



Southern African Biofuels Association

Comments on the Draft National Biofuels Strategy

31 March 2007

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1. INTRODUCTION

Biofuels are solid, liquid and gaseous fuels made from renewable vegetative resources and include bio-ethanol, which can be blended with petrol, biodiesel, which can be blended with diesel, bio-ethanol gel, biogas and biomass. While the main use of biofuels is in the transport sector, biofuels are also import fuel sources for heating and power generation. South Africa is a signatory of the Kyoto Protocol and hence has an obligation to reduce its reliance on energy sources that contribute to the generation of greenhouse gases. Biofuels are an important substitute for fossil fuels, and as biodegradable and renewable energy sources, they can make an important contribution towards South Africa meeting its obligations under the Kyoto Protocol.

The Southern African Biofuels Association (SABA) is a non-profit organisation of private-sector roleplayers. It aims to facilitate the development of a sustainable Southern African biofuel industry, supported by a comprehensive infrastructure to market and utilise biofuels, and a favourable regulatory and incentive framework.

This document sets out SABA's response to the proposed national biofuel strategy, as set out in the following documents:

- Draft National Strategy¹ 14 December 2006, ("the Draft Strategy Document")
- Investigation into the Feasibility of Establishing a Biofuels Industry, 6 October 2006² ("the Feasibility Investigation")
- Possible Reforms to the Fiscal Regime Applicable to Windfall Profits in SA's Liquid Fuel Energy Sector, 9 February 2007³ ("the Windfall Tax Report")

While the purpose of this submission is to respond to the Draft Strategy Document and the Feasibility Investigation, comments are also made on the Windfall Tax Report in areas where the Windfall Tax Report departs from the other two reports.

By way of introduction, an overview of the case for biofuels industry establishment is provided below, followed by general comments on the Draft Strategy Document. The essential SABA response then falls into four categories:

- Financial incentives and support
- Licensing of biofuel production
- Agricultural recommendations
- Food security and rural economic development

The strategy proposed by SABA in this document is a framework until 2020 and hence regular reviews and amendments as the biofuel industry develops will be needed.

¹ National Biofuels Task Team, Draft National Biofuel Strategy, 14 December 2006

² National Biofuels Task Team, An Investigation into the Feasibility of Establishing a Biofuels Industry in the RSA: Final Report, 6 October 2006

³ Rustomjee Z, Crompton R, Maule A, Mehlomakulu B, and Steyn G, Possible reforms to the fiscal regime applicable to windfall profits in South Africa's liquid fuel energy sector, with particular reference to the synthetic fuel industry. Final report: Task Team appointed by the South African Minister of Finance, 9 February 2007

2. THE CASE FOR BIOFUELS

That South Africa is fast running out of fuel refining capacity is well known. Expanding refining capacity by building new coal-to-liquid (CTL) refineries or building new conventional oil refineries will be prohibitively expensive, at a cost in the region of \$5-\$10bn. A recent media report has speculated whether oil companies will start lobbying government for incentives to build a new refinery⁴. Arguments raised are that the new refinery will provide greater security of supply, create jobs and reduce South Africa's import bill.

These arguments apply equally to the establishment of biofuel production plants, but biofuel production plants have the added advantage of being far less costly and having a far greater footprint of social, economic and environmental benefits. In addition, due to their grounding in agriculture, biofuel production plants will unleash substantial additional investment in agriculture.

The approximate potential investment is summarised below⁵:

Biofuel	Production Plants	Investment Required
Bio-ethanol		
Grain-based	8 x 150kt	R6.4 bn
Sugar cane-based	4 x 100kt	R2.4 bn
Biodiesel		
Oilseed-based	2 x 100kt	R1.6 bn
Other	3 x 100kt	R2.4bn
Bio-ethanol Gel		
	To be determined	
Biogas		
	To be determined	

The *multiplier effect* can be demonstrated in terms of job-creation, in which it is expected that more than 75 000 direct and indirect jobs can be created under an appropriate "investment incentive dispensation"⁶.

The Windfall Tax Report offers strong support for biofuel manufacturing in its recommendation that government incentivise establishing new biofuel production plants before incentivising new CTL, gas-to-liquid (GTL) or crude oil refineries.

The Task Team **further suggests** that if Government wishes to intervene to address supply side issues in non petroleum based fuels, then the domestic manufacture of biofuels should be given precedence over the *new* facilities for the manufacture of synfuels from coal or gas given biofuels expected greater benefits to the South African economy.⁷

⁴ Theunissen, G The bottom of the barrel, *Finweek*, 15 February 2007, pg 20-21

⁵ Please note: The sizes of the plants reflected in this table are not prescriptive and should not be taken to read that SABA is supporting biofuel plants only of this size. The size of the plants reflected here are an average of the standard sizes of commercially viable plants internationally and are used to develop the argument that with a similar quantity of investment needed to set up one new crude oil refinery, a number of biofuel refineries, each with important multiplier effects can be established.

⁶ Absa Agribusiness

⁷ Rustomjee, Z. Crompton, R. Maule, A. Mehlomakulu, B. and Steyn, G. 2007. Possible reforms to the fiscal regime applicable to windfall profits in South Africa's liquid fuel energy sector, with particular

Also of note is the Windfall Tax Report's recommendation that a raft of measures be brought to life to support the biofuels industry, in effect that an "investment incentive dispensation" be put in place.

After analysis of the pros and cons of each of the [...] fiscal options [...] [the Task Team has] **rejected each of these instruments as a stand alone option**. Instead the Task Team recommends the adoption of a progressive **investment incentive dispensation** for the manufacture of liquid fuels from indigenous raw materials.⁸

The purpose of this document is therefore to set out the criteria of such a dispensation for the biofuel industry.

SABA supports the recommendation in the Windfall Tax Report that government prioritise the establishment of plants producing biofuels from indigenous raw materials and that a complete "investment incentive dispensation" be established, which extends significantly beyond the current Biofuel Task Team proposals.

3. GENERAL COMMENTS ON THE DRAFT NATIONAL STRATEGY

3.1. Mandatory blending percentages

The mandatory blending percentages recommended by the Biofuels Task Team are based on the 10 000GWh renewable energy target set out in the White Paper on Renewable Energy. Accordingly, the Team has recommended B2 and E8 blends, as these make up the proportion of liquid fuels to the renewable energy target.

These targets, which are below the B5 and E10 blends recommended by industry, are, however, based on a flawed premise: the Renewable Energy paper (and so also the 10 000GWh target) is due to be revised in 2008 and the 10 000GWh target also bears no relation to the country's potential to produce biofuel crops. **Thus the Biofuels Task Teams reliance on the 10 000GWh target places an unnecessary restriction on mandatory blend volumes.**

South Africa's agro-climatic potential shows the country is able to produce **at least** a 10% bio-ethanol blend using potential maize surpluses and export-directed sugarcane.

South Africa currently does not produce sufficient oilseeds to meet its food and feed demands. This is not necessarily a reflection on the country's oilseed production potential but rather that production is depressed due to factors such as markets not being properly developed and cheap imports. A biodiesel market will create the pull to increase production.

In addition, the 2% blend proposed by the Biofuel's Task Team is too small to create a viable industry. This blend will require only 162m litres of biodiesel, insufficient for

reference to the synthetic fuel industry. Final report: Task Team appointed by the South African Minister of Finance. Unpublished. Page 15 ("the Windfall Tax Report")

⁸ The Windfall Tax Report, page 15

two 100 kt plants, and hence will allow the industry to be dominated by one or two players. A B5 blend, requiring 450m litres, will allow a minimum of four major biodiesel plants to be established.

SABA notes the Biofuel Task Team's concern that the national herd will not be able to consume the oilcake produced as co-products from blends in excess of B2. This assumption, however, fails to account for four important factors that could increase oilcake consumption:

- the national herd is not static, as SA is a net red meat importer it has substantial capacity to increase its national herd size through feedlotting.
- biofuel industry establishment can result in a fundamental restructuring of the livestock and poultry sector.
- there are alternate uses for biofuel production co-products (DDGS, oilcake etc.) – such as fuel pellets, corn oil, carbon dioxide, separated proteins and fibres etc.
- tapping into a potential soya bean meal export market.

SABA also acknowledges that there is significant potential for 100% biodiesel fuels in closed systems – such as for example on farm use, on mines, cellphone mast power generation, municipalities, marine fleets etc. It is important that the national biofuel strategy be flexible enough to accommodate such fuels outside the mandatory blending system.

