



Draft Biofuels Industrial Strategy of the Republic of South Africa

Department of Minerals and Energy

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TITTLE: DRAFT BIOFUELS INDUSTRIAL STRATEGY

1 Executive Summary

This document presents the proposed South African Biofuels Industrial Draft Strategy, outlining Government approach to addressing policy, regulations and incentives. Internationally, biofuels are growing, due mainly to higher oil prices, concerns with environment and government policies, regulations and incentives that support this indigenous and renewable fuel source over fossil fuels.

Sustainable supply of biofuels requires low cost, high yield and surplus agricultural production. The Biofuels draft strategy aims to achieve a biofuels average market penetration of 4.5 %, of liquid road transport fuels (petrol and diesel) in South Africa by 2013, which is achievable without excessive support by utilising surplus agricultural capacity. Until this target is achieved, licensed biofuels producers will have a linked licence condition for petroleum wholesalers to accommodate qualifying production volumes at Basic Fuel Price (BFP), which is the import parity price for local petroleum producers and is an element of fuel price mechanism, related pricing, less discounts for added handling costs.

The existing fuel levy exemption and support mechanism should continue and be adjusted, if necessary, and as shown possible, to assist the target being achieved. Further support to establish this industry would come from targeting of existing agricultural support programmes. If the oil price were below \$ 45/bbl, biofuels producers would need some form of additional support, and for prices above \$ 65/bbl, the biofuels industry would pay in, slightly reducing pump price increases. This would be catered for by the Central Energy Fund (CEF) Act Equalization Fund Levy as a balanced hedge with consumers, and at minimum expected oil price of \$ 35/bbl would require fuel price support of less than 1.2 SA cpl. Government agencies should be urged to invest in projects that facilitate the development of this infant industry, particularly linked to Black Economic Empowerment (BEE) participation and for higher risk projects supporting development of new crops on currently underutilised arable land.

Comments are invited to assist with finalization and implementation of this draft strategy.

2 Introduction

2.1 Purpose

Global interest in biofuels has been driven by support for and increasing acceptance of renewable energy sources, growing concerns for the environment including climate change. However, the common view is that clear government policy, coupled with regulations and incentives is a prerequisite for the development of a sustainable biofuels industry.

This document presents the proposed South African Biofuels Industrial Draft Strategy and further outlines the Government support and approach to

addressing policy, regulations and incentives for Biofuels. It is provided so that stakeholders can submit comments to be considered in the finalization of the draft strategy.

2.2 Stakeholder Comments

Stakeholder comments and inputs are invited to be submitted by 10 March 2007 to:

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2.3 Outline of the process followed to date

The establishment of a Task Team and the development of a draft strategy was authorised by Cabinet, through a decision made in December 2005. The draft strategy is based on the work conducted by an Interdepartmental Biofuels Task Team (BTT) over the past 10 months, which builds upon work conducted by Government since 1998. This work yielded two substantial reports a literature review and an investigation into biofuels (see 2.5 for details).

2.4 Consideration of Comments

Government appreciates that there are diverse views regarding biofuels. The objective is to facilitate a biofuels industry that best meets the broader national interest and national development priorities in the short and long term. Comments and suggestions based on a balanced view of the national interest are therefore more likely to carry greater weight.

2.5 References

This Draft strategy utilizes two reports of “An Investigation into the Feasibility of establishing a Biofuels Industry in the Republic of South Africa” as the main inputs.

- Phase 1: Literature Review And Identification Of Gaps
- Final Report

Both documents are available on the DME website: www.dme.gov.za

3 Background

This section traces, briefly, in chronological sequence on the development of the Government policy and thinking on energy policy, sustainable development, renewable energy and biofuels.

