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

A discussion document for public comment

14 July 2006

This discussion document 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.

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The Task Team invites comment and views from interested and potentially affected parties in electronic format to be sent to the Secretariat at : kiyasha.thambi@treasury.gov.za.

We further request that respondents indicate whether or not they would like to make an oral presentation in addition to the written response submitted. Oral presentations will be heard at public hearings that will be held at a later stage, approximately three weeks after public release of this document.

Flowing from this and, in accordance with the Terms of Reference given to the Task Team, a report will be compiled and recommendations made to the Minister of Finance by mid-September 2006.

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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 Associates GMBH
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

1. Introduction

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 Section 2.

This purpose of this document is to provide a basis for public discussion of the issues that the Task Team is required to address as well as to solicit informed comment. It does not represent a full discharge of the Terms of Reference. Indeed several areas require further development and sections of the document pointedly raise questions that have arisen in the Task Team's work thus far. Few conclusions have been reached and no recommendations are made at this stage.

If any views are expressed in this document, they have been derived from the Task Team's respective analyses of:

- the historical trajectory of the South African liquid fuels industry,
- relevant international experience of fiscal and other measures applied to liquid fuel and related industries,
- definition of the term "windfall" and its relation to various forms of economic rent.

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 Task Team has approached its work with care and in as even-handed a manner as is possible. We have refrained from expressing and concluding views in this document. This would be premature at this early stage of the investigation. However we are, as suggested in the TOR, soliciting your views through some pointed questions, regarding the desirability and feasibility of the options that we are asked to examine.

In soliciting responses to this document, the Task Team welcome clarification and correction of any of the analyses that we have undertaken as well as any alternate views and approaches that may be more accurate and/or relevant. We propose that such comment be done in writing, and that these be formally tabled and discussed at public hearings to be held approximately 3 weeks after public release of this discussion document.

This document does not reflect the views of the National Treasury, who are providing logistical and administrative support for the Task Team. In fact, the Task Team invite the National Treasury to make formal inputs into this process along with other interested parties.

The discussion document is organised as follows. In Section 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 section 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 our work thus far, we have tried to more precisely define "windfall" and to apply that definition to a rigorous analysis of the liquid fuels value chain. In Section 4 we develop a working definition, which clearly distinguishes between the two different forms of super-normal profits that are of interest to the Task Team, namely windfall profits on the one hand, and other forms of super-normal profits/economic rent. We also review various "windfall" and super-normal profit 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. Our scan of international experiences is not fully comprehensive and we would welcome and additional perspectives that may be relevant and useful.

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. Section 5 details the intricate nature and history of the regulatory system that governs the industry.

Section 6 discusses the role of the liquid fuel industry in the economy, in particular the contribution of the synfuel industry.

The concepts of "windfall", developed in Section 4, are applied to the South African liquid fuel value chain in Section 7 where we test whether windfall profits have been generated in the liquid fuels industry and whether super-normal profit generation can be expected to continue into the foreseeable future.

The Terms of Reference also require 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 a number of questions are raised in this regard in section 8. It is our intention to focus more intensively on this area of our brief in the next stage of investigation.

In Section 9, we conclude by pointedly raising key issues and questions that have arisen thus far in the investigation, including confirmation of the methodology that we have adopted and the analytical steps that we have taken.

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 until1999, 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:

    - 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.

3. The South African Fiscal Regime as Applied to the Liquid Fuel 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, in order to adhere to our terms of reference, that it is important that all options and experiences be aired at this stage of the investigation.

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, Mossgas) 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
    - 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 section 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

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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 Appendix2) 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 beneficiated. 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 baseload electricity shortages and feedstock for PetroSA's dwindling reserves.
        - Current high oil prices may also lead 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 1 : **A brief chronology of the UK oil and gas fiscal regime**

1964	• **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	• 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 *oil production allowance*, '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	• **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	• 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	• 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	• 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	• 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	• 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	• 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 sold in coastal areas. 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 2 : 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.
	Customs and Excise Levy	National	Petrol, Diesel, Biodiesel	4 cent per litre.
Vehicle taxation	*Ad Valorem* 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 WDCS 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 3 : 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

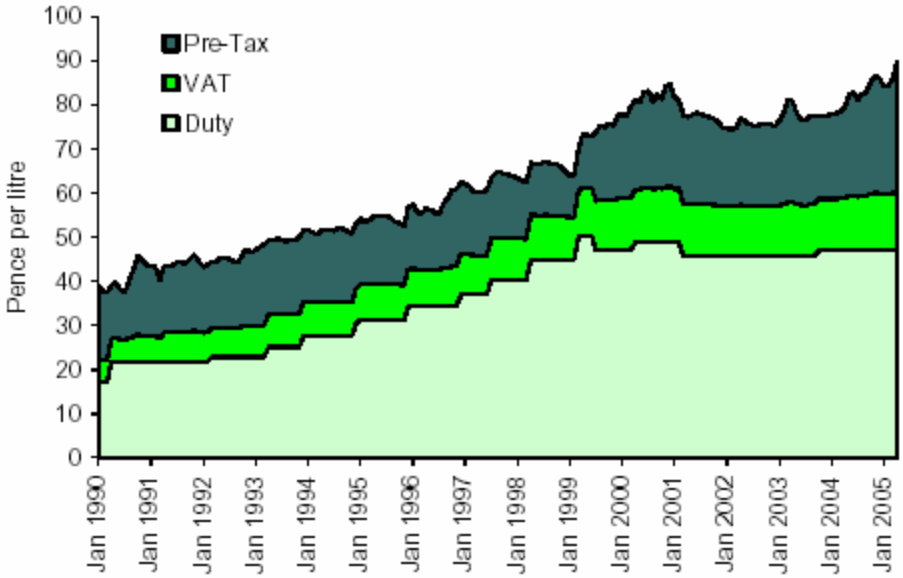
The Task Team is developing an understanding of these policy coordination processes and the extent to which they might overlap with windfall tax-related issues.

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: Super-normal-Profits, 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 often 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

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

Postner (2002) defines it 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)" [1]

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.
- 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 rents because they:

- are profits over and above what is necessary to sustain the enterprise; and

[1] Economic rent is a fundamental concept in economics. 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), or 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.

- often arise from the extraction of natural resources which are considered to belong to society; or
- arise from excessive pricing of essential goods and services for which consumers have no alternatives and have little choice but to consume.

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

The term "super-normal profit" is also used to describe economic rent. *Normal profit* is the opportunity cost of the entrepreneur. *Super-normal profit* is any profit over and above normal profit (Bannock et al, 1992:345). The terms economic rent and super-normal profit are used interchangeably here.

While governments would not always want to tax economic rent, it seems that economic rent generally qualifies for taxation when 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 super-normal 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 be super-normal profits that may qualify for additional taxation.

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

Super-normal 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 creation of intellectual property (including technology).

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.

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 gains 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 expected scenarios it will often be considered that some form of 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.

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.[2]

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

[2] 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.

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 super-normal 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 (Inland 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 super-normal 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"[3]

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

[3] Communication from UK Treasury to RSA National Treasury, May 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 cyclicity 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 baseload 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, but this is outside the scope of the TOR.

