
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

9th February 2007

This report has been prepared by the Task Team appointed by the Minister of Finance in May 2006 to consider possible reforms to the fiscal regime applicable to windfall profits in South Africa's liquid fuel energy sector. The report supersedes the discussion document on the subject that was released for public comment on 20 July 2006.

The views expressed are those of the task team only, and not of Government or the Minister of Finance. It was submitted to the Minister of Finance on 9 February 2007 for his consideration and response.

Prepared by the Task Team

Zavareh Rustomjee (Chairperson)
Rod Crompton
Almorie Maule
Boni Mehlomakulu
Grové Steyn

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Abbreviations

BEE	Black economic empowerment
BFP	Basic Fuel Price
BJM	Barnard Jacobs Mellet
CEF	Central Energy Fund
CGT	Capital gains tax
CPI	Consumer Price Index
CSP	Customised sector programme
CTL	Coal to liquids
DEAT	Department of Environmental Affairs and Tourism
DJP	Durban – Johannesburg Pipeline
DME	Department of Minerals and Energy
DTI	Department of Trade and Industry
DWP	Durban Witwatersrand Pipeline (a white oil products pipeline)
E&P	Exploration and production
GTL	Gas to liquids
IBLC	In Bond Landed Cost
IDC	Industrial Development Corporation of South Africa (Pty) Ltd
IPP	Import parity pricing
mboe	million barrels of oil equivalent
MPAR	Marketing-of-Petroleum-Activities Return (Wholesale margin in liquid fuels industry)
MPRD	Minerals and Petroleum Resources Development Act 2004
MRG	Methane rich gas
MSA	Main supply agreement (between Sasol and other oil companies)
NATREF	National Petroleum Refiners (Pty) Ltd
NER	National Electricity Regulator
NERSA	National Energy Regulator of South Africa
NIOC	National Iranian Oil Company
OOC	Other oil companies (traditionally crude oil refiners and marketers in SA)
OP26	Prospecting Lease No. OP26
OPEC	Organisation of Petroleum Exporting Countries
PASA	Petroleum Agency of South Africa
PetroSA	Petroleum Oil and Gas Corporation of South Africa (Pty) Ltd
PPM	Parts per million
PRT	Petroleum revenue tax
PVM	PVM Oil Associates GMBH, Vienna
RATPLAN	Retail rationalisation plan
RSA	Republic of South Africa
SAPIA	South African Petroleum Industry Association
SAPREF	South African Petroleum Refiners (Pty) Ltd
SAR&H	South African Railways and Harbours
SARB	South African Reserve Bank
SATMAR	South African Torbanite Mining and Refining Company
SFF	Strategic Fuel Fund
SPD	Supplementary petroleum duty
STC	Secondary tax on companies
TOR	Terms of reference

UK	United Kingdom
UN	United Nations
US	United States of America
VAT	Value added tax
WPT	Windfall profit tax

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The Task Team's terms of reference go beyond the confines of National Treasury's areas of responsibility and include regulatory matters that are the responsibility of the Minister of Minerals and Energy. We would like to thank Nhlanhla Gumede and Hein Baak at the DME for their assistance and cooperation. The views expressed remain our own.

Executive Summary

1. The Process

In May 2006, the Minister of Finance appointed a Task Team to:

- advise him on 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,
- as well as to advise on options for securing the optimal contribution of the synthetic fuel industry to South Africa's long-term development.

The Task Team adopted an open and consultative process from the outset. A database was compiled of the key industry participants including other associated parties. On 16th May 2006, a communication was addressed to the key industry players informing them of the Terms of Reference and inviting early written inputs. On 12th June 2006, a second communiqué was sent to the industry outlining the planned process up to mid-September, which committed the Task Team to preparing and issuing a Discussion Document by end-June 2006, followed by Public Hearings in the week of 17th July 2006 and delivery of a report and recommendations to the Minister on 15th September 2006.

The Discussion Document was released on 20th July 2006, three weeks later than planned due to the unanticipated complexity of issues being addressed as well as an underestimated time allocation necessary to consult within National Treasury. Consultations were also held with the Department of Minerals and Energy. We received 20 formal and substantive responses to the Discussion Document from the industry involved in the value chain as well as other interested institutions and individuals. Public Hearings were held on 14th August 2006 and we were somewhat disappointed that only 3 parties submitted oral evidence, namely Sasol, Consumer Goods Council of South Africa and the Petroleum Agency of South Africa. Thereafter, the Task Team completed its report on 30 October 2006.

The Task Team was subsequently requested to further develop one of its recommendations, namely "An alternative fiscal response to rents/excessive economic profits being generated because of a perceived permanent structural increase in international oil commodity prices" and this final report was issued on the 9th February 2007.

2. National Treasury aims and objectives

What are National Treasury's aims in investigating the merits of a fiscal response to excessive economic profit generation? Some stakeholders directly addressed this question and listed what they considered the aims could be. This question was also a cause of acute concern by a number of parties who seem to have focussed almost exclusively on the fiscal recommendation component in isolation from the other components of the TOR.

We found these concerns which questioned National Treasury's aims to be a very useful input which was worthy of further consideration. In fact we had implicitly made assumptions which we outline below as National Treasury Aims

The Task Team commenced from the premise, as does the TOR, that South Africa has a unique liquid fuel value chain with a legacy of very complex regulation that is currently being reformed. This regulatory legacy is also interwoven with an existing complex fiscal regime. The reform process is being led by the Minister of Minerals and Energy, while the fiscal measures are the responsibility of the Minister of Finance and National Treasury.

The exercise involving the Task Team is not simply aimed at developing a new fiscal instrument. But as evidenced in the additional work request (which is appended to the original Terms of Reference), National Treasury seeks advice primarily on a **fiscal response** to a situation where:

- Government is concerned that synthetic fuel producers are making excessive economic profits in circumstances where an apparent structural increase in oil prices has occurred and,
- Tariff protection has been removed at times and reinstated at times;
- There have been several different protection dispensations;
- Such producers were, for a considerable period, the subject of a "tariff protection" dispensation that included a derived oil "floor price" of \$23/barrel below which they were protected and a mechanism for the refund to the state of 25% of revenue when oil prices exceeded \$28.70 per barrel until the cumulative amount of protection was recovered;
- Government, by mid-2000, planned to review the "tariff protection" dispensation for the synthetic fuels industry and has not yet taken a final decision on the outcome of that review.

The Terms of Reference also require the Task Team to give consideration to four specific fiscal mechanisms, amongst others.

In addition to addressing the above aim, National Treasury (as evidenced by the Terms of Reference) also seeks to support the following aims which are not primarily related to fiscal policy:

- Improved efficiency of the value chain and the transfer of such efficiency gains to the consumers of liquid fuel;
- As a subset of the above, regulatory reform across the value chain, in accordance with the evolution and application of energy policy is key;
- Future investment in the liquid fuel value chain, particularly in regard to meeting accelerated growth targets, reducing unemployment and improving security of supply;
- Reduction of the negative impact on the domestic economy on fuel price volatility and, if possible, a reduction of fuel prices to final consumers;
- Energy policy objectives for the liquid fuel value chain.

A significant part of this report is devoted to analysing and unravelling the complex history of South Africa's liquid fuel value chain and to outlining the complexity of the regulatory and fiscal systems that evolved with the industry. As indicated in the report, given the complexity of its legacy, it has been difficult to separate the fiscal and energy policy issues. Consequently a number of recommendations made by the Task Team in the above regard are within the policy jurisdiction of the Minister of Minerals and Energy, rather than that of the Minister of Finance and we highlight

where this is the case. We also give consideration to the fiscal implications of those recommendations.

3. Methodology

Taking the list of aims, outlined above, we assess the extent to which such aims could be addressed by fiscal instruments and the extent to which they could be addressed through regulatory reforms, reforms which are currently being considered or being effected by the Minister of Minerals and Energy.

Our research revealed that there is no universally accepted definition of windfall tax, nor is there a universally accepted practice in implementing windfall taxes. Indeed the international use of windfall taxes has been driven by different imperatives in different countries and has had mixed results.

We were thus forced to develop our own methodology to define “windfall” profits in order to apply a consistent set of “rules” in evaluating the components of South Africa’s complex liquid fuel value chain and the circumstances presented to us. Our analysis and recommendations are based on this. Essentially the methodology defines windfall profit as an excessive profit¹ (or economic rent) that has accrued to a party under certain circumstances. We have analysed other international experiences where fiscal authorities have chosen to impose specific taxes on such economic rents. The common circumstances that appear to qualify rents for a fiscal response are as follows:

- When rents arise in the natural resource, or essential infrastructure service or essential goods sectors
- When economic rents do not arise from efficiency improvements or the creation of valuable intellectual property
- When, in the case of infrastructure and essential services, economic rents are caused by market power, possibly combined with regulatory failure
- Economic rents that were not anticipated in policy (in the case of retrospective measures)

Public consultation formed an important part of the methodology pursued. The Task Team published a Discussion Document in July 2006 that dissected the liquid fuels value chain and applied the methodology to categorise each segment in terms of whether economic rent was being generated and, if so, what the basis of that rent was.

The Discussion Document requested parties to respond to specific issues raised, including:

- the methodology developed by the Task Team,
- the accuracy of our understanding of the different segments of the value chain and the associated revenue streams,
- the historical development of the liquid fuel value chain, and
- the manner in which we applied the methodology to the individual revenue streams

¹ We use the term in the sense of “economic profit” which refers to returns over and above the appropriate opportunity cost of capital

The publication of the Discussion Document was followed by a public hearing in which a number of parties took the opportunity to present their views and/or make written submissions. All of these were helpful.

We have addressed the key issues that parties raised in the main body of this report. In short, most of the parties agreed with the methodology and the value chain segmentation. One party challenged the methodology, arguing, at one level, that rent should not be the basis of measurement and, that our approach was “unprecedented” in their own understanding of international experience and therefore caused them some confusion. The methodology was also caricatured by some parties as being too theoretical and academic. Most parties, however, contested the outcome of the application of the methodology and argued, for a variety of reasons, that rent was not being generated in one or other sector. All those making submissions were unanimous in their rejection of the desirability of windfall taxes. We have addressed these challenges in detail in the report and we have accepted some of the contentions and appropriately modified the approach. But in short, we stand by the basic elements of the methodology that we have developed.

4. What qualifies as rent/excessive economic profit?

In our methodology, we have argued that the litmus test of establishing whether excessive economic rent is being generated under the specific conditions indicated above, *merely qualifies the rent as being worthy of consideration for a policy response*. In our assessment of international experiences, we have noted that when a policy response has been implemented, it has often been a fiscal one – a super-tax or windfall tax – but because of the complex nature and unprecedented uniqueness of South Africa’s regulated liquid fuel value chain, there are a number of additional non-fiscal policy response options available.

We have then, in each segment of the value chain, screened each qualifying element of revenue and cost to determine the appropriateness of each of four possible policy responses, namely:

- reduce or eliminate the rent/excessive economic profit through regulatory means
- reduce or eliminate the rent/excessive economic profit by liberalising that particular segment of the value chain
- apply a special fiscal remedy to claw back part of, or all the rent
- do nothing and allow the party concerned to continue to appropriate the rent/excessive economic profit, perhaps in the expectation that competition could develop in future.

The Task Team would like to point out that the nature of the brief was such that it was difficult to contain comments and recommendations to those that lie solely within the jurisdiction of the Minister of Finance. In responding to the terms of the additional Terms of Reference, the Task Team has proposed a specific fiscal remedy. But our mandate inevitably encompassed the regulatory framework for liquid fuels. Consequently, the Task Team has formed opinions and made recommendations with respect to the regulatory environment and its future.

Our favoured approach is informed by two principles; (a) getting economic regulation and fiscal dispensations “right” and (b) taking a medium to long term view of investment to create additional domestic capacity in order to provide some shelter from high imported oil prices and security of supply concerns. In regard to the former we have tried in our approach to reduce the generation of rent in recommending rapid regulatory reform, where such regulation is giving rise to identified rent. But we recognise that such reform may not proceed as far and as fast as possible for a variety of reasons leading, in particular, to a situation (on which we elaborate in the body of the report)

where the dominant inland synfuel producer is able to capture a significant share of the inland market at a price higher than would otherwise have been the case, as a result of constraints in logistical (primarily pipeline) capacity. The resulting higher fuel costs are sub-optimal for the national economy.

There are three value chain revenue and cost elements where the generation of excessive economic rents, in the view of the Task Team, cannot be adequately addressed through regulatory reform, and where additional fiscal and other measures will be necessary. These are:

- upstream oil and gas production,
- excessive synfuel economic profit when oil prices are high due to the Basic Fuel Price mechanism (only partly addressed through regulation),
- inland (“must have”) volumes not subject to supply competition because of infrastructure constraints (could be fiscal or regulatory)

Each of these three aspects is now dealt with in turn.

5. Upstream oil and gas production

The possibility exists of excessive economic rent arising in the mining and sale of oil and gas resources. To address this the Task Team **recommends** that the tax authorities should either introduce a linkage between royalty levels and the respective commodity price curve in the Royalty Bill, or incorporate a progressive tax mechanism into the schedule of the Income Tax Act that ultimately replaces the OP26 mining lease currently in operation.

6. Existing synfuels production and new investment in alternative fuels

The Terms of Reference require us to examine both *existing* synfuels production for excessive economic profits as well as possible fiscal support for the *future* development of alternative fuels. In the following two sub-sections these two matters are canvassed and separate recommendations made for each. The recommendations are nevertheless intended to dovetail into each other so as to provide a homogenous fiscal policy.

7. Excessive synfuels economic profits - permanent structural increase in oil prices – fiscal options

7.1. Existing synfuel producers

First we deal with existing synfuels producers.

When oil prices are high, there is a structural propensity for synthetic fuel producers to continue to benefit from excessive economic rents, largely arising from: (a) the differing cost structures between fuels produced from crude oil and fuels produced from the synthetic fuel processes and (b) the import parity basis (BPF) on which fuel prices are set.

As a fiscal response to rents/excessive economic profits being generated by existing synfuel producers because of a perceived permanent structural increase in international oil commodity prices, the Task Team notes the following basis for its recommendation:

-
- The “tariff protection” or subsidy and “clawback” system that has been employed in the synfuel industry contained prior recognition by both Government and synfuels producers that excessive economic rent would implicitly be *taxed* at a different rate through the mechanism that clawed back excessive economic rent, at the rate of 25% of the synfuel firm’s revenues when oil prices were above \$28.70 per barrel. The form that this “tax” took was not to accrue to the fiscus but to directly return the excessive rent to the Equalisation Fund that only benefited the users of petroleum products.
 - It is also clear from chapter 10 that in 1995 Government started a process of reviewing and amending the subsidy system (mainly from an energy policy perspective) and that it made some interim adjustments in 1995 with a view to finally concluding the review in 2000. From the perspective of the *fiscal* authorities, the 1995 process was viewed as an exercise that reviewed this “tax” in terms of its rationale, structure, form, appropriateness and level. This process is still incomplete and Cabinet has not yet concluded the review.

Having considered the four options set out in the Terms of Reference (revised subsidy scheme, cost-based administered pricing regime, progressive formula tax and investment linked tax and subsidy options) we reject each of them in their pure form. Instead we recommend a composite fiscal instrument that contains elements from one or more of these four options.

Recommended fiscal mechanism

- The Task Team recommend that National Treasury consider a pure fiscal option of an additional special fuel levy on existing synfuel producer’s volumes at a level commensurate with the level of permanent structural increase of oil commodity prices and triggered at an appropriate threshold/trigger price.
- In addition, to cater for the volatility exhibited by oil prices in recent times, the Task Team also recommends that, unlike the tariff protection/subsidy system that employed a fixed percentage of revenue, the concept of a progressive sliding rate of taxation apply, according to a formula linked to the oil price.

Recommended oil price threshold/trigger price

Determining such a threshold was a key objective of the PVM study and it recommended a threshold of \$28/bbl. The 1989 to 1995 tariff protection dispensation determined that oil prices above \$28.70 per barrel represented an increase outside a “structural” price band and incorporated a built-in mechanism to share the additional benefits above that price. It is our view that an equivalent price, (adjusted for inflation and exchange rate differences and other relevant factors) since the review commenced in 1995, should form the oil price threshold, above which rents accruing would be regarded as excessive.

If adjusting \$28.7/bbl for inflation and exchange rate differences and other relevant factors does not prove satisfactory, an alternative would be to determine an appropriate trigger level afresh. A focussed exercise would need to be undertaken which builds upon the PVM work. As with the PVM study, this may require the firms concerned to provide commercially confidential information and it may be appropriate to involve several relevant arms of Government.

7.2. Incentivising new investment in alternative fuels

The TOR explicitly tasks the team to draw on the past lessons from the Government support given to Sasol and PetroSA and make recommendations, not only concerning excessive economic profits/rents that these and other entities might be enjoying as a result of the legacy of past support,

but also to consider a possible increased future role for synthetic fuel and biofuel in the national economy.

Having regard to incentivising investment in the supply of fuels, of the four fiscal options identified in the TOR that we have investigated, we **recommend** rejection of the *Cost-based administered price regime* as an investment incentive mechanism because such an instrument runs in an opposite trajectory to current energy policy which aims at deregulation of the liquid fuel value chain and because such an instrument also discourages efficiency of production.

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 imported natural gas (see Chapter 12). 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 economy (this is discussed in Chapter 12). The details of the mechanism are contained in Chapter 12, but it has the following basic elements:

- Tax-based, on output of new litres of alternate fuels (synthetic and biofuels)
- Investments are rewarded through tax credits at low petroleum product prices and taxed at high prices, thereby constituting a combined protection and windfall mechanism.
- In order to reflect the greater economic and environmental benefits of biofuels the current discount on the fuel levy be extended to all biofuels and the specific incentive curve adjusted to place biofuels in a similar profit position to synfuels under the incentive mechanism
- The investment regime applies irrespective of type of fuel produced and technology used. It is acknowledged that bio ethanol, synfuels and bio diesel have different production costs. However it is intended that, after the fuel levy discount for biofuels, a level playing field should apply to all local production options to encourage the more efficient, lower cost, options to emerge. Applying a single mechanism also has the benefit of greater simplicity in administering the incentive dispensation.
- Based on a literature survey, and utilising updated estimates made in the Arthur Andersen and PVM Reports, the Task Team has estimated benchmark costs of greenfield GTL and CTL production plants, as well as the estimated costs of existing amortised GTL and CTL production facilities in South Africa (Appendix 3). We have used these in defining appropriate thresholds for the formula we are proposing.
- These suggest that, for greenfield plants, \$40 per barrel could constitute an appropriate floor price below which tax credits would apply. Above \$60 per barrel the rents generated could be regarded as excessive and subject to a special tax which rises in accordance with oil prices on a progressive scale.

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- Should these recommendations find favour, a more rigorous process would be needed to test the appropriateness of the proposed thresholds.
 - We recommend that the fiscal mechanism be obligatory for all new investments in alternative fuel production from indigenous resources. This is because the primary objective is self-sufficiency and energy security of supply. This dispensation is intended to provide investors and the public with certainty in this regard.
 - Conventional crude refineries fall outside these mechanisms, irrespective of whether imported or local crude is used.

We **recommend** that this be implemented as a fiscal instrument. In theory, such a measure could also be implemented through the CEF Act as a variation of the previous subsidy regime, although it is a less favoured route mainly because its benefits are aimed more at consumers rather than at incentivising new supply capacity and also because that route makes it legally more difficult and administratively more complex to manage.

The Task Team has made a stand-alone recommendation on a specific **fiscal response** to rents/excessive economic profits being generated by existing synfuel producers. Such a recommendation is largely within the fiscal jurisdiction of the National Treasury and is implementable in its own right.

Our recommendation for a progressive investment-linked tax and subsidy mechanism, is also made as a stand-alone proposal, mutually exclusive of the fiscal response recommendation for existing synfuels producers. The Task Team regard the former recommendation as one which may be preferable if it is capable of realising more of the national policy aims and objectives outlined in the TOR than the latter, but we also recognise that its realisation depends on a range of complex factors that go beyond fiscal policy.

However, we have crafted both mechanisms in a manner which would allow for a homogenous fiscal approach.

8. *Inland fuel production not subject to supply competition because of infrastructure constraints*

The third of the value chain revenue and cost elements where the generation of excessive economic rents arises is brought about by the logistical constraints preventing fuel supply competition in the inland market. Although we believe that this can be addressed by regulatory reform it could also be addressed by fiscal measures. It is dealt with below in the section entitled “regulatory reforms”.

9. *Demand and supply of fuels - Other measures*

9.1. *Demand-supply analysis*

Demand for liquid fuel products is beginning to reach supply capacity. We **recommend** that careful attention be given by government and industry to further develop and refine the supply-demand forecasts. The Task Team have carried out a preliminary supply-demand analysis. In our view, an overhasty response which closes off supply options is unwarranted at this stage and we believe that there is ample time for a range of policy responses to be debated and developed. South Africa’s

recent experience in the electricity sector have demonstrated the dangers posed by complacent dependence on information flowing from dominant players in the sector, coupled with deficient forecasting and the lack of attention to empirical detail.

9.2. Demand-side management

We further **recommend** that Government urgently pursue *demand side* approaches to transport fuels, to follow up on the 2001 Cabinet commissioned “Technology Audit of the Transport Fuels Sector in South Africa” which found that “Measures and mandates to improve the efficiency of existing and new vehicles represent *the single most effective way* for the Government to slow down the rate at which demand for oil-based fuels will grow.”

10. Stabilisation/ Heritage Fund

We have explored the role that Stabilisation Funds have played in the liquid fuel and commodity value chains elsewhere, particularly in the upstream components of such value chains.

Elements of traditional stabilisation funds have been part of the liquid fuel regulatory system for some time, particularly in regard to the Equalisation Fund and to the subsidy and payback mechanism.

However, the direct application of a stabilisation fund in its traditional form, in respect to the liquid fuel sector, is not appropriate. Our analysis also suggests that a stabilisation fund may not be of use to that part of the coal industry that supplies the domestic market (*perhaps not for stabilisation purposes, but possibly, at least in theory, for the purpose of spreading the benefits (rent) of a finite resource over a period longer than it takes to extract it – i.e. as a form of social saving as outlined under “advantages” above*). There is perhaps a stronger case for a stabilisation fund for other commodities that South Africa exports, particularly given the uncertainties over the sustainability of the current commodity boom.

Here, our methodology and analysis might be useful and relevant should Government wish to further investigate the merits of stabilisation policy instruments for the primary commodity sector in general and here the Task Team would advocate the following.

Stabilisation funds have traditionally been applied to upstream resource extraction activities:

- usually in circumstances where the respective economy is heavily dependent on the export of a single primary commodity
- and often in circumstances where the prevailing fiscal and macroeconomic systems are relatively undeveloped and/or incapable of dealing with the propulsive macro impact associated with huge surges and declines in export revenue financial flows
- and, in the case of the more successful funds, in pursuit of medium- to long-term reduction of dependence on finite mineral resources.

In the case of the latter, the Royalties that are charged on the extraction and export of finite minerals are the normal fiscal mechanism used to protect national patrimonies. In respect to the impending Royalty Bill, the Task Team has elsewhere in this document, recommended that to address the possible circumstance where excessive economic profits are earned in the extraction of other natural resources, it would be prudent for government to consider including a progressive fiscal mechanism as part of the Royalty Bill. Otherwise, if the claims of a minerals “super cycle” are proven to be

true, it may give rise to ad-hoc future windfall tax investigations on other commodities and increase investor uncertainty.

In conjunction with our recommendation on the Royalty Bill, as commodity prices burst through the defined trigger prices for respective minerals, we suggest that it may be useful to consider linking a Stabilisation/Heritage Fund to the revenues that accrue to the fiscus in terms of the recommended progressive fiscal tax rate, that are in excess of defined royalty levels. In our view, such an approach would be consistent with some of the elements to address excessive economic profit that we are recommending in respect of the liquid fuels value chain.

11. Regulatory reforms – liquid fuels

On the basis of our inference of what the broader aims of National Treasury are in initiating the work of this Task Team, we conclude that regulatory reform and measures aimed at increasing efficiencies and competition will go some way towards reducing the excessive economic rent that is being generated in a number of segments of the liquid fuels value chain. These conclusions, drawn from Chapters 7 and 13, are listed below and summarised in the summary table 11 at the end of Chapter 7. The key elements of the regulatory reform and the fiscal implications thereof follow.

- **Import Control:** The Task Team **recommends** that quantitative import controls be removed forthwith and replaced by a policy approach that says that when imports do occur preference should be given to imports of biofuels, where feasible, rather than imports of refined petroleum. The fiscal implication of a slight rise in imports will be a corresponding rise in Customs and Excise duty income.
- **Price Regulation:** It is **recommended** that full price regulation of gasoline be initially reduced to price cap regulation for a period to determine the impacts and to see what aspects of regulation will be required to be retained when proceeding to full price deregulation. Utilising price cap regulation the risks of higher prices in less competitive rural markets or of rural areas cross-subsidising urban areas can be avoided. This means that the elements of the price build up would not be regulated or gazetted. Only a final retail maximum price would be gazetted. However the composite elements thereof should be transparent. Constituent elements similar to those currently in use could be used to calculate such a price cap. During this period of price capping the prohibition of discounting and purchasing incentives should be discontinued. Similarly the prohibition on purchasing using credit and the restriction on retail promotions should also be discontinued. This will allow increased competition and an opportunity for some of the benefits thereof to be passed through to motorists. This recommendation is elaborated in Chapters 7 and 13. Liberalising retail prices by means of a price cap will, if anything, lead to a marginal increase in fiscal revenues from fuel sales. Also as prices fall an opportunity is created to increase the Fuel Levy.
- **Import parity price:** It is **recommended** that the import parity price (BFP) be comprehensively overhauled to produce a formula that is much closer to ‘true import parity’. In line with the proposals above this would not be a regulated price but merely constitute a part of the calculation performed by the regulator to determine the final retail price. A downward revision of the BFP would lower prices and lead to a marginal increase in fiscal revenues from fuel sales. Also as prices fall an opportunity is created to increase the Fuel Levy.
- **Pipeline Tariffs:** Petroleum pipeline tariffs are expected to be regulated soon under the Petroleum Pipelines Act administered by the National Energy Regulator. It is **recommended** that this new regulator be given an opportunity to carry out its functions in

this regard. Expected changes to petroleum pipeline tariffs are not expected to materially change fiscal revenues.

- **Price zone differentials:** No evidence of windfall rents in the retail price zone differentials has emerged during this investigation. It is **recommended** that the DME investigation into this aspect be pursued and the outcomes, if appropriate, be applied within the context of the price capping mechanism referred to above. There are no fiscal implications arising from this recommendation.
- **Marketing synfuels/Upliftment agreements:** The remaining agreements between PetroSA and the rest of the petroleum marketing companies are a Government supported and pragmatic economic solution to PetroSA's lack of marketing infrastructure. It is **recommended** that this be allowed to continue until PetroSA evolves to a point at which it can absorb this function. Alternatively if our recommendation of price cap regulation yields the increased retail price competition that we expect then the Government could opt to use PetroSA's volumes and status as a merchant refiner to discipline prices in certain markets and thus obviate the need for these upliftment agreements. There are no fiscal implications arising from this recommendation.
- **Inland fuel production not subject to supply competition because of infrastructure constraints:** Inland manufacturers are able to exercise market power and thus enjoy windfall profits by virtue of logistical constraints. Given the currently prevailing logistical constraints there appears to be no opportunity for market forces to ameliorate this phenomenon in the short term. Changes in infrastructure are necessary before this can occur. We are aware that Petronet and others are developing investment plans to do this. Consequently it is **recommended** that until these logistical constraints have been removed the Minister of Minerals and Energy should give serious consideration to regulating the price, at an appropriate level that approximates competitive market prices, at which the inland market "must have" volumes are sold by the producers. This could be done by raising a levy in terms of the CEF Act and passing the benefits on to petroleum product users. This could benefit inland fuel users by approximately R709 million p.a. and reduce an important market price signal. If regulatory reform is not deemed advisable a special tax or additional Fuel Levy on these volumes could be introduced until the logistical constraints are removed.
- **Delivery costs:** It is **recommended** that the regulator concerned monitor service cost recoveries (delivery) and ensures that they are adjusted when required to realistically reflect true costs. There are no fiscal implications arising from this recommendation.
- **Wholesale margin:** It is **recommended** that the MPAR methodology review underway by the DME should be finalised as soon as possible and any changes warranted made. It is unclear whether the benefits expected from the parallel "regulatory accounts" investigation will warrant the apparent delay that this investigation poses to a review of the MPAR methodology and any consequent relief that this may bring to the economy in terms of efficiency and prices. The **fiscal implications** of this recommendation are not known at this time as the matter is still under investigation.
- **Retail margin:** In accordance with our **recommendation** of retail price capping, the retail margin would no longer be regulated. The regulator would however still need to calculate a retail margin to arrive at a final retail price. The increased competition that we expect to arise from our recommended price capping regulation is in turn expected to thin out the population of service stations in those areas where there are more service stations than market forces can sustain. As this happens it is expected that the average volume through-put or size of service stations will increase and this in turn will allow the retail margin calculation to be reduced to the ultimate benefit of motorists and the economy. We note that the continued employment of pump attendants is protected by the Petroleum Products Amendment Act. The **fiscal implications** of price cap regulation are dealt with above.

The **fiscal implications** of the regulatory reforms recommended for the downstream liquid fuels industry range from a not discernable impact to marginally positive in all instances except one. The only exception is the possible introduction of a fiscal levy on the “must have” volumes in the inland market (one of three options to deal with this phenomenon) which could yield a significantly positive result. Whilst such a levy would increase fiscal revenue it will be a temporary possibility that will exist only until pipeline capacity into the inland market is increased. Both of the projects that have been announced to do this (by Petroline from Mozambique and by Petronet from Durban) have indicated that additional capacity will become operational by about 2010.

12. Synfuels tariff protection

The long and complex history of “tariff protection” appears to be unresolved and not concluded. It is **recommended** that Government conclude this matter expeditiously and in doing so tie up various loose ends. We also **recommend** that the fiscal instrument for existing synfuels producers in response to excessive economic profits proposed elsewhere in this document be the preferred instrument for resolving any uncertainties that may remain at the conclusion of the long history of synfuels tariff protection.

13. Potential windfall gains from the privatisation of Sasol

It is the view of the Task Team that Sasol may have benefited from windfall gains at the time of its privatisation in 1979/1980. The favourable terms of the Sasol privatisation in 1979/80 coupled with the conditions which were established to ensure the success of the privatisation resulted in the generation of economic rent. There may have been some anticipation that economic rents would be generated in the privatisation process, but the extent of these rents is unlikely to have been anticipated. There does therefore appear to be a case for considering a portion of these rents to have been windfall gains in terms of the definition adopted in this report.

The example of the UK Government in imposing a windfall tax on privatised utilities does provide a comparable international precedent for the imposition of a windfall tax under similar circumstances

However, for a variety of reasons including our view that National Treasury have not seen the overall intention of the Task Team’s TOR as a tax-raising exercise and because of the retrospective nature of such an action, we **recommend** that the matter of potential windfall gains that might have been made because of the terms of Sasol’s privatisation should be noted but that no further investigation or action be taken towards considering a windfall tax on such potential windfall gains from Sasol’s privatisation.

1. Introduction

In the November 2005 Medium Term Budget Policy Statement², the Minister of Finance stated:

“The tax treatment of retirement funds, taxation of the mining sector and the fiscal regime that applies to the synthetic fuels industry are under review.”

The Minister further announced in the 2006 Budget Review that:

“The synthetic fuel industry accounts for about 35 per cent of domestic liquid petroleum sales. This industry developed with extensive government support. From 1979 to 1995, the Equalisation Fund, created under the Central Energy Fund Act (1977), gave tariff protection to the industry (Sasol and Mossgas, which is now PetroSA). Funds were collected from motorists using the fuel levy to compensate the industry in times of low oil prices. According to an agreement with the previous government, when the oil price rose above US\$28,50 a barrel, Sasol paid 25 per cent of revenues over that level into the Equalisation Fund. This was effective until 1995. Given the price determination process (import parity pricing and partial regulation), the industry is in a position to reap substantial economic rents when crude oil prices are high. Such windfall gains should be shared with the public. A task force will accordingly be appointed to examine this issue for possible legislative resolution.”

In May 2006, the Minister of Finance appointed a Task Team to:

- advise him on 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,
- as well as to advise on options for securing the optimal contribution of the synthetic fuel industry to South Africa’s long-term development.

The Terms of Reference (TOR) are reproduced in Chapter 2. However, as was apparent from the responses of some parties to this investigation, the breadth of issues raised in the TOR have caused some confusion and it has been necessary for the Task Team to outline our point of departure in interpreting the objectives of the Minister of Finance and National Treasury in initiating this investigation.

What are National Treasury’s aims in investigating the merits of a fiscal response to excessive economic profit generation? Some stakeholders directly addressed this question and stated what they considered National Treasury’s objectives could be. This question was also a cause of acute concern by, a number of parties who seem to have focussed almost exclusively on the fiscal recommendation component in isolation from the other components of the TOR.

We found these concerns which questioned National Treasury’s aims to be a very useful input which was worthy of further consideration. In fact we had implicitly made assumptions which we outline below as “National Treasury Aim”

² National Treasury(2005)

National Treasury Aims and objectives

The Task Team commenced from the premise, as does the TOR, that South Africa has a unique liquid fuel value chain with a legacy of very complex regulation that is currently being reformed. This regulatory legacy is also interwoven with an existing complex fiscal regime. The regulatory reform process is being led by the Minister of Minerals and Energy, while the fiscal reforms are the responsibility of the Minister of Finance and National Treasury. The exercise involving the Task Team is not simply aimed at developing a new fiscal instrument. But as evidenced in the additional work request (which is appended to the original Terms of Reference), National Treasury seeks advice primarily on a **fiscal response** to a situation where:

- Government is concerned that synthetic fuel producers are making excessive economic profits in circumstances where an apparent structural increase in oil prices has occurred and,
- Tariff protection has been removed at times and reinstated at times;
- There have been several different protection dispensations;
- Such producers were, for a considerable period, the subject of a “tariff protection” dispensation that included a derived oil “floor price” of \$23/barrel below which they were protected and a mechanism for the refund to the state of 25% of revenue when oil prices exceeded \$28.70 per barrel until the cumulative amount of protection was recovered;
- Government, by mid-2000, planned to review the “tariff protection” dispensation for the synthetic fuels industry and has not yet taken a final decision on the outcome of that review.

To this end, the TOR requested that the Task Team give consideration to four specific fiscal mechanisms, amongst others.

In addition to addressing the above aim, National Treasury (as evidenced by the Terms of Reference) also seeks to support the following aims which are not primarily related to fiscal policy:

- Improved efficiency of the value chain and the transfer of such efficiency gains to the consumers of liquid fuels and the economy in general
- As a subset of the above, regulatory reform across the value chain, in accordance with the evolution and application of energy policy is key
- Future investment in the liquid fuel value chain, particularly in regard to meeting accelerated growth targets, reducing unemployment and improving security of supply
- Reduction of the negative impact on the domestic economy of fuel price volatility and, if possible, a reduction of fuel prices to final consumers
- Energy policy objectives for the liquid fuel value chain, including a measure of self sufficiency in these products

A significant part of this report is devoted to analysing and unravelling the complex history of South Africa’s liquid fuel value chain and to outlining the complexity of the regulatory and fiscal systems that evolved with the industry. As indicated in the report, given the complexity of its legacy, it has been difficult to separate the fiscal and energy policy issues. Consequently a number of recommendations made by the Task Team in the above regard are within the policy jurisdiction of the Minister of Minerals and Energy, rather than that of the Minister of Finance and we highlight where this is the case. We also give consideration to the fiscal implications of those recommendations.

1.1. The Investigation Process

The Task Team adopted an open and consultative process from the outset. A database was compiled of the key industry participants including other associated parties. On 16th May 2006, a communication was addressed to the key industry players informing them of the Terms of Reference and inviting early written inputs. On 12th June 2006, a second communiqué was sent to the industry outlining the planned process up to mid-September, which committed the Task Team to preparing and issuing a Discussion Document by end-June 2006, followed by Public Hearings in the week of 17th July 2006 and delivery of a report and recommendations to the Minister on 15th September 2006.

The Discussion Document was released on 20th June 2006, three weeks later than planned due to the unanticipated complexity of issues being addressed as well as an underestimated time allocation necessary to consult within National Treasury. The Discussion Document provided a basis for public discussion of the issues and gave rise to a range of factual and informed comment that the Task Team took into account in finalising the report.

Consultations were also held with the Department of Minerals and Energy. Twenty formal and substantive written responses to the Discussion Document were received from the industry involved in the value chain as well as other interested institutions and individuals. Sixteen submissions were published on the National Treasury website and the other four contributors requested that their submissions be treated as confidential.

Table 1 : List of Respondents to Task Team's Discussion Document

Respondents to the Discussion Document
African Rural Initiatives for Sustainable Development
Business Unity South Africa (BUSA)
Chemical and Allied Industry Association (CAIA)
Consumer Goods Council of SA
Dr Jim Harris
Engen Petroleum Limited
Ethel Teljeur
National Association of Automobile Manufacturers of South Africa (NAAMSA)
Petroleum Agency of South Africa (PASA)
South African Institute of Chartered Accountants (SAICA)
Russell Morrison
Sasol
Shell
SWP Meintjies & JGM Jacques
Total SA
Transnet
Website Location for above http://www.finance.gov.za/documents/Taskteam/Submissions/default.htm
Confidential Responses
BP
PetroSA

Respondents to the Discussion Document

Individual A

Individual B

Public Hearings were held on 14th August 2006 in Pretoria. We were somewhat disappointed that only 3 parties submitted oral evidence, namely Sasol, Consumer Goods Council of South Africa and the Petroleum Agency of South Africa. Thereafter, the Task Team completed its report on 30th October 2006.

The Task Team was subsequently requested to further develop one of its recommendations, namely “An alternative fiscal response to rents/excessive economic profits being generated because of a perceived permanent structural increase in international oil commodity prices” and that led to this report.

We have not comprehensively summarised and responded to each response received. However, where appropriate, the points from submissions and issues raised have been cited and referred to throughout the document where appropriate.

1.2. *Reader’s guide to this report*

The South African liquid fuels value chain is technically complex and that complexity is increased by the regulatory system that has been applied historically, elements of which prevail to this day and which are in the process of being reformed.

The report is organised as follows. Chapter 2 reproduces the Terms of Reference. In Chapter 3 we analyse the associated fiscal regime that has evolved for the upstream and downstream segments of the South African liquid fuel industry value chain. The methodology used is to conceptually separate upstream and downstream components of the value chain and to examine the differing fiscal approaches adopted for each. In this chapter we also explore the interrelationship between current fiscal policy considerations relating to liquid fuel production in South Africa and considerations from other policy spheres, including energy policy, mining policy, industrial policy, technology policy and environmental policy. We also analyse selected international fiscal policy experiences and approaches in respective value chains elsewhere. In this chapter, we also define “windfall” more precisely and we apply that definition to a rigorous analysis of the liquid fuels value chain.

Our research has revealed that there is no universally accepted definition of windfall tax nor is there a universally accepted practice in implementing windfall taxes. Indeed the international use of windfall taxes has been driven by different imperatives in different countries and has had mixed results. We have thus been forced to develop our own methodology in order to apply a consistent set of “rules” in evaluating the circumstances presented to us. We do this in Chapter 4 where we develop a working definition, which clearly distinguishes between the two different forms of excessive economic rent that are of interest to the Task Team, namely windfall profits on the one hand, and other forms of excessive economic rent. We also review various “windfall” and excessive economic rent taxation and levy initiatives taken by the Governments of different countries, at

different times, on the upstream and downstream segments of the energy/fuel value chain and at different stages of development of the value chain/system.

The development of South Africa's liquid fuel industry has been unique compared to post-war growth of similar sectors in other countries. Today some 30% of South Africa's liquid fuel is produced from coal and natural gas using a domestically developed synthetic fuel technology. The same process produces the bulk of the basic organic chemicals that are utilised in the downstream chemical and allied industries, as well as a significant proportion of South Africa's chemical exports.

The liquid fuel industry's growth and development (both crude oil-based, coal-based and gas-based) has taken place under an interventionist industrial policy that gave priority to increasing fuel security/self sufficiency, using the key policy instruments of investment incentives and regulation of the entire liquid fuels value chain. Chapter 5 details with the intricate nature and history of the regulatory system that governs the industry.

Chapter 6 discusses the role of the liquid fuels industry in the economy, in particular the contribution of the synfuel industry.

The concepts of "windfall", developed in Chapter 4, are applied to the South African liquid fuels value chain in Chapter 7 where we test whether or not windfall profits have been generated in the liquid fuels industry and whether or not excessive economic rent generation can be expected to continue into the foreseeable future. Having established what qualifies as excessive economic rent in Chapter 7, we discuss and make concrete recommendations on how such rents could be reduced through regulatory mechanisms in Chapter 13.

But regulatory reform may not be sufficient to address excessive economic rent in the upstream segment of the value chain and, in Chapter 8, we make specific recommendations on this.

We address the windfall gains that might have been made by Sasol as a result of the terms of its privatisation in Chapter 9. We also make recommendations in Chapter 10 on the recovery of potentially very significant amounts of past tariff protection which, in terms of past agreements between the synthetic fuel industry and government, could be outstanding and due for collection by the state.

In some cases, excessive economic rent could still continue to be generated despite regulatory changes. In such circumstances, as identified in the TOR, Chapter 11 considers the merits and demerits of a number of fiscal options to address continued excessive economic rent generation.

We take into account that the TOR also requires the Task Team to advise on options for securing the optimal contribution of the synthetic fuel industry to South Africa's long-term development. We have interpreted this largely in terms of the desirability and feasibility for further synfuel/alternative fuel production to meet the needs of a fast-growing economy and we make concrete proposals on a progressive investment incentive dispensation in Chapter 12 as well as some recommendations on fuel demand-side management.

Our recommendations are summarised in Chapter 14 of the report.

The views expressed in this report are those of the Task Team and are not the views of the National Treasury nor any other party unless specifically referenced as such.

2. Terms of Reference

TERMS OF REFERENCE

TASK TEAM TO ASSESS THE FISCAL REGIME APPLICABLE TO WINDFALL PROFITS IN THE LIQUID FUEL SECTOR

Introduction

The purpose of this assignment is to advise the Minister of Finance on 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.

The Minister of Finance seeks to be advised on options for securing the optimal contribution of the synthetic fuel industry to South Africa's long-term development, against the background of, *inter alia*, its significance for the economy and the balance of payments, its historic dependence on the state for capital funding and price support, the impact of movements in the oil price and exchange rates on synthetic fuel producers' profitability and the potential for further expansion of domestic synthetic fuel production.

A Task Team is accordingly proposed to assist the National Treasury to achieve these objectives, which are further identified below.

Background

The synthetic fuel industry meets about 30 per cent of South African demand for petroleum products, thereby reducing dependence on imported crude oil for local refining and imported fuel. The industry comprises two players – Sasol and PetroSA – both of which have their origins in government-backed initiatives to reduce dependence on imported oil. Sasol operates commercial scale facilities for conversion of low-grade coal to liquid fuel, is a major contributor to South Africa's petroleum production, is a world leader in the conversion of coal to fuels, chemical feedstock and gas, and is developing ventures internationally to convert gas into clean diesel fuel. PetroSA converts natural gas to liquid fuel.

Petroleum prices are administratively determined in South Africa, effectively reproducing an import parity price that takes into account international oil price movements, transport and refining margins and wholesale and retail distribution costs. The fuel tax elements apply to liquid fuel (petrol and diesel), both derived from imported crude oil and synthetically produced. Synthetic fuel manufacturers sell into this administered market at prices determined without reference to their production costs.

Concerns exist that the present dispensation benefits the synthetic fuel producers and their shareholders disproportionately, at the expense of the consumer and the taxpayer. South African taxpayers and motorists have historically supported the synthetic fuels industry through sizeable subsidies, when the administered fuel price has been too low to recover the costs of production. This had the effect of protecting the companies from the adverse impact of a below-cost price, with the associated benefit to the country's balance of payments of greater stability in domestic fuel production. This price support arrangement also provided for a recovery by the fiscus of a share of

the windfall profits to the industry when high oil prices resulted in a high-administered fuel price. An agreement was in place that an offsetting reimbursement to the fiscus would be paid when oil prices exceeded \$28.50 per barrel, but this fell away in 1995. A revised subsidy regime that provided for a subsidy in the case of low oil prices without the requirement of a payback during times of high oil prices was in place until 1999, this revised regime was based on recommendations by the Arthur Andersen report. When this agreement expired in 1999 the Department of Minerals and Energy appointed consultants to recommend a more appropriate forward-looking fiscal regime. The issue has remained in abeyance since then, partly in recognition – until recently – that global oil prices were at moderate levels.

Internationally, oil and gas companies are often subject to fiscal regimes that effectively tax the windfall profits associated with high oil prices relative to resource extraction costs. These tax or profit-sharing regimes assist in mobilising surplus funds for public investment purposes, but arguably also inhibit exploration and hold back global oil supply, contributing to the persistence of high fuel prices already underpinned by strong growth in demand. It is recognised that South Africa's synthetic fuel production technology and capacity are considerable economic strengths in the context of high global oil prices. Careful consideration needs to be given to the long-term development of this industry, the design of appropriate fiscal measures and the evolution of the relevant environmental and industrial regulatory arrangements. Mindful of international practice and the complex balance of economic aspects to take into account, the Minister of Finance has requested that the fiscal regime applicable to South Africa's synthetic fuel producers should be reassessed.

Purpose of the Task Team

The National Treasury seeks through this Task Team to formulate a sound policy position on fiscal measures applicable to the synthetic fuel industry, underpinned by appropriate evidence and analysis.

The Task Team is requested to:

- Outline the international experience and approaches associated with a windfall tax;
- Comment on the contribution of the synthetic fuel industry to the South African economy;
- Where and if appropriate benchmark the synthetic fuel industry against the local and international petroleum (oil) refining industry;
- Review the role of fiscal support in the establishment and development of the synthetic fuel industry;
- Consider any distinguishing factors that are peculiar and specific to the South African liquid fuel and synthetic fuel production system that have relevance to windfall profits;
- Provide an economic and financial analysis of the synthetic fuel industry as a basis for assessment of these and other fiscal regime options;
- Take account of, and where relevant, comment on the various policy processes that are currently underway in respect to the fuel industry, including:

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- Energy policy and policy processes,
 - Other relevant tax dispensations and policy processes, including those associated with the proposed Mineral royalty regime and the taxation of intellectual property rights, e.g. Trade Marks,
 - Beneficiation dispensations and policy processes, and
 - Any other relevant dispensations and policy processes.
- Comment on the appropriateness of the current price regulations with respect to petroleum products in so far it impacts on windfall tax recommendations;
 - Investigate the economic, financial and administrative implications of tax options identified and to draw where appropriate on international experience and practice;
 - Identify key economic, technological, environmental and financial considerations relating to the future development of synthetic fuels and its future role in the South African economy; and
 - Evaluate options for reform of the tax treatment of liquid fuel/synthetic fuel producers, possible fiscal support for future development of the industry and options for reform of the regulation of the pricing of synthetic fuel products.

Amongst the options to be considered are the following:

Revised subsidy regime: A price support and reimbursement arrangement could be reinstated. This might take the form, for example, of a floor price below which synthetic fuel producers would receive a subsidy, or pay a reduced fuel levy, and a ceiling above which a supplementary tax or revenue-sharing levy would be payable.

Cost-based administered price regime: Analogous to the price regime applicable to the refining industry, synthetic fuel producers could be reimbursed for their output on the basis of a cost-plus price structure. This would mean, in practice, a separate price for the synthetic product and an excess profit tax (or subsidy in the event of a negative differential) would fall on the gap between synthetic fuel production costs and standard refinery costs.

Progressive formula tax: Synthetic fuel production could be subject to a formula-based progressive profit tax, along similar lines to the South African gold mining tax formula. Such a formula has some advantages over a price or cost-based arrangement in that it avoids sharp tax thresholds and is linked directly to profitability. It can also provide for relief during periods of low commodity prices and low profitability.

Investment-linked tax and subsidy options: With due regard to economic and environmental considerations, account could be taken of investment by synthetic fuel producers in expanded or improved production capacity as part of an incentive-based targeted tax regime.