The White Paper on Energy Policy, 1998, sets the energy policy direction for the country. It acknowledges that benefits could be derived from the use of alternate transport fuels. This was followed by Cabinet instructing the Department Arts, Culture, Science and Technology to conduct a Technology Audit of the Transport Fuels Sector, which was completed in May 2001. Its conclusions were that the largest energy saving potential lay in improving vehicle efficiencies. Also, that biofuels, biodiesel and bio-ethanol, need to be evaluated in more detail, that bottlenecks be identified and that government support is required. The White Paper on Renewable Energy 2003 has set a target of 10 000 GWh (equivalent to 0.8 Mtoe or B14) by 2013. Internationally, biofuels typically provide a significant portion of renewable energy and are recognised as the major contributor to supply of renewable liquid transport fuels. In South Africa, transport fuels make-up about 30 % of energy consumption (by energy content) and 70 % (by value), and hence renewable fuel supply should include a contribution from biofuels.

The United Nations Framework Convention on Climate Change (UNFCCC) and its related Kyoto Protocol (1997) is an multilateral agreement under which industrialised countries (Annex 1 countries) will reduce their combined greenhouse gas emissions by at least 5% compared to 1990 levels by the period 2008 to 2012, primarily by investing in cleaner technologies in developing countries. This became legally binding on 16 February 2005, after ratification, thereby committing the Annex 1 parties accounting for 61,6% of the total 1990 global carbon dioxide emissions to achieve the 5% reduction by 2012. South Africa acceded to the Kyoto Protocol in March 2002. Although the Kyoto Protocol does not commit the non-Annex 1 (developing) countries, like South Africa, to any quantified emission targets in the first commitment period (2008 to 2012), there is potential for future low cost emission reduction options in these countries. The Clean Development Mechanism (CDM) provides for trade in certified emission reductions (CERs) between non-Annex 1 countries and Annex 1 countries and thus supports sustainable development with respect to greenhouse gas emissions reduction in developing countries while helping Annex 1 countries to comply with their commitments under the Kyoto Protocol. The DME has established the Designated National Authority (DNA) to process CDM projects. Biofuels projects may apply for such CDM credits.

South Africa hosted the World Summit on Sustainable Development (WSSD) in 2002, and its outcome, the Johannesburg Plan of Implementation (JPol) commits the country to develop renewable energy technologies, which included transportation related renewable energy sources, such as biofuels.

The Petroleum Products Amendment Act, (Act No. 58 of 2003), enables the Minister of Minerals and Energy to require that licensed wholesalers and licensed producers may be required to supply petroleum products made from “vegetable matter”, and complying to certain specifications before they supply petroleum products made from other raw materials.

The Cleaner Fuels Programme, approved by Cabinet, that aims to reduce emissions and environmental impact, has phase-out leaded petrol and reduced sulphur in diesel to a maximum of 0,05 % (mass) from 2006. Regulations made under the Petroleum Products Amendment Act (Act No. 58 of 2003) in support of this programme, *gazetted* in June 2006, have made specific allowance for biodiesel addition, and other relevant fuel specification parameters according to South African National Standards (SANS) are mandated. The SANS has recently finalised specifications for biodiesel and fuel ethanol, and are developing a standard for ethanol gel fuel. The provision for biofuels is in line with the standards that are employed in Europe, the USA and Japan, whose automotive manufacturers are active in the South African market. The revision of standards and their deployment fits in with the measures proposed in this document to increase the development and promotion of a biofuels industry, which will further enhance the development, promotion and penetration of cleaner fuels into the South African petroleum pool.

In 2002 National Treasury approved the implementation of a Fuel Levy exemption for biodiesel of 30 % from 2003, and this was increased to 40 % from 2005. SARS allows for 100 % exemption for small producers (less than 300 m³ annually). Biofuels investments also qualify for a tax-depreciation write-off 50:30:20 percent over three years, which equates to about \$ 2/bbl crude oil equivalent effective support. In September 2005 National Treasury approved a Renewable Energy Subsidy Scheme, which is implemented by the DME. The Subsidy allocation methodology for 2006/7 provides for 16.7 c/l for bioethanol and 27.3 c/l for biodiesel up to a maximum of R 20 million. In July 2006, National Treasury released for comment a Discussion Paper on Environmental Taxes, that proposed extending this incentive to bioethanol, and that the basis for incentives must be linked to overall externality benefits.

