with methane emissions underestimated by up to 40%. US oil and gas plant emissions were 60% higher than reported to the Environmental Protection Agency. This is because current inventory methods do not include emissions that occur during abnormal operating conditions, during releases and accidents.

Inland fracking proposals are within the country's Strategic Water Source Areas. These are our water "factories" that comprise large groundwater reserves with grasslands, healthy soil profiles and wetlands that help filter water entering our water systems, likened to the lifeblood of our biodiversity, communities and livelihoods.

The extraction of gas through fracking uses vast quantities of water and toxic compounds to create frack fluid. Heavy metals and radioactive materials are released from the crushed shale into surface and groundwater.

Underground water supplies become contaminated through the migration of gas and frack fluid. To understand the sheer impact of fracking on a landscape, picture this: each km<sup>2</sup> can contain 20 drill wells, each consuming about 20 million litres of water every time a well is fractured.

A well can be fractured multiple times, with water being used for each round of fracturing.

The amount of exploration in the country does not equate to the gas allocation within the Integrated Resource Plan (IRP). A new provision has now been made for emergency power procurement of 2 000MW in addition to the 3 000MW allocation for gas in the IRP, bringing the total to 5 000MW.

Exploration is currently done in an ad hoc fashion, letting in everyone who wishes to prospect from Rhino with interests in gas exploration in the Free State, KwaZulu-Natal and the Karoo, to offshore prospecting from Total, Sasol and Eni. This is done in the interest of short-term industrial gains, but no mid- to long-term plan to sustain jobs or deal with liability of



oil and gas infrastructure that will no longer be needed.

Jobs in the oil and gas sector are in the form of temporary construction boom jobs and mainly specialised jobs for foreigners, with profits from investments leaving the country.

According to the Carbon Tracker Initiative, a third of fossil fuel investments risk failure by 2030 and will result in stranded assets. These impacts have mobilised groups such as the Southern African Faith Communities' Environment Institute, FrackFree SA, Southern Cape Land Committee, Vaal Environmental Justice Alliance, groundWork and JA! to resist oil and gas developments and prevent the further impoverishment of communities from such developments.

The bulk of the burden and liability of accidents and incidents will be borne not just by people living in the affected areas, but by entire nations. The recent oil spill in Mauritius has also highlighted critical risk factors associated with the oil and gas industry and necessitates the withdrawal from fossil fuels usage and a move to renewable energy.

It seriously raises the question of liability and the cost to people, the environment and economy.

Polluting companies are not held to account. By allowing an increase in oil and gas developments, governments are not protecting, but exposing, people and the planet to more risk all along the supply chain. To add to our burden, the increase in greenhouse gases such as methane increases the risk of global warming and climate change impacts that will affect our ecosystems and our ability to survive.

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