

PRESS RELEASE: GAS WEEK 2014



Gas Week 2014: The Blue Bridge Scenario

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Experts now believe that South Africa has the eighth largest shale gas reserves in the world. For a country with an energy profile dominated by coal, recoverable shale gas resources could be a major game-changer in its development. In our African Futures Project brief, “Fracking for Shale Gas in South Africa: Blessing or Curse?,” we explore the potential outcomes of unconventional gas development in the country. By using the International Futures (IFs) integrated forecasting system; we were able to evaluate the long-term effects of a few broad policy interventions on South Africa's environment and economy.

In our scenario analysis, we explored three different paths forward for the energy production in the country. To serve as a basis for comparison, the Base Case scenario assumes that even though the ANC government now plans “to go the fracking route,” as former Minister of Mineral Resources Susan Shebangu stated last year, South Africa will pull back and continue to develop its energy resources without fracking as an option. It's important to note that over the long-term, our IFs Base Case is relatively optimistic when it comes to the onset of renewable energy at a global level; therefore, we still foresee renewable energy dominating the country's energy mix by 2050. That said, in 2050, coal would still comprise roughly 46 percent of total energy production and nuclear energy would likely only make up around 3 percent. Carbon emissions would peak and then plateau, only beginning to decline in the early 2030s.

To account for the expected onset of shale production in the country, we created a second “Shale Boom” scenario. In this scenario, we factored in the known limitations of shale gas production in the Karoo region, increasing natural gas production to 644-million barrels of oil equivalent (MBOE) by 2050.

In this scenario, we began to see the economic implications of diversifying energy production, especially as South Africa would begin exporting more of its resources. We see an increase in overall GDP, as well as an increase in GDP per capita of roughly ZAR 12,100 more than the Base Case in 2050. The number of people living in extreme poverty could decline by as much as 400,000 relative to the Base Case, and the government could have as much as ZAR 912-billion more to spend on other initiatives, such as healthcare, education and infrastructure, across the same timeline.

While the benefits related to increased energy production are clearly apparent, the Shale Boom also brings environmental trade-offs. For instance, the country’s share of renewable energy is greatly reduced and carbon emissions remain high, at approximately 5,35-billion tons, just slightly less than the Base Case. To help contain these adverse effects, we designed a third “Blue Bridge” scenario in which the government would levy a “transition tax” on fracking. These revenues would then be reinvested in more centralised renewable energy production within the country.

With these added investments, we forecast that renewable energy production could jump to more than 1.6-billion barrels of oil equivalent (BBOE) by 2050, surpassing even coal as an energy source today. In addition, economic growth could surge from ZAR 15.4-trillion in the Base Case to nearly ZAR 16.51-trillion in the new Blue Bridge scenario ~ more than ZAR 400-billion greater than GDP in the Shale Boom scenario.

Through our IFs forecasts, we can see that limited shale gas production, coupled with a strategic diversion of tax revenues ~ could offer both the short-term financial benefits that private investors seek now and the long-term sustainability and economic promise that might improve South Africa’s prospects overall.

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Gas Week 2014 is the only event in Southern Africa with a strategic focus on all the regulatory, commercial, legal and environmental developments in conventional and natural gas exploration and production.

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