4.5. Conclusions

We have defined economic rent as equivalent to *super-normal profits* that is profits in excess of *normal profits*. *Normal* profits are those necessary to attract and keep an entrepreneur invested in the business.. We have pointed out that economic rents often qualify for special additional taxes (henceforth referred to as "qualifiable 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 defined taxable windfall profits as:

- such qualifiable 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 qualifiable economic rent that arose unexpectedly, and which could 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 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, qualifiable 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 qualifiable 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.

4.6. Questions for Comment

Do you agree with our definitions and use of the concepts of "economic rent"/"super-normal profit", "natural resource rent" and "windfall profits"? If not please give reasons and alternative suggestions.

Do you agree with the conditions set out above which normally apply to the circumstances when economic rent (including windfall profits) is subject to taxation? In other words, when does economic rent qualify for taxation?

Do you agree that the distinction between *backward looking* retrospective windfall profits and *forward-looking* expectations of economic rent, and thus a distinction between formulating respective policy responses has value as argued above?

The issue of retrospective measures, is a sensitive area, and one which the Task Team would like to address openly at this early stage. Mindful of the basic stance of South African fiscal authorities - in support of fiscal certainty and against retrospectivity and its possible consequential adverse impact on investor confidence - outlined in Section 3.1 above, please comment on whether there are there any circumstances applying to the liquid fuels value chain that could justify a retrospective approach.

Do you agree with our arguments about "windfall losses" as made for both the infrastructure and essential services sectors, and the natural resource sectors?

Are there other important considerations for the key concepts that we have missed?

Do you agree with our interpretation of the examples and are there other cases that we should consider?

Do you agree with our interpretation of the role of natural resource stabilisation / savings funds, and or their limited applicability to the South African coal sector?

5. History of the Liquid Fuels and Synthetic Fuels Industry in South Africa[4]

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 economy[5]. 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 incentives 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.

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4 See Appendix for a chronological account of Government involvement in the industry.

5 The Competition Tribunal recently took a similar view. "…the strategic significance that fuel products assume in all countries…", In The Competition Tribunal Of South Africa, Case No: 101/LM/Dec04, In the large merger between: SASOL LIMITED, ENGEN LIMITED, PETRONAS INTERNATIONAL CORPORATION LIMITED, (Primary Acquiring Firms) And SASOL OIL (PTY) LTD, Primary Target Firms, ENGEN LTD, (Primary Target Firms), paragraph 41. Hereinafter the "Uhambo Decision".

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.

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 equalise prices between urban and rural markets. 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 RATPLAN[6] 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,

[6] The Retail Rationalisation Plan

- In1979, 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.

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. 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 provided Natref with a range of incentives (additional to those granted previously to Mobil, Shell/BP and Caltex, for the construction of their refineries) to locate the refinery at Sasolburg. 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.

Total's entry to the country was facilitated through the preferential granting of sites via the RATPLAN and by the preferential treatment it enjoyed as a shareholder in Natref.

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 were compelled to purchase their crude requirements through the SFF. This requirement was removed 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 the oil companies in maintaining their refineries, was inadequate. 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.

5.4. Development of the Manufacture of Synthetic Fuels

Following the SATMAR initiative of the 1930s the SA government in 1954 decided to establish a synthetic fuels manufacturing plant to reduce its dependence on imported fuel, using German technology. To achieve this objective, the IDC formed the South African Coal, Oil and Gas Corporation Ltd (Sasol).

In 1955, the Sasol 1 plant was commissioned in Sasolburg. 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 heavily subsidised through CEF funding and 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. 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 some 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 refused as they believed that the capacity was not required as it would be more economic for them to re-commission their mothballed capacity.

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.

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. 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. 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. This gave content to 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 free 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. The impact of this again for inland producers was that they enjoyed greater "locational advantage" than would otherwise have been the case. 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.

In 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. 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.

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. Despite this rather presumptuous 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.

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 intended to resolve market problems. For example the RATPLAN was introduced in the 1950s to address cut-throat competition that was undermining the commercial viability of the retail sector. 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)[7] was, as far as can be established not in the public domain.

[7] The SFF was incorporated into the CEF Act in 1977

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 gentleman'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;
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 the product of a signed agreement between the Department of Minerals and Energy and the members of SAPIA 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).

In 2005/2006 the manner of regulation was formally modified by the commencement of new legislation establishing a new independent National Energy Regulator[8] to regulate petroleum pipelines and the formalisation of licensing responsibilities of the Petroleum Controller[9]. 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.

[8] See the National Energy Regulator Act, No 40 of 2004.
[9] See the Petroleum Products Amendment Act, No 58 of 2003.

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 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.

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 2002 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. Consequently the RATPLAN lapsed. It also became increasingly difficult to gain exemption from the, by then, strengthened Competition legislation. It will be replaced by a regulated licensing system in terms of regulations published under the Petroleum Products Act.[10]

(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 1971) which was also given preferential treatment in terms of guaranteed offtake.

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

This tradition of upliftment of indigenous fuels began with the SATMAR refinery and was continued when SASOL One commenced operations. Government required the other oil companies (OOCs) to purchase ("uplift") all of its output and to sell it through their branded forecourts. The rationale for this was economic efficiency because SASOL did not have any service stations. Although somewhat lost in the mists of time is 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.

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 up to a cap of a 9.23% market share from 1988. The *quid pro quo*, was that SASOL was prevented from marketing its product through its own retail outlets. These agreements have been referred to as "effectively a government-brokered and sanctioned form of private regulation".[11]

When SASOL Two and Three were constructed in the early 1980s this upliftment and blue pump arrangement was extended to these two new refineries.[12] 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 capacity[13] 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 on assets" formula called "PAR" which presumably also compensated them for idle assets[14]. 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.[15] 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 meanwhile enjoyed the luxury of being able to sell every litre that it produced. Understandably the OOCs found this servile relationship unpalatable.

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.

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11 "Uhambo Decision" paragraph 46.

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

13 Uhambo decision para 53.

14 Refinery assets were "deregulated", that is excluded from the return on assets formula in 1990 on the basis of the Lambprecht 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.

15 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.

When the Government built the Mossgas synfuels refinery in Mossel Bay in the early 1990s[16] 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 Mossgas was not paid an import parity price. Instead it was only paid an "Africa nett back" price[17] and the motorists, via the Equalisation Fund levies were compelled to make up the difference. Mossgas was and remains a purely merchant refiner without a marketing and distribution chain.

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 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 entered the inland market shipping as much product as they could into the inland market, at almost any price. 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."*[18]

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 and the Competition Board (the predecessor to the current competition authorities) never challenged it.

PetroSA continues to enjoy a product upliftment agreement.

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16 It commenced production in 1992.

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

18 Uhambo Decision para 119.

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. 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.

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.

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 again[19].

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 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 to guarantee that the return on assets managed by the oil companies would be around 15%.This was replaced in 1990 by a guaranteed return for marketing assets only –marketing of petroleum activities return (MPAR). 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.

5.6.8. The Equalisation Fund

The Equalisation Fund was created 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:

- 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.

[19] 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.

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 and CEF to forgive Sasol certain debt as a result of which the price of petrol could be reduced.

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

5.7.2. Tariff Protection to Sasol

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 in 1979. Support comprised 3.6 cents/litre 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.

In July 1989 a new system that varied from month to month was introduced and it prevailed until 1995. 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 1979 was wiped clean. The slate was never wiped clean.

It is noteworthy that this was achieved by means of a "gentleman's" agreement. When in 2003 Sasol believed that it no longer required tariff protection it refused to reintroduce such a "gentleman's agreement".