Proposed Process

In carrying out its task, the Task Team will need to consult with and gather facts and evidence from appropriate Government departments and other interested and affected parties including:

- The Department of Minerals & Energy;
- Synthetic fuel producers; Sasol & PetroSA;
- Oil companies operating in the South African market, SAPIA, the South African Petroleum Industry Association;
- Organised business;
- Organised labour;
- The accounting and legal professions;
- Consumer lobby groups; and
- The South African Revenue Service.

Mindful of the complexities associated with the liquid fuel sector, a public hearing and transparent evidence-led approach to gathering facts, evidence and information and views may be followed. If any additional powers are necessary to enable the Task Team to fulfil their committee functions, the Minister may following advice from the Task Team and National Treasury consider such authorisation of powers.

The Tax Policy Unit of the National Treasury will act as the secretariat to the Task Team.

SECOND TERMS OF REFERENCE

TASK TEAM TO ASSESS THE FISCAL REGIME APPLICABLE TO WINDFALL PROFITS IN THE MANUFACTURE OF SYNTHETIC FUELS

Version 12-12-06

Introduction

Following the submission of the report entitled *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*, dated 30th October 2006 by the Task Team, the Minister of Finance has requested that the Task Team further explore the feasibility of fiscal measures applicable to domestic synthetic fuel producers.

This should be done against the background of, *inter alia*, the synthetic fuel industry's historic dependence on the state for capital funding and price support, the impact of movements in the oil price and exchange rates on synthetic fuel producers' profitability, its contribution towards the economy and the balance of payments and the potential for further expansion of domestic synthetic fuel production.

Background

Petroleum prices are administratively determined in South Africa, effectively reproducing an import parity price that takes into account international oil price movements, transport and refining margins and wholesale and retail distribution costs. The General Fuel Levy and the Road Accident Fund Levy applies to liquid petrol and diesel. Synthetic fuel manufacturers sell into an administered market at prices determined by reference to crude oil costs whereas their synfuels production costs are very different.

A key concern for Government is that during times of high crude oil prices synthetic fuel producers are making windfall profits (excess rents) given that the prices of their final products are largely determined by international crude oil prices whilst their input costs are not.

Sasol, the major synthetic fuel producer, converts coal (and more recently also gas) into liquid fuels (petrol, diesel and illuminating paraffin), whilst PetroSA converts natural gas and imported condensate into liquid fuels.

The wholesale price of diesel and the retail prices of petrol and illuminating paraffin are regulated by the Minister of Minerals and Energy. The refinery gate price of liquid fuel products is referred to as the basic fuel price (BFP), previously referred to as the IBLC (In-bond landed cost). The pricing of liquid fuels is essentially based on import-parity-pricing, to which regulated profit margins at the wholesale and retail levels, in the case of petrol, and a transport cost (delivery) component that varies with the distance from the coast are added. The move from the IBLC formula to the BFP formula happened in 2003 and resulted in a reduction in product prices and profit margins accruing to fuel suppliers.

The present dispensation (given the relatively high international crude oil prices) benefits the synthetic fuel producers and their shareholders disproportionately. South African motorists have

historically supported the synthetic fuels industry through sizeable subsidies, when the administered fuel price has been too low to allow an acceptable rate of return. This had the effect of protecting the synfuel companies from the adverse impacts of low prices. With this came the associated benefits to the country's balance of payments, employment and security of liquid fuels supply. For a certain period the price support arrangement also provided for a recovery by motorists of a share of the windfall profits to the industry when high oil prices resulted in a high regulated fuel prices. For this period an agreement was in place with the synfuels producers that an offsetting reimbursement to the motorists would be paid when oil prices exceeded \$28.70 per barrel. A different mechanism was introduced in 1995 and it is not clear if the reimbursement mechanism fell away at that time. This was in the form of a declining subsidy ("floor price") in the case of low oil prices without the requirement of a payback during times of high oil prices. This mechanism was to be reviewed by 2000. This revised regime was based on recommendations contained in the report by Arthur Andersen. The Department of Minerals and Energy appointed consultants -PVM- to conduct the review in 2000. A report was produced by PVM in 2003 but has not yet led to a decision by the Government.

Purpose

The Minister of Finance has requested the formulation of a sound policy position on fiscal measures applicable to the synthetic fuel industry, in the light of the unique circumstances under which this industry operates.

The efforts of the Task Team to formulate a set of recommendations that incorporate the complex interplay of energy policy, fiscal policy, regulatory reform and elements of environmental policy is noted and commended.

The Task Team is requested to further develop its recommendation entitled "An alternative fiscal response to rents/excessive economic profits being generated because of a perceived permanent structural increase in international oil commodity prices".

In doing this, the Task Team should also take particular account of the differential cost structures between the processes of refining crude oil into liquid fuels, coal into liquid fuels and gas into liquid fuels;

Outputs

The Task Team is requested to deliver a report and an electronic copy thereof in MSWord format by the end of January 2007.

3. The South African Fiscal Regime as Applied to the Liquid Fuels Value Chain

3.1. Fiscal policy approach of the South African Government

The Task Team's is mindful of, and has tried to adhere to, the core principles that we understand has been utilised by the South African fiscal authorities in its dealings with individual and corporate taxpayers, particularly in regard to maintaining certainty in the tax regime. However, in an investigative exercise such as we have been tasked with, it has been necessary to investigate and record a range of international fiscal experiences and actions which may not adhere to the fiscal practice and track record of the South African government.

The Task Team must stress at this point that in recording such fiscal experiences and measures in this section, particularly those which could be construed to be retrospective, we are not necessarily advocating that the same policies be adopted. But we feel that, in order to adhere to our terms of reference, it is important that all options and experiences be aired.

3.2. Fiscal policy and energy policy considerations at the upstream end of the energy value chain

The relationship between energy policy and fiscal policy has varied according to the stage of development of the respective resource extraction industry and according to the policy priorities of respective resource-producing and energy-consuming countries. More recently, environmental policy considerations have risen in prominence and striking a balance between a range of key policy considerations will be a challenge for policymakers:

- Fiscal Policy considerations
 - Raising fiscal revenue to finance the national budget,
 - Reforming the fiscal regime with simplification or liberalisation objectives,
- Energy & Industrial Policy considerations
 - Encourage investment in the extraction industries,
 - Manage the extraction of finite natural resources,
 - Encourage forward and backward linkages with the resource extraction industry (beneficiation),
- Environmental Policy considerations
 - At the extraction industry arena – environment impact assessments, rehabilitation guarantees, etc,
 - At the downstream consumption end of the value chain through taxes affecting overall pricing levels as well as differential taxes to influence fuel use behaviour change.
 - To encourage the extraction and production of alternative and renewable energy resources

In South Africa, historic energy policy has been strategically directed at attaining energy self sufficiency, particularly during the apartheid sanctions years which also coincided with global oil price rise shocks in 1970s and 1980s.

During this period, the entire petroleum industry was governed by comprehensive regulation and was stimulated by direct state investment in facilities (Sasol II, Sasol III, Moss gas) to produce liquid fuel products and industrial gas from indigenous coal and natural gas sources. In addition, the state created and directly financed Soekor to explore for oil and gas on land and off the South African coastline.

During this period, energy self-sufficiency policy dominated and any considerations regarding fiscal policy appears to have taken second place. A possible exception to this related to the decision to partly privatise Sasol in 1979, when significant capital infusions were required to finance the accelerated expansion of synfuel production at Sasol 3. This is discussed in another section of the report.

Energy policy success was achieved at great cost but by 1989, South Africa was producing around 50% of its national requirement of liquid fuel from indigenous raw materials.

3.3. The fiscal Treatment of Resource Extraction

As custodians of sovereign national rights over finite natural resources, governments have traditionally managed the extraction of such resources through the regulation of mineral rights, various licensing regimes and through royalties, corporation taxes, special duties and other taxes. (See figure below which illustrates the changing forms of fiscal regulation over the life cycle of the UK north sea oil resources)

3.3.1. Fiscal Regimes

Fiscal regimes for upstream extraction industries typically consist of a mix of the following instruments:

- Direct Tax (Profit taxes)
 - Resource rent tax – related to the economic rent generated by the difference between the market price and the cost of extraction (including an acceptable return on investment)
 - Corporation tax – applicable to all corporate entities irrespective of the sector in which they are operating.
 - Progressive profit tax – a variant of corporation tax which links the tax rate with various profit indicators, including commodity product prices, production volume, sales turnover

- Indirect Tax
 - Royalties – on production volume, production value and sometimes progressive and linked to market prices

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- Import duties – and the way it is applied or exempted for mineral extraction projects
 - Value added tax – and the way it is applied or exempted for mineral extraction projects

 - Non-tax
 - Fixed fees and bonus payments
 - Production sharing arrangements
 - State equity

 - National Resource Stabilisation/Savings funds

In general these instruments are part of ongoing fiscal measures designed to address expected sector characteristics and changing sector and fiscal policy objectives. The burden is also reduced or increased depending upon the level of incentive that the authority wishes to offer. Such changes are typically related to industry life cycle and commodity prices.

However, special fiscal measures have at times been implemented when unexpected windfall profits were generated. The distinction between anticipated super-normal profits and anticipated economic rent, on the one hand, and windfall profits, on the other, will be more clearly defined in Chapter 4.

3.3.2. South Africa's existing fiscal regime for oil and gas

The fiscal policy towards oil and gas resources was developed during the apartheid sanctions period between the 1960s and 1980s with the objective of achieving national oil and gas self sufficiency.

The state-owned Soekor was formed in 1965 to explore for oil and gas. Under the Mining Rights Act of 1967, Soekor was granted a prospecting lease No. OP26 by the government and proceeded to sub-lease these rights to international companies, who were awarded offshore concessions leading to a number of onshore and offshore wells being drilled and some limited success in gas discoveries. However, foreign interest waned due to sanctions and comparatively poor prospectivity. Until 1997, most exploration and production (E&P) activity and associated expenditure was carried out by the state, through Soekor. It is estimated that some R2.6 billion was expended in seismic, drilling and production development activities by Soekor between 1965 and 1994, with budgeted expenditure thereafter at approximately R130m per annum. DMEA (1995).

After about 1997, several energy and fiscal policy reforms were implemented.

First, the self-sufficiency policy objective was replaced in 1997 with an approach that sought to attract private capital to fund the costly E&P activities. The large quantity of seismic data that had been financed by the state, through Soekor, was made available under concessions that were offered to private international oil exploration firms under the OP 26 lease.

To facilitate this objective in 1999, the management and promotion of petroleum exploration and production licensing, together with data management functions were separated from the commercial activities of Soekor and transferred into a newly-created Petroleum Agency of SA (PASA).

Second, the government's interests in oil and gas exploration (Soekor) and synfuel production (Mossgas) were consolidated under a single company, the Petroleum Oil and Gas Corporation of South Africa (Pty) (Ltd) (PetroSA), with a very specific mandate to operate commercially in the domestic and global markets.

Thirdly, the management of all mineral resources were brought under the jurisdiction of the Mineral and Petroleum Resources Development Act 2004. Under the MPRD, all unleased areas covered by OP26 will revert to the state and all sub-leases are required to be converted to new rights in terms of the MPRD. PASA will continue to administer the system as a designated agent of the state.

If the earlier period was characterised by the primacy of energy policy considerations over fiscal policy, the current period reflects an overriding priority being accorded to the simplification and unification of the fiscal regime for petroleum and mineral resources together with institutional reform designed to effectively manage the policy measures.

Key components of the current fiscal regime are as follows:

- Royalty
- Normal company tax
- BEE requirement – BEE firms to be offered a 10% farm-in option
- 10% farm-in right for state-owned national oil company PetroSA

3.3.3. Existing fiscal regime for coal

Unlike any other country, South Africa is unique in the extent to which the energy/ fuel and chemical value chains are dependent on coal mining. Some 94% of electricity is generated from coal. About 30% of liquid fuels are sourced from a coal-based synthetic fuel process, and this process integrally produces the bulk of the country's basic organic chemical feedstock.

The current fiscal regime for coal exploration and production is governed by the Minerals and Petroleum Resources Development Act and coal mining is covered by normal corporate tax rules. Additional fiscal measures that are being developed include the Minerals Royalty Bill and it is understood that the DTI are considering the development of incentives to encourage the beneficiation of primary and primary-processed minerals.

Government will decide on the level of royalties that will apply to coal extraction after 2009. (see Appendix 2) The 2003 draft Minerals Royalty Bill has proposed a 2% royalty for coal, with a 1% rebate for low grade coal (which would be of too low a grade to be exportable) that is utilised domestically in the production of electricity and synthetic fuel. Such measures are specific to low-grade coal, which is typical to South African geology. There is clearly a mineral beneficiation policy objective contained in this proposed lower royalty for coal that is benefited. In addition to this, it is understood that DTI are investigating a range of measures to further encourage beneficiation.

3.3.4. Royalty Bill – South Africa

The following criteria are expected to influence policy decisions on the levels of Royalty and other taxes that will ultimately be imposed on South African oil and gas exploration and production activities.

- Fiscal regime comparison
 - International benchmarking of oil and gas fiscal regimes
 - Domestic comparison of fiscal regime differentials between energy sources such as coal, gas and bio fuels
- Energy policy considerations, including:
 - The urgent need to stimulate exploration activity particularly for natural gas which, if found in sufficient quantity, could provide an alternative gas-based solution for existing peak and looming base load electricity shortages and feedstock for PetroSA's dwindling reserves.
 - Current high oil prices may also lead to stimulation of oil exploration and further synfuel from coal beneficiation

A Royalty of 1% is proposed in the draft Royalty Bill (See Appendix 2) for deep water production and 2% for the less costly shallow water production.

Fiscal benefits conferred in the past under the OP26 lease are acknowledged to be very favourable in comparison with other countries. This is probably due to the fact that South Africa's gas and oil prospectivity is lower than that of many oil and gas producing countries and there have been no discoveries of significant reserves.

International evidence (UK case) has shown that liberalising their fiscal regime did lead to increased investment in exploration and production, although *more* of the benefit of cyclical oil and gas prices accrued to companies under the liberalised system. This happened after significant reserves of oil had been proven, unlike in South Africa.

The detail of the South African fiscal regime is currently defined under the OP26 lease agreement and is being revised with the phasing out of OP26. The 2006 Budget referred to the "renewal" of tax incentives for offshore exploration and production and the following analysis by Ernst & Young (2006) indicates the detail of the fiscal regime that is of concern.

"These incentives will more than likely include no ring fencing of mining income and capital expenditures, exemption from STC, customs and excise and exchange control provisions, and possibly, the exclusion of CGT and the foreign exchange provisions of 24I. But there is no certainty, particularly in relation to the last two points.

However, it seems certain that the deduction of capital expenditure will continue, it is not too much different in principle to the hard-rock mining tax rules, and the confusion surrounding the calculation of a 12% 'uplift allowance' on unredeemed capital expenditure, clarified. The tax rate applied should continue to be the corporate rate as set out in the Income Tax Act as amended from time to time and the cap of 35% contained in many recent leases will hopefully be maintained. The method of calculation and payment of taxes is also

in need of clarification and the preference by the industry players is that calculations will be permitted in US dollars “

The presence of such a cap constitutes a significant investment incentive for highly risky capital intensive offshore exploration activities. However, should significant oil and gas production be established in the future under fiscal measures that contain the aforementioned tax rate cap, the Task Team must point out that concerns about windfall gains may emerge in the future. Should this occur, mechanisms like the supplementary corporate tax that were imposed by the UK Treasury could still be utilised, but would be viewed negatively by investors if imposed retrospectively. It may therefore be appropriate that the future royalty fiscal architecture be enabled in order to address potential future (windfall) excessive economic rents being appropriated by oil and gas producers.

The relegation of energy policy in favour of consolidating the fiscal policy changes is clearly reflected in the past unwillingness of South African authorities to create any precedents by providing ad-hoc fiscal measures to offshore exploration projects ahead of a thorough and comprehensive review of mineral royalty bill details. It has been reported that the Occidental/BHP Billiton joint-venture plans to drill two exploration wells during 2005/6 in deep water on Block 3A was postponed pending the finalisation of the Royalty Bill and uncertainty regarding the future fiscal regime. It is understood that Occidental/BHPB decision to commit +-\$100m to drilling two deep water wells in 2005/6 was driven by (a) a recognition by them that the RSA fiscal regime for production was very favourable in comparison to regimes elsewhere in the world, and (b) that the shortage of peak electric power would create conditions for a gas market in the Western Cape region that would absorb any significant gas subsequently found.

The Petroleum Agency of South Africa (PASA) is also apparently waiting for certainty on the upstream fiscal regime before launching a licensing round for offshore acreage on the eastern and western seaboard of South Africa.

It is perhaps timeous that this investigation into windfall gains is also being carried out simultaneously with the other processes that will make up the future upstream fiscal regime for oil and gas exploration and production.

3.3.5. The UK’s fiscal regime for upstream oil and gas

The Task Team’s preliminary scan of international experiences of fiscal policy towards both upstream and downstream segments of the fuel value chain has identified the UK, amongst others, as insightful and useful.

Unlike other major upstream fuel producing economies, the UK has been both a major producer and consumer of liquid fuels, and has developed linked but distinct fiscal approaches between upstream and downstream segments of the fuel value chain.

At the upstream end, the UK oil and gas fiscal regime consists of the following components:

- Royalties
- Resource rent tax - A cash-flow tax (petroleum revenue tax or PRT) and
- Normal company tax

- Supplementary petroleum tax on profits

A key difference with South African fiscal policy is the UK approach to tax economic rents (or natural resource rent in the case of oil production) through a specific and additional tax to normal corporate income taxes.

The interesting aspect of the UK experience is that fiscal liberalisation processes also accompanied a major energy market liberalisation. The latter energy market liberalisation had unintended consequences and, as is shown later, such consequences became an election issue, and also led to specific backward- and forward-looking corrective fiscal measures being imposed.

The approach towards taxing upstream oil producers operating in the UK Continental Shelf was also applied in the 1990s era where authorities were liberalising the tax system for offshore industries, the theoretical rationale being that a lower fiscal regime would lead to greater investment in exploration and production and a consequent higher net tax take.

UK evidence suggests that while a lower fiscal regime (tax on oil price reduced from 45% in 1985 to 10% in 1991 and raised to 15% in 2000) did lead to higher production (from 2.75mboe/day to 4.64mboe/day between 1990-2000), there was a marked decline in the net tax take (£4,645m in 1987 declining to £2,595m in 1999 and rising with oil prices to £4,825m in 2000), with the oil companies enjoying a very substantial windfall gain. Wright (2003).

In contrast, the tax revenue from downstream UK fuel consumption was significantly higher than from the upstream, rising from £8,870m in 1987 to £26,345m in 2000. This policy of loading tax on consumption but incentivising production is mirrored in RSA although the quantum differs.

The Table below shows how the UK's fiscal policy had shifted in recent years in the gradual reduction and elimination of royalty taxes and resource rent tax in favour of a supplementary tax on top of normal company tax, a trend aimed at simplification and liberalisation of the fiscal regime that applied to North Sea oil resources. This was also accompanied by additional investment allowances which aimed to improve exploration and investment incentives in the context of high levels of risk and uncertainty.

Table 2 : A brief chronology of the UK oil and gas fiscal regime

1964	<ul style="list-style-type: none"> • 12.5 per cent royalty and corporation tax, but major loopholes for the avoidance of the latter, including the deductibility of losses made on non-UK operations.
1975	<ul style="list-style-type: none"> • Additional to the 12.5 per cent royalty, petroleum revenue tax (PRT) introduced, initially at 40 per cent, rising to 60 per cent (1979–80) and then 70 per cent (1980–82). PRT was 'ring-fenced' by field (losses from one field could not be set against the profits of another), but a series of deductions were allowed (royalties, a tax-free <i>oil production allowance</i>, 'uplift' (an enhancement of actual capital expenditure) and smaller and less profitable fields were protected by a 'safeguard' and 'tapering'). • Corporation tax was charged at 52 per cent between 1972 and 1983 and ring-fenced against non-UK losses, but not within the UK for individual fields.
1981	<ul style="list-style-type: none"> • Supplementary petroleum duty introduced at a rate of 20 per cent on gross revenue, but with a duty-free allowance of 20,000 barrels/day.
1982	<ul style="list-style-type: none"> • Supplementary petroleum duty replaced by advance petroleum revenue tax to accelerate PRT and an increase in PRT itself to 75 per cent (from January 1983).

1983	<ul style="list-style-type: none"> • Advance petroleum revenue tax phased out. • Royalties abolished on fields receiving development consent after April 1982. • Oil production allowance doubled. • Cross-field exploration allowance introduced with respect to PRT, allowing a partial breach of the PRT ring-fence principle: exploration and appraisal expenditure incurred for one field could be offset against PRT liability on another.
1984–86	<ul style="list-style-type: none"> • Corporation tax was progressively reduced from 52 per cent to 50 per cent in 1984, 45 per cent in 1985 and 40 per cent in 1986. As a compensating measure, 100 per cent first year capital allowances were abolished and replaced with a 25 per cent depreciation allowance calculated on the declining balance method.
1987	<ul style="list-style-type: none"> • Corporation tax was reduced further to 35 per cent. • A cross-field development allowance was introduced: in a further breach of the ring-fence principle, companies were allowed to offset 10 per cent of their annual capital expenditure against the PRT liable profits of other fields.
1991	Corporation tax reduced to 34 per cent.
1992	Corporation tax reduced to 33 per cent.
1993	PRT reduced to 50 per cent for existing fields and abolished altogether for new fields given development consent after April 1993. Cross-field development allowance abolished.
1997	<ul style="list-style-type: none"> • New Labour government announces a review of the North Sea fiscal regime, involving two alternatives: a supplementary corporation tax or a broader petroleum revenue tax. Either of these alternatives would be accompanied by the abolition of royalties. However neither alternative was implemented, with the 1998 drop in oil prices being used as the pretext. • Moreover, oil companies benefited from a further reduction in corporation tax to 31 per cent.
1999	Corporation tax reduced to 30 per cent.
2002	<ul style="list-style-type: none"> • Remaining royalty obligations to be phased out for the 30 fields which still pay them. • An additional supplementary corporation tax of 10 per cent of ring-fenced profits introduced, without any deduction for financing costs. • At the same time expenditure which currently qualifies for a 25 per cent writing-down allowance under the plant and machinery and mineral extraction capital allowance codes will now receive a 10 per cent first year allowance. • Long life assets which currently receive a 6 per cent writing down allowance, will be eligible for a 24 per cent first year allowance.
2006	Increase of additional supplemental corporation tax to 20% of ring-fenced profits

Source: Wright (2003), RSA National Treasury Correspondence with UK National Treasury

3.4. *Brazil's Proalcool Programme*

Brazil's 1975/6 initiative took place in response to global oil price rises, at the same time that the South African government was embarking on its synfuel programme. Similar fiscal and regulatory measures were used by Brazil as in South Africa. Incentives were provided to stimulate sugar and alcohol production, state financing underpinned the necessary logistics and stocks and initially government acted as a single channel marketer of alcohol. Legislation and regulation ensured that fuel specifications accommodated the alcohol blends. After 1979, Brazil went further than many other countries in accelerating technological change in the motor industry. As part of the Proalcool programme, fiscal incentives were extended to motor vehicle manufacturers to develop and introduce vehicle engines utilising 100% alcohol fuel.

It should be noted that during sanctions, South Africa (and Zimbabwe) utilised an 8-15% ethanol blend in petrol. This blend was only sold in the South African inland market. Such a blend could be utilised in the engines of most vehicles without any adverse consequences. In some cases, slight carburettor adjustments were required.

Unlike in South Africa, ethanol production and utilisation was accommodated in their market without the sudden displacement that South African oil refiners experienced when Sasol II and III came on stream after 1980.

The Brazil example is perhaps less relevant to the issue of windfall and may be more useful when we consider that part of the Terms of Reference that addresses the potential for future synfuel/alternative fuels in South Africa.

3.5. Fiscal Policy at the downstream end of the energy value chain in South Africa

Three key objectives have been prevalent in global fiscal approaches to downstream fuel industries:

- Taxes have been applied to raise revenue, particularly in developed economies,
- Taxes have been applied to influence the behaviour of fuel consumers,
- In some cases, particularly in developing economies, subsidies have been applied to keep end-user prices affordable.

International fiscal practice has been to either subsidise fuel consumption or, in more industrialised countries, to tax fuel consumption in order to raise revenue and/or to achieve environmental objectives.

In South Africa, the historical approach to taxing fuel has been more strongly driven by energy self-sufficiency and synfuel protection objectives. As has been analysed elsewhere in this document, the downstream fiscal regime for the liquid fuels value chain is highly regulated, with the profitability of refiners, marketers and service stations all being administered through regulation. This has included “tariff protection” for synfuels producers to deal with their anomalous cost and pricing structure, that is the cost of production of synfuels (and therefore the profitability of the synfuels producers) bears no direct relationship to the production costs of the crude oil refiners, yet they are price takers of prices set according to crude refining economics. This means that they are likely to experience very high profits at times of high crude prices and profit squeezes at times of lower crude prices.

More recently, a range of additional and environmentally-oriented objectives have emerged with the potential to further shape the taxation of fuel.

In a recent policy discussion paper on environmental fiscal measures, National Treasury (2006) estimate that the costs of vehicle sulphur dioxide, nitrous oxides and particulate exhaust emissions (excluding the impact of lead and other heavy metal fuel additives) on human health has been of the order of R10b per annum. (DEAT/DME,2003).

The discussion paper signals Treasury’s intention to more consciously and comprehensively apply fiscal measures to support national environmental policy than is currently the case, as the next table shows.

Table 3 : Overview of environmentally-related taxes and charges in South Africa (2005/2006)

SECTOR	LEVY (charge)	LEVEL	APPLICATION	TAX RATE
Transport fuels	General Fuel Levy	National	Petrol Diesel Biodiesel	116 cent per litre. 100 cent per litre. 60 cent per litre.
	Road Accident Fund Levy	National	Petrol, Diesel, Biodiesel	36.5 cent per litre.
	Equalisation Fund Levy	National	Petrol, Diesel, Biodiesel	Currently zero.
Vehicle taxation	Customs and Excise Levy	National	Petrol, Diesel, Biodiesel	4 cent per litre.
	<i>Ad Valorem</i> Customs & Excise Duty	National	All passenger and light commercial vehicles	Graduated rate based on the vehicle price with an upper ceiling of 20 per cent.
	Road Licensing Fees	Provincial	All registered vehicles	Fees vary between different provinces – usually based on weight.
Aviation taxes	Aviation Fuel Levy	National	Aviation fuel sales	1,5 cents per litre on all fuel sales excluding foreign operators.
	Airport charges	National	Landing, parking, and passenger service charge	Charges imposed to fund the operation of the South Africa Civil Aviation Authority (SACAA).
	Air Passenger Departure Tax	National	International air travel from SA	R120 per passenger; R60 per passenger to BLNS countries.
Product taxes	Plastic shopping bags levy	National	All plastic shopping bags	3 cents per bag.
Electricity	NER Electricity Levy	National	All electricity generated	A levy per kWh is implemented on all electricity generated to fund the National Electricity Regulator.
	Local Government Electricity Surplus	Local	Electricity distributed to end-users by municipalities	Implicit tax rates vary between different municipalities. Total surplus revenue raised is approximately R 1.4 billion.
Water supply	Water Resource Management Charge,	National	All registered water use from DWAF water schemes	Charge rates vary according to different users. The aim is to recover costs associated with water supply and abstraction.
	Water resource development and use of water works charge.	National	All registered water use from DWAF water schemes	Charge rates vary according to different users. The charges aim to recover the costs associated with the construction, operation and maintenance of water schemes.
	Water Research Fund Levy	National	All registered water users	This levy is earmarked to fund the operations of the Water Research Commission.
Waste water	Waste Water Discharge Charge System (proposed)	National framework	All (DWAF) registered water dischargers	The WDCCS is in the process of being developed. 2 components are proposed for the system. A cost recovery based charge and a levy/ tax on waste effluent.

The instruments in the above table have been included on the basis of the (tax) base and not their intent. Using the tax base for classification purposes is in line with international conventions and allows a more consistent cross-country comparison.

Source: National Treasury (2006)

As shown in a later section of this document, in global comparative terms, RSA fuel is not heavily taxed although it is the site of significant revenue generation as the next table demonstrates.

Table 4 : Revenues from environmentally-related taxes in South Africa

(R millions)	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
General fuel levy	12,092	13,640	14,290	14,496	14,923	15,334	16,252	19,190
SACU customs & excise	636	641	649	627	657	680	787	802
Road accident fund levy	2,183	2,151	2,165	2,483	2,821	3,264	3,894	4,624
Ad valorem duties new vehicles ³⁹	543	622	849	1,093	1,473	1,622	1,522	1,489
Provincial road traffic fees	1,198	1,256	1,514	1,748	1,965	2,152	2,506	2,672
Total revenues	16,652	18,310	19,467	20,437	21,839	23,052	24,961	28,777

Source: National Treasury (2006)

The table above highlights the differential fuel taxes that are currently applied on petrol(116c/l), diesel(100c/l) and bio diesel(60c/l) through the General Fuel Levy.

“Currently, diesel is taxed at a lower rate than petrol and no fuel tax differential currently exists between leaded and unleaded petrol. Two types of environmentally friendly alternative fuels from biomass have reached technical maturity and acceptance in international fuel markets. These are bio diesel from vegetable oils and bio ethanol fuels. Currently, bio diesel can be produced more economically than bio ethanol fuels, provides more energy, is a cleaner burning fuel and is compatible with existing engines and commercial fuel distribution systems. Given the potential long-term benefits of bio diesel, a favourable fuel tax treatment was announced in the 2002 budget in an attempt to reduce the cost disadvantages that bio diesel currently faces with respect to fossil fuels. The intention is to give a similar fuel tax dispensation for bio ethanol in the future.” National Treasury (2006)

Elements of cross-subsidy are already inherent in the current fiscal regime. Through differential rebates, some low-income users and targeted primary economic sectors with significant forward and backward economic linkages such as agriculture have access to lower cost fuel. Illuminating paraffin is only taxed at VAT rates. Primary producers such as mining enjoy a tax relief of 38.8% on diesel tax from 7 April 2004.

In 2006 the Minister of Minerals & Energy promulgated fuel specification regulations which will result in the production of cleaner transport fuels and a national vehicle fleet that conforms with European emission standards.

The Task Team notes that to achieve the targeted environmental standards, very significant investments have already been made by crude and synfuel refineries and that considerable further investments will still be required in the future.

From the above, it is clear that an integrated approach will need to be adopted by National Treasury, DME, and DEAT towards the various fiscal measures that are applied to the liquid fuels industry.

3.6. Fiscal Policy and Industrial (Beneficiation) policy in South Africa

A detailed, sectorally segmented policy approach towards beneficiation of South Africa's mineral resources is currently being developed by policy makers. The intention is to integrate:

- the policy levers conferred in the Minerals and Petroleum Resources Development Act, 2004 ,
- explicit beneficiation levers incorporated in the Mineral and Petroleum Royalty Bill of 2003 (Money Bill),
- sector specific industrial strategies emerging from DTI's Customised Sector Programmes (CSP) as well as mineral beneficiation programmes being developed by DME and Mintek,
- other support measures that could be applied to facilitate the achievement of the above strategies

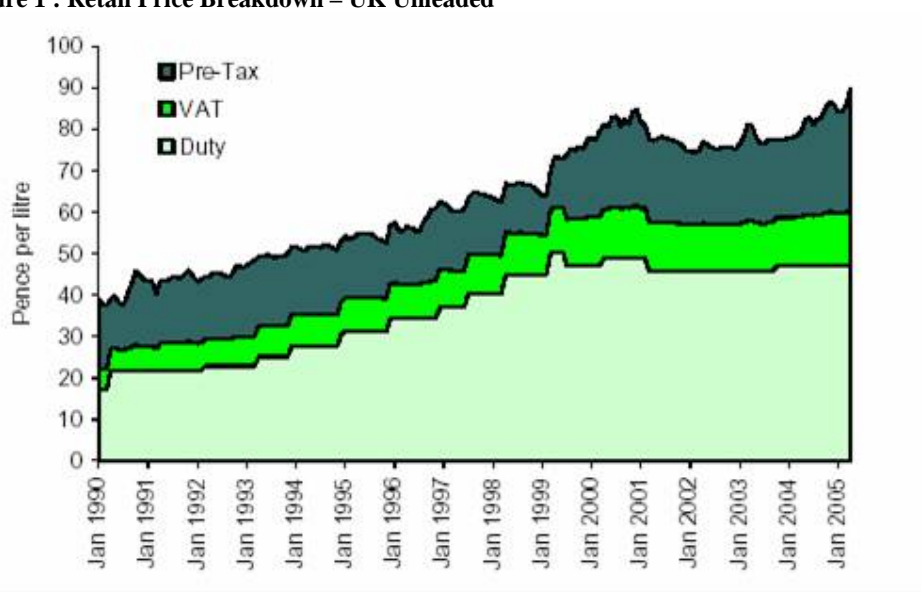
The Task Team is developing an understanding of these policy coordination processes and the extent to which they might overlap with windfall tax-related issues.

3.7. UK fiscal regime applicable to energy consumption

The UK experience has been to rapidly and significantly increase the taxation of energy consumption in the 1990s, a period also characterised by liberalisation of the upstream oil production fiscal regime (see above).

Indirect tax on fuel through duties and VAT increased very significantly between 1994 and 1999 as shown below. The very high pump prices caused a public outcry in 2000. From 2000 to 2005, end user price rises were more directly attributed to pre-tax fuel production costs, reflecting the underlying increasing price of crude oil and associated oil company profits.

Figure 1 : Retail Price Breakdown – UK Unleaded



Source: Leicester (2005)

4. The Concepts: Excessive economic profit, Windfalls and Economic Rent

Given the range of fiscal measures reviewed above, it would at this stage be useful to clarify why additional taxes are at times implemented in the resource, infrastructure and other similar sectors, in addition to normal corporate income tax, and in the process to clarify the meanings we attribute to certain terms.

4.1. *Economic rent and economic profit*

Depending on the market arrangements and regulatory regimes applicable it is at times possible to generate economic rent in these sectors.

Postner (2002) defines economic rent as follows:

“...it is an excess of revenue over cost. It is pure profit, which is to say profit in excess of the cost of capital (which is not “profit” in an economic sense but merely another cost of doing business)”³

It can also be defined as:

“payment of any such a ‘surplus’ to a factor of production over and above what was necessary to maintain that factor in its present use or form of production, above its opportunity cost” Munro (2006)

Economic rent is generally considered to be “earned by a factor of production”. However, in practice factors of production are owned by firms who will, *ceteris paribus*, earn economic profits from rent producing resources. Economic profits are profits in excess of profits required to reward the opportunity cost of capital.

Economic profit differs from accounting profit. Assuming that accounting conventions are designed to reflect the economic reality of the firm, a certain level of financial profit is required to cover the opportunity cost of equity capital. Financial profits above this level becomes economic profit.

The question arises as to why it is at times possible for firms to generate such excess revenues (economic rent). Situations where this might be possible include:

- Specific resource endowments or technological advantages, which enable the production of commodities or services at costs that are below market price levels (assuming a competitive market).
- The existence of market power, which enables firms to charge prices above the full cost of production.

³ Economic rent is a fundamental concept in economics and is discussed in most undergraduate microeconomic text books. , It can also be defined as “The difference between the opportunity cost and the income earned in its present use is a rent.” (Wikipedia: Economic Rent). The Wikipedia reference also contains a discussion of further alternative interpretations of the concept.

-
- Where infrastructure or essential service firms with market power are subject to economic regulation, regulatory failure could result in the exploitation of market power and the accrual of economic rent.
 - The existence of regulatory, institutional or other means by which firms can shift their costs onto other players, or benefit from such cost shifting affected by government policy or other institutional factors.

Establishing the existence of economic rent obviously depends on empirical verification.

Governments often tax economic rent because:

- it constitutes profits over and above what is necessary to sustain the enterprise; and
- it often arises from the extraction of natural resources which are considered to belong to society; or
- it arises from excessive pricing of essential goods and services for which consumers have no alternatives and have little choice but to consume; and
- taxing economic rent does not affect demand and output levels and is paid for entirely by the producer from the economic profits generated. Samuelson and Nordhaus (1992).

The term “natural resource rent” is sometimes used to refer to situations where economic rent is generated from the extraction of natural resources.

While governments would not always want to tax economic rent, it seems that economic rent generally qualifies for taxation when **all** the following conditions apply, as will become evident from the examples below:

1) When rents arise in the natural resource, or essential infrastructure service or essential goods sectors.

Economic rents often occur in sectors that supply essential services, including infrastructural services, and where consumers have no alternatives. Essentially this means that higher monopoly profits are possible because of the low price elasticity of demand that is normally associated with such goods and services. This addresses the heart of the economic policy question at stake here. For this reason the identification of economic rent (or past windfall profits) also has a political element. It is the fact that firms are deemed to generate excessive economic profits at the expense of consumers with no alternatives that is generally considered inappropriate and attracts political attention.

Rents also often arise from the extraction of natural resource commodities. In this case such commodities might not be essential goods, but they are considered to be a societal inheritance and as such society could claim a share of any economic rents arising.

As set out here, this criterion implies that economic rent generated in other sectors, such as luxury goods, where consumers have higher price elasticity of demand and are not vulnerable in terms of their consumption of essential goods and services, would generally not be considered to qualify for additional taxation.

2) *When economic rents do **not** arise from efficiency improvements or the creation of valuable intellectual property*

Economic profits that are the result of superior business efficiency improvements or other normal business decisions of the firm are not normally considered reasonable targets for additional taxation. Neither are profits that occur as a result of the efficiency enhancing creation of intellectual property (including technology). In an open, competitive market, such rents are normally considered to be an inducement for additional entry and are expected to be whittled away over time.⁴

3) *When, in the case of infrastructure and essential services, economic rents are caused by market power, possibly combined with regulatory failure*

Firms providing essential infrastructural goods and services are often able to generate economic rent by virtue of market power and / or regulatory failure. Under these circumstances it is often considered that such profits could reasonably be clawed back, either through regulatory mechanisms or fiscal measures.

This requirement does not apply to rents arising from natural resource sectors where rents can be generated in competitive commodity markets because advantageous resource endowments could result in lower production costs or higher resource values than what is reflected in average market prices.

As will be seen from the examples below, if qualifying economic rent is subject to additional taxation, it is generally not the aim to tax all economic profits, but rather to tax economic profits that are considered to be “excessive”.

4.2. Windfall profits

Regular fiscal measures such as royalties, or resource rent taxes are often implemented when the generation of economic rent, as outlined above, is expected. However, at times circumstances arise unexpectedly leading to the unanticipated generation of economic rent at the expense of consumers or society, in the absence of appropriate fiscal measures. For instance, this can occur as the result of unanticipated large changes in commodity prices, unexpected emergence of market power, or unexpected regulatory failure. Under these circumstances we refer to these excessive economic profits as *windfall profits*. In addition to the three criteria above, potentially taxable windfall profits thus refers to:

Economic rents that were not anticipated in policy

Windfall profits are unexpected, occurring because of circumstances that were not foreseen at the time when existing fiscal and regulatory regimes were established. Infrastructure and essential service industries where market power is potentially a problem are generally subject to specific policy or regulatory measures that are based on, and appropriate to, a range of expectations about future contingencies. In the event that future outcomes fall outside of the range of plausible scenarios it will often be considered that some form of

⁴ Submissions to the Task Team have argued that economic rents should not be taxed because they act as an inducement for additional investment. We agree that this is the case with temporary rents earned from efficiency enhancing or value increasing improvements and innovations. However in a highly concentrated and regulated domestic market, dominated by import parity pricing, barriers to entry are very high.

intervention is required as circumstances have moved beyond the “rules of the game”. The same argument applies to natural resource extraction industries when existing fiscal regimes did not anticipate the levels of resource rents that arose.

The terms “windfall profits” and “windfall taxes”, as used in this document, thus per definition envisage an unexpected situation that occurred in the past, and which might still exist in the present. This is essentially a *backward looking* perspective that employs retrospective fiscal measures. However, when changed conditions and recognition of the existence of windfall profits create an expectation of sustained economic rent in future, longer-term *forward looking* fiscal measures could be implemented (or existing ones adjusted) as required, if such economic profits are considered to be excessive.

The distinction between *backward looking* retrospective windfall taxes and *forward-looking* taxation of economic rent (in the specified sectors) has value. While retrospective windfall taxes could correct for unwarranted and unfair gains, it could also be viewed as politically controversial (and under some circumstances even punitive), and could contribute to investor uncertainty. Nevertheless retrospective windfall taxes might well be warranted under some circumstances, and it thus makes sense to separate the analysis and motivation for these, from that of forward looking fiscal measures that address the expectation of sustained generation of economic rent in future, which might be viewed in a different light.

4.3. “Windfall losses”

If windfall profits are possible then, it is often argued, so are “windfall losses”. The argument goes that if governments want to tax windfall profits or future expected economic rent, that they should also protect firms against “windfall losses”. It is, however, often overlooked that this protection often applies, irrespective of whether explicit policies or regulatory mechanisms exist to provide such protection. Central infrastructure industries per definition have implied policy protection from the state. Because of their critical position in the economy, governments will not allow such industries to be bankrupted or to cease operations and will step in with bailout or other measures if required.

Effectively this means that a significant portion of firm risk has been shifted onto the state. As a result, firms will benefit by having lower financing cost because of a reduction in the firm’s systematic risk in terms of the capital asset pricing model (as measured by BETA). To a large extent this risk shifting and implicit promise to protect strategic infrastructural industries is unavoidable.

From a societal point of view the downside risk is that struggling industries will have to be bailed out, either by some form of tariff protection or some other state intervention. The opposite or upside risk from a societal point of view is that when prices concerned are too high and consequently the social costs are also too high (as a result of market power and possibly regulatory failure), that the state can recover some of this revenue in the form of windfall taxes or taxation of expected economic rent.⁵

⁵ By definition windfall profits will be absent in industries that are subjected to *effective* economic regulation. In this case both risks from the societal (and firm) perspectives are managed by regulatory fiat thus avoiding the possibility of windfall profits or losses.

Given the narrow definition of when and where windfall profits can be said to occur it is thus argued that infrastructure and essential industries will already have implicit state protection against extreme firm downsides and that it would thus not be unreasonable to also provide society with protection against extreme upsides that take the form of large economic rents. The rationale in the case of resource extraction industries is different. While these industries do not necessarily benefit from implicit state protection, they utilise natural resources that belong to society and for which they have to pay a resource rent (tax). In this case an economic rent tax should be considered as the cost of one of the production factors. This is precisely what the Royalty Bill is intended to achieve.

4.4. Examples of international experience with windfall and economic rent taxes and levies

The Task Team has identified several international experiences where, having identified circumstances of windfall profits, fiscal instruments have been used to impose special tax levies on economic actors.

The definition of “windfall” taxes, outlined above as being retrospective measures to address unexpected past excessive profits, only fits the UK privatised utility experience (discussed next). All the other experiences recorded below are actually forward-looking measures which utilise existing fiscal instruments to address the expectation that sustained excess profits will be generated, mainly through economic rents, into the foreseeable future.

4.4.1. Windfall tax on privatised utilities, UK (1997 – 98)

In the early 1990s the British Labour Party, then still in opposition, proposed that a once-off tax should be levied on the privatised utility companies Chennels (1997). The idea was further developed in their 1996 industrial policy paper Labour Party (1996) as well as in the party’s 1997 election manifesto.

Privatised utility companies were said to have benefited from a windfall gain due to under pricing of shares at the time of privatisation and lax regulation during the early years in the private sector, which allowed regulated firms to exploit their market power and generate excessive economic profits. In its July 1997 budget the new UK Labour government imposed a once-off windfall tax on the profits of privatised utility companies. The measure was implemented, as part of the 1997 Finance Act. Chennels (1997:280), Internal Revenue Service (2002).

The revenue generated by the tax was applied to fund the Government's Welfare to Work programme for the period up to 2002. This programme was established to provide employment and assist single parents and the disabled to return to work. This tax was equal to 23 percent of the difference between the “value of the company in profit making terms” and the company’s “flotation value,” and was payable in two equal instalments, one due on or before December 1, 1997, and one due on or before December 1, 1998. For purposes of the windfall tax, the “value of a company in profit making terms” was defined as 9 times the company's average annual after-tax profits, as reported for U.K. tax purposes, for the four years immediately following flotation (but no later than April 1, 1997). The “flotation value” of a company was defined as the price paid for the company's stock by the public at the time the company was privatised. Internal Revenue Service (2002).

The windfall tax was a tax imposed on the privatised utility company in addition to the generally imposed U.K. corporate income tax but was not deductible in computing the company's corporate income tax liability and could not be offset by the advance corporation tax (ibid).

Just over £2.6bn was raised with each instalment Grant Thornton (2005). The tax was levied on a number of utility companies including BAA, BG, British Telecom, British Energy, Centrica, National Power, PowerGen, the regional electricity companies and the water and sewerage companies.

4.4.2. Supplementary Petroleum Duty, UK (1981 – 83)

As a result of the high oil prices in the late 1970s and early 1980s the 1981 UK Finance Act introduced a Supplementary Petroleum Duty (SPD) with effect from 1 January 1981 and which lapsed after 31 December 1982. It was payable at the rate of 20% on the gross value of oil and gas produced under UK licences less an allowance per field of 1 million tonnes per year. Strictly speaking this was an excise tax, not a profit tax. £2,025 million was raised by the SPD in 1981/82 and £2,395 million in 1982/83. Data by Design (2006).

4.4.3. Special tax on bank deposits, UK (1981/82)

In 1981, UK Chancellor of the Exchequer, Geoffrey Howe, imposed a special tax on bank deposits. Banks were deemed to be making excessive economic profits under conditions where interest rates had reached 17%. The banks were able to advance loans earning up to 20% interest that were financed by these deposits. Willets (1997).

The tax was levied at 2.5% of non-interest-bearing sterling deposits held by all banks in the United Kingdom. It raised £355 million in 1981/82. Grant Thornton (2005).

4.4.4. Crude oil windfall profit tax, US (1980 – 1988)

In 1980 the US Congress enacted the Windfall Profit Tax (WPT) as a part of a political compromise that decontrolled oil prices Thorndike (2005). In April 1979 US President Carter introduced plans to lift oil price controls gradually over the subsequent 18-month period. In tandem, he offered a new tax on oil production. He was concerned that oil companies would reap huge and undeserved windfall profits unless these were taxed, and argued that Americans had a right to recapture some of that windfall and put it to good use. Carter suggested that the revenue be earmarked for mass transit, heating oil price relief for poor families, and the development of alternative energy sources.

The tax took the form of an excise levy on domestic oil production, taxing the difference between the market price of oil and a predetermined base price. The base price was derived from 1979 oil prices, and it required annual adjustments for inflation and state severance taxes. Virtually all domestic oil production was subject to the tax. Various factors in the regime produced excise rates ranging from 15 percent to 70 percent. The WPT was explicitly designed to be temporary and ended in 1988.

The windfall tax brought in \$80 billion in gross revenues from 1980 to 1988, versus initial projections of \$393 billion when the bill was passed. Oberweis (2006).

4.4.5. UK 2002 & 2006 Supplementary Corporate Tax on Oil Producing Corporations

The UK Labour government appears to have rejected the concept of windfall tax on excessive profits. Instead, the fiscal approach towards oil extraction has been to incorporate the notion of a permanent resource rent in the form of supplementary taxes on normal company tax. This is viewed by the UK Treasury as a permanent tax feature "...intended to reflect the permanent potential for North Sea oil production to generate economic rent, and not to tax windfall profits....the Supplementary Charge (was increased) from 10% to 20% from 1 January 2006 in response to the higher oil price environment, but this was a permanent increase in response to long-run changes to price expectations rather than a windfall tax"⁶

A legacy excess profits tax still prevails on a number of fields developed before 1993 in the form of the Petroleum Revenue Tax with a rate of 50%, deductible against Corporation Tax.

4.4.6. Australian Fiscal Regime for Oil

Australia does not appear to have adopted any special windfall measures on petroleum resource extraction. On the contrary, their fiscal approach seems to have focussed on encouraging significant expansion of offshore petroleum extraction. In terms of the Australian Constitution, taxation powers for resources on the landward side of the territorial sea lie with the states, while the Federal government has the rights to the seaward side. States are restricted to royalty type taxes, while the Federal government has the power to levy excise and royalty and other profit-based taxes.

The Petroleum Resources Rent Tax is the main fiscal instrument used by the Federal government and it was reviewed following a lengthy interaction with the industry concerned with the amendments tabled in 2006. Most of these amendments related to anomalies that had arisen over the years. In addition, the Crude Oil Excise Regime levies excise taxes at rates specific to individual oilfields, set according to age of field and volume of production.