SABA recommends that

- **Blending targets be set at levels that correspond with South Africa's agro-climatic potential to produce biofuel crops.**
- **Initial minimum blending targets of E10 and B5 be set, and that these targets be increased as the industry matures.**
- **Provision be made to allow blending percentages in regions that are conducive to biofuel crop production to be higher than the national blend.**
- **Biodiesel blending targets are set in accordance with the potential growth of the national herd and poultry sectors through feedlotting, investment, economic growth a growing soya bean meal export market, with the understanding that biofuel industry establishment can result in a fundamental restructuring of the livestock, dairy and poultry sectors.**

3.2. Biofuel crops

SABA supports the production of biofuels from commercially grown crops – notably sugar, maize, grain sorghum, winter cereals such as triticale, soya beans, canola and sunflower seeds – as well as from new and alternate plants, such as jatropha, algae etc, provided that these are suited to the country's agro-climatic conditions.

SABA recommends that the national biofuel strategy neither prescribe nor exclude the crops that may be used to produce biofuels.

Sugar is the only agricultural sector that has not yet been deregulated and still receives protection. Reforms of this sector have been protracted and will unlikely be completed by the deadline set for the finalisation of the national biofuel strategy.

SABA recommends that licensed sugar-to-bio-ethanol producers fall outside the ambit of the Sugar Act and the Sugar Industry Agreement.

3.3. Small-scale and “National Priority Biofuel” producers

Currently producers producing under 300 000lt of biodiesel per year are exempted from the fuel levy (“small-scale producers”). The Biofuels Task Team has recommended extending this threshold to small-scale bioethanol producers.

Small-scale producers have requested the fuel-levy exemption threshold be increased and that they benefit from any “investment incentive dispensation” to be granted to large-scale biofuel producers, in particular the Equalisation Fund mechanism. Small-scale producers have also called for assistance from government with licensing due to the extra cost and administrative burden this entails.

SABA proposes that a category of “National Priority Biofuel Producers” be created and that this category be distinguished from all other biofuel producers by virtue of their being able to contribute significantly and consistently to biofuel supply security and at the same time also to key government objectives such as BEE and rural development.

National Priority Biofuel Producers are distinguishable from other biofuel producers by meeting all of the following requirements:

- being able to meet all of the licence criteria set out in point 5.5, and
- being located in geographic areas that offer both fuel logistic efficiencies and significant crop production potential, and
- being able to consistently produce sufficient volumes to supply the national blend.

In addition, National Priority Biofuel Producers also include biofuel producers who can contribute significantly to the health and safety of the poor by producing bio-ethanol gel as a liquid paraffin substitute.

Only National Priority Biofuel Producers should be the focus of the “investment incentive dispensation”. In this way government support can be channelled to biofuel producers who are significantly able to meet the key government objectives of biofuel supply security, BEE and rural development. Such a focus will also allow government to tailor its support for the biofuel industry in response to the industry’s development and in response to local and international market conditions, such that the industry does not become an excessive drain on the fiscus.

The ring fencing of the “investment incentive dispensation” is also essential to ensure an orderly and regulated biodiesel industry. This is because since biodiesel can be viably produced on a smaller scale than bio-ethanol, and since it is far easier to introduce into the fuel chain than bio-ethanol, biodiesel production has the potential of releasing a substantial amount of fuel onto an informal market (eg to be used on farms or on mines). This will reduce the oil companies’ guarantee that sufficient biodiesel will be produced consistently to meet their mandatory blending obligations. Varying informal-market supplies will also cause the national demand for biodiesel

from formal channels to fluctuate from season to season, depending on production levels. This too will impact negatively on oil companies' abilities to meet their national biodiesel blending targets.

Such difficulties can be prevented by allowing only National Priority Biofuel Producers to benefit from the "investment incentive dispensation" in general, and the Equalisation Fund mechanism in particular.

SABA therefore proposes that government's existing SMME programmes are better suited to channelling support to small-scale biofuel producers.

Cognisant of the fact that the Petroleum Products Act 120 of 1977 currently requires all biofuel manufacturers, irrespective of size, to be licensed⁹, SABA proposes further that a separate licensing category be established for National Priority Biofuel Producers. This will be covered more fully in point 5.

SABA recommends

- **The 300 000lt/year production threshold for fuel levy exemption be revised and that it be extended to bio-ethanol production.**
- **Small-scale producers be assisted with licensing.**
- **A separate licensing category for National Priority Biofuel Producers be created.**
- **The "investment incentive dispensation" apply only to National Priority Biofuel Producers.**
- **Government reinstate or extend existing SMME programmes to provide assistance to small-scale producers.**

3.4. Bio-ethanol gel

Bio-ethanol gel is a particularly exciting new energy source because it is a safe alternative to paraffin, being non toxic, clean burning, environmentally friendly, non-flare, non-explosive and provides a steady, reliable cooking heat. Paraffin is the most commonly-used and purchased fuel source for low-income communities throughout South Africa, with almost half of South African homes using it to some degree.

Paraffin is an extremely hazardous household fuel – being highly flammable and explosive – a characteristic that is made worse by the fuel being consumed in inherently unsafe, cramped household conditions by consumers who are unaware of the dangers and how to prevent harmful incidents from occurring. The second major area of risk relates to the inherent unsafe nature of paraffin cooking devices. Profit margins on such devices are very thin and hence safety is compromised. Paraffin also has the disadvantage of being distributed in bulk through a complicated and unregulated supply chain where it is susceptible to contamination.

South Africa currently consumes about 700m litres of paraffin annually as a household fuel, creating a substantial market for bio-ethanol gel fuel. Bio-ethanol gel stoves are also inherently safer than liquid paraffin stoves. These stoves are smokeless

⁹ Petroleum Products Act 120 of 1977: Regulations regarding petroleum products manufacturing licences, published under Government Notice R288, 27 March 2006

and emit no dangerous gases and hence will immediately improve indoor air quality if used in the home. The stoves are also easy to light and very easy to put out.

Bio-ethanol gel is not highly flammable or explosive, nor will it spill or spread as easily as paraffin. It is also increasingly more easily available in a convenient and economical form. In addition, portable gel stoves are inexpensive, highly efficient, instantly ready for cooking and easy to use.

When one considers the powerful and far reaching benefits of bio-ethanol gel as opposed to paraffin, it seems contradictory that one of the most basic human requirements, energy, offered in a safer, healthier and sustainable product, is subject to VAT, while paraffin with its dangerous character, is exempted.

SABA recommends that bio-ethanol gel:

- **receives the same tax exemption treatment as paraffin.**
- **due to its important health and safety characteristics, benefits from the “investment incentive dispensation”.**
- **is prioritised for its contribution to the health and welfare of poorer communities reliant on paraffin, and actively promoted by government.**

3.5. Carbon credits

Carbon credits represent a valuable incentive that can improve the viability of biofuel production plants. However, applying for these credits is time consuming, expensive and success rates are highly erratic.

SABA recommends government apply for a blanket carbon credit regime for the entire biofuels industry and that the savings represented by such credits be shared among all licenced producers according to principles to be agreed to by the industry.

3.6. Biofuel quality standards

Biofuel testing facilities need to be more accessible and affordable, particularly to small-scale producers. Clarity is also needed on whether the responsibility for biofuel testing will rest at retail or wholesale level, as well as on the required auditing procedures.

3.7. Basic Fuel Price

The Biofuels Task Team recommends oil companies reimburse biodiesel producers at 100% of BFP and bioethanol producers at 95% of BFP. The team recommended that oil companies be entitled to keep back 5% of the bio-ethanol BFP to cover costs of upliftment.

SABA finds this approach contentious. Within the context of guaranteed wholesale and retail margins for fuel companies, entirely independent of the crude oil price, the use of BFP as a benchmark criterion is difficult to fully justify.

3.7.1. Biofuel pricing benchmark

It is too simplistic to suggest that the BFP be used as a benchmark price to avoid distortions and complications in the retail market. Problems with using BFP as a benchmark include the following:

- BFP is not a benchmark price for the oil industry, but only a minimum price to which fixed mark ups and price components are added.
- BFP does not reflect the special advantages biofuels have over fossil fuels, in particular their environmental, social and rural development benefits.

Accordingly, biofuels can be priced more competitively if they are priced in accordance with production costs. The industry clearly needs its own rationale and pricing strategy that can accommodate, among other things:

- Commercial viability of production. As in other countries, the investment incentive dispensation needs to meet the generic opportunity cost of capital investors face. Should biofuels offer a reasonable profit margin, investments will not be sustained.
- The regionality of biofuels. This is particularly important in view of the recommendation in the windfall tax report to deregulate the price of petrol. This will allow for differences in fuel prices in various regions.
- Benefits that biofuels generate for the greater economy and South African society – such as environmental, social and rural development benefits – which should be supported by all South Africans, and not just biofuel producers.