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

Table 4: 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), Pg 38.

This system 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. 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.

Table 5: 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

In exchange for this declining floor price and loss of an absolute floor price the "claw back" mechanism when prices were high was abandoned.

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 by an interdepartmental committee that gave rise to the so-called PVM Report. This PVM report recommended the maintenance of tariff protection along the lines of the dispensation preceding 1995-2000 and also recommended the reintroduction of a "claw back" provision. The Committee had just finalised its recommendations and had prepared a Cabinet Memorandum when the Minister of Finance announced in his 2006 Budget Speech the appointment of a Task Team. The Cabinet subsequently requested that certain aspects of the recommendations be reworked.

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 requirements
- 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 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 provides opportunity to blend/upgrade components at Natref
- Scheduling of pipeline deliveries biased to Sasol's requirements

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 expense [20]

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 purchased the shares held by the National Iranian Oil company and became the majority shareholder.

5.7.5.1. 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)

From the Natref commissioning in 1971 to 1987 (17 years!), Natref was not charged for the transport of crude from Durban to Sasolburg by crude pipeline. Instead they were passed on to inland motorists.

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. It appears that this was financed by Sasol through government and the IDC.

[20] Uhambo Decision

5.7.5.2. 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
- 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
- Pipeline constructed from Natref to Johannesburg Airport. Sized and dedicated to accommodate Natref's jetfuel volumes only.
- When the Government's strategic stocks held at Ogies were relocated to Saldanha Bay, the most cost effective means 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
- 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 it 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.

5.7.6. 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 Soekor[21]
- 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 off-shore. Subsequently when PetroSA was in a position to repay these loans earlier than planned this was not allowed, at some cost to PetroSA. Investing

[21] Presentation by Sipho Mkhize to PPC on Minerals and Energy, 17 November 2004

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. In the process the government wrote off/capitalised loans to the value of R8 billion for Mossgas and R1.5 billion for Soekor. Subsequent to "normalisation" all loans raised have to be raised on a commercial basis without government guarantees. Mossgas received R1.5 billion in tariff protection up to November 2004

5.7.7. 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.

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 between "about R6 billion" (Sasol est) and R6.8 billion (BP est).[22]
- By November 2004, PetroSA had received a subsidy of R1,5 billion in the form of tariff protection from government.

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 Uhambo 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. 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.
- 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

[22] Uhambo Decision

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.

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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
- Minimizing 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
- 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
- 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 party to export parity.
- Total has benefited from the shared good fortune of being a joint venture refinery partner with a synfuels producer, Sasol.

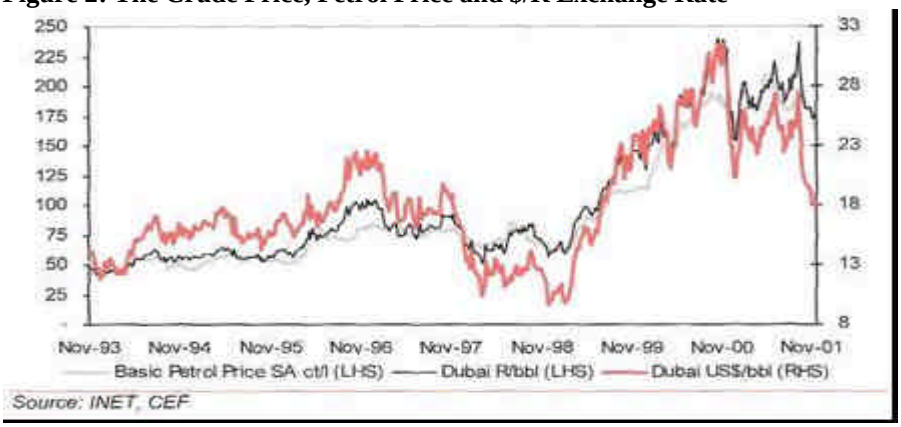
- The synthetic fuels manufacturing industry would not have developed in the absence of incentives and tariff protection because of high capital and operating costs.
- Sasol shareholders reaped huge benefits from the previous investments by government and the "inherited" structures which favour the inland producer
- The development of the fuels infrastructure and distribution networks were 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.
- 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.

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 synthetics 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 section 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

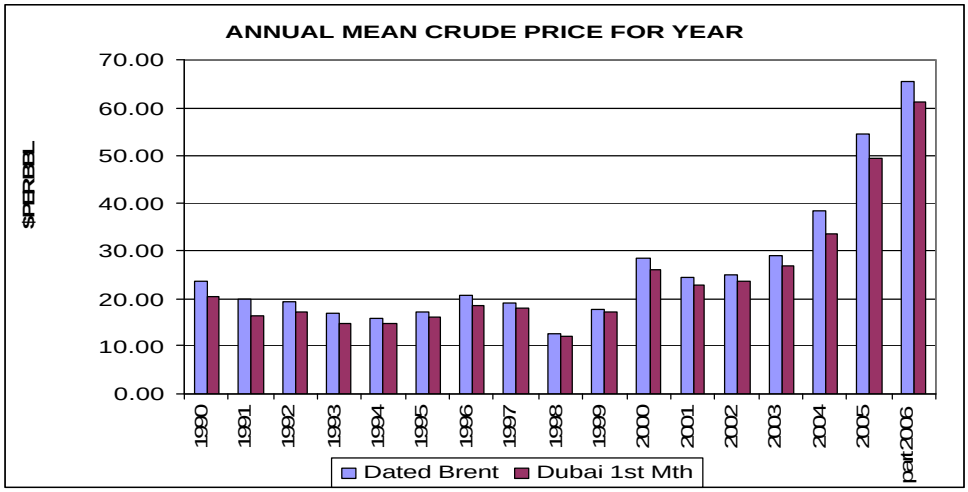


Source : BJM (2002), Report on Sasol, January

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

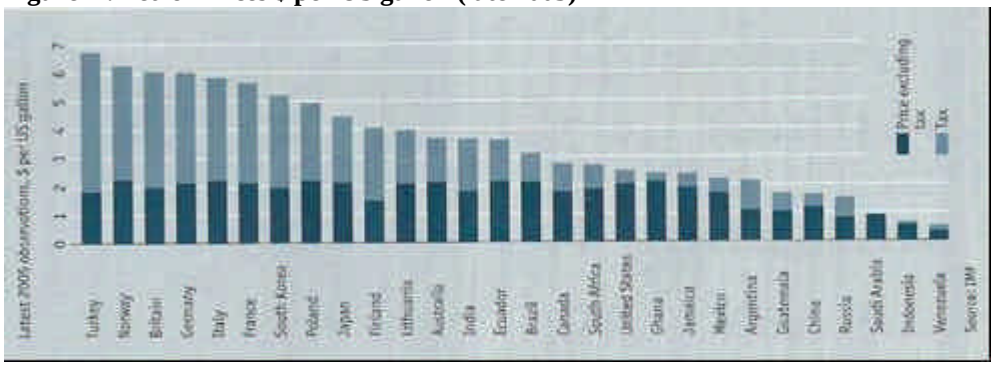


Source: Platts

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, manufacturing costs are largely determined in local currency. These questions have relevance and need to be given due consideration.