Australia's more liberal fiscal approach is probably based on the fact that their economy has grown consistently over the past decade and is now enjoying budget surpluses, based largely on commodity extraction. Rather than seeking further revenues from windfall commodity profits, the Australian fiscal authorities are even considering tax cuts, although there is a growing debate on the need to use high commodity prices to build up fiscal reserves rather than spending windfall revenues or returning revenues to taxpayers.

4.4.7. Recent Calls for Windfall Taxes on Oil Companies in the UK, EU and US

As oil prices increased and oil companies began reporting record profits in 2005, politicians in Europe and the US have been calling for windfall taxes to be imposed. A range of state and congressional investigations have been launched in the US (Clayton, 2006). UK politicians have also come under pressure to impose taxes on windfall profits on BP and other oil companies and the issue has also been debated in the House of Commons. Cohen (2006)

US Federal Government and certain USA State Governments seem to be shifting their fiscal approach towards taxing corporate profits rather than taxing oil production.

⁶ Communication from UK Treasury to RSA National Treasury, May 2006

EU Finance Ministers have also recently considered the question of windfall taxes, but have rejected the idea. Kennedy & Rastello (2006).

4.4.8. Excess Profits Taxes During Wartime

Governments have also at times levied an “excess profits tax” during periods of national crises, mostly during wartime, in order to prevent businesses from benefiting unfairly from increased government spending and increased commodity prices.

The U.S. federal government imposed such a tax in 1917 in various forms and at increasing rates until 1921 (The Columbia Encyclopaedia, 2005). This tax was again imposed during World War II and the Korean War. In principle the tax was imposed on excess profits over a firm’s peacetime earnings, or over a decreed earning rate.

The United Kingdom also imposed an excess profits tax from 1915 to 1921 at rates varying from 40% to 80%. During World War II the tax was imposed again at rates up to 100% (ibid).

4.4.9. National Resource Stabilisation/Savings Funds

A number of resource-dependent countries have adopted stabilisation funds primarily as means to achieve macroeconomic stability, to either dampen the disruptive impact of resource-based revenue volatility and/or to provide a savings pool in anticipation of downside resource price volatility.

While such funds are strictly speaking vehicles for *utilising* financial resources, rather than *generating* them through fiscal and other measures, and do not in themselves constitute a rationale for resource rent taxation, they are nevertheless discussed here. This is because a review of the objectives of creating such funds highlights important macro-economic issues related to resource extraction, which could have bearing on the decision to implement resource rent taxation measures and on the shape of the policy “package” that is finally adopted.

Tsalik (2003) has discussed a number of case studies, including:

- Alaska Permanent Fund
- Alberta Heritage Savings
- Venezuela Stabilisation Investment Fund
- Chilean Copper Fund
- Norway’s State Petroleum Fund
- Chad’s Oil Revenue Management Plan

A recent entrant has been Russia with its own Stabilisation Fund.

By using a trigger price for the commodity in question, a portion of the revenues are channelled into the fund when prices are high. Below the trigger price, the fund’s resources could be channelled back into whatever is the designated target destination.

This document has not gone into the detail of such funds but we list below some key advantages and disadvantages of the stabilisation/savings fund instrument.

Advantages

- Assists in long-term smoothing of cyclical resource revenues and expenditure – budgeting can be more predictable in the face of external price shocks for a resource-dependent economy,
- Provides the basis for resource rents to support long-term development beyond the exhaustion of finite resources,
- If the stabilisation funds are held offshore, this reduces the potential for currency appreciation as a result of resource based exports (sometimes referred to as the “Dutch disease”),

Disadvantages

- Misjudging the price cycle in the timing of the utilisation of the fund
- Misuse of stabilisation funds

Most of the objectives of National Resource Stabilisation/savings funds can be achieved by other fiscal policy tools such as multi-year planning.

South Africa does not apply stabilisation fund instruments for any of its natural resource industries. However, in the context of expected sustained global buoyancy in high energy commodity prices, there may be merit in considering a stabilisation-type fund for extractive industries in times of high prices such as gold and platinum group metals are currently enjoying.

In the case of oil and gas, South Africa is not a major producer but this could change in future if large deep water deposits are discovered (see Task Team’s comments in regard to the Royalty Bill).

For the coal industry, steam coal (for use mainly in global electricity generation) is a major and growing export industry, making up several billion rand of national exports. A stabilisation fund could offer value only to that part of the industry that is exposed to cyclical international energy coal prices, including the current planned infrastructure investments of Transnet who are allocating billions of rand towards railway wagons and locomotives and an associated upgrade of the dedicated Richards Bay coal line and Richards Bay Coal Terminal. Should historic cyclicality in global coal prices be experienced over the next decades, a sizable part of the coal economy, including the associated logistics value chain could be at risk.

The low quality of South African coal and the associated extraction economics usually require a long-term offtake agreement from the domestic electricity utility or synfuel project for the low-grade coal fraction, while a portion of the extracted coal is washed to a higher export grade.

Some 30% of RSA’s liquid fuel (and a significant proportion of chemicals) are produced from finite coal energy resources, Coal is also a major pillar of RSA’s energy industry and the source of more than 90% of RSA’s electricity generation. Coal mining growth over the next 2 decades will be associated with considerable new electricity and transport utility investment over the same period. Eskom alone has at least two 3600MW coal-fired base load stations incorporated in their current plans.

However, the bulk of current generation capacity is mostly supplied in terms of cost-plus agreements, and Eskom thus purchases this coal at levels far below world market levels, and at prices which fluctuate much less. Eskom does purchase some coal on the spot market, and has greater exposure here, but again, this is the local inland spot market, and Eskom is a powerful, near monopoly, buyer.

As is the case with such stations here and in the US, further coal based baseload stations will inevitably be developed on a similar basis with dedicated mines and adjacent power stations. The price will most likely be based on a long-term take-or pay risk sharing agreement using low quality coal and will have little bearing to the emerging world sea-borne coal spot market.

This therefore suggests that a stabilisation fund may not be of use to that part of the coal industry that supplies the domestic market (*perhaps not for stabilisation purposes, but possibly, at least in theory, for the purpose of spreading the benefits (rent) of a finite resource over a period longer than it takes to extract it – i.e. as a form of social saving as outlined under “advantages” above*). There is perhaps a stronger case for a stabilisation fund for other commodities that South Africa exports, particularly given the uncertainties over the sustainability of the current commodity boom.

The direct application of a stabilisation fund in its traditional form, in respect to the liquid fuel sector, is not appropriate. However, elements of traditional stabilisation funds have been part of the liquid fuel regulatory system for some time, particularly in regard to the Equalisation Fund and to the subsidy and payback mechanism.

Nevertheless, our methodology and analysis might be useful and relevant should Government wish to further investigate the merits of stabilisation policy instruments for the primary commodity sector in general and here the Task Team would advocate the following.

Stabilisation funds have traditionally been applied to upstream resource extraction activities:

- usually in circumstances where the respective economy is heavily dependent on the export of a single primary commodity
- and often in circumstances where the prevailing fiscal and macroeconomic systems are relatively undeveloped and/or incapable of dealing with the propulsive macro impact associated with huge surges and declines in export revenue financial flows
- and, in the case of the more successful funds, in pursuit of medium- to long-term reduction of dependence on finite mineral resources.

In the case of the latter, the Royalties that are charged on the extraction and export of finite minerals are the normal fiscal mechanism used to protect national patrimonies. In respect to the impending Royalty Bill, the Task Team has elsewhere in this document, recommended that to address the potential circumstance where excessive economic profits are earned in the extraction of other natural resources, it would be prudent for government to consider including a progressive fiscal mechanism as part of the Royalty Bill. Otherwise, if the claims of a minerals “super cycle” are proven to be true, it may give rise to future windfall tax investigations on other commodities and increase investor uncertainty.

In conjunction with our recommendation on the Royalty Bill, as commodity prices burst through the defined trigger prices for respective minerals, we suggest that it may be useful to consider linking a Stabilisation/Heritage Fund to the revenues that accrue to the fiscus in terms of the recommended

progressive fiscal tax rate, that are in excess of defined royalty levels. In our view, such an approach would be consistent with some of the elements to address excessive economic profit that we are recommending in respect of the liquid fuels value chain.

4.5. Conclusions

We have defined economic rent as revenue in excess of the cost of capital, accruing to the owners of factors of production. Economic rent can give rise to economic profits. . We have pointed out that economic rents often qualify for special additional taxes (henceforth referred to as “qualifying economic rent”) when:

- Rents arise in the natural resource, or essential infrastructure service or goods sectors.
- Rents do **not** arise from efficiency improvements or the creation of valuable intellectual property
- In the case of infrastructure and essential services economic rents are caused by market power, possibly combined with regulatory failure

We have noted that qualifying economic rent is generally only taxed when such rents are considered to be excessive.

We have defined taxable windfall profits as:

- such qualifying economic rents that were not anticipated in policy

The terms “windfall profits” thus per definition deals with a special case of, or a sub-set of qualifying economic rent that arose unexpectedly, and which could still exist in the present. This is essentially a *backward looking* perspective and taxing windfall profits would thus employ retrospective fiscal measures. However, when changed conditions and recognition of the existence of windfall profits create an expectation of sustained economic rent occurring in future, longer-term *forward looking* fiscal measures could be implemented (or existing ones adjusted) as required.

The Task Team has identified several international experiences where, qualifying economic rents have been subjected to special tax levies on firms, including the:

- Windfall tax on privatised utilities, UK (1997 – 98)
- Supplementary Petroleum Duty, UK (1981 – 83)
- Special tax on bank deposits, UK (1981/82)
- Crude oil windfall profit tax, US (1980 – 1988)
- UK 2002 & 2006 Supplementary corporate tax on oil producing corporations
- Excess profits taxes during wartime

It is only the UK tax on privatised utilities in the 1990s that qualifies as a windfall tax as defined here. The other cases are forward-looking measures which utilised fiscal instruments to address the expectation that sustained qualifying economic rent will be generated, into the foreseeable future.

The clear distinction between economic rent and windfall profits, as a specific sub-set of economic rent, and the development of clear criteria for both of these categories, makes it possible to apply this framework to assess the extent to which they apply in the liquid fuels sector in South Africa.

Comments on the concepts outlined above were solicited in our Discussion Document. Most of the parties responding agreed with the conceptual approach. One party challenged the methodology, arguing, at one level, that rent should not be the basis of measurement and, that our approach was “unprecedented” in their own understanding of international experience and therefore caused them some confusion. The methodology was also caricatured by some parties as being too theoretical and academic.

One party drew attention to the inappropriate use of the term super-normal profit, and we have accordingly clarified and revised our terminological basis.

Some parties also questioned the lack of definition of what constitutes an essential service or infrastructure sector, arguing that our methodology could be applied to other sectors deemed to be providing essential services and infrastructure. We agree that this might be the case, although we would argue that our brief concerns the liquid fuel value chain only.

Most parties, however, contested the outcome of the application of the above concepts and argued, for a variety of reasons that will be discussed below, that rent was not being generated in one or other segment of the value chain. The Task Team is therefore comfortable to proceed to apply these concepts as a basis for fulfilling the Terms of Reference of this investigation.

5. History of the Liquid Fuels and Synthetic Fuels Industry in South Africa⁷

Energy is a fundamental input into economic development and most countries have in the past and many continue to view the oil industry as a strategic industry which is vital to the development of the economy⁸. Consequently, there has been a high degree of intervention, regulation and protectionism in the industry worldwide as countries have sought to reduce their dependence on imported oil and to nurture the domestic production of refined products.

The drive towards self sufficiency was a key feature of the evolution of the industry in South Africa because of the country's increasing isolation and sanctions during the second half of the 1900's as the world responded to the apartheid government's policies.

This gave rise to the development of a refining industry which developed through the provision of generous incentives⁹ to multinational oil companies to establish refineries in South Africa. More significantly, it also saw the establishment of a highly developed and unique synthetic fuels industry, initially owned by government, built on the basis of what appears to be generous levels of government support for the technology, construction and continued operation of synthetic fuels manufacturing plants.

The key features of the history of the Liquid Fuels Industry are outlined below with particular reference to the roles of government support and regulation in shaping the industry. The influence of international geo-political-economic factors is also considered where relevant. The resultant impact on the industry, its structure and the development of the infrastructure which services the industry is described and key issues are identified.

The following sub-sections provide a brief history of the liquid fuels industry in RSA with particular emphasis on the synthetic fuels industry in an endeavour to provide context and background to the discussion that follows.

5.1. Government Policies and Their Impact

The Nationalist government came to power in 1948. In line with other developing countries at that time, its policies centred around import substitution and inward industrialisation with an additional dimension of Afrikaner empowerment. Its fundamental policy of apartheid led to the increasing isolation of South Africa over the ensuing forty two years, and resulted in a mandatory crude oil embargo being imposed by the United Nations in 1977. This led to a renewed series of controls and government intervention in the industry, a veil of secrecy around the industry and increased government intervention and regulation. It also saw the construction of Sasol 2 and Sasol 3, and later Mossgas, as well as concerted efforts at exploration by the state oil company to find oil and gas reserves.

⁷ See Appendix One for a Milestones in Government involvement in the synfuels industry.

⁸ The Competition Tribunal (2006:Para 41), recently took a similar view. "...the strategic significance that fuel products assume in all countries..."

⁹ Some companies contend that decisions were made on economic grounds. Engen (2006:12); BP (2006:24).

Government support and incentives were integral to the development of both the crude oil refining industry and the manufacture of synthetic fuels. This was firstly, because the international oil companies needed to be incentivised to invest in refining assets in a country whose policy of apartheid was leading it down a path to increasing isolation. Secondly, both the capital and operating costs associated with the manufacture of synthetic fuels were significantly higher than for conventional refining and could not be justified on purely economic terms.

The first domestic refinery was in fact a synfuels refinery, built in the 1930s. Small volumes of product were manufactured from shale oil at SATMAR (South African Torbanite Mining and Refining Company in Boksburg). The greater part of fuels demand was met by imported products at this time until 1954, when South Africa's first refinery was commissioned (Mobil). This early reliance upon imports set the basis for future subsidisation and support for locally refined or manufactured liquid fuels.

The search for local supplies of crude oil and gas was prioritised by government from early on and the private sector was encouraged to explore for oil and gas through the granting of generous fiscal terms. Despite extensive exploration by Soekor no commercial reserves were found onshore and only small pockets of gas were found offshore.

A regulatory framework was introduced to encourage oil companies to remain in SA and to invest in local manufacturing facilities. Regulation ensured that all locally manufactured product was absorbed by the market before any product could be imported.

Retail price maintenance was introduced to protect rural markets from high prices. The components of the price were similar to those applicable today, with the price building up from the base of an import parity price. Prices were held relatively steady and over-and under-recovery of prices was kept on a slate for periodic price adjustment. The RATPLAN¹⁰ was introduced at the same time – a voluntary self-regulating agreement between the oil companies, the fuel retailers and Government to ensure fuel availability throughout the country and to protect the profitability of existing retail outlets. The Department of Minerals and Energy subsequently became a party to the RATPLAN.

The regulatory environment and government intervention in the sector are discussed in detail in the following sections.

5.2. Key External Influences

The world economy and also South Africa, were influenced by four major factors which impacted on energy related policies:

- Firstly, the OPEC was formed in September 1960 in order to defend the price of oil through the regulation of production and collaboration on pricing,
- In 1973, OPEC brought about a global shortage of crude by instituting an oil embargo on the United States, Netherlands, Portugal, South Africa and Rhodesia,
- In 1979, a second international oil crisis was caused by the revolution in Iran.
- The fourth major oil shock occurred in 1991 when Iraq invaded Kuwait and the Gulf War ensued.

¹⁰ The Retail Rationalisation Plan

Concerns about global oil supplies and price spikes arising from these events renewed the government's commitment to promoting greater self sufficiency.

5.3. Development of Crude Oil Refining

Refinery investments were attracted through the regulatory system which allowed for full offtake of local production at import parity prices in the early 1950s and 1960s¹¹. Certain capital investment incentives were also granted.

The government's desire for the strategic development of the infrastructure for the supply of fuels underpinned the development of refining (and synfuels manufacture) with respect to the timing of investments, and particularly the location of refineries. Refineries fell under the National Key Points Act, being vulnerable to sabotage, and policies were aimed at preventing the "clustering" of refining facilities in one location as this increased the risk of possible supply disruption. High levels of security were maintained around the refineries.

In 1954, Mobil commissioned a simple refinery in Durban.

In 1963, SAPREF – a joint venture refinery between Shell and BP - was commissioned in Durban.

In 1966, the Caltex refinery was commissioned in Cape Town. Caltex had planned to build the refinery in Durban but the government wished to have a refinery located in Cape Town. Caltex received additional incentives to persuade them to locate in Cape Town. Apart from direct incentives, they benefited from "shared infrastructure" with government in the form of government's strategic fuels storage being placed adjacent to the refinery with access to common pipelines and offloading facilities and benefits from sharing crude shipments with SFF with concomitant more efficient and lower shipping costs. However during the period of oil sanctions certain Caltex pipelines were nationalised without compensation. Later after oil sanctions terminated the pipelines were sold back to Caltex for R1-00.

In 1967, Shell and BP, in partnership with Federale Volks Beleggings, built the first base oil refinery adjacent to SAPREF. The base oils manufactured replaced the previously imported base oils used in the manufacture of lubricants.

In 1969, Natref (National Refining Company) was formed. Sasol, Total and NIOC (National Iranian Oil Company) were partners in the company which was aimed at ensuring security of crude oil supplies from Iran. Although a coastal location was the most logical, given the need to import crude for the refinery, the government wanted increased security of supply inland and persuaded Natref to locate the refinery at Sasolburg. Key to this persuasion was Government's agreement to bear the costs of shipping crude oil inland from the coast (see Natref neutrality elsewhere in this document). Natref was commissioned in 1971. Following the revolution in Iran in 1979, Sasol and Total became the joint owners of Natref. Natref has enjoyed extra-ordinary support because of its inland location (together with the synthetic fuels plants). These locational benefits and further preferential benefits are outlined in more detail elsewhere in this document.

¹¹ BP points out that they have consistently exported volumes at below IPP over many decades and that the sale of most of their production at IPP related prices refers essentially to Sasol. BP (2006:25)

Total entered the country in 1954. During its early years of marketing in South Africa it was assisted in growing its market share through the preferential granting of sites¹² via the RATPLAN and by the preferential treatment it enjoyed as a shareholder in Natref.¹³

In 1972, a second base oil refinery was commissioned at the Mobil refinery, as a joint venture between Mobil, Caltex and Total. With its commissioning, SA virtually eliminated its need to import base oils for lubricants apart from some specialist products.

The original design of the SA refineries was geared to the use of Iranian crudes. This was because the pre-revolution Iran was favourably disposed towards the SA regime.

After the introduction of the UN crude oil embargo in 1977, all the oil companies except Shell and Total chose to purchase their crude requirements through the SFF. This arrangement fell away in the early 1990's.

All the refineries expanded and upgraded their facilities over the years. The integration of the synthetic fuels manufacturing facilities and Natref into the supply network, however, was a key factor determining the pace of refinery expansions and, at times, the mothballing of capacity, to accommodate the government's priority of supply by synfuels and Natref. In 1982, when Sasol 2 and Sasol 3 came on-stream, the refineries were obliged to mothball 30% of their capacity. This capacity was re-activated in the late 1980's and early 1990's. This led to technical problems in later years. The refineries were paid a synlevy to compensate for their loss of own production.

During the late 1970's and 1980's, the multinational oil companies came under strong pressure to disinvest from SA, and many were considering this option. It is generally agreed that, based on prospective disinvestment, the level of expenditure by at least some of the in maintaining their refineries, was inadequate, although no companies are prepared to acknowledge this observation. In 1989, Mobil sold its Southern African assets to Gencor. These assets were consolidated with Gencor's other assets, including Trek Petroleum, to form Engen.

During the 1990's, the market demand increased and all the refineries restored mothballed capacity and embarked on expansions or upgrades. A second wave of upgrades was necessitated in the period leading up to January 2006 when new fuel specifications were put in place. Most of these investments related to the reduction of sulphur in fuel and refinery emissions and increasing the octane of petrol. It is believed that no exceptional incentives were granted for these investments.

Cooperation and Competition – Hospitality Agreements

The large amounts of petroleum products necessary to meet market demands required cost efficiency in the delivery chain. From its earliest days participants in the industry entered into cooperation arrangements whereby they "exchanged" product at different locations and shared storage and distribution facilities, whilst competing with each other.

¹² Total (2006:16) comments that the support for their entry into the market was partly motivated by the fact that they had local shareholders, as did Trek who were also given preferential market access.

¹³ Total (2006:23) does not believe that it received preferential treatment as a shareholder in Natref although it admits to having "obtained some synergies between their synfuel and crude operations".

5.4. Development of the Manufacture of Synthetic Fuels

Following the SATMAR initiative of the 1930s the SA government in 1947 decided to establish a synthetic fuels manufacturing plant to reduce its dependence on imported fuel. Legislation was introduced to facilitate this. Government had Anglovaal in mind as the lead investor but when it perceived the risks to be too high. The IDC in 1950 formed the South African Coal, Oil and Gas Corporation Ltd (Sasol).

In 1955, the Sasol 1 plant was commissioned in Sasolburg utilising Fischer Tropsch and Kellogg technologies. It received tariff protection (equivalent to that of SATMAR i.e. around 20% of the fuel price) as well as a refinery investment incentive. The oil companies were required to uplift Sasol's entire production according to market share at import parity pricing.

In 1977, following the introduction of mandatory crude oil sanctions by the United Nations, the government decided to further expand the production of synthetic fuels. The decision was taken to establish Sasol 2 at Secunda. The Iranian revolution two years later led to the accelerated decision for Sasol 3, also in Secunda. Sasol 2 and Sasol 3 were commissioned in 1980 and 1982 respectively. Both plants were funded by levies imposed on motorists that were collected into the Central Energy Fund and were in turn loaned to Sasol at favourable rates. They also enjoyed tariff protection. Despite substantial additional volumes produced, the oil companies were again required to purchase all their production (apart from small own use volumes) at import parity pricing.¹⁴ This created surplus crude based refined product capacity in the country and the multinational crude oil refiners (and Natref) had to mothball around 30% of their capacity for which they received partial compensation in the form of a synlevy.

In the late 1990's much of Sasol's research effort was directed at changing the balance between fuels and the higher value chemicals feedstock produced at their synfuels plants. Sasol 1 was eventually converted to a plant producing only chemicals feedstock. Significant investments in new reactors around 2000 caused a substantial shift in the proportion of chemical feedstock produced.

In 1986, the government commenced the planning for an alternative synthetic fuel plant. There appears to have been a quasi competitive process of selection between a number of competing and some relatively new technologies, each of which was being promoted by a major corporate conglomerate. Gencor proposed a Torbanite to fuel project. AECI proposed a Methanol-to-Gasoline (MTG) project. It is understood that Sasol were considering a Sasol 4 project. Ultimately government elected to support a Gas-to- Liquids (GTL) synthetic fuels plant at Mossel Bay utilising gas feedstock from the Bredasdorp Basin development. It is unclear how the decision was finally made. A number of commentators at the time pointed to the fact that the then State President PW Botha had George and Mossel Bay as his electoral constituency. The oil companies were invited to participate in the plant, but declined as they believed that the capacity was not required as it would be more economic for them to re-commission their mothballed capacity – for which plans had already been initiated. The planned 45 000 b/d refinery also fell far short of a world scale facility.

The construction of the plant was project managed by Gencor, and was commissioned in 1992. The plant used Sasol's Fischer-Tropsch technology and drew on Sasol's experience in the manufacture of synthetic fuels.

¹⁴ Sasol (2006:65) contends that it “ would all along willingly have marketed its own production given the opportunity to establish retail stations the way Trek and Total entered the retail arena”. Note that both of these were state aided.

Mossgas received tariff protection in line with that enjoyed by Sasol synthetic fuels. The oil companies were also compelled to purchase the full production of Mossgas. They, however, refused to pay import parity price, and eventually agreed to pay Mossgas an export price equivalent (Africa Netback price). The government compensated Mossgas for the difference between the import and export parity prices via the Equalisation Fund. It is believed that Mossgas could not develop as a chemicals feedstock supplier because of restrictions in the licensing agreement negotiated with Sasol.

5.5. Development of Pipeline Infrastructure

The South African Railways & Harbours (SAR&H) commissioned the first white product (12") pipeline (DJP) from Durban to Johannesburg via Sasolburg in 1965. Tariffs were initially based on rail tariffs. Rail tariffs are typically higher than pipeline tariffs over longer distances and “due to this link, huge profits were made by the Pipeline Department of the then SA Railways and Harbours Administration” Moerane (2006:66)¹⁵. Hence inland refiners that enjoyed “locational advantage” in price regulation gained an additional advantage. In 1990 when Petronet became part of the new Transnet tariffs changed. A point-to-point tariff was introduced and rail tariffs increased without a corresponding increase in pipeline tariffs. The pipeline was extended in 1973 and 1993. Between 1993 and 1997 there were no pipeline tariff increases.

In 1967 SAR &H built a crude oil pipeline from Durban to Kendal via Richard’s Bay and Sasolburg that was commission in 1969 – the so-called COP pipeline. This was to provide transport of crude to the Ogies stockpile and also to provide crude oil to proposed future refineries at Richard’s Bay and Sasolburg. As it turned out private sector proposals to build a refinery and petrochemical complex at Richard’s Bay were blocked by Government. In what appears to have been a coincidence of the policies of import substitution industrialisation, “growth point” industrialisation and apprehension about possible oil sanctions, investors in the Natref refinery in Sasolburg were incentivised to build it at Sasolburg instead of at Richards Bay. One of the incentives was that crude oil would be shipped from the coast to Natref free of charge. “Crude oil was transported at net cost and the transportation was recovered through a complex formula on refined products” Moerane (2006:67)¹⁶. Put differently the tariff was such that Natref would not be worse of had it been located at the coast. This was the concept of “Natref at the sea” which later was transformed into the concept termed “Natref neutrality”. The latter arose from the findings of a Government Commission of Inquiry that found that it was no longer acceptable for Natref to enjoy subsidised transport of crude oil. In order for Natref to be kept “neutral”, that is to maintain its hypothetical coastal location (despite being 600 km from the sea) the tariff on the petroleum products pipeline had to be increased so that the differential between the two tariffs “kept Natref neutral” i.e. at the coast. Sasol (2006:72) claims that it only enjoyed a transport advantage over coastal refiners from 1987.¹⁷

¹⁵ Quoted from Petronet Presentation and Written Submission to the Transport and Minerals and Energy Portfolio Committees on Petronet Tariffs, 8 September 1998, pg 1.

¹⁶ Quoted from Petronet Presentation and Written Submission to the Transport and Minerals and Energy Portfolio Committees on Petronet Tariffs, 8 September 1998, pg 1.

¹⁷ The Petronet (SATS) tariff developed over time in consideration of the requirements of that time. The different periods and methods were:

- 1967-1981: The SATS principle was that their income would remain the same as if Natref product was dispatched from the coast. Natref paid the same white product tariff as coastal refiners. No separate tariff for crude
- 1981-1987: The above process was difficult to manage and changed to Natref paying a Natref to depot leg and the full Durban to depot transport cost for refined product was recovered by SATS from Natref. No crude tariff charged. This cost was borne by the consumer.

Currently the preferential pipeline tariffs persist and, as such, the finished product pipeline tariff subsidises the crude pipeline tariff.¹⁸ The Moerane Investigation concluded that in their opinion the refined products pipeline tariff is overstated by four SA cents per litre Moerane (2006:100). The impact of this again for inland producers was that they enjoyed greater “locational advantage” than would otherwise have been the case.

“The tariff linkage agreement was concluded between the Natref shareholders and Petronet in 1992 with the intention that adjustments on crude oil and white product transport tariffs do not negatively impact on the profitability of Natref. The agreement provides that any increase in the crude oil tariff will not exceed the weighted average increase of tariff for certain products, provided Petronet’s pipeline network is used to convey Natref’s crude requirements. The agreement was a response to Petronet increasing its rates and Natref’ shareholders responding with their proposal to build their own crude line. The agreement has a three-year notice period.

The tariff linkage agreement ensures that a gap between crude and finished product tariffs is maintained. Shell is of the view that this gap should have been narrowed for two reasons. Firstly, currently more product is produced from 1 litre of crude due to improved efficiencies at Natref than in 1992. Second, since 1992, the "supply direction" from Sasolburg has moved "northwards" (that is to say that more product is pumped north and less, if any, south) and the practice of back-hauling product (that is to say the transportation by rail tanker from Natref towards Durban) has diminished. Natref was also allowed an element of compensation for moving product back towards the coast in the linkage formula, having already paid to have the product or its crude equivalent moved inland.”¹⁹

Over time an “inland network” of small pipes was constructed to distribute petroleum products north of Sasolburg into the industrial heartland. Because of the Sasol upliftment agreement giving priority to synfuels, this network was operated for Sasol’s convenience, rather than pipeline network optimisation.

In 1973 SAR&H commissioned a new dedicated pipeline to transport the newly commissioned Natref’s jet fuel to the Johannesburg International Airport –dedicated to accommodate Natref jet fuel supplies only. The tariff for this pipeline was determined on the basis of rail tank car delivery costs from Durban, despite the fact that the jet fuel was supplied from Natref in Sasolburg.²⁰

In 1978 SAR&H commissioned a second 16” refined products pipeline (DWP) from Durban to Alrode via Secunda. The pipeline was aimed at increasing product supplies from the coast and from Secunda to the growing inland market. However the anticipated demand did not materialise especially after Sasol’s Secunda synfuel refineries were commissioned. Consequently this pipeline fell into disuse for about 18 years until 1995 when Petronet converted it into a methane rich gas (MRG) pipeline to facilitate Sasol’s MRG marketing to KZN at a very reasonable tariff.

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- 1987-1991: The Dr. Wim de Villiers report recommended that SATS decentralise and become more focused. As a result Petronet was created. Crude oil tariffs were re-introduced with differentiated tariffs between crude and rail.
 - Post 1991: Agreement on a direct linkage between crude and white oil tariffs. This linkage was governed by the yield of white product. Note that the process is managed by Sasol. Total (2006:16)

¹⁸ Shell (2006:10)

¹⁹ Shell (2006:10)

²⁰ Complaints by airlines led to a Parliamentary hearing following which the tariff was reduced.

The other oil companies (OOCs) were of the opinion that this pipeline should be reserved for their usage as and when market growth warranted it and the Sasol upliftment agreement fell away. This was based on the fact that Petronet did a private deal with a competitor using publicly funded infrastructure, in the process introducing a potential logistics constraint (which has now become a reality). Additionally, it effectively prevented the Engen and Shell depots at Witbank from being supplied from the coast²¹. Petronet at the time assured the Competition Board and the industry that the capacity would be available in the future when required.²² Despite this view, Petronet entered into a 17 year agreement with Sasol to ship MRG through the Lilley pipeline effectively locking in a pipeline infrastructure constraint that the OOCs believe denies them an opportunity to use the pipeline to ship refined products inland.

From about 2000 onwards the state's strategic stocks of crude oil held in mines near Ogies was sold off (to Natref, this being the only practical option) and the pipelines passing Secunda to Ogies and to Sasolburg fell into disuse. These pipelines were then utilised to ship refined components from Secunda to Natref and further benefited synfuels manufacture.

It is thus understandable that a perception exists that the pipeline infrastructure in the country has been used to meet Sasol's needs and to its advantage at the expense of competition and motorists. The converse of this view is also understandable. It holds that poor pipeline planning and changing needs left Petronet with unused pipelines and that Sasol was able to take advantage of this and in turn to give Petronet some tariff income when the alternative was no income.²³

5.6. The Regulatory Environment

Government intervention and regulation were aimed at developing an indigenous refining and synthetic fuels industry. The regulatory framework therefore favoured local manufacture and additionally favoured indigenous production and the dominance of the then state oil company, Sasol.

5.6.1. Features of Regulation

The style of regulation used by Government is influential in determining outcomes and therefore some contextual background and periodisation of the phases of regulation is given here. These phases were not discrete and separate blocks but rather merged into one another with some strands enduring longer than others.

Prior to 1977 the style of regulation was one that appears to have relied less upon legislation and more upon Government initiated agreements, in consultation with industry, intended to resolve market problems. For example the RATPLAN was introduced in 1951 as an industry initiative, but with tacit support of government, to ensure the availability of petroleum products throughout the country and particularly in the rural areas. This plan also limited the unrestricted proliferation of

²¹ Shell (2006:11)

²² Engen (2006:12)

²³ "The contribution to the current pipeline infrastructure constraint is a failure of the market and the regulatory environment in the determination of fair pricing in the market. (Petronet 2006:3)

service stations to ensure economic volume throughput and associated profitability.²⁴ Subsequently this objective was supplemented by the intention to reserve the retail sector as a preserve for small business. This was an agreement between the fuel retailers, the oil companies and Government. Elements of the regulatory dispensation such as the RATPLAN had been in the public domain, but the establishment of the Strategic Fuel Fund Association (Section 21 not for profit company)²⁵ was, as far as can be established not in the public domain.

A new era of more formal, legislative, regulation commenced in 1977 with the advent of the Petroleum Products Act and the CEF Act. However key elements of these Acts were designed to shroud the industry in secrecy. This blanket of secrecy began to be removed in the early 1990s as a new political dispensation loomed on the horizon. According to the provisions of the Petroleum Products Act of 1977 the Minister of Minerals and Energy is the regulator of the petroleum products industry. The Minister also plays a prominent role in the Central Energy Fund Act of the same year. With political principals acting as regulators a style of regulation-by-consensus with the regulated entities emerged, elements of which prevail until today.

In this style of regulation, efforts were made by Government to reach consensus with the regulated entities before regulations were gazetted and in some instances purely gentlemen's agreements were relied upon. Examples of this are:

1. The Service Station Rationalisation Plan, a consensus informal agreement between the oil companies, retailers and the Department of Minerals and Energy;
2. The Upliftment agreement, also referred to as the Sasol Supply Agreement was facilitated by government; the agreement was never signed;
3. The dispensation of "tariff protection" applicable to the synfuels industry from inception until 1995, in particular that element that involved a payment by the synfuels beneficiaries of tariff protection to the Equalisation Fund when oil prices were above \$28 per barrel.

In some cases there were written and signed agreements, for example –

- The Basic Fuels Price (BFP formula) was developed by DME and members of SAPIA, and certain elements of it were the subject of an agreement between the DME and industry in 2003.
- The Charter for the South African Petroleum and Liquid Fuels Industry on Empowering Historically Disadvantaged South Africans in the Petroleum and Liquid Fuels. It was signed by industry players and government in November 2000 and had legal effect in 2006.

In the early 1990s the blanket of secrecy was gradually removed. An important element of this was the implementation by the Liquid Fuels Industry Task Force in 1993 of transparency of pricing and the introduction of daily reporting of pricing in newspapers. Currently there are little if any aspects of the regulation that are kept secret. From about 1996 the scope of consultation and consensus seeking was widened from just industry players to incorporate other stakeholders, in particular from the consultations on the Green Paper on Energy Policy that began then and contributed to the White Paper on Energy Policy (1998).

²⁴ BP (2006:27)

²⁵ The SFF was incorporated into the CEF Act in 1977

In 2005/2006 the manner of regulation was formally modified by the commencement of new legislation establishing a new independent National Energy Regulator²⁶ to regulate petroleum pipelines and the formalisation of licensing responsibilities of the Petroleum Controller²⁷. In this phase, consultation with interested and affected parties remains a prominent feature. Of course the weakness in this approach is that the poorly organised and poorly resourced are not able to take up the opportunity to express their opinions.

5.6.2. Key Elements of Regulation

From the 1950s the regulatory dispensation for petroleum products has rested upon three key pillars. They are:

- Market access control and competition (the RATPLAN and guaranteed off-take of synfuels)
- Retail price regulation
- Import control

Each of these is discussed in turn in the sections that follow.

5.6.3. Market Access Control and Competition

(i) The Service Station Rationalisation Plan

Manufacturers of petroleum products see access to a marketing and distribution chain as critical because refinery economics dictate that a steady flow is far preferable to a stop-start style of operation. Market share, if sufficiently large, also represents market power. Service station outlets cannot be opened, closed or relocated at a whim. Developing a service station network takes time and considerable investment. For all these reasons a good marketing and retail network is for oil companies a highly prized asset. Prior to the 1950s all service stations were multi branded, that is they sold the products of more than one oil company. This included the pumps of the only local producers at the time, SATMAR (fuel from torbanite) and Union Spirit (alcohol from sugar cane).

The RATPLAN was established in 1951. It was established “voluntarily” by the oil companies to control the development of retail sites and to ensure the survival of the smaller sites and to preserve retail profitability that was threatened by cut-throat competition and to improve the availability of products in rural areas. Self service was also prohibited by the RATPLAN. The RATPLAN was facilitated and administered by the DME and enjoyed an exemption from the Competition Act. It was used as a “lever” to assist Total and Trek to establish marketing networks in the 1960’s. The RATPLAN has been similarly used to assist the entry of BEE companies into marketing.

The RATPLAN operated for fixed periods after which it was renegotiated and renewed. However when it expired in 1999 the parties could not reach agreement, principally because Sasol wished to enter the retail market and to compete with the OOCs for a share of the lucrative retail margin and also to ensure that it would be able to continue to dispose of its product at BFP inland related prices;²⁸ but it continued to be adhered to until 2002 when it lapsed. It also became increasingly difficult to gain exemption from the, by then, strengthened Competition legislation. It will be

²⁶ See the National Energy Regulator Act, No 40 of 2004.

²⁷ See the Petroleum Products Amendment Act, No 58 of 2003.

²⁸ BP (2006:27)

replaced by a regulated licensing system in terms of regulations published under the Petroleum Products Act.²⁹

(ii) Guaranteed Offtake of Local Production

While the refining industry was being established, SA still required imported product. Imports were controlled to ensure that only requirements in excess of local production would be imported. As the successive synthetic fuels manufacturing facilities were established, this “indigenous” product was given precedence over locally refined product. The one exception was Sasol’s Natref production (from 1970) which was also given preferential treatment in terms of guaranteed offtake in accordance with a Government facilitated agreement between Natref and the OOCs in exchange for which Sasol and the National Iranian Oil company were constrained from marketing their product.

When Sasol One commenced operations the other oil companies (OOCs) purchased (“uplifted”) all of its output and sold it through their branded forecourts in terms of an agreement reached between Sasol One and the OOCs in March 1954. At that time Sasol did not have any service stations. Although somewhat lost in the mists of time it seems that this arrangement was not unduly burdensome for the OOCs because demand was growing strongly, Sasol One’s output was small (~30 000 bbls/day) and although oil refining capacity was being built it still did not meet domestic demand. The first crude oil refinery (Mobil now Engen) was built in Durban in 1954 at about the same time that Sasol One commenced operations.

According to Sasol “The International Oil Companies wanted to open single brand service stations for a variety of reasons. Government was concerned about this development and the impact thereof on the position of the producers of indigenous fuels as becomes apparent from a letter to the OOCs dated 19 November 1951. Government eventually acceded to the request with the proviso that indigenous fuel producers would be allowed to have a pump on any single branded service station forecourt. When Sasol One commenced with production in 1955 they started marketing by converting existing SATMAR pumps to “Blue Pumps”.”³⁰

A part of this upliftment agreement was the “Blue Pump Agreement”. This allowed Sasol to place one (blue) petrol bowser (pump) on the forecourts of OOC branded sites. As this came into effect the need for the OOCs to uplift Sasol One’s output diminished. With the advent of the Natref refinery in 1970 Government the uplift all of Sasol’s output by the OOCs up to a cap of a 9.23% market share from 1982. The *quid pro quo*, was that Sasol was prevented from marketing its product through its own retail outlets and the OOCs retained control of the retail network. These agreements have been referred to as “effectively a government-brokered and sanctioned form of private regulation”.³¹

When Sasol Two and Three were constructed in the early 1980s this upliftment and blue pump arrangement was extended to these two new refineries.³² However these new synfuels plants were very much larger, with a capacity of about 150 000 bbls/day. The OOCs found the accommodation of all this new production very burdensome because it required them to shut down about 30% of their refining capacity³³ and to make costly assets redundant. In compensation therefore the coastal refiners and Natref received “synlevies”. At this time refinery margins were regulated by a “return

²⁹See Regulations concerning Site and Retail Licenses (Regulation Gazette No. 8433, Vol 489, R. 286, Petroleum Products Act (120/1977), 27th March 2006.

³⁰ SASOL (2006:49)

³¹ Competition Tribunal (2006:46)

³² It is also referred to as the Main Supply Agreement (MSA) or the Sasol Supply Agreement (SSA).

³³ Competition Tribunal (2006:53)

on assets” formula called “PAR” which presumably also compensated them for idle assets³⁴. Government also offered the OOCs coal mining assets in a series of deals that have never been fully disclosed by Government or by the OOCs concerned.³⁵ It is thus not possible to quantify the costs to the state and the benefits derived by the OOCs.

This agreement also placed the coastal OOC refiners in the position of “swing” producers – in other words their role became one of making up the shortfall in the market that Sasol’s output could not meet, as and when required. Sasol synfuels meanwhile enjoyed the luxury of being able to sell every litre that it produced. Understandably the OOCs found this arrangement unpalatable. While the OOCs may have been under Government pressure during apartheid to comply with this arrangement they never sought to terminate the arrangement after the advent of democracy. The upliftment agreement contained a five year notice of termination provision that was never exercised by the OOCs. Indeed it was Sasol that ultimately gave notice in 1998 to terminate the agreement which ended in December 2003.

A curious feature of this Upliftment Agreement was that it was implemented although it was never actually signed. There were many versions and much disagreement about it leading to several private arbitrations between the parties but it remained unsigned and was never taken to formal arbitration.

When the Government built the Moss gas synfuels refinery in Mossel Bay in the early 1990s³⁶ it used Sasol proprietary synfuels technology and it also entered into an Upliftment Agreement with the OOCs. This Upliftment Agreement had two important differences from the Sasol Upliftment Agreement. Firstly it had no “blue pump” equivalent and secondly Moss gas was not paid an import parity price. Instead it was only paid an “Africa nett back” price³⁷ and the motorists, via the Equalisation Fund levies were compelled to make up the difference. Moss gas was a purely merchant refiner without a marketing and distribution chain. Subsequently, PetroSA has become active in the commercial market³⁸,

In 1998 the Government published its White Paper on Energy Policy in which it set out milestones to be achieved by the industry before the industry would be deregulated. One of the seven milestones is –

“Mutually acceptable arrangements between synfuels producers and the marketers of crude oil based fuels on the upliftment and marketing of synfuels.”

In 1998 Sasol gave the OOCs the stipulated five year notice necessary to terminate its Upliftment Agreement which duly ended in December 2003. This was probably the most significant event in the industry in the twenty years leading up to it as it opened the way for a whole new basis of interaction between the players in the industry and removed one of the main pillars of regulation i.e. the compulsory upliftment of all the synthetic fuels produced by Sasol. The “Blue Pumps” also disappeared from the forecourts of the OOC’s. The impact of this change was fundamental and

³⁴ Refinery assets were “deregulated”, that is excluded from the return on assets formula in 1990 on the basis of the Lambrecht Report (a Stellenbosch University professor). The return on assets regulation was retained on marketing and distribution assets in the form of the “MPAR” that determines the wholesale margin to this day.

³⁵ This took place during a time of oil sanctions against South Africa and so it is understandable that the sanctions busting OOCs were reluctant to disclose these deals. There may also have been secrecy requirements imposed on the OOCs by Government at the time.

³⁶ It commenced production in 1992.

³⁷ This is the price achieved in East Africa minus the costs of shipping the product to that market.

³⁸ Shell (2006:11)

probably larger than any other change in the preceding 20 years. It led to a veritable shake up in the inland market. Sasol aggressively entered the retailing sector and the OOCs aggressively switched to supplying the maximum amount of product from their own refineries resulting in Natref becoming the swing refiner rather than the coastal refineries. The OOC's were able to supply these volumes at lower prices as, unlike previously, they were able to capture their refining margins on these volumes. It could be argued that Sasol triggered a form of deregulation. At the very least, from the perspective of Government policy, it brought the market one milestone closer to deregulation.

The Competition Tribunal found that –

“From the perspective of competition law there can be no gainsaying the nature of the MSA. It constituted a market sharing and output limiting cartel between Sasol and the OOCs – Sasol agreed to limit its participation in the wholesale and retail markets; in exchange the OOCs agreed to uplift, at a price based upon import parity (viz. the IBLC, later BFP), the vast majority of Sasol’s inland product, effectively accepting that they would not utilise their coastal refineries to meet their inland marketing requirements except to the extent of any inland shortfall between Secunda and Natref supply and inland demand.”³⁹

As has been mentioned upliftment agreements although private commercial agreements were nevertheless initiated by the Government and sanctioned by Government in that the Department of Minerals and Energy regarded it as a part of the regulatory dispensation. The agreements had also been exempted by the Competition Board (the predecessor to the current competition authorities) until it expired.

PetroSA continues to enjoy product upliftment agreements.

5.6.4. Retail Price Regulation and Import Parity Pricing (IPP)

Since the 1950's regulated pricing has been based on the price of importing fuel with a “generous” price build up for storage and distribution.

In short this type of methodology determines the cost of importing petroleum products from appropriate markets and by adding together all the costs associated with delivering that product to a particular location in South Africa arrives at the regulated price. The economic rationale is that in most markets the economic text books tell us that a seller may be expected to sell his/her product at or below the price at which the next nearest producer could deliver the product to that point of demand. From this point on the concept begins to merge with what has become to be known as “locational advantage” but more on this later.

The basis for calculating the import parity price or In Bond Landed Cost (IBLC) was revised (downwards) in the late 1990's and replaced by the Basic Fuels Price (BFP) in 2003 (further downward revision) because the previous IPP was considered too generous.⁴⁰ The generous level of the IPP during the apartheid years, ensured the profitability of the oil companies and provided an incentive to the multinationals initially, to invest in refining assets, and subsequently, to remain in South Africa despite pressures to disinvest.

³⁹ Competition Tribunal (2006:119)

⁴⁰ The BFP formula was perceived to have given prices about 6c/l lower than the IBLC formula. PetroSA (2006:21).

Some of the OOCs dispute the “generosity” of the IPP prices applied over the years. We disagree, and hold to our view that the generous IBLC price was part of the mechanism to ensure continued investments in local refining facilities. This contention is (implicitly) supported by the comment from Engen (footnote 44) when they point out that refining was effectively deregulated with the introduction of the MPAR mechanism and the IBLC price in order to encourage refining investments.

By contrast, BP have consistently indicated in their public testimony before the Competition Tribunal that it does not believe that the BFP is a true import parity price. However, they state that it would not be appropriate for government to adopt the stance that the BFP formula justifies the imposition of any retrospective windfall taxes in view of the central role which government played in the imposition of the formula. They believe that the major aberration in the price formula comes from the difference in the cost base of the coastal refiners and inland refiners and manufacturers.⁴¹

Import parity pricing has been a much debated topic over the last 10 years or so and has risen to prominence once again in the last year particularly in respect of steel prices.⁴²

A number of other elements are added to the import parity price to make up the ultimate retail price. They include –

- A wholesale margin (MPAR)-oil company margin
- A retail margin – dealer margin
- Taxes (including a slate levy-for rounding to the nearest cent)
- General Fuel Levy
- Transport tariffs
- Service differential
- Road Accident Fund Levy
- Equalisation Fund Levies (currently nil)
- Central Energy Fund Levies (currently nil)

5.6.5. Import Control

An important pillar of the regulatory dispensation over many years has been the control of imports of petroleum. These are controlled by the DTI using the Import Export Control Act acting on advice from the DME. The basis of the policy has been that imports are only permitted when local production is unavailable. This philosophy created a pecking order that meant that synfuels manufactured from indigenous materials had first claim to the market, followed by petroleum products made from imported crude oil and lastly imported petroleum products. This policy was for many years unwritten and simply existed in practice. It was first recorded and formalised by the DME in 1995 as the “Crude oil and petroleum products import and export policy”. The current version was approved in February 2004. It is currently under review again⁴³.

⁴¹ BP (2006:4)

⁴² Some OOC’s dispute the “generosity” of the import parity price. Engen asserts that the IPP was realistic until the early 1990s when the posted prices that formed the basis of the IBLC became less representative of market reality. They contend that this aberration was then corrected by the 1994 modification in the IBLC and subsequent replacement of the IBLC by the BFP in 2003. Engen (2006:13)

⁴³ See Draft Guidelines for Recommendations on the Importation and Exportation of Crude Oil and Petroleum Products, General Notice 807, Government Gazette No 2895, 23 June 2006.