SABA recommends the benchmark price for biofuels take the following into consideration:

- **The price per litre required for zero economic profit (ie. The price at which investors meet a minimum opportunity cost of capital requirement), which will differ between crop types used as feedstock, as well as technology and location**
- **The price per litre compared to the landed cost of imported biofuels, petroleum-bases fuels and synthetic fuels and oxygenates.**

3.7.2. Unjustified discrimination in bio-ethanol pricing

The Draft Strategy envisages bio-ethanol producers being paid only 95% of BFP. Implied in this is that the petroleum industry's additional costs of incorporating bio-ethanol in the supply chain be rolled backwards and be carried by downstream members in the biofuels supply chain.

The effect of this, in stark contrast to the previous and continued government support enjoyed by the oil industry, is that the biofuels supply chain will be solely accountable for its own establishment.

This is not justifiable in light of the environmental and social benefits of biofuels benefiting all South Africans and not just the biofuel industry, namely:

- As a cleaner energy source, biofuels are an economic alternative to finite fossil reserves that currently drive the world economy
- Biofuels improve environmental health through better air quality, minimise health hazards and also mitigate against climate change.

Accordingly, it is wrong to allow only the petrochemical industry only to receive support for the establishment costs of the biofuel industry.

SABA recommends that

- **Biofuels be priced based on production costs and import parity prices**
- **The additional handling cost of accommodating bioethanol into the fuel chain, estimated by the Biofuels Task Team to be 5% of BFP per litre, be carried by government and / or society.**

3.7.3. Waste Vegetable Oil

Waste vegetable oil (WVO) is an invaluable biodiesel feedstock but is commonly re-used to prepare food in South Africa, despite its carcinogenic effects.

SABA recommends dedicating this resource to biodiesel production both to remove a carcinogen from the food supply chain and to reduce biodiesel feedstock supply constraints. However, it is important to qualify that only WVOs generated by local businesses in the course of their trade (such as hotels, restaurants, large-scale catering institutions) be considered for biodiesel use in South Africa. If this is not done, there is a danger that WVO can be imported to produce biodiesel. This will be contrary to the important policy objectives underlying the biofuel industry, in particular rural economic development through increased agricultural production.

Furthermore, even the uncontrolled use of locally generated WVOs could jeopardise the development of the industry, as this feedstock use does not inherently contribute to the development of local oilseed production. The effects of uncontrolled WVO use include:

- The development of biodiesel plants in areas that are not conducive to agricultural production. This will be contrary to one of the pillars of the biofuel licensing system that only plants contributing significantly to important government objectives, such as rural socio-economic development, be supported.
- It will be impossible to control the import of tariff-free vegetable oils destined for biodiesel purposes. Thus, for example, palm oil could be imported tariff free for use in industries and shops with the aim of later using it for biodiesel production. This will also harm the vegetable oil market in South Africa.

SABA recommends that

- **While waste vegetable oil (WVO) constitutes an important biodiesel feedstock, its use be limited to non-commercial biodiesel production in plants falling within the “small-scale producer” definition under SARS regulations.**

- **Government consider a domestic/import levy on all vegetable oil sales to fund the establishment of a WVO collection system.**

4. FINANCIAL INCENTIVES AND SUPPORT

Private-sector investors have shown substantial interest in the biofuels sector internationally and, recently, in South Africa. However, very little of this interest has concretised into domestic investment because, unlike in the major biofuel producing countries, government support here is insufficient to create an environment that can assure investors an attractive return.

Both the Biofuels Task Team and the Windfall Tax Report have proposed a variety of incentives and supports. SABA's understanding of those proposed by the Biofuels Task Team is set out in Annexure 1. While SABA is appreciative of the incentives government is willing to offer, these are unfortunately not sufficient to ensure the industry's commercial sustainability, and hence will not facilitate its establishment. This can be explicitly demonstrated given generic production figures currently available.

Of particular concern is the five-year limit the Biofuels Task Team places on the incentives. This is well below the investment timeframe needed for projects of the nature of biofuel production. Large biofuel plants are typically expected to be financed on 7-10 year terms. In contrast to the Biofuels Task Team report, the Windfall Tax Report recommends that incentives remain in place for 10-15 years.

What is needed therefore is an "investment incentive dispensation" consisting of a range of supports that are collectively sufficient to address commercial viability and the opportunity cost of invested capital.

Nevertheless while calling for government support, SABA is also aware that such support, if not carefully crafted, can drain the fiscus unnecessarily and can lead to severe market distortions. Accordingly, SABA recommends that National Priority producers be the main beneficiaries of the "investment incentive dispensation", as these producers are best capable of establishing a biofuel industry that, once matured, can be weaned off government support.

SABA recommends government put in place an "investment incentive dispensation" for National Priority Biofuel Producers that fully addresses commercial viability and the opportunity cost of invested capital.

SABA recommends the "investment incentive dispensation" consist of:

- **A separate licensing category for National Priority Biofuel Producers that exclusively entitles such producers to**
 - **supply the national biofuel mandatory blend**
 - **government investment**
 - **support from the Equalisation Fund mechanism.**
- **A fuel levy rebate that applies equally to all producers, all biofuels (including bio-ethanol gel) and which is tax exempt in the hands of the biofuel producer.**

SABA recommends the “investment incentive dispensation” remain in place for 15 years and be revisited thereafter, as recommended in the Windfall Tax Report.

4.1. Fuel Levy Exemption

The Biofuel Task Team has recommended a 45% fuel levy exemption for biodiesel and that bioethanol receive 70% of the biodiesel exemption.

4.1.1. Extent of the levy

Based on figures received from major global technology providers and agricultural role-players regarding generic technology costs and commodity prices¹⁰, preliminary financial models¹¹ were constructed by Absa AgriBusiness to assess the commercial viability of production for the feedstocks under consideration if fuel levy rebates are in place. The results of this exercise are tabulated below¹²:

	Rebate	Min DSCR	S/Holder Nominal IRR
Ethanol from Sugar Cane	No Rebate		
Worst Case	0	(3.53)	5%
Base Case	0	(0.16)	5%
Best Case	0	0.82	5%
Ethanol from Sugar Cane	45c/l rebate scenario		
Worst Case	0.45	(1.43)	5%
Base Case	0.45	0.76	5%
Best Case	0.45	1.60	17%
Biodiesel from Soya Beans	No Rebate		
Worst Case	-	(10.08)	6%
Base Case	-	0.86	8%
Best Case	-	3.37	31%
Biodiesel from Soya Beans	45c/l rebate scenario		
Worst Case	0.45	(8.81)	6%
Base Case	0.45	1.61	16%
Best Case	0.45	4.05	34%
Ethanol from Maize	No Rebate		
Worst Case	-	(57.79)	No Return
Base Case	-	1.12	No Return
Best Case	-	2.47	23%
Ethanol from Maize	45c/l rebate scenario		
Worst Case	0.45	(62.76)	No Return
Base Case	0.45	(2.42)	No Return
Best Case	0.45	2.05	5%

It is important to note that the calculations reflected in this table were based on the commodity and oil prices of 2004/5. Significant changes in these prices – notably lower oil and ethanol prices and spikes in maize and oilseed prices – have had the result that the best case scenario no longer applies. Hence the effect of the rebate proposed by the National Biofuels Task Team (namely R0.45/lit) therefore falls between the worst and base case scenarios.

¹⁰ Praj Technologies, Lurgi, Absa AgriBusiness, Bureau for Agricultural Policy

¹¹ Given the current escalation in construction input costs, and global demand for biofuel production plants, it is expected that these costs have been under-estimated.

¹² Please note that the table reflects results of the calculations performed before the fuel levy was increased by R0.05 in the National Budget and therefore reflect a fuel levy rebate of R0.45 instead of R0.47.

SABA response to Draft National Biofuels Strategy

As an example, the graph below demonstrates the extreme fluctuations in the US ethanol profitability over the past 18 months. July 2006 was the most profitable period in this time frame but recent weeks have shown a more difficult environment for US biofuel producers due to lower oil prices and higher maize prices.



Source: LaSalle, Chicago

The commercial viability indicator being used in this regard is nominal shareholder IRR, under the assumption that a 25% return on investment (or 19% real return) to shareholders is sufficient as a zero economic profit benchmark, to stimulate investment into the biofuels sector. In addition, a “bankability” criterion regarding debt finance has been included, where a debt service coverage ratio (DSCR) of 1.6 is assumed relevant. Thus a plant that meets this ratio will be generating sufficient income to cover the costs of servicing its debt by a multiple of 1.6.

The exercise demonstrates that the proposed rebate incentive does not sufficiently address the issue of commercial viability, as the 25% threshold cannot be reached. This exercise was conducted prior to recent commodity price increases, which underlines the point that a formula-based “investment incentive dispensation” is required.