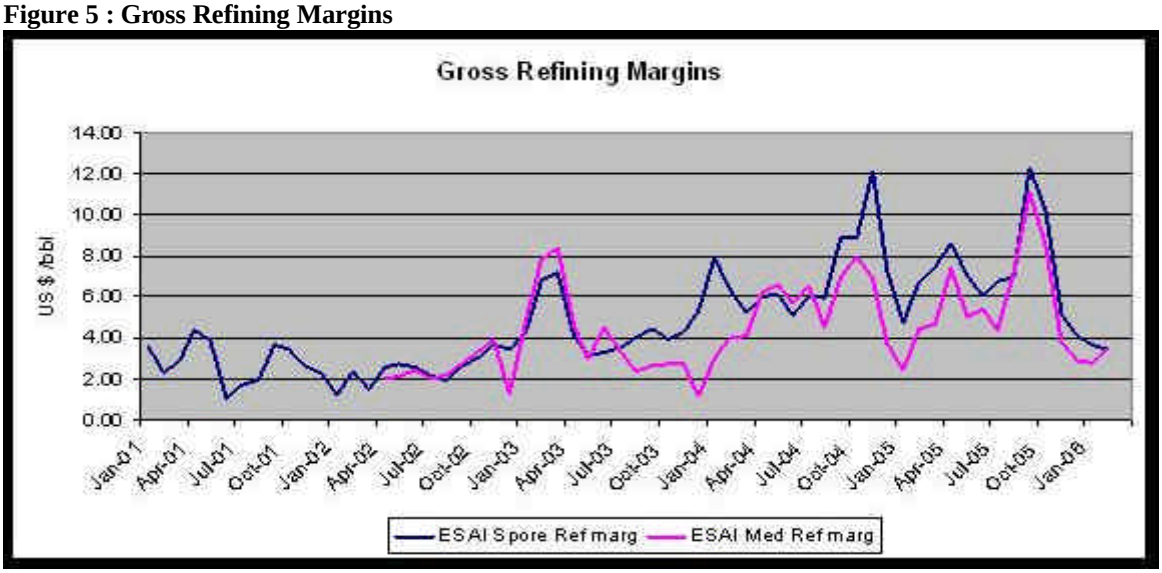
In the case of Sasol, the production costs of coal, its base input into the Secunda coal liquefaction process (CTL), and the operating costs of its CTL process, are key to the calculation of its breakeven costs. The price realised for its fuels products are external to its cost base.

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.

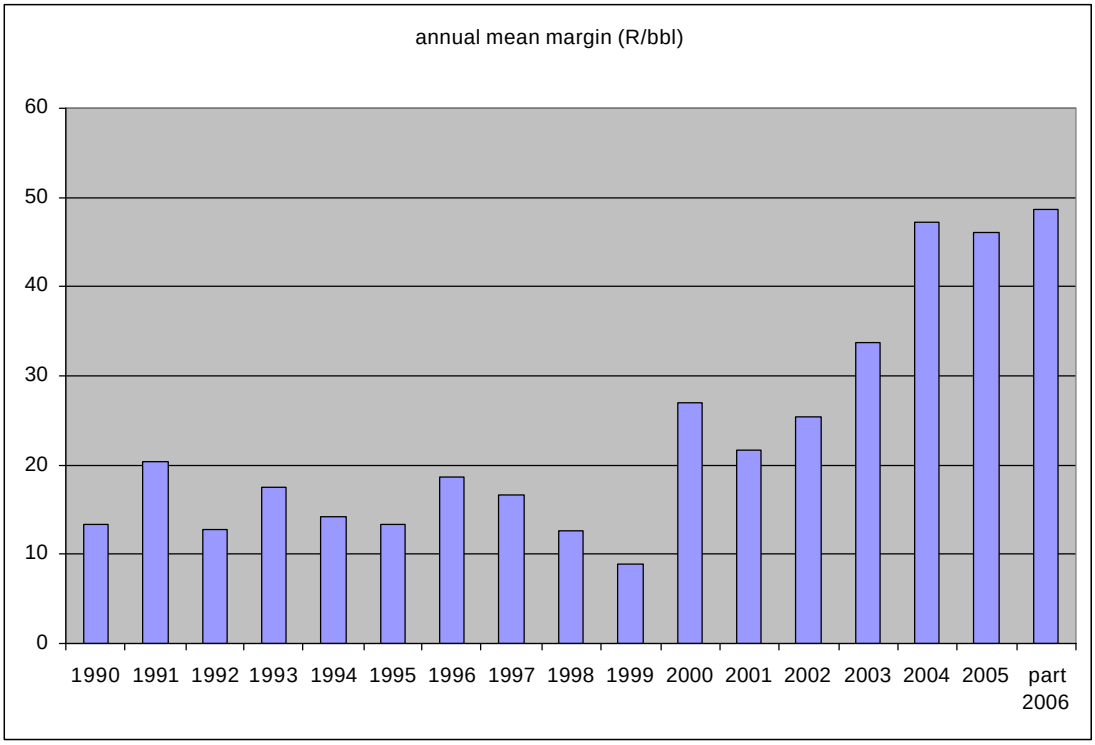
The international upstream operations of the OOC's, reap direct and significant benefits from high crude oil and gas prices. (see figure 6 which relates crude oil prices to gas prices). As the local operations of the OOC's are solely marketing and refining operations, these profits fall outside of the 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

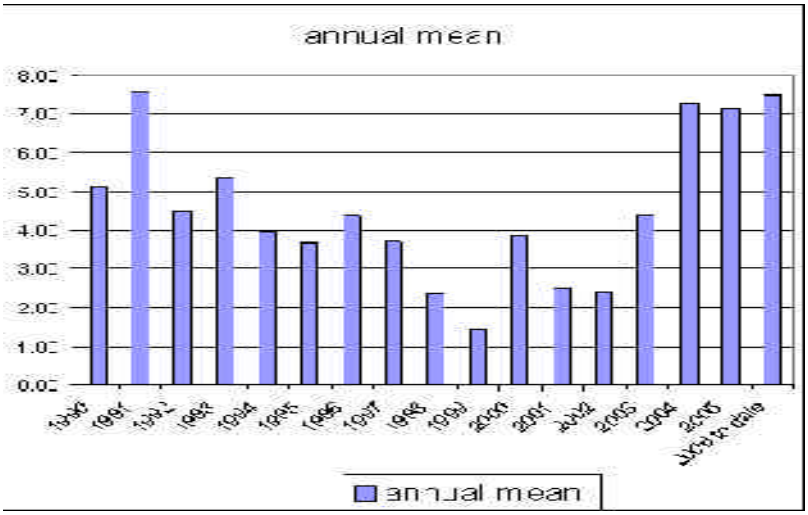
It is evident from the figures below that there has been a significant increase in refining profitability internationally in the last three years (and therefore also in South Africa). This is largely attributable to supply-demand factors with few expansions and new refinery investments over the past 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 players 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 requirements[23].

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.

[23] SANEA (2003)

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.