5.6.6. Payment of Synfuels Levy to Crude Refiners

The crude refiners were forced to mothball around 30% of their capacity in 1982 when Sasol 2 and Sasol 3 came into operation. They were partially compensated for this loss of refining margin from 1984 onwards via the synlevy which was funded by motorists and paid from the Equalisation Fund. The amount paid was reduced annually as the demand for local product grew and the synlevy was phased out in 1996. The formula was Rand based and was initially calculated from a \$ based refining margin, converted to rand. The decline of the rand over the next ten years meant that the OOCs were only partly compensated for the loss of refining margin. This compensation differed from the protection to synthetic fuels which was dollar based, and compensation therefore increased with the declining rand.

5.6.7. MPAR - Oil Company Profitability.

The PAR mechanism was introduced in 1984. It applied the 15% overall return on assets managed benchmark which had applied to the industry also prior to 1984 and was intended to ensure that the industry achieved a return of around 15%. The PAR mechanism was replaced in 1990 by the Marketing Of Petroleum Activities Return (MPAR), which applied to achieving benchmark returns for marketing assets only. The purpose of MPAR was to ensure that the return on marketing assets would be “guaranteed” in the 10-20% range. The MPAR indirectly “guaranteed” a return on refining benchmarked to international trends, given that the transfer price between the refinery and the marketing assets was taken as the IBLC price.⁴⁴

Oil company results published in SAPIA reports lend some credibility to the contention of the oil companies that marketing returns have not been over generous. They point to the retrospective nature of the adjustments- margin adjustments require the consolidation and verification of results for the industry by an independent auditor, a process which historically has taken six to twelve months – and the fact that margins applied for, were not always granted in the past. Total, in their submission (p19) tabulate the requested and actual received MPAR payments from 1999 to 2003, to demonstrate the consistent under-recovery.

It is, however, relevant to note, that a significant part of the delays in the granting of MPAR adjustments are a result of the industry itself being slow in delivering their results to the auditors. Furthermore, the 10% to 20 % range for MPAR was set at a time of high inflation. It could be argued that this benchmark should be evaluated in the light of a much lower inflationary environment.

5.6.8. The Equalisation Fund

The Equalisation Fund was created as a price smoothing mechanism and to meet government commitments to the oil industry. In 1977 the Equalisation Fund was incorporated into the CEF Act and managed by CEF (Pty) Ltd. It has been used to perform the following functions:

⁴⁴ Engen (2006:13) comment that: “the 15% benchmark applied to other regulated industries, also at the time, so it cannot be argued that the government intended to give the oil industry favoured treatment. By 1990 it became necessary to make large investments in additional refining capacity, and the distortions resulting from integrated profit monitoring made it very difficult for refiners to justify such investments. MPAR was introduced to regulate marketing margins, and refining was effectively “deregulated” and allowed to earn whatever return was attainable based on import parity pricing ex refinery. ...objective examination of the history will show that neither the MPAR mechanism nor its predecessors have yielded excessive returns to local oil companies over the years.”

-
- Retail price smoothing mechanism. Levies on petroleum products were collected in times of low prices and when the import parity prices rose, retail prices would not be increased. Instead the funds collected into the Equalisation Fund would be used to pay the oil industry the shortfall until prices dropped once again, or the funds in the Equalisation Fund were exhausted. By the time this happened the price increase necessary to bring retail prices in line with import parity prices could be substantial. It was a steep increase in the price of petrol caused by this phenomenon in 1993 that led to social unrest and the establishment of the Liquid Fuels Industry Task Force;
 - "tariff protection" to the synthetic fuels producers;
 - synlevies to the crude oil refiners;
 - SFF oil procurement price premiums caused by the need to use intermediaries to disguise the source of supply, given the UN sanctions on crude oil supply.

The Equalisation Fund is financed through levies inserted into the price structure of the main petroleum products and therefore funded by the end users.

5.6.9. Empowerment

The industry has experienced two episodes of empowerment. The first was Afrikaner Empowerment. Given that no local companies were involved in the marketing of fuels, and driven by their desire to advance "Afrikaner empowerment" the government facilitated the formation of Trek Petroleum in 1967. Trek was 65% owned by Federale Volks Beleggings (FVB) and 17.5% each by Shell and BP who facilitated the transaction by selling some of their service stations to Trek. The RATPLAN further assisted the development of Trek by granting them double the number of quotas for new service stations than was available to the other oil companies.

The second episode is generally referred to as Black Economic Empowerment or BEE. This initiative is an endeavour to correct the distortions created by apartheid and found its first expression as a target in formal Government Policy in the White Paper on Energy Policy (1998) where one of the milestones to be achieved before deregulation is -

- *The sustainable presence, ownership or control by historically disadvantaged South Africans of approximately a quarter of all facets of the liquid fuels industry or plans to achieve this.*

The lack of progress in moving towards this goal caused the Minister of Minerals and Energy in her Budget Speech in 2000 to establish a committee with the oil industry to see what could be done. This led to the drafting of the *Charter For the South African Petroleum and Liquid Fuels Industry on Empowering Historically Disadvantaged South Africans in the Petroleum and Liquid Fuels Industry*. That was voluntarily signed by all the major oil companies and Government in November 2000. This was the first of its type and has been followed by several others.

The oil industry has been periodically berated by politicians for the lack of progress in implementing the Charter. The Charter was annexed to the Petroleum Products Amendment Act of 2003 shifting it from a voluntary agreement to a statute. Sasol has been the last of the major oil companies to do a deal in mid 2006 with a BEE consortium.

This concludes the discussion of the regulatory dispensation in the petroleum products industry with the exception of those elements concerned with the manufacture and marketing of synfuels and inland refining. They are considered in the following section.

5.7. Government Support for Synthetic Fuels Manufacture

Government support for the manufacture of synthetic fuels has been a consistent theme in the industry since the first SATMAR endeavours of the 1930s. Over time the scale and complexity of support increased. SATMAR was subsidised to the extent of around 20% of the price paid by the end user and all volumes produced had to be absorbed by the market. This formed the starting point for subsequent support given to Sasol and Mossgas (PetroSA).

The type of support afforded to Sasol and Mossgas was different in some respects and they are consequently dealt with separately below.

5.7.1. Direct Assistance to Sasol

5.7.1.1. Sasol One

Sasol One commenced production in 1954. It was financed by the IDC and also received a refinery investment incentive.

Without a retail network marketing had to be taken care of. Government negotiated the first Sasol Supply Agreement which protected Sasol and ensured that:

- All Sasol's production would be bought by the oil companies provided Sasol did not directly enter marketing
- Sasol received full import parity pricing for all their production
- Defined the Sasol Supply Area (inland market)
- Oil companies were to accommodate Sasol pumps on their forecourts in the Sasol Supply Area but the volumes sold through the blue pumps were limited by the agreement. This was a very profitable market niche because of geographic concentration and low overheads

5.7.1.2. Sasol Two and Three

In subsequent years, Government negotiated the extension of the Sasol Supply Agreement to accommodate the volumes produced by Sasol 2 and 3 under similar terms to the original agreements.

Sasol 2 and 3 were financed by CEF through:

- a) the Equalisation Fund
- b) Loans
- c) IDC equity

The initial capital investment could not be serviced so tariff protection was granted from 1979 to 2000.

These loans became an issue in the regulatory dispensation during the social unrest caused by petrol price hikes in 1993 which led to the establishment of the Liquid Fuels Industry Task Force under the auspices of the National Economic Forum (now NEDLAC). As a part of its short term steps to deal with the petrol price, the Forum persuaded Government to reduce the petrol price. A part of this agreement was to reduce synfuels tariff protection from \$23/bbl to \$21.40/bbl contributing to a reduction in the petrol price. Sasol was protected by Government guarantees. This reduction triggered a provision of the loan agreement between CEF and Sasol that reduced the interest rate payable by Sasol.

Sasol's loans from CEF have now all been repaid.

5.7.2. Tariff Protection to Sasol

This is dealt with in a subsequent chapter 10 in which the Task Team makes some specific recommendations regarding the current position of the Equalisation Fund payback mechanism.

5.7.3. Indirect Assistance to Sasol

The following elements constituted indirect assistance to Sasol

- Regulatory framework aimed at ensuring accommodation of all products in the market for locally manufactured liquid fuels
- Import parity pricing for all products
- Transport infrastructure developed to accommodate Sasol's requirements⁴⁵
- First white oil pipeline (DJP) routed through Sasolburg to Langlaagte provided direct pipeline access for Sasol's synfuels to the market
- Second product pipeline (DWP) was routed through Secunda to Alrode to facilitate delivery of Sasol 2 and 3 product to the inland market (as well as additional product from the coast).
- Product pipeline converted to MRG pipeline in 1995 to enable Sasol to supply MRG from Secunda to Durban. Sasol could achieve this market penetration without the cost of establishing any major infrastructure.
- Product component pipeline link between Secunda and Natref (1995) provides opportunity to blend/upgrade components at Natref
- Scheduling of pipeline deliveries biased to Sasol's requirements⁴⁶
- The reconfiguration of the DWP pipeline resulted in Sasol becoming the sole source of supply to the Witbank depot.

⁴⁵ Sasol rejects this idea but concedes that "Obviously the development of pipeline infrastructure took the location and production levels of the Sasol plants into consideration. Sasol (2006:61)

⁴⁶ Total is of the view that Sasol, Total and Natref were merely exploiting a business opportunity that made sense in their pipeline network utilisation Total (2006:18). Transnet claims that its liquids fuels pipelines operate on a "common carrier" principle, which ensures that all carriers are subject to the same conditions. Transnet (2006:3).

5.7.4. Privatisation of Sasol:

When Sasol was privatised in phases from 1979 onwards (before Sasol 2 and 3 commenced production) and listed on the Johannesburg Stock Exchange it was on terms very favourable to investors. These terms were in the form of undertakings that effectively locked Government into ongoing tariff protection. Its prospectus stated -

“In considering the economic viability of the Sasol group once the Sasol Two project has been complete, the State agreed that for the commercial success of the undertaking in which the public is now being invited to participate, the State will, have to meet two requirements to achieve the desired financial results, namely:

- (a) An additional protection of 3,6c per litre on all white products, namely liquid petroleum gas, petrol, diesel, kerosene, including jet fuel, produced from indigenous materials;*
- (b) This industry must have the assurance that as international oil prices increase in future, the prices of its products will also increase.*

These principles have been considered and accepted by the State with the reservation that should the ratio between the rise in general cost factors and the rise in the prices of petroleum products materially deviate from the assumptions made for the purpose of the economic evaluation of the Sasol undertaking the additional protection of 3,6c per litre may be adjusted upwards or downwards by the State.”

The total amount paid by Sasol shareholders for the privatisation of the company was 92% of the actual cost of the construction of the Sasol 2 and 3 plants.

For example, the purchase of the final 50% of Sasol 3 from CEF in 1990, was for R617 million in cash and a loan of R2.3 billion from CEF at an interest rate which was reduced if tariff protection was reduced. The agreement was that if tariff protection was reduced, then first the interest rate and then the capital outstanding would be proportionately reduced at Government expense⁴⁷

5.7.5. Benefits to Natref

Although Natref is a crude oil refinery and not a syfuels manufacturer it is considered here because Sasol is a majority shareholder and as a result it has been able to introduce important operational synergies between its synfuels operations and Natref operations. After the Shah of Iran fell from power in 1979 Sasol and Total (the other equity holder) entered into a long negotiation and eventually in 1989 purchased the shares held by the National Iranian Oil company in proportion to their existing shareholdings at the time. Sasol further entrenched its majority shareholding position in Natref to 64% with this transaction.

5.7.6. Direct Benefits to Natref

Government incentivised Natref owners-Sasol, Total, National Iranian Oil Company- to build Natref in Sasolburg by treating Natref as though it was a coastal refinery (cost of delivering products to the storage depot was the same as if the product had been delivered from Durban to the depot, compared to transporting crude to the refinery and then on delivering product from the refinery to the end user).

⁴⁷ Competition Tribunal 2006.

From the Natref commissioning in 1971 it enjoyed Government's undertaking that it would be no worse off than if it had been located at the coast. This only became a transport advantage over coastal refiners from 1987 when Natref started paying for crude transport and being paid location differentials on products. The additional costs of pretending that Natref was at the coast were passed on to inland motorists through the pipeline tariffs and in turn through the fuel prices.

The Main Supply Agreement was extended to include Natref production (apart from Total's share). Sasol's share of the output was therefore guaranteed import parity pricing for all its products from day one. The Natref refinery was designed to deliver a very high white product yield with an associated high capital investment.

5.7.7. Indirect Benefits to Natref

Natref enjoyed the following indirect benefits:

- Natref crude was/is stored in the SFF constructed crude storage tanks in Durban Harbour and then transferred to Natref.⁴⁸
- Crude oil pipeline routed through Sasolburg to Kendal to supply strategic stockpile at Ogies but also to supply crude to the proposed future crude refinery at Natref
- Natref enjoyed the bulk shipping benefits of joint procurement and shipping with SFF cargoes of crude oil as did the OOCs excluding Shell and Total that procured their own crude.
- Pipeline constructed from Natref to Johannesburg Airport. Sized and dedicated to accommodate Natref's jet fuel volumes. By agreement among the parties 20% of the demand was shipped from the Durban refineries by rail in order to ensure that an alternative supply route was maintained in case of emergencies (Sasol 2006:75). The 80% market share enjoyed by Natref and unregulated jet fuel prices may have allowed Natref to make excessive economic profits in this market.
- When the Government's strategic stocks held at Ogies were relocated to Saldanha Bay, the most cost effective means, indeed the only practical way given the logistics available, of doing so was to sell the inland crude oil to Natref and to purchase replacement oil for storage at Saldanha Bay. The logistical challenge and costs of moving crude oil from inland to the coast meant that Natref received this crude oil at a very favourable price.⁴⁹
- As the storage of strategic oil stocks at Ogies fell away the pipelines connecting Secunda and Natref, some via Ogies became available for other purposes. Sasol was able to negotiate favourable terms for the interconnection of its two refineries with Petronet as Petronet did not have another use for the pipelines. These interconnections have allowed Sasol to optimise its operations and output between its two inland refining centres. For example with the end of the Upliftment Agreement and the change in the inland market dynamics, Sasol was able to shift the role of swing producer from the target intended by the OOCs (Secunda) to Natref.⁵⁰

⁴⁸ Sasol claims that the OOCs also enjoyed this benefit (Sasol 2006:74), particularly Caltex in Saldanha Bay. The Durban tanks were sold to Natref at market value in 1988 from which date SFF had no involvement in its operation. The land on which the tanks are situated was bought from the Airports Company in 2002 based on market values. (Total 2006:22)

⁴⁹ Total claim that the price was realistic given the degree of contamination and quality of the crude

⁵⁰ Engen contends that "it was never an intention of the OOCs that Secunda should become the swing refiner: Engen (2006:14)

5.7.8. Direct Assistance to Mossgas/PetroSA

Mossgas (now PetroSA) enjoyed the following direct assistance:

- Soekor formed by government and funded by the IDC to explore for oil and gas onshore and offshore explored and found the gas used by Mossgas as its feedstock; Initially Mossgas paid Soekor for this gas but subsequently the two firms were merged and thus the payments that previously accrued to a public benefit (Soekor's oil and gas development efforts) became internalised in PetroSA's accounts.
- The government arranged for motorists, through the Equalisation Fund to compensate Mossgas for the difference between IBLC and Africa Netback price received from the oil companies for their compulsory offtake;
- Mossgas received tariff protection on the same basis as Sasol, from motorists via the Equalisation Fund.
- State invested R13 billion in Mossgas and R8 billion in Soekor⁵¹
- The investment was funded through state guaranteed loans
- An additional R2.5 billion was invested to extend gas reserves to 2008/9. The loans required by Mossgas were guaranteed by the state which however required that they be raised offshore. Subsequently when PetroSA was in a position to repay these loans earlier than planned this was not allowed, at some cost to PetroSA. Investing in extending the gas fields was deemed by Government to be the best remaining option after an attempt to privatise Mossgas in 1995/6 produced only one paltry offer that was turned down.

The first step in the rationalisation of the CEF group was the "normalisation" of the CEF group balance sheets. This was approved by Cabinet on 21 October 1999. The purpose of this decision was to place the CEF commercial entities on a reasonable commercial financial footing. In essence this decision waived Mossgas' debt in exchange for undertakings to provide dividend payments in future years. Subsequent to "normalisation" all loans raised have to be raised on a commercial basis without government guarantees. Mossgas received significant tariff protection and a synlevy up to November 2004.

The crude oil business currently accounts for approximately 25% of the company's revenues but this is set to decline substantially in the next few years⁵².

5.7.9. Indirect Assistance to Mossgas

Government, on more than one occasion, arranged for Mossgas to enjoy an upliftment agreement with the OOCs on a basis similar to Sasol's, albeit with some important differences. The current upliftment agreement incorporates an "equality of misery" principle whereby export volumes (receiving lower prices) are shared *pro rata* among all the parties so that the "pain" is fairly distributed.

⁵¹ Presentation by Siphon Mkhize to PPC on Minerals and Energy, 17 November 2004

⁵² PetroSA (2006:11)

5.8. Summary of Government Intervention in support of Synthetic Fuels Industry in SA

The skewed allocation of resources to companies, one of which was privatised in 1979 (Sasol), raises the question of the opportunity cost of support for synfuels. It appears that a narrow base of shareholders in Sasol derived significant benefits from direct and indirect support by government, at the expense of the broad stakeholder base of government and the consumer. However the Arthur Andersen and other investigations have revealed that the general economic benefits of having Sasol and Mossgas were substantial and we consider this aspect elsewhere in this document.

Whilst our information on government support for synfuels is not comprehensive, it is clear that very large amounts of the tax payers' money have been used to support and maintain the synthetic fuels industry.

5.8.1. Capital Investment by Government

- Sasol
 - Sasol 1 was commissioned in 1955. Investments cost not known.
 - Sasol 2 and 3 were commissioned in 1980 and 1982 respectively.
 - The price paid to the government for the privatisation of Sasol amounted to R2.9 billion or 92% of the actual cost of constructing Sasol 2 and Sasol 3 , estimated at R3.2 billion. This excludes payment of tariff protection.
- Mossgas was launched by government at an estimated cost of R13 billion, and Soekor at R8 billion. The two merged in 2002 and became PetroSA.

5.8.2. Tariff Protection by Government

- Tariff protection paid to Sasol from the Equalisation Fund from 1970 to 2000 is estimated to be between “about R6 billion” (Sasol est) and R6.8 billion.
- The first tariff protection support to PetroSA was provided in October 1993. The last payments were made in August 1999. During the period from 1993 to 1999, Mossgas/PetroSA received significant tariff protection.
- The State wrote off loans amounting to approximately R7.9 billion (previously granted to Mossgas) and R1.5 billion (granted to Soekor) in 1999 as part of the normalisation process.

5.8.3. Market Access Engineered by Government

- Other Oil Companies in South Africa were obliged to buy all of Sasol's synfuels for decades. Feedstock and product movement infrastructure still favours Sasol.
- Other Oil Companies in South Africa are obliged to buy all of PetroSA's synfuels
- Sasol benefits from its inland locational advantage being paid the full cost of transport from the coast to market through the BFP price whereas product is transported only from Secunda or Natref to market. This advantage may be quantified at > 11c per litre on a volume of 6 billion litres=>R660 million per year.[deduced from Competition Tribunal (2006) decision]

From 1971 to 1987, crude oil for Natref was transported via the purpose constructed pipeline at no cost. This cost was subsidised by loading the product pipeline tariff which fed directly into the IBLC price. Sasol benefited from this price (see point above) and the end cost was borne by the

consumer (additional 3c/litre added to the price). An estimated benefit of more than R200 million per year to Sasol.

5.8.4. Impact on the Consumer

The Costs Borne by the Consumer

- Consumers have borne the costs of establishing and maintaining synfuels producers over some 70 years.
- The regulated maintenance of import parity pricing through out the history of the industry has carried considerable benefit to the petroleum industry at the expense of motorists in the form of higher prices. On the other hand the economy has benefited from value adding investment in oil refining and its knock-on economic impacts.
- Significant over investment in pipeline infrastructure in the 1960s and 1970 was borne by taxpayers.⁵³ Even today when pipeline capacity is at a premium it is doubtful that some pipelines have recovered their costs.
- The cost of cross subsidisation of transport between the crude and white product pipeline was carried by inland consumers.⁵⁴
- The DWP pipeline was funded by setting product pipeline tariffs at rail tariffs and denying motorists the benefits of the more efficient form of transport.
- Pipeline revenues have been used at times to cross subsidise other forms of state owned transport.
- Politically driven development of the oil industry –security of supply through development of synfuels (and strategic) - built in many inefficiencies. The end cost was to the consumer and high fuel input costs to the economy- particularly in the industrial heartland
- Overinvestment in the retail sector through a proliferation of very high quality retail sites facilitated by return on investment type regulation (MPAR) and guaranteed retail margins.

5.8.5. Key Issues

The desired outcomes of government intervention and regulation were:

- Security of supply
- Reduced dependence on imported oil
- Stability in domestic fuels production
- Minimising the impact of fuels imports on the balance of payments
- Wide availability of fuel to consumers and industry (and military)

It can be argued that these objectives were achieved.

Additional outcomes:

- Development of refining infrastructure
- Attracted refining investments by multinationals

⁵³ Engen's view is that the pipeline capacity investments were justifiable at the time. It was only after the decision was taken to construct Sasol 2 and 3 that the installed capacity became surplus to requirements Engen (2006:14)

⁵⁴ This is denied by Transnet. "There is no policy or deliberate framework of cross subsidising and adjusting pricing regimes to ensure that enough profits are made to "carry" other divisions." Transnet (2006:3)

-
- Achieved geographic distribution of refining facilities improving security of supply
 - Industrial growth centres developed -Sasolburg, Secunda, Mossel Bay
 - Added value to low quality coal resources (beneficiation)
 - Developed a leading world technology and expertise

However, there have been other unplanned outcomes:

- A logistics/distribution network that favours/ed one private sector company.
- Technology that was nurtured and developed through investments by the state which is now in the hands of a private sector company
- An oil industry which expects to be kept profitable at any cost.⁵⁵
- The lack of a concentrated refining and petrochemicals centre.
- Reliance upon coal for petrochemicals with periodic supply limitations and composition profile that inhibits the establishment of a petrochemicals complex independent of coal.
- A private sector company with strong competitive advantages secured through government subsidy and regulation
- The incentives for investment by the crude oil refiners were largely achieved through the regulatory framework
- Synthetic fuels producers benefited from the incentives of the regulatory framework as well as direct tariff protection
- Sasol and Mossgas have been guaranteed full offtake of production until they voluntarily relinquish it. Upliftment prices have ranged from import parity to export parity.
- Total has benefited from the shared good fortune of being a joint venture refinery partner with a synfuels producer, Sasol.
- The synthetic fuels manufacturing industry would not have developed in the absence of incentives and tariff protection because of high capital and operating costs.
- Sasol shareholders reaped huge benefits from the previous investments by government and the “inherited” structures which favour the inland producer
- The development of the fuels infrastructure and distribution networks was skewed to meet the needs of the inland manufacturers –effectively Sasol.
- The co-operative relationship between Sasol and Petronet continued after privatisation and it appears that significant government resources and spending were effectively diverted to a privatised Sasol.⁵⁶
- Direct taxation on fuels products is much lower in South Africa than in many developed countries. It could be argued that the option of earning income from direct taxation- which could have been distributed widely to socio-developmental causes-was sacrificed in favour of the narrower option of building a state-owned synthetics fuels business and to a lesser extent promoting refining investments.
- The contradiction of the privatisation of Sasol, lies in why a narrow base of shareholders/stakeholders should have benefited so greatly from its privatisation.

⁵⁵ Engen disputes this. “All that was expected was that the government would apply agreed regulatory mechanisms consistently and fairly”(Engen 2006:15); (Shell 2006:12). BP contends that the crude oil refiners have often borne the brunt of policies which have been driven by strategic goals as opposed to economic goals. (BP 2006:31). The Task Team would, however, argue that, historically, expectations from the regulatory mechanism, were to be kept profitable at any cost.

⁵⁶ Transnet (2006:3) disputes this. “These statements imply that there was a collusive arrangement between Sasol and Petronet, to the exclusion of the rest of the oil industry. This is a fallacy. All decisions were made on the basis of sound business principles, given the constraints applicable at the time. No special or additional resources was expended from Petronet in order to benefit Sasol.”

While there are both positive and negative factors associated with the development of Sasol and PetroSA, unquestionably, the intervention of government in creating and promoting the synthetic fuels industry to reduce dependence on external crude and product supplies, has been successful. Both Sasol and, to a lesser extent, PetroSA have contributed significantly to the South African economy. These contributions are outlined in further detail in Chapter 6.

6. The Liquid Fuels Industry and the Economy

The liquid fuels industry is a primary driver of economic growth. About 76% (Digest of South African Energy Statistics, 2005) of liquid fuels are used for transport – motor vehicles, vehicles used by industry and agriculture, heavy equipment, aircraft, ships, etc. The balance of fuels is used for heating and power generation. The price of fuel therefore has a direct influence on the cost base of the economy.

Figure 2 : The Crude Price, Petrol Price and \$/R Exchange Rate

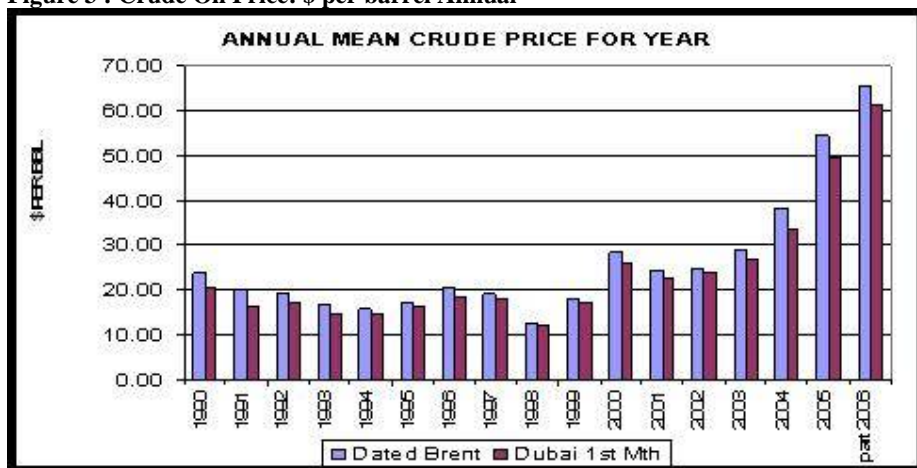


Source : BJM (2002), Report on Sasol, January

Given that the pricing of liquid fuels in South Africa is related to crude oil prices through the import parity price mechanism, the consumers of fuel are subject to monthly fluctuations in crude prices with the additional major impact from changes in the rand/dollar exchange rate. The graph above demonstrates the cushioning effect the weakening rand had on the falling crude oil prices in 2000-2001.

The next figure illustrates the step change in oil prices in the last two years:

Figure 3 : Crude Oil Price: \$ per barrel Annual

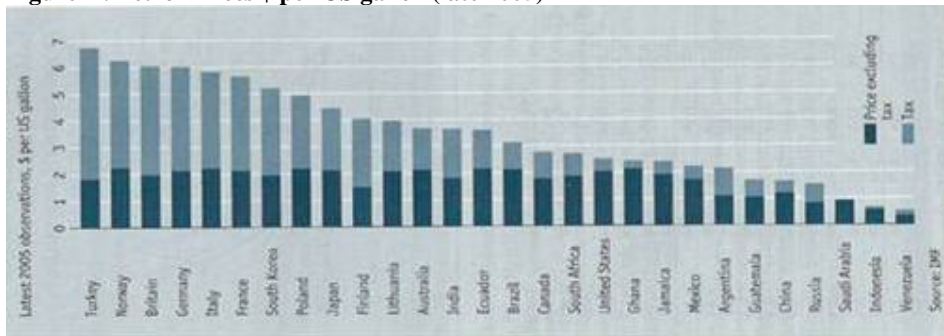


Source: Platts

National and provincial government’s worldwide target fuel prices as a mechanism for taxation and for influencing consumption patterns. Various elements of the price are frequently the target of taxes or duties to be channelled to funding specific expenditures. The Road Accident Fund levy in the SA fuel price is an example of this approach.

The tax “take” of government in SA is relatively low – around 40% currently – with comparable percentages for more than half of the countries surveyed, being more than 100%. It is also evident from the figure below that the base price excluding taxes in SA, is competitive with most countries. In some cases there is clear subsidisation by governments to enable these lower prices, but it would be instructive to investigate the methodology of arriving at the base price for these “lower base” countries.

Figure 4 : Petrol Prices \$ per US gallon (late 2005)



Source: The Economist May 6-12, 2006

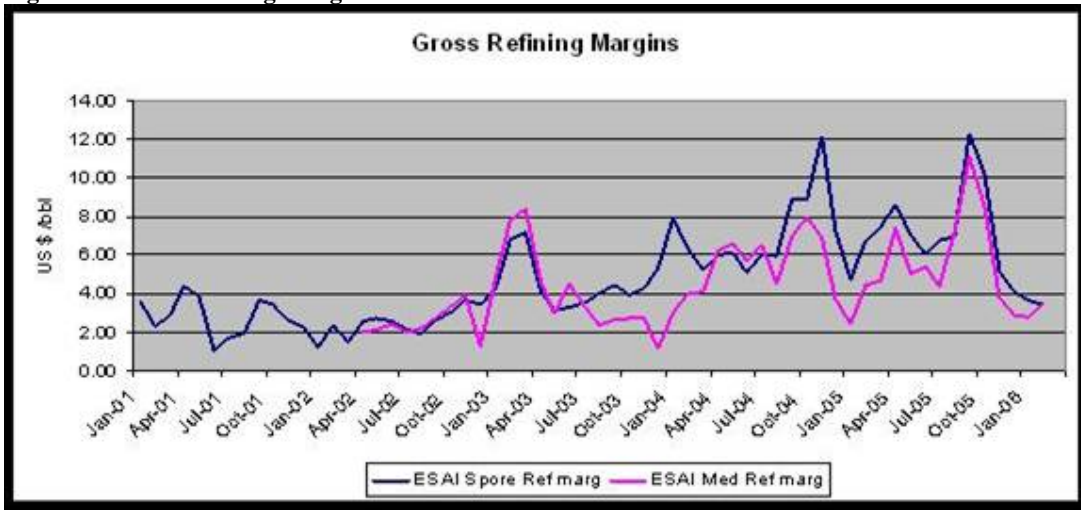
Movements in the fuel price, particularly sharp increases, are very emotive to the end user. These sometimes lead to consumer mass action and inevitably the spotlight falls on fuels producers and their profitability. In SA, there are additional questions raised about the link with international prices given that about a third of SA supply comes from synthetic fuels, and not conventional refining. Moreover, synfuels manufacturing costs are largely determined in local currency. These questions have relevance and need to be given due consideration.

In the case of Sasol, the production costs of coal, its base input into the Secunda coal liquefaction process (CTL), and the operating costs of its CTL process, are key to the calculation of its breakeven costs. The price realised for its fuels products are external to its cost base.

The economics of the PetroSA Gas-to-Liquids (GTL) process relates to the price of extracting gas and transporting it to the “refinery” as well as the operating costs of the plant. As gas reserves become depleted and fuel specifications change, PetroSA will become increasingly dependent on the import of intermediates and condensates to bolster its production. The fate of PetroSA beyond 2012 when gas reserves are likely to be depleted, remains in the balance.

The refining profitability of the other oil companies (companies with refining and marketing facilities in South Africa), is directly related to international refining margins and the efficiencies of their local refining operations and the import parity pricing they receive for their production. The crude price impacts only indirectly through the relationship of refining margins to movements in the crude price. A secondary impact is through the negative impact of high prices on working capital. Marketing margins are regulated in SA cents per litre and therefore the marketing operations of these companies do not benefit from changes in crude prices.

Figure 5 : Gross Refining Margins



Source : ESAI Reports

The figure above shows gross refinery margins. These are the margins obtained per barrel before deducting the costs incurred by the refinery in manufacturing product. The margin is also dependent on the suite of products produced by a specific refinery. For example, Natref produces a much higher than average percentage of white product; therefore its margins are significantly higher than those achieved by the OOC's in South Africa.

The international upstream operations of the OOC's, reap direct and significant benefits from high crude oil and gas prices. (see figure 6 which relates crude oil prices to gas prices). As the local operations of the OOC's are solely marketing and refining operations, these profits fall outside of the scope of this Task Team. It should also be noted that the size of the businesses of the OOC's in SA is skewed towards marketing, given the history of compulsory synfuels offtake domestically. They are therefore heavily dependent on Marketing for their overall profitability.

Figure 6 : Average Naphtha/Brent Margin

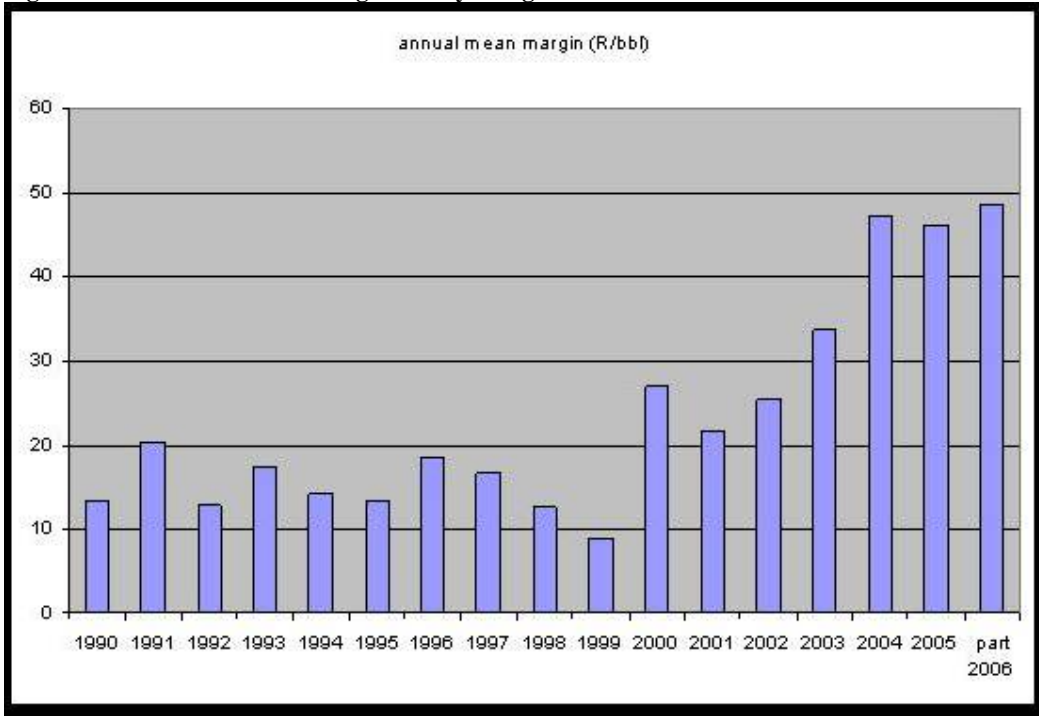


Impact of International refining margins on profitability of other oil companies

It is evident from the figures below that there has been a significant increase in refining profitability internationally in the last three years (and therefore also in South Africa). This is largely attributable

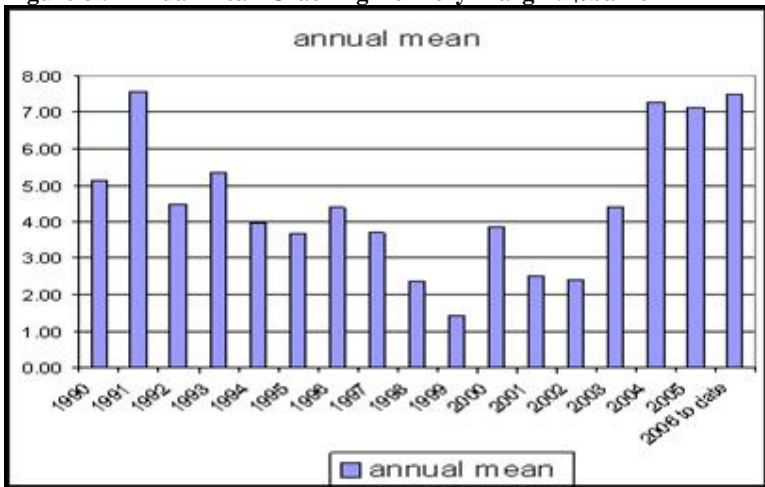
to supply-demand factors with few expansions and new refinery investments over the past decade given opposition to refineries by environmentalists and conservative expectations about future demand growth.

Figure 7 : Annual Mean Cracking Refinery Margin: R/barrel



Source: Platts, Industry Sources

Figure 8 : Annual Mean Cracking Refinery Margin: \$/barrel



Source: Platts, Industry Sources

6.1. Contribution of the Synthetic Fuels Industry to the South African Economy

It is generally accepted that the South African Synfuels Industry makes a substantial contribution to the economic policy goals of *growth, employment and foreign exchange* by creating value added, investment, providing jobs, and by saving on foreign exchange.

The two major producers are Sasol (coal-to oil/ chemicals) and PetroSA (natural gas-to-petroleum products). Sasol has the capacity to produce 150 000 bbl/d, and PetroSA produces 45 000 bbl/d – respectively meeting 23% and 7% of South Africa’s requirements⁵⁷.

Additional contributions relating to Sasol’s activities in the economy are listed below:

- The development of the leading, tested, world class synfuels production technology by Sasol has created a positive “technology halo” for South Africa.
- The establishment of the Sasol synfuels plants has resulted in the beneficiation of large quantities of low grade coal reserves
- Sasol played an important role in Mocambican-South African co-operation through the development and commercialisation of the Mocambican gas fields
- Sasol makes a large contribution to the liquidity and market capitalisation of the JSE Securities Exchange, being the second largest listed company by market capitalisation.

Quantifying the contribution by the synfuels industry in today’s terms is a challenge owing to the following observations:

- a) The latest actual data analysing economics of the synfuels industry was done in 1998. During the past seven years, there have been shifts in the weightings of different economic sectors and income distribution. The sustained growth in the economy and fluctuations in the exchange rate and crude prices have also been significant.
- b) Similarly, the information pertaining to the profitability of the synfuels operations relates to data for 2000. Subsequently there have been changes at PetroSA and Sasol has restructured its businesses, revised the basis of its cost allocation and transfer pricing and expanded. Additionally, the long standing synfuels supply agreements ceased and have been replaced by new agreements. Also Sasol has grown its gas business and has directly entered the retail fuels business.
- c) The fundamental approach used in generating the data was to ring-fence the production of synfuels. It is believed that the profits from synfuels have been utilised over the years to build other businesses. The profitability of the entire company would be more relevant.

The dividends paid by Sasol before privatisation will require additional research to uncover.

Subsequent to privatisation the IDC has remained a shareholder although its shareholding has been reduced from approximately 20% to about 8%. The dividends received by the IDC contribute to the funding that the IDC invests in new projects in fulfilling its development mandate.

PetroSA in 2003 paid a “once off restructuring dividend” of R1.6 billion. This included a R60 million in lieu of windfall profits and a “special dividend” of R570 million.

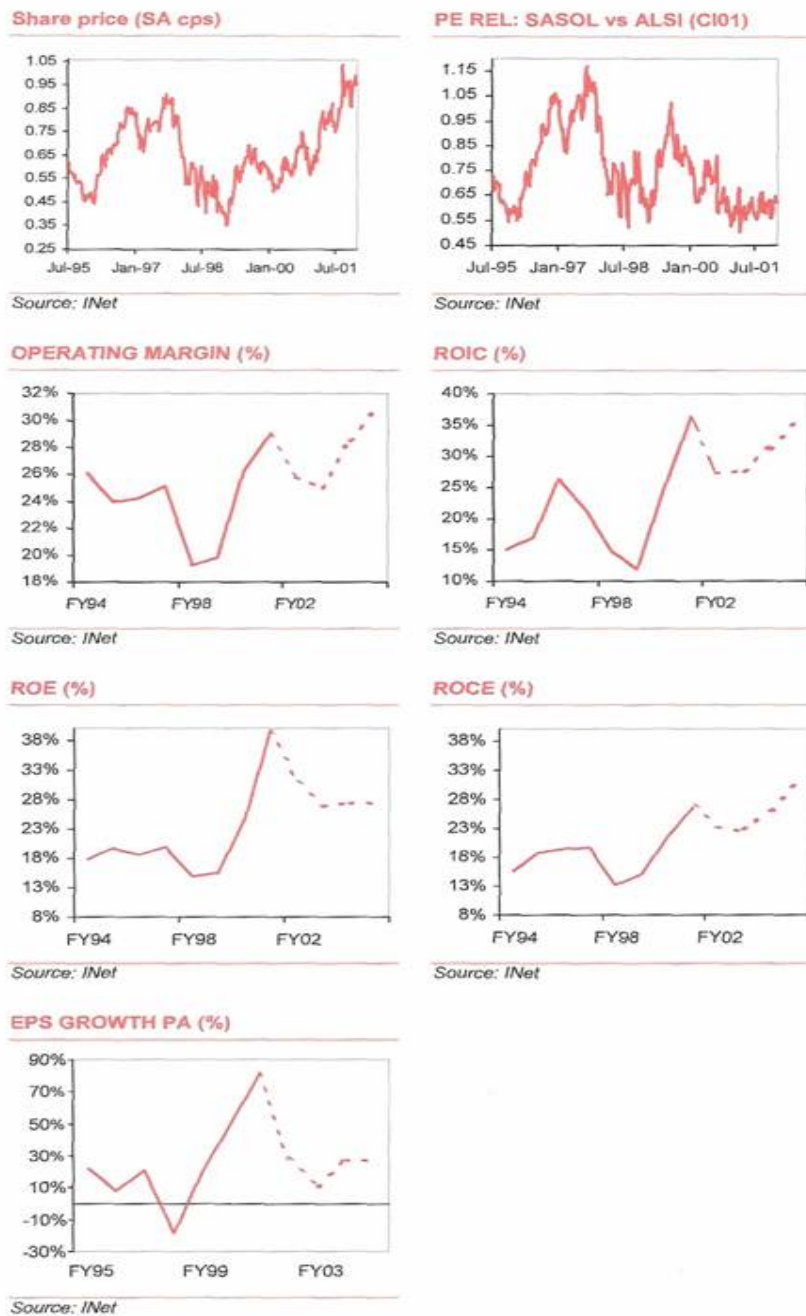
⁵⁷ SANEA (2003)

6.2. The Economic Viability of the Liquid Fuels Industry

6.2.1. SASOL

The historical performance of the Sasol Group (1995 to 2001) is shown in the charts below. The forecasts for the period to 2006 were made in early 2002.

Figure 9 : Sasol Group – Historical Share price performance 1995-2001



Source : Inet, BJM(2002)

The above graphs were sourced from a report on Sasol by Barnard Jacobs Mellet Securities (Pty) Ltd in January 2002. To update the above pictures, it is relevant to quote the extracts from the First South Securities (FSS) Report on Sasol, April 2006:

“The estimated increases in the production of synfuels is based on management’s forecasts of a 20% increase in volumes over the next 10 years. Sasol’s ten year capex programme is estimated at R150 billion, of which 32% will be spent in Southern Africa, 34% in the Middle East and 20% in Australia/China.

The group continues to generate strong cash flows which are used to cover debt, taxation, dividend obligations and service working capital requirements, and to finance capital investments. The large cash flows demonstrate a healthy business model that is highly geared to high oil prices. We note that, despite the substantial capex, the company is strongly cash generative with cash flow from operations up 36% for FY06. The compound annual rate of cash generated by operating activities over the last five years is 19%.

Approximately 90% of group sales are effectively denominated in US\$. Sasol’s results are directly geared to oil prices through product prices, refining margins and crude oil differentials. They are also indirectly geared to the oil price through petrochemicals prices and natural gas (lagged effect). ROE has increased from 18% in 2004 to 30% (est) in 2006.”

The BJM Report on Sasol quotes from Sasol Synfuels Division in 2002: “SSF commented that its cash cost is currently less than \$10 per barrel of crude equivalent. Its objective is to attain \$7 per barrel over the next five years.”

Comparing results for Sasol Oil and Sasol Synfuels with the results for the consolidated SAPIA members for the years 1998 to 2001, gives an indication of the difference in profitability between Sasol and the OOC’s.

Table 5 : Sasol Comparison of Returns 1998-2001

Return on Assets %	1998	1999	2000	2001
Sasol Oil (Fin Year) Before tax	40.7	45.0	37.2	47.7
Sasol Synfuels (Fin Year) Before Tax	27.2	31.7	63.1	101.6
SAPIA Annual Report 2002 After Tax	4.5	9.3	10.7	8.0

Source: BJM Report on Sasol (Jan 2002)

Table 6 : Sasol Group Return on Assets 1996-2005

%	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
ROA	34	36	25	27	38	53	55	37	28	38

Source: Sasol Limited Group, Summary of Statistics

All indications from the material available to us, are that Sasol's synthetic fuels operations as well as the Sasol Group have moved to maturity and are no longer in the need of "incubator" assistance.

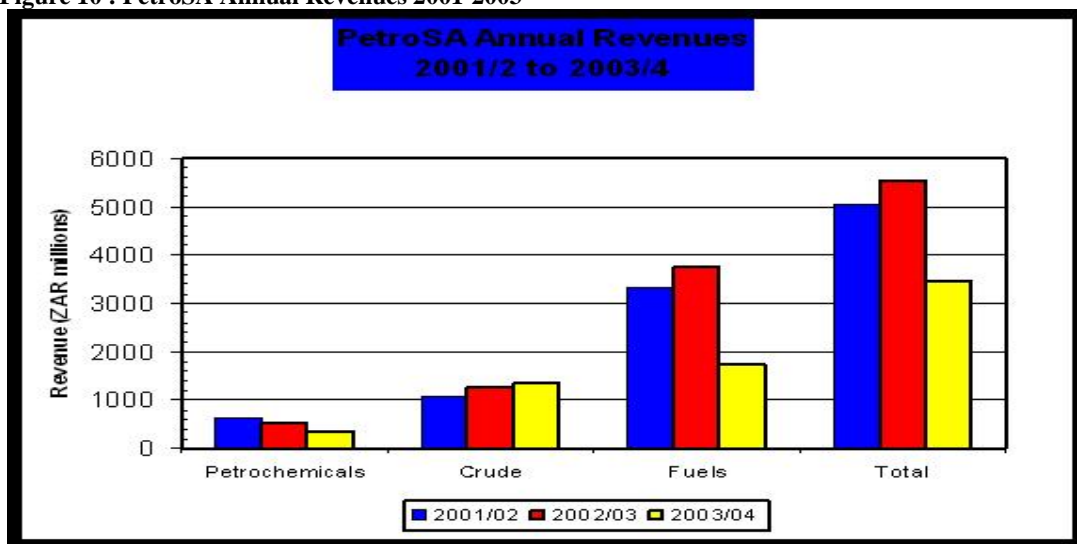
6.2.2. PETROSA

- The investment in PetroSA was funded through state guaranteed loans.
- Returns on these investments were negligible.
- Soekor had limited success in finding oil reserves, but found sufficient gas reserves to take Moss gas to 2008/9.
- Moss gas's life span was threatened by the lack of availability of gas. A further investment of R2.5 billion to develop gas reserves had to be made to extend the life span of Moss gas to 2008/9.
- A major challenge facing PetroSA is to secure feedstock for the Mossel Bay plant beyond 2008 and invest in related infrastructure.
- PetroSA sells most of its fuels to oil companies at a discount to BFP. These agreements expire in December 2007. It is unlikely to be renewed unless this is sanctioned by the Competition authorities. PetroSA's alcohols and distillates are marketed overseas at negotiated prices based on competing product prices which are moderately correlated with the crude price.⁵⁸
- The high-temperature FT technology currently being used in the Mossel Bay plant is licensed and is less commercially attractive to operate than the new LTFT technology that PetroSA is actively developing in partnership with Statoil. PetroSA and Statoil currently each hold a 37.5% interest in a SA JV, of which Lurgi holds the remaining 25%. This JV has invested in a semi-commercial plant in Mossel Bay, which is on target to prove the commercial viability of the technology in the near future. The technology could be licensed on a commercial basis to third parties and earn royalties. PetroSA could earn income from this investment.⁵⁹

⁵⁸ PetroSA (2006:13)

⁵⁹ PetroSA (2006:12)

Figure 10 : PetroSA Annual Revenues 2001-2003



Source : PetroSA (2004)

Table 7 : PetroSA Abridged Income Statement

Rand millions	2003 Actual	2004 Actual	2005 Forecast
Gross revenue	5882	3473	5623
Operating profit	2141	(396)	743
Net Investment Income	1159	636	592
Taxation	(20)	(1)	-
Profit after Taxation	3280	239	1335

Source : PetroSA (2004)

Table 8 : PetroSA Abridged Cash Flow

	2003	2004
Cash generated by operations	801	271
Cash used for investing	67	(382)
Loans repaid	(2006)	(224)
Decrease in cash equivalents	(1138)	(335)
Cash & cash equivs at y/begin	4111	2973
Cash & cash equivs at y/end	2973	2638

Source : PetroSA (2004)

6.2.3. Other Oil Companies

Table 9 : Aggregate Financial Results of SAPIA Members

APPENDIX 1 – AGGREGATE FINANCIAL RESULTS OF SAPIA MEMBERS												
	Year ended 31 December											
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Operating profit (R/m)	2 108	1 877	1 649	2 402	2 229	1 987	2 965	5 704	5 687	6 136	3 625	7758
Interest paid (R/m)	(173)	(250)	(323)	(447)	(454)	(683)	(389)	(789)	(673)	(1 141)	(1 062)	(617)
Income tax (R/m)	(596)	(582)	(402)	(568)	(474)	(419)	(667)	(1 249)	(1 682)	(1 178)	(983)	(2 591)
Net income (R/m)	1 339	1 045	924	1 387	1 301	885	1 909	3 666	3 332	3 817	1 579	4 550
Total assets (R/m)	10 845	13 324	14 466	17 634	18 597	19 546	20 492	34 157	41 451	41 849	37 794	57 169
Capital expenditure (R/m)	1 558	1 613	1 389	1 377	1 455	1 511	1 542	1 763	2 627	2 877	1 812	2 555
After tax return on assets (%)	12,3	7,8	6,4	7,9	7,0	4,5	9,3	10,7	8,0	8,4	4,2	8,0
Sales volumes (bn litres)	23,6	24,7	28,0	29,4	33,8	31,0	26,6	26,7	26,9	31,4	30,2	30,6
Net income after tax (c/l)	5,7	4,2	3,3	4,7	3,8	2,9	7,2	13,7	12,4	12,2	5,2	14,9

Source: SAPIA Annual Report

Operating profit for the SAPIA companies increased from R1.9 bill in 1994 to R3.0 bill in 1999. Results for 2000 and 2001 are skewed as they include Sasol Oil in 2000 and PetroSA in 2001. The comparatively higher profitability of Sasol Oil is illustrated by the inclusion of Sasol Oil in 2000, which contributed to the jump in profit to R5.7 bill. Between 2000 and 2004, operating profit increased by around R2 billion to R7.8 bill.