A Biodiesel working group conducted a detailed examination in 2005 and concluded that support and development of biodiesel was justified and required, due to the environmental and job benefits in particular.

In December 2005 Cabinet (Cabinet Memo 14 of 2005) approved the development of a national biofuels industrial draft strategy targeted at creating jobs in the energy crops and biofuels value chain, and to act as a bridge from the 2nd to the 1st economy. They approved the establishment of an Interdepartmental Biofuels Task Team (BTT), comprising the national departments and state entities, to develop the draft strategy contained in this document.

4 Objectives of this Draft Strategy

Governments typically have many policy objectives that are pursued concurrently and consequently any new intervention runs the risk of being diffused and lost

among the myriad competing policies.. This is especially the case with renewable energy interventions that may meet many varied objectives.

This intervention is primarily targeted at multiple objectives of contributing to the country's development goals, renewable energy target, generating employment and reducing the negative impact of energy consumption on the environment.

Biofuels provide the opportunity to achieve comprehensive sustainable developments benefits, addressing social, economic and environmental aspects, at local and global levels, and renewable energy needs. The extent of these benefits and value thereof are determined by national priorities, as is evidenced by the diversity of drivers of international biofuels programmes. Prioritization of goals enables regulations and incentives to be optimised to enable greater benefits.

Different stakeholders have different views and opinions as to which benefits are more, or less, important. Given that biofuels are an element of Governments Accelerated Shared Growth Initiative (AsgiSA) programme, it should focus on job creation and economic contribution, as well as transformation. However, it would not be prudent to drive this without consideration of holistic sustainability benefits, at local, national, regional and global levels. The Feasibility Study underpinning this draft strategy therefore included a holistic analysis, so that the draft strategy proposed could take account of all factors and impacts.

5 Current Situation

South Africa used bioethanol (from sugar cane) in petrol from the 1920's until the 1960's, when this fell away due to low international crude oil prices. Recent high oil prices have lead to major interest in investing in biofuels production. Many foreign companies have examined biodiesel production as part of their arms deal offset obligations. Some sugar industry players produce bioethanol already (for the potable and export alcohol markets) and are developing fuel ethanol capacity in neighbouring countries. The biggest oil industry producer is looking at developing a biodiesel plant. Maize growers in collaboration with some private investors have announced their intention to build several maize-to-ethanol factories.

Internationally, biofuels are growing, due to the higher oil prices and government targets, regulations and incentives. The leading producer is Brazil. It produces ethanol from sugarcane that meets about 20 % of their national liquid fuels usage, which is about 1.5 times South Africa's petrol usage. They are significantly increasing capacity and target a 50 % contribution to liquid fuels supply. The Brazilian ethanol production is viable at an oil price of \$ 35/bbl. However, this includes a renewable electricity co-generation incentive of about \$10/bbl in addition to electricity costs that are significantly higher than those in South Africa, and equate to a further \$ 10/bbl effective support. Almost on a par with Brazil as regards volumes and growth is the USA, with ethanol from maize, that is supported by incentives of up to R 2 per liter (ca \$ 40/bbl). Europe is reaching a 2005 biofuels target of 2 % of road transport fuel usage and has set a target of 5.75 % by 2010 on the back of incentives (fuel levy exemption) of the order of

\$ 80/bbl. The success and commitment varies from country to country. Germany, the largest user of biodiesel, is now reducing its incentives , to reduce loss to the Fiscus, and is examining the option to have a mandatory target.

It is clear that biofuels, particularly as an infant industry and with the uncertainty of future oil prices and exchange rates, requires some form of government support.

6 Sectors Involved

In addition to sustainability, the second major principle on which the Biofuels Industrial Draft Strategy is based is sectoral partnerships and corporation, including along the value chain.