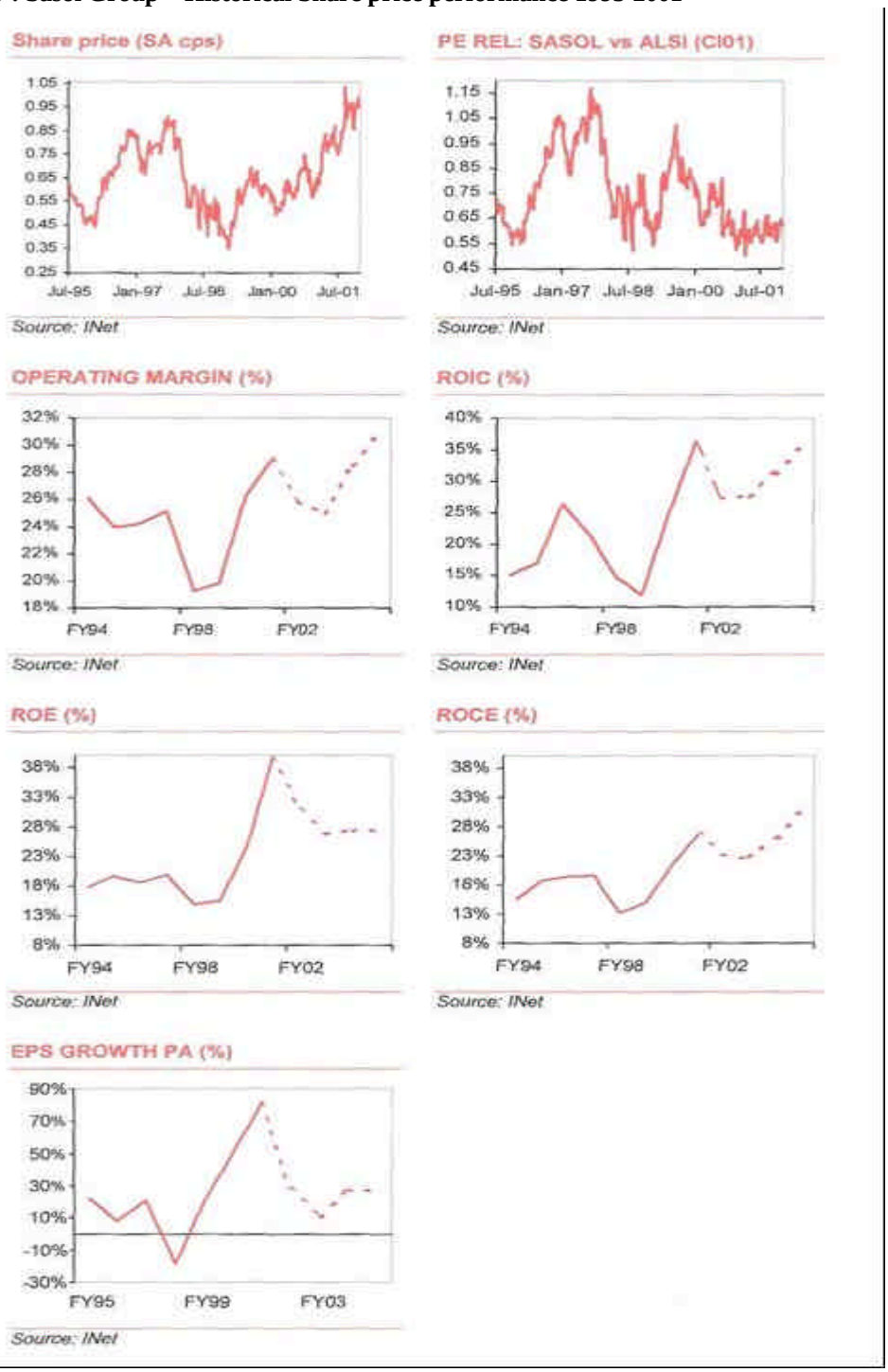
PetroSA in 2003 paid a “once off restructuring dividend” of R1.6 billion. This included a R60 million in lieu of windfall profits and a “special dividend” of R570 million.

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 6 : 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 7 - 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

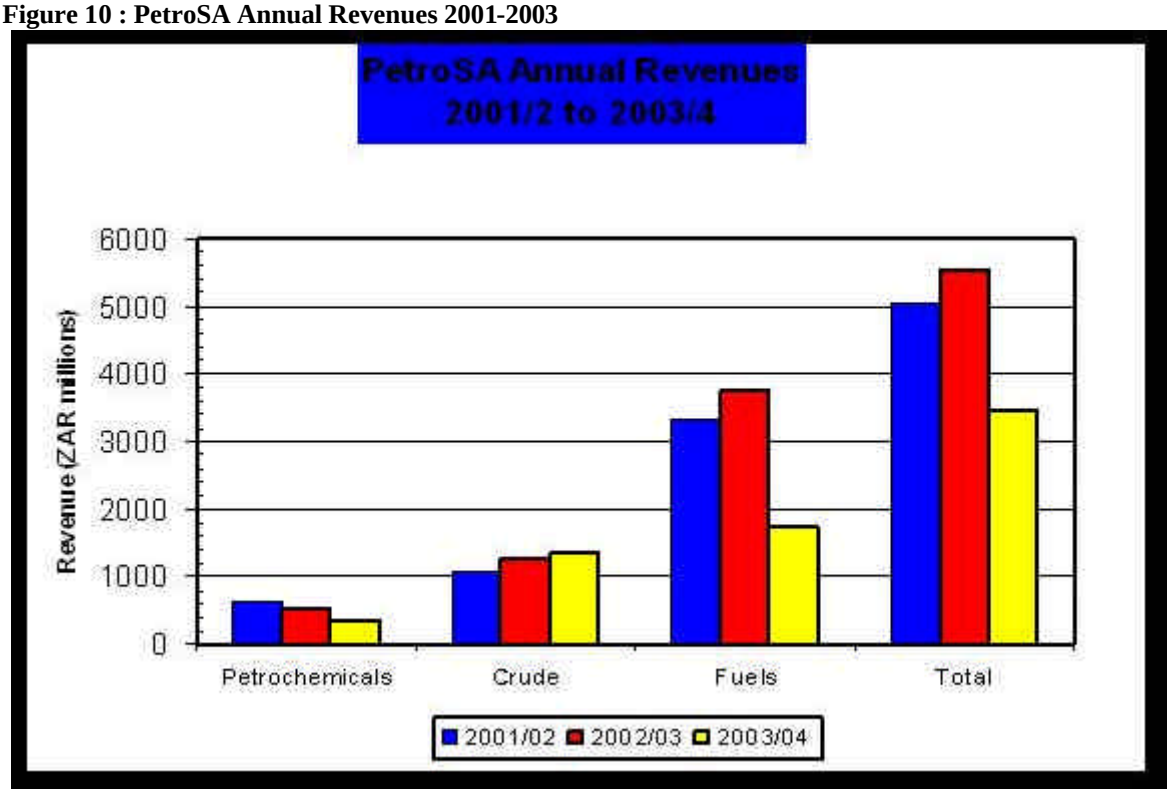
- The investment in PetroSA was funded through state guaranteed loans.
- Returns on these investments were negligible.
- Soekor had limited success in finding oil reserves, but found sufficient gas reserves to take Mossgas to 2008/9.
- Mossgas's life span was threatened by the lack of availability of gas. A further investment of R2.5 billion to develop gas reserves had to be made to extend the life span of Mossgas to 2008/9.
- A major challenge facing PetroSA is to secure feedstock for the Mossel Bay plant beyond 2008 and invest in related infrastructure.