Annual capital expenditure by the industry has varied between R1.4 bill and R2.9 billion between 1994 and 2004.

After tax return on assets ranged between 2.9% and 14.9% with the highest return of 14.9% having been realised in 2004. The Marketing returns for the oil companies since 1990 are shown below.

Table 10 : SAPIA – Marketing of Petroleum Activities Return (MPAR)

APPENDIX 4 – MARKETING OF PETROLEUM ACTIVITIES RETURN (MPAR)																
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004***	2005
MPAR return (%)	(1,6)	3,4	8,7	13,9	12,0	9,2	6,8	8,8	9,7	7,3	4,0	3,8	1,9	9,72	-	-
Indicated margin increase (c/l)	4,0	4,0	2,3	0,0	0,0	2,7	4,9	3,6	2,5	3,81	6,75	6,93	8,97	3,21	-	-
Increase granted (in succeeding year)	-	4,0	4,0	0,5	0,0	0,0	0,0	2,0	1,0	0,5	1,23	2,58	6,93	8,97	2,0**	-
Margin at year end (c/l)	5,6	9,6	13,6	14,1	14,1	14,1	14,1	16,1	17,1	17,6	18,8	21,4	28,3	37,3	39,3*	39,3*

Source : SAPIA Annual Report

7. Defining the components of rent and identifying policy response options

Given the review of the history of the liquid fuels industry in South Africa and of its institutional and regulatory arrangements earlier in this document it is now possible to apply the conceptual framework outlined in Chapter 4 above. This enables us to undertake a preliminary analysis as to:

- whether economic rent is being generated in the liquid fuels sector, and if so,
- whether economic rent has been generated in the past, and
- whether the generation of economic rent can reasonably be expected to continue into the future.

This chapter thus identifies the steps in the value chain where economic rent has or is being generated and which qualifies for policy recommendations by the Task Team in terms of its TOR.

In determining the most appropriate policy response, we have screened each identified and qualifying excessive economic profit/rent stream by checking whether the qualifying economic rents being generated are likely to be reduced or eliminated by:-

- regulatory reform processes that the DME is executing, and/or
- the application of regulatory instruments by the relevant institutions that currently exist
- Economic liberalisation and/or the introduction of competition in the relevant part of the value chain is also considered as a mechanism to reduce or eliminate qualifying economic rent.

The results are consolidated and summarised in the summary recommendations Table 11 below. As is apparent, the excessive economic profits generated by most of the qualifying cost and revenue streams can be addressed by the current timeline of regulatory reforms, institutional regulation and/or liberalisation of the segment of the value chain concerned.

These regulatory policy instruments are under the jurisdiction of the Department of Minerals and Energy and associated energy regulation institutions.

There are four value chain revenue and cost elements where the generation of excessive economic rents, in the view of the Task Team, cannot be adequately addressed through regulatory reform, and where additional fiscal and other measures will be necessary. These are:

- upstream oil and gas production,
- excessive synfuel economic profit when oil prices are high due to the Basic Fuel Price mechanism (only partly addressed through regulation),
- tariff protection not refunded;
- inland “must have” volumes not subject to supply competition because of infrastructure constraints (could be fiscal or regulatory).

Recommendations for these are contained in separate chapters.

7.1. The Criteria

In chapter 4 we identify the conditions where fiscal and other policy measures could be considered to address the generation of excessive economic rent and past windfall profits from economic activities. In order to identify such areas the following questions need to be answered:

1. Were economic rents being generated in the distant or more recent past?
2. Were these past economic rents windfalls (i.e. *not* “anticipated in policy”)?
3. Is there a reasonable expectation for (continued) generation of economic rents in the future?
4. Do rents arise, or have they arisen, from natural resource extraction, or infrastructure and essential service or goods provision?
5. Are rents *not* based on efficiency improvements or the creation of valuable intellectual property?
6. Are rents caused by market power, or (possibly combined with) regulatory failure in the case of infrastructure, and essential goods and services (this criterion does not apply to natural resource rent).

If questions 1-2 and 4-6 are answered in the affirmative, a case can be made that windfall profits have been generated and that backward looking fiscal or other measures might be considered.

If questions 3-6 are answered in the affirmative a case can be made that continued economic rent extraction can be expected in future and that appropriate fiscal or other measures (including regulatory) could be warranted.

7.2. The Value Chain Approach

Like many modern industrial goods and services, liquid fuels have a long, complicated value chain producing a basket of fuel commodities which are subject to different market and regulatory conditions. This value chain is closely linked to the value chain of many associated commodities (chemicals and plastics); and includes commodities that are traded globally (crude and final products). In theory, rents can be extracted anywhere along the value chain, and also shifted between different commodities linked to the value chain. This complex situation poses a significant challenge to policy makers aiming to implement prudent fiscal and regulatory regimes while encouraging appropriate industry development.

For these reasons, rather than solely focussing the analysis on upstream production, we have broadened the scope to include most of the value chain. However, in order to achieve this we have had to adopt a number of simplifying stratagems to contain the level of complexity to manageable proportions. One area of complexity arises from the upstream side of the industry. The analysis has to cover both the synfuels industry which produces final fuel products and a myriad of other chemical and plastics commodities produced from coal *and* natural gas, and the conventional oil industry where oil companies import crude oil from around the world and refine it in three coastal and one inland refinery – all with different configurations and cost structures.

The historic and current South African price regulation ignores these differences and instead strives to use an international benchmark price. It uses a basket of international prices for refined product to benchmark an import parity price to set prices (initially the IBLC – In Bond Landed Cost, and now the BFP – Basic Fuel Price mechanism). Similar benchmarking mechanisms are used through

the rest of the value chain to build up the final retail price or wholesale market price. The analysis thus follows the value chain categorisation suggested by this practice.

Price is but one of the factors that determines a firm's revenues and whether it is able to generate economic rent. Revenues are the product of volumes and prices, implying that institutional and regulatory factors that impact on *volumes* at relevant steps in the value chain also need to be reviewed. Furthermore, per definition, economic rents are the difference between the full economic cost (opportunity cost) and revenues of the firm. This suggests that *cost* factors also need to be investigated. Market or regulatory arrangements could either impose additional costs on firms or save firms from incurring costs that they (and their competitors) would normally incur, by shifting such costs onto others, and thus affecting their profits and the level of economic rent that they might be generating. Thus the value chain categorisation also distinguishes between price, volume and cost factors.

A further complexity in the case of the production of synthetic fuels is attributing the correct costs to the various fuel and petrochemical feedstock streams that emerge from the reactors as some of the co-products are produced whether desired or not. This is of little relevance in the case of PetroSA as, until 2006, limitations imposed by its technology licence, prevented it from significant manufacture of petrochemicals. In the case of Sasol, compounding this analytical challenge is the fact that Sasol has historically attributed prices to the more valuable petrochemical feedstock streams at the "fuel alternate value". This, simply put, means the value such streams would have had, had they been utilised in the fuel pool rather than for petrochemicals. The question of possible transfer pricing between the fuels part of the business and the chemicals part of the business has thus been raised by analysts. Such matters are regarded by Sasol as highly confidential and we are not aware of a conclusive answer to such questions in the public domain.

Sasol's approach gives rise to perceived higher than realistic break even costs for the synthetic fuels manufacturers.

7.3. Identifying Windfalls and Expected Economic Rents

The results of applying the qualification criteria to the value chain as discussed above are shown in the following table and discussed in more detail below along with the fiscal implications. The elements listed do not cover every step in the value chain, but are considered to be the elements that could be significant factors in the generation of economic rent. The elements are listed in roughly "chronological" order. Revenue (price or volume), cost, and capital elements are included. The columns across the table list the qualification criteria outlined above with the two final columns showing our conclusions regarding whether past windfalls existed and whether future economic rent is expected or not. These conclusions take account of responses received to an earlier table contained in our published Discussion Document.

In cases where past windfalls existed or future economic rents are expected, we have identified four possible policy responses:

- Do nothing
- Reduce rent through regulation
- Reduce rent through liberalisation/increasing competition
- Claw back rent through an appropriate fiscal instrument

The question as to whether or not the liquid fuels sector, including the synthetic fuel industry, can be classified as a natural resource sector or an essential infrastructural service sector (or both) applies to the evaluation of most of the elements in the value chain, and determines the importance of establishing the existence of market power or regulatory failure in each case. This question is thus discussed first and is followed by a discussion of the individually listed value chain items as listed in the table in terms of the remaining criteria.

7.4. Rents arising in the natural resource extraction, or infrastructure and essential service or goods sectors?

Some confusion has at times arisen as to whether rents that might be generated from the synthetic fuels industry should be considered natural resource rents arising from the extraction of either coal or gas. The Task Team is of the view that, while resource rents might be generated from the low quality coal or gas used in these processes, the actual rent levels should be determined by comparing the value of these resources to the counterfactual of their alternative uses. In both cases we are of the view that this will reveal that the actual *resource* rent levels are very modest.

The question of natural resource rents, in the case of crude oil-based fuel production in South Africa, is similarly depreciated because almost all crude oil is imported⁶⁰ and can thus per definition not give rise to natural resource rents in South Africa.

Rather, the provision of liquid fuels should be viewed as both a basic infrastructure to the economy and an essential service to consumers. Consumers do not have realistic alternatives to replace liquid fuels. Here the historic role of taxpayers and consumers in funding the establishment of alternative fuels plant, and bearing the downside risk of the oil price highlights the necessity and social importance of investing in its establishment, and the role of synthetic fuel plants as essential infrastructure producing essential goods.

An important factor that comes into play with essential infrastructural services, as explained above, is the principle that the existence of economic rent is not appropriate in these sectors.

Not all respondents to the Discussion Document agreed that the liquid fuels value chain constitutes an essential service and/or basic infrastructure. Sasol argued that the value chain could not be regarded as a utility because it did not exhibit “the characteristics of utilities, which are by nature networked industries, in that all participants tend to share a monopoly distribution infrastructure (e.g. wires, railway tracks or in some cases pipelines). This is clearly not the case in either upstream, midstream or downstream oil.” Sasol (2006:35). Sasol further argue that a more appropriate response to excessive economic profits that might be generated from a highly regulated industry would be to consider regulatory changes. Total (2006:6) argue that the terms “essential service” and “infrastructure” need to be more clearly defined because they could also relate to other sectors where excessive economic rents are being generated. Total go on to argue that should any policy response be directed to the liquid fuels sector, this might be tantamount to discrimination if similar policy responses are not directed at other sectors also falling within these terms.

The Task Team acknowledges but does not necessarily agree with all these views. We have adopted an approach which does consider regulatory causal factors. Furthermore, our mandate is to focus on the liquid fuels value chain. Should our defining criteria affect other sectors, it is a matter that

⁶⁰ The small volumes of crude oil produced by PetroSA are sold at international market prices. The *resource* rent thus accrues to PetroSA.

policy makers may need to address. We have, in any case, considered a number of simultaneous qualifying criteria and have not elevated any single criteria above any others.

In our view this industry provides an essential service or essential goods. This is why most of its key installations have been designated “key points” in terms of the National Key Points Act. Also the industry is viewed as strategic by most countries; this is reflected in government intervention in the industry and the holding of crude oil or product stocks in strategic stockpiles as part of government policy. Much of the transport and distribution of liquid fuels in South Africa operates on the basis of “product swop” agreements and the sharing of distribution depot infrastructure. Although these facilities may not all necessarily (some are) be connected by pipeline networks, they nevertheless operate like a network industry in many respects. Interruptions in the supply of liquid fuels are regarded just as seriously as interruptions in the supply of electricity which is an undisputed network industry. For example interruptions in liquid fuels supply in December 2005 led the Minister of Minerals and Energy to appoint Adv. Moerane and a special investigative Task Team to look into the interruptions. The outcry in the media at the time was similar to that surrounding the electricity interruptions in the Western Cape at about the same time. The Competition Tribunal states that “Primary amongst these are, firstly, the strategic significance that fuel products assume in all countries” (Competition Tribunal 2006 Para 41). Coordination is necessary among (competing) producers and distributors in order to avoid interruptions in supply and optimisation of the system. These are the features of network industries.

Table 11 : Areas for possible policy response to past windfall profits and continued economic rent generation in the SA liquid fuels industry

Value Chain: revenue & cost elements	Criteria for assessing windfall and expected economic rent conditions						What is the Policy Response, if any				
	Past economic rents?	Were rents windfalls?	Expectation of future rents?	Resource extract., infrastru ct. or essential goods or services?	Market power or regulatory failure	Past Windfall profits?	Future rents?	Reduce Rent through Regulation	Reduce Rent through Liberal-isation/ increasing competition	Claw back rent through Fiscal Instrument	Do Nothing
Upstream – Economic rent components											
Cost: Resource extraction	Yes: Sasol (coal rent, minor); PetroSA (gas rent)	No (Rents were expected)	Minor	Yes (resource extraction)	n/a	No	Yes: reason for Royalty and Beneficiation Bills			New Royalty bill being implemented. 35% tax cap currently contained in the fiscal terms of OP26 will give rise to future calls for windfall tax on upstream producers. To address excessive economic profit, either introduce a linkage between royalty levels and the respective commodity price curve, or incorporate a progressive tax mechanism in the schedule of the income tax act that ultimately replaces OP26.. There should be a linkage between the rates chosen for coal and gas and the fiscal instrument that the Task Team is recommending for the liquid fuel industry	
Downstream – Economic rent components											

Value Chain: revenue & cost elements	Criteria for assessing windfall and expected economic rent conditions						What is the Policy Response, if any				
	Past economic rents?	Were rents windfalls?	Expectation of future rents?	Resource extract., infrastruct. or essential goods or services?	Market power or regulatory failure	Past Windfall profits?	Future rents?	Reduce Rent through Regulation	Reduce Rent through Liberalisation/increasing competition	Claw back rent through Fiscal Instrument	Do Nothing
<i>Import control</i>								Rent = additional capacity utilisation due to existence of import controls (similar to guaranteeing Sasol's softtake) If import policy remains unchanged, domestic refiners will continue to accrue a rent	Market is close to being in supply-demand balance New capacity must be built on an internationally competitive basis Task team recommends the immediate scrapping of import controls and replace with a new dispensation which gives preference for biofuel imports. <ul style="list-style-type: none"> • to meet renewable targets • broaden geographic sourcing • may encourage SADC supply 		
<i>Price: BFP</i>	Yes: All oil companies	??	Yes	Yes	Yes	??	If Yes: Regulatory & Fiscal	Contains an OPEC rent (not for synfuel refiners) Not a true import parity price Recommendation is to	Competition more likely in urban areas Regulator could regulate retail price cap for petrol & diesel Remove prohibition on	Even at a true import parity price, and high oil prices, producers using indigenous raw materials will make excessive economic profits arising from their different production cost structures.	

	Criteria for assessing windfall and expected economic rent conditions						What is the Policy Response, if any				
Value Chain: revenue & cost elements	Past economic rents?	Were rents windfalls?	Expectation of future rents?	Resource extract., infrastr. or essential goods or services?	Market power or regulatory failure	Past Windfall profits?	Future rents?	Reduce Rent through Regulation	Reduce Rent through Liberalisation/increasing competition	Claw back rent through Fiscal Instrument	Do Nothing
								<p>reduce BFP to true import parity (Uhambo evidence suggests that the BFP is still too high)</p>	<p>discounting & purchases on credit, etc. Pump attendant employment protected in Petroleum Products Act</p> <p>Likely outcome, rural prices will tend towards cap. urban area competition will lower prices</p> <p>BFP will not be gazetted, but regulator would use BFP in setting and adjusting the cap</p> <p>Will bring economic efficiencies by reducing excess of small retailers yielding lower fuel prices and economic benefits</p> <p>Adverse impact on small retailers, but this can be mitigated Act that currently prevents vertical integration</p>	<p>This can only be addressed through a specific fiscal measure. For administrative simplicity reasons, the Task Team has incorporated this into the fiscal system it is recommending a) in response to rents/excessive economic profits being generated by existing synfuel producers because of a perceived permanent structural increase in international oil commodity prices; and b) to incentivise future investment in liquid fuel production using indigenous raw materials</p>	
<i>Cost</i>	Yes:	??	n/a	Yes	Yes	??	n/a				

	Criteria for assessing windfall and expected economic rent conditions						What is the Policy Response, if any				
	Value Chain: revenue & cost elements	Past economic rents?	Were rents windfalls	Expectation of future rents?	Resource extract., infrastr. or essential goods or services?	Market power or regulatory failure	Past Windfall profits?	Future rents?	Reduce Rent through Regulation	Reduce Rent through Liberalisation/increasing competition	Claw back rent through Fiscal Instrument
<i>(saving):</i> Tariff Protection not refunded	Sasol, Petrosa?										
<i>Cost (saving):</i> Pipeline tariffs	Yes: Sasol; PetroSA; Natref, Chevron (e.g. pipeline tariffs subsidised);	Yes:	Yes: Sasol & Natref	Yes	Yes	Yes: Secunda & Natref	Yes: Until Energy Regulator sets tariffs	NERSA will soon be setting tariffs Task team recommends that NERSA be given an opportunity to address tariffs			
<i>Price:</i> Zone differential	No:	N/a	No	Yes	Yes	No	Under investigation by Regulator (DME)	Zone hopping is under review by DME and recommendations may flow from this process	See price capping above		
<i>Volume:</i> Uplift agreements	Yes: Sasol ; PetroSA	No	Yes: PetroSA See next point: Sasol	Yes	Yes	No	Yes? (See next point)				
<i>Volume:</i> Infrastructure constraints (“must have	Yes: Sasol; Total	Yes: Sasol and Total (since	Yes : Sasol ; Total	Yes	Yes	No	Yes: regulatory (DME)	Recommendation – the regulator to regulate the transfer price for the “must have”			

	Criteria for assessing windfall and expected economic rent conditions						What is the Policy Response, if any				
Value Chain: revenue & cost elements	Past economic rents?	Were rents windfalls?	Expectation of future rents?	Resource extract., infrastruct. or essential goods or services?	Market power or regulatory failure	Past Windfall profits?	Future rents?	Reduce Rent through Regulation	Reduce Rent through Liberalisation/increasing competition	Claw back rent through Fiscal Instrument	Do Nothing
volumes")		MSA lapsed)					failing which fiscal until infrastructure constraints removed	volumes. Ceiling is BFP (or regulated ceiling price). Floor is true import parity + pipeline tariff to inland markets Primary source of rents lie in the pipeline/transport infrastructure constraints			
<i>Price:</i> Service cost recoveries (delivery)	No	n/a	No	n/a	n/a	No	No Regulatory monitoring required (DME)	Road transport from depot to service station A matter for the regulator to monitor and regulate	See price capping		
<i>Price:</i> Wholesale margin (MPAR)	Yes: Wholesalers	No	Yes: Wholesalers	Yes	Yes	No	Yes: Regulatory (DME)	Recommendations are likely to flow from the study that DME are undertaking on the cross subsidy between users of diesel Diesel pricing has a wholesale price below which there is some competition Task team recommends, as with			

	Criteria for assessing windfall and expected economic rent conditions						What is the Policy Response, if any				
	Past economic rents?	Were rents windfalls?	Expectation of future rents?	Resource extract., infrastru ct. or essential goods or services?	Market power or regulatory failure	Past Windfall profits?	Future rents?	Reduce Rent through Regulation	Reduce Rent through Liberal-isation/ increasing competition	Claw back rent through Fiscal Instrument	Do Nothing
								petrol, that the regulator regulate a price cap on diesel & unequal treatment of service station assets be addressed			
<i>Price:</i> Retail margin	Yes	Yes	Yes	Yes	Yes	No	Yes: Regulatory (DME)				
Value Chain: capital elements											
Terms of Sasol privatisation	Yes	Unlikely to have anticipated the magnitude	Yes from technology benefits	Yes	n/a	Yes	to be determined (see below)				
Financing synfuel capital investment	Yes: Sasol, PetroSA	No	No	Yes	n/a	No	n/a				

7.5. Conclusions

In this chapter we have applied the conceptual framework outlined in Chapter 4 above to identify the steps in the value chain where economic rent has been, or is being, generated and which qualifies for policy recommendations by the Task Team in terms of its TOR.

What qualifies as excessive economic profit? In our methodology, we have argued that the litmus test of establishing whether excessive economic rent is being generated under the specific conditions indicated above, *merely qualifies the rent as being worthy of consideration for a policy response*. In our assessment of international experiences, we have noted that when a policy response has been implemented, it has often been a fiscal one – a super-tax or windfall tax – but because of the complex nature and unprecedented uniqueness of South Africa’s regulated liquid fuel value chain, there are a number of additional non-fiscal policy response options available to Government.

In determining the most appropriate policy response, we have screened each identified and qualifying excessive economic profit/rent stream by checking whether the qualifying economic rents being generated are likely to be reduced or eliminated by:

- regulatory reform processes that the DME is executing, and/or
- the application of regulatory instruments by the relevant institutions that currently exist
- economic liberalisation and/or the introduction of competition in the relevant part of the value chain is also considered as a mechanism to reduce or eliminate qualifying economic rent, or
- do nothing and allow the party concerned to continue to appropriate the rent/excessive economic profit, perhaps in the expectation that competition could develop in future?

The results are outlined in the **summary recommendations Table 11**. As is apparent, the excessive economic rents generated by most of the qualifying cost and revenue streams can be addressed by the current timeline of regulatory reforms, institutional regulation and/or liberalisation of the segment of the value chain concerned.

These regulatory policy instruments are under the jurisdiction of the Department of Minerals and Energy and associated energy regulation institutions and we develop our recommendations further in Chapter 13 below.

There are four value chain revenue and cost elements where the generation of excessive economic rents, in the view of the Task Team, cannot be adequately addressed through regulatory reform, and where additional fiscal and other measures will be necessary. These are:

- upstream oil and gas production,
- excessive synfuel economic profit when oil prices are high due to the Basic Fuel Price mechanism (only partly addressed through regulation),
- tariff protection not refunded;
- inland “must have” volumes not subject to supply competition because of infrastructure constraints (could be fiscal or regulatory).

Recommendations in respect of some of these four elements are contained in following chapters.

8. Upstream resource extraction rent

8.1. Coal mining

This is the only part of the value chain that resides in the natural resource extraction sector. Only minor rents are assumed to occur in coal mining, and these are expected to be addressed in future by Royalty and Beneficiation Bills and, as such, it is thus not considered an important area for Task Team recommendations.

8.2. Oil and gas extraction

The mining of oil and gas is usually considered a part of the upstream oil industry and in this sense is regulated under the Mineral and Petroleum Resources Development Act (Act No 28 of 2002). It is also subject to royalty taxes that are currently under discussion at this time as the new Mineral Royalty Bill is anticipated.

The Task Team made the observation in our July Discussion Document, that the royalty proposals contained in the draft Royalty Bill recommendations **will not** address excessive economic profit generation from current and future upstream oil and gas production.

To our knowledge, all current hydrocarbon fiscal jurisdictions apply an element of progressiveness in their treatment of oil and gas production profits, using a range of instruments including supplementary taxes, production sharing arrangements, etc.

As a mineral extraction dependent economy, it will not be prudent for South Africa to treat the offshore oil and gas industry as if normal company tax applies – as indicated in our report, the UK is following this trajectory but it can afford to do this because there is no longer a major geological potential in the North Sea and also because the UK economy is no longer dependent on its resource base.

Because South Africa's offshore geological prospects for oil and gas are relatively poor, there is definitely a case to have a fiscal regime that is more favourable than in other more established oil and gas acreages, but not to the extent of capping taxation at a level close to normal company tax.

If the potentially large reserves of oil and gas that are being drilled for by oil companies are proven, there is no existing fiscal instrument that could address the excessive economic profits that might be generated under such a scenario. It is the Task Team's view that the 35% tax cap contained in the prevailing fiscal terms⁶¹ may give rise to future calls for windfall tax on upstream producers, particularly at high oil prices.

Consequently it is recommended that to address this risk of excessive economic profit, the tax authorities should either introduce a linkage between royalty levels and the respective commodity price curve in the Royalty Bill, or incorporate a progressive tax mechanism into the schedule of the income tax act that ultimately replaces the OP26 mining lease currently in operation.

⁶¹ As set out in the OP26 lease administered by PASA

Elsewhere in this document we have recommended an incentive dispensation for the manufacture of petroleum products from indigenous raw materials for domestic consumption. Should this recommendation be considered, we point out that there should be a linkage between this dispensation and the royalty tax rates chosen for coal and gas when those raw materials are used for this purpose.

In the case of oil and gas extraction, the beneficiary of those rents is currently PetroSA and since it is wholly state owned and has already paid windfall and special dividends the only advantage of setting in place a known windfall tax dispensation would be an improved planning capability and greater certainty for both PetroSA and the tax authorities.

9. Potential windfall gains from the privatisation of Sasol

The favourable terms of the Sasol privatisation in 1979/80 in terms of the government guarantees provided is outlined in Chapter 5 above. These conditions were established to ensure the success of the privatisation and it is evident that they resulted in the generation of economic rent. There may have been some anticipation that economic rents would be generated in the privatisation process, but the extent of these rents is unlikely to have been anticipated. There does therefore appear to be a case for considering a portion of these rents to have been windfall gains in terms of the definition adopted in this report.

While the privatisation took place many years ago, the prospectus governing the private placement of the initial shares and subsequent public offer is instructive about the conditions of the privatisation and constitutes the basis of our view.

The privatisation windfall gains largely flowed from:

1. The absence of the payment of a premium price for the loss of 100% control, both in share ownership and stepwise reduction in board representation,
2. “Soft loans” provided by the IDC through Konoil: “An agreement was concluded on 20 July 1979 which provides for the future acquisitions by Sasol of Konoil’s interest in Sasol 2 and Sasol 3 which includes a 50% shareholding and substantial loans in each of the companies. The loans will be free of interest initially, but one half thereof will bear interest, up to a rate not exceeding that applicable to 10-year government stock, once Sasol 2 and later Sasol 3 each exceeds a profit level of R100 million after taxation.”⁶²,
3. The public investor was guaranteed downside protection on the major capital investment and commissioning of Sasol 2 (R2.503 billion) and Sasol 3 (R3.276 million). The downside in this high risk period for the projects was limited to R100 million.⁶³
4. There is no mention in the share placement document about the valuation of Sasol’s technology and it can reasonably be inferred that no price was paid to the government by Sasol for the acquisition of the technologies funded and developed over nearly 30 years by the government.⁶⁴ Patents were listed under fixed assets at nominal value, R2.00 for Sasol One Group and R1.00 for Sasol One. (Sasol Prospectus: p30).
5. Government undertakings to support the production of liquid fuels from indigenous raw materials. Government effectively undertook that it would ensure the continued profitability of Sasol through a direct support mechanism as well as through regulation. This is worded :

⁶² Sasol Prospectus for the private placement of 245 million ordinary shares, 15 August 1979: pg 6

⁶³ Sasol 2 and Sasol 3, from an accounting point of view, have been isolated from Sasol during the construction and commissioning periods, but when each of these projects has (sic) been put into successful commercial operation, the investor will start reaping benefits from them....Because Sasol2 and Sasol 3 have been so isolated from Sasol until they become wholly-owned subsidiaries, the risk of the public investor during the establishment of these two projects is limited to Sasol’s initial investment of R100 million by way of share capital of R50 million in each of those companies.”(Sasol Prospectus: pg 7)

⁶⁴ See, for example, the defined basis for valuing the remaining 50% of Sasol 2 and Sasol 3 when acquire by Sasol from Konoil. (Sasol Prospectus: pg 7)

-
- a. “An additional protection of 3.6 cents per litre...”
 - b. “This industry must have the assurance that as international oil prices increase in future, the prices of its products will also increase”.⁶⁵

In essence, the government surrendered control of the company, forgoing the profit streams associated with the divested shares and forgoing the technology ownership, whilst retaining virtually all the risk associated with the business of the company.

The conditions around the privatisation of Sasol are in some ways similar to those associated with the privatisation of utility companies in the UK where “privatised utility companies were said to have benefited from a windfall gain due to underpricing of shares at the time of privatisation and lax regulation during the early years in the private sector, which allowed regulated firms to exploit their market power and generate excessive economic profits. (Discussion Document p32/102). In the case of Sasol there are also additional soft loans and guarantees which greatly reduced the risk of the investment and ensured continued profitability. It can be argued that this is equivalent to hedging the downside of the investments.

While it may reasonably be inferred from the Sasol Prospectus that no premium was paid for the stepwise relinquishing of control by government, the document makes no clear statement to this effect. The absence of a premium in the valuation of the company may therefore be open to dispute.

By contrast, the reality and details of the “soft loans” provided by the IDC are well documented. Details of the repayment of these loans should be available in the archives of the IDC and Sasol. These records will make it possible to quantify the benefits accruing to Sasol through the provision of these loans by the IDC.

Similarly, the value of the downside protection guaranteed to the public investors - R100 million on an investment of R5.779 billion - during the early stages of Sasol 2 and Sasol 3, could be quantified using a methodology which classifies the protection as an underwriting benefit. At that time, it is estimated that the cost of providing the benefit would have been in the 5-10% range of the value of the benefit (around R500 million). An investigation of historical trends would enable a more accurate assessment of this value.

It is therefore the view of the Task Team that Sasol may have benefited from windfall gains at the time of its privatisation in 1979/1980. The example of the UK Government in imposing a windfall tax on privatised utilities does provide a comparable international precedent for the imposition of a windfall tax under similar circumstances.

However, there are some important factors which mitigate against the implementation of a windfall tax. Firstly, the retrospective nature of any such action is likely to have a negative impact on investor perceptions, notwithstanding any merits or demerits of the case, particularly given the extended time that has elapsed since privatisation. Second, the area of financial support for Sasol outlined under point 5 above, relates to possible regulatory failure. However, it is not possible to define whether the support which ultimately was provided by government’s direct support mechanism was intended or windfall.

⁶⁵ Sasol Prospectus: pg 7

Finally, National Treasury's aims in initiating the work of the Task Team are also relevant to the issue. We have not seen the overall intention of the exercise as a tax-raising exercise and, consequently, the Task Team **recommend** that the matter of potential windfall gains that might have been made because of the terms of Sasol's privatisation should be noted but that no further investigation or action be taken towards considering a windfall tax on such potential windfall gains from Sasol's privatisation.

10. The History of Synfuels Tariff Protection

10.1. 1954 to 1989

When Sasol One was commissioned in 1954/5 it received direct “tariff protection” equivalent to that afforded to SATMAR through -

- Two pennies per gallon subsidy (equivalent to 20% of end price)
- Half penny per gallon refinery investment incentive.

The tariff protection system operated through an Equalisation Fund that Government established. When oil prices were low a levy was added to the price of petroleum products and collected into the Equalisation Fund from where it was dispensed to synfuels producers. When oil prices were high synfuels producers paid something back into the Equalisation Fund and the proceeds used to reduce the contributions required from motorists when oil prices fell again.

In 1977 the Equalisation Fund was incorporated into the CEF Act and managed by CEF (Pty) Ltd.

This system was formalised into a set of rules by the Department of Minerals and Energy from the time of Sasol’s privatisation and listing on the stock exchange in 1979. According to Sasol this arrangement was “of a quasi-contractual nature” (Sasol 2006:22). For the period 1979 to 1989 support ranged from nil to 4,5 cents/litre (Sasol 2006:54) plus 0.9c/l excise duty rebate for fuels produced from indigenous materials. This prevailed up until January 1985 when it was suspended due to high oil prices. When oil prices dropped the 3.6c/l was reinstated in October 1986. With continuing low oil prices this was increased by 6.0 c/l in January 1988.

10.2. Cabinet decision on tariff protection – July 1989 - 1995

On 1st July 1989 a new system that varied from month to month was introduced and it prevailed until 1995 (the so-called Pim Goldby mechanism). This system provided a floor price of \$23/bbl below which Sasol received tariff protection to make up the difference to \$23/bbl. A formula was designed to provide synfuels manufacture with a minimum selling price in USD for petroleum products corresponding to an oil price of \$23/bbl. It was targeted at a 10% return on assets. Locational advantage was also taken into account.

Between oil prices of \$23/bbl and \$28.7/bbl the mechanism did not function.

When prices rose above \$28.7/bbl Sasol was required to refund the Equalisation Fund 25% of its revenue until the “slate” of cumulative benefit of protection received since July 1989 was wiped clean. The relevant part of the Cabinet decision of 6 December 1989 is recorded as:

“Cabinet has decided that the domestic industry should provide for the repayment of the amount of protection paid from 1 July 1989 after a crude oil price of \$ 28,70 per barrel has been reached according to a system of income sharing.

*“When crude oil prices exceed the level of \$ 28,70 per barrel, the domestic industry shall:
(i) turn over to the Equalisation Fund 25% of the additional gross income above \$ 28,70 per barrel on domestic production, before tax; and
(ii) continue with this payment to the Equalisation Fund until such time as the cumulative amount of protection has been recovered. No interest will be calculated.”*
(Sasol’s translation from Afrikaans)

The original Afrikaans text is:-

“die inheemse bedryf by ‘n ru-olieprys bokant \$28,70 per vat –

- (i) 25 persent van die addisionele bruto inkomste bokant \$28,70 per vat op inheemse produksie, voor belasting, aan die Egalisasiefonds moet uitkeer; en*
- (ii) met hierdie betaling aan die Egalisasiefonds moet volhou totdat die kumulatiewe beskermingsbedrag verhaal is. Geen rente word in berekening gebring nie.”* (Sasol 2006:57)

Was the cumulative amount of tariff protection recovered? Was the “slate” wiped clean? By the end of 1995 when elements of the tariff protection system were changed again, Sasol had an obligation to repay the Equalisation Fund the R3 726,5 million⁶⁶ less R24 719 646⁶⁷ = R3,701,780,354. Since the same tariff protection system applied to PetroSA, the same argument may be applied to PetroSA but of course the quantum will be different. PetroSA in their confidential response to the Discussion Document published by the Task Team pointed out that they have in recent years paid special dividends to Government including some earmarked as “windfall profit” dividends arising from a weaker than expected exchange rate. It is thus reasonable to assume that as at 1995 the synfuels producers had not wiped their slates clean.

The synfuels producers contest the notion that they have any remaining obligations in this regard. Sasol in its submission says that *“the nature of tariff protection extended to Sasol was of a quasi-contractual nature, with clear conditions and terms contained in each of the different dispensations”* (Sasol 2006:22). It goes on to say that *“When the tariff protection dispensation (which required repayment) ended in 1995, the obligation to repay was not renewed.”* (Sasol 2006:58).

It seems that in Sasol’s mind each tariff protection dispensation was a separate and distinct episode or compartment. When the new dispensation commenced in 1995 (see below) it clearly did not have a “claw-back” component. Sasol apparently interprets this to mean that because there was no instrument specified by Government *in the new dispensation*, then the obligation to repay the accumulated deficit fell away. And accordingly it is then able to say that *“Sasol complied in full with all its obligations in terms of the rules applicable to each of the dispensation”* (Sasol 2006:58).

The resolution of this matter then takes one into the murky waters of contractual law. The operation of that part of the Pim Golby mechanism that required Sasol to repay 25% of revenue above \$28.7/bbl until the slate was wiped clean was not, as far as we know, enforced by law or regulation.

⁶⁶ According to Arthur Andersen – see table below.

⁶⁷ According to SASOL the amount of tariff protection repaid after 1 July 1989. See Sasol submission Graph 5 page 58

It was merely a Cabinet decision that Sasol decided, voluntarily, to comply with. In this sense we believe that it could be characterised as a “gentleman’s agreement”. Sasol (2006) refers on the one hand to tariff protection as “*of a quasi-contractual nature, with clear conditions and terms contained in each of the different dispensations*” (Sasol 2006:22). But on the other hand it states that “*Sasol has been unable to verify the existence of either a written or verbal so-called “gentlemen’s agreement”*” (Sasol 2006:59). We submit these are the same thing.

The “gentleman’s agreement” argument is strengthened by the fact that when in 2003 Sasol believed that it no longer required tariff protection it refused to agree to the system of tariff protection that was proposed at that time⁶⁸. Although no legal opinion was sought by the Task Team it would appear that Government does not have an existing legal instrument capable of enforcing claw-back payments.

Although there may be a clear moral case in favour of synfuels producers “wiping the slate clean” the legal obligations to do so are less clear. The Task Team also did not have the benefit of contract law experts in order to come to a conclusive view on whether or not synfuels producer’s obligations to wipe the slate clean indeed existed and whether or not they could be enforced. Even if a case for such obligations could be made, it may be expected that attempts to enforce it would be challenged in the courts leading to a protracted process. And if Government were successful in the courts the actual recovery of the funds requires consideration. A single payment might cripple the companies and would at the very least seriously disrupt their investment plans. This should not be Government’s intention. A more reasonable view would be that such refunds be spread over a number of years. If this approach were adopted, how would that relate to the fiscal recommendations made elsewhere in this report? Would the refunds and excessive economic profit taxes run in parallel or sequentially? And for how long?

It appears from the preceding analysis that in resolving what appears to be a clear moral case there are still several unanswered legal and other questions. Also pursuing such a path will involve much effort and many uncertainties and risks, both legal and administrative, for all parties without the benefit of a certain conclusion. Therefore Government is advised to give careful thought to such matters before embarking upon such a path. Rather our **recommendation** is that the fiscal measures put forward elsewhere in this document be utilized as they yield a more elegant solution and provide greater certainty for all concerned.

The quantum of tariff protection received by Sasol is known up to 1995 and is recorded in the table below.

⁶⁸ Interestingly, this view regarding the need for protection co-incided with a period of increased profitability resulting from the decline in the value of the rand (see comments above pertaining to PetroSA).

Table 12: Protection Received by Sasol's synthetic fuel business

Year	Synthetic fuel volumes '000m ³	Protection value R million	Weighted average protection per litre SA c/l	Average weighted derived crude oil Price US \$ barrel	Average weighted IBLC SA c/l	Protection % of IBLC
1989/90	4 936	479,5	9,71	17,52	45,96	21,13
1990/91	5 341	223,3	4,18	24,16	58,13	7,19
1991/92	5 602	538,7	9,62	18,55	51,46	18,69
1992/93	5 791	629,9	10,88	18,31	53,18	20,46
1993/94	5 826	1 004,0	17,23	15,30	53,20	32,38
1994/95*	4 345	851,1	19,59	14,24	52,98	36,98
Average			11,70	18,77	52,39	22,33
Total	31 841	3 726,5				

Source : Arthur Andersen (1995:38).

10.3. Cabinet decision on tariff protection – December 1995

The Pim Golby mechanism was replaced by decision of Cabinet in December 1995 and a new dispensation based on the National Economic Forum commissioned Arthur Andersen Report was introduced. It was opposed by the other oil companies.⁶⁹ Cabinet did not adopt the Arthur Andersen recommendations unchanged. It made certain changes to the levels but adopted the overall “architecture” of the recommendation. This new system differed from its predecessor by the removal of an absolute price floor, and its replacement by two mechanisms:

- a stepwise decline in the floor price as set out in the table below.
- a provision that if the oil price fell below the floor price consistently for a period of 3 months then the benefit to synfuels manufacturers was capped at a percentage of the IBLC as set out in the following table.

⁶⁹ “...the OOCs regarded the Arthur Andersen report and recommendations as seriously flawed, and therefore strongly objected to and distanced themselves from these in the Liquid Fuels Industry Task Force. In our view, the fact that the synfuels industry undoubtedly received more tariff protection than was necessary, and was not obliged to repay any of this when prices rose significantly above the “floor” level, was an entirely predictable consequence of Cabinet’s decision to implement these recommendations.” : (Engen 2006:14)

Table 13: Revised Synfuel Protection System – 1995 Cabinet decision

YEAR	Floor Price - With effect from	FLOOR PRICE \$/bbl	Cap as % of IBLC
1995/96	Prior to January 1996	23	30
1996/97	January 1996	19	30
	1-7-96	18	
1997/98	1-7-97	17	25
1998/99	1-7-97	17	25
1999/2000	1-7-99	16	20

The “claw back” mechanism when oil prices were high was not a part of this new dispensation.

It should be noted that the decline in the \$ based floor price shown above is roughly the same as the decline forecast in the rand/dollar exchange rate by the Andersen Report. In other words, the floor price in rand terms – the currency in which Sasol and PetroSA incur the majority of their costs - remained approximately the same. Additionally, the breakeven costs of the synfuels producers, particularly of Sasol, are believed to have declined during the period under discussion, as a result of the installation of new reactors and the subsequent increases in volumes produced. It may also be reasonably assumed that, if a price cap had remained in place, its level would also have decreased commensurately.

It is necessary to point out that, contrary to Sasol’s submission, tariff protection under the “Arthur Andersen architecture” appears not to have ended. Although the system was to have been reviewed by mid-2000 and although it has taken Government longer than this, the matter was the subject of a recent Cabinet Memorandum which as far as we know did not lead to a substantive decision. It is also a fact that oil prices have since 2000 have not declined to a level that would have triggered the tariff protection system. However these pricing facts should not be confused with the idea that Cabinet had taken a deliberate decision to terminate tariff protection. To the best of our knowledge this has not happened.

10.4. Review of Arthur Andersen dispensation in 2000 & the PVM Report recommendations

This so-called Arthur Andersen dispensation was to prevail until 2000 when it was to be reviewed and a report given to Cabinet as to whether or not further protection was warranted and if so in what form. Studies were commissioned one of which found that the benefits that accrued to Sasol under the “Arthur Andersen architecture” were greater than predicted at the adoption of the system. Unfortunately the system was silent on what should happen in that instance. Good regulation these days provides for “re-openers” in the event certain assumptions prove to be incorrect.

Another study by an interdepartmental committee gave rise to the so-called PVM Report. This PVM report made certain recommendations. We understand that Cabinet subsequently requested that certain aspects of the recommendations be reconsidered and that all of these historical matters remain elements of work-in-progress.

10.5. Recommendations

The long and complex history of “tariff protection” appears to be unresolved and not concluded. It is **recommended** that Government conclude this matter expeditiously and in doing so tie up various loose ends. We also **recommend** that the fiscal options in response to excessive economic profits proposed elsewhere in this document be the preferred instrument for resolving any uncertainties that may remain at the conclusion of the long history of synfuels tariff protection.

11. Excessive synfuels economic profits generated by existing producers - permanent structural increase in oil prices – fiscal options

11.1. Structural propensity for synfuel producers to continue to generate excessive economic rent through the BFP mechanism

We have established in Chapter 7 and in Table 11 that when international oil prices are high, the Basic Fuel Price mechanism and the differential costs between synfuel production and crude oil-based production, results in the existing synfuel producers generating excessive economic rent. Turning to our methodological approach and elaborating on the criteria listed in Table 11 to determine whether rents are qualifiable:

1. Were economic rents being generated in the distant or more recent past?
 - a. Yes and these were mutually acknowledged as being excessive when oil prices rose above \$28.70. Above this level, 25% of the synfuel producer's gross revenues were repaid.
2. Were these past economic rents windfalls (i.e. *not* "anticipated in policy")?
 - a. No, such rents were anticipated, quantified and taxed accordingly under the subsidy system that was in place.
3. Is there a reasonable expectation for (continued) generation of economic rents in the future?
 - a. Yes, particularly given the structural upward shift in global oil prices.
4. Do rents arise, or have they arisen, from natural resource extraction, or infrastructure and essential service or goods provision?
 - a. Yes. The fuel supply industry is both basic infrastructure to the economy and an essential service to users, who do not have realistic alternatives to petroleum products.
5. Are rents *not* based on efficiency improvements or the creation of valuable intellectual property?
 - a. Yes. The threshold oil price of \$28.70 was set at that time, taking into account the then prevailing efficiencies of the synfuel plants. Any additional rents arising from improvements in efficiency by the synfuel producers would have accrued to the producers themselves.
6. Are rents caused by market power, or (possibly combined with) regulatory failure in the case of infrastructure, and essential goods and services (this criterion does not apply to natural resource rent).
 - a. Yes. Market power, particularly in the dominant inland market, is a contributing component of the excessive economic rent accruing to synfuel producers.

Hence, and largely arising from a) the differing cost structures between fuels produced from crude oil and fuels produced from the synthetic fuel processes and b) the BPF basis on which fuel prices are set, there is a structural propensity for synthetic fuel producers to continue to benefit from excessive economic rents in the future.

There are four possible policy responses that we have identified, namely:

- Do nothing (not an option, given the explicit TOR)
- Reduce rent through regulation
- Reduce rent through liberalisation/increasing competition
- Claw back rent through an appropriate fiscal instrument

In Chapter 13, we make recommendations regarding the Basic Fuel Price and other regulatory elements pertaining to the second and third policy responses, but such changes will not address that component of excessive economic rent that is derived from the difference between the cost structures of conventional refining and synfuel production.

11.2. The rationale for a fiscal response

As evidenced in the additional work request (which is appended to the original Terms of Reference), National Treasury seeks advice primarily on a **fiscal response** to a situation where:

- Government is concerned that synthetic fuel producers are making excessive economic profits in circumstances where an apparent structural increase in oil prices has occurred and,
- Tariff protection has been removed at times and reinstated at times;
- There have been several different protection dispensations;
- Such producers were, for a considerable period, the subject of a “tariff protection” dispensation that included a derived oil “floor price” of \$23/barrel below which they were protected and a mechanism for the refund to the state of 25% of revenue when oil prices exceeded \$28.70 per barrel until the cumulative amount of protection was recovered;
- Government, by mid-2000, planned to review the “tariff protection” dispensation for the synthetic fuels industry and has not yet taken a final decision on the outcome of that review.

To this end, the TOR also requested that the Task Team give consideration to four specific fiscal mechanisms, amongst others, which we do below.