6.1 Agriculture

Excluding the oil price, the Biofuels industry is largely a function of agricultural feedstock capability and risks. The specific projects and associated crops that materialise will be determined by factors such as actual land availability, productivity and the market. The biofuels industry impacts back up the value chain to agriculture in providing better offtake (demand) security, as regards quantities, prices and longer-term contracts. This market pull would incentivise farmers to plant and optimise longer-term yields (land productivity). Internationally, biofuels are mainly used to support local farmers, and Europe requires massive subsidies to match (or replace) existing agricultural subsidies. In South Africa, this is not envisaged and necessary because apart from sugar cane, there are extremely limited agricultural subsidies. The support to develop supply should be achieved by utilising existing agricultural support programmes, that can be better targeted to assist biofuels investments, and these can be phased out (re-directed) once sustainable feedstock supply is established. Ongoing general agricultural financial support is not favoured. Instead the focus for the biofuels industry should be on providing increased demand and market access to cater for surplus agricultural production. This would eventually enable prices to move closer to import parity prices.

6.2 Biofuels Production Plants

The technology to produce biofuels is well established, and production processes are mature, including in South Africa. The development of a new wave of more efficient technologies, the second generation technologies, is taking place internationally and South Africa should not only keep abreast of these developments, but also seek benefits from participating from the outset. This would be facilitated by the existence of a domestic biofuels industry. The creation of a biofuels industry requires that investors see an attractive return on capital and demand certainty, as well as a margin between the fuel based product price and the agricultural feedstock nett input cost. Due to the desirability of a certain level of biofuels industry, government needs to facilitate an environment conducive for investments. This should also promote the advancement of previously disadvantaged citizens. The support must not be excessive, such that food markets are materially affected. The long term intention is to reduce support

once the industry and players are established, as capital is paid back, efficiencies improve, and entry costs are reduced. The licensing and environmental impact assessments (EIAs) requirements need to be streamlined as far as possible to ensure that South Africa does not lag behind in biofuels development and does not develop unsustainable biofuels industry.

6.3 Fuel Industry

Internationally, the oil industry is increasingly accommodating biofuels products in their fuel pools. Such experience allows biofuel component advantages and disadvantages to be better managed. This draft strategy supports using the existing oil industry and its infrastructure to accommodate the biofuels in the most efficient manner. The details and specifics should be negotiated with the oil industry, to maximise efficiencies, reduce costs, and ensure fuels fit for purpose. The base case, and typical lowest cost entry, is based on depot blending, and hence biofuels should be absorbed by the oil industry according to national market share (of their fossil fuel products). A similar approach was followed in developing the existing Synfuels industry. The existing oil industry is regulated, and this facilitates regulations to accommodate biofuels. The approach for biofuels would align with that for the Managed Liberalization process applied to the Liquid Fuels sector, as follows

- Phase 1 achieve target with firmer hand of regulation – this will be applicable as the biofuels industry is in its infancy, and there is a need to link the largely unregulated and far smaller agricultural sector with the (regulated and far larger) oil industry;
- Phase 2 refine regulations; and
- Phase 3 monitoring, evaluation and corrective action

6.4 Integration

Biofuels industry, being agri-based, is low technology and job intensive, which suits participation by the 2nd economy, and as the 1st economy is the major user of transport fuels, it provides an opportunity to link these two economies. The integration in the value chain, through to consumers and their vehicle providers, the auto industry, needs proper relationships and interfaces. The intention is to have as light handed a government approach as possible, with regulatory and incentive interventions to a minimum and decreasing over time. However, where there are market failures, in particular to establish the infant biofuels industry, government will regulate as is necessary.

7 The Draft strategy

The Biofuels Draft Strategy aims to achieve a biofuels average market penetration of 4.5 % of liquid road transport fuels (petrol and diesel) by 2013 which will contribute 75 % to the national Renewable Energy target. This is to be based on local production, both agricultural and manufacturing, because to base such a target on imports is risky and does not really make a contribution to South Africa's Renewable Energy target, nor provide the benefits, such as jobs, economic growth and BEE participation through the value chain. For expected

scenarios, this target is realisable without negatively effecting food security or requiring excessive support.