Table 8 : PetroSA Income Performance

PetroSA	2003/4	2002/3	2001/2
Average crude oil price	$28.97/bbl	$27.58/bbl	$23.36/bbl
Average R/$ exchange rate	7.20	9.82	9.48
Impact on revenue: $1 change in price			R164m
R1 change in exchange rate			R382m

Source : PetroSA (2004)

Figure 10 : PetroSA Annual Revenues 2001-2003



Source : PetroSA (2004)

Table 9 : 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 10 : 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)
The objective of manufacturing is to achieve a break-even point of $19.00 per barrel by the end of 2007

6.2.3. Other Oil Companies

Table 11 : 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 12 : 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. Economic Rent and Windfall Profits in the Liquid Fuels Industry in South Africa

Given the review of the history of the liquid fuels industry in South Africa and of its institutional and regulatory arrangements it is now possible to apply the conceptual framework outlined in section 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 section 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.

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 economic rent and past windfall profits from economic activities. In order to identify such areas the following questions thus have 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; form part of 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 other oil companies who import their crude from around the world and refine their product in three coastal and one inland refinery – all with different cost structures. The historic and current South African price regulatory regime deals with this complexity by simply treating it as a "black box". It uses a basket of international prices for refined product to benchmark an import parity price which local producers are allowed to charge (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. 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 a firm from incurring costs that it (and its competitors) would normally incur, by shifting it onto others, and thus affect its profits and the level of economic rent it might be generating. The value chain categorisation thus also distinguishes between price, volume and cost factors.

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. 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 preliminary conclusions regarding whether past windfall existed and whether future economic rent is expected. In cases where this is found further investigation of the appropriate policy response is warranted and tentative indications regarding the direction for such investigations are thus given (fiscal, regulatory or other)

Table 13 : Areas for possible policy response to past windfall profits and continued economic rent generation in the SA liquid fuels industry

		Criteria for assessing windfall and expected economic rent conditions					Should a policy Response be considered?	
	Value Chain: revenue & cost elements	**Past economic rents?**	**Were rents windfalls? (i.e. unanticipated in policy)**	**Expectation of future rents?**	**Resource extraction, infrastructure or essential goods or services?**	**Market power or regulatory failure (excl. natural resources)?**	**Past Windfall profits?**	**Future rents?**
Upstream – Economic rent components								
1	*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
Downstream – Economic rent components								
2	*Price:* BFP - FOB (product spot price) - Freight - Insurance - Ocean loss - Wharfage - Coastal Storage - Stock financing	Yes: All oil companies	??	Yes	Yes	Yes	??	If Yes: Regulatory & Fiscal
3	*Cost (saving):* Tariff Protection not refunded	Yes: Sasol, Petrosa?	No	n/a	Yes	Yes	No	n/a

		Criteria for assessing windfall and expected economic rent conditions					Should a policy Response be considered?	
	Value Chain: revenue & cost elements	**Past economic rents?**	**Were rents windfalls? (i.e. unanticipated in policy)**	**Expectation of future rents?**	**Resource extraction, infrastructure or essential goods or services?**	**Market power or regulatory failure (excl. natural resources)?**	**Past Windfall profits?**	**Future rents?**
4	*Cost (saving):* Transport costs	Yes: Sasol; PetroSA; Natref, Chevron (e.g. pipeline tariffs free or subsidised pipeline export);	Yes: Secunda? Chevron?	Yes: Sasol; No: PetroSA	Yes	Yes	Yes: Secunda No: Natref Chevron?	Yes: Possibility of Energy Regulator
5	*Price:* Zone differential	Yes: All Oil Co's. Larger benefit to Sasol.	No ??	Yes: All Oil Co's	Yes	Yes	No??	Yes: unless changed by Regulator (DME)
6	*Volume:* Uplift agreements	Yes: Sasol (MSA, Bl Pump); PetroSA	??	Yes: PetroSA See next point: Sasol	Yes	Yes	??	Yes? (See next point)
7	*Volume:* Infrastructure constraints ("must have volumes")	Yes: Sasol; Total	Yes: Sasol and Total (since MSA lapsed)	Yes : Sasol ; Total	Yes	Yes	Yes: Fiscal windfall?	Yes: fiscal & regulatory (DME) until infrastructure constraints removed

		Criteria for assessing windfall and expected economic rent conditions					Should a policy Response be considered?	
	Value Chain: revenue & cost elements	**Past economic rents?**	**Were rents windfalls? (i.e. unanticipated in policy)**	**Expectation of future rents?**	**Resource extraction, infrastructure or essential goods or services?**	**Market power or regulatory failure (excl. natural resources)?**	**Past Windfall profits?**	**Future rents?**
8	*Price:* Service cost recoveries (delivery)	Yes	No	Yes	n/a	n/a	No	Yes: Regulatory (DME)
9	*Price:* Wholesale margin (MPAR)	Yes: Wholesalers	No??	Yes: Wholesalers	Yes	Yes	No	Yes: Regulatory (DME)
10	*Price:* Dealers' margin	Yes	Yes??	Yes	Yes	Yes	Yes?? (practical?)	Yes: Regulatory (DME)
	Value Chain: capital elements							
11	Terms of Sasol privatisation	Yes?: Sasol	No	No	Yes	n/a	No??	n/a
12	Financing synfuel capital investment	Yes: Sasol, PetroSA	No	No	Yes	n/a	No??	n/a

The question as to whether 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) would apply 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.

1) 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 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 imported[24] and can thus per definition not give rise to natural resource rents in South Africa.

Rather liquid fuels provision 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 the 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.

7.4. Value Chain Elements

The individual value chain elements listed in the table are now discussed in turn. The analysis presented here relies on the review of the history and other data presented in previous chapters and is thus not repeated here.

7.4.1. 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.

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

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. In the case of oil and gas mining 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.

7.4.2. Price: Basic Fuel Price (BFP) mechanism

The application of the BFP regulatory mechanisms to the sales price of liquid fuels in South Africa can give rise to economic rent in 2 ways.

Firstly, there can be a difference between "true" import parity price[25] 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. Consequently economic rent is generated by the BFP. It is assumed that the regulator did not intend to put in place a regulation designed to generate profit in excess of normal profit, this is super-normal 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.

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.[26]

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 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.

[25] It is assumed that true import parity arises from a globally competitive market allowing participants to make normal profits.

[26] 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 .

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.

7.4.3. Cost (saving): Tariff protection not refunded

There are two considerations here. Firstly in terms of the tariff protection system in place since the 1980s and until 1995 synfuel manufacturers were required to refund the Equalisation Fund 25% of their revenue when oil prices exceeded $28.7/bbl. Was it intended by Government/regulator that such repayments should at some stage balance the tariff protection given to synfuels manufactures when oil prices were below the floor price? It seems unlikely because at the time of its introduction, oil price fluctuations over the life of the plant could not have been known. Nor could it have been known that those fluctuations when matched against the tariff protection formula would have allowed the account to balance out at some time during the life of the plant. But if so, was the slate ever wiped clean?

Secondly when this model of tariff protection was replaced in 1995 by the so-called "Arthur Andersen" model, did the Arthur Andersen model deliver greater benefit to Sasol than Arthur Andersen intended by the time it lapsed in 2000?

These areas could be further investigated.

7.4.4. Cost (saving): Transport costs

Sasol, Natref (Sasol and Total) and Chevron(to a much lesser extent) have all benefited from free or subsidised pipeline transport 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 and PetroSA might continue to benefit from subsidised pipeline costs in future. This question of pipeline regulation is expected to be addressed by the Energy Regulator now that it is busy processing license applications made in terms of the Petroleum Pipelines Act.