11.3. Incomplete process of reviewing previous subsidy/excessive economic rent recovery system⁷⁰

It is clear to the Task Team that, from the outset of the tariff protection system that gave birth to the synfuel industry, there was a prior recognition by both Government and synfuels producers that excessive economic rent would implicitly be taxed at a different rate through the mechanism that clawed back excessive economic rent at the rate of 25% of the synfuel firm’s revenues when oil

⁷⁰ The history of synfuels tariff protection is covered more fully in Chapter 10.

prices were above \$28.70. The form that this “tax” took was not to accrue to the fiscus, but instead to directly return the excessive rent to an equalisation fund that only benefited the users of petroleum products.

It is also clear from the preceding chapter that in 1995 Government started a process of reviewing the subsidy system (mainly from an energy policy perspective) and that it made some interim adjustments with a view to finally concluding on the review in 2000. From the perspective of the *fiscal* authorities, the 1995 Andersen process, and the subsequent PVM exercise, were viewed as exercises that, amongst others, reviewed this “tax” in terms of its rationale, structure, form, appropriateness and level.

The evidence led in our investigation suggests that this process is still incomplete in that Cabinet has not concluded on the review. While oil prices were below the original threshold of \$28.70 during the 1990s and up until 2002, there appears to have been no strong motivation to conclude this process, although it is not clear to the Task Team why the matter was not addressed earlier.

Apart from this unique circumstance and historical legacy, international market conditions for fuels have substantially changed, triggering fiscal responses by the authorities of a number of countries. The most notable example is the action of the UK Government which, in 2002 and again in 2006, imposed a supplementary corporate tax on oil producing firms on the basis of a perceived permanent structural increase in the price of oil.

Before considering an appropriate fiscal instrument, as we are asked to in our Terms of Reference, it is necessary to define what constitutes the “excessive” part of the economic rent that is being generated.

Our recommendation in regard to a fiscal option has two components. The first addresses the issue of an appropriate oil price threshold or trigger price, above which any rents accruing would be regarded as excessive. The second component considers different fiscal mechanisms which could be utilised to apply the tax. Our response to this task is set out in the following two sub-sections.

11.4. What is an appropriate oil price threshold or trigger price, above which any rents accruing would be regarded as excessive?

Due to the dearth of data relating to synfuel production costs, taking account of the liquid fuel and chemical product streams amongst others, and the extremely tight timeframes imposed on this process, it has not been possible for the Task Team to rigorously determine such a level.

However, the Task Team notes that it is a matter of record that between 1989 and 1995 the prevailing subsidy regime used a derived oil price of \$28.70 per barrel as a threshold previously and that it was accepted by all parties, above which rents were regarded as “excessive” and thereby subject to a supplementary tax of 25% of revenue. The Task Team also notes that the PVM (2003) investigation recommended that a derived oil price of \$28 per barrel be the threshold.

The Task Team therefore recommend that the previously agreed \$28.70 threshold be utilised as a trigger price and that it be adjusted to a present day equivalent taking into account exchange rate and inflation trends as well as other relevant factors such as changes in the relationship between crude and product prices which have occurred since the 1995 date on which the Andersen formula came into force.

11.5. *Alternative process for determining an appropriate trigger oil price above which any rents accruing would be regarded as excessive?*

An alternative to using the \$28.70 threshold could be to develop a new trigger oil price, utilising relative production cost data for synthetic fuel and crude oil-based operations. Based on a literature survey, and utilising updated estimates made in the Andersen and PVM Reports, the Task Team has estimated benchmark costs of greenfield GTL and CTL production plants, as well as the estimated costs of existing amortised GTL and CTL production facilities in South Africa (Appendix 3). However, we outline some of the complexities associated with this approach in Chapter 7.

In addition, determining such a threshold was a key objective of the PVM study⁷¹, but even at that time, the Task Team understand that there were some reservations about the trigger levels identified by PVM. We therefore suggest that, should Government wish to adopt this approach and to determine an appropriate trigger level afresh, that a focussed exercise be undertaken which builds on the PVM work. As with the PVM study, this may require the firms concerned to provide commercially confidential information and it may be appropriate to involve, several relevant arms of Government.

11.6. *What is the optimal fiscal mechanism for applying an excess economic rent tax on the synfuel industry to address a permanent structural increase in international oil prices?*

11.7. *Cost-based administered price regime*

“Analogous to the price regime applicable to the refining industry, synthetic fuel producers could be reimbursed for their output on the basis of a cost-plus structure. This would mean, in practice, a separate price for the synthetic product and an excess profit tax (or subsidy in the event of a negative differential) would fall on the gap between synthetic fuel production costs and standard refinery costs.” (Terms of Reference)

Commentary

In theory the system is simple to administer, if costs are known, but it has many problems in practice. This has led to a broad consensus in regulatory economics about the undesirability of cost-plus type approaches. The primary problems relate to the existence of substantial information asymmetries with respect to costs and economic risks, and to adverse incentives with respect to expenses, capital formation and efficiency improvement. It is widely recognised that this system may encourage “gold plating” and unnecessary expenditure.

Cost-based regulation also runs in an opposite trajectory to current energy policy which is aimed at deregulation of the liquid fuel value chain.

⁷¹ This study was concluded in May 2003 as a part of the Cabinet review of tariff protection and was managed by an interdepartmental Government Committee led by the Department of Minerals and Energy.

Cost-based regulatory approaches are rejected by most commentators on the discussion document who addressed it, including Shell (2006: 16), Engen (2006: 10), Sasol (2006:144), PetroSA (2006:52), Teljeur (2006) and BUSA (2006). The Consumer Goods Council of South Africa (2006) expressed a preference for a “Cost-based limited administered pricing regime”.

In addition the pricing of co-product chemical streams from synfuels reactors, discussed more fully elsewhere in this document, provide a particular challenge to cost-based methodologies.

Task Team view

As experienced by PVM, any attempt to fairly determine an updated \$28.70 threshold will require concrete information on synfuel production costs and, in that sense, an element of the cost-based price regime may be inherent in any system that may ultimately be adopted. From the Task Team’s point of view, we would prefer a simpler mechanism if it were possible. The additional complexity of this method lies in the definition and measurement of “standard refinery costs”. Refining costs vary according to the scale of production and complexity and age of the refinery. Even within South Africa, a comparison of refining costs between the four crude-oil based refineries will show a wide variance. A further complicating factor, is the substantially higher capital costs associated with synthetic fuels manufacture compared to conventional refining. There would be much debate around what would be considered to be an appropriate level of capital recovery for the different manufacturing facilities.

For the reasons outlined above we recommend against the *Cost-based administered price regime* as the primary fiscal mechanism to address to excessive economic rent on synfuel producers.

11.8. Progressive formula tax

“Synthetic fuel production could be subject to a formula-based progressive profit tax, along similar lines to the South African gold mining tax formula. Such a formula has some advantages over a price or cost-based arrangement in that it avoids sharp tax thresholds and is linked directly to profitability. It can also provide for relief during periods of low commodity prices and low profitability.” (Terms of Reference)

The PetroSA submission provides a succinct explanation of the gold mining formula tax as follows:

“Briefly, the formula applies to income accruing to gold mining companies specifically from gold mining, and provides a tax-free tunnel of 5% i.e. no tax is paid on the first 5% of profitability as determined in terms of the Income Tax Act. The company is taxed at a marginal rate of either 35% or 45% on income in excess of this profitability.

The tax applies on a ‘per mine basis’ – the aim of this was to ensure that richer mines are taxed at higher rates than poorer mines, so that each mine is taxed according to its own profitability.”

Commentary

This proposed regime has similarities to the Chinese system, in which taxes are applicable at higher rates as the oil price progresses into higher bands. However it is distinguishable on the basis that this proposed regime applies to profitability, whereas the Chinese system is more akin to an excise tax.

At heart, this system has similarities with a cost based regime with progressive taxation, and thus suffers from the same problems as cost-based regimes outlined above. As profits are the difference between revenues and costs, pressure to cut costs is reduced. Furthermore, similar information asymmetry problems exist as with cost-plus systems and such a system is thus likely to have high administrative costs while these problems will remain.

In general the progressive formula tax approach has received a favourable response from some commentators responding to the discussion document published by the Task Team (Petrosa, 2006; Sasol, 2006; CGCSA, 2006), while others reject it (Meintjes and Jacques, 2006; Shell, 2006; BUSA, 2006).

Task Team view

To cater for the volatility exhibited by oil prices in recent times, the Task Team would also recommend that a concept of a sliding rate of taxation contained in the progressive formula be adopted, depending on the particular oil price and we adopt this in our recommended fiscal response below.

11.9. Revised subsidy scheme

“A price support and reimbursement arrangement could be reinstated. This might take the form, for example, of a floor price below which synthetic fuel producers would receive a subsidy, or pay a reduced fuel levy, and a ceiling above which a supplementary tax or revenue-sharing levy would be payable.” (Terms of Reference)

Commentary

This system was the basis on which the South African synthetic fuels industry has developed and has thus been successful in facilitating local production. However, the evidence suggests that this policy, together with its associated policies of ensuring offtake for synfuels producers, etc, has come at a high cost to the economy.

Government policy to liberalise the industry has meant that it has moved away from this approach in recent years. Depending on how this system is implemented it also has the risk of creating adverse incentives by removing too much business risk from private investors.

One of the beneficiaries, Sasol, has been a major exporter of petrochemicals in recent decades and has encountered difficulties in the USA and other countries with such exports on the basis that the system of “tariff protection” used by Government constituted a subsidy and that consequently their petrochemical exports were subsidised. International trade rules are becoming increasingly complex and strict.

Although the administrative efficacy and low administrative costs of such a system has been demonstrated over many years the risks lie elsewhere as has been pointed out above.

This system lacks a proper legal basis. In the past it relied upon what we have called a “gentlemen’s agreement” between the Government and Sasol and what Sasol has termed a “quasi-agreement”. It does however lack a proper legal basis in that neither the Petroleum Products Act nor the CEF Acts that have been used in the past make explicit. During the course of the PVM review when this concept was mooted and Sasol objected, the legal weaknesses came to the fore. The legal advice we

are aware of suggests that as things stand the Government does not have a legal basis in order to implement this scheme without the consent of the synfuels producers.

This approach is opposed by a majority of the players who comment on it (Engen, 2006; CGCSA, 2006; BUSA, 2006; Sasol, 2006), while a minority support it (PetroSA, 2006; Teljeur; 2006).

Task Team view

The concept contained in the original subsidy system of the “ceiling”, above which a revenue sharing levy was appropriated into the Equalisation Fund is not supported by the Task Team. The intention of the original scheme was to facilitate investment and, as such, the mechanism is entirely unsuitable for the purposes of addressing a structural upward shift in the price of oil. Furthermore, the original subsidy system effectively capped the taxation of excessive rents up to the amount of total subsidies received.

However, we make a further recommendation in Chapter 12 below, aimed at securing the optimal contribution to the economy of the synfuel industry, which does adopt the concept of the original subsidy scheme. From a practical perspective, given that the operational aspects of this subsidy system is well understood by the parties concerned, it may be easier to adapt the mechanism rather than recreate a mechanism.

11.10. Investment-linked tax and subsidy options

“With due regard to economic and environmental considerations, account could be taken of investment by synthetic fuel producers in expanded or improved production capacity as part of an incentive-based targeted tax regime.” (Terms of Reference)

Comments

It is generally accepted that the benefits of growing local production, particularly from indigenous resources, could justify appropriate financial support to such investments. An appropriate balance has to be found between: promoting local investment and employment; reducing oil and fuel product imports; containing energy costs; reflecting the greater benefits of biofuels over fossil based fuels; encouraging efficient risk taking by private investors; ensuring that investors are rewarded for the greater societal benefits of local and renewable production; protecting the viability of investments during times of low oil prices; protecting society against sustained excessive economic profits from fuel as an essential infrastructural industry; and providing *ex ante* and *ex post* investor confidence.

Some of those that responded to the Task Teams discussion document have argued in favour of investment linked tax and subsidy options, including Sasol (2006: 145), Teljeur (2006) Engen (2006, only for biofuels). This option receives a lukewarm, but most favourable response from BUSA (2006: 10), while those not in favour include Shell (2006) and CGCSA (2006).

Task Team view

This section, seeks to respond specifically to the request by National Treasury to advise primarily on a **fiscal response** to a situation where:

- Government is concerned that synthetic fuel producers are making excessive economic profits in circumstances where an apparent permanent structural increase in oil prices has occurred and,

-
- in circumstances where such producers were, for a considerable period the subject a “tariff protection” dispensation that included a mechanism for recovery of excessive economic profit when oil prices exceeded \$28.70 per barrel and it is not clear if that recovery mechanism has been removed or not;
 - where, by mid 2000, Government planned to review the “tariff protection” dispensation for the synthetic fuels industry and has not yet taken a final decision on the outcome of that review.

The Task Team therefore have, in this chapter, separated the excessive profit taxation mechanism from any linkage with an investment promotion or other energy policy aims and objectives. To achieve such objectives, as requested in the TOR, we make a specific recommendation on an investment-linked tax and subsidy mechanism in Chapter 12.

11.11. Recommendation - excessive economic rent tax on the synfuel industry to address a permanent structural increase in international oil prices

As a fiscal response to rents/excessive economic profits being generated by existing synfuel producers because of a perceived permanent structural increase in international oil commodity prices, the Task Team notes the following basis for its recommendation:

- The “tariff protection” or subsidy and “clawback” system that gave birth to the synfuel industry reflected prior recognition by both Government and synfuels producers that excessive economic rent would implicitly be *taxed* at a different rate through the mechanism that clawed back excessive economic rent at the rate of 25% of the synfuel firm’s revenues when oil prices were above \$28.70 per barrel. The form that this “tax” took was not to accrue to the fiscus but to directly return the excessive rent to the Equalisation Fund that only benefited the users of petroleum products.
- It is also clear from the preceding chapter that in 1995 Government started a process of reviewing and amending the subsidy system (mainly from an energy policy perspective) and that it made some interim adjustments with a view to finally concluding on the review in 2000. From the perspective of the *fiscal* authorities, the 1995 Andersen process, and the subsequent PVM exercise, were viewed as exercises that, amongst others, reviewed this “tax” in terms of its rationale, structure, form, appropriateness and level.
- The evidence encountered in our investigation suggests that this process is still incomplete in that Cabinet has not yet concluded the review. While oil prices were below the original threshold of \$28.70 during the 1990s and up until 2002, there appears to have been no strong motivation to conclude this process.

Recommended oil price threshold/trigger price

The original subsidy regime effectively determined that oil prices above \$28.70 represented an increase outside a “structural” price band and incorporated a built-in mechanism to share the additional benefits above that price.

Based on our reasoning above, the Task Team **recommend** the adoption of a simple excessive economic rent tax on the established synfuel industry based on a trigger price that is equivalent to the \$28.70 that prevailed in 1995 (adjusted for inflation and exchange rate differences and other relevant factors).

It is our view that the current rand equivalent price, (adjusted for inflation and exchange rate differences and other relevant factors) since the review commenced in 1995, could form the oil price threshold, above which rents accruing would be regarded as excessive and subject to a special tax. It must be noted that although reference is made here to an oil price in USD per barrel, this is only a convenient short hand. In fact the actual mechanism used in the past and advocated here reflected a petroleum product price in Rands per litre.

Recommended process for determining oil price threshold/trigger price

If adjusting \$28.7/bbl for inflation and exchange rate differences and other relevant factors does not prove satisfactory an alternative would be to determine an appropriate trigger level afresh. A focussed exercise would need to be undertaken which builds upon the PVM work. As with the PVM study, this may require the firms concerned to provide commercially confidential information and it may be appropriate to involve several relevant arms of Government.

Recommended fiscal mechanism

The Task Team recommend that National Treasury consider a pure fiscal option of an additional special fuel levy on existing synfuel producer's volumes at a level commensurate with the level of permanent structural increase of oil commodity prices and based on current plant capacities.

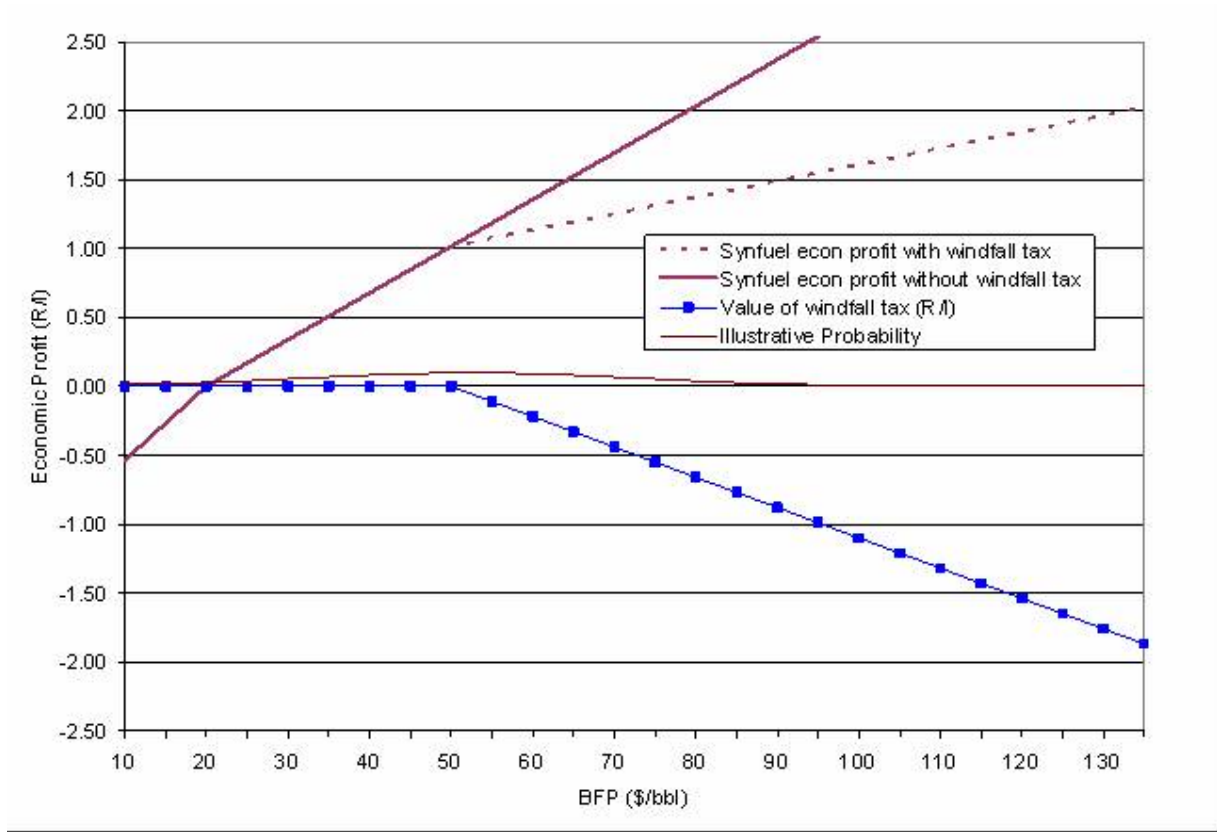
In addition, to cater for the volatility exhibited by oil prices in recent times, the Task Team would also recommend that, unlike the original subsidy system, a concept of a sliding rate of taxation contained in the progressive formula be adopted, linked to prevailing oil prices.

We illustrate this mechanism in the following graph which models the synfuel economic profits above and below the suggested excessive profit trigger price. Table 20 below sets out the assumptions made in the model.⁷²

⁷² The formula used to convert from crude equivalent prices to product prices is taken from the PVM report.
*Weighted Product Price = (Derived Crude Price*1.21916051) + 6.1906816763 (all in constant currency and volume units)*

The formula allows for losses during the conversion process and the increased value of refined product.

Figure 11 : Graphical representation of proposed excessive profit tax for existing synfuel producers using an illustrative \$50/bbl threshold



The information shown is for illustrative purposes, but could be viewed as preliminary suggestions for the parameters of the proposed fiscal mechanism.

The progressive tax rate begins at 20% at \$55/bbl and increases by an additional 20 percentage points for every \$5/bbl increase in the oil price.

12. Fiscal options to address the future contribution of synthetic/biofuels to the economy

Thus far, we have deconstructed the complexity of the value chain, identified the respective components of rent, and we have recommended a specific **fiscal response** to rents/excessive economic profits being generated by existing synfuel producers because of a perceived permanent structural increase in international oil commodity prices and because of the BFP structure which determines domestic pricing of liquid fuels (as outlined in Table 11)

The TOR also calls for recommendations which achieve the following additional key policy aims.

- Improved efficiency of the value chain and the transfer of such efficiency gains to the consumers of liquid fuel (we adopt this as a general underlying consideration for all our recommendations)
- As a subset of the above, regulatory reform across the value chain, in accordance with the evolution and application of energy policy is key (this is discussed in Chapter 13)
- Future investment in the liquid fuel value chain, particularly in regard to meeting accelerated growth targets, reducing unemployment and improving security of supply
- Reduction of the negative impact on the domestic economy on fuel price volatility and, if possible, a reduction of fuel prices to final consumers
- Energy policy objectives for the liquid fuel value chain

In a subsequent chapter we will make recommendations which stretch regulatory and liberalisation policy responses to their limits in order to reduce such rent generation as identified in Table 11.

This Chapter addresses the latter three of these aims. It begins with a review of the expected supply shortfall that our growing economy faces. Having established the scale of finished fuel product requirements, we briefly state our understanding of current energy policy approaches towards demand- and supply-side choices and how this might affect the prioritisation of investment choices between conventional fuel, synthetic fuel and biofuel production options.

On this basis, we develop a proposed investment support mechanism which forms part of our ultimate recommendations. We do this by considering the merits of the four fiscal options identified in the TOR *in terms of their appropriateness to facilitate future investment in liquid fuel production* while simultaneously addressing the potential negative impact on imported fuel price volatility and high cost.

12.1. Supply – Demand forecast to 2012

SAPIA(2006) estimate that, on a high growth scenario (3.5% per annum), the domestic liquid fuel market will require an additional 4,740 million litres per annum of petrol, diesel and kerosene in

2012 equivalent to about 80,000 barrels per day. SAPIA (2006) also report that current refining and synfuel production capacity were close to their limits in 2005. The forecasts apply the same growth rate to all three key products. Historical and current trends, however, point to higher growth rates for diesel. Given the already tight supply position for diesel, it is clear that significant quantities of diesel will have to be imported in the next few years and underpins the need for investment in diesel-producing new capacity.

Table 14 : Preliminary forecast of fuel supply-demand shortfalls in 2012

	Millions of litres							
	2005 Refining capacity actual	2005 Demand actual	2005 Surplus/ (shortfall) actual	2012 Refining capacity	2012 Low growth demand	2012 Low growth surpl/(shortf)	2012 High growth demand	2012 High growth surpl/(shortf)
Petrol	13 300	12 106	1 194	13 000	13 440	(440)	15 400	(2 400)
Diesel	9 000	9 091	(091)	9 300	10 090	(790)	11 570	(2 270)
Kerosene*	3 700	3 044	656	3 800	3 380	420	3 870	(70)

* Kerosene includes jet fuel and illuminating paraffin

Source : SAPIA (2006)

In the Discussion Document, the Task Team requested current and potential members of the liquid fuel industry to comment on the following:

- In recent months, controversy has reigned over the forecasting of electricity consumption, particularly in the light of Government's accelerated growth targets. Please therefore comment on the expected impact of higher than expected economic growth on the accuracy of the SAPIA forecasts.
- How do your member companies plan to meet the expected growth in the domestic fuels market - through domestic production or imports?
- Is there any macroeconomic and/or microeconomic advantage in meeting such anticipated demand growth from domestically produced fuel instead of imported fuel? If not, how might this be changed?

The crude-based refiners broadly concurred with the SAPIA forecasts and indicated that they will meet growing domestic demand through increased imports, increased purchases of domestically produced synthetic and biofuels and increasing refining throughput and capacity (Engen 2006:10). However, their indications are that new capacity is only likely to be commissioned once the capacity shortfall is significant enough to absorb the new capacity and then only if the domestic refining project is shown to be more profitable than importing finished product. (Engen 2006:10) The Task Team also notes that there are a number of very large scale greenfield and brownfield refining projects under construction in the Middle East and elsewhere which is likely to ease the current global shortfall in refined product. Total (2006) report that 500 projects have been announced worldwide including 66 new refineries (8.5-16 million barrels per day capacity), 180 upgrading projects (4.7 million barrels per day) and 180 projects to meet more stringent fuel specifications. Any crude refining expansion project that a transnational oil company might consider in South Africa is likely to be carefully weighed up against these international expansion projects.

Coastal refiners also pointed to potential pipeline capacity constraints in getting their product into the inland market in the future.

Sasol, in their written input, estimated that if the RSA, Botswana, Lesotho, Namibia and Swaziland markets grow at a rate of 6%, a 150,000 barrel facility could be justified. In their oral presentation, Sasol were far more forceful, arguing unequivocally that the best option for the South African economy was a new coal-to-liquids plant (CTL). Sasol further stated that, given the lead times involved in constructing CTL plants, there was an urgent need for government and Sasol to set up a working group to progress a CTL project. It also emerged in press reports after the Task Team's public hearings that Sasol had already initiated discussions with government, through the Ministry and Department of Minerals and Energy.

In the view of the Task Team, an overhasty response which closes off supply options is unwarranted at this stage and we believe that there is ample time for a range of policy responses to be debated and developed. **As a start, we recommend that careful attention be given by government and industry to further develop and refine the supply-demand forecasts.** South Africa's recent experience in the electricity sector have demonstrated the dangers posed by complacent dependence on information flowing from dominant players in the sector, coupled with deficient forecasting and the lack of attention to empirical detail.

Additionally, we **recommend** that government support for specific investments should be based on a range of factors which takes into consideration:

- Capital intensity per unit of output
- Energy efficiency of the mode of production
- Operating costs and the likely sustainability of operations
- Logistics constraints and transport costs
- Job creation opportunities

12.2. The macroeconomic impact of increased fuel imports

The macroeconomic impact of increased fuel imports in a medium term scenario of high oil prices is quite significant. The IEA (2004) estimated that:

“...According to the results of a quantitative exercise carried out by the IEA in collaboration with the OECD Economics Department and with the assistance of the International Monetary Fund Research Department, a sustained \$10 per barrel increase in oil prices from \$25 to \$35 would result in the OECD as a whole losing 0.4% of GDP in the first and second years of higher prices. Inflation would rise by half a percentage point and unemployment would also increase. The OECD imported more than half its oil needs in 2003 at a cost of over \$260 billion – 20% more than in 2001. Euro-zone countries, which are highly dependent on oil imports, would suffer most in the short term, their GDP dropping by 0.5% and inflation rising by 0.5% in 2004. The United States would suffer the least, with GDP falling by 0.3%, largely because indigenous production meets a bigger share of its oil needs. Japan's GDP would fall 0.4%, with its relatively low oil intensity compensating to some extent for its almost total dependence on imported oil. In all OECD regions, these losses start to diminish in the following three years as global trade in non-oil goods and services

recovers. This analysis assumes constant exchange rates. The adverse economic impact of higher oil prices on oil-importing developing countries is generally even more severe than for OECD countries. This is because their economies are more dependent on imported oil and more energy-intensive, and because energy is used less efficiently. On average, oil-importing developing countries use more than twice as much oil to produce a unit of economic output as do OECD countries. Developing countries are also less able to weather the financial turmoil wrought by higher oil-import costs. India spent \$15 billion, equivalent to 3% of its GDP, on oil imports in 2003. This is 16% higher than its 2001 oil-import bill. It is estimated that the loss of GDP averages 0.8% in Asia and 1.6% in very poor highly indebted countries in the year following a \$10 oil-price increase. The loss of GDP in the Sub-Saharan African countries would be more than 3%.”

In 2005/6, South Africa’s total trade balance was a negative R66 billion. In that year crude oil imports amounted to R57 billion, or some 87% of the current account deficit.

If future growth in fuel demand is met from increased imports of either crude oil, finished products or even imported biofuels or biofuel inputs, the current account deficit will increase quite significantly.

In June 2006, the SARB increased interest rates by 0.25%, on the basis of inflationary expectations. Crude oil imports, coupled with exchange rate fluctuations, have a significant direct and indirect impact on inflation.

In fact the South African economy’s short term exposure to imported fuel inflation is at the level of 100% of its domestic consumption of fuel because of its regulated pricing system, even though 30% of the fuel consumed is produced from domestic primary resources.

It would appear that, for as long as the BFP-based fuel pricing mechanism is used to set retail petrol prices and provide the guideline for the domestic prices of other petroleum products, current or increased domestic fuel production will not have any short-term influence on the inflationary impact of rising crude oil prices. There would however be longer term advantages through the reduced trade deficit impact as well as a positive impact of increased investment, jobs created and the like.

12.3. Scan of Government Policy Processes underway

12.3.1. Terms of Reference

In its Terms of Reference the Task Team is required to -

- *“Identify key economic, technological, environmental and financial considerations relating to the future development of synthetic fuels and its future role in the South African economy;”*

The TOR also requests the Task Team to –

-
- “Take account of, and where relevant, comment on the various policy processes that are currently underway in respect to the fuel industry, including:
 - Energy policy and policy processes,
 - Other relevant tax dispensations and policy processes, including those associated with the proposed Mineral royalty regime and the taxation of intellectual property rights, e.g. Trade Marks,
 - Beneficiation dispensations and policy processes, and
 - Any other relevant dispensations and policy processes.”

Consequently this chapter seeks to locate the discussion of future development of synthetic fuels within the existing policy context, whilst at the same time commenting upon the policies themselves.

12.3.2. Energy Policy Processes

The Task Team is aware of the following energy policy processes that have relevance to its Terms of Reference –

- (a) **The White Paper on Energy Policy** (1998) is in the process of being implemented. The key elements of this White Paper that have relevance to this Task Team are the following –
 - (i) The Liquid Fuels sector is in a process of transition from a highly regulated one to a deregulated one. Various milestones set out in the White Paper as prerequisites for deregulation have been achieved and the legislation and accompanying regulations are now all in place, bar one or two currently being finalised. In the section concerned with Liquid Fuels it is stated that –

“The cornerstones of the future policy framework will thus be:-

- *Deregulation;*
- *The stable and continued availability of quality product throughout the country at internationally competitive and fair prices;*
- *The preservation and promotion of formal sector employment;*
- *The desire for commercially based retail pricing in which the industry does not engage in inter-fuel or rural-urban cross subsidies;*
- *The preservation of retailing activities for small and medium businesses;*
- *Black economic empowerment reflected in the composition of the industry at all levels and significant domestic black ownership or control in all facets of the industry;*
- *The maintenance and enforcement of adequate health, safety and environmental standards;*
- *The promotion of a coastal refining and petrochemicals hub for future investments;*
- *Adequate provision for national strategic considerations relating to security of supply; and*
- *Tariff protection for vulnerable sectors where justified by cost-benefit analysis;*

-
- *A low cost pipeline and storage infrastructure suitably regulated to encourage optimum investment, to prevent the abuse of these natural monopolies and to prevent the exclusion of new entrants*

Underlined phrases are deemed to be especially significant for the Task Team. Other relevant policy statements are reflected below -

- *“Government is committed to promoting a climate that would be conducive to reasonable profits and sustained investment in the liquid fuels industry.”*
- *“Tariff protection afforded to the synthetic fuels industry is being progressively lowered. The need for such protection will be reviewed before mid 2000.”*
- *“Government will introduce a deregulated oil industry as predetermined milestones are achieved.”*

(ii) Security of supply concerns are addressed as follows –

“Given increased opportunities for energy trade, particularly within the Southern African region, government will pursue energy security by encouraging a diversity of both supply sources and primary energy carriers.”

Progress has been made in this area in so far as substituting petroleum based energy carriers is concerned. Natural gas has been introduced from Mozambique and feasibility studies are underway with regard to the importation of liquified natural gas. A strategy to diversify into biofuels is under development (see below).

(b) The **White Paper on Renewable Energy** (2003) sets a renewable energy target (about half of which is expected to be met by biofuels) and is in the process of being implemented⁷³. In order to facilitate the achievement of this target the following dispensation has been put in place by Government –

- (i) the **Fuel Levy** on biodiesel has been reduced by 40%;
- (ii) accelerated depreciation for biofuels manufacture;
- (iii) the DME has introduced a **Renewable Energy Subsidy Office** and is in the process of dispensing R14.5 million over three years;
- (iv) the **Designated National Authority** required to approve projects for the purposes of claiming carbon credits from the Clean Development Mechanism has been set up in the DME;
- (v) Cabinet in December 2005 approved the establishment of an **Interdepartmental Task Team to develop a Biofuels Strategy**. The Task Team is currently developing this strategy and is expected to present its proposals to Cabinet in the third or fourth quarter of 2006.
- (vi) **Regulations made under the Petroleum Products Act** allow for the blending of bioethanol with petrol (10%) and biodiesel with petroleum diesel (5%, 10%, 20%, 30%, 50% and 100%);

⁷³ Government’s medium-term (10-year) target is: 10 000 GWh (0.8 Mtoe) renewable energy contribution to final energy consumption by 2013, to be produced mainly from biomass, wind, solar and small-scale hydro. The renewable energy is to be utilised for power generation and non-electric technologies such as solar water heating and biofuels. (White Paper on Renewable Energy)

-
- (vii) **Import Control Policy:** The Minister of Minerals and Energy recently gazetted “Guidelines For Recommendations On The Importation And Exportation Of Crude Oil And Petroleum products For Public Comment” published in the Government Gazette no. 28952 on 23 June 2006.

12.3.3. Taxation of mining rights and intellectual property rights

These matters are dealt with elsewhere in this document..

12.3.4. Beneficiation dispensations and policy processes

These matters are dealt with elsewhere in this document where the Minerals Beneficiation Bill is considered.

12.3.5. Other relevant policy processes with a bearing upon the development of fuel production from domestic resources

- a) The **Integrated Sustainable Rural Development Strategy (ISRDS 2000)** was "designed to realise a vision that will attain socially cohesive and stable rural communities with viable institutions, sustainable economies and universal access to amenities, able to attract and retain skilled and knowledgeable people, who are equipped to contribute to growth and development".
- b) The **Accelerated Shared Growth Initiative of South Africa (ASGISA)** includes as one of its pillars the growing of feedstocks for, and manufacture of biofuels. One of the key drivers of ASGISA is understood to be job creation.
- c) **National R&D Strategy (2001)** is the Department of Science & Technology's vehicle for increasing the quality and quantity of R&D in South Africa. It seeks to promote domestic R&D and the domestic growth of intellectual capital. Developments in the synfuels industry suggest that this is not happening in South Africa to the extent that it could. Not only does this diminish our domestic R&D but there is also a risk that synfuels technology will gradually migrate offshore. The energy sector is one of the key strategic sectors identified as needing renewed impetus in strategic planning and investment in R&D. The developing trend of South African companies purchasing R&D abroad highlights a potential problem for South Africa with its aspirations to become a knowledge economy. The case in point is Sasol's investment in St Andrews heterogeneous catalysis facility and R&D programmes in Europe and Northern America. This might benefit South Africa in linkages with advances in R&D abroad, however if the trend continues it will erode the knowledge base that is needed to sustain the synfuels industry in South Africa. The Task Team is of a view that, if intellectual property migrating out of South Africa is seen as a threat, it must be seen in a broader context than just the potential takeover of a local company by an international company. The new knowledge bridges that are continually being built by Sasol and PetroSA outside of South Africa are

enabling technological progress in synfuels outside of South Africa at the expense of local technological development.

- d) **The South African National Energy Research Institute:** This is a joint initiative of DME and DST to develop expertise for a sustainable energy sector. Initiatives include university based research programmes in renewable energy and clean coal.
- e) **The South African Hydrogen Vision:** A DST programme that investigates the role South Africa could play in the nascent hydrogen economy. Hydrogen and fuel cells are seen as key technology solutions to mitigate petroleum based products challenges. The CTL technology is seen as one of the potential bridges to generating hydrogen.
- f) **Working for Water** programme (focuses on removal of invasive alien species – a potential source of vegetable matter for biofuels), Working on Fire and Working for Wetlands programmes.
- g) The **Expanded Public Works Programme** includes elements that could have synergy with the implementation of a national biofuels strategy e.g. Land Care and CSAP programmes.
- h) **Working for Woodlands:** a programme run by the Department of Environmental affairs and tourism;

12.4. Implications and consideration of Policy Processes underway

It is noticeable that government's energy policy has shifted away from international security of supply and perhaps as a consequence thereof there are no initiatives underway that are concerned with future new synthetic fuels manufacture.⁷⁴ Instead there are several policy initiatives underway (or implemented) that envisage a future biofuels industry contributing to the liquid fuels industry in future.

The world is currently experiencing what appears to be a permanent structural increase in oil prices.⁷⁵ This, together with increasing concern about global oil production reaching its peak, suggests that the South African government should be concerned about oil prices as an external economic shock, as well as about its long term supply implications. In this context, policy concerns about future domestic fuel production are warranted.

Both synfuels and biofuels manufacture are supply side approaches to meeting transport fuels supply and price concerns. There is relatively little being done by Government with regard to *demand side* approaches to transport fuels. This is despite the fact that Cabinet commissioned a "Technology Audit of the Transport Fuels Sector in South Africa" in June 2001.⁷⁶ It found that "Measures and mandates to improve the efficiency of existing and new vehicles represent *the single*

⁷⁴ Recent press reports reflecting comments by the Minister of Minerals and Energy about possible plans for additional synthetic fuel production investments in South Africa seem to suggest that this policy is under review.

⁷⁵ The fall in oil prices to levels around \$63/bbl at the time of finalising this report is noted.

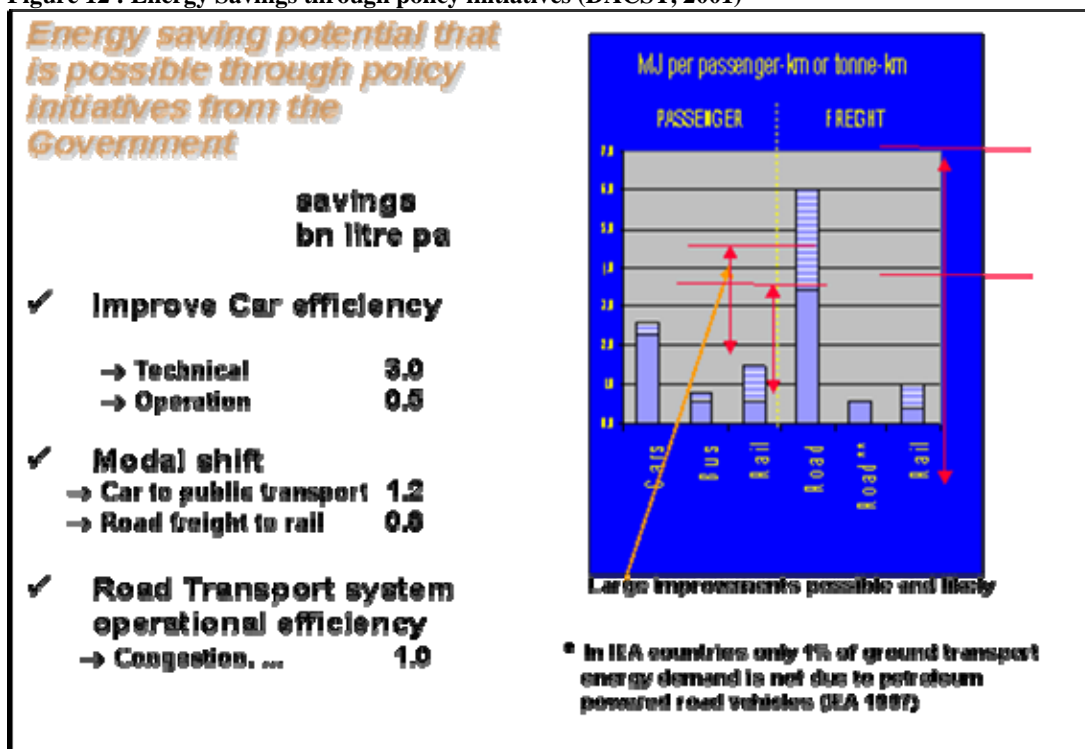
⁷⁶ DACST (2001), Technology Audit of the Transport Fuels Sector in South Africa - Report to the Departments of Arts, Culture, Science and Technology (DACST) and Minerals and Energy (DME), June.

most effective way for the Government to slow down the rate at which demand for oil-based fuels will grow.” (pg 13, emphasis added).

Surprisingly the Government has done little if anything to address this opportunity. In fact despite the commercial availability of increasingly fuel efficient vehicles Government is not monitoring the vehicle pool efficiency. The DME has had plans to intervene in the market to influence it in the direction of more efficient vehicle for some years now but nothing has thus far materialised. Such plans include compulsory advertising of consumption with the selling price and adjusting vehicle license fees to correspond to fuel efficiency instead of vehicle mass. Personal income tax could also be revised to reward efficiency instead of distance covered. A number of associated policy initiatives can be adapted to support this, including appropriate targets of the Motor Industry Development Programme (MIDP) that is currently under review, the Taxi Recapitalisation programme and the recapitalisation of Spoornet with its associated plans to shift significant quantities of freight from road to rail.

The benefits of such an approach were clearly spelt out in DACST (2001). These and similar measures are “low hanging fruit” that can be achieved at low cost to Government and the economy and we **recommend** that they be pursued with urgency.⁷⁷

Figure 12 : Energy Savings through policy initiatives (DACST, 2001)



⁷⁷ The value of such an approach has been amply demonstrated by the recent electricity supply crisis in the Western Cape where, after years of what can only be described as a pedestrian application of demand-side management, a concerted effort in a relatively short space of time by all parties in the value chain has reaped considerable reduction in electricity demand, particularly during peak periods.

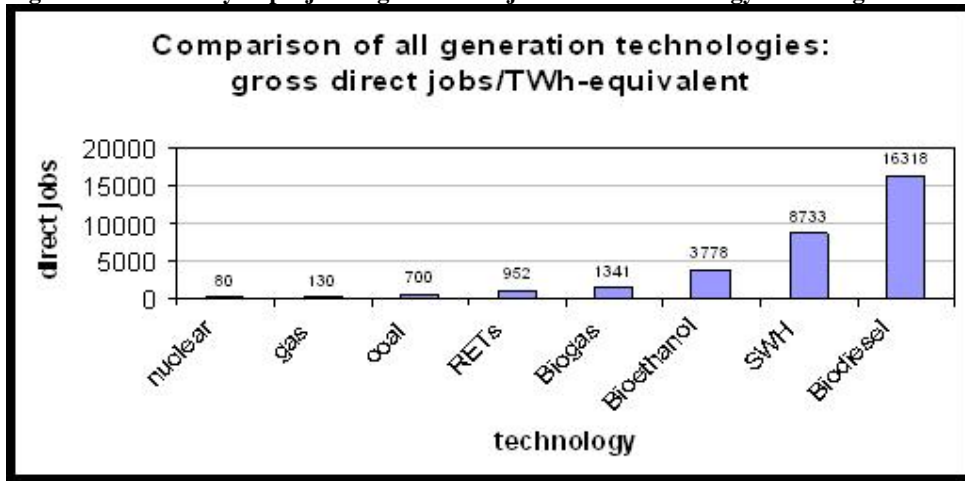
Given South Africa's relatively low cost electricity resources consideration should be given to the possibility of encouraging greater use of electric vehicles for specific applications, including urban commuting. This consideration is particularly pertinent in the context where additional CTL investments are being considered. The value chain of converting coal to motive (kinetic) energy in internal combustion vehicles is extremely wasteful of domestic energy, given the poor energy efficiency of the CTL process and low efficiencies of internal combustion engines. If the same coal was used in modern power stations to generate electricity used for rail or road transport, the same coal could be used to move approximately three times more vehicles, thereby displacing the fuel that would have been used. This is a complex issue and deserves further investigation.

The advantages of domestic fuel production from indigenous resources are the following:

- a) **Self Sufficiency / security of supply:** This was the objective of investment in synfuels capacity. The output of synfuels from indigenous resources has fallen from their peak⁷⁸. Also there has been market growth and consequently the synfuels share of the domestic market is on a declining trend.
- b) **Balance of Payments / Value added:** Savings in the importation of crude oil or petroleum products, South Africa's largest single import item, has benefits for the economy. Importation of petroleum products is more costly than crude oil and means that the value added to crude oil takes place in another economy. SAPIA has recently issued a media release warning that South Africa will soon need to begin importing petroleum products as domestic refining capacity becomes insufficient to meet domestic demand. Manufacturing petroleum products domestically means that the value added is captured within the economy along with the employment and secondary economic impacts. Investigations into the economic benefits of Sasol's synfuels manufacturing in the past have consistently found it to be beneficial to the economy.
- c) **Price advantages:** Production costs are linked to local prices and this can pass on cost advantages to the economy in times of petroleum price spikes. Conversely in times of petroleum price slumps support for such industries can pass on costs to the economy. Support for such industries then inevitably turns upon predictions of the oil price – a notoriously difficult task.
- d) **Technology development:** Both synfuels and biofuels technologies appear to be on the cusp of extensive global growth and development. Being an early leader in the development of global technologies can lead to long term benefits.
- e) **Environmental and employment benefits:** Biofuels have significant environmental benefits over synthetic or crude oil based fuels. Domestic biofuel production also will have orders of magnitude greater employment benefits per litre of product produced as illustrated in the graph below.

⁷⁸ PetroSA now has to import condensate to make up for reduced local production. Sasol's Project Turbo reduced fuel output by approximately 1 billion litres p.a.

Figure 13 : Summary of projected gross direct jobs for various energy technologies in 2020, AGAMA (2003)



Domestic manufacture of biofuels deserves particular mention not least because it is the focus of a Cabinet mandated Task Team. The recently published guidelines on import control for petroleum referred to above do not consider the strategic implications of petroleum based imports of fuel in comparison with biofuels substitutes. Consider the case of crude oil imports. It has been argued elsewhere that at \$70/barrel the crude oil price includes an international political risk premium of say \$30-\$40/barrel. This rent flows out of the pockets of South African motorists to oil producing nations and shareholders of multinational oil companies, both for the most part external to the SA economy.

Assuming that price and all other things are equal, an alternative is for South Africa to import biofuels from producing nations. This has the following advantages-

- The rent in the price will flow primarily to other developing nations that for the most part lack oil resources (Brazil is an important exception) with the consequent geo-political implications;
- Biofuels contribute to environmentally sustainable development whereas petroleum does not;
- Supply risk is reduced as sources of supply are more diversified and begin to be shifted out of the politically volatile Middle East. If significant global volumes are achieved there could even be a price moderating impact;
- Imports of biofuels are expected to stimulate a domestic market.

It also has disadvantages. Value added could be lost to other economies and local refineries could be threatened. A possible solution lies in the short term future when domestic refiners can no longer meet domestic demand thus requiring imports of refined products. Import control policy could then be shifted to favour biofuels instead of petroleum fuels.

12.5. Preliminary Findings

In the light of the preceding discussion the Task Team finds that there is merit in:

- (a) rapidly implementing demand side management measures for the consumption of petroleum products (see DACST (2001) for details) in order to reduce the capacity of supply side options required. It is recognised that these recommendations have been presented to Cabinet before but with little result. Nevertheless the Task Team commends them to the Minister again as being worthy of serious consideration and further development, also in the area of demand shifting to electric vehicles.
- (b) considering a policy change in petroleum product import control when domestic demand exceeds domestic supply and that such change favour biofuels over petroleum fuels, all other things being equal.
- (c) in the domestic beneficiation of indigenous raw materials to manufacture petroleum products. South Africa has very limited proven resources of crude oil and natural gas. Any incentives to beneficiate them locally may feed back up the value chain to incentivise the search for oil and gas.

The next step is to determine whether or not it is desirable and possible to support this manufacture from all possible indigenous sources or whether a more selective approach needs to be taken.

12.6. Selecting a technology path

There are essentially two technology clusters to consider –

- Synfuels including coal-to-liquids and gas-to-liquids; and
- Biofuels including bioethanol and biodiesel. Each of these can be manufactured from about 10 different crops and several different technologies. Biodiesel can be produced from sunflower seeds, soya, canola seeds, palm oil, jatropha curcass, megafolia-paulownia and other vegetable oils. Ethanol can be produced from sugar cane, maize, sugar beet, manioc, sweet sorghum, and wheat. Other new hybridised species are under development. New technologies under development envisage converting cellulose (from any vegetable matter) to ethanol.

There are key differences between the economic impacts of synfuels (coal and gas based) and the biofuels (vegetable matter based) routes to petroleum products that are summarised in the table below.