The driver to enable the volumes is utilisation of the Petroleum Products Licensing system that will require the existing petroleum wholesalers to buy biofuels production according to their national market share. Pricing will be linked to the BFP (basic fuels price) that is an import parity marker for local producer prices of fuels and is the basic element of fuels price regulation. The biofuels industry will continue to receive a percentage Fuel Levy reduction, as determined by the government's, with this being extended to all liquid biofuels, that comply to agreed specifications. Oil price risks and benefits will be managed by the Equalization Fund, such that motorists (consumers) partially support the biofuels industry at low oil prices and receive the benefit of reduced fuel prices at times when oil prices are high.

8 Physical Limitations, Targets, Costs & Benefits

The extent of Government support, and an enabling framework, will to a large degree determine the extent and growth of the biofuels industry. Government will be prudent as to the extent of this support, justifying it by the benefits and minimising the costs and negative consequences thereof as well as trying to avoid unintended consequences.

As a part of the Feasibility Study, a comprehensive and integrated model was developed to determine likely and optimum scenarios. For these scenarios, the benefits, costs and risks could be determined.

Biofuels supply requires low cost, high yield and surplus agricultural production, most of which will not be food crops. South Africa has limited arable land, only 14 % of the total land available, with just 10 % of that being irrigated. This irrigation consumes 60 % of the national water supply. However, in most years, South Africa has surplus maize and sugar production that could each produce ethanol at more than 5 % of national petrol demand. In addition, there is 3 mil ha of currently underutilised, high potential land, mainly lying in the former homelands. Utilising 1 mil ha of such land could produce about 5 % of national diesel usage.

The Feasibility Study determined that production would vary regionally according to climate and soil and that co-product markets would limit biofuels capacity and costs. Hence a scenario of E8 (national basis of 8 % ethanol in petrol, although in reality this would more likely be E10 in 80 % of the petrol), and B2 (national basis of 2 % biodiesel in diesel, although in reality would more likely be B5 in certain diesel supply regions) was examined. This equated to 4.5 % of national petrol and diesel volumes. This would lift indigenous fuel supply from about 35 %, from coal and gas synfuels and local crude oil production, to about 40 %. Biofuels at these levels will have limited effect on supply security, particularly if the market growth remains at 2.5 %, tracking GDP growth trends. However, biofuels replace imports of finished products, or components, with little local value addition, or local crude oil refining that ultimately leads to increased exports of lower value residual fuels that are already in excess by more than 20 % and

growing, as market growth is higher for diesel and petrol. Given the current supply-demand outlook, biofuels would reduce imports required by market growth in excess of refining over-capacity.

The scenario examined, assumed that all biofuels would be produced from local crop production, and found that this had an insignificant affect on food prices, or about a 5 % average increase through to 2015 for the crops used. This affect would be offset by increased supply of agricultural co-products, and agricultural efficiency gains, that are possible for energy crops, and for better-supported, dedicated farming. It is also important to note that crop varieties for fuels focus on starch (for ethanol) or oil (for biodiesel) content whereas crops for food focus on protein content and this tends to keep the markets separate. This scenario results in 55 000 jobs being created (using existing commercial farming employment intensity for the crops considered), reducing unemployment by 1.3 % and being largely focussed in rural areas; economic growth of 0.12 %, or 6 % of the AsgiSA targetted increase from 4 to 6 %; an average balance of payments saving of R 3.7 billion; and a greenhouse gas emission saving of the order of R 100 million pa.

This would require investment in biofuels factories of about R 6 billion, that would be undertaken by the private sector with the objective of generating favourable returns. To assist the creation of this new industry would require a favourable investment climate, particularly in its infancy. The capital spend per job created is about 65 % better (lower) than the Industrial Development Corporation target. The jobs to investment ratio are about 100 times higher than for a new crude oil refinery. South African motorists and consumers have, in the past, supported the investment and ongoing operation of oil refining, in addition to ensuring the viability of the synfuels industry by sheltering it from low oil prices over an extended period.