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7.4.5. Price: Zone differential

It appears that all the oil companies at times benefit inappropriately, albeit minimally, from "postage stamp" methodology utilized in determining the zone differential. 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.

7.4.6. 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 MSA in 2003.

The supply agreements currently in place with PetroSA are still in place and 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.

7.4.7. Volume: Inland Infrastructure constraints ("must have volumes")

A distinction is drawn in respect of the inland market because of the special considerations that apply. In the view of the Competition Tribunal Sasol took into account, when making its decision to terminate is 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 and Total (through Natref) are in the opinion of the Competition Tribunal able 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.

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.

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

7.4.8. 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 mechanisms it is possible that it could give rise to too economic rent. The normal regulatory vigilance is required.

7.4.9. Price: Wholesale margin (MPAR)

The wholesale margin, (MPAR) is currently set at between 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.
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.

7.4.10. Price: Retail margin

While we have not investigated this issue at depth we are aware of a general view to the effect 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. 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. 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.

7.4.11. Terms of Sasol privatisation

The favourable terms of the Sasol privatisation in terms of the government guarantees provided is outlined above. While these conditions were established to ensure economic returns to shareholders it is possible that they could have resulted in the generation of economic rent. The risk of this would have been evident from the outset. Any such possible rents should probably thus not be considered windfalls in terms of the definition adopted in this report. The extended time that has elapsed since privatisation and the fact that those shareholders that benefited post privatisation may no longer be current shareholders makes it extremely difficult to see how any windfall tax could be equitably implemented.

7.4.12. Financing Synfuels capital investment

The historic details of the subsidised financing for PetroSA and Sasol's investments are outlined in earlier chapters 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.

7.5. Conclusions

This section has identified the steps in the South African liquid fuels value chain where economic rent has or is being generated and which could qualify for policy recommendations by the Task Team in terms of its TOR.

On the basis of this methodology and the tentative application of it to the facts at our disposal, managing anticipated future economic rents might be addressed through:

- existing and new fiscal measures and
- through the modification of the various regulatory instruments that govern the liquid fuels industry

7.6. Questions for comment

Please comment on the usefulness of the value chain approach adopted here.

Please comment of the preliminary analysis of the individual value chain elements as presented in the table and accompanying text, highlighting any possible omissions or differences in interpreting the data.

Please comment on the key conclusions from the analysis.

8. Incentivising future investments in the downstream liquid fuel industry

The Terms of Reference for this initiative also require the Task Team to comment on future investment in the liquid fuel industry.

SAPIA(2006) estimate that, on a high growth scenario, the domestic liquid fuel market will require an additional 4,740 million litres per annum of petrol, diesel and kerosene in 2012.

SAPIA (2006) also report that current refining and synfuel production capacity were close to their limits in 2005. Thus, by 2012, the anticipated growth in domestic demand could be met by a combination of :

- additional imports of approximately 80,000 barrels per day
- new crude oil refinery capacity of minimum 80,000 barrels per day
- new synfuel capacity of minimum 80,000 barrels per day
- indigenously produced renewable fuel components such as bio diesel and bio ethanol

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 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 exposure to imported fuel inflation is at the level of 100% of its domestic consumption of fuel, 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 domestic prices, no advantage on the impact of inflation will be derived from any current or increased domestic fuel production. However inflation is but one indicator and there would doubtless be benefits from increased investment, jobs created and the like.

At this early stage of the work of the Task Team, we would like to address the following questions to the current and potential members of the liquid fuel industry:

- 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 Task Team has been asked to consider the merits of the following four fiscal mechanisms to address anticipated windfall profits:

    - Revised subsidy regime
    - Cost-based administered price regime
    - Progressive formula tax
    - Investment-linked tax and subsidy options

    Such mechanisms, depending on how they are shaped, may also have an impact on the profitability of new investments that might be made to meet future demand growth. Synfuel and/or renewable fuel production may not be cost competitive with crude-base refining production. Please comment on the relative attractiveness of each of the above mechanisms for future investment.

8.1. The potential of Transfer Pricing

We have established in Section 7 above, that it is unlikely that windfall gains have been made in the upstream coal production segment of the synfuel value chain.

Transfer pricing can theoretically take place at or between any of the stages in the value chain. In the cases in question the most obvious possibilities are at the resource extraction stage or chemical manufacture stages. Transfer pricing in various forms can become tempting when floor price and "claw-back" tariff protection are under consideration. Consequently the Arthur Andersen and other investigations into tariff protection for the synfuels industry paid particular attention to this possibility. Any proposed measure of support or taxation would similarly need to pay careful attention to this possibility.

The possibility of transfer pricing also exists for manufacturers importing crude oil and in this instance cross border transfer pricing is the obvious target of concern. This was tested in court recently in when the Receiver of Revenue challenged a multinational oil company in this regard.

8.2. Questions for comment

Comment on whether the concern of the Task Team about this hypothetical transfer pricing situation is warranted and, if so, how could it be mitigated?.

9. Conclusions and issues for discussion

This section pointedly consolidates the questions that have arisen in this investigation thus far. The Task Team requests comment on these issues as well as any other issues that are of relevance to stakeholders.

9.1. Fiscal regime applied to liquid fuel value chain

These issues arise largely from Section 3.

- Royalty Bill – Coal.
  In respect of beneficiation policy objectives, the Bill proposes a 1% reduction in royalties for low grade coal that will be used to manufacture synfuels and/or electricity. Comment on whether this is a sufficient incentive to encourage further beneficiation of coal.

- Royalty Bill/OP26 fiscal regime - Gas
  In structuring the OP26 fiscal reform and setting royalty levels for offshore gas production, what is the appropriate balance that should be struck between encouraging investment in exploration as against anticipating the potential windfall gains that might arise from a large discovery? Should the Royalty Bill distinguish between gas used to manufacture petroleum products in RSA from gas for other purposes?

9.2. Relationship between fiscal, minerals, energy, industrial and environmental policies

- The Task Team's brief is to address the fiscal regime applying to "windfall" profits. We have pointed to the interwoven nature of fiscal, mining, energy, industrial and environmental policies that apply across the liquid fuel value chain. Please comment on the coherence of these policy spheres in South Africa insofar as they apply to windfall profit issues.

- Is there coherence between the policy approach towards proposed environmental taxes and the re-regulation process being applied to the fuels industry? Elaborate on what should be the optimum interlinkage.

- What liquid fuel investments have been made to date to meet environmental requirements and what investments are still to be made?

- Is it appropriate for RSA to consider a regulatory and fiscal dispensation that would support another round of investment in synfuels or in bio fuels or in both? If so, how should it best be done and how should any perceived errors in past attempts be avoided?

9.3. Methodology for defining windfall

We invite comment on the methodology used by the Task Team to define windfall, as outlined in Section 4.

- Do you agree with our definitions and use of the concepts of "super-normal profit", "economic rent", "natural resource rent" and "windfall profits"? If not please give reasons and alternative suggestions.

- Do you agree with the conditions set out above which normally apply to the circumstances when economic rent (including windfall profits) is subject to taxation? In other words, when does economic rent qualify for taxation?

- Do you agree that the distinction between *backward looking* retrospective windfall taxes and *forward-looking* taxation of economic rent has value as argued above?

- Do you agree with our arguments about "windfall losses" as made for both the infrastructure and essential services sectors, and the natural resource sectors?

