

## Biofuels – a quick win that ticks all the right boxes

The Department of Minerals and Energy published a National Industrial Strategy on biofuel production in South Africa as far back as 2007. Sadly, this strategy received widespread opposition from certain groupings based on a misunderstanding of its potential impact on food security. As such, the strategy has still not been finalised. The biofuels industry has the potential to create in excess of 25 000 jobs and contribute indirectly to land reform, rural development, reduce the negative environmental impact of transport fuel, and reducing our reliance on imported fossil fuels. It, therefore, ticks the boxes from a social, economic and environmental point of view. With our economy under distress, tough decisions need to be made and it may be time to look critically at the validity of opposing comments in light of empirical data.

### What are biofuels?

In brief, biofuels relate to the practice of manufacturing liquid fuels such as petrol and diesel from agricultural products. Sugar cane and sugar beet can be used to create ethanol from which petroleum can be made. Similarly, any agricultural product that contains starch, like maize or sorghum and even sunflower seeds can be used to create diesel. According to the 2007 strategy, it is estimated that 25 000 jobs can be created if biofuel production can reach the levels required to meet merely 2% of our liquid fuel mix.

### Will this affect food security?

The principal concern raised by stakeholders to date is that the use of agricultural produce for biofuels production opposed to food production may lead to food insecurity. This argument is not supported by empirical research. South Africa is a net exporter of the product concerned as we usually produce more than we consume each year. What's more, local agricultural production has not yet reached a 'ceiling' due to natural resource constraints. There are vast areas of South Africa, particularly in the communal areas, which can still be developed for agriculture provided there is demand from the market. As our production already exceeds demand, biofuels production will not detract from the amount consumed for food production but will, in fact, stimulate demand in the market for additional production. These arguments aside, the 2007 strategy chose to err on the side of caution and excluded the use of maize for biofuels as this is a staple crop, choosing rather focus on the potential production of sugar beet and sorghum. Biofuel production will therefore not threaten food security but in fact, enhance it by stimulating an industry that can provide an income to 25 000 people without affecting the availability of products for food production.

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## **What are the potential benefits?**

By stimulating increased demand for agricultural produce, it creates an environment that encourages investment into underutilized lands such as communal lands in the Eastern Cape and Kwa-Zulu Natal. Directly, it will also stimulate investment as processing plants will be needed to convert produce into liquid fuel. This will all lead to increased job and economic opportunities. Indirect benefits include a reduction of South Africa's carbon footprint as a portion of our fossil fuel combustion will be replaced by the combustion of renewable energy products. From a strategic point of view, it also reduces the country's reliance on imported fossil fuels.

An additional benefit, which should not be overlooked, is the potential which biofuels have to utilise contaminated water resources that would otherwise be unsuitable for food production. It is a well-known fact that South Africa is a water-constrained country. Aside from overall availability, acid mine drainage has resulted in some of our water resources becoming unsuitable for food production or human consumption due to the presence of heavy metals. This risk is mitigated if the crops will not be consumed, but rather used for biofuel production. In other words, it could unlock potential sources for irrigated agriculture.

## **So what is needed?**

The critical component needed for the industry to take off is a pricing strategy. The international price of crude oil is highly variable and there are legitimate concerns surrounding the industry's sustainability during times when the oil price dips to levels that would make biofuels unaffordable vis-à-vis crude oil derivatives. This can, however, be addressed by creating a pricing mechanism that protects the industry from the fluctuations in the international oil price.

## **Conclusion**

The biofuel industry has the potential to unlock significant job creation in an economy which is in dire need of job creation. It furthermore ticks all the right boxes from an environmental, economic and social point of view. It is for this reason that Business recommended the strategy be prioritised as a Job Summit outcome to create the enabling environment for this industry to take off. With that said the other important aspect that is yet to explore the costing of establishing this industry, and feasibility thereafter when global oil prices are at depressed levels, particularly when the government has to make financial commitments or subsidies in the process at times when its finances are constrained.