The cost to government of accepting the targets advocated here would be the Fuel Levy reduction (see below), that at 40 % equates to R 12 000 per job, and justifiably this can be raised to 75 %, or roughly R 20 000 per job and still be competitive when compared to the cost of jobs for fuel retail site attendants built into the petrol price. The WTO (World Trade Organization) rules accept Fuel Levy reductions for biofuels of up to 100 %. A 100 % reduction in the Fuel Levy given the relatively low South African Fuel Levy, would cost the Fiscus less than 5 cpl on the *overall* Fuel Levy income. The costs of forecourt attendants jobs built into the petrol price is 8.9 cents per litre for a similar number of jobs, so as self-service is prohibited to protect jobs, biofuels with its attendant jobs should be protected.

When oil prices exceed \$ 65/bbl, no special incentives for the biofuels industry should be necessary in the longer term and the Fuel Levy reduction could eventually fall away. If the oil price is below \$ 45/bbl, biofuels producers would need some form of additional support. A hedge mechanism with motorists (consumers) for prices below \$ 45/bbl, could add just 1.2 cpl to the petrol price if the oil price fell to an expected lowest level of \$ 35/bbl. To motorists this is relatively insignificant compared to fluctuations in world oil prices and when seen against the pump price level currently at about R6 per litre. For world oil prices

above \$ 65/bbl, the biofuels industry could pay in (back) and slightly reduce pump price increases.

9 Specific Interventions

9.1 Licensing of Producers and Offtake by Petroleum Wholesalers

Biofuels development and utilization is typically most economic when logistics, distances and costs, are minimised and hence the preferred offtake, excluding own use by producers, is by the (existing) oil industry at the depots closest to the biofuels manufacturing plants. This would then involve blending of the biofuel components at levels allowed internationally for typical vehicles and adopted in South Africa, currently at 5 % for biodiesel and 10 % for fuel ethanol. An added benefit of such an approach is that the existing oil industry would ensure quality risks to consumers are minimised.

Licensing and Regulation under the Petroleum Products Act are the key instruments for this element of the draft strategy. Licences for biofuels production would then be linked to Regulations requiring corresponding upliftment by licensed petroleum product wholesalers according to national market share, and supplying markets in proximity to the point of manufacture. The existing wholesale licences can be amended by adding a condition of uptake of biofuels, as per the Regulations regarding Petroleum Products Wholesale Licences, R287, 27 March 2006, section 9 (g) or by a legitimate instruction from the Controller of Petroleum Products, section 12. (3) (h) (ii). The licensed volumes per biofuels production facility would be a percentage of what is produced based on local value addition and linked to BEE participation levels, such as 100 % offtake licensing requiring 25 % BEE. Additional volumes, over the percentage licensed, would need to be sold on negotiated commercial terms. Simply put, “upliftment” of biofuels production will only be mandatory for volumes produced from indigenous raw materials although it is recognised that in the initial stages it may be necessary for some manufacturers to import raw materials until such time as the local agricultural market can respond to the new demand for new varieties of crops.

The price for the licensed volumes should be based on BFP, as that is the price used for producers in determining the market price of fuels. As biofuels upliftment should be favoured over imports, and refining of imported crude oil, and should be used first, the price that should apply is BFP without discounts but taking account of additional costs. Specific additional depot and market handling costs for bio-ethanol should be provided for, and it is proposed to initially fix this at 5 % of BFP, so that bio-ethanol producers receive 95 % of BFP for licensed volumes and this can be fine-tuned based on real average oil industry costs and benefits. Section 2(1) (c) of the PPA Act enables the prices to be set. To avoid distortions and complications in the retail market, E10 petrol should sell at the same price as E0 (would sell).