The Biofuel Task Team initially recommended a 70% fuel levy reduction, but then argued this should be reduced to 45% to accommodate additional supports – in particular the depreciation allowance and a guaranteed offtake through mandatory blending. The logic of this argument is not clear. For example, a depreciation allowance can technically be seen as a deferred tax liability, and hence not a support that is a drain on the fiscus. SABA is therefore of the view that the Biofuels Task Team has not properly quantified the impact of the so-called “additional supports” to the industry. Additionally, it appears patently obvious that these “additional supports” pale in comparison to those that have supported the established liquid fuels industry for decades. The National Treasury team in the Windfall Tax Report has taken a more

generous view of the fuel levy rebate and has recommended rebates be increased, if needed, to successfully establish the industry.

SABA recommends:

- **Biofuels receive a 100% fuel levy rebate until the industry is established and B5 and E10 blending targets are met, where after the rebate can be reviewed.**
- **Bio-ethanol gel producers receive a 100% fuel levy rebate.**
- **While this levy rebate be part of a complete “investment incentive dispensation”, which fully addresses commercial viability and the opportunity cost of invested capital, it also apply equally to all biofuel producers, irrespective of size.**

4.1.2. Tax treatment of the levy

The impact of the rebate is substantially diluted due to its taxability, for example:

Biodiesel Fuel Levy	R1.05
Rebate of 45%	R0.47
Tax @ 29%	R0.14
Net Rebate	R0.33

Bio-ethanol Fuel Levy	R1.21
Rebate @ 70% of 45%	R0.38
Tax @ 29%	R0.11
Net Rebate	R0.27

SABA recommends that fuel levy rebates be tax exempt.

4.1.3. Increase in fuel levies on non-biofuels

The Biofuels Task Team has recommended a fuel levy increase for every percentage increase in biofuel market share. While the National Strategy Document recommends states this be R0.35/lt, the Biofuels Task Team has advised SABA that this is possibly an error and that the figure should be R0.035/lt. Even this reduced increase is difficult to justify.

The assumption that a reduction in the fuel levy will lead to a drain on the fiscus needs further investigation. In line with international tax practices, the fuel levy is classified as an indirect tax on fuel consumption. Its purpose is to act as a mechanism to balance tax collection increases or decreases in other areas of the fiscus. As such it is increased if a decrease in tax collection is expected in another area of the fiscus, while it is either not increased or even decreased if National Treasury expects increased revenues from other sources (eg an increase sin taxes, incomes). Revenues collected from the fuel levies are not earmarked for specific purposes but are combined in a general pool with revenues collected from other sources.¹³

As biofuel production will establish new income-earning activities, the reduction in fuel levy revenues will very likely be made up from increased income tax collection.

¹³ Verbal correspondence with the South African Petroleum Industry Association, 12 October 2006

SABA recommends

- **The impact of increased income earning activities from biofuel production be offset against the reduced fuel levy to determine the net loss (or gain) of revenue collection on the fiscus.**
- **Any fuel levy increase on fossil-based fuels should not be unduly onerous on motorists.**

4.1.4. Discriminatory treatment of bioethanol

The Biofuels Task Team has recommended that bio-ethanol receive only 70% of the fuel levy rebate set for biodiesel on the grounds that bioethanol only has 70% of the energy content of fossil-based petroleum.

However it has been demonstrated that at percentages below 10%, this difference is not noticeable – according to SAPIA, the difference at a 10% blend will at most be 2%¹⁴. The Biofuels Task Team has therefore taken an overly cautious approach which is not justified by the harm it wishes to prevent.

In addition, the Biofuels Task Team's recommendation is contrary to the recommendation of the Windfall Tax Report that bioethanol and biodiesel be treated equally.

SABA recommends bio-ethanol and biodiesel receive the same “investment incentive dispensation”.

4.2. Equalisation Fund mechanism

The Equalisation Fund offers a more powerful incentive for the establishment of the biofuel industry than the fuel levy rebate, as government can use it to guarantee the investment returns required for greenfields plant establishment. Accordingly, only National Priority Biofuel Producers should be eligible to benefit from it. This will also ensure that the difficulties arising from that mechanism's application to the synfuels industry, as detailed in the Windfall Tax Report, will not be repeated.

SABA recommends the Equalisation Fund be

- **structured so as to guarantee a 25% nominal equity return (about 19% real return) for investors.**
- **structured to provide economic viability for National Priority Biofuel Producers.**
- **applicable only to National Priority Biofuel Producers and only in respect of volumes destined for the national mandatory blend supply.**

4.2.1. Equalisation band

The Biofuels Task Team has recommended an Equalisation Fund-based price hedging mechanism be put in place until 2013 which will entitle biofuel producers to a payment of \$0.35/b for every \$1 the oil price falls below \$45/b, and require producers to pay \$0.35/b into the fund for every \$1 the oil price exceeds \$65/b. This mechanism is similar to the one used to establish the coal-to-liquids (CTL) synthetic fuel industry.

¹⁴ Verbal correspondence with the South African Petroleum Industry Association, March 2007

SABA response to Draft National Biofuels Strategy

The Windfall Tax Report has, however, criticised this form of the Equalisation Fund mechanism and proposes instead that biofuel producers receive a tax credit when oil prices fall below \$45/b and pay extra excise taxes when prices exceed \$60/b. The report recommends that this tax be a sliding percentage of a Full Incentive Amount of R0.55.

a. Equalisation band range

The proposed Equalisation Fund’s \$45-\$65/b band originates from the petroleum industry and are not at all applicable to the biofuel industry. In particular, given the shifts in supply and demand of international oil prices prior to 2005, the lower and upper limits of the equalisation band be revised such that the Equalisation Fund can achieve its objective of guaranteeing nominal investor returns of 25% (19% on real terms). SABA therefore suggests that a band of \$70-\$80/b would be more effective.

SABA recommends the Equalisation Fund range be determined by input and output prices so as to enable the mechanism to ensure requisite investor returns are maintained and that the industry remains commercially viable.

b. Claw-back mechanism

The Biofuels Task Team has assumed that for every \$1 increase in the crude oil price above \$65 per barrel, biofuel production facilities stand to make \$0.70 in profits per barrel. Using the generic plant financials developed by Absa AgriBusiness, it can be demonstrated that such an assumption cannot be justified.

Shareholder IRR at baseline Brent + movement in USD/barrel				
Movt in Brent	Baseline	Sugar Ethanol	Maize Ethanol	SoyDiesel
53.22	-10	0.050	No Return	0.072
54.22	-9	0.050	No Return	0.077
55.22	-8	0.050	No Return	0.082
56.22	-7	0.050	No Return	0.087
57.22	-6	0.050	No Return	0.096
58.22	-5	0.050	No Return	0.105
59.22	-4	0.050	No Return	0.121
60.22	-3	0.050	No Return	0.132
61.22	-2	0.050	No Return	0.140
62.22	-1	0.050	No Return	0.146
63.22	0	0.050	No Return	0.153
64.22	1	0.050	No Return	0.159
65.22	2	0.050	No Return	0.165
66.22	3	0.050	No Return	0.171
67.22	4	0.050	No Return	0.177
68.22	5	0.050	No Return	0.182
69.22	6	0.050	No Return	0.188
70.22	7	0.050	No Return	0.194
71.22	8	0.050	No Return	0.199
72.22	9	0.050	No Return	0.205

As can be seen in the table above, the profitability change for such increases / decreases under the proposed rebate scenario are NOT substantial. A net cash flow analysis will NOT support the assumptions made in the Biofuels Task Team report.

SABA recommends no claw-back mechanism be introduced for a period of 15 years, or until such time as National Priority Biofuel Producers have recovered their costs and expenses, which ever is the longer.

4.2.2. Mechanism proposed by the Windfall Tax Report

The Windfall Tax Report has recommended the Equalisation Fund operate on a tax exemption/liability basis. A tax credit-based mechanism would do little to alleviate the immediate cashflow needs of the infant biofuels industry. Under certain economic circumstances (in particular low oil prices), the biofuels industry will likely incur losses and so not be able to benefit from the tax credit. A tax credit-based mechanism will also not only limit the establishment of the biofuels industry, but also affect the industry's ability to stimulate rural socio-economic development by severely constraining the market for biofuel feedstock crops.

Nevertheless, the Windfall Tax Report substantiated its view by raising concerns with how the Equalisation Fund mechanism as used in the CTL industry, and as subsequently proposed by the Biofuels Task Team. SABA's response to these concerns is as follows:

- *"The mechanism lacked a proper legal basis."¹⁵* This is a concern pertinent to the environment in which CTL production was established; namely an opaque industry, with substantial political interference and agreements that were often verbal and informal. The National Priority producer licensing system and the new culture of transparency in the liquid fuel sector should ensure that any new Equalisation Fund mechanism is set up in a manner that is legally sound.
- *"The mechanism removed too much business risk from private investors"¹⁶.* The extent of Equalisation Fund mechanism proposed in this document on its own is not sufficient to subsidise a new industry. Even under an "investment incentive dispensation", private investors will therefore still carry substantial business risk.
- The mechanism had the unintended consequence that synfuels could not be exported as the mechanism constituted *"a protection that fell foul of World Trade Organisation rules"¹⁷*. This would not be a problem for biofuels if the mechanism applies only to fuels produced for domestic consumption.

