Econometrix

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Economic report: Karoo shale gas development could boost GDP and create hundreds of thousands of jobs

- Just 10% of the US EIA estimated 485 tcf (trillion cubic feet) shale resource could add R200 billion to GDP annually and create 700 000 sustainable jobs
- Could provide SA with a solution to its electricity supply and pricing challenges
- Development of gas could ensure South Africa’s energy security

The shale gas opportunity in the Karoo could significantly boost South Africa’s economy and create hundreds of thousands of jobs. This is according to an economic report released by Econometrix, the country’s largest independent macro-economic consulting firm.

According to the US Energy Information Administration (EIA), the shale gas reserve of the southern Karoo area is estimated at around 485 tcf, which would make it the fifth largest shale gas field in the world.

To measure the potential impact of shale development on the South African economy, Econometrix created an economic impact model to estimate the likely impact of shale gas production. The study took a conservative approach and ran the model on just 4% (20 tcf) and 10% (50 tcf) of the total EIA estimated recoverable resource in the Karoo (485 tcf).

According to the report, successful exploration of shale gas in the Karoo could deliver permanent and sustainable jobs, increased government revenues and positive effects on GDP in addition to increased energy security.

On the estimates of 4% (20 tcf) of estimated resource and 10% (50 tcf), there would be an annual economic impact¹ of more than R80 billion and R200 billion to GDP, which is around 3.3% and 9.6% respectively of total 2010 GDP. To put this into perspective, coal mining value added 1.8% to the total GDP in 2010.

The average annual government revenue from 20 tcf and 50 tcf production would be around R35 Billion to R90 Billion and it would generate around 300 000 to 700 000 permanent jobs for a period of 25 years, which is the expected lifetime of an initial first phase shale gas development.

“The possible economic impact of shale gas development in the Karoo is undeniable,” says Tony Twine, director and research team leader at Econometrix. “Developments, downstream and induced demand from the income generated by gas finds representing only 4% and 10% of the suspected reserve could generate massive contributions to the country’s GDP and create many hundreds of thousands of jobs.”
South Africa’s energy crisis:

According to Twine, large scale development of shale gas may ease the energy deficit, making it cheaper for South Africa to grow in the future and reduce imports of gas and electricity. Consumers may also benefit from more reliable and affordable energy.

It is no secret that South Africa’s economy is heavily reliant on its energy sector. Around 67% of oil consumption is imported and 65% of natural gas is imported from Mozambique.

“Recent experiences with electricity supply and pricing developments have brought home to most South Africans the inseparable relationship between usable energy and economic performance. The economy simply cannot grow at any reasonable sustained rate without using additional energy resources,” says Twine.

The country’s energy deficit looks set to increase if the economy is to grow and sustain higher levels of wealth and employment. SA’s energy demand is expected to double and potentially triple by 2050.

The future demand for energy makes a compelling case for shale gas development. Only 88% of urban South Africans and 55% of people living in rural areas have access to electricity. Over 10 million South Africans have no access to power at all.

Knock-on benefits for industry:

“The exploration, discovery and subsequent commercial development of shale gas have the potential to deliver significant economic benefits to both the Karoo and across the national economy as the benefits ripple through the various supply chains. This will benefit producers, consumers and government,” says Twine.

This could have knock-on benefits for producers and industries that are energy intensive because they will benefit from lower input costs.

“A common assertion in South Africa is that the country possesses abundant cheap coal. Abundant, yes, but the Rand price of coal has kept pace with the Rand price of crude oil very closely over the past three decades. Nobody asserts that oil is cheap,” says Twine.

What shale or natural gas is used for:

Shale gas, simply put, is natural gas that is present in shale formations deep underground. It has wide-ranging industrial and commercial uses, as well as being suitable for electricity generation.

Un-exported natural gas has five major downstream uses. Apart from being a safe industrial, commercial and domestic fuel, it can also be used to generate electricity with low water consumption, be converted into liquid fuels as is done at Secunda, be used as a transport fuel with minimal adjustments to existing engines and it may be used to provide the energy necessary in manufacturing fertiliser products.

“All these options provide substantial value adding, employment and remuneration opportunities for the country,” says Twine.

“But the first step in harnessing such a potentially transformational economic resource has to be either proving or disproving its size and location. Only after that do prospects become bankable projects,” concludes Twine.

Ends
¹ Based on constant 2010 prices.

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**About Econometrix**

Econometrix is South Africa’s largest independent macro-economic consultancy based in Johannesburg. Econometrix are privately owned and therefore totally independent of any official organisation or pressure groups. Econometrix – which has a successful track record of close to 30 years - is committed to on-going research and analysis of economic fundamentals thereby ensuring a sound basis for future business decisions. These services are provided through a range of complimentary products and to more than 150 South African and international organisations.

Our approach is to empower our clients with quality decision support intelligence and assistance regarding the economic and financial environment, and assist them in their strategic and financial planning processes. Our in-depth analysis of economic fundamentals aims to assist our clients in commanding the economic environment and in identifying opportunities and risks.