The petroleum wholesalers should be free to use the biofuels in whatever manner they choose, subject to the licensed upliftment volumes and the price dispensation, as by mass balance this ultimately substitutes use of fossil fuel products. A further significant issue for fuel ethanol is the potential knock-on

effect on the refinery petrol blend component, for example the 90 % petrol basestock used in E10 blends. This is significant for four main reasons:

- Adding ethanol increases the blend fuel volatility
- Adding ethanol raises octane
- Adding ethanol adds oxygen and reduces levels of harmful conventional components, such as sulphur and benzene
- Refineries, depots and retail sites have constraints as to the number of grades they can handle

The oil (refining) industry is best placed to address this based on supply by licensed biofuels producers. For instance, they may decide to use certain bioethanol volumes to produce Ethyl tertiary Butyl ether (ETBE), which is used to enhance octane levels. Some additional form of discount to the bioethanol price could be included, but would need significant motivation as existing oil refiners received BFP, or higher, for all their petrol components for the initial years of their operation, so it is fair that new biofuels producers, that ensure greater externality benefits, receive this too. In addition, the petrol specification(s), SANS 1598, should be changed to be more fuel ethanol, friendly. In cases, where agreement between stakeholders cannot be reached, the Controller of Petroleum Products can be requested to make a ruling(s), and the normal appeal processes would apply.

Once licensed volumes of biofuels reach the proposed target of 4.5%, mandatory “upliftment” of any further volumes should not be provided by Government and market forces should take over. As this realises, Government interventions can be scaled back.

9.2 Fuel Levy Exemption

The existing Fuel Levy exemption mechanism should continue, and be reviewed annually. It is recommended that any increases be phased in and used to attract investment to reach the 4.5 % target by 2013. Based on job creation benefits, Fuel Levy exemption increases of up to 75 % of the Fuel Levy are possible. It is further recommended that the exemption should be extended to bio-ethanol based on its energy content, and hence the Fuel Levy exemption for bio-ethanol should be 70% of that applicable to biodiesel.

9.3 Equalization Fund

The Equalisation Fund is an instrument existing in the CEF Act (Act No. 38 of 1977), which has been used successfully over many years in the development of the synthetic fuel production. This fund is controlled by the Minister of Minerals and Energy in concurrence with the Minister of Finance.

It is proposed to that a simple price hedge mechanism for biofuels prices that caters for low and high oil prices, be established, within the existing equalization fund. The principle is that it should balance upside benefits to motorists with downside benefits to biofuels producers. There is no nett cost to the state. The details need to be developed and agreed.

It is proposed that, given current oil price fluctuations, support for biofuels producers is triggered at oil prices below \$ 45/bbl and biofuels producers begin to payback for prices in excess of \$ 65/bbl. The support could come in at \$ 0.5/bbl for every \$ 1/bbl drop in the oil price below \$ 45/bbl, ie. 50 % support. On the upside, the biofuels producers should pay in at 25 % of the price above 65 \$/bbl. Assuming the oil price drops to an expected lowest average level of \$ 35/bbl, the cost to motorists would be less than 1.2 cpl.

9.4 Tariffs

Crude oil and petroleum product imports are essentially duty free; hence imports of agricultural feedstock for biofuels production and of biofuels should also be duty free. However, this imported material or only portions of it would qualify for the licensed offtake by the petroleum wholesalers, linked to biofuels production local content (value addition). For example, if the feedstock is only 40 % indigenous, then only 40 % of the biofuels would qualify for the local production upliftment, and the other 60 % would have to be sold on negotiated free market terms.

9.5 Agricultural Support

The Department of Agriculture has a number of programmes to support development of local agricultural production and value addition, including programs for small scale farmers and emerging farmers. This would be able to be targetted to support farmers in crop selection, hedging, agricultural methods, research and development, and contract negotiations with biofuels manufacturers.

9.6 Government Agencies

There is greater macro-economic benefit potential where underutilised agricultural land is brought into production, but also higher investment risk. To facilitate and prove such developments, that often may correspond to poverty nodes, government agencies, such as Central Energy Fund (CEF), and the Industrial Development Corporation (IDC) should become involved. They must maximise initial Black Economic Empowerment (BEE) involvement and later disinvest by preferably selling out to BEE players. Such BEE investors could make use of the National Empowerment Fund, and the potential to utilise other specific incentives that may be introduced in future.