SABA recommends the Equalisation Fund mechanism be based on a cash payout, rather than a tax credit and that it be restricted to biofuel production for domestic use only, as per the definition of a 'renewable energy resource'.

4.3. Import policy

The Biofuels Task Team proposes there be no tariffs on biofuels, biofuel feedstocks, biofuel production inputs and biofuel co-products. Nevertheless, some sort of tariff protection, within the framework of existing multilateral trade agreements, may be

¹⁵ The Windfall Tax Report, page 119

¹⁶ The Windfall Tax Report, page 119

¹⁷ The Windfall Tax Report, page 119

necessary to offset the effects of farm and energy crop subsidies in the US, the EU and other countries. Such protection may especially be required to prevent markets being flooded and so depriving biofuel producers of an income stream from co-products, in particular of oilcake co-products. In addition, tariff protections may be needed on biofuel imports to in favour of local biofuel producers so as to entrench backward linkages to energy-crop producing farmers.

SABA recommends

- **Tariff protections on biofuel imports.**
- **A graduated tariff structure be put in place, with lower tariffs on biodiesel feedstocks and biofuel inputs but higher tariffs on co-products.**
- **A continuous consultation process between SABA and government on the import and export of biofuels, biofuel inputs, co-products and tariff issues.**

5. Licensing of biofuel production

SABA welcomes the recommendation to licence biofuel production plants as this will ensure a number of objectives are met:

- The creation of a stable and well regulated industry
- A consistent supply of fuel that meets the standards required by the fuel industry
- Channelling investment into rural areas and spurring rural development
- Ensuring BEE participation at all levels of the biofuels value chain

While there has been substantial interest in biofuel production, particularly in the recent favourable coinciding of high oil prices and low maize prices, very little progress has been made in establishing biofuel projects. This is because currently the investment returns expected from biofuel projects are too low as against the high risks of investment, and lack an overall supporting legislative and economic framework.

A licensing framework can address these concerns by creating a ring-fenced area for government intervention. This can allow for a guaranteed bioethanol or a biodiesel price. Once biofuel producers are ensured an income, they can then offer a price that can address investor concerns and so stimulate the production of biofuels as well as forward and backward linkages in the supply chain.

5.1. Existing legislation

SABA notes that biofuels are legally classified as petroleum products under the Petroleum Products Act 120 of 1977 and that the current Petroleum Product Manufacturing licences¹⁸ already regulate the manufacture of biofuels under the jurisdiction of the Controller of Petroleum Products (CoPP).

¹⁸ Petroleum Products Act 120 of 1977: Regulations regarding petroleum products manufacturing licences, published under Government Notice R288, 27 March 2006

SABA recommends the biofuel manufacturing licencing framework be amended to create a separate category of licences for National Priority Biofuel Producers.

5.2. Licensing Agency

Despite biofuels falling under the ambit of the CoPP, SABA recommends the administration of biofuel licences not be left solely to this official but that a separate agency and that the CoPP be obliged to consider this agency's recommendations. This will ensure the new biofuel industry is not dominated by the petroleum industry and will allow for concerns specific to the biofuel and the renewable energy sectors to be addressed. The agency should consist of elected members from the various components of the industry value chain, as well as policy makers or government representatives.

SABA recommends that all biofuel manufacturing licences, including National Priority Biofuel Production licences, be controlled and administered by a new agency, the Biofuel and Renewable Energy Licensing Agency, be set up under the National Energy Regulator of South Africa (“the Biofuel Agency”).

SABA recommends the Biofuel Agency

- **Determine the total number of National Priority Biofuel Production licences based on the country's agroclimatic potential for biofuel crop production.**
- **Determine the geographic location of the National Priority Biofuel Production licences based on both crop production potential and fuel logistic efficiencies.**
- **Be given statutory powers to monitor all biofuel and biofuel input imports by biofuel producers.**
- **Include SABA on its Board**

SABA recommends the addition of new sub-sections 5(d) and 6(1)(c) to Petroleum Manufacturing Regulations¹⁹ to oblige the Controller of Petroleum Products to be satisfied or to verify (as the case may be) that the Biofuel Agency has approved the granting of a biofuel manufacturing licence or a National Priority Biofuel Production licence to an applicant.

5.3. Ambit of the licences

SABA recommends that:

- **The “investment incentive dispensation” be restricted to National Priority Biofuel Producers only.**
- **Successful National Priority Biofuel Producer licence applicants start production within two years of the licence being granted, failing which the licence will be forfeited.**
- **Only National Priority Biofuel Producers be allowed to supply biofuels to meet the national blend requirements.**
- **Export-directed production not to qualify for incentives, nor be allowed to supply the domestic market.**

¹⁹ *Petroleum Products Act 120 of 1977: Regulations regarding petroleum products manufacturing licences*, published under Government Notice R288, 27 March 2006

- **National Priority Biofuel Producers only be entitled to export only once they have delivered their licensed volumes.**
- **Biofuel offtakers be stipulated in National Priority Biofuel Production licences to retain efficiencies in the biofuel market.**
- **National Priority Biofuel Production licences be in force for 15 years, where after producers can reapply for their licences and government can revisit the number of National Priority Biofuel Production licences.**
- **An annual market review is undertaken to ensure that National Priority Biofuel Production licensing requirements keep up with market developments.**

5.4. Location of National Priority Biofuel Production licences

The spatial dimensions of agricultural production, as well as the spatial dimensions of biofuel consumption should be considered in the allocation of National Priority Biofuel Production licences. For instance, while South Africa is a net importer of winter cereals in most years, certain areas in the country are net surplus producers of winter cereals that could be used for bioethanol production.

In addition, if the biofuel industry is to act as a catalyst for rural development, then care should be taken not to grant National Priority Biofuel Production licences based on import and offtake logistic efficiencies only.

SABA recommends that National Priority Biofuel Production licences to supply the national blend be distributed among the provinces according to their agro-climatic potential for growing energy crops.

To date, the Free State and the Eastern Cape provinces have issued media statements regarding biofuel plants they will officially support. This has created uncertainty in the investor community as there are no objective criteria on which provinces decide what projects to support. It appears that this is being done on a “first come, first served” basis. Thus there is no transparency on how government involvement is decided.

Government agencies such as the Industrial Development Corporation (IDC) and the Central Energy Fund (CEF) are also signing contracts and mandates with apparently “pre-approved” parties in a process that is neither transparent, efficient nor based on commercial viability.

SABA recommends that

- **There be a moratorium on announcements by provinces regarding which projects are officially supported until National Priority Biofuel Production licences have been issued**
- **Provinces support only National Priority Biofuel Production projects**
- **Any equity to be taken up by state-owned enterprises, particularly the Industrial Development Corporation and the Central Energy Fund, be conditional on such projects obtaining National Priority Biofuel Production licences.**

5.5. Licence criteria

SABA proposes the following licensing criteria categories:

- **Procurement**
 - **Hedging strategy: should be in place to ensure price and volume stability.**
 - **Supply model: this model must indicate the farmers from whom plants will source feedstock, the production capacity of these farmers, measures put in place to increase farmers' production capacity etc.**
 - **Local procurement: Licensees should procure feedstock from local suppliers as far as possible**
- **Technology**
 - **Standards, certification, reliability**
- **Finance**
 - **Credit approved by major commercial bank**
- **Offtake**
 - **Contracts for term of debt at fixed / formula-based prices**
 - **Identity of offtaker stated**
 - **Offtakers be selected on the basis of logistical efficiencies**
- **Integrated development strategy**
 - **Rural economic development**
- **BEE targets**
 - **substantial percentage of crops and fuel to be produced by BEE producers**
 - **Biofuel producers to be BEE compliant with relevant scorecard**
- **Industry competition, concentration and displacement**
 - **Prevention of one or a few players dominating the new industry**
 - **Existing efficient role-players not to be displaced**
- **Time frames**
 - **Licencees producers start production within two years of the licence being granted**
 - **Licences remain in force for 15 years, whereafter licensees will be required to reapply.**

6. AGRICULTURAL RECOMMENDATIONS

6.1. Concerns raised on the Draft Strategy Document

The introduction of biofuels will increase the demand for locally produced agricultural commodities, thereby making otherwise nonexistent commercial opportunities available to land reform beneficiaries and emerging black farmers. This in turn will increase the chances of Black Economic Empowerment succeeding in the sector.

SABA notes with concern the extent to which the Draft National Strategy Document is devoted to idealistic and romantic recommendations in respect of subsistence and emerging farmers. Problematic recommendations in the report include:

- That emerging farmers only be considered as biofuel crop producers once they have met their food and energy needs from locally produced sources.