- Are there other important considerations for the key concepts that we have missed?

- Do you agree with our interpretation of the examples and are there other cases that we should consider?

- Do you agree with our interpretation of the role of natural resource stabilisation / savings funds, and or their limited applicability to the South African coal sector?

9.4. History of the liquid fuel and synthetic fuel industry – factual accuracy and interpretation of the material analysed

The Task Team has based its analysis on the publicly available documentation that has been referenced in this paper. Industry participants are requested to assist the Task Team to address the following questions:

Questions to all parties

- Comment on any inaccuracies contained in the history section,
- Logistics Infrastructure - Are industry participants (Crude-based or synfuels) deriving any specific preferential commercial gain through the particular way in which they access nationally-owned infrastructure? If so, does this situation continue to prevail? If so, how would you quantify the differential benefit and how can this situation be rectified?

Specific questions to Other Oil Companies (OOC)

- Quantification of historic benefits received by OOCs
    - Value and detail of terms of transfer of coal assets from government to OOCs in 1980s
    - What was the shortfall/gain between synfuel levy and from actual lost profits
    - What was the difference between support received by Natref and other oil companies?
- Did Natref benefit from the purchase of crude oil stocks at "discount" prices for processing at their refinery when government decided to reduce stocks?
- Why were Total and Shell permitted to procure their own crude for their SA refineries when the rest of the SA refiners were supplied by CEF? Were there any abnormal profits involved?
- Were the multinational companies compensated for mothballing refining capacity to accommodate Sasol 2 and 3 in any other way apart from the payment of the synlevy
- Why are the OOC's return on assets as recorded in the SAPIA Annual Report so low?
- How do the OOC's explain the difference between their profitability and that of Sasol Oil?
- Have any form of incentives been granted to the oil companies to encourage refinery investments for upgrades to meet Clean Fuels specifications?
- Does Chevron benefit from shared logistics with PetroSA?

Specific questions to Government, Sasol, CEF and the IDC

- What were the terms of the privatisation of Sasol? How many phases of dilution were there by government and at what price? Who were the main beneficiaries? What was the benefit to shareholders including and excluding tariff protection?
- How was NATREF financed through government and the IDC?
- At what price did Sasol and Total acquire the NIOC share of Natref?
- What was the extent of the benefit to Natref from the purchase of Ogies strategic stocks? Was this benefit shared with Total?
- Why does Natref continue to benefit from location, and other factors enjoyed by synfuels?
- What are the breakeven synfuel costs before and after capital recovery?
- What has been the cumulative tariff protection, including capital costs incurred by government over the lifetime of the company
- The Task Team understands that the synfuel protection slate was never wiped clean in 1998. Should it have been?
- If so, what is the current outstanding amount – assuming the tariff protection system was terminated in 2000,
- And if we assume that it was not terminated but merely suspended while negotiations with the synfuel industry continued, then what amount has built up on the slate since 2000?
    - On the basis of the Andersen formula?
    - On the basis of the pre-1995 floor and ceiling mechanism?
- At the time of the 1998 negotiations with Sasol, the Task Team understands that Sasol committed to creating 50,000 jobs in the downstream petrochemical and

plastics manufacturing sector (ChemCity initiatives, etc) – What results were achieved and was there any conditionality imposed by government between this and the suspension of the synfuel tariff protection mechanism?

Specific questions to PetroSA

- What are the breakeven synfuel costs before and after capital recovery?
- What has been the cumulative tariff protection, including capital costs incurred by government over the lifetime of the company
    - Is there any relationship between PetroSA's past windfall gains (in terms of the Task Team definition of windfall) and the restructuring dividend levied on PetroSA following the merger of Mossgas and Soekor in 2002. The Task Team understands that the National Treasury levied a special "restructuring" dividend of R1.6b specifically on PetroSA and a further R0.6b on its holding company, the Central Energy Fund (CEF) in 2003,
    - PetroSA has been protected by the synfuel tariff protection system. What is the current outstanding amount on the slate – assuming the tariff protection system was terminated in 2000,
    - And if we assume that it was not terminated but merely suspended while negotiations with the synfuel industry continued, then what amount has built up on the slate since 2000?
        - On the basis of the Andersen formula?
        - On the basis of the pre-1995 floor and ceiling mechanism?
    - If one assumes that the special restructuring levy imposed by Treasury in 2003 was allocated to offsetting the slate, what is the net position today?

9.5. Value chain approach to liquid fuel industry

Transfer Pricing. Please comment on whether the Task Team's concern about the potential for transfer pricing of windfall gains across the value chain is valid or not. If so, how do you suggest the transfer pricing risk could be mitigated?

9.6. Applying windfall methodology on the liquid fuel value chain to identify economic rent streams

Section 7 has identified the steps in the South African liquid fuels value chain where economic rent has or is being generated and which could qualify for policy recommendations by the Task Team in terms of its TOR.

On the basis of this methodology and the tentative application of it to the facts at our disposal, managing anticipated future economic rents might be addressed through -

- existing and new fiscal measures and
- through the modification of the various regulatory instruments that govern the liquid fuels industry

- Please comment on the usefulness of the value chain approach adopted here.

- Please comment on the preliminary analysis of the individual value chain elements as presented in the table and accompanying text, highlighting any possible omissions or differences in interpreting the data.

- Please comment on the key conclusions from the analysis.

9.7. Request for comment on the fiscal measures identified in the TOR that the Task Team has been requested to consider

At this stage, the Task Team has not concluded on which rent streams if any might exist or might qualify for policy recommendations. Should we ultimately do so, the Terms of Reference call for four distinct fiscal measures to be considered and investigated and we would value any comments that you may have on the merits and demerits of these potential fiscal measures for addressing anticipated future economic rent, namely:

- *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/alternative 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/alternative 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/alternative product and an excess profit tax (or subsidy in the event of a negative differential) would fall on the gap between synthetic/alternative fuel production costs and standard refinery costs.

- *Progressive formula tax*: Synthetic/alternative 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/alternative fuel producers in expanded or improved production capacity as part of an incentive-based targeted tax regime.

- Any alternative fiscal measures that you feel may be appropriate

- Modification of elements of the regulatory system that cause the generation of economic rent

Commercially sensitive information
If your contribution contains any commercially sensitive information kindly identify it as such.

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APPENDIX 1

Milestones in Government Participation in the Industry

1954: Sasol formed by IDC

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. Financed by the IDC.

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.

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: 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: Process to privatise Sasol initiated. Privatisation took place in phases.[Need details of phases]

1982: Commissioning of Sasol 2

1984: 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.

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.

1993: UN crude oil sanctions lifted

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.

1999: Synfuel subsidy floor price adjusted to $16.00/bbl

2001: Soekor, Mossgas consolidated to form PetroSA, as a wholly-owned subsidiary of CEF. Management responsibility of strategic stock policy retained within CEF.

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 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 paid leases to the state and if they changed to the new order rights before the five years when the royalties comes into effect in 2009, they would not have to pay the government anything 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 the tendency of overstating their costs to minimise tax payments hence defeating government's goal of adequate compensation. Hence government introduced an ad valorem royalty on all minerals mined in South Africa. The question is what impact the royalty has 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 on the lower half of the international scale. The royalty rates are as follows:

Table 15 : 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 creation 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 more to extract coal and some consumers would face higher prices for electricity. Coal is a significant input in our electricity generation process 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 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.