9.7 Other

9.7.1 Government Procurement

There is already precedent in South Africa at local government and provincial government spheres of procurement targeting more environmentally sustainable electricity and liquid fuels. They have done this without specific national Government interventions but responding to general policy imperatives determined by national Government. There is no good reason why they and national government departments and agencies should be prevented from doing similarly for biofuels. Locations with significant air quality concerns would be prime candidates. A specific provision for government fleet procurement of biofuels is an option, but niche projects, that are well structured and supported, can be embarked upon. A good example of a dedicated fleet is government

transport or government subsidised public bus transport services. This provides an alternative or and additional market outlet if there could be failures by the in the petroleum sector to uplift biofuels.

9.7.2 SADC Integration

The agricultural and hence biofuels production potential is greater in many of our SADC neighbours, and such developments, in as far as they benefit the region, should be encouraged. However, given the early stages of the South Africa biofuels industry it would be prudent to focus locally first. The SADC Energy Protocol, that includes fuel specification rationalization, should be used to encourage inclusion of biofuels in the regional fuel pool and regional fuel specifications, and South Africa embarking on such a programme will facilitate our involvement. The scope exists in future for biofuels cooperation further into the Sub-Saharan Africa, within NEPAD energy projects.

9.7.3 Development

Existing technology, as regards fuels, vehicles, agriculture & biofuels production, enables the development of a 4.5% biofuels pool, however there is much focus on technology development internationally and South Africa should keep abreast. The creation of a biofuels industry will facilitate this, and will be further supported by existing technology research and development initiatives. Key state research agencies in this field will be the Water Research Commission (WRC), Agricultural Research Council (ARC), South African National Energy Research Institute (SANERI), and Council for Scientific and Industrial Research (CSIR).

10 Implementation Plans

The Biofuels Task Team focussed on determining what level and type of national biofuels industry is achievable, and what policy measures could enable this. Until such time as a draft strategy is approved it did not make sense to develop a comprehensive implementation plan and so there was only limited examination of implementation details. The proposed policy requires partnerships and support from a number of stakeholders, many of them in the private sector for success.

Implementation aspects are however briefly covered to give stakeholders an idea of what is being considered, and details would be developed when the draft strategy is finalised and rolled out. It is recommended that the Interdepartmental Biofuels Task Team should continue in existence, but shift its focus to implementation, monitoring and draft strategy refinement. A draft high-level implementation plan, with timing, is included as Attachment 1. A responsibilities matrix is provided in Attachment 2. As part of implementation planning, this should be refined by the Biofuels Task Team and by the responsible parties.

Given the availability of existing mechanisms and funds, the infancy of the biofuels industry and the desired phasing-in thereof, it is prudent to start with existing funds and resources.

11 Communication and Education

Public education will constitute an important element of draft strategy implementation and comment on this aspect is specifically invited from stakeholders. Elements of a communication draft strategy are included in the main research report available on the DME website. The Interdepartmental Biofuels Task Team, in collaboration with Government Communication and Information System (GCIS) should lead the communication drive for the Biofuels.

12 Monitoring and Evaluation

This is primarily enabled by the licensing system for biofuels producers and petroleum wholesalers. This will be done by the DME with reports into the Biofuels Task Team. As we are at an early stage, and even countries that have programmes for many years adjust their programmes on an ongoing basis, the approach will be one of fine-tuning and further refinement as the industry develops.

13 The Way Forward

General support and broader stakeholder input to the Biofuels Industrial Draft strategy is a key to successful implementation, and hence this draft draft strategy is circulated for comments.

Stakeholder comments will be reviewed after 10 March 2007 and further review of the Draft strategy would then take place, in conjunction with further consultation where required. A final draft strategy would then be presented to Cabinet by May 2007. This would include the development and refinement of implementation aspects, such as regulations, licence requirements, support mechanisms and incentive schemes, that would include consultation with directly affected stakeholders. These regulations and the final approved draft strategy would then be communicated from June 2007.

END