- That commercial crops aren't suited to biofuel crop production by emerging farmers.
- That biofuel crop production will jeopardise food security.
- A blanket and idealistic recommendation of low input, draught-animal powered agriculture to the exclusion of other, potentially more efficient farming practices.

In effect the proposals contained in the Draft National Strategy Document assume that rural poverty can be alleviated in a vacuum – ie without linking farmers to first economy markets with income earning potential, and without allowing them the option to adopt first economy agricultural production technologies and systems.

6.2. Ensuring emerging farmers benefit

Commercial energy crops – maize, grain sorghum, winter cereals such as triticale, sugar, soya beans, sunflower seed and canola – are ideally suited to the stimulation of rural economies.

Commercial energy crops are typically low value, commodity crops with limited job creation potential. On average energy crops create 0.05 jobs/ha, compared to approximately 3 jobs/ha for higher value cash crops, such as tomatoes. These crops nevertheless generate high volumes and have relatively low production risks. They are also not as perishable as higher value cash crops, such as fruit and vegetables. This allows for more room for error in the production process and obviates the need for expensive and management-intensive cold chain management. Energy crops can be stored with relative ease and cost effectiveness. This reduces the pressure on farmers to access markets immediately after harvest and allows them to keep crops from the market when producer prices are low.

Energy crops have a further advantage of lending themselves to large-scale regional production. This allows for the grouping of a number of emerging farmers, farming on pockets of land too small to individually warrant capital investment, so that they approximate large-scale farming enterprises. This arrangement unlocks economies of scale previously denied individual small-scale farmers, such as the ability to negotiate better farm-gate and input prices. It is also easier to extend farm management and extension services to a group of farmers producing identical crops under similar conditions than it is to individual farmers growing different crops. As a result, the likelihood of emerging farmers consistently, and more efficiently, producing higher volumes than they would individually increases, as does the likelihood of their producing under commercial conditions.

The grouping of small-scale farmers is a mechanism through which otherwise marginalised small-scale farmers can obtain access to the first economy. This access can be further facilitated if the farmers become dedicated suppliers to an industry with an established and growing demand. A new industry, such as a biofuels industry, is ideally suited to this purpose – it will create demand for additional agricultural commodities to be supplied by new entrants. Biofuel offtakers are likely to be major oil companies, which will provide market security for emerging farmers especially in the event of mandatory blending being introduced.

The licensing system proposed by the draft National Biofuel Strategy creates a framework to ensure emerging producers can benefit from the production of feedstock demanded by the new developments in biofuel production, in particular if it is structured to accommodate National Priority Biofuel Producers from whom petroleum companies will be obliged to source all biofuels from licensed biofuel producers.

If it is a key criterion of a licence that biofuel producers must source feedstock from emerging farmers, then the biofuel industry can immediately create a market for emerging farmers, particularly if they are situated in marginalised rural areas.

SABA recommends that National Priority Biofuel Production licences specifically require biofuel producers to source a substantial percentage of their feedstock – say 30% – from emerging farmers.

6.3. Stimulating rural development through anchor projects

Energy crops can therefore act as anchor projects for rural development. Once a producer base of emerging farmers is established, higher value cash crops can be introduced as rotation crops. Such crops can unlock agroprocessing opportunities in economically depressed rural areas and can also contribute to household food security.

Typically emerging farmers struggle to produce higher value agroprocessing crops as their perishable nature requires greater farm management skills and greater capital expenditure, particularly with regard to investments in cold chain management, traceability etc. Emerging farmers also often fail to obtain the production loans typically needed for higher value crop cultivation due to a lack of security and poor asset bases. However, the likelihood of emerging energy-crop farmers obtaining production loans is increased by the fact that energy crops generate a stable income stream in a liquid market at lower risk.

Energy crop production can help establish an agro-processing foundation in marginalised rural areas allowing for the introduction of the cultivation of higher value cash crops and agro-processing activities. The higher risk entailed in producing higher value cash crops can be offset by the lower risk entailed in producing bulk commodities for dedicated and reliable offtakers such as the liquid fuel industry.

SABA recommends that government support biofuel production projects encompassing emerging farmers and which are structured as anchor projects for further rural development.

6.4. An opportunity for public private partnerships

Turning emerging farmers into income earners will, however, require a scaffolding of assistance, ranging from extension services, business skills, access to stable markets and substantially in improved rural infrastructure.

The Development Bank of South Africa (DBSA)²⁰ has highlighted the extent to which such supports, put in place by the previous government for white farmers, contributed to the establishment of today's world-class commercial farming sector. Previous state-funded farmer supports included capital subsidies, guaranteed prices, import protection, a strong government extension and research service and cheap credit.

The DBSA has noted that similar measures aren't available to new black farmers. The land reform programme is arguably the most important form of support for emerging farmers as it has increased access to land. Attempts have been made to make grants and cheap credit available through programmes such as Mafisa, LRAD and Casp. However, none of these come close to the magnitude of previous assistances.

But it is also clear that government faces substantial financial and human resources constraints. Thus the private sector needs to partner with government in assisting marginalised farmers. A co-operative farming model can create a structure that is conducive to private sector involvement.

Such models can entail input suppliers, eg seed or fertiliser companies, providing extension services to ensure inputs correctly used and proper farming practices are adopted. Commercial co-operatives and agribusinesses can assist through business skills training and availing infrastructure such as grain storage facilities.

With support from a range of roleplayers, a group of emerging farmers will consistently and efficiently produce greater volumes than they would as individuals. The improved production coupled with a guaranteed market such as a biofuel plant should, in turn, increase emerging farmers' income-earning potential. This will make it more viable for financial institutions to extend credit to them.

Many new black farmers are "unbanked" because they lack assets that banks can use as security, but a guaranteed income stream will give banks security in farmers' ability to repay their loans.

SABA recommends biofuel crop production projects involving emerging farmers be structured on a public private partnership basis.

7. FOOD SECURITY

7.1. Cash in hand more important for food security

The draft National Strategy has raised the concern that biofuel production could jeopardise food security concerns because it promotes two major food and feed crops for biofuel production; namely soya for biodiesel and maize for bio-ethanol. There is also the concern that biofuel crop production could consume land and water resources that could be used for food production.

²⁰ Development Bank of South Africa, Development Report 2005 – Overcoming underdevelopment in South Africa's second economy, pg 71, 2005

Arguments have also been raised that commercial crop production is not suited to alleviating poverty in marginalised rural areas as it will impinge on household food production efforts, such as food gardens.

These concerns reflect a misunderstanding of role agriculture in alleviating poverty and an ignorance of the factors that determine food prices in South Africa.

Taken as whole, South Africa is food secure and has been so for over 20 years²¹. The country produces its main staples from domestic sources and exports surplus food. But, juxtaposed against this picture of plenty is the fact that nearly 14 million South Africans are food insecure and about 43% of households suffer from food poverty²².

Food insecurity is concentrated mainly among black people residing in rural areas, particularly the former homelands, and in urban informal settlements.

This localisation indicates that food insecurity is due more to systemic factors in the economy than the simple production of food. Essentially people are food insecure because they are poor – they lack cash to buy food when harvests fail or to pay for necessities such as a decent home, medicines, school fees and electricity.

This view is substantiated by research from the Food and Agricultural Organisation (FAO) on the role of agriculture in food security. This study showed clearly that having cash in hand contributed more to food security than the ability to produce food²³.

A corollary to this finding is that unless small-scale farming is commercialised and farmers can earn an income, such farming activities will have little impact on food insecurity.

The FAO research therefore discredits the practice of overemphasising romantic measures, such as food gardens, to improve food security. While food gardens do contribute substantially to basic household nutrition, they have only a limited potential for alleviating poverty because they generate virtually no income.

The easiest way to rural development and sustainable household food production, as is explained above, is through the production of commodity crops, such as maize, sugar and soya, on a fairly large scale. Food crops display scale dynamics / economies which extend beyond the household food level.

Thus, biofuel crop production, provided it prioritises the procurement of feedstock from emerging farmers, is a unique opportunity for rural people to earn a stable income from farming, and ensure sustainable rural economies and food security.

7.2. Inefficiencies in the food market supply chain

The increased demand for maize and oilseed feedstock for food and biofuels will increase the prices of the raw materials of basic food items. But, arguing that this will

²¹ Department of Agriculture, The Integrated Food Security Strategy for South Africa, 2002

²² National Treasury, Intergovernmental Fiscal Review, 2003

²³ Roles of Agriculture Project, Food security in South Africa, October 2003, Kirsten J et al.

automatically translate into food insecurity in South Africa is simplistic and ignores other important factors that contribute to food prices.

Research on drivers of food prices conducted by the National Agricultural Marketing Council in 2002 showed farmgate prices are largely divorced from retail prices, especially in the case of maize and wheat²⁴. One of the factors highlighted by the study as having a major effect on food prices was the lack of competition further down the supply chain.