Table 15: Differences between synfuels and biofuels

Criteria	Synfuels	Biofuels
Capital intensity	High	Low
Labour intensity	Low	High (agricultural element & by-products beneficiation)
Energy in feedstock	Concentrated (coal, gas)	Not concentrated (vegetable matter)
Manufacturing technology risk	Lower (known technologies and established presence in SA)	Lower (known technologies and established presence internationally)
Economic risk:	Large synfuel/refining facility carries greater capital risk	A number of smaller biofuel plants carry lower risk

Criteria	Synfuels	Biofuels
Key risks, external to manufacturer:	<ul style="list-style-type: none"> oil price, exchange rate gas price for third party supplied GTL plants 	<ul style="list-style-type: none"> oil price, exchange rate, crop commodity price. Weather conditions
Contribution to sustainable development:	Economic (Positive) Social (Neutral) Environmental (Negative)	Economic (Positive) Social (Positive) Environmental (Positive)
Technology development	Both CTL and GTL are well understood. GTL undergoing well advanced international development; CTL in early stage international development	Both bioethanol and biodiesel technologies well understood. Plant modification undergoing international development
Availability of short term benefits:	Longer	Shorter
Availability of longer term benefits	Similar	Similar
Market risk	Lower – established integration with petroleum fuels infrastructure	Higher – integration with petroleum fuels infrastructure has been a challenge in respect of integrating fuel specifications and properties in other countries.
Cost benefit to economy	Not available. Should be evaluated before policy choice is made	Not available. Should be evaluated before policy choice is made
Security of supply through diversity of energy carrier	Existing primary energy (coal and gas)	New primary energy (vegetable matter), thus greater diversity benefit – i.e. addition to security of supply
Beneficiary of substantial previous incentives?	Yes	No
SADC potential involvement	Namibia and Mozambique have small natural gas resources. Botswana claims large coal bed methane gas reserves. Several countries have large coal deposits.	Extensive agricultural potential in Mozambique, Zimbabwe, Swaziland.

The table above demonstrates that it would be very complex to try and address all these policy imperatives in a single incentive. Accordingly a package of incentives is recommended along the lines of the following more manageable framework. As far as possible a separate, measurable incentive should be utilised to achieve each policy objective.

Table 16 : Incentive framework

Factor	Incentive
Economic	Output based tax incentive (see below). Neutral between technologies (various synfuels and biofuels) but should reflect difference in output benefits of broad technology types (environment and employment)
Environmental	Reductions in the Fuel Levy for biofuels and not for fossil fuels. More rigorous anti-pollution measures being put in place by DEAT.

Given the large range of feedstocks, technologies and cost structures for the manufacture of synfuels and biofuels there is a good *prima facie* case against the possibility of finding a “one-size-fits-all” incentive or tax dispensation that will have the desired outcomes. However –

- it is risky, if not impossible, for governments to try and pick winners; and
- it would be complex to design and administer.

Based on the above criteria and considerations the Task Team **recommends** 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 its expected greater benefits to the South African economy.

12.7. Nurturing a new industry

Investors in a new biofuels industry face more risks than most if, for example compared to independent power producers investing in power generation. In the tender document currently being prepared by the DME, Government is willing to absorb much of the risk for those investors in power generation. This is also true to some extent for anchor investors in the new Coega Port.

There are important reasons why the state should bear some of the risk in developing the biofuels industry. While the financial risks (and other financial costs) are higher than for conventional fuel options, the benefits to society, in the form of security of supply, reduced environmental externalities and substantial employment creation in rural areas are large. Also the benefits to society are significantly greater than the financial benefits that will accrue to the private investor that will be relied upon to realise these projects. This means that without policy intervention the levels of investment into biofuels arising from purely private market based decisions will be lower than socially optimal levels – a classic market failure, hence the need for state intervention.

Investor certainty for new endeavours is critical. If a support dispensation is given then it needs to be one that enjoys investor confidence and is unlikely to change during the critical first 10 to 15 years of the life of a project

There are lessons to be learnt for biofuels by tracking the path of support given to the synfuels industry historically. Initially support was in the form of a subsidy per unit of output. This was changed to a dispensation involving a floor price per unit of output and a ceiling price with a claw back based on revenue (not unit of output). Later this was replaced by a declining floor price (per unit of output) without a claw back. Subsequently the Minister of Finance believed that windfall profits should be investigated.

It is **recommended** that such a tortuous path for new developments in synfuels and biofuels be avoided. Since crude oil and agricultural commodity prices are known to be volatile with large swings in price this should be acknowledged upfront and accommodated in any dispensation. The same applies to the exchange rate.

12.8. Alternate fuels economic investment incentive

The recommended pricing and taxation approach for the beneficiation of indigenous raw materials is summarised in the table below -

Table 17 : Investment incentive – pricing and taxation approach

Stage of value chain	Pricing	Taxation	Proposed change
Primary production – agricultural	<ul style="list-style-type: none"> • Agricultural commodities (for biofuels) such as sugar, soya etc have domestic market prices (many are import parity prices) 	<ul style="list-style-type: none"> • Company tax and Secondary Tax on Companies is applicable to agri industry • Personal income tax to small producers. • Special depreciation allowances for capital projects 	None
Primary extraction of finite natural resources	<ul style="list-style-type: none"> • Crude oils and natural gas are internationally traded commodities with an international prices • Domestic prices are import parity 	<ul style="list-style-type: none"> • Minerals Royalty taxation • Company tax and Secondary Tax on Companies 	None
Conversion to liquid fuels (manufacturing)	<ul style="list-style-type: none"> • Refinery gate prices are fully or partially regulated on an import parity basis 	<ul style="list-style-type: none"> • Company tax and Secondary Tax on Companies 	Yes – special output based tax credit / liability (see below)
Marketing of liquid fuels	<ul style="list-style-type: none"> • Retail prices are fully or partially regulated on an import parity basis plus domestic costs on a return on assets and cost recovery basis 	<ul style="list-style-type: none"> • Company tax and Secondary Tax on Companies • Consumption tax in the form of a Fuel Levy on petrol and diesel and VAT on paraffin and jet fuel 	<p>None</p> <p>Reductions in the Fuel Levy on bioethanol, bioethanol gel and biodiesel recommended based on environmental and employment benefits considerations</p>

The focus of the tax incentive regime for alternate fuels is on the manufacturing stage in the value chain.

We now consider the merits of the four fiscal options identified in the TOR *in terms of their appropriateness to facilitate future investment in liquid fuel production* while simultaneously addressing the potential negative impact on imported fuel price volatility and high cost.

12.8.1. Cost-based administered price regime

For the same reasons relating to administrative burden and disincentive to industry efficiency outlined in Chapter 11 above, we recommend against the *Cost-based administered price regime* as an investment incentive mechanism and response to excessive economic rent.

12.8.2. Progressive formula tax

For the same reasons outlined in Chapter 11 above, we recommend the rejection of a *Progressive formula tax in its pure form* as an investment incentive mechanism and response to excessive economic rent. However elements of the concept are utilised in our proposal.

12.8.3. Revised subsidy scheme

For the reasons outlined in Chapter 11 above, we recommend utilising elements of the *revised subsidy scheme in a new* investment incentive mechanism which simultaneously addresses the issue of excessive economic rent. In particular, the concepts of a “floor” and a “ceiling” with support below the “floor” and repayment above the “ceiling” have been borrowed and utilised in our proposed incentive design (see chapter 12.9 below). From a practical perspective, the operational aspects of this subsidy system are well understood by the parties concerned and our proposal is likely to be relatively easy to implement and administer.

12.9. Investment-linked tax and subsidy options

After careful analysis of the pros and cons of each of the fiscal options **we are recommending the adoption of a progressive investment incentive dispensation for the manufacture of liquid fuels from indigenous raw materials, excluding crude oil**.⁷⁹

This will 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, particularly providing transparency, ease of application, encouraging local production from the most cost effective sources and encouraging cost efficiencies. Our proposal is set out in more detail below.

It is noted that mechanisms exist to implement a similar system in terms of the CEF Act. Essentially this will be an amended version of a revised subsidy scheme using the Equalisation Fund. However, this mechanism is **not recommended** because, in addition to the reasons for rejecting it outlined above, it has the disadvantage that: it incentivises consumption (of petroleum products) rather than investment in beneficiation of indigenous resources.

⁷⁹ Crude oil and natural gas extraction are, or will be, governed by the Minerals Royalty Bill that is expected in the near future and by the Minerals Beneficiation Bill that is also expected in the near future. Crude oil is the conventional raw materials used in the manufacture of petroleum products whereas the manufacture of liquid fuels from natural gas is a new but growing phenomenon with a much lower environmental impact.

12.10. Linkage between the progressive investment-linked tax and subsidy recommendation and the recommendation on a specific fiscal response to rents/excessive economic profits being generated by existing synfuel producers options

The Task Team has made a stand-alone recommendation on a specific **fiscal response** to rents/excessive economic profits being generated by existing synfuel producers. Such a recommendation is largely within the fiscal jurisdiction of the National Treasury and is implementable in its own right.

Our recommendation for a progressive investment-linked tax and subsidy mechanism, detailed in the next section, is also made as a stand-alone basis, mutually exclusive of the fiscal response recommendation. The Task Team regard the former recommendation as one which may be preferable if it is capable of realising more of the national policy aims and objectives outlined in the TOR than the latter, but we also recognise that its realisation depends on a range of complex factors that go beyond fiscal policy.

However, we have crafted both mechanisms in a manner which would allow for a homogenous fiscal approach.

12.11. The proposed fiscal mechanism

This section outlines the basic parameters of the fiscal mechanism proposed by the Task Team. We have earlier discussed our reasons for rejecting the four fiscal options included in our Terms of Reference and we have pointed out we do borrow elements of the progressive formula tax concept in what follows.

The overall objectives of the proposed fiscal mechanism are to pursue greater fuel security and economic benefits through local production and diversification of both primary energy carrier and geographical location. To achieve this, private investment decision-making should thus be encouraged to have the desired outcomes by:

- Providing sufficient certainty of the benefits and taxes applied to projects over a large portion of the project life,
- Maintaining adequate risk with investors to ensure efficient capital and resource allocation and operational management, but;
- Given the possible financial vulnerability of local projects: providing sufficient financial protection during times of low oil prices to ensure financial viability,
- Given the import parity nature of fuel prices; the use of natural resources in local production; and the essential infrastructure nature of fuel which leaves consumers with few alternatives: provide for additional taxation at high oil prices and high economic profit levels from local production,
- Employing a mechanism that allows government in each financial reporting period to demonstrate the tax income foregone and the additional tax income received thus allowing investors to see their taxes being recycled over time to grow the industry.

Secondary benefits include:-

- Environmentally friendlier sources of fuels,

-
- Local economic activity, value addition, and employment creation; and more efficient capital allocation and plant operation, reflecting an appropriate balance between the greater benefits and greater direct financial costs of alternative fuels.

“**alternate fuels**” means fuels produced from indigenous raw materials including biomass, natural gas, coal bed methane, coal, and torbanite.

The basic elements of the proposal are as follows:

The mechanism will be aimed at incentivising and protecting the output of new litres⁸⁰ of alternate fuels. When petroleum product prices are low output will be subsidised by means of tax credits or cash payouts (although cash payouts will have administrative implications and costs) and when prices are high, extra excise taxes will be applied. The mechanism is illustrated in Figure 14 below.

Figure 14 : Indicative incentive mechanism profit curves for new bio- and synfuel producers

1. This incentive is offered with a Government promise that it will be maintained for at least 15 years and that it will be reviewed in the light of changing market conditions but in such a way that it would be benchmarked on achieving at least on average, an appropriate average weighted cost of capital as determined by appropriate determinations of benchmark cost of debt and equity capital to the firm, all other things being equal.⁸¹
2. It is triggered when prices decline below a set floor price specified in R/litre.
3. The incentive level varies according to petroleum product prices and is measured in Rands per litre of alternate fuels produced in that month.
4. The cumulative incentive is offered in the form of a tax credit that is deductible from company tax and secondary tax on companies.⁸² If the amount of the credit exceeds the tax payable then

⁸⁰ In other words, output from investment creating new additional capacity for alternate fuels that takes place after September 2006. Such additions will be captured in manufacturing licenses issued in terms of the Petroleum Products Act.

⁸¹ More careful thought will have to be given to the precise wording of a guarantee of this type as an appropriate level of risk sharing is still required as will be demonstrated by the mechanism proposed below.

⁸² The weakness of this concept is that the beneficiaries will not enjoy the cash flow benefits that were enjoyed by the synfuels producers under previous dispensations where cash subsidy payments were received approximately 2-3 months after the month in question unless they pay corporate tax monthly. Also a company with a tax deductible credit that cannot meet its operating costs will be in a more precarious position than one that can bank on receiving a cash injection in 2-3 months time.

the excess can be carried over to a future year. Alternatively the incentive can be offered as cash payouts.

5. The incentive is calculated as a percentage of one number, the “Full Incentive Amount”. The Full Incentive Amount is based on comparative international data on such subsidies and is proposed to be R0.55 per litre of ethanol or bio diesel produced and sold into domestic commercial markets.⁸³
6. Above the floor price (see point 2 above), there is no incentive or additional tax until a “ceiling price” is reached.
7. The ceiling price trigger is the point at which it is estimated that substantial economic rent is being generated and that any additional profits should be subject to additional taxes. Above this threshold the producer becomes liable for additional tax. The amount of additional excise tax is determined in the same way as the incentive applicable below the floor price. Care should be taken to ensure that the after tax profit curve remains positive at these price levels to ensure that incentives to develop additional (possibly more costly) local sources of production are increased if fuel import costs increase.⁸⁴ The percentage additional tax continues to rise as prices increase while it is designed to ensure that the firm’s profit continues to increase as prices increase.
8. In order to reflect the greater economic and environmental benefits of biofuels the current discount on the fuel levy is extended to all biofuels and adjusted upwards to shift the incentive curve for biofuels to place biofuels on a similar profit position to synfuels under the incentive mechanism (See the difference between the two green curves in the area between the floor and ceiling levels in Figure 14.) In contrast to tax credits, which are only realisable if the firm is in a tax paying position, a greater role for the fuel levy discount for biofuel producers has the benefit of providing cash relief when it is most needed, during times of low oil prices. This will be particularly valuable to smaller biofuel producers who could be vulnerable to cash flow problems during such periods, particularly if they have low levels of diversification and the prices of their other products (such as animal feed) are also positively correlated with oil prices.
9. The investment regime applies irrespective of type of fuel produced and technology used with the exception that the fuel levy discount is applied to biofuels in recognition of the different production costs of biofuels and synfuels. However it is intended that, after the fuel levy discount for biofuels, a level playing field should apply to all local production options to encourage the more efficient, lower cost, options to emerge. Applying a single mechanism also has the benefit of greater simplicity in administering the incentive dispensation.
10. We recommend that the fiscal mechanism be obligatory for all new investments in alternative fuel production from indigenous resources. This is because the primary objective is self-sufficiency and energy security of supply. It is not intended as an export promotion incentive. This could be reconsidered if South Africa were to become an oil and gas exporter. Also if it were not applicable to all producers and if oil prices stayed high or low for a significant period, it is very likely that appeals would be made to the state to introduce windfall taxes or to subsidise as the case may be. This dispensation is intended to provide investors and the public with certainty in this regard.

⁸³ This is the quantum of subsidy given by Brazil to its new bio diesel producers and can be varied from time to time and is the rand equivalent of \$100 per tonne. At R7/\$ this equates to R0.55 / litre.

⁸⁴ If biofuels input costs are also positively related to oil prices, care should be taken to allow for this and ensure that the after-tax curve still has an appropriate positive slope beyond the additional tax threshold.

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11. The same dispensation could apply to existing producers, if substantial capital investment on existing plant is required to replace existing capacity. Here the associated product output from this plant, as a portion of the economic value of the new capital investment to the economic value of the existing plant, could be brought into the fiscal incentive mechanism for new plant proposed here.
 12. Conventional crude refineries fall outside these mechanisms, irrespective of whether imported or local crude is used.
 13. If the rate at which new production capacity enters the market does not meet the state's expectations or self sufficiency targets then the state can adjust either the incentive amount or the rate at which it is applied (% curve, see below) or both, in order to increase the profitability of projects. If the opposite should happen the state can merely withdraw the incentive for further projects. However it is important that it is maintained for producers that have already made the investments.
 14. The floor price of the mechanism is set at the estimated full cost of new coal to liquids capacity in South Africa. Producers effectively earn import parity prices based on the Basic Fuels Price (BFP)⁸⁵ calculated according to the formula used by the Department of Minerals and Energy⁸⁶. The floor and other price points in the mechanism should thus be specified in BFP R/l terms.⁸⁷ Currently the BFP is fixed monthly and widely published making it an easy reference point for farmers and producers.
 15. This concept requires producers and SARS to keep monthly records of production and prices. This is already done in order to administer the fuel levy and would thus not require substantial additional effort.
 16. A table published each year by the tax authorities would determine the Incentive Number and the percentages applicable. See simple example in Annexure A.
 17. Depreciation remains as is. This is because this instrument encourages capital intensity and is not focussed on output, which is the key objective here. An example of the perverse impact of deprecation incentives could have is the Sasol "Turbo" project that involved billions of Rand in investment but actually *reduced* the output of synfuels. Also depreciation incentives discriminate in favour of the more capital intensive producers (synfuels) and against the less capital intensive producers (biofuels).

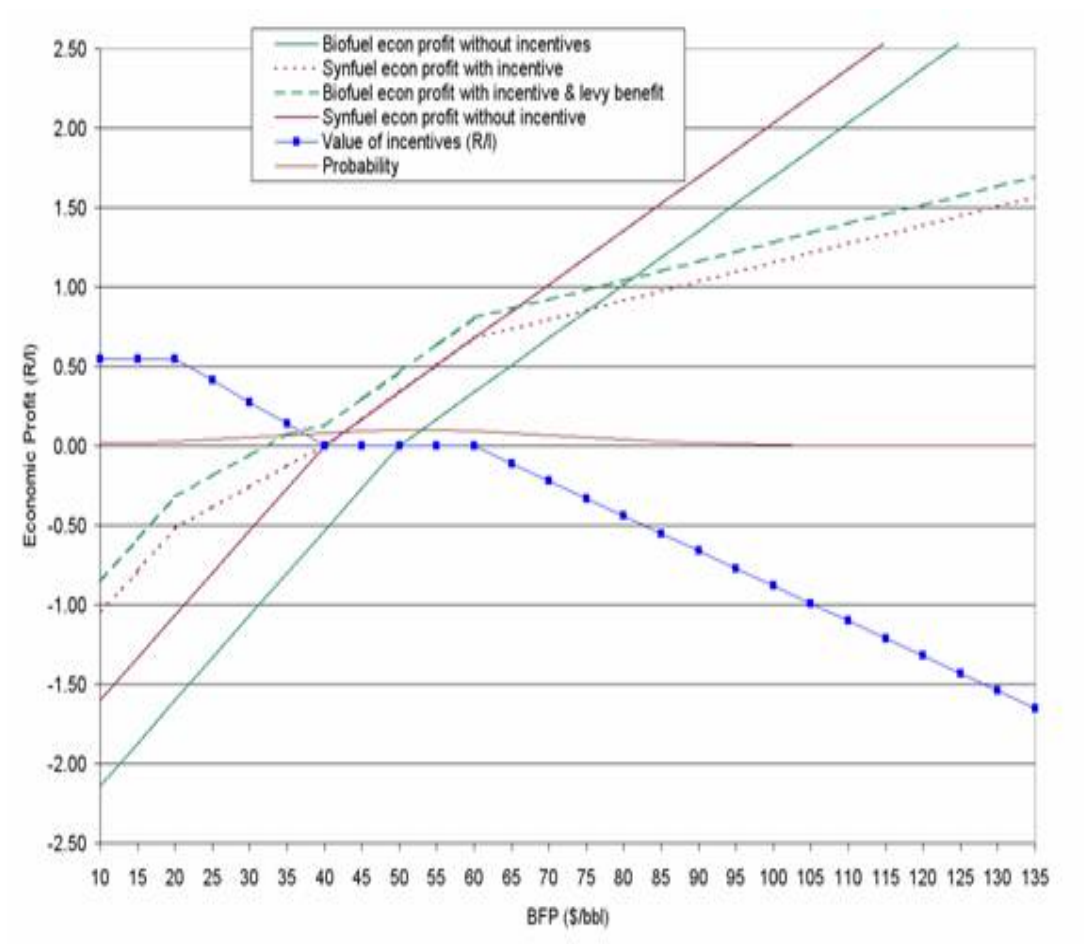
The effect of the incentive mechanism combined with the discount on the fuel levy for biofuel producers, on the profits per litre for biofuel and synfuel producers is shown in the following illustrative graph.

⁸⁵ Note that using the BFP carries the following risks. (1) The DME may modify the formula to reduce prices; (2) the formula is an import parity type formula and Government may not be comfortable to use it. However it is currently in use for the purposes of regulating petrol, diesel and paraffin prices. (3) The DME may deregulate prices and cease using it. In this case it would not be difficult to continue calculating it but it would need to be reviewed at least once every 5 years to take account of changes in international markets.

⁸⁶ Bio ethanol production is believed to be competitive in Brazil at \$32 per barrel, in Australia at \$51 and in Thailand at \$46.

⁸⁷ BFP prices are generally \$4-10 above prevailing world crude oil prices, because of the allowance for refining margins and other smaller cost items it includes.

Figure 14 : Indicative incentive mechanism profit curves for new bio- and synfuel producers



The graph is the result of a simplified spreadsheet model designed to illustrate the basic features of the mechanism. The horizontal axis shows BFP prices in \$/bbl crude equivalent units to enable easy comparison with international crude prices. It should be borne in mind that in practice BFP price levels are approximately 5c/l higher (see Chapters 5.6.4 and 13.7) than true import parity price levels, and that the mechanism would be specified in R/l BFP terms.

The blue line shows the value of the variable incentive (or claw back) that is applied at a given BFP crude equivalent price and should be read off from the right-hand axis.

Illustration

From the graph it can be seen that between \$40/bbl and \$60/bbl no variable incentive is applied. This has the effect that for synfuels the economic profit curve before and after application of the incentive is the same. For biofuels the profit curve with incentive in this region is still higher because of the benefit of the across-the-board discount on the fuel levy. At levels outside this band the variable mechanism is activated for both fuels types, either compensating for lower revenues, or clawing back excessive economic profits.

The solid lines show the after tax economic profit lines for bio- and synfuels (CTL) before additional incentives are applied.⁸⁸ The dotted lines show the after tax profit curves after the incentive mechanisms have been applied (keep in mind that biofuels benefits from two mechanisms, the discount on the fuel levy and the hedging mechanism).

In order to provide a rough estimation of the total level of benefit provided per annum we have, for illustrative purposes, made a simplifying assumption that prices will vary according to a normal probability density function and have applied this in the table below. The data from which the graph is drawn is set out in the tables below.

The details of the illustrative fiscal mechanism outlined above, are set out here.

Based on a literature survey, and utilising updated estimates made in the Andersen and PVM Reports, the Task Team has estimated benchmark costs of greenfield GTL and CTL production plants, as well as the estimated costs of existing amortised GTL and CTL production facilities in South Africa (Appendix 3). We have used these in defining appropriate thresholds for the formula we are proposing.

Table 20 below sets out the details of the proposed incentive mechanisms.

The formula used to convert from crude equivalent prices to product prices is taken from the PVM report.

*Weighted Product Price = (Derived Crude Price*1.21916051) + 6.1906816763 (all in constant currency and volume units)*

The formula allows for losses during the conversion process and the increased value of refined product.

The information shown is for illustrative purposes, but could be viewed as preliminary suggestions for the parameters of the proposed fiscal mechanism.

⁸⁸ The use of economic profit means that at a zero indicated economic profit full return to capital is earned, including an appropriate return to equity as would, for instance, be calculated by the capital asset pricing model. This means that at zero economic profit positive accounting profit would normally be reflected.

Table 18: Incentive and tax impact of fiscal proposal on new capacity

BFP R/I	\$/bbl	Incentive rate % (Right hand axis)	Biofuel econ profit without incentives	Biofuel econ profit with incentive & levy benefit	Value of incentives (R/I)	Incentive % of price /litre	Value of incentives (\$/bbl final product)	Incentive quantum at this price pa (Rm)	Probability	Incentive paid at this price given probability (Rm)	Synfuel econ profit without incentive	Synfuel econ profit with incentive	Value of incentives (R/I)	Incentive % of price /litre	Value of incentives (\$/bbl final product)	Incentive quantum at this price pa (Rm)	Incentive paid at this price given probability (Rm)				
0.81	10	100%	-2.14	-0.85	1.29	159.5%	29.32	1981.79	0.023	45.09	-1.60	-1.05	0.55	68.3%	12.55	3794.53	86.33				
1.07	15	100%	-1.87	-0.59	1.29	119.8%	29.32	1981.79	0.017	34.30	-1.34	-0.79	0.55	51.3%	12.55	3794.53	65.68				
1.34	20	100%	-1.60	-0.32	1.29	95.9%	29.32	1981.79	0.027	53.01	-1.07	-0.52	0.55	41.0%	12.55	3794.53	101.50				
1.61	25	75%	-1.34	-0.19	1.15	71.4%	26.18	1769.73	0.039	68.74	-0.80	-0.39	0.41	25.7%	9.41	2845.90	110.54				
1.87	30	50%	-1.07	-0.06	1.01	53.9%	23.04	1557.67	0.053	82.56	-0.53	-0.26	0.28	14.7%	6.27	1897.26	100.57				
2.14	35	25%	-0.80	0.07	0.87	40.7%	19.91	1345.61	0.068	91.46	-0.27	-0.13	0.14	6.4%	3.14	948.63	64.48				
2.41	40	0%	-0.53	0.13	0.66	27.5%	15.09	1020.23	0.082	83.57	0.00	0.00	0.00	0.0%	0.00	0.00	0.00				
2.68	45	0%	-0.27	0.30	0.56	21.1%	12.86	869.31	0.093	80.63	0.17	0.17	0.00	0.0%	0.00	0.00	0.00				
2.94	50	0%	0.00	0.47	0.47	15.8%	10.63	718.39	0.099	70.91	0.34	0.34	0.00	0.0%	0.00	0.00	0.00				
3.21	55	0%	0.17	0.64	0.47	14.5%	10.63	718.39	0.099	70.91	0.51	0.51	0.00	0.0%	0.00	0.00	0.00				
3.48	60	0%	0.34	0.80	0.47	13.4%	10.63	718.39	0.093	66.63	0.68	0.68	0.00	0.0%	0.00	0.00	0.00				
3.74	65	-20%	0.51	0.86	0.36	9.5%	8.12	548.74	0.082	44.95	0.85	0.74	-0.11	-2.9%	-2.51	-758.91	-62.16				
4.01	70	-40%	0.68	0.92	0.25	6.1%	5.61	379.09	0.068	25.77	1.02	0.80	-0.22	-5.5%	-5.02	-1517.81	-103.17				
4.28	75	-60%	0.85	0.98	0.14	3.2%	3.10	209.45	0.053	11.10	1.19	0.86	-0.33	-7.7%	-7.53	-2276.72	-120.68				
4.55	80	-80%	1.02	1.04	0.03	0.6%	0.59	39.80	0.039	1.55	1.35	0.91	-0.44	-9.7%	-10.04	-3035.62	-117.91				
4.81	85	-100%	1.19	1.10	-0.08	-1.7%	-1.92	-129.85	0.027	-3.47	1.52	0.97	-0.55	-11.4%	-12.55	-3794.53	-101.50				
5.08	90	-120%	1.35	1.16	-0.19	-3.8%	-4.43	-299.49	0.017	-5.18	1.69	1.03	-0.66	-13.0%	-15.06	-4553.43	-78.82				
5.35	95	-140%	1.52	1.22	-0.30	-5.7%	-6.94	-469.14	0.011	-4.94	1.86	1.09	-0.77	-14.4%	-17.57	-5312.34	-55.92				
5.62	100	-160%	1.69	1.28	-0.41	-7.4%	-9.45	-638.79	0.006	-3.84	2.03	1.15	-0.88	-15.7%	-20.08	-6071.24	-36.52				
5.88	105	-180%	1.86	1.34	-0.52	-8.9%	-11.96	-808.44	0.003	-2.61	2.20	1.21	-0.99	-16.8%	-22.59	-6830.15	-22.06				
6.15	110	-200%	2.03	1.40	-0.63	-10.3%	-14.47	-978.08	0.002	-1.59	2.37	1.27	-1.10	-17.9%	-25.10	-7589.06	-12.37				
6.42	115	-220%	2.20	1.46	-0.74	-11.6%	-16.98	-1147.73	0.001	-0.89	2.54	1.33	-1.21	-18.9%	-27.61	-8347.96	-6.45				
6.68	120	-240%	2.37	1.52	-0.85	-12.8%	-19.49	-1317.38	0.000	-0.45	2.71	1.39	-1.32	-19.7%	-30.12	-9106.87	-3.14				
6.95	125	-260%	2.54	1.58	-0.96	-13.9%	-22.00	-1487.02	0.000	-0.21	2.88	1.45	-1.43	-20.6%	-32.62	-9865.77	-1.42				
7.22	130	-280%	2.71	1.64	-1.07	-14.9%	-24.51	-1656.67	0.000	-0.09	3.05	1.51	-1.54	-21.3%	-35.13	-10624.68	-0.60				
7.49	135	-300%	2.88	1.69	-1.18	-15.8%	-27.02	-1826.32	0.000	-0.04	3.22	1.57	-1.65	-22.0%	-37.64	-11383.58	-0.24				
Average estimated benefit p.a.(Rm)										807.854	Average estimated benefit p.a. (Rm)										-193.859

Table 19: Incentive and tax impact of fiscal proposal on existing capacity

BFP R/I	Crude equivalent \$/bbl	Incentive rate % (Right hand axis)	Probability	Synfuel econ profit without incentive	Synfuel econ profit with incentive	Value of incentives (R/l)	Incentive % of price /litre	Value of incentives (\$/bbl final product)	Incentive quantum at this price pa (Rm)	Incentive paid at this price given probability (Rm)
0.81	10	50%	0.023	-0.53	-0.26	0.28	34.1%	6.27	1897.26	43.16
1.07	15	25%	0.017	-0.27	-0.13	0.14	12.8%	3.14	948.63	16.42
1.34	20	0%	0.027	0.00	0.00	0.00	0.0%	0.00	0.00	0.00
1.61	25	0%	0.039	0.17	0.17	0.00	0.0%	0.00	0.00	0.00
1.87	30	0%	0.053	0.34	0.34	0.00	0.0%	0.00	0.00	0.00
2.14	35	0%	0.068	0.51	0.51	0.00	0.0%	0.00	0.00	0.00
2.41	40	0%	0.082	0.68	0.68	0.00	0.0%	0.00	0.00	0.00
2.68	45	-20%	0.093	0.85	0.74	-0.11	-4.1%	-2.51	-758.91	-70.39
2.94	50	-40%	0.099	1.02	0.80	-0.22	-7.5%	-5.02	-1517.81	-149.82
3.21	55	-60%	0.099	1.19	0.86	-0.33	-10.3%	-7.53	-2276.72	-224.73
3.48	60	-80%	0.093	1.35	0.91	-0.44	-12.7%	-10.04	-3035.62	-281.57
3.74	65	-100%	0.082	1.52	0.97	-0.55	-14.7%	-12.55	-3794.53	-310.81
4.01	70	-120%	0.068	1.69	1.03	-0.66	-16.5%	-15.06	-4553.43	-309.51
4.28	75	-140%	0.053	1.86	1.09	-0.77	-18.0%	-17.57	-5312.34	-281.58
4.55	80	-160%	0.039	2.03	1.15	-0.88	-19.4%	-20.08	-6071.24	-235.82
4.81	85	-180%	0.027	2.20	1.21	-0.99	-20.6%	-22.59	-6830.15	-182.69
5.08	90	-200%	0.017	2.37	1.27	-1.10	-21.7%	-25.10	-7589.06	-131.36
5.35	95	-220%	0.011	2.54	1.33	-1.21	-22.6%	-27.61	-8347.96	-87.87
5.62	100	-240%	0.006	2.71	1.39	-1.32	-23.5%	-30.12	-9106.87	-54.78
5.88	105	-260%	0.003	2.88	1.45	-1.43	-24.3%	-32.62	-9865.77	-31.87
6.15	110	-280%	0.002	3.05	1.51	-1.54	-25.0%	-35.13	-10624.68	-17.32
6.42	115	-300%	0.001	3.22	1.57	-1.65	-25.7%	-37.64	-11383.58	-8.80
6.68	120	-320%	0.000	3.39	1.63	-1.76	-26.3%	-40.15	-12142.49	-4.18
6.95	125	-340%	0.000	3.56	1.69	-1.87	-26.9%	-42.66	-12901.39	-1.86
7.22	130	-360%	0.000	3.73	1.75	-1.98	-27.4%	-45.17	-13660.30	-0.78
7.49	135	-380%	0.000	3.89	1.80	-2.09	-27.9%	-47.68	-14419.21	-0.30
Average estimated benefit p.a. (Rm)										-2326.45

Table 20: Assumptions used in assessing the impact of the fiscal proposals

Item	Input value	Units	Comments	Equivalent	Units
Biofuels output	29000	Bbl/day	Crude equivalent ethanol and diesel output of 6 x R700m, 375 000 ton/y bio-ethanol plants		
Synfuels output	120000	Bbl/day	Crude equivalent petrol and diesel output		
Refinery white product %	70%		Percentage by volume of white products produced from crude oil in standard refinery		
Days production pa (BF)	333	days	Based on Ethanol Africa claims in Engineering News		
Days production pa (SF)	360	days	Average Sasol uptimes		
Litres per 42 gal barrel	159.7		Weighted average of fuel (71%) and diesel (29%) at standard 20 deg Celsius		
Mean of normal distribution	50	\$/bbl	Mean of expected BFP price distribution in crude equivalent terms		
Standard Deviation of BFP normal distribution	20	\$/bbl	SDev of expected BFP price distribution in crude equivalent terms		
CTL cost of production	40	\$/bbl	Crude equivalent, includes after tax wacc	2.41	R/l final product equivalent
Existing plant CTL cost of production	20	\$/bbl	Crude equivalent, includes after tax wacc	1.34	R/l final product equivalent
Bio fuels Cost of production (\$/bbl)	50	\$/bbl	Crude equivalent, includes after tax wacc	2.94	R/l final product equivalent
Incentive reference cost for new plant	40	\$/bbl	Crude equivalent, includes after tax wacc	2.41	R/l final product equivalent
Incentive reference cost for existing plant	20	\$/bbl	Crude equivalent, includes after tax wacc	1.34	R/l final product equivalent
Incentive offset above ref cost	20	\$/bbl	Set to enable payback at price levels significantly above full cost		
Slope of incentive increase	5.00%	%/ \$			
Slope of claw back increase	4.00%	%/ \$			
Incentive offset below ref cost	0	\$/bbl	Can be used to trigger mechanism at levels below reference cost		
Payback rate limit	400%		Set high to continue payback rate as price increases		
Marginal tax rate (incl. STC)	36.625%				
Full incentive amount (R/l)	0.55cent	/litre	Equivalent of \$100/tonne	5.21	\$/bbl crude equivalent
Fuel levy (R)	1.05	\$/bbl	For diesel	14.57	\$/bbl crude equivalent
Fuel levy benefit (assume diesel)	70%		Assumed increase from 40%		
R/\$	7				

13. Economic rent, windfall profits and regulatory reform in the liquid fuels value chain - and the fiscal implications

This chapter should be read in conjunction with Chapter 7 and Table 11.

13.1. Downstream Regulation – value chain elements and fiscal implications

This chapter sets out the Task Team’s recommendations for regulation of the downstream liquid fuels sector from the point of view of economic rents and measures to address these as well as the expected fiscal implications thereof.

We begin by addressing the regulatory dispensation from a more general perspective before proceeding to address each of the regulatory aspects individually. Like the Moerane Investigation we are of the opinion that a comprehensive review of the petroleum pricing and regulatory regime is required (Moerane 2006:17), and in this vein the Task Team recommends particular regulatory reforms.

The White Paper on Energy Policy (1998) informs us that the general policy approach is to be one of deregulation after certain milestones have been achieved. Our interpretation of those milestones and our assessment of the current circumstances is that the milestones have been achieved⁸⁹ and that Government is in a position to proceed with deregulation. The details of how and the sequencing of deregulation are not spelt out in that White Paper leaving it open to suggestions such as those that follow. It is our view that by liberalising aspects of the regulatory dispensation, the means by which windfall benefits which have accrued in past years will be reduced and the possibility of windfall rents accumulating in future will be reduced. These changes will result in the enhancement of the economic performance of the sector and should lead to benefits to the end users of petroleum products.

The individual value chain elements listed in the table 11 above (with the exception of upstream oil and gas production and tariff protection not refunded) are now each discussed in turn, together with our recommendations in regard to associated regulatory reforms and the expected implications. The analysis presented here also relies on the review of the history and other data presented in previous chapters and is thus not repeated here.

13.2. Import Controls – refined products

The preferential treatment given to local producers of refined products in accordance with the import control policy has allowed local producers to enjoy higher capacity utilisation and therefore resulted in higher refinery margins than would have been the case had they

⁸⁹ We are aware that there may be some debate about whether or not the black economic empowerment milestone has been met or not as there is no scientific way of determining this. Our view is that the phrase “or plans to achieve this” must not be underestimated when interpreting that milestone.

faced open market competition from imports. This will continue unless import policy is changed as is being currently considered by the Minister.

The Task Team notes that the country's domestic supply and demand are almost in balance and that in the short term the country will become a net importer of petroleum products. It also notes that demand will grow over time and will become an incentive to invest in further domestic manufacturing capacity. The history of the domestic manufacturing of petroleum products is replete with examples of internationally uncompetitive manufacturing facilities, both crude oil refining and synthetic fuels. Currently many South African refineries are old and, as mentioned earlier in this report, some have not been maintained adequately. This makes them prone to production problems. The size of many of the refineries also falls short of current world scale facilities built in recent years, and results in the South African refineries being relatively high cost producers compared with many of their international peers. The economy has had to carry this burden, although it has benefited from the foreign currency savings achieved through the substantial local manufacture of synthetic fuels.

Low intermediate input costs are important in the context of a growing economy. The Moerane Investigation also makes a similar point when it advocates that "The DME should explore the possibility of moving the pricing regime of the country towards a genuine market related import parity pricing system which is not unduly protectionist of local refineries" (Moerane 2006:140).

Consequently it is **recommended** that any new greenfield crude oil refining capacity is only licenced if it is internationally competitive so that the economy is not burdened with the costs of supporting uncompetitive refining. (It is expected that brownfield expansions of existing refining capacity will improve their competitiveness). In general, any new manufacturing capacity should be internationally competitive unless there are compelling security of supply or strategic considerations that can justify the burden on the economy.

The Task Team **recommends** that quantitative import controls be removed forthwith and replaced by a policy approach that says that when imports do occur preference should be given to imports of biofuels, where feasible, rather than imports of refined petroleum.

Defining such an import policy is a separate task and not within the Task Team's terms of reference, nor is there yet sufficient certainty about Governments Biofuels Strategy to do so. However we would offer the following pointers towards the development of that policy:

- a) biofuels are in general terms preferable to crude oil or its derivatives, however it should not be a simple blanket type policy because:
 - (i) biofuels may not always be available to import;
 - (ii) biofuels and their derivatives may not always be suitable in meeting manufacturers needs;
- b) biofuels imports should only be allowed if local producers cannot meet the quality or quantity required,
- c) import control policy will need to be synchronised with fuel specifications. For example if it becomes mandatory to blend a certain percentage of biodiesel with mineral diesel then import control will need to be adjusted to suit this,

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- d) biofuels prices will not always be equal to, or lower than, mineral fuel prices. Therefore there may need to be compensatory adjustments in the final regulated fuel price,
 - e) if as the recently gazetted policy guidelines suggest all future imports can only be made by BEE companies then the financial burden on those companies that will be faced with huge stockholding / working capital costs as well as price fluctuation and exchange rate risk, not to mention capital costs in building new storage facilities, will need careful consideration. Indeed it appears to us that such strategy to promote BEE is questionable as it would place the heaviest burden possible on new BEE entrants when the established industry may be better able to bear such a burden,

An import policy approach giving preference to biofuels as suggested above will meet the White Paper on Energy Policy objective of diversifying sources of supply as crude oil exporting countries are seldom also exporters of biofuels as well as contributing to the renewable energy target set by the White Paper on Renewable Energy.

It may also act as incentive to SADC producers to export biofuels to South Africa thereby helping to redress the negative trade balances that prevail between these countries and South Africa as well as regional economic integration. Biofuels are also more environmentally friendly than petroleum fuels.

The Task Team is aware that the costs of producing biofuels are such that the emerging industry could be threatened with closure, should the oil price fall significantly. However, manufacturing costs are expected to decline in the years ahead and the industry will become increasingly cost competitive as experience and the scale of facilities evolve. This supports the recommendation of regulatory intervention.

13.3. Fiscal implications of liberalising import controls

Currently all litres of refined products sold, including imports, are subject to a 4 cents per litre Customs and Excise Tax. Therefore the origin of a litre of fuel will not affect the income to the fiscus arising from this tax and accordingly the liberalisation of import controls will have no impact.

The same principle applies to the Road Accident Fund Levy and the Fuel Levy.

The secondary effects of liberalising import controls should also be considered. In the short term South Africa is or is about to become a nett importer of refined products and so the focus must shift to the construction of the next tranche of refining capacity in South Africa. This is because oil refiners pay corporate tax, employ staff that pay personal income tax and generate demand for goods and services from suppliers that also pay corporate tax and personal tax. Liberalising import controls is expected to marginally reduce the propensity to invest in fuel manufacturing facilities. This is because any new capacity will have to be competitive with actual imported prices, instead of the protected position they now have as a consequence of import controls. The propensity to invest in the next tranche of domestic refining capacity is largely a function of the surplus or scarcity of refining capacity within striking distance of the South African market and shipping costs. These are very difficult to predict. Of course there are many other factors that influence such investment decisions

and the assumption made for the purposes of this theoretical consideration, i.e. that all other things are equal, is not realistic.

In short the Task Team is of the view that liberalising import controls may marginally delay investment in the next tranche of refining capacity with a corresponding delay in the additional company and personal tax revenues to the fiscus.

13.4. Retail Price Maintenance

Retail price maintenance is the cornerstone of the current regulatory dispensation and therefore the liberalisation of this aspect deserves careful consideration. It is **recommended** that full price regulation of gasoline be initially reduced to price cap regulation for a period to determine the impacts and to see what aspects of regulation will be required to be retained when proceeding to full price deregulation. Utilising price cap regulation the risks of higher prices in less competitive rural markets or of rural areas cross-subsidising urban areas can be avoided. This means that the elements of the price build up would not be regulated or gazetted. Only a final retail maximum price would be gazetted. However the composite elements thereof should be transparent. Constituent elements similar to those currently in use could be used to calculate such a price cap.

During this period of price capping the prohibition of discounting and purchasing incentives should be discontinued. Similarly the prohibition on purchasing using credit and the restriction on retail promotions should also be discontinued. This will allow increased competition and allow some of the benefits thereof to be passed through to motorists.

If the current DME investigation, into cross subsidies in the retail prices of diesel, reveal that private motorists are indeed subsidising industry then the DME should consider implementing a retail price cap and also a wholesale price cap on diesel fuels to prevent such cross subsidies. We note that in the electricity sector there are cross subsidies but of a more progressive type, in that industry cross subsidises residential consumers.

It is noted that the jobs of pump attendants are protected by law in the Petroleum Products Amendment Act.

13.5. Retail price liberalisation – fiscal implications

Currently every litre of petrol or diesel sold is subject to the Fuel Levy, Road Accident Fund Levy and Customs and Excise Levy, important revenue streams for the fiscus. Would the recommended price cap regulation change the volumes sold? If the expected discounting of prices materialised, then as price falls demand may be expected to rise with a consequent increase in fiscal revenue. However the volume of fuel sold is a function of the number of vehicles on the roads and that in turn is more a function of vehicle prices and interest rates than it is of fuel prices.

In short the Task Team is of the view that liberalising retail prices will, if anything, lead to a marginal increase in fiscal revenues from fuel sales. Also as prices fall an opportunity is created to increase the Fuel Levy.

13.6. Cost: Resource extraction

The use, or marketing, of locally extracted natural resources could give rise to economic rent, which, if not taxed could provide an input cost benefit. As argued above, minor resource rents are assumed to have occurred in the past and will continue, possibly at increasing levels, in future. The past situation can not be considered a windfall, as it was the direct result of government policy choices concerning the mineral rights regime in South Africa as it applied to coal mining, and Sasol and PetroSA in particular.

This is further addressed in a separate chapter.

13.7. Import Parity Price: BFP mechanism

The application of the BFP regulatory mechanisms to the sales price of liquid fuels in South Africa can give rise to excessive economic rent in 2 ways.

Firstly, there can be a difference between “true” import parity price⁹⁰ and the BFP. While no detailed quantification has been provided in this report, the Competition Tribunal, based on the evidence of oil company managers, appears to be of the view that the BFP is higher than true import parity prices.

“Note that BFP is, and IBLC was, actually set somewhat higher than import parity. This is pointed out by Mr. Fienberg for BP who estimates that BFP is approximately 5c per litre higher than a true import parity price (see page 2957 of the transcript) and confirmed by Mr. Oberholster. At page 401 of the transcript Mr. Oberholster states: ‘..where we import from, we import from mega or where the numbers come from, from mega refineries, huge cost efficient refineries, BFP relates to, if you do that on a consistent basis, large volumes, it’s a true import parity price. However in fully competitive, tough competing environment with people like Pick n Pay in the market, importing spot cargos all over the place, we do believe that there could be a lower import parity price, which will reflect in those markets and that would be, as I’ve said earlier, in the order of some 5c a litre below the current BFP price, which in fact is that 1.3% of the price today.’ “(Competition Tribunal 2006 footnote 72)

Consequently economic rent is generated by the BFP. A number of the OOCs point out that, more recently, imports into the country to cover the shortfall in demand, were done at prices substantially above BFP prices.⁹¹ They contend that this supports the view that the BFP price is not generous. Refining margins are cyclical and the long term cycle needs to be taken into account in the determination of fair, regulated prices. The Task Team accepts that there is merit in this argument. However, over a longer period, it appears that excessive economic rent has been generated by the regulated IPP mechanisms, and particularly, by the previously prevailing IBLC price mechanism.

It is assumed that the regulator did not intend to put in place a regulation designed to generate profit in excess of normal profit, that is excessive economic profit. If economic rent accrues in the fashion described here then it follows that all domestic petroleum product manufacturers as well as importers benefit. A review of the BFP formula appears to be indicated.

⁹⁰ It is assumed that true import parity arises from a globally competitive market allowing participants to make normal profits.

⁹¹ Total (2006:21)

Secondly, economic rent can arise from the fact that international petroleum product prices (which are reflected in the BFP) incorporate crude oil prices because petroleum products are manufactured from crude oil. Then in so far as crude oil prices are not reflective of competitive market clearing prices (which should in theory be equal to the full economic cost of production), so will the BFP be correspondingly affected. There are at least two factors in international oil markets that curtail the operation of a truly competitive market; (a) the existence of a price cartel among the major producers known as OPEC, and (b) the lack of transparent and reliable oil statistics.⁹²

Assuming that domestic crude oil refiners are paying the prevailing price for crude oil then they would not share in this economic rent. Synfuel manufacturers on the other hand do not have crude oil as their major input cost. Instead they use other raw materials. Thus they are able to accrue excessive economic rent through the medium of the BFP whenever the oil price reflected in the BFP is above the oil price necessary to provide synfuel manufacturers with normal profit. The converse must also be true that is whenever the oil price reflected in the BFP is below the oil price necessary to provide synfuel manufacturers with normal profit then negative economic rent accrues.

Such economic rents, from both of these sources, could be expected to continue to accrue, for so long as the BFP prevails and from time-to-time in future whenever higher oil prices prevail.

One such element of a price capping regulation outlined above could be a revised BFP. As has been pointed out earlier in this document the BFP contains elements of OPEC cartel rent, which is carried through into the BFP through petroleum product prices. Also as emerged in the Competition Tribunal hearings, the BFP does not reflect true import parity prices. Above we have discussed evidence from oil company executives at the Competition Tribunal Hearing into the proposed Sasol / Engen merger to the effect that the BFP was and is some 5c/l higher than “true import parity”. The Moerane Investigation was of the view that the BFP is “some 10c/l higher than ‘true import parity’ price” (Moerane 2006:136). It is **recommended** that the BFP be comprehensively overhauled to produce a formula that is much closer to ‘true import parity’ In line with the proposals above this would not be a regulated price but merely constitute a part of the calculation performed by the regulator to determine the final retail price.