Recent Competition Commission investigations into various food industries (notably bread and milk) have since substantiated this claim. Of note is the current investigation into alleged cartel behaviour among three major food companies in the Western Cape bread market²⁵. It has been alleged that the companies sold bread at higher bread prices in rural areas than in urban areas.

Similarly, the Competition Commission has levied cartel charges against eight major milk suppliers for among other things keeping milk prices high by suppressing surpluses.²⁶

Current market making mechanisms on the input supply side of the biofuel production equation will remain in place and functioning. **It is important to note in the current environment that current short-medium term shortages in the market are a result of the combined effect of cyclical planting behaviour on the part of farmers, and adverse weather conditions. Biofuels industry establishment is being proposed as a stabilising influence in this arena, as the additional market channel will provide farmers with more demand security, and hence act against cyclical production swings.**

7.3. Increased demand will ease price volatilities

A further contributor to high food prices is the maize price's acute sensitivity to supply and demand signals due to the limited size of the grain market. This has led to extreme fluctuations in the maize price in recent years.

The limited market also results in production decisions that are seldom influenced by agroclimatic factors, such as rainfall and the latest advances in production technology, but rather to a great extent by factors related to an insufficient market size. Currently, the production capacity of the grain industry is based on the price signal of the previous season, which in turn determines the tons of grain produced during the following season. If price signals are low, the industry reacts by limiting production in the following season. Consequently, and more often than not, grain prices increase during the next season, thus setting in motion a boom bust cycle of prices.

It is expected that the establishment of a biofuels industry will increase the medium term demand for grain. This should ease the volatility of the maize prices and ensure, in the long term, that the country's full maize growing potential is exploited. This should contribute to food security by bringing food price stability.

²⁴ National Agricultural Marketing Council, Pricing behaviour in the SA food and agricultural sector, 2002

²⁵ Le Roux M Bakers face fines for fixing bread price, *Business Day*, 15 February 2007

²⁶ Blom N, Its official, consumers are being milked, *Business Day*, 8 December 2006

SABA has noted the recent drought-induced spikes increase in the maize price and the impact these are expected to have on food prices. Noteworthy are also increases in the international maize price, spurred on by small harvests in the US and the demand for maize to produce bio-ethanol. **Maize price increases in the short to medium term are a reality, and will occur in South Africa irrespective of whether a biofuel industry is introduced. The introduction of such an industry will, however, increase rural incomes and so contribute to food security by decreasing the percentage of the population dependent on subsistence farming.**

8. CONCLUSION

SABA's concerns regarding proposals made by the Biofuels Task Team's Draft National Strategy can be summarised as follows:

- Financial incentives and support measures
 - **A complete “investment incentive dispensation” needs to be constructed**
 - The financial incentives proposed, while moving in the right direction, are not sufficient to spur investment into the industry.
 - **Substantial work is, however, still required to develop formulas, which can accommodate changes in particular variables (eg. feedstock, co-products etc), in order to determine the appropriate incentive levels.**
 - The Equalisation Fund mechanism, while appropriate, suffers from a severe error in its profitability assumption which will require substantial and competent investigation
 - The proposed fuel levy increases in tandem with biofuel market share increases would not be acceptable to consumers, and will be unsustainable.
 - The 2013 time horizon is too short to stimulate the industry appropriately
- Agriculture and rural development
 - Food security concerns appear to be over exaggerated. Food security is dependent more on the ability to earn an income than it is on household food production. Biofuel production can contribute to food security by bringing stable income streams to depressed rural areas.
 - The emphasis placed on food gardens and the potential displacement of subsistence agriculture cannot be justified, as it would negate both rural development objectives and is an unrealistic comparison.
 - **SABA opposes the report's recommendation that a separate biofuel policy be created for emerging farmers, which concentrates on first creating energy and food self sufficiency in depressed rural areas before linking these farmers to energy-crop offtake markets.** This recommendation is flawed as it assumes poverty can be alleviated in a vacuum and that citizens in the marginalised first economy don't need access first economy markets to earn incomes to pay for necessities such as school textbooks, medication, transport etc. In addition, many emerging farmers have aspirations to become commercial farmers. A separate strategy will stymie these ambitions.

- Licensing
 - Licensing requirements should apply only to those wishing to access the local market. Those producers that have achieved substantial production efficiencies should be required simply to meet the appropriate standards and certification criteria.
 - **Criteria categories should include procurement, technology, finance, offtake, rural development, and industry competition.**

It is suggested that the lead being provided by the Task Team appointed by the Minister of Finance in May 2006 to consider possible reforms to the fiscal regime governing the liquid fuel energy sector be vigorously pursued.

After analysis of the pros and cons of each of the other fiscal options, namely *Revised subsidy Regime*, *Progressive formula tax* and an *Investment-linked tax and subsidy option*, we have rejected each of these instruments as a stand alone option.

Instead, the Task Team recommends the adoption of a progressive investment incentive dispensation for the manufacture of liquid fuels from indigenous raw materials, excluding crude oil and natural gas. This would be a hybrid fiscal hedging measure that has elements of each of the above three fiscal measures and which best incorporates the aims of National Treasury, as well as those outlined in the White Paper on Energy Policy (1998), particularly providing transparency, ease of application, encouraging local production from the most cost effective sources and encouraging cost efficiencies.

The Task Team further suggests that if Government wishes to intervene to address supply side issues in non petroleum based fuels, then the domestic manufacture of biofuels should be given precedence over the *new* facilities for the manufacture of synfuels from coal or gas given biofuels expected greater benefits to the South African economy²⁷.

²⁷ The Windfall Tax Report, page 15

ANNEXURE 1:

SABA's understanding of incentives proposed by the Biofuels Task Team

Outside of the accelerated depreciation allowance, the following financial incentives and support to the industry have been proposed by the biofuels task team.

- Fuel levy exemption
 - 45% exemption for commercial biodiesel producers
 - Exemption can be raised up to 75% to stimulate production to reach B5 target
 - 100% exemption for non-commercial biodiesel producers
 - Bioethanol producers (both commercial and non-commercial) get 70% of the biodiesel exemption
 - Fuel levy to increase by 35c/l for every 1% biofuel market share established
 - All biofuel producers to pay full levy and claim back exempt portion against proof of quality and safety standards
 - Exemption to apply only to registered producers until the renewable fuels target of 4.5% is reached in 2013
- Equalisation fund mechanism
 - Assumes that for every \$1/b increase above an oil price of \$65/b, biofuel production profits will increase by 70% of the oil price increase. The biofuel task team therefore proposes that 50% of this profit (ie \$0.35/b) be paid into the equalisation fund.
 - At an oil price above \$65/b, producers will pay \$0.35 into the equalisation fund for every \$1/b the oil price is above \$65. At an oil price under \$45/b, producers will receive an equalisation levy payment of \$0.35/b for every \$1/b decrease.
 - Proposed 5-year application.
- Regulated selling prices: Bioethanol – 95% of BFP; Biodiesel – 100% of BFP
Only applies to licensed producers, the mandated volumes and only until 4.5% overall target reached in 2013. All other biofuel volume prices subject to negotiation

ANNEXURE 2

SABA Recommendations regarding Biofuels Task Team Report

1. Prioritisation of Biofuels

- 1.1. SABA supports the recommendation in the Windfall Tax Report that Government prioritise the establishment of plants producing biofuels from indigenous raw materials.
- 1.2. SABA recommends the establishment of a complete “investment incentive dispensation” extending significantly beyond the current Biofuel Task Team proposals.

2. Mandatory Blending

SABA recommends:

- 2.1. Blending targets be set at levels that correspond with
 - 2.1.1. South Africa’s agro-climatic potential to produce biofuel crops;
 - 2.1.2. the growth potential of the national herd and poultry sectors through feedlotting, with the understanding that biofuel industry establishment can result in a fundamental restructuring of the livestock sectors; and
 - 2.1.3. investment and growth in the national economy.
 - 2.1.4. growth in the international soya bean meal export market.
- 2.2. Initial minimum blending targets of E10 and B5 be set, and that these be increased as the industry matures.
- 2.3. Provision be made to allow blending percentages in those regions that are suited to biofuel crop production to be higher than the national blend.

3. Biofuel Feedstock Crops

SABA recommends:

- 3.1. The National Biofuel Strategy neither prescribe nor exclude the crops that may be used to produce biofuels.
- 3.2. Licensed sugar-to-bioethanol producers fall outside the ambit of the Sugar Act and the Sugar Industry Agreement.

4. Small-Scale and National Priority Biofuel Producers

SABA recommends:

- 4.1. The 300 000lt/year production threshold for the fuel levy exemption be revised and that it be extended to bio-ethanol production.
- 4.2. Small-scale producers be assisted with licensing.
- 4.3. A separate licensing category for National Priority Biofuel Producers be created.
- 4.4. The “investment incentive dispensation” apply only to National Priority Biofuel Producers.
- 4.5. Government reinstate or extend existing SMME programmes to provide assistance to small-scale producers.