13.8. Revising import parity pricing – fiscal implications

A downward revision of the import parity price (BFP) would lower prices. In this instance the same arguments and conclusions as have been made in respect of retail price liberalisation apply – see Chapter 13.4 on retail price maintenance above.

⁹² As a result of this phenomenon Six international organizations – APEC, Eurostat, IEA, OLADE, OPEC and UNSD, under the guidance of the World Energy Forum, in 2001 embarked upon the Joint Oil Data Initiative (JODI). JODI is intended to bring greater transparency to global oil markets See <http://www.jodidata.org/FileZ/ODTmain.htm> .

13.9. Cost (saving): Tariff protection not refunded

This issue is addressed in a separate Chapter 10.

13.10. Stock Profits

Stock profits can arise when product procured at one price is sold later at a higher price. Stock losses are the converse of this. Transnet points out, that this may be a further possible area of excessive economic profits.⁹³ Whilst short term fluctuations in price can give rise to stock losses and profits, it can be argued that these fluctuations may cancel one another out over a long period of time. However this depends upon the general price trajectory of the commodity concerned and the time period chosen. Making a finding in this regard requires a detailed analysis of prices and this has not been possible within the constraints of this Task Team.

13.11. Transport costs - Pipeline tariffs

Sasol, Natref (Sasol and Total) and Chevron (to a much lesser extent) have all benefited from free or subsidised pipeline transport or infrastructural ‘support’ in the past. It appears that this situation was the direct intention of government policy and this benefit could thus not be considered a windfall. It appears, furthermore, that Sasol might continue to benefit from subsidised pipeline costs in future. This question of pipeline regulation is expected to be addressed by the new Energy Regulator now that it is busy processing license applications made in terms of the Petroleum Pipelines Act.

It is noted that petroleum pipelines and storage facilities have been opened to allow for market forces to operate in this sector⁹⁴. The opening of this link in the value chain to increased competition needs to be matched by similar changes elsewhere in the value chain.

Petronet’s pipeline tariffs are expected to be regulated soon under the Petroleum Pipelines Act administered by the National Energy Regulator. It is **recommended** that this new regulator be given an opportunity to carry out its functions in this regard.

13.12. Regulated pipeline tariffs – fiscal implications

Petroleum pipeline tariffs have no direct relationship to fiscal revenues. The sector is dominated by Petronet, a division of Transnet and the impact of a change in Petronet’s pipeline revenues on the ultimate corporate tax paid by Transnet is likely to be minimal. The pipeline tariff from the coast to Gauteng in January 2007 was 2.3% of the retail price of petrol. It is too early to say whether the Energy Regulator will increase or decrease pipeline tariffs.

⁹³ Transnet (2006:3)

⁹⁴ By virtue of the Petroleum Pipelines Act pipelines are governed by the common carrier principle and storage facilities by the principle of third party access to uncommitted capacity.

In short expected changes to petroleum pipeline tariffs are not expected to materially change fiscal revenues.

13.13.Price: Zone differential

The regulation of zone differentials is done on a “postage stamp” and cost-recovery basis. Both of these regulatory approaches could lead to unintended benefits or losses to industry participants. While this can be considered a direct result of government policy, and could thus not be considered a windfall, consideration might be given to reviewing this regulatory mechanism.

No evidence of windfall rents in the zone differentials has emerged during this investigation. It is **recommended** that the DME investigation into this aspect be pursued and the outcomes, if appropriate, be applied within the context of the price capping mechanism referred to above.

There are no fiscal implications arising from this recommendation.

13.14. Volume: Upliftment agreements

Sasol and PetroSA have had important benefits in the form of upliftment agreements. These agreements have been brokered by government, and, in principle, the benefits arising from it can thus not be considered a windfall. However, it is unclear whether the benefits accrued were within the realm contemplated by government. Sasol voluntarily terminated its upliftment agreement in 2003.

The upliftment agreements PetroSA currently has in place are actively supported by Government. Some further investigation into the possibility of economic rent accruing to PetroSA as a result of its upliftment agreements might be required. However it is noted that as a dividend paying, wholly state-owned entity, private shareholders are not benefiting from any such rent as may exist. Again in reviewing regulation, care needs to be taken that the benefits of any change are passed through to customers and not simply shifted from one oil industry participant to another.

The remaining agreements between PetroSA and the rest of the petroleum marketing companies are a Government supported and pragmatic economic solution to PetroSA’s lack of marketing infrastructure. It is **recommended** that this be allowed to continue until PetroSA evolves to a point at which it can absorb this function. Alternatively if our recommendation of price cap regulation yields the increased retail price competition that we expect then the Government could opt to use PetroSA’s volumes and status as a merchant refiner to discipline prices in certain markets and thus obviate the need for these upliftment agreements.

There are no fiscal implications arising from this recommendation.

13.15. Volume: Inland Infrastructure constraints (“must have volumes”)

A distinction is drawn in respect of the inland market because of the special considerations that currently apply. In the view of the Competition Tribunal Sasol took into account, when making its decision to terminate its upliftment agreement, the pipeline capacity available to ship petroleum products inland. It is now generally accepted that currently available pipeline capacity cannot meet demand from coastal refiners and importers wishing to ship petroleum products into the inland market and that consequently Sasol in the opinion of the Competition Tribunal, is able to exercise market power. Although Total participates in Natref, 90% of its inland production is used to service its own customers.⁹⁵ This, together with its comparatively small market share, restricts its ability to exercise market power.

Whether or not these inland producers have benefited unduly from sympathetic treatment from Petronet and thus increased this market power requires clarification. In this regard, Transnet contends that “normal business processes were followed”.⁹⁶

Until these transport constraints have been addressed it can be argued that there is a need for intervention. This could be in the form of a Petroleum Products Act regulatory response or a windfall tax on the inland suppliers in respect of the “must have” volumes.⁹⁷

These continued benefits, particularly since the MSA has lapsed, can not be said to have been anticipated in policy and could thus effectively have contributed to windfall benefits which could, in principle, be investigated for windfall taxation

We have seen from preceding discussion that inland manufacturers are able to exercise market power and thus enjoy windfall profits by virtue of logistical constraints. Given the currently prevailing logistical constraints there appears to be no opportunity for market forces to ameliorate this phenomenon in the short term. Improvements in infrastructure are necessary before this can occur. We are aware that Petronet is developing a plan to do this and that a private investor, Petroline, is planning to construct a petroleum pipeline from Maputo to Kendal. Consequently it is **recommended** that until these constraints have been removed Government consider an appropriate response. Such a response could take one of three forms:-

- (a) the regulator concerned (the Minister of Minerals and Energy) could regulate the price, at an appropriate level that approximates competitive market prices, at which the “must have” volumes are sold by the producers. The benefits of this lower price could be passed on to motorists through lower regulated prices in the inland market.
- (b) the regulator concerned (the Minister of Minerals and Energy) could keep regulated prices as they are and appropriate the rent by imposing a levy on inland manufactures, equal to the rent, in terms of the CEF Act.
- (c) the tax authorities could appropriate the rent by imposing a special levy on inland manufactures, equal to the rent.

⁹⁵ Total (2006:24)

⁹⁶ Transnet (2006:3)

⁹⁷ Engen believes this should be addressed by competition authorities. Engen (2006:9)

13.16. Levy on “must have” volumes – fiscal implications

The fiscal implication of recommendation (a) that is, lower regulated inland prices: If the expected reduction in prices occurs it is likely to be marginal, in the order of 10 cents per litre. In theory as price falls demand may be expected to rise with a consequent increase in fiscal revenue. However, the price reduction is marginal – there have been month to month price changes of three times that amount, and the impact on demand is likely to be insignificant. Also the volume of fuel sold is a function of the number of vehicles on the roads and that in turn is more a function of vehicle prices and interest rates than it is of fuel prices. However from the point of view of the economy such a structural adjustment in prices represents a significant saving in fuel costs, of the order of R709 million p.a.⁹⁸

In short the Task Team is of the view that passing on the benefit of a slightly lower inland price will have no impact on fiscal revenues or a very marginal increase.

The fiscal implication of recommendations (b) & (c) will be the same as they simply represent different administrative means of collecting the same size levy or tax and they can therefore be considered together.

The increased revenue from such levy or tax will be approximately R709 million p.a.^{98, 99}.

13.17. Price: Service cost recoveries (delivery)

This element compensates marketers for depot related costs (storage and handling) and distribution costs from the depot to the end user at service stations. The value is calculated on actual historical costs of the previous year, averaged over the country and industry. As a cost-plus regulatory mechanism it is possible that it too could give rise to economic rent. The normal regulatory vigilance is required.

It is **recommended** that the regulator concerned monitor these costs and ensures that they are adjusted when required to realistically reflect true costs.

There are no fiscal implications arising from this recommendation.

13.18. Price: Wholesale margin (MPAR)

The wholesale margin, (MPAR) is currently set at between a 10%-20% return on assets. Some concern has been raised about the equity of the MPAR rules and whether the rate-of-return has been set at an appropriate level. The existence or not of economic rent turns upon whether or not the targeted rate of return in a regulated (return on assets) industry is excessive or not for an industry of this type.

⁹⁸ Inland demand of OOCs = 7.56 billion litres
OOCs existing DJP pipeline capacity = 2.83 billion litres pa
Therefore “must have” volumes = 7.56 - 2.83 = 4.73 billion litres pa
Discount sales to OOCs 15 cents per litre below inland BFP
Therefore 4.73 x R0.15 = R 709.5 million p.a.
(Source: Competition Tribunal, 2006 page 84)

⁹⁹ Note: Eligibility for Fuel Levy rebates has not been taken into account. The real figure will therefore be less than this one.

While rents might have occurred in the past as a result of this mechanism, it did not occur as the result of an unforeseen change in circumstances, but because of inappropriate implementation of the mechanism, and can thus probably not be considered windfalls in terms of the definition adopted in this report.

It is **recommended** that the MPAR methodology review underway by the DME should be finalised as soon as possible and any changes warranted made. It is unclear whether the benefits expected from the parallel “regulatory accounts” investigation will warrant the apparent delay that this investigation poses to a review of the MPAR methodology and any consequent relief that this may bring to the economy in terms of efficiency and prices.

13.19.Price: Retail margin

While we have not investigated this issue at depth, we are aware of a general view in the industry that RSA has some 10% to 30% more service stations than competitive market forces are expected to allow. We are also aware that the MPAR methodology has rewarded oil companies (but not independent service station investors) with a “guaranteed” return on assets on service station investments.¹⁰⁰ It may be that a “guaranteed” retail margin has allowed the survival and proliferation of small service stations. We are aware that the new licensing dispensation brought into effect in 2006 in intended in part to address these matters. An additional regulatory review appears to be appropriate.

In so far as the regulatory dispensation may have delivered economic rent it appears to have manifested itself in an abundance of service stations from which at least some motorists will also have shared through improved proximity of service stations.

In accordance with our **recommendation** of retail price capping, the retail margin would no longer be regulated. The regulator would however still need to calculate a retail margin to arrive at a final retail price. The increased competition that we expect to arise from our recommended price cap regulation is in turn expected to thin out the population of service stations in those areas where there are more service stations than market forces can sustain. As this happens, it is expected that the average volume through-put or size of service stations will increase and this in turn will allow the retail margin calculation to be reduced to the ultimate benefit of motorists and the economy. We note that the continued employment of pump attendants is protected by the Petroleum Products Amendment Act.

The **fiscal implications** of price cap regulation are dealt with in the retail price maintenance section 13.4 above

13.20.Terms of Sasol privatisation

This is dealt with in a separate Chapter 9 above.

¹⁰⁰ Shell and Engen comment that there is no guaranteed return on retail investments and that the current slate under-recovery is about R1.6 bill that is negative- an amount which the oil industry has to bear unless there is intervention by the regulator within the pricing framework. Shell (2006:12); Engen (2006:9)

13.21. Financing Synfuels capital investment

The historic details of the subsidised financing for PetroSA and Sasol's investments are outlined in earlier chapters 5 and 6 above. These benefits can not be said to be windfalls as they were the direct consequence of deliberate government action. These arrangements are not in place anymore and will thus not give rise to continued economic rent generation in future.

13.22. Conclusions – regarding regulatory reform

In this section, which should be read together with chapter 7, we have screened each identified and qualifying excessive economic profit/rent stream and have shown how the qualifying economic rents being generated are likely to be reduced or eliminated by:

- regulatory reform processes that the DME is executing, and/or
- The application of regulatory instruments by the relevant institutions that currently exist
- economic liberalisation and/or the introduction of competition in the relevant part of the value chain is also considered as a mechanism to reduce or eliminate qualifying economic rent.

As is apparent, the excessive economic profits generated by most of the qualifying cost and revenue streams can be addressed by the current timeline of regulatory reforms, institutional regulation and/or liberalisation of the segment of the value chain concerned.

The Task Team recognise that these regulatory policy instruments are under the jurisdiction of the Department of Minerals and Energy and associated energy regulation institutions but strongly urge that they be considered together with other recommendations made in fulfilment of the TOR. We are also of the view that appropriate regulatory interventions will address excessive economic rent earned by the conventional oil refiners and marketers.

In addition there is one element, the inland “must have” volumes that could be the subject of a fiscal intervention.

13.23. Conclusions - regarding fiscal implications

The fiscal implications of the regulatory reforms recommended for the downstream liquid fuels industry range from a not discernable impact to marginally positive in all instances exceptbar one. The only exception is the possible introduction of a fiscal levy on the “must have” volumes in the inland market (one of three options to deal with this phenomenon). Whilst such a levy would increase fiscal revenue it will be a temporary possibility that will exist only until pipeline capacity into the inland market is increased. Both of the projects that have been announced to do this (by Petroline from Mozambique and by Petronet from Durban) have indicated that additional capacity will become operational by about 2010.

14. Conclusions and recommendations

South Africa has a unique liquid fuel value chain with a legacy of very complex regulation that is currently being reformed. This regulatory legacy is also interwoven with an existing complex fiscal regime. The reform process is being led by the Minister of Minerals and Energy, while the fiscal measures are the responsibility of the Minister of Finance and National Treasury. The exercise involving the Task Team has not simply been aimed at developing a new fiscal instrument. A large part of our report is devoted to analysing and recording the history of South Africa's liquid fuel value chain and to outlining the complexity of the regulatory and fiscal systems that have evolved with the industry.

14.1. Screening methodology

We have applied our methodology to identify the steps in the value chain where excessive economic rent has been, or is being, generated and which qualifies for policy recommendations by the Task Team in terms of its TOR. In determining the most appropriate policy response, we have screened each identified and qualifying excessive economic profit/rent stream by checking whether the qualifying economic rents being generated are likely to be reduced or eliminated by:

- Fiscal measures,
- Regulatory reform processes that the DME is executing, and/or
- The application of regulatory instruments by the relevant institutions that currently exist
- Economic liberalisation and/or the introduction of competition in the relevant part of the value chain is also considered as a mechanism to reduce or eliminate qualifying economic rent, or
- Do nothing and allow the party concerned to continue to appropriate the rent/excessive economic profit, perhaps in the expectation that competition could develop in future?

The results are outlined in the **summary recommendations Table 11**. As is apparent, the excessive economic profits generated by most of the qualifying cost and revenue streams can be addressed by the current timeline of regulatory reforms, institutional regulation and/or liberalisation of the segment of the value chain concerned.

These regulatory policy instruments are under the jurisdiction of the Department of Minerals and Energy and associated energy regulation institutions and we develop our recommendations further in chapter 13.

There are three value chain revenue and cost elements where the generation of excessive economic rents, in the view of the Task Team, cannot be adequately addressed through regulatory reform, and where additional fiscal and other measures will be necessary. These are:

- upstream oil and gas production,

-
- excessive synfuel economic profit when oil prices are high due to the Basic Fuel Price mechanism (only partly addressed through regulation),
 - inland (“must have”) volumes not subject to supply competition because of infrastructure constraints (could be fiscal or regulatory)

Each of these three aspects is now dealt with in turn.

14.2 Upstream oil and gas production

The possibility exists of excessive economic rent arising in the mining and sale of oil and gas resources. To address this the Task Team **recommends** that the tax authorities should either introduce a linkage between royalty levels and the respective commodity price curve in the Royalty Bill, or incorporate a progressive tax mechanism into the schedule of the Income Tax Act that ultimately replaces the OP26 mining lease currently in operation.

14.3 Existing synfuels production and new investment in alternative fuels

The Terms of Reference require us to examine both *existing* synfuels production for excessive economic profits as well as possible fiscal support for the *future* development of alternative fuels. In the following two sub-sections these two matters are canvassed and separate recommendations made for each. The recommendations are nevertheless intended to dovetail into each other so as to provide a homogenous fiscal policy.

14.3.1 Excessive synfuels economic profits - permanent structural increase in oil prices – fiscal options

First we deal with existing synfuels producers.

When oil prices are high, there is a structural propensity for synthetic fuel producers to continue to benefit from excessive economic rents, largely arising from: (a) the differing cost structures between fuels produced from crude oil and fuels produced from the synthetic fuel processes and (b) the import parity basis (BPF) on which fuel prices are set.

As a fiscal response to rents/excessive economic profits being generated by existing synfuel producers because of a perceived permanent structural increase in international oil commodity prices, the Task Team notes the following basis for its recommendation:

- The “tariff protection” or subsidy and “clawback” system that has been employed in the synfuel industry contained prior recognition by both Government and synfuels producers that excessive economic rent would implicitly be *taxed* at a different rate through the mechanism that clawed back excessive economic rent, at the rate of 25% of the synfuel firm’s revenues when oil prices were above \$28.70 per barrel. The form that this “tax” took was not to accrue to the fiscus but to directly return the excessive rent to the Equalisation Fund that only benefited the users of petroleum products.
- It is also clear from chapter 10 that in 1995 Government started a process of reviewing and amending the subsidy system (mainly from an energy policy perspective) and that it made some interim adjustments in 1995 with a view to finally concluding the review in 2000. From the perspective of the *fiscal* authorities,

the 1995 process was viewed as an exercise that reviewed this “tax” in terms of its rationale, structure, form, appropriateness and level. This process is still incomplete and Cabinet has not yet concluded the review.

Having considered the four options set out in the Terms of Reference (revised subsidy scheme, cost-based administered pricing regime, progressive formula tax and investment linked tax and subsidy options) we reject each of them in their pure form. Instead we recommend a composite fiscal instrument that contains elements from one or more of these four options.

Recommended fiscal mechanism

- The Task Team recommend that National Treasury consider a pure fiscal option of an additional special fuel levy on existing synfuel producer’s volumes at a level commensurate with the level of permanent structural increase of oil commodity prices and triggered at an appropriate threshold/trigger price.
- In addition, to cater for the volatility exhibited by oil prices in recent times, the Task Team also recommends that, unlike the tariff protection/subsidy system that employed a fixed percentage of revenue, the concept of a progressive sliding rate of taxation apply, according to a formula linked to the oil price.

Recommended oil price threshold/trigger price

Determining such a threshold was a key objective of the PVM study and it recommended a threshold of \$28/bbl. The 1989 to 1995 tariff protection dispensation determined that oil prices above \$28.70 per barrel represented an increase outside a “structural” price band and incorporated a built-in mechanism to share the additional benefits above that price. It is our view that an equivalent price, (adjusted for inflation and exchange rate differences and other relevant factors) since the review commenced in 1995, should form the oil price threshold, above which rents accruing would be regarded as excessive.

If adjusting \$28.7/bbl for inflation and exchange rate differences and other relevant factors does not prove satisfactory an alternative would be to determine an appropriate trigger level afresh. A focussed exercise would need to be undertaken which builds upon the PVM work. As with the PVM study, this may require the firms concerned to provide commercially confidential information and it may be appropriate to involve several relevant arms of Government.

14.3.2 Incentivising new investment in alternative fuels

The TOR explicitly tasks the team to draw on the past lessons from the Government support given to Sasol and PetroSA and make recommendations, not only concerning excessive economic profits/rents that these and other entities might be enjoying as a result of the legacy of past support, but also to consider a possible increased future role for synthetic fuel and biofuel in the national economy.

Having regard to incentivising investment in the supply of fuels, of the four fiscal options identified in the TOR that we have investigated, we **recommend** rejection of the *Cost-based administered price regime* as an investment incentive mechanism because such an instrument runs in an opposite trajectory to current energy policy which aims at

deregulation of the liquid fuel value chain and because such an instrument also discourages efficiency of production.

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 imported natural gas (see Chapter 12). 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 economy (this is discussed in Chapter 12). The details of the mechanism are contained in Chapter 12, but it has the following basic elements:

- Tax-based, on output of new litres of alternate fuels (synthetic and biofuels)
- Investments are rewarded through tax credits at low petroleum product prices and taxed at high prices, thereby constituting a combined protection and windfall mechanism.
- In order to reflect the greater economic and environmental benefits of biofuels the current discount on the fuel levy be extended to all biofuels and the specific incentive curve adjusted to place biofuels in a similar profit position to synfuels under the incentive mechanism
- The investment regime applies irrespective of type of fuel produced and technology used. It is acknowledged that bio ethanol, synfuels and bio diesel have different production costs. However it is intended that, after the fuel levy discount for biofuels, a level playing field should apply to all local production options to encourage the more efficient, lower cost, options to emerge. Applying a single mechanism also has the benefit of greater simplicity in administering the incentive dispensation.
- Based on a literature survey, and utilising updated estimates made in the Arthur Andersen and PVM Reports, the Task Team has estimated benchmark costs of greenfield GTL and CTL production plants, as well as the estimated costs of existing amortised GTL and CTL production facilities in South Africa (Appendix 3). We have used these in defining appropriate thresholds for the formula we are proposing.
- These suggest that, for greenfield plants, \$40 per barrel could constitute an appropriate floor price below which tax credits would apply. Above \$60 per barrel the rents generated could be regarded as excessive and subject to a special tax which rises in accordance with oil prices on a progressive scale.
- Should these recommendations find favour, a more rigorous process would be needed to test the appropriateness of the proposed thresholds.

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- We recommend that the fiscal mechanism be obligatory for all new investments in alternative fuel production from indigenous resources. This is because the primary objective is self-sufficiency and energy security of supply. This dispensation is intended to provide investors and the public with certainty in this regard.
 - Conventional crude refineries fall outside these mechanisms, irrespective of whether imported or local crude is used.

We **recommend** that this be implemented as a fiscal instrument. In theory, such a measure could also be implemented through the CEF Act as a variation of the previous subsidy regime, although it is a less favoured route mainly because its benefits are aimed more at consumers rather than at incentivising new supply capacity and also because that route makes it legally more difficult and administratively more complex to manage.

The Task Team has made a stand-alone recommendation on a specific **fiscal response** to rents/excessive economic profits being generated by existing synfuel producers. Such a recommendation is largely within the fiscal jurisdiction of the National Treasury and is implementable in its own right.

Our recommendation for a progressive investment-linked tax and subsidy mechanism, is also made as a stand-alone basis, mutually exclusive of the fiscal response recommendation for existing synfuels producers. The Task Team regard the former recommendation as one which may be preferable if it is capable of realising more of the national policy aims and objectives outlined in the TOR than the latter, but we also recognise that its realisation depends on a range of complex factors that go beyond fiscal policy.

However, we have crafted both mechanisms in a manner which would allow for a homogenous fiscal approach.

14.4 Inland fuel production not subject to supply competition because of infrastructure constraints

The third of the value chain revenue and cost elements where the generation of excessive economic rents arises is brought about by the logistical constraints preventing fuel supply competition in the inland market. Although we believe that this can be addressed by regulatory reform it could also be addressed by fiscal measures. It is dealt with below in the section entitled “regulatory reforms”.

14.5 Demand and supply of fuels - Other measures

14.5.1 Demand-supply analysis

Demand for liquid fuel products is beginning to reach supply capacity. We **recommend** that careful attention be given by government and industry to further develop and refine the supply-demand forecasts. The Task Team have carried out a preliminary supply-demand analysis. In our view, an overhasty response which closes off supply options is unwarranted at this stage and we believe that there is ample time for a range of policy responses to be debated and developed. South Africa’s recent experience in the electricity sector have

demonstrated the dangers posed by complacent dependence on information flowing from dominant players in the sector, coupled with deficient forecasting and the lack of attention to empirical detail.

14.5.2 Demand-side management

We further **recommend** that Government urgently pursue *demand side* approaches to transport fuels, to follow up on the 2001 Cabinet commissioned “Technology Audit of the Transport Fuels Sector in South Africa” which found that “Measures and mandates to improve the efficiency of existing and new vehicles represent *the single most effective* way for the Government to slow down the rate at which demand for oil-based fuels will grow.”

14.6 Stabilisation/ Heritage Fund

We have explored the role that Stabilisation Funds have played in the liquid fuel and commodity value chains elsewhere, particularly in the upstream components of such value chains.

Elements of traditional stabilisation funds have been part of the liquid fuel regulatory system for some time, particularly in regard to the Equalisation Fund and to the subsidy and payback mechanism.

However, the direct application of a stabilisation fund in its traditional form, in respect to the liquid fuel sector, is not appropriate. Our analysis also suggests that a stabilisation fund may not be of use to that part of the coal industry that supplies the domestic market (*perhaps not for stabilisation purposes, but possibly, at least in theory, for the purpose of spreading the benefits (rent) of a finite resource over a period longer than it takes to extract it – i.e. as a form of social saving as outlined under “advantages” above*). There is perhaps a stronger case for a stabilisation fund for other commodities that South Africa exports, particularly given the uncertainties over the sustainability of the current commodity boom.

Here, our methodology and analysis might be useful and relevant should Government wish to further investigate the merits of stabilisation policy instruments for the primary commodity sector in general and here the Task Team would advocate the following.

Stabilisation funds have traditionally been applied to upstream resource extraction activities:

- usually in circumstances where the respective economy is heavily dependent on the export of a single primary commodity
- and often in circumstances where the prevailing fiscal and macroeconomic systems are relatively undeveloped and/or incapable of dealing with the propulsive macro impact associated with huge surges and declines in export revenue financial flows
- and, in the case of the more successful funds, in pursuit of medium- to long-term reduction of dependence on finite mineral resources.

In the case of the latter, the Royalties that are charged on the extraction and export of finite minerals are the normal fiscal mechanism used to protect national patrimonies. In respect to the impending Royalty Bill, the Task Team has elsewhere in this document, recommended

that to address the possible circumstance where excessive economic profits are earned in the extraction of other natural resources, it would be prudent for government to consider including a progressive fiscal mechanism as part of the Royalty Bill. Otherwise, if the claims of a minerals “super cycle” are proven to be true, it may give rise to future windfall tax investigations on other commodities and increase investor uncertainty.

In conjunction with our recommendation on the Royalty Bill, as commodity prices burst through the defined trigger prices for respective minerals, we suggest that it may be useful to consider linking a Stabilisation/Heritage Fund to the revenues that accrue to the fiscus in terms of the recommended progressive fiscal tax rate, that are in excess of defined royalty levels. In our view, such an approach would be consistent with some of the elements to address excessive economic profit that we are recommending in respect of the liquid fuels value chain.

14.7 Regulatory reforms – liquid fuels

On the basis of our inference of what the broader aims of National Treasury are in initiating the work of this Task Team, we conclude that regulatory reform and measures aimed at increasing efficiencies and competition will go some way towards reducing the excessive economic rent that is being generated in a number of segments of the liquid fuels value chain. These conclusions, drawn from Chapters 7 and 13, are listed below and summarised in the summary table 11 at the end of Chapter 7. The key elements of the regulatory reform and the fiscal implications thereof follow.

- **Import Control:** The Task Team **recommends** that quantitative import controls be removed forthwith and replaced by a policy approach that says that when imports do occur preference should be given to imports of biofuels, where feasible, rather than imports of refined petroleum. The fiscal implication of a slight rise in imports will be a corresponding rise in Customs and Excise duty income.
- **Price Regulation:** It is **recommended** that full price regulation of gasoline be initially reduced to price cap regulation for a period to determine the impacts and to see what aspects of regulation will be required to be retained when proceeding to full price deregulation. Utilising price cap regulation the risks of higher prices in less competitive rural markets or of rural areas cross-subsidising urban areas can be avoided. This means that the elements of the price build up would not be regulated or gazetted. Only a final retail maximum price would be gazetted. However the composite elements thereof should be transparent. Constituent elements similar to those currently in use could be used to calculate such a price cap. During this period of price capping the prohibition of discounting and purchasing incentives should be discontinued. Similarly the prohibition on purchasing using credit and the restriction on retail promotions should also be discontinued. This will allow increased competition and an opportunity for some of the benefits thereof to be passed through to motorists. This recommendation is elaborated in Chapters 7 and 13. Liberalising retail prices by means of a price cap will, if anything, lead to a marginal increase in fiscal revenues from fuel sales. Also as prices fall an opportunity is created to increase the Fuel Levy.
- **Import parity price:** It is **recommended** that the import parity price (BFP) be comprehensively overhauled to produce a formula that is much closer to ‘true import parity’. In line with the proposals above this would not be a regulated price but merely constitute a part of the calculation performed by the regulator to

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- determine the final retail price. A downward revision of the BFP would lower prices and lead to a marginal increase in fiscal revenues from fuel sales. Also as prices fall an opportunity is created to increase the Fuel Levy.
- **Pipeline Tariffs:** Petroleum pipeline tariffs are expected to be regulated soon under the Petroleum Pipelines Act administered by the National Energy Regulator. It is **recommended** that this new regulator be given an opportunity to carry out its functions in this regard. Expected changes to petroleum pipeline tariffs are not expected to materially change fiscal revenues.
 - **Price zone differentials:** No evidence of windfall rents in the retail price zone differentials has emerged during this investigation. It is **recommended** that the DME investigation into this aspect be pursued and the outcomes, if appropriate, be applied within the context of the price capping mechanism referred to above. There are no fiscal implications arising from this recommendation.
 - **Marketing synfuels/Upliftment agreements:** The remaining agreements between PetroSA and the rest of the petroleum marketing companies are a Government supported and pragmatic economic solution to PetroSA's lack of marketing infrastructure. It is **recommended** that this be allowed to continue until PetroSA evolves to a point at which it can absorb this function. Alternatively if our recommendation of price cap regulation yields the increased retail price competition that we expect then the Government could opt to use PetroSA's volumes and status as a merchant refiner to discipline prices in certain markets and thus obviate the need for these upliftment agreements. There are no fiscal implications arising from this recommendation.
 - **Inland fuel production not subject to supply competition because of infrastructure constraints:** Inland manufacturers are able to exercise market power and thus enjoy windfall profits by virtue of logistical constraints. Given the currently prevailing logistical constraints there appears to be no opportunity for market forces to ameliorate this phenomenon in the short term. Changes in infrastructure are necessary before this can occur. We are aware that Petronet and others are developing investment plans to do this. Consequently it is **recommended** that until these logistical constraints have been removed the Minister of Minerals and Energy should give serious consideration to regulating the price, at an appropriate level that approximates competitive market prices, at which the inland market "must have" volumes are sold by the producers. This could be done by raising a levy in terms of the CEF Act and passing the benefits on to petroleum product users. This could benefit inland fuel users by approximately R709 million p.a. and reduce an important market price signal. If regulatory reform is not deemed advisable a special tax or additional Fuel Levy on these volumes could be introduced until the logistical constraints are removed.
 - **Delivery costs:** It is **recommended** that the regulator concerned monitor service cost recoveries (delivery) and ensures that they are adjusted when required to realistically reflect true costs. There are no fiscal implications arising from this recommendation.
 - **Wholesale margin:** It is **recommended** that the MPAR methodology review underway by the DME should be finalised as soon as possible and any changes warranted made. It is unclear whether the benefits expected from the parallel "regulatory accounts" investigation will warrant the apparent delay that this investigation poses to a review of the MPAR methodology and any consequent relief that this may bring to the economy in terms of efficiency and prices. The

fiscal implications of this recommendation are not known at this time as the matter is still under investigation.

- **Retail margin:** In accordance with our **recommendation** of retail price capping, the retail margin would no longer be regulated. The regulator would however still need to calculate a retail margin to arrive at a final retail price. The increased competition that we expect to arise from our recommended price capping regulation is in turn expected to thin out the population of service stations in those areas where there are more service stations than market forces can sustain. As this happens it is expected that the average volume through-put or size of service stations will increase and this in turn will allow the retail margin calculation to be reduced to the ultimate benefit of motorists and the economy. We note that the continued employment of pump attendants is protected by the Petroleum Products Amendment Act. The **fiscal implications** of price cap regulation are dealt with above.

The **fiscal implications** of the regulatory reforms recommended for the downstream liquid fuels industry range from a not discernable impact to marginally positive in all instances except one. The only exception is the possible introduction of a fiscal levy on the “must have” volumes in the inland market (one of three options to deal with this phenomenon) which could yield a significantly positive result. Whilst such a levy would increase fiscal revenue it will be a temporary possibility that will exist only until pipeline capacity into the inland market is increased. Both of the projects that have been announced to do this (by Petroline from Mozambique and by Petronet from Durban) have indicated that additional capacity will become operational by about 2010.

14.8 Synfuels tariff protection

The long and complex history of “tariff protection” appears to be unresolved and not concluded. It is **recommended** that Government conclude this matter expeditiously and in doing so tie up various loose ends. We also **recommend** that the fiscal instrument for existing synfuels producers in response to excessive economic profits proposed elsewhere in this document be the preferred instrument for resolving any uncertainties that may remain at the conclusion of the long history of synfuels tariff protection.

14.9 Potential windfall gains from the privatisation of Sasol

It is the view of the Task Team that Sasol may have benefited from windfall gains at the time of its privatisation in 1979/1980. The favourable terms of the Sasol privatisation in 1979/80 coupled with the conditions which were established to ensure the success of the privatisation resulted in the generation of economic rent. There may have been some anticipation that economic rents would be generated in the privatisation process, but the extent of these rents is unlikely to have been anticipated. There does therefore appear to be a case for considering a portion of these rents to have been windfall gains in terms of the definition adopted in this report.

The example of the UK Government in imposing a windfall tax on privatised utilities does provide a comparable international precedent for the imposition of a windfall tax under similar circumstances

However, for a variety of reasons including our view that National Treasury have not seen the overall intention of the Task Team’s TOR as a tax-raising exercise and because of the

retrospective nature of such an action, we **recommend** that the matter of potential windfall gains that might have been made because of the terms of Sasol's privatisation should be noted but that no further investigation or action be taken towards considering a windfall tax on such potential windfall gains from Sasol's privatisation.

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APPENDIX 1 - Milestones in Government Participation in the synfuels industry

- 1947: South African government granted a licence for the development of a synthetic fuel industry.
- 1950: Sasol formed by government of South Africa.
- 1954: Blue Pump Agreement negotiated by government with the oil companies to accommodate Sasol 1 volumes and place Blue Pumps on company forecourts. Impact was limited as SA was still importing product to meet local demand. Sasol 1 production received a subsidy and a refinery investment incentive.
- 1955: Sasol 1 commissioned.
- 1964: Creation of the Strategic Fuel Fund (SFF) to organise and implement a strategic stockpiling programme
- 1965: Formation of Soekor to explore for oil and gas inland and around the SA coast. Soekor was funded by the IDC and directly by government
- 1965: The SAR&H commissioned the first white product pipeline (DJP) from Durban to Johannesburg via Sasolburg. The pipeline was extended in 1973 and 1993
- 1966: SFF established crude oil storage at Durban harbour and next to Durban airport.
- 1967: Mining Rights Act introduced. The MRA offered the private sector favourable fiscal terms for the exploration and production of crude oil and gas.
- 1967: Government began a project to build strategic crude oil stocks at disused coal mines at Ogies.
- 1967: SAR &H built a crude oil pipeline from Durban to Kendal via Richard's Bay and Sasolburg. This was to provide transport of crude to the Ogies stockpile and also to provide crude to proposed future refineries at Richard's Bay and Sasolburg.
- 1969 Crude oil pipeline (COP) commissioned
- 1973: OPEC oil embargo on certain countries including the USA and South Africa.
- 1973: SAR&H commissioned a new dedicated pipeline to transport Natref's jetfuel to the Johannesburg International Airport –dedicated to accommodate Natref jetfuel supplies only.
- 1977: UN imposes mandatory crude oil sanction on South Africa.
- 1977: Petroleum Products Act passed. It consolidated the regulatory framework and also imposed a veil of secrecy around the industry.

The Central Energy Fund (CEF) was established, incorporating the SFF. The Central Fund Act allowed for the creation of the Equalisation Fund. CEF received direct government funding and also indirect funding from the levy on the fuel prices designated for the Equalisation Fund. Investments in Sasol were consolidated as a holding company under the CEF Group. SFF extended its role to include procuring crude for the refiners (*excluding Shell and Total*).

- 1978: SAR&H commissioned a white oil product pipeline (DWP) from Durban to Alrode via Secunda. The pipeline was aimed at increasing product supplies from the coast and from Secunda to the growing inland market.
- 1979: Second international oil crisis caused by the revolution in Iran.
- 1979: Process to privatise Sasol initiated. Privatisation took place in phases.
- 1980: Commissioning of Sasol 2
- 1982: Commissioning of Sasol 3
- 1984: Introduction of the PAR mechanism to protect the return on investment of the oil companies. The PAR mechanism was retained until 1989.
- 1986: Government commenced the planning for a new alternative synthetic fuel plant.
- 1989: Deloitte Pim Goldby formula for tariff protection on for synfuels adopted
- 1990: The MPAR mechanism replaced the PAR formula. MPAR was designed to protect the profitability of the Marketing operations of the oil companies. It provided for an average 15% ROAM for Marketing.
- 1990: Secrecy legislation associated with the industry was lifted.
- 1990: Petronet became part of Transnet.
- 1992: Moss gas synfuels refinery in Mossel Bay is commissioned.
- 1993: UN crude oil sanctions lifted.
- 1993: The National Economic Forum established the Liquid Fuels Industry Task Force to investigate the restructuring of the South African fuel industry.
- 1993: Change (lowering) in IBLC price formula
- 1995: Petronet converted the DWP pipeline to a methane rich gas pipeline (MRG) to facilitate Sasol's MRG marketing to KZN.
- 1995: Andersen Report adjusted the floor price for subsidisation of synfuels from \$23.00/bbl to \$21.40/bbl.[R84.41/bbl to R78.54/bbl]¹⁰¹

¹⁰¹ Based on December 1995 average Rand Dollar exchange rate of 3.67

1999: Synfuel subsidy floor price reached its lowest level of \$16.00/bbl [R98.40/bbl]¹⁰²

2001: Soekor, Moss gas consolidated to form PetroSA, as a wholly-owned subsidiary of CEF. Management responsibility of strategic stock policy retained within CEF

¹⁰² Based on December 2006 average Rand Dollar exchange rate of 6.15

APPENDIX 2 - Mineral Royalty Bill

The National Treasury released the Minerals and Petroleum Royalty Bill in March 2003, proposing the royalty rates to be imposed on mining companies. Royalties have been defined as compensation to the state for the right to exploit non-renewable resources. Royalties have historically been the most important instrument for taxing mineral extraction especially when the country attracts substantial investment. This type of tax is suitable for government because it ensures an up-front revenue stream as soon as production starts. However, if royalties are imposed at a high rate, they have the potential of deterring investment by increasing marginal cost and impacting negatively on marginal operations in turn.

The mineral and petroleum royalty bill gives effect to the Minerals and Petroleum Resource Development (MPRD) Act of 2002 and seeks to impose a royalty on the extraction and transfer of South Africa's mineral resources. The point is mining operations do not always generate profit, and thus the state has no guarantee that it will receive its revenue for the extraction of its forgone mineral resources. The royalty proposed by the Treasury is an ad valorem royalty, which is a percentage tax on gross revenue. This means an amount payable by mining companies is calculated according to the market value of mineral production.

The proposed royalty regime imposes a quarterly charge on holders of mineral rights for the extraction and transfer of South African mineral rights. The Royalty Bill recognises that the nation is entitled to a payment for the extraction of its non-renewable mineral resources. The royalty is levied in addition to income tax but scores as a deduction, as it constitutes a deductible expense in the production of income.

An ad valorem royalty is classified as a production related tax because companies are burdened with it regardless of their profitability and therefore, it is imposed on the production of the deposit when it starts. Royalties are popular among governments because they are easy to collect, to understand and to administer. Additionally, this type of royalty ensures some revenue for government from the onset.

However they are regressive, non-neutral, increasing the possibilities to tax more than economic rent, especially during low price periods, and they reduce the economic size of the deposits.

The Minister of Finance has explained that “South Africa is not alone in charging a royalty for its mineral resource”. Most countries with significant mineral resources impose such a charge and the royalty rates fall well within internationally competitive margins that can be sustained in the foreseeable future.

However the royalty will only go into effect in 2009, when the conversion from old order to new order rights has been completed. Government’s reason for charging an ad valorem royalty is that it wants to “strike a balance between the need for adequate compensation and the imperative of maintaining the international competitiveness of the mining sector”.

The enactment of the MPRD Act saw the end of the old mineral and petroleum dispensation and the start of a new regime, which comes as a need to transform the mining and petroleum industry. The first step to the transformation of the industry is to transfer the

control of mineral rights in South Africa from the dual system between private holders and the state to a position where the State becomes the sole custodian of all mineral rights in South Africa. Therefore the bill provides continuity for mines and oil producers who changed from the old order rights held by firms to the new order rights held by the state. All of these companies now pay leases to the state and if they change to the new order rights before the end of the five year period when the new royalties comes into effect (in 2009), they will not have to pay the government royalties until the royalty issue has been settled. This however would cost the state millions of Rands in lost revenue in the process.

One disadvantage of the formula tax on gold is that companies have are tempted to overstate their costs to minimise tax payments hence defeating government's goal of adequate compensation. Consequently government introduced an ad valorem royalty on all minerals mined in South Africa. The question is: what impact will the royalty have on businesses involved in the liquid fuel value chain?

Royalty Rates

The royalty rates range from one percent to eight percent depending on the mineral commodity, as classified in Schedule 1 of the Royalty Bill. National Treasury says the rates chosen are eminently reasonable, falling in the lower half of the international scale. The royalty rates are as follows:

Table 21 : Proposed Royalty Bill Rates

Gold	3%
Platinum	4%
Diamond	8%
Coal	2% (1% exemption for low grade coal utilised in power generation or synfuel production)
Oil and Gas Natural gas and natural gas condensate petroleum crude offshore production where the water depths are Deeper than 500 meters.	1%
Oil and Gas Natural gas and natural gas condensate petroleum crude onshore and offshore production where water depths are shallower than 500 meters	3%

Source : Royalty Bill (2003)

The government might reconsider the taxes on gas and oil production to attract investment.

There will be a one per cent exemption for the low grade coal than internationally used coal, which Sasol uses in its production process to create synthetic fuel. Most minerals falling under this exemption have relatively small values and hence, the revenue potential is limited.

With regard to oil and natural gas the royalty rate for oil and gas is halved for any holder of oil production rights if the holder initially discovers an economically exploitable deposit within the same area as the oil production right in question.

The inclusion of the royalties to be charged on coal, which is used by Sasol in the manufacture of liquid fuels and also by Eskom in the generation of electricity, is a major concern. The costs of extraction will increase (where certain coal grades can only be used locally). The result is it might cost Sasol and Eskom more to extract coal and some consumers might face higher prices for electricity. Coal is a significant input in our electricity generation sector and it is access to cheap electricity that encourages investment in the country. By placing such a royalty on coal production, the local economy is prejudiced in the same way, if not more than would be the case if royalties were paid on minerals for domestic use.

On the other hand the royalty on gross revenue can have a significant impact on the future of the mining industry, thus causing an unintended consequence of shifting investment away from South Africa. This could also result in future loss in revenues and employment due to declines in production especially in the gold mining industry which has been hit hard recently by the strong Rand. The current royalty bill raises the fixed cost of both current and future mining projects despite project profitability and ability to pay. In particular, a revenue-based royalty has a negative impact on low margin projects, which are rendered uneconomic. In essence, the proposed gross revenue royalty will raise the barriers to entry for new entrants, particularly on BEE projects, as well as weakening existing projects and ultimately undermining investment and growth in the mining and petroleum industries. Conversely, the position of large profitable firms will be entrenched as the royalty on gross revenue will hurt them the least unlike the marginal mines and the new entrants into the mining industry.

National Treasury announced in June 2006, that the Royalty Bill was reaching the final stages of Cabinet approval but that there had been substantial revision of the earlier draft.

APPENDIX 3 - Summary: CTL, GTL and Biofuel Cost Information

Table 22 : Summary CTL, GTL and Biofuel Cost information

CTL	Capital Cost	Feed stock Cost	Oper-ating Cost	Total
Suppes, G.J.& T.S. Storvick (2005)				\$41/bbl
First South Securities Report (2006)	\$5-7b based on China for 84 000 b/d : \$62500- 87500/bbl/d	\$5/bbl	\$15/bbl	Existing synfuels 2006 cost of production in SA is estimated at R198/bbl (\$26/bbl)
Shenhua (2006)		\$10- 12/ton		\$22/bbl
USDOE (2006)				\$45/bbl first plant, reducing to \$35/bbl for subsequent plants
US Airforce Magazine (2006)				\$45–60/bbl
GTL				
First South Securities Report (2006)*	\$ 1 bill for 34 000 b/d: \$29 412 /bbl/d	\$10- 15/bbl	<\$5/bbl output	\$25-30/bbl
Foster Wheeler – Halstead (2006)	\$950m \$9/bbl Equiv.	\$0.5/MMb tu = \$4.50/bbl equiv.	\$4.50/bbl	\$18/bbl
Biofuel				
Sunflower				\$ 95/bbl
Soya				\$ 65/bbl
Maize				\$ 67/bbl
Sugar cane				\$ 65/bbl ¹

Biofuel Assumptions – Source: Biofuel Working Group

1. Currently allowed crops and proven technologies;
2. Current production areas with typical margins and economics;
3. Benefits from co-product sales included unless specified otherwise;
4. No accelerated depreciation allowed.
5. Crude oil prices determined from Basic Fuels Prices plus \$2/bbl for additional handling.
6. Includes returns to farmers.
7. No incentives included.

First South Securities Report (2006)

Report Details

- a. Integrated oil companies have higher-risk and lower return projects than Sasol (reserve replacement)
- b. Maintenance capex spend is lower than the typical integrated oil company
- c. Sasol WACC 2006-15 estimated in 10)-10.5 range.
- d. Sasol says operating costs for GTL plants will remain at or below \$5/bbl of product produced
- e. At \$40/bbl long term oil price, GTL projects have significant return and earnings potential
- f. Breakeven cost of GTL is about \$25-30/bbl
- g. 1 bbl output for CTL plant needs 0.5- 0.6t coal
- h. Sasol's data indicates that a 80 000 bbl/d CTL plant at a capital cost of \$80 000/bbl/d can yield 15% pre-tax return for oil prices above \$50/bbl (with *no* fiscal incentives). 45% of capital for gasification step (coal handling, air separation, gasification, purification); FT requires 11% of capital.
- i. Coal at \$10/tonne is equivalent to \$0.50/mmBtu versus a long term natural gas price of \$6/mmBtu in the US.
- j. CTL plants will require oil prices in excess of \$45-50/bbl *to be economically feasible*
- k. CTL uses "vast" amounts of water
- l. Typical World Scale CTL Economics:
(based on China) at \$5-7 bill for a 84 000 bbl/d CTL plant

- Assume 80 000 bbl/d nominal capacity, actual production 84 200 bbl/d. consuming 15-19 mill t of coal per annum.
- Product slate: Diesel 53 100 b/d
Naphtha 24 500 b/d
LPG 5 600 b/d
- Capex: Capital cost: \$60 000-80 000 per daily barrel
(implies capex of \$5-7 billion)
- Opex: \$5/bbl at coal price of \$10/tonne
- Other costs: \$15/bbl –catalysts, maintenance, labour, materials; excludes rebates for electricity export,etc

- m. Typical GTL Economics:
(based on crude oil price \$25-30 (minimum at which GTL meets WACC)

	GTL \$/bbl
Cost of gas feedstock (\$0.50 -1.00 /mmbtu)	10-15
Cash operating cost of plant	5
Total cash costs	15-20
Crude oil price	25-30
Refining margin(diesel-brent)	4-5
Premium	1-2
Less transportation costs	(2-3)
Net back to GTL plant	29-34
EIT Margin available for capital recovery and profit	9-19

Target is to build plants for <\$20 000 per daily barrel