5. Bio-ethanol Gel

The SABA recommends:

- 5.1. Bio-ethanol receives the same tax exemption treatment as paraffin.
- 5.2. Bio-ethanol gel, due to its important health and safety characteristics, benefit from the “investment incentive dispensation”.
- 5.3. Bio-ethanol gel is prioritised for its contribution to the health and welfare of poorer communities reliant on paraffin, and actively promoted by government.

6. Carbon Credits

SABA recommends government apply for a blanket carbon credit for the entire biofuels industry and that the savings represented by such credits be shared among licensed producers, according to principles to be agreed to by the industry.

7. Benchmark Biofuels Price

SABA recommends:

- 7.1. The benchmark price for biofuels take the following into consideration:
 - 7.1.1. The price per litre required for zero economic profit. This is the price required by investors to meet the minimum opportunity cost of capital and will differ between biofuel crop types, technology and location.
 - 7.1.2. The price per litre compared to the landed cost of imported biofuels, petroleum-based fuels and synthetic fuels and oxygenates.

- 7.2. Biofuels be priced based on production costs and import parity prices
- 7.3. The additional handling cost of accommodating bioethanol into the fuel chain be carried by government and/or society.

8. Waste Vegetable Oil

SABA recommends

- 8.1. While waste vegetable oil (WVO) constitutes an important biodiesel feedstock, its use be limited to non-commercial biodiesel production in plants falling within the “small-scale producer” definition under the SARS regulations.
- 8.2. Government consider a domestic/import levy on vegetable oil sales to fund the establishment of a WVO collection system.

9. “Investment Incentive Dispensation”

SABA recommends:

- 9.1. Government put in place an “investment incentive dispensation” for National Priority Biofuel Producers that fully addresses commercial viability and the opportunity cost of invested capital.
- 9.2. This “investment incentive dispensation” consist of:
 - 9.2.1. A separate licensing category for National Priority Biofuel Producers that exclusively entitles such producers to
 - a. supply the national biofuel mandatory blend
 - b. government investment
 - c. support from the Equalisation Fund mechanism.
 - 9.2.2. A fuel levy rebate that applies equally to all producers, all biofuels (including bio-ethanol gel) and which is tax exempt in the hands of the biofuel producer.
- 9.3. The “investment incentive dispensation” remain in place for 15 years and be revisited thereafter, as recommended in the Windfall Tax Report.
- 9.4. Export-directed production be excluded from the “investment incentive dispensation” and not be allowed to be directed into the domestic market
- 9.5. Bioethanol and biodiesel enjoy the same “investment incentive dispensation”.

10. Fuel Levy Rebate

SABA recommends:

- 10.1.1. While the rebate be part of a complete “investment incentive dispensation”, it also apply equally to all biofuel producers, irrespective of size.
- 10.1.2. All biofuels receive a 100% fuel levy rebate until the industry is established and B5 and E10 blending targets are met, where after the rebate can be reviewed.
- 10.1.3. Bio-ethanol gel producers receive a 100% fuel levy rebate until bio-ethanol gel constitutes at least 75% of the market share of liquid paraffin for household purposes.
- 10.1.4. This levy rebate be tax exempt.
- 10.1.5. The impact of increased income earning activities from biofuel production be offset against the reduced fuel levy to determine the net loss (or gain) of revenue collection on the fiscus.
- 10.1.6. Any fuel levy increase on fossil-based fuels should not be unduly onerous on motorists.

11. Equalisation Fund Mechanism

SABA recommends:

- 11.1.1. Only National Priority Biofuel Producers be eligible to support from the Equalisation Fund mechanism and only in respect of volumes destined for the national mandatory blend supply.
- 11.1.2. The Equalisation Fund mechanism be:
 - a. determined by input and output prices;
 - b. structured to guarantee a 25% nominal equity return (about 19% real return) for investors, economic viability for National Priority Biofuel Producers and that the industry remains commercially viable.
 - c. based on a cash payout, rather than a tax credit
- 11.1.3. No claw-back mechanism be introduced for a period of 15 years, or until such time as the National Priority biofuel producers have recovered their costs and expenses, which ever is the longer.

12. Import Policy

SABA recommends:

- 12.1. Tariff protections on biofuel imports.
- 12.2. A graduated tariff structure be put in place, with lower tariffs on biodiesel feedstocks and biofuel inputs but higher tariffs on co-products.

- 12.3. A continuous consultation process between SABA and government on the import and export of biofuels, biofuel inputs, co-products and tariff issues.

13. Licensing

SABA recommends:

- 13.1. A separate category of licences for National Priority Biofuel Producers be created under the licensing framework set out under the Petroleum Products Act 120 of 1977.
- 13.2. All biofuel licences, including National Priority Biofuel Production licences, be controlled and administered by a new agency, the Biofuel and Renewable Energy Licensing Agency (“the Biofuel Agency”), be set up under the National Energy Regulator of South Africa.
- 13.3. The Biofuel Agency should
 - 13.3.1. determine the total number of National Priority Biofuel Production licences based on the country’s agroclimatic potential for biofuel crop production.
 - 13.3.2. determine the geographic location of the National Priority Biofuel Production licences based on both crop production potential and fuel logistic efficiencies.
 - 13.3.3. have the statutory powers to monitor all biofuel and biofuel input imports by biofuel producers.
 - 13.3.4. include SABA on its Board.
- 13.4. The addition of new sub-sections 5(d) and 6(1)(c) to Petroleum Manufacturing Regulations²⁸ to oblige the Controller of Petroleum Products to be satisfied or to verify (as the case may be) that the Biofuel Agency has approved the granting of a biofuel manufacturing licence or a National Priority Biofuel Production licence to an applicant.
- 13.5. The “investment incentive dispensation” be restricted to National Priority Biofuel Producers only and that only National Priority Biofuel Producers be allowed to supply biofuels to meet the national blend requirements.
- 13.6. Successful National Priority Biofuel Producer licence applicants start production within two years of the licence being granted, failing which the licence will be forfeited.
- 13.7. National Priority Biofuel Producers only be entitled to export once they have delivered their licensed volumes.
- 13.8. Biofuel offtakers be stipulated in the National Priority Biofuel Production licences to retain efficiencies in the biofuel market.

²⁸ Petroleum Products Act 120 of 1977: Regulations regarding petroleum products manufacturing licences, published under Government Notice R288, 27 March 2006

- 13.9. National Priority Biofuel Production licences be in force for 15 years, where after producers can reapply for their licences and government can revisit the number of licences.
- 13.10. An annual market review is undertaken to ensure that National Priority Biofuel Production licensing requirements keep up with market developments.
- 13.11. In respect of government involvement in biofuel projects:
 - 13.11.1. there be a moratorium on announcements by provinces regarding which projects are officially supported until National Priority Biofuel Production licences have been issued.
 - 13.11.2. provinces support only National Priority Biofuel Production projects.
 - 13.11.3. any equity to be taken up by state-owned enterprises, particularly the Industrial Development Corporation and the Central Energy Fund, be conditional on such projects obtaining National Priority Biofuel Production licences.

14. National Priority Licence Criteria

SABA proposes the following licensing criteria categories:

- 14.1. **Procurement**
 - Hedging strategy: to ensure price and volume stability.
 - Supply model: to indicate the farmers from whom plants will source feedstock, the production capacity of these farmers, the measures in place to increase farmers' production capacity etc.
 - Local procurement: to ensure licensees procure feedstock from local suppliers as far as possible
- 14.2. **Technology** – standards, certification, reliability.
- 14.3. **Finance** – credit approved by major commercial bank.
- 14.4. **Offtake** – contracts for term of debt at fixed / formula-based prices; identity of offtaker stated; offtakers selected on the basis of logistical efficiencies.
- 14.5. **Integrated development strategy** – rural economic development
- 14.6. **BEE targets** – substantial percentage of crops and fuel to be produced by BEE producers; biofuel producers to be BEE-compliant with relevant scorecard.
- 14.7. **Industry competition, concentration and displacement** – prevention of one or a few players dominating the new industry; existing efficient role-players not to be displaced.
- 14.8. **Time frames** – licenced producers start production within two years of the licence being granted; licences remain in force for 15 years where after licensees will be required to reapply.

15. Agricultural Production

SABA recommends:

- 15.1. National Priority Biofuel Production licences specifically require producers to source a substantial percentage of their feedstock – say 30% – from emerging farmers.
- 15.2. Government support emerging farmer biofuel production projects that are structured as anchor projects for further rural development.
- 15.3. Emerging farmer biofuel crop production projects be structured on a public private partnership basis.